



VIRTUAL/TELECONFERENCE
CONVEYANCE SAFETY CODE COUNCIL
Virtual, 4822 Madison Yards Way, Madison
Contact: Will Johnson (608) 266-2112
August 26, 2025

The following agenda describes the issues that the Board plans to consider at the meeting. At the time of the meeting, items may be removed from the agenda. Please consult the meeting minutes for a record of the actions of the Board.

AGENDA

9:00 A.M.

OPEN SESSION – CALL TO ORDER – ROLL CALL

- A. Adoption of Agenda (1-2)**
- B. Approval of Minutes of July 22, 2025 (3-4)**
- C. Reminders: Conflicts of Interest, Scheduling Concerns**
- D. Introduction, Announcements, and Recognition**
- E. Administrative Matters**
 - 1) Department, Staff and Board Updates
 - 2) Council Members
 - a. Braun, Andrew
 - b. Danowski, David
 - c. Lex, Adam
 - d. Misustin, Keith
 - e. Rausch, Brian
 - f. Rosenberg, Paul
 - g. Thurmer, Harold
 - h. Whelan, Maiya
- F. Administrative Rule Matters – Discussion and Consideration**
 - 1) Pending or Possible Rulemaking Projects **(5-289)**
- G. Discussion and Consideration of Items Added After Preparation of Agenda:**
 - 1) Introductions, Announcements and Recognition
 - 2) Administrative Matters
 - 3) Election of Officers
 - 4) Appointment of Liaisons and Alternates
 - 5) Delegation of Authorities

- 6) Education and Examination Matters
- 7) Credentialing Matters
- 8) Practice Matters
- 9) Legislative and Policy Matters
- 10) Public Health Emergencies
- 11) Administrative Rule Matters
- 12) Liaison Reports
- 13) Board Liaison Training and Appointment of Mentors
- 14) Informational Items
- 15) Division of Legal Services and Compliance (DLSC) Matters
- 16) Presentations of Petitions for Summary Suspension
- 17) Petitions for Designation of Hearing Examiner
- 18) Presentation of Stipulations, Final Decisions and Orders
- 19) Presentation of Proposed Final Decisions and Orders
- 20) Presentation of Interim Orders
- 21) Petitions for Re-Hearing
- 22) Petitions for Assessments
- 23) Petitions to Vacate Orders
- 24) Requests for Disciplinary Proceeding Presentations
- 25) Motions
- 26) Petitions
- 27) Appearances from Requests Received or Renewed
- 28) Speaking Engagements, Travel, or Public Relation Requests, and Reports

H. Public Comments

ADJOURNMENT

NEXT MEETING: SEPTEMBER 23, 2025

 MEETINGS AND HEARINGS ARE OPEN TO THE PUBLIC, AND MAY BE CANCELLED WITHOUT NOTICE.

Times listed for meeting items are approximate and depend on the length of discussion and voting. All meetings are held virtually unless otherwise indicated. In-person meetings are typically conducted at 4822 Madison Yards Way, Madison, Wisconsin, unless an alternative location is listed on the meeting notice. In order to confirm a meeting or to request a complete copy of the board's agenda, please visit the Department website at <https://dsps.wi.gov>. The board may also consider materials or items filed after the transmission of this notice. Times listed for the commencement of any agenda item may be changed by the board for the convenience of the parties. The person credentialed by the board has the right to demand that the meeting at which final action may be taken against the credential be held in open session. Requests for interpreters for the hard of hearing, or other accommodations, are considered upon request by contacting the Affirmative Action Officer or reach the Meeting Staff by calling 608-267-7213.

**VIRTUAL/TELECONFERENCE
CONVEYANCE SAFETY CODE COUNCIL
MEETING MINUTES
JULY 22, 2025**

PRESENT: David Danowski, Adam Lex, Keith Misustin, Brian Rausch, Paul Rosenberg, Harold Thurmer

ABSENT: Andrew Braun, Maiya Whelan

STAFF: Will Johnson, Executive Director; Jameson Whitney, Legal Counsel; Sofia Anderson, Administrative Rule Coordinator; Ashley Sarnosky, Board Administrative Specialist; and other Department Staff

CALL TO ORDER

Paul Rosenberg, Chairperson, called the meeting to order at 9:01 a.m. A quorum was confirmed with six (6) members present.

ADOPTION OF AGENDA

MOTION: David Danowski moved, seconded by Harold Thurmer, to adopt the agenda as published. Motion carried unanimously.

APPROVAL OF MINUTES OF APRIL 15, 2025

MOTION: Harold Thurmer moved, seconded by David Danowski, to approve the minutes of April 15, 2025 as published. Motion carried unanimously.

INTRODUCTIONS, ANNOUNCEMENTS AND RECOGNITION

RECOGNITION

Ronald P. Mueller -- Wisconsin City, Village, Town or County Representative, Resigned 4/21/2025 (Member since 9/25/2016)

MOTION: Harold Thurmer moved, seconded by Keith Misustin, to recognize and thank Ronald Mueller for their years of dedicated service to the Council and State of Wisconsin. Motion carried unanimously.

9:00 A.M. PRELIMINARY PUBLIC HEARING – SCOPE STATEMENT 035-25: SPS 302, 305, 316, 318, 321, 362, 366, 381, AND 382, RELATING TO CONVEYANCE SAFETY CODE COMPREHENSIVE REVIEW

Review Public Hearing Comments

MOTION: Harold Thurmer moved, seconded by David Danowski, to affirm the Council has reviewed the public comments received concerning Scope Statement (SS) 035-25 (SPS 302, 305, 316, 318, 321, 362, 366, 381, and 382), relating to Conveyance Safety Code comprehensive review.

Additionally, after considering the public comments received the Council recommends approval of SS 035-25 for implementation. Motion carried unanimously.

ADMINISTRATIVE RULE MATTERS

Pending or Possible Rulemaking Projects

MOTION: David Danowski moved, seconded by Harold Thurmer, to designate Brian Rausch to serve as liaison to DSPS staff for drafting SPS 302, 305, 316, 318, 321, 362, 366, 381, and 382, relating to Conveyance Safety Code comprehensive review. Motion carried unanimously.

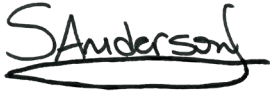
ADJOURNMENT

MOTION: Adam Lex moved, seconded by Harold Thurmer, to adjourn the meeting. Motion carried unanimously.

The meeting adjourned at 9:38 a.m.

**State of Wisconsin
Department of Safety & Professional Services**

AGENDA REQUEST FORM

1) Name and title of person submitting the request: Sofia Anderson – Administrative Rules Coordinator		2) Date when request submitted: 08/14/2025 Items will be considered late if submitted after 12:00 p.m. on the deadline date which is 8 business days before the meeting	
3) Name of Board, Committee, Council, Sections: Conveyance Safety Code Council			
4) Meeting Date: August 26, 2025	5) Attachments: ☒ Yes ☐ No	6) How should the item be titled on the agenda page? Administrative Rules Matters – Discussion and Consideration 1. Pending and possible rulemaking projects.	
7) Place Item in: ☒ Open Session ☐ Closed Session	8) Is an appearance before the Board being scheduled? <i>(If yes, please complete Appearance Request for Non-DSPS Staff)</i> ☐ Yes ☒ No	9) Name of Case Advisor(s), if required: N/A	
10) Describe the issue and action that should be addressed: Attachments: 1. SPS 302, 305, 316, 318, 321, 362, 366, 381, 382. 2. SPS 318 Code change recommendations.			
11) Authorization  Signature of person making this request 08/14/2025 Date Supervisor (if required) Date Executive Director signature (indicates approval to add post agenda deadline item to agenda) Date			
Directions for including supporting documents: 1. This form should be attached to any documents submitted to the agenda. 2. Post Agenda Deadline items must be authorized by a Supervisor and the Policy Development Executive Director. 3. If necessary, provide original documents needing Board Chairperson signature to the Bureau Assistant prior to the start of a meeting.			

Chapter SPS 302

FEE SCHEDULE

Subchapter I — Miscellaneous

- SPS 302.001 Scope.
 SPS 302.02 Handling, copying and miscellaneous fees.
 SPS 302.04 Miscellaneous plan reviews, inspections and services.
 SPS 302.06 Fee assessment and collection.
 SPS 302.07 Fee refunds.
 SPS 302.08 Waiver of fee assessments.
 SPS 302.09 Priority review.
 SPS 302.10 Projects without approval.

Subchapter II — Safety Services

- SPS 302.11 Boilers and pressure vessels.
 SPS 302.12 Anhydrous ammonia systems.
 SPS 302.13 Mechanical refrigeration systems.
 SPS 302.15 Elevators, power dumbwaiters, escalators, moving walks and ramps, lifts for accessibility and material lifts.
 SPS 302.17 Mines, pits and quarries.
 SPS 302.18 Explosive materials.
 SPS 302.19 Fireworks manufacturing plants.
 SPS 302.20 Amusement rides.
 SPS 302.21 Passenger ropeways.

Subchapter III — Buildings

- SPS 302.31 Buildings, structures, heating, ventilation and fire protection systems.

- SPS 302.33 Manufactured homes.
 SPS 302.34 One- and two-family dwellings, multifamily dwellings, manufactured dwellings, manufactured multifamily dwellings, and camping units.
 SPS 302.35 Electrical systems.

Subchapter IV — Gas Systems

- SPS 302.44 Gas system equipment.

Subchapter V — Material Approvals and Petitions

- SPS 302.51 Material approvals.
 SPS 302.52 Petitions for variance.

Subchapter VI — Building Water Systems

- SPS 302.61 Miscellaneous inspections, reviews and services.
 SPS 302.635 Lot restriction waivers.
 SPS 302.64 Plumbing systems.
 SPS 302.645 Cross connection control assemblies.
 SPS 302.65 Private onsite wastewater treatment systems.
 SPS 302.66 Product and standard approvals.
 SPS 302.67 Sanitary permits.
 SPS 302.675 Privy registrations.
 SPS 302.68 Public swimming pool and water attraction plan review and inspection fees.

Note: Chapter Ind 69 as it existed on June 30, 1992 was repealed and a new chapter ILHR 2 was created effective July 1, 1992. Chapter ILHR 2 was renumbered Comm 2 under s. 13.93 (2m) (b) 1., Stats., and corrections made under s. 13.93 (2) (b) 6. and 7., Stats., [Register, October, 1996, No. 490](#). Corrections made under s. 13.93 (2m) (b) 6. and 7., Stats., [Register, February, 1997, No. 494](#); corrections made under s. 13.93 (2m) (b) 7., Stats., [Register, February, 1999, No. 518](#). Chapter Comm 2 was renumbered chapter SPS 302 under s. 13.92 (4) (b) 1., Stats., [Register December 2011 No. 672](#).

Subchapter I — Miscellaneous

SPS 302.001 Scope. The fees established in this chapter shall be paid to the Wisconsin department of safety and professional services, for providing those services authorized in the Wisconsin Statutes. The divisions may withhold providing services to individuals who have past due accounts with the division.

Note: All checks or money orders are to be made payable to Wisconsin department of safety and professional services.

History: Cr. [Register, June, 1992, No. 438](#), eff. 7-1-92; correction made under s. 13.92 (4) (b) 6., Stats., [Register December 2011 No. 672](#).

SPS 302.02 Handling, copying and miscellaneous fees. (1) **HANDLING FEES.** (a) The department may charge a handling fee, determined at \$30.00 per hour, with a minimum fee of \$30.00, in addition to any other fee provided in this chapter, to offset administrative costs.

(b) A handling fee of \$60.00 per plan shall be charged to the submitting party for any plan which is submitted to the department, entered into the department's plan system and, then, requested to be returned by the submitting party prior to review. This fee does not apply to building plan components, other than the original building or heating and ventilation plan noted in s. [SPS 302.31 \(1\) \(a\)](#), submitted after the original plan submittal.

(2) **PHOTOCOPYING FEES.** A photocopying fee of \$0.30 per page may be charged.

(3) **PLAN REPRODUCTION FEES.** A fee of \$6.00 per plan sheet shall be charged to the submitting party for plan reproduction on plan sheets larger than legal size. Plan sheets at or smaller than legal size may be charged the normal photocopying fee.

(4) **PLAN APPROVAL — ADDITIONAL SETS.** A maximum of 5 sets of plans shall be stamped approved without additional fees

being charged. Upon request, additional sets of plans identical to previously approved plans shall be stamped approved upon receipt of a \$25.00 fee per plan.

Note: The 5 sets include the one set retained by the department.

(5) **FEE FOR EXTENSION OF PLAN APPROVAL.** The examination fee for a plan previously approved by the department for which an approval extension is requested shall be \$120.00 per plan.

(6) **MAILING LISTS.** The fee for mailing lists shall be \$30.00 for the first 1,000 names and \$6.00 for each 1,000 names thereafter. This fee shall be doubled, if gummed labels are requested.

(7) **COMPUTER INFORMATION.** Information from computer files is available for the costs incurred in generating the data requested.

(8) **INSPECTION AND COPYING OF FILES, PLANS AND SPECIFICATIONS.** The department shall allow inspection and copying of all files and plans, specifications and related materials filed with the department, except as follows:

(a) The department may restrict, on a case by case basis, the right of inspection or copying of files and plans, specifications and related materials where the possible harm to the public interest outweighs the benefits of inspection or copying for the following types of buildings and facilities:

1. Banks, savings and loans, credit unions, securities dealers and other types or parts of buildings where large sums of money, negotiable securities or valuables are stored in secured areas;
2. Jails and other correctional institutions;
3. Public facilities regularly used for the storage or evaluation of evidence in criminal proceedings;
4. Armories;
5. Public broadcasting facilities;
6. Power generating facilities;
7. Museums and libraries; and
8. Noncommercial storage tanks which store heating oil for consumptive use on the premises.
9. Buildings that are or are anticipated to be owned by or leased to the state.

(b) The department shall allow inspection or copying of files and plans, specifications and related materials of all buildings in response to lawful subpoena or written requests from law enforcement agencies.

(c) Prior to any inspection or copying of files and plans, specifications and related materials, a written, signed application shall be obtained from the person requesting the inspection or copying. The application shall contain a general description of the files or premises for which inspection or copying is requested and the full name, address and telephone number of the requester. The written request shall contain a statement that any information obtained from the inspection or copying shall not be used for any unlawful purpose or unfair competitive practice, and that the information set out therein is true and correct. The department will consider the information supplied in the request in conjunction with the type of buildings noted in par. (a) in determining whether the request for inspection or copying shall be granted. The department may transmit a copy of this statement to the owner and submitter of the documents being inspected or copied.

(d) The department may charge a reasonable amount to defray its costs in providing copies.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; am. (1) (a), r. and recr. (4), cr. (4m), Register, July, 2000, No. 535, eff. 9-1-00; correction in (1) (b) made under s. 13.93 (2m) (b) 7., Stats., Register, July, 2000, No. 535; CR 05-038: r. (7), cr. (8) (a) 9. Register October 2005 No. 598, eff. 11-1-05; CR 08-039: am. (1) to (4), renum. (4m) to (6) to be (5) to (7) and am. (5) and (6) Register November 2008 No. 635, eff. 12-1-08; correction in (1) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 302.04 Miscellaneous plan reviews, inspections and services. (1) MISCELLANEOUS PLAN REVIEWS. Unless specified otherwise in this chapter, the fee for department costs incurred in performing miscellaneous plan reviews shall be \$80.00 per hour per plan, with a minimum fee of \$80.00 per plan.

(2) MISCELLANEOUS INSPECTIONS AND INVESTIGATIONS. Unless specified otherwise in this chapter, fees for department costs incurred in performing miscellaneous inspections or investigations, including special inspections for alterations, fabrication, repairs, testing, electrical construction and quality assurance methods, which are either provided on request or to satisfy administrative code requirements, shall be determined and assessed in accordance with Table 302.04. An additional amount may be charged to cover all expenses, including travel time, mileage, meals and lodging. Travel expenses shall be limited to those allowed under ss. 16.53 and 20.916, Stats., and collective bargaining agreements.

Table 302.04

Miscellaneous Inspections and Investigations Fees

Individual Special Inspections	Fee Per Hour Per Inspector
1. Inspections performed between the hours of 7:45 a.m. and 4:30 p.m. on weekdays Monday through Friday	\$80.00
2. Inspections performed on Saturdays, Sundays, holidays and at times other than scheduled in 1.	\$120.00
3. For supervising the American Society of Mechanical Engineers (ASME) joint review and audit and for conducting shop audits, Monday through Friday	\$120.00

(3) MINIMUM CHARGE. In reference to Table 302.04 lines 1. and 2., a minimum charge of 4 hours shall be assessed for all special inspections required during fabrication and testing of ASME code items.

(4) MISCELLANEOUS GOODS AND SERVICES. The department may collect a fee for providing goods and services related to work

that has been delegated by the department to authorized agents, municipalities or other state agencies based upon actual cost.

(5) INSPECTION ASSESSMENTS. The department may inspect any installation which is also inspected by a certified inspector. When the department inspection confirms that the inspection report is incomplete, invalid or unacceptable, the department shall assess the inspector or his or her employer a fee determined in accordance with sub. (2).

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; am. (1), r. and recr. (2), cr. (2m), Register, July, 2000, No. 535, eff. 9-1-00; CR 05-025: renum. Comm 2.16 to be (4) and am. Register October 2005 No. 598, eff. 11-1-05; CR 08-039: am. (1) and Table 2.04, renum. (2m) to (4) to be (3) to (5) and am. (3) Register November 2008 No. 635, eff. 12-1-08; correction in (2), (3) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 302.06 Fee assessment and collection. (1) ASSESSMENT. Unless specified otherwise in this chapter, registration, inspection and all other fees in this chapter shall be paid annually before registration is processed by the department.

(2) COLLECTION. All fees not paid within 60 calendar days after the first invoice date may be assessed a late payment fee equal to one percent per month of the outstanding balance.

(3) MONTHLY BILLING SERVICE. Upon request and advance approval, the department may bill for services rendered on a monthly basis rather than requiring payment on an individual fee basis. Advance approval shall be obtained from the director in charge of the affected program. The decision to grant the request shall be based on the applicant's past record of paying for the service, the credit rating from a recognized credit organization or a letter of financial reference concerning loan and account information from a financial institution.

(4) CHARGE CARD. The department may accept fee payment by electronic payment.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; am. (2), r. Table 2.06, Register, July, 2000, No. 535, eff. 9-1-00; CR 08-039: am. (4) Register November 2008 No. 635, eff. 12-1-08.

SPS 302.07 Fee refunds. (1) GENERAL. If a request for a permit, for which a fee is paid and a processing time is specified, is not processed by the department within the time specified, a refund of 50% of the fee paid shall be made to the person who paid for the request for the permit.

(2) DEFINITIONS. The following definitions shall apply in this section:

(a) "Fee" means the amount of money paid for a single permit or request for service, but does not mean the total amount of money which may be submitted with an application covering more than one permit or request for service.

(b) "Permit" includes an examination of plans, initial permit to operate, registration of a device, approval of a material or product, shaft excavation permit, petition for variance, permission to start construction, rental unit certificate of compliance, priority review and petition, and underground tank registration and use permit, but does not include any inspection services.

(3) PROCESSING TIME. (a) *Starting date.* When an appointment process exists for a specific type of permit, the permit processing time shall begin on the appointment date. When an appointment process does not exist for a specific type of permit, the permit processing time shall begin on the day after receipt of the request for the permit whether submitted by mail or in person. When the department finds a permit application has been submitted with inadequate information or fees, the application will be placed on hold and the department will notify the applicant of the information needed to process the application. Upon receipt of the complete information, the department will process the permit, except that the length of the processing time shall start over and the processing time shall begin the day after the receipt of the additional information or fees.

(b) *Ending date.* The ending date which shall be used to assess whether the permit was processed within the time period specified shall be the date the department actually made a deter-

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mination to approve, deny or withhold the permit, and not the date on the correspondence noting the action or the date the permit was mailed out.

Note: The specific processing times for various permits may be found in the respective chapters where the permits are required.

(4) DETERMINATION. (a) The starting and the ending dates recorded on the computer record or individual file shall be the dates used to assess whether a refund is to be made.

(b) The initial determination as to whether the permit was processed within the time period specified shall be made by the director of the bureau responsible for issuing the permit.

(c) Determinations subject to dispute shall be forwarded to the division administrator for a final determination.

(5) PAYMENT OF REFUND FEES. (a) All refunds made by the department shall be forwarded through the United States postal service.

(b) Refunds shall be mailed to the person who paid for the request for the permit at the address of record indicated on the department's request for service forms.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; am. (2) (b), Register, October, 1996, No. 490, eff. 11-1-96; am. (2) (b), Register, July, 2000, No. 535, eff. 9-1-00; CR 06-119: am. (3) (a) and (4) (a) Register July 2007 No. 619, eff. 8-1-07.

SPS 302.08 Waiver of fee assessments. All or a portion of any fee may be waived upon a determination of indigency. Waivers under this section may be granted only by the secretary of the department.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92.

SPS 302.09 Priority review. A person may request and make an appointment with the department to facilitate the examination of plans, or the review of a product or material for approval, on a priority basis. The fee for examination or review on a priority basis shall be twice the normal rate, based on the appropriate rate specified in this chapter. Scheduling on a priority basis shall be contingent upon the department having sufficient time and staff to accommodate the request.

History: CR 05-038: cr. Register October 2005 No. 598, eff. 11-1-05.

SPS 302.10 Projects without approval. The plan examination fees specified in this chapter shall be doubled for projects where the installation, erection or construction was initiated without the required departmental approval.

History: CR 05-038: cr. Register October 2005 No. 598, eff. 11-1-05.

Subchapter II — Safety Services

SPS 302.11 Boilers and pressure vessels. (1) **BOILER FEES.** Inspection fees for boilers shall be determined in accordance with Table 302.11-1.

(2) **PRESSURE VESSEL FEES.** Inspection fees for pressure vessels shall be determined in accordance with Table 302.11-2.

(3) **REINSPECTION FEES.** A fee of \$80.00 per inspection shall be assessed for inspections made by the department to gain compliance with ch. SPS 341, after orders have been issued by the department.

**Table 302.11-1
Boiler Inspection Fees**

Type of Boiler	Heating Surface Area (Square Feet)	Type of Inspection	
		Internal	External
1. Miniature	20 or less	\$35.00	\$35.00
2. Power	21-250	\$80.00	\$80.00
3.	251-1,000	\$180.00	\$120.00
4.	1,001-10,000	\$240.00	\$170.00
5.	Over 10,000	\$630.00	\$290.00
6. Heating	N/A		
7. - With manhole		\$140.00	\$60.00
8. - Without manhole		\$130.00	\$60.00
9. - Multiple boilers in one building		\$60.00 per boiler or \$320.00 per 4 hour inspection period, whichever is less	

**Table 302.11-2
Pressure Vessel Inspection Fees**

Volume of Pressure Vessels (Cubic Feet)	Operating Pressure (psig)	Type of Inspection
		Internal or External
1. All sizes	Less than 15	No Fee
2. 11 or less	15 or more	No Fee
3. 12-200	15 or more	\$50.00
4. 201-500	15 or more	\$120.00
5. Over 500	15 or more	\$140.00
6. Multiple pressure vessels in one building	---	\$50.00 per vessel or \$320.00 per 4 hour inspection period, whichever is less

(5) FEE FOR FAILURE TO HAVE BOILER OR PRESSURE VESSEL READY FOR INSPECTION. A fee equal to 50% of the applicable inspection fee shall be assessed for failure to have the boiler or pressure vessel ready for inspection on the date specified, unless the department is notified, in writing, 7 business days prior to the specified inspection date.

(6) PERMIT TO OPERATE. The fee for the issuance of a permit to operate each boiler or pressure vessel shall be \$50.00.

(7) PIPING INVESTIGATION. Fees related to piping investigations performed by the department shall be determined in accordance with s. SPS 302.04 (2).

(8) NATIONAL BOARD EXAM. The fee for the application for and the administration of the national board of boiler and pressure vessel inspectors competency examination shall be \$250.00.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; corrections in (3), (4) and (6) made under s. 13.93 (2m) (b) 7., Stats., Register, November, 1999, No. 527; am. (3), (4) and (6) and Tables 2.11-1 and 2.11-2, cr. (7), Register, July, 2000, No. 535, eff. 9-1-00; CR 05-025: am. Tables 2.11-1 and 2.11-2 and (5), r. (4), cr. (8) Register October 2005 No. 598, eff. 11-1-01; CR 08-039: am. (3), (8) and Tables 2.11-1 and 2.11-2 Register November 2008 No. 635, eff. 12-1-08; CR 09-050: am. (6) Register December 2009 No. 648, eff. 1-1-10; correction in (1), (2), (3), (7) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 302.12 Anhydrous ammonia systems. (1) PLAN EXAMINATION AND INSPECTION FEES. A fee of \$700.00 shall be submitted for plan examination and external inspection of each new anhydrous ammonia handling or storage facility.

(2) PERIODIC INSPECTION FEES. (a) *Storage facilities.* Fees for the required periodic inspection of storage facilities shall be \$150.00 per facility.

(b) *Nurse tanks.* Fees for the required periodic inspection of nurse tanks shall be determined in accordance with Table 302.12.

Table 302.12
Nurse Tank Inspection Fees

Nurse Tanks Per Site	Fee
1. 10 or less	\$80.00
2. 11-30	\$120.00
3. 31-50	\$200.00
4. Over 50	\$250.00

(3) REINSPECTION FEES. A fee in accordance with s. [SPS 302.04 \(2\)](#) shall be assessed for inspections made by the department to gain compliance with ch. [SPS 343](#), after orders directing compliance have been issued by the department.

(4) PERMIT TO OPERATE. The fee for the issuance of a permit to operate each anhydrous ammonia system shall be \$50.00.

History: Cr. [Register, June, 1992, No. 438](#), eff. 7-1-92; am. (1), (2) (a) and (3) and Table 2.12, [Register, July, 2000, No. 535](#), eff. 9-1-00; [CR 05-038](#): am. (1), cr. (2m) [Register October 2005 No. 598](#), eff. 11-1-05; [CR 08-039](#): am. (1), (2) and Table 2.12, renum. (2m) and (3) to be (3) and (4) [Register November 2008 No. 635](#), eff. 12-1-08; [CR 09-050](#): am. (4) [Register December 2009 No. 648](#), eff. 1-1-10; correction in (2) (b), (3) made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#).

SPS 302.13 Mechanical refrigeration systems. (1) INSPECTION FEES. (a) The inspection fees, based on the aggregate tonnage of the mechanical refrigeration system, shall be determined in accordance with Table 302.13.

Table 302.13
Mechanical Refrigeration Inspection Fees

Capacity in Tons	Inspection Fee
1. Less than 3	No fee
2. 3-25	\$60.00
3. 26-100	\$100.00
4. 101-250	\$130.00
5. 251-500	\$210.00
6. 501-750	\$290.00
7. 751-1,000	\$350.00
8. Over 1,000	\$400.00

Note: For the purpose of assessing the inspection fee, the capacity of a mechanical refrigeration system will be determined in tons. One ton of refrigeration capacity is considered to be the equivalent of abstracting heat at the rate of 12,000 Btu per hour.

(b) Fees related to steel-piping inspections performed by the department shall be determined in accordance with s. [SPS 302.04 \(2\)](#).

(2) REINSPECTION FEES. A fee of \$80.00 per inspection shall be assessed for inspections made by the department to gain compliance with ch. [SPS 345](#), after orders directing compliance have been issued by the department.

(3) PERMIT TO OPERATE. The fee for the issuance of a permit to operate each mechanical refrigeration system shall be \$50.00.

History: Cr. [Register, June, 1992, No. 438](#), eff. 7-1-92; correction in (3) (c) made under s. 13.93 (2m) (b) 7., Stats., [Register, November, 1994, No. 467](#); r. (3), [Register, October, 1996, No. 490](#), eff. 11-1-96; am. Table 2.13 and (2), [Register, July, 2000, No. 535](#), eff. 9-1-00; [CR 05-038](#): cr. (1m) [Register October 2005 No. 598](#), eff. 11-1-05; [CR 08-039](#): am. Table 2.13, renum. (1m) and (2) to be (2) and (3) and am. (2) [Register November 2008 No. 635](#), eff. 12-1-08; [CR 09-050](#): am. (3) [Register December 2009 No. 648](#), eff. 1-1-10; [CR 10-011](#): renum. (1) to be (1) (a), cr. (1) (b) [Register August 2010 No. 656](#), eff. 9-1-10; correction in (1) (a), (b), (2) made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#).

SPS 302.15 Elevators, power dumbwaiters, escalators, moving walks and ramps, lifts for accessibility and material lifts. (1) PLAN EXAMINATION, APPLICATION AND INITIAL INSPECTION FEES. Fees for the initial inspection and for the examination of plans or for an application for installation or alteration, or both, submitted in accordance with the requirements of s. [SPS 318.1007](#) or [318.1008](#), shall be determined in accordance with Table 302.15. A reinspection fee as specified in Table 302.15 shall be charged for each inspection conducted until the installation or alteration qualifies for a permit to operate.

(2) PERIODIC INSPECTION AND REINSPECTION FEES. Fees for periodic inspections and reinspections of all classes of elevators and lifting devices within the scope of ch. [SPS 318](#) shall be determined in accordance with Table 302.15. An inspection fee shall also be charged for each reinspection of an elevator in accordance with Table 302.15 until the installation or alteration qualifies for a permit to operate.

(3) FEE FOR FAILURE TO HAVE EQUIPMENT READY FOR INSPECTION. A fee equal to 50% of the applicable inspection fee shall be assessed for failure to have the elevator or lifting device ready for inspection on the date specified, unless the department is notified, in writing, 7 business days prior to the specified inspection date.

(4) PERMIT TO OPERATE. The fee for the issuance of a permit to operate each conveyance shall be \$50.00.

History: Cr. [Register, June, 1992, No. 438](#), eff. 7-1-92; am. (3) and r. Table 2.15-2, [Register, October, 1996, No. 490](#), eff. 11-1-96; emerg. r. and recr., eff. 6-1-97; r. and recr., [Register, January, 1998, No. 505](#), eff. 2-1-98; am. (1) and (3), [Register, November, 1999, No. 527](#), eff. 12-1-99; am. (1) to (3), cr. (2m), [Register, July, 2000, No. 535](#), eff. 9-1-00; correction in (1) made under s. 13.93 (2m) (b) 7., Stats., [Register November 2004 No. 587](#); [CR 05-038](#): am. Table 2.15-1, Table 2.15-2, and (2m) [Register October 2005 No. 598](#), eff. 11-1-05; [CR 08-039](#): am. (1) and (2), r. Tables 2.15-1 and 2.15-2, cr. Table 2.15, renum. (2m) and (3) to be (3) and (4) [Register November 2008 No. 635](#), eff. 12-1-08; [CR 09-050](#): am. (4) [Register December 2009 No. 648](#), eff. 1-1-10; correction in (1), (2) made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#); correction in (1) made under s. 13.92 (4) (b) 7., Stats., [Register December 2017 No. 744](#).

Table 302.15
Plan Examination and Inspection Fees
for Elevators, Escalators and Lift Devices

Type of Unit	Plan Examination		Type of Inspection		
	New Installations	Alterations, Repairs and Remodeling	Acceptance or Acceptance Re-inspection		Periodic or Periodic Re-inspection
			New Installations	Alterations, Repairs and Remodeling	
1. Traction elevator, other elevator driving machines	\$400.00	\$200.00	\$800.00	\$400.00	\$320.00
2. Hydraulic elevator	\$320.00	\$160.00	\$720.00	\$360.00	\$240.00
3. Dumbwaiter, platform lift, stair chair lift, special application elevator	\$320.00	\$160.00	\$640.00	\$320.00	\$160.00
4. Escalator, moving walk	\$320.00	\$160.00	\$800.00	\$400.00	\$320.00

SPS 302.17 Mines, pits and quarries. (1) SUBMITTAL REQUIREMENTS. The person or firm operating the crushing, screening or washing equipment shall submit, with the fee specified in sub. (2), the name of the mine, pit or quarry; the name of the company; the mailing address; the telephone number; and the type of product to be mined, such as ore, stone, clay, lime or aggregate.

(2) SAFETY SERVICE. The annual safety service fee for each metal or nonmetal mine, pit or quarry shall be based on the size of the respective operation for the calendar year. Production records shall be made available upon request. The fee shall be determined in accordance with Table 302.17. This fee does not apply to mines, pits or quarries used for private domestic use.

Note: The department intends to review the fees in Table 302.17 with the Mines, Pits and Quarries Advisory Council by June 1, 2001, and annually thereafter.

Table 302.17
Annual Production Safety Service Fee

Annual Production (Tons Per Year)	Annual Safety Service Fee
1. Less than 50,000	\$70.00
2. 50,000-100,000	\$140.00
3. 100,001-200,000	\$280.00
4. 200,001-300,000	\$420.00
5. 300,001-400,000	\$560.00
6. 400,001-500,000	\$700.00
7. Over 500,000	\$1,120.00

(3) SHAFT EXCAVATION PERMIT. The fee for obtaining a shaft excavation permit shall be \$400.00 per permit.

(4) MISCELLANEOUS INSPECTIONS. The fee for miscellaneous consultation inspections provided on request shall be in accordance with s. [SPS 302.04 \(2\)](#).

(5) TRAINING. The fee for annual refresher training provided by the department and required by the federal mine safety and health administration shall be \$330.00 per course.

History: Cr. [Register, June, 1992, No. 438](#), eff. 7-1-92; am. (1) and (2) and Table 2.17, renum. (3) (a) and (c) to be (3) and (4) and am., r. (3) (b) and (4), [Register, July, 2000, No. 535](#), eff. 9-1-00; [CR 02-042](#): am. Table 2.17 and (5), [Register October 2002 No. 562](#), eff. 11-1-02; [CR 08-039](#): am. Table 2.17 [Register November 2008 No. 635](#), eff. 12-1-08; correction in (2), (4) made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register December 2011 No. 672](#).

SPS 302.18 Explosive materials. (1) USE. Fees for conducting a safety inspection of the use of explosive materials shall be assessed in accordance with s. [SPS 302.04 \(2\)](#). Use of explosive materials shall include the storage of daily supplies.

(2) PERMANENT STORAGE. Fees for conducting a safety inspection of a permanent explosive materials storage facility shall be determined in accordance with Table 302.18. The fees are based on the combined volume of one or more magazines at any given site. This inspection fee applies to blasters and explosive materials contractors working independently of mine, pit or quarry operations.

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Table 302.18
Explosive Materials Storage Facility Inspection Fees

Quantity of Explosives	Fee
Storage Per Site	
1. Less than 100 cubic feet	\$80.00
2. 100-500 cubic feet	\$120.00
3. Over 500 cubic feet	\$160.00

(3) TEMPORARY STORAGE IN A COMMUNITY. Fees for department costs incurred in the performance of safety inspections of temporary explosive materials storage magazines in a community shall be \$80.00 per magazine.

History: Cr. [Register, June, 1992, No. 438](#), eff. 7-1-92; r. (1) and Table 2.18-1, [Register, October, 1996, No. 490](#), eff. 11-1-96; renum. (2) to be (1) to (3) and am., am. Table 2.18, [Register, July, 2000, No. 535](#), eff. 9-1-00; [CR 08-039](#): am. Table 2.18 [Register November 2008 No. 635](#), eff. 12-1-08; correction in (1), (2) made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register December 2011 No. 672](#).

SPS 302.19 Fireworks manufacturing plants. Fees for department costs incurred in the performance of inspection of fireworks manufacturing plants shall be determined in accordance with s. [SPS 302.04 \(2\)](#).

History: Cr. [Register, June, 1992, No. 438](#), eff. 7-1-92; r. (2), [Register, October, 1996, No. 490](#), eff. 11-1-96; am. [Register, July, 2000, No. 535](#), eff. 9-1-00; correction made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register December 2011 No. 672](#).

SPS 302.20 Amusement rides. (1) PLAN EXAMINATION, DATA REVIEW, REGISTRATION AND INSPECTIONS. Fees for amusement rides shall be determined in accordance with the following schedule:

(a) Plan examination for new amusement ride tramways.....
\$280.00 per plan submittal.

Note: See ch. [SPS 333](#) for definitions of tramways.

(b) Review of engineering analysis and test data associated with the acceptance of amusement rides.....
\$280.00 per ride.

(c) 1. Annual registration for all amusement rides.....
\$55.00 per ride.

2. Late registration fee for failure to register amusement ride before opening it to the public.....
\$200.00 per ride.

(d) Initial inspection of custom-built, site-specific amusement rides not used in a portable mode
per s. [SPS 302.04 \(2\)](#).

(e) Periodic inspection of coin operated kiddie rides.....
\$70.00 per ride.

(f) Periodic inspection of Class 1 amusement rides.....
\$140.00 per ride.

(g) Periodic inspection of Class 2 amusement rides, except amusement rides that the manufacturer estimates require more than 40 work hours for erection
\$250.00 per ride.

(h) Periodic inspection of Class 2 amusement rides that the manufacturer estimates require more than 40 work hours for erection.....
\$350.00 per ride.

(i) Periodic inspection of amusement ride tramways.....
\$420.00 per tramway.

(j) Reinspection fee for noncompliance with orders previously issued by the department.....
\$100.00 per ride.

Note: See ch. SPS 334 for definitions of ride classes.

(2) FEE ASSESSMENT AND COLLECTION. Registration and outstanding inspection fees for amusement rides shall be paid before registration is processed by the department.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; am. (1), Register, July, 2000, No. 535, eff. 9-1-00; CR 08-039: am. (1) (a), (b) and (2), renum. (1) (c), (d) to (h) and (k) to be (1) (c) 1., (e) to (i) and (j) and am., cr. (1) (c) 2. and (d), r. (1) (i) and (j) Register November 2008 No. 635, eff. 12-1-08; correction in (1) (d) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 302.21 Passenger ropeways. (1) PLAN EXAMINATION FEE. Fees for the examination of plans for passenger ropeways shall be determined in accordance with Table 302.21-1.

Table 302.21-1
Plan Examination Fees for Passenger Ropeways

Type of Passenger Ropeway	Fee Per Plan
1. Gondola lifts and rides	\$780.00
2. Chair lifts and rides.....	\$580.00
3. Surface tows, except fiber and wire rope tows	\$390.00
4. Fiber and wire rope tows, and conveyors.....	\$260.00

Note: See ch. SPS 334 for definition of the term "Amusement Ride" as it applies to passenger ropeways used as amusement rides.

Note: Surface tows include T-bar, platter and similar devices.

(2) INSPECTION FEES. Fees for the inspection of new installations, annual inspections and other inspections of passenger ropeways shall be determined in accordance with Table 302.21-2.

Table 302.21-2
Inspection Fees for Passenger Ropeways

Type of Passenger Ropeway	Inspection Fee Per Installation
1. Gondola lifts and rides	\$490.00
2. Chair lifts and rides:	
3. Fixed grip	\$280.00
4. Detachable grip	\$350.00
5. Surface tows, except fiber and wire rope tows	\$210.00
6. Fiber and wire rope tows, and conveyors	\$140.00

Note: See ch. SPS 334 for definition of the term "Amusement Ride" as it applies to passenger ropeways used as amusement rides.

Note: Surface tows include T-bar, platter and similar devices.

(3) LOAD TEST FEE. The fee for certifying a load test of a passenger ropeway shall be \$420.00 per load test.

(4) PERMIT TO OPERATE. The fee for the issuance of a permit to operate each passenger ropeway shall be \$50.00.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; am. (3), (4), Tables 2.21-1 and 2.21-2, Register, July, 2000, No. 535, eff. 9-1-00; CR 00-132: am. Register August 2001 No. 548, eff. 9-1-01; CR 08-039: am. (3) and Tables 2.21-1 and 2.21-2 Register November 2008 No. 635, eff. 12-1-08; CR 09-050: am. (4) Register December 2009 No. 648, eff. 1-1-10; correction in (1), (2) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

Subchapter III — Buildings

SPS 302.31 Buildings, structures, heating, ventilation and fire protection systems. (1) PLAN SUBMITTAL.

(a) *General.* Fees relating to the submittal of all plans, submitted in accordance with the requirements of chs. SPS 361 to 366, shall be determined in accordance with this section.

(b) *Plan review fees.* Fees relating to the submittal of all building plans, heating, ventilating and air conditioning (HVAC) plans, and fire protection system plans shall be computed on the basis of the total gross square footage of each building or affected area. The fees shall be determined in accordance with Table 302.31-1 for buildings not located in municipalities that have assumed building inspection responsibilities. The fees shall be determined in accordance with Table 302.31-2 for buildings located in agent municipalities and counties that have assumed the building inspection responsibilities specified under s. 101.12 (3) (g), Stats., and ch. SPS 361.

(c) *Multiple identical buildings.* The fees set forth in this paragraph may be applied to a project which contains multiple identical buildings. In order to qualify for the multiple identical building fee, plans for all buildings shall be submitted at the same time. The fees for the submittal of plans for the first building shall be determined in accordance with Table 302.31-1 or 302.31-2 on the basis of the total gross area of one building. The fee for each of the remaining identical buildings shall be computed on the basis of an area of less than 2,500 square feet.

(d) *Miscellaneous plans.* The fee for miscellaneous plans shall be \$250 per plan. Miscellaneous plans are plans which have no building, HVAC or fire protection system plan submissions and those plans for which no area may be associated. Miscellaneous plans include, but are not limited to, all of the following:

1. Footing and foundation plans submitted prior to the submission of the building plans.

2. Exhaust systems for dust, fumes, vapors and gases.

3. Stadium, grandstand and bleacher plans, and interior bleacher plans submitted as independent projects.

4. Any building component, other than building, HVAC and fire protection systems, submitted after installation.

(e) *Permission to start construction.* The fee for a permission to start construction shall be \$75.00.

(f) *Revisions.* The fee for revisions to previously approved plans and plans that have been previously reviewed but not denied shall be \$75.00.

(g) *Second class city.* A second class city that is certified to perform the expanded plan examinations specified in s. SPS 361.60 (5) (b) shall submit to the department the fee specified in Table 302.31-3 for each building or structure reviewed which exceeds the limits specified in s. SPS 361.60 (5) (c).

(h) *Appointed agent.* An agent that is appointed by the department under s. 101.12 (3g), stats., to perform plan examinations shall submit to the department the fees specified in Table 302.31-3 for each building or structure reviewed under s. 101.12 (3g), Stats.

(i) *Resubmission.* The fee for building, HVAC or fire protection system plans resubmitted within 8 months following denial of plan approval shall be \$250 per plan.

(2) FEE FOR PLAN ENTRY. In addition to the plan review and inspection fees for a project, each separate submission of plans for the project shall be accompanied by a \$100.00 plan entry fee. When plans for multiple projects are submitted together, each project shall constitute a separate submission and requires a \$100.00 plan entry fee.

Note: For example, the total fee to be submitted under Table 302.31-1 for a 15,000 square foot building that includes building plans, HVAC plans, fire alarm plans and fire suppression plans would be \$800 + \$450 + \$200 + \$200 + \$100 = \$1,750.

(3) FEE FOR MISSING A PLAN REVIEW APPOINTMENT. A fee of \$60.00 may be charged for missing a plan review appointment that was processed and scheduled by the department.

(4) REINSPECTION FEE. A fee as specified in s. SPS 302.04 (2) shall be assessed for inspections made by the department to gain compliance with rules after orders have been issued by the department.

(5) COMPLETION STATEMENT. A fee of \$15.00 shall be assessed for any project where the department has issued orders for

a completion statement to be submitted as required by s. SPS 361.40.

(6) FEE REFUNDS. The department may refund the difference in fees between Tables 302.31-1 and 302.31-2 for projects that are abandoned prior to construction.

(7) COLLECTION OF FEES. Fees shall be remitted at the time the plans are submitted. No plan examinations, approvals or inspections shall be made until fees are received.

Table 302.31-1
Plan Review Fees for Buildings Not Located in Municipalities That Perform Inspections

Area (Square Feet)	Fees			
	Building Plans	HVAC Plans	Fire Alarm System Plans	Fire Suppression System Plans
1. Less than 2,500	\$300	\$180	\$50	\$50
2. 2,500-5,000	350	250	100	100
3. 5,001-10,000	600	350	150	150
4. 10,001-20,000	800	450	200	200
5. 20,001-30,000	1,200	600	250	250
6. 30,001-40,000	1,600	900	400	400
7. 40,001-50,000	2,100	1,200	550	550
8. 50,001-75,000	2,900	1,600	800	800
9. 75,001-100,000	3,600	2,200	1,100	1,100
10. 100,001-200,000	6,000	2,900	1,400	1,400
11. 200,001-300,000	10,500	6,700	3,300	3,300
12. 300,001-400,000	15,500	9,800	4,800	4,800
13. 400,001-500,000	18,500	12,000	6,300	6,300
14. Over 500,000	20,000	13,500	7,100	7,100

Table 302.31-2
Plan Review Fees for Buildings Located in Municipalities That Perform Inspections

Area (Square Feet)	Fees			
	Building Plans	HVAC Plans	Fire Alarm System Plans	Fire Suppression System Plans
1. Less than 2,500	\$250	\$150	\$30	\$30
2. 2,500-5,000	300	200	60	60
3. 5,001-10,000	500	300	100	100
4. 10,001-20,000	700	400	150	150
5. 20,001-30,000	1,100	500	200	200
6. 30,001-40,000	1,400	800	350	350
7. 40,001-50,000	1,900	1,100	500	500
8. 50,001-75,000	2,600	1,400	700	700
9. 75,001-100,000	3,300	2,000	1,000	1,000
10. 100,001-200,000	5,400	2,600	1,200	1,200
11. 200,001-300,000	9,500	6,100	3,000	3,000
12. 300,001-400,000	14,000	8,800	4,400	4,400
13. 400,001-500,000	16,700	10,800	5,600	5,600
14. Over 500,000	18,000	12,100	6,400	6,400

Table 302.31-3
Fees to be Forwarded to the Department
for Reviews Performed by Second Class Cities and Appointed Agents

Area (Square Feet)	Fees			
	Building Plans	HVAC Plans	Fire Alarm System Plans	Fire Suppression System Plans
1. Less than 2,500	\$30	\$18	\$5	\$5
2. 2,500-5,000	35	25	10	10
3. 5,001-10,000	60	30	15	15
4. 10,001-20,000	80	45	20	20
5. 20,001-30,000	120	60	25	25
6. 30,001-40,000	160	90	40	40
7. 40,001-50,000	210	120	55	55
8. 50,001-75,000	290	160	80	80
9. 75,001-100,000	360	220	110	110
10. 100,001-200,000	600	290	140	140
11. 200,001-300,000	1,050	670	330	330
12. 300,001-400,000	1,550	980	480	480
13. 400,001-500,000	1,850	1,200	630	630
14. Over 500,000	2,000	1,350	710	710

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; am. (1) (intro.), Register, March, 1995, No. 471, eff. 4-1-95; cr. (1) (a) 2, g.; r. and recr. Table 2.31-1 and 2.31-2, Register, February, 1997, No. 494, eff. 4-1-97; correction in (1) (intro.) made under s. 13.93 (2m) (b) 7., Stats., Register, November, 1999, No. 527; r. and recr. (1), (2) and Tables 2.31-1 and 2.31-2; cr. Table 2.31-3, Register, July, 2000, No. 535, eff. 9-1-00; CR 01-139: am. (1) (a), (b), (g), (h), (i), (3) and (5) Register June 2002 No. 558, eff. 7-1-02; corrections in (1) (g) and (h) made under s. 13.93 (2m) b) 7., Stats., Register January 2005 No. 589; CR 05-038: r. and recr. (2), cr. (2m), r. (3) Register October 2005 No. 598, eff. 11-1-05; CR 06-119: am. tables 2.31-1 to 2.31-3 Register July 2007 No. 619, eff. 8-1-07; CR 06-120: am. (1) (a), Register February 2008 No. 626, eff. 3-1-08; CR 08-039: am. (1) (d) to (f), (i), (5) and Tables 2.31-1, 2.31-2 and 2.31-3, renum. (2m) to be (3) Register November 2008 No. 635, eff. 12-1-08; CR 09-046: am. (1) (d) 6. and Table 2.31-1, Register March 2010 No. 651, eff. 4-1-10; CR 10-103: am. (1) (a) and (d), r. and recr. (1) (i), Register August 2011 No. 668, eff. 9-1-11; correction in (1) (a), (b), (c), (g), (h), (4), (5), (6) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; 2017 Wis. Act 198: am. (1) (h) Register April 2018 No. 748, eff. 5-1-18.

SPS 302.33 Manufactured homes. (1) CERTIFICATION AND INSPECTION FEES. Fees for certification and inspection relative to the manufacture of manufactured homes shall be determined in accordance with Table 302.33-1.

Table 302.33-1
Certification and Inspection Fees
for Manufactured Homes

Type of Approval	Fee
1. Manufactured home inspection.....Established by Contract	
2. Plant inspection and certification.....See s. SPS 302.04 (2)	
3. Required inspection not included in the fee distribution system described in 24 CFR 3282.204 (a).....See s. SPS 302.04 (2)	
4. Warranty-related inspections, reinspections or investigative actions conducted as a result of consumer complaints.....See s. SPS 302.04 (2)	

(2) COMMUNITY PLAN REVIEW AND INSPECTIONS. Fees for plan review and inspection of new or expanded manufactured home communities shall be determined in accordance with Table 302.33-2.

Table 302.33-2
Manufactured Home Community
Plan Examination and Inspection Fees

Proposed Number of Home Sites	Plan Examination and Initial Inspection Fee	Reinspection Fee
1. 1-20	\$250.00	\$160.00
2. 21-50	450.00	160.00
3. 51-100	700.00	160.00
4. 101-175	900.00	160.00
5. more than 175	1,000.00	160.00

(3) COMMUNITY PERMITS. (a) Permit fees for manufactured home communities shall be determined in accordance with Table 302.33-3.

Table 302.33-3
Manufactured Home Community Permit Fees

Number of Home Sites	Permit Fee	Permit Revision Fee
1. 1-20	\$250.00	\$40.00
2. 21-50	450.00	40.00
3. 51-100	700.00	40.00
4. 101-175	900.00	40.00
5. more than 175	1,000.00	40.00

(b) A late fee of \$80.00 shall be required for each permit if the renewal fee is not paid before the permit expires.

(c) Agents issuing permits shall reimburse the department 37% of the permit fees specified in par. (a).

(4) CERTIFICATE OF TITLE FEES. Fees for a certificate of title for a manufactured home shall be determined in accordance with the following schedule:

(a) For filing an application for the first certificate of title.....\$8.50

(b) A manufactured housing rehabilitation and recycling fee upon filing an application under par. (a) or (d)\$7.00

(c) For the original notation and subsequent release of each security interest noted upon a certificate of title.....\$4.00

(d) For a certificate of title after a transfer.....\$8.50

(e) A supplemental title fee upon filing an application under par. (a) or (d), except that this fee shall be waived with respect to an application under par. (d) for transfer of a decedent's interest in a manufactured home to his or her surviving spouse.....\$7.50

(f) For each assignment of a security interest noted upon a certificate of title.....\$1.00

(g) For a replacement certificate of title.....\$8.00

(h) For processing applications for certificates of title that have special handling requests for fast service..... \$15.00

(i) For the reinstatement of a certificate of title previously suspended or revoked..... \$25.00

(j) For conducting a file search of manufactured home title records..... \$3.00

(k) For each notification under s. 101.9213 (8), Stats., that a security interest has not been satisfied..... \$4.00

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; am. Table 2.33, Register, October, 1996, No. 490, eff. 11-1-96; am. (2), Register, July, 2000, No. 535, eff. 9-1-00; CR 05-038: am. (1) and (2) Register October 2005 No. 598, eff. 11-1-05; emerg. cr. (5), eff. 2-1-05; CR 04-135: cr. (3), (4) and (5) Register February 2006 No. 602, eff. 3-1-06; CR 08-039: am. (1), r. (2), renum. (3) to (5) and Table 2.33 to be (2) to (4) and Table 2.33-1 and am. (2), (3) and Table 2.33-1, cr. Tables 2.33-2 and 2.33-3 Register November 2008 No. 635, eff. 12-1-08; correction in (1), (2), (3), Table 302.33-1 made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 302.34 One- and two-family dwellings, multi-family dwellings, manufactured dwellings, manufactured multifamily dwellings, and camping units. (1) UNIFORM BUILDING PERMIT SEAL. A fee of \$30.00 shall be remitted to the department at the time of application for a Wisconsin Uniform Building Permit Seal. Municipalities or UDC inspection agencies administering the Uniform Dwelling Code shall purchase one \$30.00 permit seal for each new dwelling.

(2) DEPARTMENTAL INSPECTIONS. Where an employee of the department performs an on-site inspection related to the enforcement of the Uniform Dwelling Code as a result of a consumer complaint or a request by an individual in a municipality where permits are not issued and inspections are not performed, a fee may be assessed to the individual requesting the inspection determined in accordance with s. SPS 302.04 (2), with a minimum fee of \$160.00 per inspection, payable in advance to the department.

(3) MULTIFAMILY DWELLINGS. Fees related to plan examination and field inspections for multifamily dwellings shall be determined in accordance with s. SPS 302.31.

(4) MODULAR HOMES. (a) Except as provided in pars. (b) and (c), where employees of the department perform plan reviews, plant evaluations, consumer complaint investigations or any other type of enforcement-related activity for modular homes, the manufacturer shall be assessed at the rates determined in accordance with s. SPS 302.04.

(b) The minimum fee for plan review shall be \$80.00 per plan.

(c) The minimum fee for inspections shall be \$160.00 per inspection.

(5) MANUFACTURED MULTIFAMILY DWELLINGS. (a) Fees related to plan examination and field inspections for manufactured multifamily dwellings shall be determined in accordance with s. SPS 302.31.

(b) Fees related to in-plant inspections for manufactured multifamily dwellings performed by the department shall be assessed and determined in accordance with s. SPS 302.04 (2).

(6) WISCONSIN INSIGNIAS. Fees for Wisconsin insignias shall be assessed and computed on the basis of \$25.00 for each dwelling unit or camping unit.

(7) MISCELLANEOUS FEES. When the department provides goods or services not specifically covered by the fees in subs. (1) to (6), fees may be charged to persons or organizations requesting the goods and services based upon actual cost.

SPS 302.35 Electrical systems. (1) GENERAL. Fees for all permits issued and inspection services provided under s. SPS 316.011 (2) (a) shall be determined in accordance with this section.

(2) PERMIT AND INSPECTION FEE. (a) Except as provided under sub. (3), the permit and inspection fee for an electrical wiring installation described under s. SPS 316.012 (1) (a) or (b) shall be the greater of the sum of the fees determined in accordance with Table 302.35 or \$160.

(b) The fee under par. (a) includes the fees for a minimum of one rough-in inspection and one final inspection.

(c) Any of the fees under Table 302.35 may, at the discretion of the department, be doubled for projects where the installation, erection, or construction of an installation component is initiated without the required permit.

Table 302.35

Commercial Electrical System Permit and Inspection Fees

Installation Component(s)	Unit of Measure	Fee
Service, including one service disconnect - 15 to 400 amperes	Each	\$80.00
Service, including one service disconnect - 401 to 800 amperes	Each	\$120.00
Service, including one service disconnect - over 800 amperes	Each	\$160.00
Additional service disconnect	Each	\$13.50
Feeder	Each	\$40.00
Branch circuit – 20 amperes or less	Each	\$20.00
Branch circuit – 21 to 60 amperes	Each	\$30.00
Branch circuit – over 60 amperes	Each	\$50.00
Temporary service and wiring	Lump sum	\$240.00
Fire pump	Each	\$160.00
Transformer, reactor, or similar component	Each	\$40.00
Fire alarm, communication and data, and power over ethernet device	Each	\$2.75
Emergency standby system, including generator, one transfer switch, and inverter	Each	\$160.00
Additional emergency standby transfer switch	Each	\$160.00
Solar photovoltaic system – 0-10 kW	Each	\$160.00
Solar photovoltaic system – 11-20 kW	Each	\$200.00
Solar photovoltaic system – over 20 kW	Each	\$400.00
Swimming pool, including associated wiring	Each	\$160.00
Elevator, escalator, or dumbwaiter, including associated wiring	Each	\$80.00

(3) INSPECTION AGENCY PERMIT AND INSPECTION FEE. The permit and inspection fee assessed by an inspection agency for an electrical wiring installation described under s. SPS 316.012 (1)

(a) or (b) may be determined by contract between the inspection agency and the department. In this subsection, “inspection agency” means an inspection agency registered under s. SPS 305.629.

(4) **PLAN REVIEW FEE.** A fee of \$160 shall be assessed for each electrical system plan review that is required or is requested by the permit applicant.

(5) **REINSPECTION FEE.** A fee of \$160 shall be assessed for a department reinspection conducted to gain compliance after an order has been issued by the department.

(6) **REFUND OF PERMIT AND INSPECTION FEE.** (a) The department may refund all or a portion of a fee assessed under sub. (2) for a project if installation of the electrical wiring has not commenced within 12 months after the date the permit is issued.

(b) The permit holder may request from the department a refund of a fee assessed under sub. (2) for a component that at the conclusion of the project has not been installed.

Note: Also see s. SPS 302.07.

(7) **FEE FOR AN INCOMPLETE OR INCORRECT PERMIT.** An additional fee of \$80 may be assessed if a permit application is submitted with incomplete or incorrect information.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; renum. (4) to (7) to be (5) to (8), cr. (4), Register, March, 1995, No. 471, eff. 4-1-95; CR 00-159: am. (1), r. and

recr. (2), r. (3), Register September 2001 No. 549 eff. 12-1-01; CR 05-038: am. (3) and (5) Register October 2005 No. 598, eff. 11-1-05; CR 08-039: am. (1), (2), (4) (title), (a) and (c) Register November 2008 No. 635, eff. 12-1-08; correction in (2), (3), (4) (a), (5) (a), (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; EmR1703: emerg. am. (6), eff. 2-6-17; CR 17-017: am. (title), (6) Register March 2018 No. 747, eff. 4-1-18; CR 19-099: cr. Register June 2020 No. 774, eff. 7-1-20.

Subchapter IV — Gas Systems

Note: Section SPS 302.43 was renumbered s. ATCP 93.1605 under s. 13.92 (4) 1., Stats. under authority of 2013 Wis. Act 20, section 9138 (3) (fm) and (4) (f).

SPS 302.44 Gas system equipment. Fees for examination of plans and site inspections under ch. SPS 340 for the storage or vehicle-fuel dispensing of liquefied petroleum gas, liquefied natural gas, compressed natural gas, gaseous hydrogen or liquefied hydrogen shall be determined in accordance with Table 302.44.

Table 302.44
Plan Examination and Inspection Fees for Gas System Equipment

Activity	Fee
Plan examination	\$300
Site inspection, up to 2 in conjunction with plan examination	\$400 per site
Site inspection, if more than the above 2 are needed	As specified in s. SPS 302.04 (2)
Plan revision examination	\$175 per revised plan
Re-inspection, for plan revision	As specified in s. SPS 302.04 (2)

History: CR 05-038: cr. Register October 2005 No. 598, eff. 11-1-05; CR 08-039: am. Table 2.44 Register November 2008 No. 635, eff. 12-1-08; CR 11-002: r. and recr. Register August 2011 No. 668, eff. 9-1-11; correction made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

Subchapter V — Material Approvals and Petitions

SPS 302.51 Material approvals. (1) The fee for department review of an application for the approval of a material, equipment or product, other than a plumbing product, or for approval of an alternate standard, shall be determined in accordance with Table 302.51.

(2) The fee for a special inspection of an installation of a material, equipment or product for which an experimental approval has been issued in accordance with s. SPS 320.18 or 361.50 shall be determined in accordance with s. SPS 302.04 (2).

Table 302.51
Material Review Fees

Action	Fee per Review Type of Review			
	Chapter SPS 310 and Voluntary	Alternate Product	Experimental	Alternate Standard
1. New approval	\$1,000	\$1,200	\$2,000	\$1,200
2. Renewal of approval with no changes	\$750	\$900	\$1,500	NA*
3. Renewal of approval with changes	\$1,000	\$1,200	\$2,000	NA*
4. Manufacturer's request for minor revision (no extension of approval period)	\$200	\$200	\$200	NA*
5. Manufacturer's request for major revision (new approval period)	\$1,000	\$1,200	\$2,000	NA*

*NA means not applicable

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; am. Register, July, 2000, No. 535, eff. 9-1-00; CR 01-139: am. (2) Register June 2002 No. 558, eff. 7-1-02; CR 05-038: am. Table 2.51 Register October 2005 No. 598, eff. 11-1-05; CR 08-039: am. (2) and Table 2.51 Register November 2008 No. 635, eff. 12-1-08; correction in (1), (2), Table 302.51 made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 302.52 Petitions for variance. (1) **GENERAL.** The department shall consider and may grant a variance from an administrative rule upon receipt of a fee, a completed petition for variance form from the owner, and a position statement from the fire department where applicable, provided an equivalency is established which meets the intent of the rule being petitioned.

(2) **PETITIONS FOR VARIANCE ON RULES UNDER CHS. SPS 320 TO 325, UNIFORM DWELLING CODE, AND CH. SPS 327, CAMPING UNITS.** The fee for reviewing petitions for variance on rules under chs. SPS 320 to 325, and 327 shall be \$175.00 per petition.

(3) **PETITIONS FOR VARIANCE ON RULES UNDER CHS. SPS 361 TO 366, COMMERCIAL BUILDING CODE.** (a) Except as provided

under sub. (4), the fee for reviewing petitions for variance on rules under chs. SPS 361 to 366 shall be \$550.00 per petition.

(b) Except as provided in par. (d), a separate petition shall be submitted for each building, even if the buildings are similar. If, after review, it is determined that some or all of the petitions may be processed using a precedent, a portion of the variance fee may be refunded in accordance with sub. (10) (b).

(c) Where identical petitions are submitted for identical buildings with a common owner on a single piece of property, the fee for the first building shall be \$550.00 and the fee for each subsequent building shall be submitted in accordance with sub. (10) (b) for precedent petitions.

(d) Where an identical variance is sought for identical buildings with a common owner in a single municipality, and all of the buildings are listed on one submitted petition, the fee for the first building shall be \$550.00, and the fee for each subsequent building shall be \$50.

(4) PETITIONS FOR VARIANCE ON HISTORIC BUILDINGS. The fee for reviewing petitions for variance on rules for historic buildings shall be \$300.00 per petition.

(5) PETITIONS FOR VARIANCE ON RULES UNDER CHS. SPS 381 TO 387, UNIFORM PLUMBING CODE. The fee per petition for processing petitions for variance to rules under chs. SPS 381 to 387 shall be \$300.00.

(6) PETITIONS FOR VARIANCE UNDER S. 101.055 (4), STATS. The fee for reviewing petitions for temporary, experimental and permanent variances under s. 101.055 (4), Stats., shall be \$300.00 per petition.

(7) PETITIONS FOR VARIANCE, OTHER RULES. Except as provided in ch. SPS 305, the fee for reviewing petitions for variance on rules of the department, administered by the division of industry services and not specifically mentioned under this section, shall be \$300.00 per petition.

(8) PRIORITY PETITIONS. (a) Upon request, the department will process petitions for variance on a priority basis. Except as specified in par. (b), the fees for processing these petitions shall be double the amounts specified in subs. (2), (3), (5) to (7) and (9).

(b) The fees for processing petitions for variance on rules for historic buildings, pursuant to s. 101.121 (3) (b), Stats., shall be as specified in sub. (4).

(9) REVISIONS. (a) Statements or conditions in a petition for variance may be revised within one year of the date of the written decision. The fee per petition for revisions to previously determined petitions for variance shall be as follows:

1. Petitions on rules under sub. (2) \$50.00
2. Petitions on rules under sub. (5) \$75.00
3. All other petitions \$100.00

(b) For revisions requested after one year from the date of the written decision, a new petition for variance shall be submitted.

(10) ADDITIONAL AND REDUCED FEES. (a) For complex petitions for variance which require more than 8 hours to review and process, an additional fee may be charged at the rate of \$80.00 per hour for each hour in excess of 8 hours. For precedent petitions for variance which require more than 3 hours to review and process, an additional fee may be charged at the rate of \$80.00 per hour for each hour in excess of 3 hours.

(b) For petitions processed under sub. (3) or (4), a refund may be returned. The minimum fee per petition charged by the department shall be based on the following schedule:

1. The minimum fee for a petition for variance that is returned without decision before assignment for staff review shall be 25% of the required fee.

2. The minimum fee for a petition for variance that is returned without decision after staff review shall be 25% of the required fee plus \$80.00 per hour of review and processing time.

3. The minimum fee for a non-priority petition for variance based on precedence shall be 50% of the required fee.

4. The minimum fee for a priority petition for variance based on precedence shall be 75% of the required fee.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; emerg. cr. (6m), eff. 10-1-93; cr. (6m), Register, March, 1994, No. 459, eff. 4-1-94; am. (3) (a), Register, March, 1995, No. 471, eff. 4-1-95; correction in (2) made under s. 13.93 (2m) (b) 7., Stats., Register, November, 1999, No. 527; r. and recr. (5), Register, April, 2000, No. 532, eff. 7-1-00; am. (3) (a), (c), (6), (7), (10) (a) and (b) 2., r. (6m), Register, July, 2000, No. 535, eff. 9-1-00; am. (3) (b), cr. (3) (d), Register, September, 2000, No. 537, eff. 10-1-00; CR 01-139: am. (3) (a) Register June 2002 No. 558, eff. 7-1-02; CR 05-038: am. (3) (d), (5) and (7) Register October 2005 No. 598, eff. 11-1-05; CR 06-120: am. (3) (title) and (a), (4) and (8) (b), Register February 2008 No. 626, eff. 3-1-08; CR 08-039: am. (2), (3) (a), (c), (d), (5), (7), (10) (a), (b) 2. Register November 2008 No. 635, eff. 12-1-08; CR 10-103: am. (3) (title) and (a) Register August 2011 No. 668, eff. 9-1-11; correction in (2), (3) (title), (a), (5), (7) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; correction in (7) made under s. 13.92 (4) (b) 6., Stats., Register October 2013 No. 694; EmR1703: emerg. am. (2), eff. 2-6-17; CR 17-017: am. (2) Register March 2018 No. 747, eff. 4-1-18; correction in (2) made under s. 35.17, Stats., Register March 2018 No. 747; CR 18-056: am. (2) Register November 2018 No. 755, eff. 12-1-18.

Subchapter VI — Building Water Systems

SPS 302.61 Miscellaneous inspections, reviews and services. (1) SPECIAL PLUMBING INSPECTIONS. (a) The fees for plumbing inspections for sanitary districts or other special purpose districts shall be determined in accordance with s. SPS 302.04 (2).

(b) The department may assess a fee determined in accordance with s. SPS 302.04 (2) for a field inspection for a department representative to conduct a soil evaluation.

(2) REVISIONS. The fee for revisions to previously approved plumbing and private sewage plans shall be \$85.00 for the first hour and \$80.00 per hour thereafter per plan. This fee shall apply when plans are revised for reasons other than those which were requested by the department.

(3) MISCELLANEOUS SERVICES. When the department provides goods or services not specifically covered in this section, fees may be charged to organizations requesting such goods and services.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; r. and recr. (3), Register, April, 2000, No. 532, eff. 7-1-00; am. (1) and (2), Register, July, 2000, No. 535, eff. 9-1-00; CR 05-038: am. (1) (a), r. (3) and (4) Register October 2005 No. 598, eff. 11-1-05; CR 08-039: am. (2), renum. (5) to be (3) Register November 2008 No. 635, eff. 12-1-08; correction in (1) (a), (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: am. (2) Register September 2023 No. 813, eff. 10-1-23.

SPS 302.635 Lot restriction waivers. The fee for any lot restriction waiver issued by the department shall be \$100.00 per lot.

History: Cr. Register, July, 2000, No. 535, eff. 9-1-00; CR 08-039: am. Register November 2008 No. 635, eff. 12-1-08.

SPS 302.64 Plumbing systems. (1) GENERAL. Plan examination fees for preliminary or complete plans shall accompany the plans and specifications when submitted. If the department determines, upon review of the plans, that inadequate fees were provided, the necessary additional fees shall be provided prior to departmental approval.

(2) EXAMINATION FEES. The plan examination fee shall be determined in accordance with Table 302.64-1. The minimum fee shall be \$85.00 per plan.

Table 302.64-1
Plan Examination Fees for Plumbing Systems

Plan Type	Fee
1. Sanitary drain and vent system.....	\$50.00 per inch diameter of each bldg. sewer, or for multiple sewer connections serving a single building the fee may be calculated per sub. (3) (a)
2. Sanitary building sewer only, no drain and vent.....	\$30.00 per inch diameter of each bldg. sewer
3. Building water distribution system.....	\$50.00 per inch diameter of each water service, or for multiple water service connections serving a single building the fee may be calculated per sub. (3) (b)
4. Building water service only, no water distribution system.....	\$30.00 per inch diameter of each water service
*5. Car wash interceptor.....	\$85.00 per interceptor
*6. Clearwater drain system.....	\$15.00 per inch diameter of each clearwater drain system
*7. Garage catch basin.....	\$85.00 per basin
*8. Grease interceptor.....	\$85.00 per interceptor
*9. Oil interceptor.....	\$85.00 per interceptor
*10. Sanitary dump station.....	\$85.00 per station
*11. Chemical waste system.....	\$85.00 per system
13. Alternate plumbing system.....	\$800.00 per system
14. Manufactured home communities and campground/ recreational vehicle parks:	
a. 1-25 sites.....	\$300.00
b. 26-50 sites.....	\$350.00
c. 51-125 sites.....	\$400.00
d. Over 125 sites.....	\$500.00
15. Private water main.....	\$30.00 per inch diameter
16. Cross connection control assemblies:	
a. Reduced pressure principle backflow preventer.....	\$170.00 per assembly
b. Reduced pressure fire protection principle backflow preventer.....	\$170.00 per assembly
c. Pressure vacuum breaker assembly.....	\$170.00 per assembly
d. Spill resistant vacuum breaker.....	\$170.00 per assembly
e. Reduced pressure detector fire protection backflow preventer.....	\$170.00 per assembly
17. Sanitary private interceptor main sewers, determined on the largest diameter of each interceptor main sewer.....	\$30.00 per inch diameter
18. Stormwater systems:	
a. Less than or equal to one acre drainage area.....	\$15.00 per inch of largest diameter storm sewer, or for multiple sewer discharge points for a single site the fee may be calculated per sub. (3) (c)
b. > one or equal to 5 acres drainage area.....	\$350.00
c. > 5 acres to < or equal to 15 acres drainage area.....	\$500.00
d. > 15 acres drainage area.....	\$600.00
19. Experimental plumbing system.....	\$1,000.00 per system
20. Water or wastewater treatment systems, other than POWTS, designed to achieve compliance with Table 382.70-1.....	Amount as specified in s. SPS 302.04 (1)
21. Stormwater and clearwater infiltration systems for public buildings or facilities.....	\$200.00 per system**

* For table entries 5. to 11., no additional fee would be required if submitted with the respective drain and vent system.

** This fee is in addition to building stormwater and clearwater plumbing systems.

(3) EXAMINATION FEES FOR ADDITIONS AND REMODELING. When new or relocated fixtures or both are connected to the existing piping inside a building, the fee shall be determined in accordance with the following procedures:

(a) *Sanitary building sewer, drain and vent.* 1. Total all of the drainage fixture units which are being added or relocated.

2. Refer to s. SPS 382.30 Table 382.30-2, and determine the horizontal drain size which would be required if all new or relocated fixtures discharged through one pipe.

Note: Disregard the asterisk limitation regarding water closets. This pipe size is used for determining the fee only and does not necessarily mean this pipe size is used in actual design or installation.

3. Determine the fee based on pipe diameter in Table 302.64-1, line 1.

(b) *Building water distribution system.* 1. Total all of the water supply fixture units which are being added or relocated, using s. SPS 382.40 Tables 382.40-1 and 2, and convert to gallons per minute (GPM) in accordance with s. SPS 382.40 Table 382.40-3.

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2. The fees shall be determined in accordance with GPM demand of the new or relocated fixtures as specified in Table 302.64-2.

Table 302.64-2
Plan Examination Fees for Building Water Distribution Systems

GPM	Fee
1. 1-6.....	\$25.00
2. 7-12.....	\$35.00
3. 13-21.....	\$50.00
4. 22-31.....	\$60.00
5. 32-46.....	\$75.00
6. 47-77.....	\$100.00
7. 78-119.....	\$125.00
8. 120-170.....	\$150.00
9. 171-298.....	\$175.00

(c) *Building storm sewer and drainage system.* 1. Total each different type of area which the new or relocated drains serve and convert to GPM using ch. SPS 382 Tables 382.36-1, 2 and 3. To this, add the GPM discharge from any added or relocated clear water drains located inside the building.

2. Refer to ch. SPS 382 Table 382.36-4, using the column for 1/4 inch per foot pitch, to determine the horizontal drain size which would be required if all new or relocated fixtures discharged through one pipe. Use this pipe size for determining the fee.

3. Determine the fee based on pipe diameter in Table 302.64-1, line 18. a.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; am. Table 2.64-1, Register, February, 1994, No. 458, eff. 3-1-94; am. Table 2.64-1; Register, February, 1997, No. 494, eff. 3-1-97; am. (3) (a) 3. and (c) 3. and Tables 2.64-1 and 2.64-2, Register, July, 2000, No. 535, eff. 9-1-00; CR 02-002: am. Table 2.64-1 Register April 2003 No. 568, eff. 5-1-03; CR 04-035: am. Table 2.64-1 Register November 2004 No. 587, eff. 12-1-04; CR 08-039: am. (2), (3) (a) 3., (c) 3. and Tables 2.64-1 and 2.64-2 Register November 2008 No. 635, eff. 12-1-08; CR 09-050: am. Table 2.64-1 Register December 2009 No. 648, eff. 1-1-10; correction in (3) (a) 2., (b) 1., 2., (c) 1., 2., 3., Table 302.64-1 made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 302.645 Cross connection control assemblies. (1) The registration fee for each cross connection control assembly submitted to the department in accordance with s. SPS 382.20 (1) (c) shall be one of the following:

(a) Thirty dollars.

(b) Twenty dollars, if completed and filed electronically via the industry services division's web site.

Note: The Industry Services Division Web address is <http://dps.wi.gov/programs/industry-services>.

(2) The filing fee for each cross connection control assembly performance test report required under s. SPS 382.22 (8) shall be one of the following:

(a) Thirty dollars.

(b) Twenty dollars, if completed and filed electronically via the industry services division's web site.

History: CR 02-002: cr. Register April 2003 No. 568, eff. 5-1-03; CR 02-129, am. Register January 2004 No. 577, eff. 2-1-04; CR 08-039: am. Register November 2008 No. 635, eff. 12-1-08; CR 09-050: r. and recr. Register December 2009 No. 648, eff. 1-1-10; correction in (1) (intro.), (2) (intro.) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; correction in (1) (b), (2) (b) made under s. 13.92 (4) (b) 6., Stats., Register October 2013 No. 694.

SPS 302.65 Private onsite wastewater treatment systems. (1) **GENERAL.** The plan examination fee as determined under this section shall accompany the plans and specifications for the proposed design of a private onsite wastewater treatment system at a specific site. If the department determines, upon review of the plans, that inadequate fees were provided, the department will not make a final determination on the plans until the appropriate fees are received.

(2) **EXAMINATION FEES.** The plan examination fee for a private onsite wastewater treatment system submitted to the department for review shall be determined in accordance with Table 302.65, rounded to the nearest dollar.

Table 302.65
Plan Review
Private Onsite Wastewater Treatment Systems

Type of Project	Fee
1. All treatment components are approved under s. SPS 384.10 (2) or (3):	
a. Design wastewater flow of the proposed system:	
b. 1,000 gpd or less	\$250.00
c. 1,001-2,000 gpd	\$325.00
d. 2,001-5,000 gpd	\$400.00
e. greater than 5,000 gpd.....	\$450.00 plus \$0.08 for each gpd over 5,000
2. One or more treatment components are not approved under s. SPS 384.10 (2) or (3):	
a. Design wastewater flow of the proposed system:	
b. 1,000 gpd or less	\$450.00
c. 1,001-2,000 gpd	\$600.00
d. 2,001-5,000 gpd	\$750.00
e. greater than 5,000 gpd.....	\$900.00 plus \$0.08 for each gpd over 5,000
3. Holding tanks approved under s. SPS 384.10 (2) or (3):	
a. Design wastewater flow of the proposed system:	
b. 5,000 gpd or less	\$90.00
c. 5,001-10,000 gpd	\$150.00
d. greater than 10,000 gpd.....	\$225.00
4. Holding tanks not approved under s. SPS 384.10 (2) or (3):	
a. Design wastewater flow of the proposed system:	
b. 5,000 gpd or less	\$180.00
c. 5,001-10,000 gpd	\$300.00
d. greater than 10,000 gpd.....	\$450.00

(3) **DATA REVIEW.** The fee to review soil saturation monitoring studies or reports in accordance with s. SPS 385.60 (2) or (3) shall be \$240.00 per site.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; r. and recr., Register, April, 2000, No. 532, eff. 7-1-00; CR 02-129: am. (table) Register January 2004 No. 577, eff. 2-1-04; CR 08-039: am. (3) and Table 2.65 Register November 2008 No. 635, eff. 12-1-08; correction in (2), (3), Table 302.65 made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 302.66 Product and standard approvals. (1) **APPROVALS.** (a) Except as provided in par. (b), the fee for the request of a review by the department for a plumbing product under s. SPS 384.10 (2) or for an alternate standard under s. SPS 381.20 (2) shall be determined in accordance with Table 302.66.

Table 302.66
Plumbing Product and Alternate Standard Review Fees

Product or Standard	Fee	
	Type of Review	Revision or Renewal
1. Alternate standards	New Review	\$250*
2. Chemical or biochemical treatment for POWTS	\$250	\$125
3. Health care plumbing appliance	\$250	\$125
4. Chemical or physical restoration processes for POWTS	\$250	\$125

Table 302.66
Plumbing Product and Alternate Standard
Review Fees (Continued)

Product or Standard	Fee	
	Type of Review	
	New Review	Revision or Renewal
5. Prefabricated holding or treatment components for POWTS	\$250	\$125
6. Prefabricated plumbing	\$250	\$125
7. Water treatment device	\$250	\$125
8. Wastewater treatment device	\$250	\$125
9. Commercial water vending or dispensing machines	\$250	\$125
10. Exterior grease interceptors	\$250	\$125

* Per standard.

(b) The fee for a minor revision to a previously issued approval for an exterior grease interceptor, or prefabricated holding or treatment component for a POWTS shall be \$70.00 plus \$10.00 for each approval affected in lieu of the fee specified in Table 302.66. For the purpose of this subdivision, a minor revision shall be considered a modification that does not affect the function, retention capacity, basic shape or size of the tank. The expiration date of the original approval shall not be extended if the minor revision is approved.

(c) 1. The fee for the request of an alternate approval to be issued by the department for a plumbing product shall be \$400.00.

2. a. Except as provided in subd. 2. b., the fee for the request of a revision or renewal of an alternate approval to be issued by the department for a plumbing product shall be \$200.00.

b. The fee for a minor revision to a previously issued alternate approval for an exterior grease interceptor, holding, septic or other sewage treatment tank shall be \$70.00 plus \$10.00 for each approval affected in lieu of the fee specified in subd. 2. a. For the purpose of this subparagraph, a minor revision shall be considered a modification that does not affect the function, retention capacity, basic shape or size of the tank, or the basis of the approval being classified as an alternate. The expiration date of the original approval shall not be extended if the minor revision is approved.

(d) 1. The fee for the request of an experimental approval to be issued by the department for a plumbing product shall be \$1,000.00.

2. The fee for the request of a revision or renewal of an experimental approval to be issued by the department for a plumbing material or product shall be \$500.00.

(e) The fee for a special inspection of an installation of a product, for which an experimental approval has been issued in accordance with s. SPS 384.50, shall be determined in accordance with s. SPS 302.04 (2).

(2) POWTS APPROVALS AND MANUFACTURER CHANGES. (a)

1. The fee for the request to have a method or technology reviewed as a POWTS holding, treatment or dispersal component or site constructed private onsite wastewater treatment system component by the department, in accordance with s. SPS 384.10 (3), shall be \$400.00 per method, technology, or site constructed component.

2. The fee for the request of a revision or renewal of a method or technology reviewed as a POWTS holding, treatment or dispersal component or site constructed private onsite wastewater treatment system component by the department, in accordance with s. SPS 384.10 (3), shall be \$150.00 per method, technology, or site constructed component.

(b) The fee for the request of a change of manufacturer's name or address on an approval issued by the department for a plumb-

Published under s. 35.93, Stats. Updated on the first day of each month.

ing product shall be \$20.00. The expiration date of the original approval shall not be extended.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; emerg. am. Table 2.66 and (1) (b) 1., eff. 5-12-94; am. Table 2.66, (1) (b) 1., Register, October, 1994, No. 466, eff. 11-1-94; am. Table 2.66, (1) (d) 2. and r. and recr. (2) (a), Register, April, 2000, No. 532, eff. 7-1-00; am. (1) (e) and Table 2.66, Register, July, 2000, No. 535, eff. 9-1-00; CR 02-002: am. Table Register April 2003 No. 568, eff. 5-1-03; CR 02-129: am. (1) (a) Register January 2004 No. 577, eff. 2-1-04; CR 04-035: am. Table 2.66, r. (1) (b) 1., renum. (1) (b) 2. to be (1) (b) Register November 2004 No. 587, eff. 12-1-04; CR 07-100: am. Table 2.66 and (2) Register September 2008 No. 633, eff. 10-1-08; CR 08-039: am. (1) (b) to (d), (2) (a) 1., (b) and Table 2.66 Register November 2008 No. 635, eff. 12-1-08; correction in (1) (a), (b), (e), (2) (a) 1., 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 302.67 Sanitary permits. (1) FEE. (a) Pursuant to s. 145.19 (5), Stats., the fee for a sanitary permit issued by a governmental unit shall be at least \$141.00.

Note: Section 145.19 (5) of the Statutes was repealed in 2012; however, section 145.19 (2) of the Statutes requires a permit fee that is no less than the amount determined under the department's rules.

(b) The fee for a sanitary permit issued by the department under s. SPS 383.21 shall be \$300.00.

(2) PORTION FORWARDED TO THE DEPARTMENT. The governmental unit responsible for the regulation of private onsite wastewater treatment systems shall forward to the department \$100.00 of each sanitary permit fee, determined in accord with s. 145.19, Stats.

Note: The \$100.00 includes the \$25.00 groundwater fee, required by s. 145.19 (6), Stats., that is forwarded to the department of natural resources.

History: Cr. Register, June, 1992, No. 438, eff. 7-1-92; renum. and am. (1) to be (1) (a), cr. (1) (b) and am. (2), Register, April, 2000, No. 532, eff. 7-1-00; CR 08-039: am. Register November 2008 No. 635, eff. 12-1-08; correction in (1) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 302.675 Privy registrations. (1) VAULT PRIVY. The fee for registering a vault privy that is to serve a state-owned facility shall be \$70.00.

(2) PIT PRIVY. The fee for registering a pit privy that is to serve a state-owned facility shall be \$90.00.

History: CR 02-129: cr. Register January 2004 No. 577, eff. 2-1-04; CR 08-039: am. Register November 2008 No. 635, eff. 12-1-08.

SPS 302.68 Public swimming pool and water attraction plan review and inspection fees. (1) Plan examination and inspection fees for public swimming pools, water attractions and associated slides shall accompany plans and specifications when submitted to the department for review. If the department determines, upon review of the plans, that inadequate fees were received, the necessary additional fees shall be received by the department prior to plan review and determination.

(2) Except as provided in sub. (3), plan examination and inspection fees for the construction or modification of public swimming pools, water attractions and associated slides shall be as listed in Tables 302.68-1 and 302.68-2.

(3) (a) *Virginia Graeme Baker alterations.* 1. Fees for the review and approval of modifications to existing pools involving circulation systems or submerged suction outlets for the sole purpose of complying with the federal Virginia Graeme Baker Consumer Product Safety Commission rules shall be one of the following:

a. Three hundred fifty dollars, if the modification inspection is performed by department staff.

b. Two hundred dollars, if the modification inspection is not performed by department staff.

2. Modification inspections, beyond the initial modification inspection, performed by department staff for modifications to existing pools involving circulation systems or submerged suction outlets for the sole purpose of complying with the federal Virginia Graeme Baker Consumer Product Safety Commission rules shall be assessed in accordance with s. SPS 302.04 (2).

(b) *Alternate and experimental system design review.* Fees for the review and approval of alternate and experimental system designs shall be as specified in Table 302.68-1. A fee for the minor revision to a previously approved alternate or experimental

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system design may be assessed. The expiration date of the original approval may not be extended if a minor revision is approved.

(d) *Reinspection fee.* A fee of \$300.00 may be assessed for a second or subsequent final inspection where the initial final in-

spection is scheduled and partially conducted by the inspector, and the pool installation is found to be incomplete.

Table 302.68-1

**Plan Review and Inspection Fees for Public Swimming Pools, Water Attractions and Associated Slides
Where Department Staff Perform Construction Inspections**

Type of Pool, Water Attraction or Equipment	Fee		
	Initial Construction	Modification	Revision to Previously Approved Plans
1. Pool Slide, Drop Slide or Water Slide, functional requirements ^{a, b}	\$540.00	\$240.00	\$240.00
2. Pool Slide, Drop Slide or Water Slide, structural requirements ^c	\$600.00	\$240.00	\$240.00
3. Public Swimming Pool, gutter type	\$1,800.00	\$1,000.00	\$240.00
4. Public Swimming Pool, skimmer type	\$1,500.00	\$1,000.00	\$240.00
5. Water Attraction (including interactive play attractions)	\$1,800.00	\$1,000.00	\$240.00
6. Public Whirlpool	\$1,500.00	\$1,000.00	\$240.00
7. Alternate and Experimental Design	\$2,100.00	\$1,350.00	\$300.00

a No additional fee required if submitted with public swimming pool or water attraction.

b Fee required per submittal of pool slides or drop slides.

c Applies to pool slides over 6 feet (1.8 m) in height measured from the slide entrance to the deck of the pool or water attraction.

Table 302.68-2

**Plan Review Fees For Public Swimming Pools, Water Attractions and Associated Slides
Where Department Staff Do Not Perform Construction Inspections**

Type of Pool, Water Attraction or Equipment	Fee		
	Initial Construction	Modification	Revision to Previously Approved Plans
1. Pool Slide, Drop Slide or Water Slide, functional requirements ^{a, b}	\$540.00	\$240.00	\$240.00
2. Pool Slide, Drop Slide or Water Slide, structural requirements ^c	\$600.00	\$240.00	\$240.00
3. Public Swimming Pool, gutter type	\$1,200.00	\$400.00	\$240.00
4. Public Swimming Pool, skimmer type	\$900.00	\$400.00	\$240.00
5. Water Attraction	\$1,200.00	\$400.00	\$240.00
6. Public Whirlpool	\$900.00	\$400.00	\$240.00
7. Alternate and Experimental Design	\$1,500.00	\$750.00	\$300.00

a No additional fee required if submitted with public swimming pool or water attraction.

b Fee required per submittal of pool slides or drop slides.

c Applies to pool slides over 6 feet (1.8 m) in height measured from the slide entrance to the deck of the pool or water attraction.

History: Emerg. cr. eff. 10-1-93; cr. [Register, March, 1994, No. 459](#), eff. 4-1-94; r. and recr., [Register, November, 2000, No. 539](#), eff. 12-1-00; [CR 02-002](#): am. (1), (2) and Table 2.68-1, cr. Table 2.68-2 [Register April 2003 No. 568](#), eff. 5-1-03; [CR 04-052](#): am. (1) and (2) and Tables 2.68-1 and 2.68-2, cr. (3) (d) [Register January 2005 No. 589](#), eff. 2-1-05; [CR 05-038](#): r. (3) (a) and (c) [Register October 2005 No. 598](#), eff. 11-1-05; [CR 08-039](#): am. (3) (d) and Tables 2.68-1 and 2.68-2 [Register November 2008 No. 635](#), eff. 12-1-08; [EmR0934](#): emerg. cr. (3) (a), eff. 1-1-10; [CR 09-116](#): cr. (3) (a), am. (3) (d) and Tables 2.68-1 and 2.68-2 [Register May 2010 No. 653](#), eff. 6-1-10; correction in (2), (3) (a) 2., (b) made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#).

Chapter SPS 305

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Note: Corrections made in this chapter were made under s. 13.93 (2m) (b) 1., 7. and 14. Stats., [Register, October, 1996, No. 490](#) and February, 1997, No. 494. Sections Comm 5.003 (10g), (27y) and (32s), 5.37, 5.38, 5.383, 5.385 and 5.387 were created as emergency rules, effective June 1, 2007, but were not adopted as permanent rules. Chapter Comm 5 was renumbered chapter SPS 305 under s. 13.92 (4) (b) 1., Stats., [Register December 2011 No. 672](#).

SPS 305.001 Purpose. This chapter is to protect public and employee health, safety, and welfare by establishing minimum standards for the qualifications and responsibilities of persons and businesses that are required or permitted to obtain licenses, certifications, registrations, or enrollment under chs. [101](#), [145](#), and [167](#), Stats.

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; CR 16-093: am. [Register June 2018 No. 750](#), eff. 8-1-18.

SPS 305.002 Scope. This chapter applies to any person or business engaging or offering to engage in an activity or provide a service for which a license, certification, registration, or enrollment is required or desired under chs. [101](#), [145](#), and [167](#), Stats.

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; am. [Register, April, 2000, No. 532](#), eff. 5-1-00; CR 16-093: am. [Register June 2018 No. 750](#), eff. 8-1-18.

SPS 305.003 Definitions. In this chapter:

(1) “Approved” means accepted by the department.

(2) “ASME” means American society of mechanical engineers.

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(2m) “ASSE” means American society of sanitary engineering.

(3) “Automatic fire sprinkler contractor” has the meaning specified under s. 145.01 (1), Stats.

Note: Under section 145.01 (1), Stats., “automatic fire sprinkler contractor” means any individual, firm or corporation who has paid the annual license fee and obtained a license to conduct a business in the design, installation, maintenance or repair of automatic fire sprinkler systems.

(4) “Automatic fire sprinkler system” has the meaning specified under s. 145.01 (2), Stats.

Note: Under s. 145.01 (2), Stats., “automatic fire sprinkler system”, for fire protection purposes, means an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The system includes a suitable water supply, such as a gravity tank, fire pump, reservoir or pressure tank or connection beginning at the supply side of an approved gate valve located at or near the property line where the pipe or piping system provides water used exclusively for fire protection and related appurtenances and to standpipes connected to automatic sprinkler systems. The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, structure or area, generally overhead, and to which sprinklers are connected in a systematic pattern. The system includes a controlling valve and a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area.

(5) “Automatic fire sprinkler system apprentice” has the meaning specified under s. 145.01 (3), Stats.

Note: Under s. 145.01 (3), Stats., “automatic fire sprinkler system apprentice” means any person other than an automatic fire sprinkler system contractor or a journeyman automatic fire sprinkler system fitter who is engaged in learning and assisting in the installation of automatic fire sprinkler systems and who is indentured under ch. 106, Stats.

(6) “Blasting” means any method of loosening, moving or shattering masses of solid matter by use of an explosive.

(7) “Blasting operation” means any enterprise or activity involving blasting.

(8) “Branch” means an office, other than the main business office, involved in the sales of manufactured homes that advertises as a sales location, displays new or used homes, takes sales calls, is staffed by licensed salespersons, has signage of a licensed dealer, and accepts offers or contracts on manufactured homes.

(9) “Broker” means a manufactured home dealer who has no sales lot, no inventory and no ownership interest in the manufactured homes being sold.

(10) “Building permit” means an official document or certificate granting permission to perform construction or erosion control work, except for electrical, plumbing or HVAC, on a one- or 2-family dwelling.

(11) “Business establishment” means any industrial or commercial organization or enterprise, including but not limited to a proprietorship, partnership, firm, business trust, joint venture, syndicate, corporation or association.

(12) “Cash price” means the manufactured home dealer asking price including dealer installed options and accessories and additional dealer mark-up, profit and transportation charges, minus the dollar value of cash discounts.

(13) “Cathodic protection tester” means a person who demonstrates an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping systems and metal tanks.

(14) “Conflict of interest” means a certified inspector inspecting work in which the inspector or the inspector’s employer, other than the state or a municipality, has participated or has a monetary or personal interest.

(15) “Conveyance” has the meaning defined in ch. SPS 318.

(16) “Corrosion expert” means a person who is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks by reason of thorough knowledge of the physical sciences and the principles of en-

gineering and mathematics acquired by a professional education and related practical experience.

(17) “Damage” means defects caused by reasons other than normal wear through home age and usage.

(18) “Department” means the department of safety and professional services.

(19) “Direct supervision” means to assume the responsibility of an activity of others and its results by providing oversight and guidance at the site where the activity is being conducted.

(20) “Dwelling contractor” means any person, firm or corporation engaged in the business of performing construction or erosion control work on a one- or 2- family dwelling.

Note: Pursuant to s. 101.654 (1) (b), Stats., “dwelling contractor” does not include an owner of a dwelling who resides or will reside in the dwelling.

(21) “Electrical construction” means the installation of electrical wiring. “Electrical construction” does not include the maintenance, repair or fabrication of electrical equipment or the installation of electrical wiring and equipment covered by ch. PSC 114.

(22) “Electrical wiring” has the meaning given in s. 101.80 (1m), Stats.

Note: Under s. 101.80 (1m), Stats., “electrical wiring” means all equipment, wiring, material, fittings, devices, appliances, fixtures, and apparatus used for the production, modification, regulation, control, distribution, utilization, or safeguarding of electrical energy for mechanical, chemical, cosmetic, heating, lighting, or similar purposes, as specified under the state electrical wiring code. “Electrical wiring” does not include the equipment, wiring, material, fittings, devices, appliances, fixtures, and apparatus used by a public utility, an electric cooperative, or a wholesale merchant operator for the purpose of generating, transmitting, distributing, or controlling heat, light, power, or natural gas to its customers or members.

(23) “Financial statement” means a balance sheet showing assets, liabilities and net worth.

(24) “Fireworks” has the meaning specified under s. 167.10 (1), Stats.

Note: Under s. 167.10 (1), Stats., “fireworks” means anything manufactured, processed or packaged for exploding, emitting sparks or combustion which does not have another common use, but does not include any of the following:

- (a) Fuel or a lubricant.
- (b) A firearm cartridge or shotgun shell.
- (c) A flare used or possessed or sold for use as a signal in an emergency or in the operation of a railway, aircraft, watercraft or motor vehicle.
- (d) A match, cigarette lighter, stove, furnace, candle, lantern or space heater.
- (e) A cap containing not more than one-quarter grain of explosive mixture, if the cap is used or possessed or sold for use in a device which prevents direct bodily contact with a cap when it is in place for explosion.
- (f) A toy snake which contains no mercury.
- (g) A model rocket engine.
- (h) Tobacco and a tobacco product.
- (i) A sparkler on a wire or wood stick not exceeding 36 inches in length that is designed to produce audible or visible effects or to produce audible and visible effects.
- (j) A device designed to spray out paper confetti or streamers and which contains less than one-quarter grain of explosive mixture.
- (k) A fuseless device that is designed to produce audible or visible effects or audible and visible effects, and that contains less than one-quarter grain of explosive mixture.
- (L) A device that is designed primarily to burn pyrotechnic smoke-producing mixtures, at a controlled rate, and that produces audible or visible effects, or audible and visible effects.
- (m) A cylindrical fountain that consists of one or more tubes and that is classified by the federal department of transportation as a Division 1.4 explosive, as defined in 49 CFR 173.50.
- (n) A cone fountain that is classified by the federal department of transportation as a Division 1.4 explosive, as defined in 49 CFR 173.50.

(25) “General supervision” means to assume the responsibility of an activity of others and its results without being present at the site where the activity is being conducted.

(26) “HVAC” means heating, ventilating and air conditioning.

(27) “HVAC equipment” means materials, piping, fittings, devices, appliances, apparatus, controls and control wiring used as part of or in connection with permanent heating, ventilating, air conditioning or exhausting systems serving buildings. HVAC equipment does not include residential bathroom fans and

kitchen hoods, water heaters, process heating equipment, and space heaters such as masonry fireplaces and chimneys, factory-built fireplaces and venting systems, decorative gas fireplaces, and wood-burning stoves.

(28) “Incompetence” means conduct which evidences a lack of competence or ability to discharge the duty required to protect the health, safety and welfare of the public, lack of knowledge of the fundamental principles of a particular trade or practice, or an inability to apply those principles, or failure to maintain competency in the current practices and methods applicable to the activity and the state statutes and rules governing the activity.

(29) “Journeyman automatic fire sprinkler fitter” has the meaning specified under s. 145.01 (6), Stats.

Note: Under s. 145.01 (6), Stats., “journeyman automatic fire sprinkler fitter” means any person other than an automatic fire sprinkler contractor who is engaged in the practical installation of automatic fire sprinkler systems.

(30) “Journeyman plumber” has the meaning specified under s. 145.01 (7), Stats.

Note: Under s. 145.01 (7), Stats., “journeyman plumber” means any person other than a master plumber, who is engaged in the practical installation of plumbing.

(31) “Journeyman plumber-restricted” means a person licensed under s. 145.14, Stats.

(32) “Licensee” means any manufactured home dealer or manufactured home salesperson or any person who is both a manufactured home dealer and a manufactured home salesperson.

(33) “Lift” means a conveyance device covered under the scope of American Society of Mechanical Engineers (ASME) A18.1a – Safety Standard for Platform Lifts and Stairway Chairlifts.

(34) “Liquefied petroleum gas” has the meaning specified under s. 101.16 (1) (b), Stats.

Note: Section 101.16 (1) (b), Stats., reads: “‘Liquefied petroleum gas’ means any material which is composed predominantly of, or any mixtures of, any of the following hydrocarbons including their isomers:

1. Propane.
2. Propylene.
3. Butane.
4. Butylene.

(35) “Listed device” has the meaning specified under s. 167.10 (1) (e), (f) and (i) to (n), Stats.

Note: See the note after the definition of “fireworks”, sub. (18), for the statutory language of s. 167.10 (1) (e), (f) and (i) to (n).

(36) “Main business office” means an office involved in the sales of manufactured homes that is the primary management location of the licensed manufactured home dealer.

(37) “Manufactured home” has the meaning given in s. 101.91 (2), Stats.

Note: Under s. 101.91 (2), Stats., “manufactured home” means any of the following:

(am) A structure that is designed to be used as a dwelling with or without a permanent foundation and that is certified by the federal department of housing and urban development as complying with the standards established under 42 USC 5401 to 5425.

(c) A mobile home, unless a mobile home is specifically excluded under the applicable statute.

(38) “Manufactured home dealer” has the meaning given in s. 101.91 (3), Stats., except for a person who sells no more than one new or used manufactured home in any one calendar year.

Note: Under s. 101.91 (3), Stats., “manufactured home dealer” means a person who, for a commission or other thing of value, sells, exchanges, buys or rents, or offers or attempts to negotiate a sale or exchange of an interest in, manufactured homes or who is engaged wholly or partially in the business of selling manufactured homes, whether or not the manufactured homes are owned by the person, but does not include:

- (a) A receiver, trustee, personal representative, guardian, or other person appointed by or acting under the judgment or order of any court.
- (b) Any public officer while performing that officer’s official duty.
- (c) Any employee of a person enumerated in par. (a) or (b).
- (d) Any lender, as defined in s. 421.301 (22).

(e) A person transferring a manufactured home used for that person’s personal, family or household purposes, if the transfer is an occasional sale and is not part of the business of the transferor.

(39) “Manufactured home community” has the meaning given in s. 101.91 (5m), Stats.

Note: Under s. 101.91 (5m), Stats., “manufactured home community” means any plot or plots of ground upon which 3 or more manufactured homes that are occupied for dwelling or sleeping purposes are located. “Manufactured home community” does not include a farm where the occupants of the manufactured homes are the father, mother, son, daughter, brother or sister of the farm owner or operator or where the occupants of the manufactured homes work on the farm.

(40) “Material hoist” has the meaning as given in s. 101.981 (1) (g), Stats.

Note: Section 101.981 (1) (g), Stats., reads: “Material hoist” means a hoist, other than a personnel hoist, that is used to raise or lower materials during construction, alteration, or demolition of a building or structure.

(41) “Master plumber” has the meaning specified under s. 145.01 (8), Stats.

Note: Under s. 145.01 (8), Stats., “master plumber” means any person skilled in the planning, superintending and the practical installation of plumbing and familiar with the laws, rules and regulations governing the same.

(42) “Master plumber-restricted” means a person licensed under s. 145.14, Stats.

(43) “Misconduct” means an act performed by an individual relating to the responsibilities or duties for which the individual has been licensed, registered or certified that jeopardizes the interests of the public, including violation of federal or state laws, local ordinances or administrative rules; preparation of deficient or falsified reports; failure to submit information or reports required by law or contract when requested by the municipality or the department; conduct which evidences a lack of trustworthiness; misrepresentation of qualifications such as education, experience or certification; illegal entry of premises; misuse of funds; or misrepresentation of authority.

(44) “Multipurpose piping system” means a type of water distribution system conveying potable water to plumbing fixtures and appliances and automatic fire sprinklers with the intention of serving both domestic water needs and fire protection needs within a one- or 2-family dwelling or manufactured dwelling.

(45) “Municipality” means a city, village, town or county.

(46) “Negligence” means the failure to exercise the degree of care and judgment to protect public health and safety normally expected of an individual performing activities within the scope of a license, certification or registration category.

(47) “Net worth” means the difference between the asset and liability values on a financial statement. Negative net worth is the excess of liabilities over assets.

(48) “New manufactured home” has the meaning given in s. 101.91 (11), Stats.

Note: Under s. 101.91 (11), Stats., “new manufactured home” means a manufactured home that has never been occupied, used or sold for personal or business use.

(49) “Non-broker” means a manufactured home dealer who has a sales lot, inventory or ownership interest in the manufactured homes being sold.

(50) “PECFA” means petroleum environmental cleanup fund award, as established in s. 292.63, Stats.

Note: Authority over sub. (50) was transferred to the Department of Natural Resources (DNR) by 2013 Wis. Act 20, s. 9138 (7) (f). Sub. (50) is subject to future rulemaking by DNR. See also ss. SPS 305.80 and 305.81 and ch. NR 747.

(51) “Personnel hoist” has the meaning as given in s. 101.981 (1) (h), Stats.

Note: Section 101.981 (1) (h), Stats., reads: “Personnel hoist” means a hoist that is installed inside or outside a building or structure during the construction, alteration, or demolition of the building or structure and that is used to raise and lower workers, other personnel, and materials which the hoist is designed to carry.

(52) “Pipelayer” has the meaning specified under s. 145.01 (9), Stats.

Note: Under s. 145.01 (9), Stats., “pipelayer” means a person registered under s. 145.07 (11).

(53) “Plumbing” has the meaning specified under s. 145.01 (10), Stats.

Note: Section 145.01 (10), Stats., reads:

(10) PLUMBING. (a) “Plumbing” means:

1. All piping, fixtures, appliances, equipment, devices, and appurtenances in connection with water supply systems, water distribution systems, wastewater drainage systems, reclaimed water systems, and stormwater use systems, including hot water storage tanks, water treatment devices, and water heaters connected with these systems and also includes the installation thereof.

2. The construction, connection, installation, service, or repair of any drain or wastewater piping system that connects to the mains or other terminal within the bounds of, or beneath an area subject to easement for highway purposes, including private sewage systems and stormwater treatment and dispersal systems, and the alteration of any such systems, drains or wastewater piping.

3. The construction, connection, installation, service, or repair of water service piping that connects to the main or other water utility service terminal within the bounds of, or beneath an area subject to easement for highway purposes and its connections.

4. The water pressure system other than municipal systems as provided in ch. 281.

5. A plumbing and drainage system so designed and vent piping so installed as to keep the air within the system in free circulation and movement; to prevent with a margin of safety unequal air pressures of such force as might blow, siphon or affect trap seals, or retard the discharge from plumbing fixtures, or permit sewer air to escape into the building; to prohibit cross-connection, contamination or pollution of the water supply and distribution systems; and to provide an adequate supply of water to properly serve, cleanse and operate all fixtures, equipment, appurtenances and appliances served by the plumbing system.

(br) “Plumbing” does not include any of the following:

1. A rainwater gutter or downspout down to the point that it discharges into a plumbing system, a subsoil drain, or a foundation drain.

2g. A process water reuse system if the process water reuse system is not connected to any plumbing fixture or appliance.

2m. A stormwater culvert under a roadway or walkway that is placed there only to equalize the water level from one end of the culvert to the other end.

3. The practical installation of process piping within a sewage disposal plant.

(54) “Plumbing appliance” means any one of a class of plumbing devices which is intended to perform a special function. The operation or control of the appliance may be dependent upon one or more energized components, such as motors, controls, heating elements, or pressure or temperature sensing elements. The devices may be manually adjusted or controlled by the user or operator, or may operate automatically through one or more of the following actions: a time cycle, a temperature range, a pressure range, a measured volume or weight.

(55) “Plumbing apprentice” has the meaning specified under s. 145.01 (11), Stats.

Note: Under s. 145.01 (11), Stats., “plumbing apprentice” means any person other than a journeyman or master plumber who is engaged in learning and assisting in the installation of plumbing and drainage.

(56) “Place of employment” has the meaning specified under s. 101.01 (11), Stats.

Note: Under s. 101.01 (11), Stats., “place of employment” includes every place, whether indoors or out or underground and the premises appurtenant thereto where either temporarily or permanently any industry, trade or business is carried on, or where any process or operation, directly or indirectly related to any industry, trade or business, is carried on, and where any person is, directly or indirectly, employed by another for direct or indirect gain or profit, but does not include any place where persons are employed in private domestic service which does not involve the use of mechanical power or in farming. “Farming” includes those activities specified in s. 102.04 (3), and also includes the transportation of farm products, supplies or equipment directly to the farm by the operator of said farm or employees for use thereon, if such activities are directly or indirectly for the purpose of producing commodities for market, or as an accessory to such production. When used with relation to building codes, “place of employment” does not include an adult family home, as defined in s. 50.01 (1), or, except for the purposes of s. 101.11, a previously constructed building used as a community-based residential facility, as defined in s. 50.01 (1g), which serves 20 or fewer unrelated residents.

(57) “POWTS” means private onsite wastewater treatment system and has the meaning specified under s. 145.01 (12), Stats., for “private sewage system”.

Note: Under s. 145.01 (12), Stats., “private sewage system” means a sewage treatment and disposal system serving a single structure with a septic tank and soil absorption field located on the same parcel as the structure. This term also means an alternative sewage system approved by the department including a substitute for the septic tank or soil absorption field, a holding tank, a system serving more than one structure or a system located on a different parcel than the structure. A private sewage system may be owned by the property owner or by a special purpose district.

(58) “Private interceptor main sewer” has the meaning specified under s. SPS 381.01 (193).

Note: Under s. SPS 381.01 (193) “private interceptor main sewer” means a sewer serving 2 or more buildings and not part of the municipal sewer system.

(59) “Private water main” has the meaning specified under s. SPS 381.01 (195).

Note: Under s. SPS 381.01 (195) “private water main” means a water main serving 2 or more buildings and not part of the municipal water system.

(60) “Process piping” means that piping which is separated from a water supply system or drain system by the appropriate methods or means specified under ch. SPS 382 and is part of a system used exclusively for refining, manufacturing, industrial or shipping purposes of every character and description.

(61) “Public building” has the meaning specified under s. 101.01 (12), Stats.

Note: Under s. 101.01 (12), Stats., “public building” means any structure, including exterior parts of such building, such as a porch, exterior platform or steps providing means of ingress or egress, used in whole or in part as a place of resort, assemblage, lodging, trade, traffic, occupancy, or use by the public or by 3 or more tenants. When used in relation to building codes, “public building” does not include a previously constructed building used as a community-based residential facility as defined in s. 50.01 (1g) which serves 20 or fewer unrelated residents or an adult family home, as defined in s. 50.01 (1).

(63) “Registered learner” has the meaning specified under s. 145.01 (13), Stats.

Note: Under s. 145.01 (13), Stats., “registered learner” means a person, other than a restricted plumber licensee, who is learning a limited type of plumbing and is engaged in assisting a restricted plumber licensee.

(65) “Restricted plumber licensee” has the meaning specified under s. 145.01 (14), Stats.

Note: Under s. 145.01 (14), Stats., “restricted plumber licensee” means any person licensed as a master plumber (restricted) or a journeyman plumber (restricted) under s. 145.14, Stats.

(66) “Retail purchaser” means any purchaser not licensed as a manufactured home dealer or a manufactured home salesperson.

(67) “Sanitary building sewer” has the meaning specified under s. SPS 381.01 (45).

Note: Under s. SPS 381.01 (45) “sanitary building sewer” means a building sewer which conveys wastewater consisting in part of domestic wastewater.

(68) “Site” means any plot of land which is owned or rented, and used or intended to be used for the accommodation of a manufactured home for residential purposes.

(69) “Storm building sewer” has the meaning specified under s. SPS 381.01 (46).

Note: Under s. SPS 381.01 (46) “storm building sewer” means a building sewer which conveys storm water wastes or clear water wastes, or both.

(70) “UDC” means chs. SPS 320 to 325, the Wisconsin uniform dwelling code.

(71) “Used manufactured home” has the meaning given in s. 101.91 (12), Stats.

Note: Under s. 101.91 (12), Stats., “used manufactured home” means a manufactured home that has previously been occupied, used or sold for personal or business use.

(72) “Utility contractor” has the meaning specified under s. 145.01 (15), Stats.

(73) “Water service” has the meaning specified under s. SPS 381.01 (282).

Note: Under s. SPS 381.01 (282) “water service” means that portion of a water supply system from the water main or private water supply to the building control valve.

(74) “Water supply system” has the meaning specified under s. SPS 381.01 (284).

Note: Under s. SPS 381.01 (284) “water supply system” means the piping of a private water main, water service and water distribution system, fixture supply connectors, fittings, valves, and appurtenances through which water is conveyed to points of usage such as plumbing fixtures, plumbing appliances, water using equipment or other piping systems to be served.

(75) “Year” means 12 consecutive months.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; corrections made under s. 13.93 (2m) (b), 6. and 7., Stats., Register, October, 1996, No. 490; cr. (1m), (32m), am. (7), (15), (16), (33), (36), (37) and (42), r. (11); Register, March, 1998, No. 507, eff. 4-1-98; r. (12), cr. (30m), am. (32), Register, April, 2000, No. 532, eff. 5-1-00; CR 00-159: cr. (48m), Register September 2001 No. 549 eff. 10-1-01; CR 04-134: cr. (6m), (6s), (8m), (11), (17m), (26m), (27e), (27m), (27s), (27w), (32e),

(32h), (46m), (47m), and (48s) **Register June 2005 No. 594**, eff. 7-1-05; **CR 04-058**: am. (32m) **Register February 2006 No. 602**, eff. 5-1-06; **CR 06-031**: am. (22) **Register October 2006 No. 610**, eff. 11-1-06; emerg. cr. (10g), (27y) and (32s), eff. 6-1-07; **CR 06-127**: r. and recr. (9), cr. (10m), renun. (17m) and (18) to be (18) and (19), r. (19), **Register September 2007 No. 621**, eff. 10-1-07; emerg. cr. (10g), (27y) and (32s), eff. 6-1-07; **CR 07-089**: cr. (10g), (26t), (27y) and (32s) **Register June 2008 No. 630**, eff. 7-1-08; **CR 08-030**: am. (10g) (a) **Register December 2008 No. 636**, eff. 1-1-09; **CR 08-092**: cr. (26x) **Register May 2009 No. 641**, eff. 6-1-09; **CR 09-028**: r. and recr. (17) **Register August 2010 No. 656**, eff. 9-1-10; **CR 11-020**: renun. (1m) to (32h) to be (2) to (48), (32m) to (52) to be (50) to (75), cr. (49), **Register December 2011 No. 672**, eff. 1-1-12; correction in (18), (58), (59), (60), (67), (68), (70), (73), (74), as renumbered, made under s. 13.92 (4) (b) 6., 7., Stats., **Register December 2011 No. 672**; **CR 13-014**: r. and recr. (15), r. (62) **Register September 2013 No. 693**, eff. 10-1-13; correction in (50) made under s. 13.92 (4) (b) 7., Stats., **Register October 2013**; **CR 14-020**: am. (15) **Register August 2014 No. 704**, eff. 9-1-14; **CR 14-010**: r. and recr. (15) **Register August 2014 No. 704**, eff. 9-1-14; correction in (64) made under s. 13.92 (4) (b) 7., Stats.; **CR 23-006**: cr. (2m) **Register September 2023 No. 813**, eff. 10-1-23.

SPS 305.004 Incorporation of standards by reference. The following standards of the American Welding Society are hereby incorporated by reference into this chapter:

- (1) D1.1-10, Structural Welding Code — Steel.
- (2) D 1.2-08, Structural Welding Code — Aluminum.
- (3) D1.3-08, Structural Welding Code — Sheet Steel.
- (4) D 1.6-07, Structural Welding Code — Stainless Steel.

Note: Copies of the American Welding Society (AWS) standards can be purchased from Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112-5776, telephone 800-854-7179, or through the AWS web site at www.aws.org/.

Note: Copies of standards incorporated by reference are on file in the offices of the department and the legislative reference bureau.

History: **CR 03-075**: cr. **Register June 2004 No. 582**, eff. 8-1-04; **CR 07-089**: am. (1) **Register June 2008 No. 630**, eff. 7-1-08; **CR 11-020**: am. (1), renun. (2) to be (3) and amend, cr. (2), (4) **Register December 2011 No. 672**, eff. 1-1-12.

Subchapter I — General Requirements

Note: Authority over registrations under ss. **SPS 305.80** and **305.81** was transferred to the Department of Natural Resources (DNR) under **2013 Wis. Act 20**, s. **9138 (7) (f)**. For purposes of administering registrations under ss. **SPS 305.80** and **305.81** under subchapter I, “department” means DNR.

Note: Authority over certifications or registrations under ss. **SPS 305.68** and **305.82** to **305.89** was transferred to the Department of Agriculture, Trade and Consumer Protection (DATCP) under **2013 Wis. Act 20**, s. **9138 (3) (fm)** and (4) (f). For purposes of administering certifications or registrations under ss. **305.68** and **SPS 305.82** to **305.89** under subchapter I, “department” means DATCP.

SPS 305.01 Application. (1) Application for a license, certification, registration, or enrollment or a license, certification, registration, or enrollment examination covered under this chapter shall be submitted on a form prescribed by the department.

Note: Applications and related forms for licenses, certifications, registrations, or enrollment covered under subchapters II to VII and IX and X of this chapter are available from the Division of Industry Services at P.O. Box 7082, Madison, WI 53707-7082; or at telephone (608) 261-8467 or (877) 617-1565 or 411 (Telecommunications Relay); or at the Division’s website at <http://dps.wi.gov/programs/industry-services>.

Note: Applications and related forms for registrations covered under ss. **SPS 305.80** and **305.81** are available from the Department of Natural Resources at P.O. Box 7921, Madison, WI 53707-7921; or at the Department’s Web site at <http://dnr.wi.gov/topic/brownfields/pecfa.html>.

Note: Applications and related forms for certifications or registrations covered under ss. **SPS 305.68** and **305.82** to **305.89** are available from the Department of Agriculture, Trade and Consumer Protection at P.O. Box 8911, Madison, WI 53708-8911; or at telephone 608-224-4929; or at the Department’s Web site at http://datcp.wi.gov/Pages/Programs_Services/PetroleumHazStorageTanks.aspx.

(2) An application for a license, certification or registration which either requires or recognizes the attendance at or completion of educational courses as a qualification for the license, certification or registration shall be accompanied by such evidence, including but not limited to transcripts, that verifies fulfillment of the prerequisite.

(3) Pursuant to s. **101.022**, Stats., the department may not issue or renew any license, certification, registration, or enrollment under this chapter unless the applicant for the license, certification, registration, or enrollment includes his or her social security

number, or in the case of a license, certification, registration, or enrollment for a business, the applicant includes the federal employer identification number. The department shall consider the failure by the applicant to provide a social security number or federal employer identification number as an incomplete application and shall not process the application further until the appropriate number is provided.

(4) A business having multiple locations covered under one federal employer identification number applying for any of the following licenses, certifications or registrations need not obtain a separate license, certification or registration for each location:

- (a) Dwelling contractor.
- (b) Electrical contractor.
- (c) UDC inspection agency.
- (d) HVAC contractor.
- (e) PECFA consulting firm.
- (f) Tank specialty firm.
- (g) Elevator contractor.
- (h) Gas supplier.
- (j) Inspection agency.

History: Cr. **Register, October, 1996, No. 490**, eff. 11-1-96; am. (1) and (2), cr. (3), **Register, April, 2000, No. 532**, eff. 5-1-00; **CR 03-075**: cr. (4) **Register June 2004 No. 582**, eff. 8-1-04; **CR 07-007**: am. (4) (a) **Register August 2007 No. 620**, eff. 9-1-07; **CR 07-089**: cr. (4) (g) **Register June 2008 No. 630**, eff. 7-1-08; **CR 08-092**: cr. (4) (h) **Register May 2009 No. 641**, eff. 6-1-09; **EmR0904**: emerg. cr. (4) (i), eff. 3-2-09; **CR 08-110**: cr. (4) (i) **Register September 2009 No. 645**, eff. 10-1-09; **CR 14-010**: r. (4) (i) **Register August 2014 No. 704**, eff. 9-1-14; **CR 16-093**: am. (1), (3), cr. (4) (j) **Register June 2018 No. 750**, eff. 8-1-18; correction in (3) made under s. **13.92 (4) (b) 7.**, Stats., **Register June 2018 No. 750**.

SPS 305.02 Fees. (1) (a) Fees required for the various licenses, certifications, registrations, or enrollment and their processing under this chapter shall be determined in accordance with Table 305.02, except as provided in par. (b).

(b) 1. Pursuant to s. **145.05**, Stats., a person who holds a master plumber license, master plumber-restricted license, journeyman plumber license or journeyman plumber-restricted license and who is employed by a city of the first, second or third class as a plumbing inspector is not required to submit a license fee in order to renew his or her license.

2. A person who applies to renew his or her master plumber license, master plumber-restricted license, journeyman plumber license or journeyman plumber-restricted license without the license fee as permitted under subd. 1. shall provide evidence that he or she is a plumbing inspector for a first, second or third class city with the application for renewal.

Note: The exemption of not having to pay a license fee does not relieve an individual of fulfilling all other obligations or responsibilities to renew the license such as continuing education requirements.

(2) Fees required under this chapter for licenses, certifications, registrations, and enrollment and for processing examinations shall not be refundable.

(3) The department shall prorate a license, certification, registration, or enrollment fee on a monthly basis for the initial issuance of a license, certification, registration, or enrollment that is issued for less than the full license, certification, registration, or enrollment period.

(4) (a) The fee for a petition for variance submitted for a rule relative to this chapter shall be \$200.00, except as provided in par. (b).

(b) The fee for a petition for variance submitted and requested by the submitter to be reviewed on a priority basis shall be \$400.00.

(5) A fee of \$15.00 shall be charged to replace a lost or destroyed license, certification, registration, or enrollment.

**Table 305.02
FEES**

	License, Certification, Registration, or Enrollment Category	Type	Application Fee	Examination Fee	License, Certification, Registration, or Enrollment Fee
Subchapter II					
1.	Class 1 Blaster	License	\$15	\$30	\$100
2.	Class 2 Blaster	License	\$15	\$30	\$100
3.	Class 3 Blaster	License	\$15	\$30	\$100
4.	Class 4 Blaster	License	\$15	\$30	\$100
5.	Class 5 Blaster	License	\$15	\$30	\$100
6.	Class 6 Blaster	License	\$15	\$30	\$100
7.	Class 7 Blaster	License	\$15	\$30	\$100
8.	Fireworks Manufacturer	License	\$15	NA	\$70
Subchapter III					
9.	Dwelling Contractor	Certification	\$15	NA	\$25
10.	Dwelling Contractor Qualifier	Certification	\$15	NA	\$30
11.	Dwelling Contractor — Restricted	Certification	\$15	NA	\$25
12.	Manufactured Home Manufacturer	License	\$15	NA	\$900
13.	Manufactured Home Dealer — Main Business	License	\$15	NA	\$200
14.	Manufactured Home Dealer — Branch	License	\$15	NA	\$200
15.	Manufactured Home Salesperson	License	\$15	NA	\$16
16.	Manufactured Home Installer	License	\$15	NA	\$100
17.	Soil Tester	Certification	\$35	\$75	\$300
18.	Welder	Registration	\$15	NA	\$35
19.	Weld Test Conductor	Certification	\$15	\$20	\$80
21.	POWTS Maintainer	Registration	\$15	NA	\$90
Subchapter IV					
22.	Electrical Contractor	License	\$35	NA	\$200
24.	Master Electrician	License	\$35	\$30	\$200
24m.	Residential Master Electrician	License	\$35	\$30	\$200
24r.	Registered Master Electrician	Registration	\$35	NA	\$150
25.	Journeyman Electrician	License	\$35	\$30	\$100
25g.	Industrial Journeyman Electrician	License	\$35	\$30	\$100
25r.	Residential Journeyman Electrician	License	\$35	\$30	\$100
26.	Registered Electrician	Enrollment	\$15	NA	\$20
26e.	Electrical Apprentice	Registration	\$15	NA	\$15
26m.	Industrial Electrical Apprentice	Registration	\$15	NA	\$15
26s.	Residential Electrical Apprentice	Registration	\$15	NA	\$15
Subchapter V					
27.	Automatic Fire Sprinkler Contractor	License	\$25	\$100	\$2000
28.	Journeyman Automatic Fire Sprinkler Fitter	License	\$10	\$20	\$180
29.	Automatic Fire Sprinkler System Apprentice	Registration	\$15	NA	\$15
30.	Automatic Fire Sprinkler Contractor — Maintenance	Registration	\$25	\$50	\$400
31.	Automatic Fire Sprinkler Fitter — Maintenance	Registration	\$10	NA	\$60
32.	Automatic Fire Sprinkler System Tester	Registration	\$15	\$25	\$180
32m.	Automatic Fire Sprinkler System Tester Learner	Registration	\$15	NA	\$15
Subchapter VI					
33.	Boiler-Pressure Vessel Inspector	Certification	\$15	NA	\$120
34.	In-Service Field Inspector	Certification	\$15	NA	\$120
35.	Commercial Building Inspector	Certification	\$15	\$25	\$40
36.	Commercial Electrical Inspector	Certification	\$15	\$25	\$40
37.	Commercial Plumbing Inspector	Certification	\$15	\$25	\$40
37m.	Fire Detection, Prevention, and Suppression Inspector	Certification	\$15	NA	\$40
37s.	Inspection Agency	Registration	\$15	NA	\$40
38.	UDC-Construction Inspector	Certification	\$15	\$25	\$40
39.	UDC-Electrical Inspector	Certification	\$15	\$25	\$40
40.	UDC-HVAC Inspector	Certification	\$15	\$25	\$40
41.	UDC-Plumbing Inspector	Certification	\$15	\$25	\$40
42.	UDC Inspection Agency	Registration	\$15	NA	\$40
43.	Soil Erosion Inspector	Certification	\$15	NA	\$40
44.	Elevator Inspector	License	\$15	NA	\$120

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Table 305.02 (Continued)
FEES

	License, Certification, Registration, or Enrollment Category	Type	Application Fee	Examination Fee	License, Certification, Registration, or Enrollment Fee
45.	POWTS Inspector	Certification	\$15	\$25	\$40
	Subchapter VI (Continued)				
46.	Rental Weatherization Inspector	Certification	\$15	\$25	\$40
47.	Tank System Inspector**	Certification	\$20	\$15	\$50
	Subchapter VII				
48.	HVAC Contractor	Registration	\$15	NA	\$160
49.	HVAC Qualifier	Certification	\$15	\$25	\$60
50m.	Liquefied Gas Supplier	License	\$15	NA	\$60
50n.	Liquefied Gas Supplier — Restricted	License	\$15	NA	\$40
	Subchapter VIII				
51.	PECFA Consulting Firm*	Registration	\$20	NA	\$50
52.	PECFA Consultant*	Registration	\$20	NA	\$50
53.	Tank Specialty Firm**	Registration	\$20	NA	\$50
54.	Tank-System Site Assessor**	Certification	\$20	\$15	\$50
55.	Aboveground Tank System Installer**	Certification	\$20	\$15	\$50
56.	Underground Tank System Installer**	Certification	\$20	\$15	\$50
57.	Tank System Liner**	Certification	\$20	\$15	\$50
58.	Tank System Remover-Cleaner**	Certification	\$20	\$15	\$50
59.	Tank System Tightness Tester**	Certification	\$20	NA	\$50
60.	Cathodic Protection Tester**	Certification	\$20	NA	\$50
61.	Corrosion Expert**	Certification	\$20	NA	\$50
	Subchapter IX				
62.	Master Plumber	License	\$20	\$30	\$500
63.	Master Plumber-Restricted Service	License	\$20	\$30	\$500
64.	Master Plumber-Restricted Appliance	License	\$20	\$30	\$500
65.	Journeyman Plumber	License	\$10	\$20	\$180
66.	Journeyman Plumber-Restricted Service	License	\$10	\$20	\$180
67.	Journeyman Plumber-Restricted Appliance	License	\$10	\$20	\$180
68.	Plumbing Apprentice	Registration	\$15	NA	\$15
69.	Plumbing Learner-Restricted Appliance	Registration	\$15	NA	\$15
70.	Plumbing Learner-Restricted Service	Registration	\$15	NA	\$15
71.	Utility Contractor	License	\$10	\$30	\$500
72.	Pipelayer	Registration	\$15	NA	\$180
73.	Cross Connection Control Assembly Tester	Registration	\$15	NA	\$180
	Subchapter X				
74.	Elevator Contractor	License	\$15	NA	\$100
75.	Elevator Mechanic	License	\$15	\$50	\$90
76.	Elevator Mechanic-restricted	License	\$15	\$50	\$90
77.	Elevator Apprentice	Registration	\$15	NA	\$15
78.	Elevator Apprentice-restricted	Registration	\$15	NA	\$15
79.	Elevator Helper	Registration	\$15	NA	\$15
80.	Lift Mechanic	License	\$15	\$50	\$90
81.	Lift Apprentice	Registration	\$15	NA	\$15
82.	Lift Helper	Registration	\$15	NA	\$15

^a No fee if application is submitted electronically; \$15 application fee for a late renewal per s. SPS 305.07 (2) (b) 1. a.

* Authority for fees under Table 305.02 lines 51 and 52 was transferred to the Department of Natural Resources (DNR) under 2013 Wis. Act 20, s. 9138 (7) (f). Table 305.02 lines 51 and 52 are subject to future rulemaking by DNR. See also ss. SPS 305.80 and 305.81.

**Authority for fees under Table 305.02 lines 47 and 53 to 61 was transferred to the Department of Agriculture, Trade and Consumer Protection (DATCP) under 2013 Wis. Act 20, s. 9138 (3) (fm) and (4) (f). Table 305.02 lines 47 and 53 to 61 are subject to future rulemaking by DATCP. See also ss. SPS 305.68 and 305.82 to 305.89.

NA means Not Applicable

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; cr. line 11, renum. lines 11 to 63 to be 12 to 64; Register, March, 1998, No. 507, eff. 4-1-98; am. (1) to (3), (5) and Table 5.02, Register, April, 2000, No. 532, eff. 5-1-00; except Table 5.02 line 17 eff. 7-1-00; am. Table 5.02, Register, July, 2000, No. 535, eff. 9-1-00; CR 00-159: renumber Table 5.02 lines 37 to 65 to be lines 38 to 66, cr. line 37; Register September 2001 No. 549 eff. 10-1-01; CR 03-075: am. (1) (a) and Table 5.02 Register June 2004 No. 582, eff. 8-1-04; CR 04-134: cr. lines 11e, 11m and 11s of Table 5.02 Register June 2005 No. 594, eff. 7-1-05; CR 06-031: am. Table 5.02 Register October 2006 No. 610, eff. 11-1-06; CR 06-071: cr. line 11w Register November 2006 No. 611, eff. 12-1-06; CR 07-007: am. lines 9 and 10, cr. line 9m of Table 5.02 Register August 2007 No. 620, eff. 9-1-07; CR 06-127: am. Table 5.02 Line 49, cr. Table 5.02 Lines 54g and 54r, Register September 2007 No. 621, eff. 10-1-07; CR 07-089: am. Table 5.02 line 39, cr. lines 67 to 75 Register June 2008 No. 630, eff. 7-1-08; CR 08-039: am. (5) and Table 5.02 Register November 2008 No. 635, eff. 12-1-08; CR 08-092: cr. lines 50m and 50n of Table 5.02 Register May 2009 No. 641, eff. 6-1-09; EmR0904: emerg. cr. line 8m of Table 5.02, eff. 3-2-09; CR 08-110: cr. line 8m of Table 5.02 Register September 2009 No. 645, eff. 10-1-09; CR 09-046: am. lines 1 to 8, 13 to 15, 18 to 20, 29, 33, 34, 44, 50 and 68 to 70 of Table 5.02 Register March 2010 No. 651, eff. 4-1-10; CR 09-028: am. Table 5.02 lines 22, 24, 25, 26, cr. lines 24m, 25g, 25r, 26e, 26m, and 26s, r. line 23 Register August 2010 No. 656, eff. 9-1-10, except repeal of line 23, eff. 4-1-13; CR 10-039: am. Table 5.02 line 19, r. Table 5.02 line 20 Register November 2010 No. 659, eff. 12-1-10; CR 10-090: cr. Table 5.02 lines 50r to 50t Register January 2011 No. 661, eff. 2-1-11; CR 11-020: cr. Table 305.02 line 32m, Register December 2011 No. 672, eff. 1-1-12; correction in (1) (a), Table footnote ^a made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 12-007: r. Table 305.02 lines 50r. to 50t Register July 2012 No. 679, eff. 8-1-12; CR 13-014: r. Table 305.02 line 50 Register September 2013 No. 693, eff. 10-1-13; CR 14-010: r. Table 305.02 line 8m. Register August 2014 No. 704, eff. 9-1-14; EmR1415: emerg. cr. Table 305.02 line 24r., eff. 8-6-14; CR 14-049: cr. Table 305.02 line 24r. Register July 2015 No. 715, eff. 8-1-15; EmR1524: cr. Table 305.02 line 37m., eff. 11-21-15; CR 15-086: cr. Table 305.02 line

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37m., [Register June 2016 No. 726](#), eff. 7-1-16; [CR 16-093](#): am. (1) (a), (2), (3), (5), Table 305.02 (intro), line 26., cr. Table 305.02 line 37s. [Register June 2018 No. 750](#), eff. 8-1-18; [CR 23-006](#): am. Table 305.02 line 73. [Register September 2023 No. 813](#), eff. 10-1-23.

SPS 305.03 Petitions for variance. An individual may submit a petition for variance to any rule in this chapter in accordance with ch. [SPS 303](#).

Note: Many of the rules relating to credentials reflect specific statutory requirements; in such cases the department is not able to grant a petition for variance if it would supersede a statutory requirement.

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; correction made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#).

SPS 305.04 Processing times. (1) An application for a license, certification, registration, or enrollment covered under this chapter shall be granted or denied by the department within 21 calendar days after the department receives all of the application materials necessary to obtain the license, certification, registration, or enrollment.

Note: Pursuant to s. 227.116, Stats., the failure by the department to make a determination on an application results in the department having to prepare and file a report with the permit information center of the department. The failure by the department to make a determination on an application does not relieve a person from the obligation to comply with the requirements or qualifications of the license, certification, registration, or enrollment or to secure the license, certification, registration, or enrollment.

(2) (a) If the license, certification, registration, or enrollment application information is insufficient, the department shall request additional information within 21 calendar days of receipt of the application.

(b) If an applicant does not respond to a request by the department for additional information within 3 months after the date of the request, the department shall make a determination on the application based upon the information on hand.

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; am. (1) and (2) (a), [Register, April, 2000, No. 532](#), eff. 5-1-00; [CR 16-093](#): am. (1), (2) (a) [Register June 2018 No. 750](#), eff. 8-1-18.

SPS 305.05 Mailing. (1) Unless otherwise provided by law, all orders, notices and other papers may be served by the department by first class mail at the address on file with the department.

(2) A license, certification, registration, or enrollment holder shall be responsible for notifying the department of any change in mailing address.

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; am. (2), [Register, April, 2000, No. 532](#), eff. 5-1-00; [CR 16-093](#): am. (2) [Register June 2018 No. 750](#), eff. 8-1-18.

SPS 305.06 Terms. (1) A license, certification, registration, or enrollment issued under this chapter shall be valid for a period of time no longer than that specified in Table 305.06.

(2) A license, certification, registration, or enrollment issued under this chapter shall expire at midnight on the day or date of expiration of the term specified in Table 305.06.

**Table 305.06
TERMS**

	License, Certification, Registration, or Enrollment Category	Term	Expiration Date
	Subchapter II		
1.	Class 1 Blaster	4 years	Date of Issuance
2.	Class 2 Blaster	4 years	Date of Issuance
3.	Class 3 Blaster	4 years	Date of Issuance
4.	Class 4 Blaster	4 years	Date of Issuance
5.	Class 5 Blaster	4 years	Date of Issuance
6.	Class 6 Blaster	4 years	Date of Issuance
7.	Class 7 Blaster	4 years	Date of Issuance
8.	Fireworks Manufacturer	4 years	Date of Issuance
	Subchapter III		
9.	Dwelling Contractor	1 year	Date of Issuance
9m.	Dwelling Contractor Qualifier	2 years	Date of Issuance
10.	Dwelling Contractor — Restricted	1 year	Date of Issuance
11.	Manufactured Home Manufacturer	4 years	December 31
11e.	Manufactured Home Dealer — Main Business Office	4 years	Date of Issuance
11m.	Manufactured Home Dealer — Branch	4 years	Date of Issuance
11s.	Manufactured Home Salesperson	4 years	Date of Issuance
11w.	Manufactured Home Installer	4 years	Date of Issuance
12.	Soil Tester	4 years	June 30
13.	Welder	4 years	Date of Issuance
14.	Weld Test Conductor	4 years	Date of Issuance
16.	POWTS Maintainer	4 years	Date of Issuance
	Subchapter IV		
17.	Electrical Contractor	4 years	June 30
19.	Master Electrician	4 years	June 30
19m.	Residential Master Electrician	4 years	June 30
19r.	Registered Master Electrician	Permanent	NA
20.	Journeyman Electrician	4 years	June 30
20g.	Industrial Journeyman Electrician	4 years	June 30
20r.	Residential Journeyman Electrician	4 years	June 30
	Subchapter IV (Continued)		
21.	Registered Electrician	1 year	Date of Issuance
21e.	Electrical Apprentice	1 year	Date of Issuance
21m.	Industrial Electrical Apprentice	1 year	Date of Issuance
21s.	Residential Electrical Apprentice	1 year	Date of Issuance
	Subchapter V		

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Table 305.06 (Continued)
TERMS

	License, Certification, Registration, or Enrollment Category	Term	Expiration Date
22.	Automatic Fire Sprinkler Contractor	4 years	June 30
23.	Journeyman Automatic Fire Sprinkler Fitter	4 years	June 30
24.	Automatic Fire Sprinkler System Apprentice	1 year	Date of Issuance
25.	Automatic Fire Sprinkler Contractor-Maintenance	4 years	June 30
26.	Automatic Fire Sprinkler Fitter-Maintenance	4 years	June 30
27.	Automatic Fire Sprinkler System Tester	4 years	Date of Issuance
27m.	Automatic Fire Sprinkler System Tester Learner	1 year	Date of Issuance
	Subchapter VI		
28.	Boiler-Pressure Vessel Inspector	4 years	December 31
29.	In-Service Field Inspector	4 years	December 31
30.	Commercial Building Inspector	4 years	June 30
31.	Commercial Electrical Inspector	4 years	June 30
32.	Commercial Plumbing Inspector	4 years	June 30
32m.	Fire Detection, Prevention, and Suppression Inspector	4 years	June 30
32s.	Inspection Agency	4 years	Date of Issuance
33.	UDC-Construction Inspector	4 years	June 30
34.	UDC-Electrical Inspector	4 years	June 30
35.	UDC-HVAC Inspector	4 years	June 30
36.	UDC-Plumbing Inspector	4 years	June 30
37.	UDC Inspection Agency	4 years	Date of Issuance
38.	Soil Erosion Inspector	4 years	June 30
39.	Elevator Inspector	2 years	December 31
40.	POWTS Inspector	4 years	June 30
41.	Rental Weatherization Inspector	4 years	June 30
42.	Tank System Inspector**	2 years	Date of Issuance
	Subchapter VII		
43.	HVAC Contractor	4 years	Date of Issuance
44.	HVAC Qualifier	4 years	Date of Issuance
45m.	Liquefied Gas Supplier	2 years	Date of Issuance
45n.	Liquefied Gas Supplier — Restricted	2 years	Date of Issuance
	Subchapter VIII		
46.	PECFA Consulting Firm*	2 years	Date of Issuance
47.	PECFA Consultant*	2 years	Date of Issuance
48.	Tank Specialty Firm**	2 years	Date of Issuance
49.	Tank-System Site Assessor**	2 years	Date of Issuance
50.	Aboveground Tank System Installer**	2 years	Date of Issuance
51.	Underground Tank System Installer**	2 years	Date of Issuance
52.	Tank System Liner**	2 years	Date of Issuance
53.	Tank System Remover-Cleaner**	2 years	Date of Issuance
54.	Tank System Tightness Tester**	2 years	Date of Issuance
54g.	Cathodic Protection Tester**	2 years	Date of Issuance
54r.	Corrosion Expert**	2 years	Date of Issuance
	Subchapter IX		
55.	Master Plumber	4 years	March 31
56.	Master Plumber-Restricted Service	4 years	March 31
57.	Master Plumber-Restricted Appliance	4 years	March 31
58.	Journeyman Plumber	4 years	March 31
59.	Journeyman Plumber-Restricted Service	4 years	March 31
60.	Journeyman Plumber-Restricted Appliance	4 years	March 31
	Subchapter IX (Continued)		
61.	Plumbing Apprentice	1 year	Date of Issuance
62.	Plumbing Learner-Restricted Appliance	2 years	Date of Issuance
63.	Plumbing Learner-Restricted Service	2 years	Date of Issuance
64.	Utility Contractor	4 years	March 31
65.	Pipelayer	4 years	March 31
66.	Cross Connection Control Assembly Tester	4 years	Date of Issuance
	Subchapter X		
67.	Elevator Contractor	2 years	Date of Issuance
68.	Elevator Mechanic	2 years	Date of Issuance
69.	Elevator Mechanic-restricted	2 years	Date of Issuance
70.	Elevator Apprentice	4 years	Date of Issuance
71.	Elevator Apprentice-restricted	4 years	Date of Issuance
72.	Elevator Helper	4 years	Date of Issuance
73.	Lift Mechanic	2 years	Date of Issuance

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Table 305.06 (Continued)

TERMS

	License, Certification, Registration, or Enrollment Category	Term	Expiration Date
74.	Lift Apprentice	4 years	Date of Issuance
75.	Lift Helper	4 years	Date of Issuance

* Authority for terms under Table 305.06 lines 46 and 47 was transferred to the Department of Natural Resources (DNR) under 2013 Wis. Act 20, s. 9138 (7) (f). Table 305.06 lines 46 and 47 are subject to future rulemaking by DNR. See also ss. SPS 305.80 and 305.81.

** Authority for terms under Table 305.06 lines 42 and 48 to 54r was transferred to the Department of Agriculture, Trade and Consumer Protection (DATCP) under 2013 Wis. Act 20, s. 9138 (3) (fm) and (4) (f). Table 305.06 lines 42 and 48 to 54r are subject to future rulemaking by DATCP. See also ss. SPS 305.68 and 305.82 to 305.89.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. Table, line 36, Register, January, 1998, No. 505, eff. 2-1-98; renum. lines 11 to 63 to 12 to 64 and am. line 21 and 39, cr. line 11, Register, March, 1998, No. 507, eff. 4-1-98; am. Register, April, 2000, No. 532, eff. 5-1-00; except Table 5.06 line 17 eff. 7-1-00; CR 00-159: renum. Table 5.06, lines 37 to 65 to be 38 to 66, cr. line 37, Register September 2001 No. 549, eff. 10-1-01; CR 03-075: am. (2) and Table 5.06 Register June 2004 No. 582, eff. 8-1-04; CR 04-134: cr. lines 11e, 11m and 11s of Table 5.06 Register June 2005 No. 594, eff. 7-1-05; CR 05-025: am. Table 5.06 lines 28 and 29 Register October 2005 No. 598, eff. 11-1-05; CR 06-031: am. Table 5.06 Register October 2006 No. 610, eff. 11-1-06; CR 06-071: cr. line 11w Register November 2006 No. 611, eff. 12-1-06; CR 07-007: am. lines 9. and 10., cr. line 9m, of Table 5.06 Register August 2007 No. 620, eff. 9-1-07; CR 06-127: am. Table 5.06 Lines 42 and 49 to 53, cr. Table 5.06 Lines 54g and 54r, Register September 2007 No. 621, eff. 10-1-07; CR 07-089: cr. lines 67 to 75 of Table 5.06 Register June 2008 No. 630, eff. 7-1-08; CR 08-092: cr. lines 45m and 45n of Table 5.06 Register May 2009 No. 641, eff. 6-1-09; correction to numbering of lines 45m and 45n made under s. 13.92 (4) (b) 1., Stats., Register May 2009 No. 641; EmR0904: emerg. cr. line 8m of Table 5.06, eff. 3-2-09; CR 08-110: cr. line 8m of Table 5.06 Register September 2009 No. 645, eff. 10-1-09; CR 09-028: am. Table 5.06 line 21, cr. lines 19m, 20g, 20r, 21e, 21m, and 21s, r. line 18 Register August 2010 No. 656, eff. 9-1-10, except repeal of line 18, eff. 4-1-13; CR 10-039: am. Table 5.06 line 14, r. Table 5.06 line 15 Register November 2010 No. 659, eff. 12-1-10; CR 10-064: am. Table 5.06 line 66 Register December 2010 No. 660, eff. 1-1-11; CR 10-090: cr. Table 5.06 lines 45r to 45t Register January 2011 No. 661, eff. 2-1-11; CR 11-020: cr. Table 305.06 line 27m, Register December 2011 No. 672, eff. 1-1-12; correction in (1), (2) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 12-007: r. Table 305.06 lines 45r. to 45t, Register July 2012 No. 679, eff. 8-1-12; CR 13-014: r. Table 305.06 line 45 Register September 2013 No. 693, eff. 10-1-13; CR 14-010: r. Table 305.06 line 8m, column (5) Register August 2014 No. 704, eff. 9-1-14; EmR1415: emerg. cr. Table 305.06 line 19r., eff. 8-6-14; CR 14-049: cr. Table 305.06 line 19r. Register July 2015 No. 715, eff. 8-1-15; EmR1524: cr. Table 305.06 line 32m., eff. 11-21-15; CR 15-086: cr. Table 305.06 line 32m., Register June 2016 No. 726, eff. 7-1-16; CR 16-093: am. (1), (2), Table 305.06 (intro.), line 21., cr. Table 305.06 line 32s. Register June 2018 No. 750, eff. 8-1-18; CR 19-118: am. Table 305.06 line 39 Register May 2020 No. 773, eff. 6-1-20; CR 23-006: am. Table 305.06 line 66. Register September 2023 No. 813, eff. 10-1-23.

SPS 305.07 Renewal. (1) (a) Except under s. SPS 305.96, a notice of renewal shall be mailed by the department to a license, certification, registration, or enrollment holder at least 30 calendar days prior to the expiration of the license, certification, registration, or enrollment.

(b) Failure to receive a notice for renewal of a license, certification, registration, or enrollment shall not be considered as an excuse or good cause for failure to renew a license, certification, registration, or enrollment prior to the expiration of the license, certification, registration, or enrollment.

(2) (a) Except as provided in par. (b), upon receipt of the renewal application from the department, a person may apply to renew his or her license, certification, registration, or enrollment provided an application, a license, certification, registration, or enrollment fee and evidence of all renewal obligations, if any, are submitted to the department prior to the expiration date of the license, certification, registration, or enrollment.

Note: Qualification obligations for renewal are specified under the appropriate license, certification, registration, or enrollment category sections.

(b) 1. A person may apply to renew his or her license, certification, registration, or enrollment in accordance with par. (a) no later than one term after expiration of the license, certification, registration, or enrollment as specified in Table 305.06 in accordance with all of the following conditions:

a. An application fee as specified in s. SPS 305.02, Table 305.02 shall accompany the renewal application.

b. Any continuing education credit obtained after the expiration date of the license, certification, registration, or enrollment, but prior to one term after the expiration date of the license, certification, registration, or enrollment as specified in Table 305.06, that is needed to fulfill the renewal obligations shall be documented and filed with the department on a form prescribed by the department.

Note: The form to document late continuing education credit may be obtained from the Division of Industry Services at P.O. Box 7082, Madison, WI 53707-7082; or at telephone 608/261-8500 or 877/617-1565 or 411 (Telecommunications Relay).

2. The submission of a form under subd. 1. b. to the department shall include a \$25.00 processing fee.

3. a. Subdivisions 1. and 2. and par. (c) do not apply to a license, certification or registration issued under s. SPS 305.68 or ss. SPS 305.82 to 305.88.

b. A person who files for renewal after the expiration date of a license, certification or registration issued under s. SPS 305.68

or ss. SPS 305.82 to 305.88 shall comply with this chapter's requirements for initially receiving that license, certification or registration.

c. A person who files for renewal of a license, certification or registration issued under s. SPS 305.68, 305.84 or 305.85, and who has not obtained all continuing education credit required for renewal shall comply with this chapter's requirements for initially receiving that license, certification or registration.

d. For a license, certification or registration issued under s. SPS 305.68, 305.84 or 305.85, the time period for obtaining continuing education credits shall extend from the beginning date to the expiration date of that license, certification or registration.

(c) A person who files for renewal more than one term after expiration of his or her license, certification, registration, or enrollment may be reinstated by filing with the department an administrative fee of \$200.00, an application, and the application fee and the license, certification, registration, or enrollment fee specified in s. SPS 305.02, Table 305.02. The department may also require demonstration of competence by various methods including written or oral examination, documentation of relevant work experience in other jurisdictions, or documentation of education or experience in the field. Any education or examination required by the department may not be more extensive than the requirements in effect at the time of the request for reinstatement.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. Register, April, 2000, No. 532, eff. 5-1-00; am. (2), Register, May, 2001, No. 545, eff. 6-1-01; CR 03-075: r. and recr. (2) (c) Register June 2004 No. 582, eff. 8-1-04; CR 06-127: cr. (2) (b) 3., Register September 2007 No. 621, eff. 10-1-07; correction in (1) (a), (2) (b) 1. (intro.), a., b., 3. a., b., c., d., (c) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (2) (b) 1. b. Register August 2014 No. 704, eff. 9-1-14; CR 16-093: am. (1), (2) (a), (b) 1., (intro.), b., (c) Register June 2018 No. 750, eff. 8-1-18.

SPS 305.08 Continuing education. (1) PROGRAM SPECIFICATIONS. (a) Only courses, programs and seminars approved in writing by the department shall be used for credit to fulfill continuing education requirements.

(b) 1. Requests for a course, program or seminar to be recognized for approval shall be submitted in writing to the department.

2. Requests for approval shall include sufficient information to determine if the course, program or seminar complies with this subsection.

3. The department shall review and make a determination on a request for approval within 21 calendar days of receipt of the request and information necessary to complete the review.

(c) 1. Thirty minutes of attendance in an approved course, program or seminar shall be deemed equal to 0.5 hours of acceptable continuing education.

2. Continuing education credit for attendance in approved continuing education courses, programs or seminars in other than 30 minute increments shall be rounded down to the next half hour.

(d) Courses, programs and seminars to be considered for approval towards continuing education credit shall relate to the skills and knowledge of one or more license, certification or registration categories.

(e) 1. The department may limit credit approval to specific license, certification, or registration categories when approving a course, program, or seminar for continuing education credit.

2. a. Except as provided in subd. 2. c., the approval of a course, program or seminar for continuing education credit shall expire 5 years after the date of approval.

b. Approval of courses, programs or seminars for continuing education credit may be renewed. Renewal shall be in accordance with par. (b).

c. An approval of a course, program or seminar for continuing education credit under s. SPS 305.68 or subch. VIII shall expire either 3 years after the date of approval, or as otherwise specified in the approval.

3. The department may revoke the approval of a course, program or seminar for continuing education credit for any false statements, misrepresentation of facts or violation of the conditions on which the approval was based. The department may not revoke the approval of a course, program or seminar less than 30 calendar days prior to the course, program or seminar being held.

(f) 1. The individual or organization which had obtained the course, program or seminar approval shall maintain an attendance record of those individuals who have attended and completed the course, program or seminar for at least 5 years from the date of the course, program or seminar.

2. The attendance record shall include all of the following:

- a. The course name.
- b. The course identification number assigned by the department.
- c. The date or dates the course was held or completed.
- d. The name of each attendee.
- e. The name of each license, certification or registration held by the attendee for which the course applies.
- f. The license, certification or registration number assigned by the department of each attendee.

3. A copy of the attendance record shall be forwarded by the person or organization which had obtained the course, program or seminar approval to the department within 14 calendar days after completion of the course or program.

(g) Any individual or organization that obtains a course, program, or seminar approval for continuing education credit under s. SPS 305.68 or subch. VIII shall notify the department of any material changes to the information submitted for that approval.

(h) Any individual or organization that obtains a course, program, or seminar approval for continuing education credit under s. SPS 305.68 or subch. VIII shall notify the department if the course, program, or seminar is discontinued before the end of its approval period.

(2) EVIDENCE OF COMPLIANCE. Each license, certification or registration holder shall retain evidence of compliance with continuing education requirements throughout the license, certification or registration period for which continuing education credit was required for renewal of the license, certification or registration.

(a) The department shall accept as evidence of compliance original or copies of documents, certified by the individual or organization providing the course, program or seminar, indicating attendance and completion of the continuing education credit.

(b) The department may require a license, certification or registration holder to submit evidence of compliance for the continuing education credit which was required to renew the license, certification or registration.

(3) CONTINUING EDUCATIONAL CYCLE. (a) Except as provided under s. SPS 305.07 (2) (b), for those license, certification or registration categories which require continuing educational credit for renewal, the license, certification or registration holder shall obtain the necessary amount of continuing educational credit prior to the expiration date of the license, certification, or registration as specified in Table 305.06.

(c) The attendance of a continuing education course, program or seminar in order to fulfill late renewal obligations under s. SPS 305.07 (2) (b) may not be credited toward more than one renewal cycle for a specific license, certification or registration.

Note: The provisions under par. (c) do not limit an individual in attending or completing courses, programs or seminars multiple times on separate occasions for continuing education credit.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (3) (a), Register, March, 1998, No. 507, eff. 4-1-98; am. (1) (d), (e) 1., (f) 2. e., f., (2) (intro.), (b) and (3), Register, April, 2000, No. 532, eff. 5-1-00; am. (3), Register, May, 2001, No. 545, eff. 6-1-01; CR 03-075: r. (1) (b) 2., renum. (1) (b) 3. and 4. to be (1) (b) 2. and 3., r. and recr. (1) (e) 2. b. Register June 2004 No. 582, eff. 8-1-04; CR 06-127: am. (1) (e) 2. a., cr. (1) (e) 2. c., (g) and (h), Register September 2007 No. 621, eff. 10-1-07; CR 09-046: am. (1) (f) 1. Register March 2010 No. 651, eff. 4-1-10; correction in (1) (e) 2. c., (g), (h), (3) (a), (b), (c) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (1) (e) 1., (3) (a), r. (3) (b) Register August 2014 No. 704, eff. 9-1-14.

SPS 305.09 Examinations administered by the department. (1) For those license, certification or registration categories which require examination, the department shall conduct at least 4 license, certification or registration examinations annually for each license, certification or registration category at times and locations specified by the department.

(2) An application and fee for a license, certification or registration that requires an examination shall be received by the department at least 30 calendar days prior to the day of the examination. The department may postpone the applicant's appearance to another examination date if any of the following occur:

- (a) The applicant fails to have the application on file with the department within the required time.
- (b) The application information or required qualifications are incomplete.
- (c) The examination center is filled to capacity.

(3) Upon verification of the application and the required qualifications, the department shall notify an applicant in writing of the date, time and place of the examination.

(4) (a) An applicant for license, certification or registration examination shall provide a photo identification or other appropriate evidence to gain admittance to an examination.

(b) An applicant shall bring to a license, certification or registration examination all necessary materials as specified by the department.

(c) 1. Except as provided in subd. 2., an applicant who fails to appear at a scheduled license, certification or registration examination without giving notice to the department at least 24 hours

before the examination shall be considered to have failed the examination and shall be required to submit a re-examination application and examination fee.

2. The department may waive the 24-hour notification requirement of subd. 1. due to inclement weather, if the applicant notifies the department the day of the examination.

(5) The examination for a license, certification or registration shall be based on a job analysis of the knowledge, skills and abilities associated with the license, certification or registration. The examination shall include all of the following subject matter:

(a) Regulations and standards governing the work or activities required or permitted under the license, certification or registration.

(b) Theories, principles, and practices associated with the activities required or permitted under the license, certification or registration.

(6) (a) A grade of 70% or greater in each part of a license, certification or registration examination shall be considered a passing grade.

(b) 1. Except as provided in subd. 2., an applicant failing a part of a multi-part license, certification or registration examination shall be required to retake only those parts failed.

2. An applicant who does not pass all required parts of a multi-part license, certification or registration examination within one year after the date of the initial examination shall apply, retake and pass all parts of the license, certification or registration examination.

(7) (a) The department shall inform an applicant of the results of an examination in writing within 21 calendar days from the examination date.

(b) Upon notification of failing a license, certification or registration examination, an applicant may request another examination in accordance with s. SPS 305.01.

(c) 1. An applicant who has successfully passed a license, certification or registration examination may submit an application and the license, certification or registration fee as specified under s. SPS 305.02, Table 305.02 for the appropriate license, certification or registration within 3 months after the date the department had mailed the results of the examination.

2. Failure to apply for a license, certification or registration in accordance with subd. 1., shall necessitate the applicant to apply, retake and pass another license, certification or registration examination in order to obtain the license, certification or registration.

(8) (a) An applicant may request and make an appointment with the department to review his or her examination.

(b) The request to review an examination relating to subchs. II to VII, but not including s. SPS 305.68, and subchs. IX and X shall be accompanied by a \$15 fee.

(c) An applicant who has failed his or her examination may not review the examination less than 7 calendar days before the applicant is scheduled to retake the examination.

(d) The department shall retain license, certification or registration examinations at least 2 months after the date of the examination.

Note: This section only applies to examinations administered by the department.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1), (2) (intro.), (4) (a), (b), (c) 1., (5), (6), (7) (b), (c) and (8) (c), Register, April, 2000, No. 532, eff. 5-1-00; CR 09-046: renum. (8) (b) and (c) to be (8) (c) and (d), cr. (8) (b) Register March 2010 No. 651, eff. 4-1-10; correction in (7) (b), (c) 1., (8) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (title) Register August 2014 No. 704, eff. 9-1-14.

SPS 305.10 Denial, suspension and revocation. (1)

Except as provided in sub. (2) pertaining to licenses or registrations for master plumbers, journeyman plumbers, cross connection control assembly testers, and utility contractors, the department may deny, suspend, or revoke a license, certification, registration, or enrollment under this chapter in accordance with the following provisions:

(a) *Reasons.* The department may deny, suspend, or revoke a license, certification, registration, or enrollment under this chapter if the department determines that an applicant or holder of the license, certification, registration, or enrollment is responsible for any of the following:

1. Fails to meet the qualifications for the license, certification, registration, or enrollment.

2. Has obtained the license, certification, registration, or enrollment through fraud or deceit.

3. Has demonstrated negligence or incompetence in fulfilling the responsibilities or obligations of the license, certification, registration, or enrollment.

4. Has a conflict of interest in fulfilling the responsibilities or obligations under the license, certification, registration, or enrollment.

5. Has demonstrated misconduct in fulfilling the responsibilities or obligations under the license, certification, registration, or enrollment.

6. Has been arrested or convicted for a crime substantially related to the license, certification, registration, or enrollment.

7. Has a physical or mental impairment which prevents the applicant or holder from fulfilling the responsibilities or obligations under the license, certification, registration, or enrollment.

8. Has violated state, federal, or local laws or regulations relating to the conduct of the activities under the license, certification, registration, or enrollment.

9. Has been certified by the department of revenue under s. 73.0301, Stats., to be liable for taxes.

10. Has been delinquent in making court-ordered payments relating to the support of a child or former spouse pursuant to s. 101.022, Stats.

11. Has failed to comply with a subpoena or warrant issued by the department of workforce development or a county child support agency relating to paternity or child support proceedings pursuant to s. 101.022, Stats.

12. If registered or certified under ss. SPS 305.80 to 305.81, has performed any of the following:

a. Intentionally shifted costs, for the purpose of making ineligible costs appear to be eligible.

b. Intentionally billed for activities not undertaken at a specific cleanup site.

c. Rebated the deductible or structured a claim to provide a responsible party with a rebate or reimbursement of the deductible.

d. Intentionally submitted invoices or bills containing fraud, or submitted claims that were incomplete or contained fraud.

e. Conducted unnecessary, ineffective or incomplete remedial activities or services.

f. Attempted to defraud, including but not limited to false or double billing of clients for work conducted.

g. Charged a fee that the department determined was excessive, after written notice from the department that the fee was excessive and should not have been charged.

h. Exhibited a pattern of attempting and failing to complete remediations of PECFA sites.

i. Performed activities that result in both exceeding a cost cap established by the department, and submittal of a claim to the department for the cost in excess of that cost cap.

j. Failed to pay a financial penalty assessed under ch. NR 747 for a grossly ineligible cost.

13. If registered or certified under s. SPS 305.68 or subch. VIII, has performed any of the following:

- a. Failed to maintain required records.
- b. Denied the department access to requested records.
- c. Failed to submit a required notice or report to the department, within a required time period.
- d. Submitted false reports to the department.
- e. Exhibited a pattern of submitting substantially inadequate reports.

14. If registered under s. SPS 305.31 as a dwelling contractor, has done or has been any of the following:

- a. Failed to hold or to engage, as an employee, a person who holds a dwelling contractor qualifier certification under s. SPS 305.315 in obtaining a building permit.
- b. Engaged in the construction of a dwelling without a uniform building permit when required under s. SPS 320.08.
- c. Convicted of a crime related to the construction of a dwelling.
- d. Adjudged bankrupt on 2 or more occasions.

(b) *Notice of denial, suspension or revocation.* Except as provided under s. 101.654 (4), Stats., relative to a dwelling contractor certification, and par. (c), a notice of denial, suspension, or revocation shall be sent to the applicant or the license, certification, registration, or enrollment holder. The notice shall include all of the following:

- 1. The basis for the denial, suspension or revocation, including the facts relied on by the department to make its decision and a citation of applicable statutes and administrative rules establishing the legal basis for the decision; and
- 2. A statement that the applicant or the license, certification, registration, or enrollment holder may file a request for an administrative hearing.

(c) *Summary suspension.* Under s. 227.51 (3), Stats., the department may summarily suspend any license, certification, registration, or enrollment if the department finds that immediate action is necessary for public health, safety, or welfare. The summary suspension of a license, certification, registration, or enrollment shall remain in effect until after a final decision is issued following a hearing.

(d) *Hearing.* 1. The request for an administrative hearing shall be received by the office of legal counsel of the department no later than 30 days following the date of mailing of the notice under par. (b), otherwise, the request for hearing shall be denied by the department.

Note: Requests for an administrative hearing may be mailed to the Department of Safety and Professional Services Legal Counsel, P.O. Box 7190, Madison, WI 53707-7190.

2. Hearings shall comply with the provisions of ch. 227, Stats.

(e) *Surrender of license, certification, registration, or enrollment.* A person whose license, certification, registration, or enrollment has been suspended or revoked shall surrender the license, certification, registration, or enrollment to the department upon request.

(f) *Reinstatement.* 1. ‘Suspension.’ a. A person whose license, certification, registration, or enrollment has been suspended may apply to have the license, certification, registration, or enrollment reissued only after the time set for suspension by

the department or hearing examiner has passed and by complying with the conditions set forth in the suspension order.

b. The request to the department to have a suspended license, certification, registration, or enrollment reissued shall be made in writing.

c. The department may require a person whose license, certification, registration, or enrollment has been suspended to apply for the license, certification, registration, or enrollment by complying with all of the requirements for a new applicant, including paying the application fees and successfully passing an examination.

d. The department may impose conditions on the reissued license, certification, registration, or enrollment to assure compliance with this chapter.

2. ‘Revocation.’ A person whose license, certification, registration, or enrollment has been revoked may not apply to receive such a license, certification, registration, or enrollment.

(2) Pursuant to s. 145.10, Stats., the department may suspend or revoke the license or registration of any master plumber, journeyman plumber, master plumber-restricted, journeyman plumber-restricted, utility contractor, or cross connection control assembly tester in accordance with this subsection.

(a) *General.* The department may suspend or revoke a license or registration for any of the following reasons:

- 1. The practice of fraud or deceit in obtaining a license or registration.
- 2. Negligence, incompetence or misconduct in the practice or work allowed by the license or registration.
- 3. Failure to correct an installation for which the license or registration holder is responsible within the time prescribed by the department.

Note: Section 145.10 (1) (b), Stats., indicates that the correction of an installation must take place within 30 days following notification by the department of a violation.

4. Falsified information on an inspection form under s. 145.20 (5), Stats.

(b) *Investigations.* The department may conduct an investigation of any alleged violations of this chapter or chs. SPS 382 and 383. If it is determined that no further action is warranted, the department shall notify the persons affected. If the department determines that there is probable cause, it shall order a hearing and notify the persons affected.

(c) *Summary suspension.* Under s. 227.51 (3), Stats., the department may summarily suspend any license or registration if the department finds that immediate action is necessary for public health, safety or welfare. The summary suspension of a license or registration shall remain in effect until after a final decision is issued following a hearing.

(d) *Hearings.* The hearing for the suspension or revocation of a license or registration shall be conducted as a contested case hearing in accordance with ch. 227, Stats., and s. 145.10, Stats.

(e) *Findings.* The department may make findings and enter its order on the basis of the facts revealed by its investigation. Any findings as a result of petition or hearing shall be in writing and shall be binding unless appealed to the secretary.

1. ‘Suspension.’ The period for suspension shall be determined by the hearing examiner or the department. The period for suspension may not exceed one year. A person whose license or registration has been suspended may apply to have the license or registration reinstated by filing a new application and payment of the appropriate fee specified in s. SPS 305.02.

2. ‘Revocation.’ The period for revocation shall be determined by the hearing examiner or the department. The period for revocation shall not exceed one year. A person whose license or

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registration has been revoked shall be eligible for the license or registration only after the time set for revocation by department order has passed. A person whose license or registration has been revoked may apply to have the license or registration reinstated only after submitting a completed application for license or registration examination, if required, payment of the examination fee, passing of the examination and payment of the license or registration fee specified in s. [SPS 305.02](#).

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; am. (1) (a) (intro.), r. and recr. (1) (e), (2) (c), cr. (1) (f), [Register, March, 1998, No. 507](#), eff. 4-1-98; am. (1) (intro.), (a), (b) (intro.), 2., (c), (e), (f), (2) (intro.) to (a) 3., (c), (d), (e) 1. and 2., cr. (1) (a) 9. to 11., [Register, April, 2000, No. 532](#), eff. 5-1-00; correction in (2) (a) 4. made under s. 13.93 (2m) (b) 7., Stats., [Register, April, 2000, No. 532](#); [CR 04-058](#): cr. (1) (a) 12. [Register February 2006 No. 602](#), eff. 5-1-06; correction in (2) (a) 4. made under s. 13.93 (2m) (b) 7., Stats., [Register October 2006 No. 610](#); [CR 07-007](#): cr. (1) (a) 14., am. (1) (b) (intro.) [Register August 2007 No. 620](#), eff. 9-1-07; [CR 06-127](#): renum. (1) (a) 12. h. to k. to be (1) (a) 13. a. to c. and 12. h., cr. (1) (a) 12. i. and j. and 13. (intro), d. and e., [Register September 2007 No. 621](#), eff. 10-1-07; correction in (1) (a) 12. (intro.), j., 13. (intro.), 14. (intro.), a., b., (2) (b), (e) 1., 2. made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#); correction in (1) (a) 12. j. made under s. 13.92 (4) (b) 7., Stats., [Register October 2013 No. 694](#); [CR 16-093](#): am. (1) (a) (intro.), 1. to 8., (b) (intro.), 2., (c), (e), (f) [Register June 2018 No. 750](#), eff. 8-1-18; correction in (1) (a) 10., 11. made under s. 13.92 (4) (b) 7., Stats., [Register June 2018 No. 750](#); [CR 23-006](#): am. (1) (intro.), (2) [Register September 2023 No. 813](#), eff. 10-1-23.

SPS 305.11 Responsibilities. (1) A person who holds a license, certification, registration, or enrollment under this chapter shall carry on his or her person the license, certification, registration, or enrollment issued by the department while performing or conducting the activity or activities permitted under the license, certification, registration, or enrollment.

(2) A person who holds a license, certification, registration, or enrollment under this chapter shall upon request of the department or its representative present the license, certification, registration, or enrollment for identification.

(3) The requirements of this section apply to licenses, certifications, registrations, or enrollment issued to an individual and not to a business.

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; cr. (3), [Register, March, 1998, No. 507](#), eff. 4-1-98; am. [Register, April, 2000, No. 532](#), eff. 5-1-00; [CR 16-093](#): am. [Register June 2018 No. 750](#), eff. 8-1-18.

SPS 305.12 Penalties. In addition to the forfeitures provided for in s. [SPS 305.125](#), penalties for violations of the provisions of this chapter may be assessed in accordance with the respective penalty provisions in the statutes, depending upon the license, certification, registration, or enrollment category or activity involved.

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; am., [Register, March, 1998, No. 507](#), eff. 4-1-98; am. [Register, April, 2000, No. 532](#), eff. 5-1-00; [CR 07-069](#): r. and recr. [Register February 2008 No. 626](#), eff. 3-1-08.; correction in (2) (h) made under s. 13.92 (4) (b) 7., Stats., [Register May 2009 No. 641](#); [CR 09-021](#): am. (1), cr. (2m) [Register November 2009 No. 647](#), eff. 12-1-09; correction in (2) (h) (intro.) made under s. 13.92 (4) (b) 7., Stats., [Register December 2009 No. 648](#); [CR 10-039](#): renum. (1) to be Comm 5.12 and am., renum. (2) to (7) to be Comm 5.125 (1), (2), and (4) to (8) and am. (1) (a) [Register November 2010 No. 659](#), eff. 12-1-10; correction made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#); [CR 16-093](#): am. [Register June 2018 No. 750](#), eff. 8-1-18.

SPS 305.125 Administrative forfeitures. (1) **PLUMBING FORFEITURES.** (a) Pursuant to s. [145.12 \(5\)](#), Stats., the department may assess a forfeiture in the amount listed in pars. (b) to (i) to a violator of the licensing requirements under s. [145.06](#), Stats.

Note: A violation of each paragraph is considered separately when assessing a first, second or third violation. For example: violating paragraphs (a), (b) and (c) creates a first violation for each paragraph, not a first, second and third violation.

(b) The amount of forfeiture assessed against an individual who does not hold the appropriate type of plumbing license under subch. [IX](#) and who installs plumbing when a master plumber is not in charge of the plumbing installation shall be one of the following:

1. First offense — \$1,000.

2. Second offense — \$1,500.

3. Third and subsequent offense — \$2,000.

(c) The amount of forfeiture assessed against an individual who does not hold the appropriate type of plumbing license under subch. [IX](#) and who installs plumbing where a master plumber is in charge of the plumbing installation shall be one of the following:

1. First offense — \$100.

2. Second offense — \$500.

3. Third and subsequent offense — \$1,000.

(d) The amount of forfeiture assessed against a master plumber who allows the use of his or her master plumber license for the purpose of obtaining a plumbing permit without that master plumber assuming responsibility for the plumbing installation shall be one of the following:

1. First offense — \$1,000.

2. Second offense — \$1,500.

3. Third and subsequent offense — \$2,000.

(e) The amount of forfeiture assessed against a master plumber who allows another licensed plumber to install plumbing in the master plumber's name when that master plumber is not in charge of the plumbing installation shall be one of the following:

1. First violation offense — \$500.

2. Second violation offense — \$1,000.

3. Third and subsequent violation offense — \$2,000.

(f) The amount of forfeiture assessed against a master plumber who allows an individual who does not hold the appropriate license under subch. [IX](#) to install plumbing when that master plumber is in charge of the plumbing installation shall be one of the following:

1. First violation offense — \$1,500.

2. Second violation offense — \$1,750.

3. Third and subsequent violation offense — \$2,000.

(g) The amount of forfeiture assessed against an individual who does not hold an appropriate master plumber license under s. [SPS 305.91](#) and who engages in the business or offers to engage in the business of superintending plumbing installations shall be one of the following:

1. First violation offense — \$1,000.

2. Second violation offense — \$1,500.

3. Third and subsequent violation offense — \$2,000.

(h) The amount of forfeiture assessed against an individual who does not hold a registration as a cross connection control assembly tester under s. [SPS 305.99](#) and who tests cross connection control assemblies to meet the requirements in s. [SPS 382.22 \(8\)](#) shall be one of the following:

1. First violation offense — \$500.

2. Second violation offense — \$1,000.

3. Third and subsequent violation offense — \$2,000.

Note: See section [145.06](#), Stats., for exemptions to the licensing requirements.

(i) When a violator creates an imminent health risk the forfeiture amounts under pars. (b) to (h) shall be doubled within the maximum statutory limit of \$2,000.

(2) **POWTS FORFEITURES.** (a) Pursuant to s. [145.12 \(5\) \(a\)](#), Stats., the department may assess a forfeiture in the amount listed in par. (b) to a violator of the restriction requirements under s. [145.20 \(6\) \(a\)](#), Stats.

(b) The amount of forfeiture assessed against an individual who violates the restriction requirements under s. [145.20 \(6\) \(a\)](#), Stats., shall be one of the following:

1. First offense — \$1,000.

2. Second offense — \$1,500.

3. Third and subsequent offense — \$2,000.

(4) **FORFEITURE PROCESS.** (a) The department shall assess an administrative forfeiture in writing.

(b) A notice of administrative forfeiture shall include the following:

1. The rule or rules violated.
2. A statement or explanation of how the violation was determined.
3. The amount of forfeiture.
4. A statement or explanation of how the amount of forfeiture was determined.
5. Information about how to contest the notice of administrative forfeiture.

(5) **FORFEITURE PAYMENTS.** (a) Except as provided in sub. (6), all forfeitures shall be paid to the department within 30 days after issuance of the notice.

(b) An interest penalty shall be imposed in accordance with s. 145.12 (5) (d), Stats., for a forfeiture not paid in accordance with par. (a).

Note: Section 145.12 (5) (d), Stats., reads: In the case of any failure in the payment of a forfeiture, the department shall impose an interest penalty of 12% per year from the time when the forfeiture should have been paid.

(c) The department may refer unpaid forfeitures to the attorney general.

Note: Section 145.12 (5) (e), Stats., reads: The attorney general may bring an action in the name of the state to collect any forfeiture imposed, or interest accrued, under this subsection if the forfeitures or interest has not been paid after the exhaustion of all administrative and judicial reviews.

(6) **FORFEITURE APPEAL.** (a) A person assessed an administrative forfeiture may request a review of the assessment of forfeiture issued under sub. (1) and the grounds for the assessment in accordance with all of the following procedures:

1. A request for review of an assessment of forfeiture under this subsection shall be on the basis to completely overturn the assessment.

2. A request for review of an assessment of forfeiture shall be made in writing to the administrator of the division of industry services.

Note: Requests for a review by the administrator may be sent to Administrator, Division of Industry Services, P.O. Box 2658, Madison, WI 53701-2658.

3. A request for review of an assessment of forfeiture shall include a statement of the specific reasons why the person believes the administrative forfeiture and the grounds for the assessment should be overturned.

(b) A request for review of an assessment of an administrative forfeiture and the grounds for the assessment shall be denied if the request is received more than 30 days after issuance of the forfeiture notice.

(c) 1. The administrator shall make a decision on a request for review of an assessment of administrative forfeiture and the grounds for assessment within 15 days of receipt of the request.

2. If the administrator determines that insufficient reasons are provided in a request for review, the request may be denied.

3. A denial of a request for review shall be in writing and shall state the reasons for denial and information about the right to appeal the denial.

4. If the administrator determines that sufficient reasons are provided in a request for review, the request shall be granted.

5. If the administrator grants a request for review, the administrator shall notify the person making the request in writing of the date, time and location where the review will take place and who will conduct the review. The review shall be scheduled within 10 days after the request for review is granted, unless the person requesting the review asks for and is granted an extension.

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6. If a review is granted, the person requesting the review shall be provided an opportunity to meet with the administrator or designee to present statements and documents regarding the contested notice of administrative forfeiture and the grounds for the assessment.

7. If a review is granted, the division shall provide technical expertise to represent the department's position.

(7) **ADMINISTRATOR REVIEW.** (a) The administrator shall issue a written decision within 30 days following a review under sub. (6) (c) 5.

(b) The written decision from the administrator shall include information about appeal rights and procedures if the decision is to deny overturning the assessment of administrative forfeiture and the grounds for assessment.

(8) **SECRETARY REVIEW.** (a) A person adversely affected by the decision of the administrator under sub. (7) may request a hearing by the secretary to review an assessment of administrative forfeiture and the grounds for assessment in accordance with all of the following procedures:

1. A request for a hearing shall be made in writing to the secretary.

2. A request for a hearing shall include a statement of the specific reasons why the person believes the forfeiture assessment and the grounds for assessment should be overturned.

3. A request for a hearing shall be denied if the request is received more than 30 days after issuance of the decision by the administrator under sub. (7).

(b) A hearing held by the secretary or designee to review the decision of the administrator on an administrative forfeiture shall be a contested case hearing. The hearing and the decision issued after the hearing shall be governed by the provisions under ch. 227, Stats.

History: CR 10-039: renum. from Comm 5.12 (2) to (8) and am. (1) (a), cr. (3) Register November 2010 No. 659, eff. 12-1-10; corrections in (5) (a), (6) (a) (intro.), (7) (a), (8) (a) (intro.) and 3. made under s. 13.92 (4) (b) 7., Stats., Register November 2010 No. 659; CR 10-090: cr. (3m) Register January 2010 No. 661, eff. 2-1-11; correction in (1) (g) (intro.), (h) (intro.), (3) (c) (intro.), (3m) (a), (b) (intro.), (c) (intro.) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 12-007: r. (3m) Register July 2012 No. 679, eff. 8-1-12; correction in (6) (a) 2. made under s. 13.92 (4) (b) 6., Stats., Register September 2013 No. 693; CR 14-010: r. (3) (a) 1. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: r. (3) Register May 2020 No. 773, eff. 6-1-20; CR 23-006: am. (1) (h) (intro.) Register September 2023 No. 813, eff. 10-1-23.

Subchapter II — Blasting and Fireworks

SPS 305.20 Blasters. (1) **GENERAL.** (a) No person may prepare explosive charges or conduct blasting operations unless the person complies with one of the following conditions:

1. Holds a license issued by the department as a licensed class 1 blaster, licensed class 2 blaster, licensed class 3 blaster, licensed class 4 blaster, licensed class 5 blaster, licensed class 6 blaster or licensed class 7 blaster.

2. Is under the direct supervision of a person who holds a license issued by the department as a licensed blaster in one or more of the categories specified in subd. 1.

(b) The operations and activities associated with a person who holds a license as a licensed class 1 blaster, licensed class 2 blaster, licensed class 3 blaster, licensed class 4 blaster, licensed class 5 blaster, licensed class 6 blaster or licensed class 7 blaster shall be limited to the operations or activities delineated under this paragraph.

1. A person, who either holds a license as a licensed class 1 blaster or is under the direct supervision of a person who holds a license as a licensed class 1 blaster, may conduct blasting operations and activities not closer than 500 feet to an inhabited building for stumps, boulders, ice, frost, concrete, footings, founda-

tions, pole settings, drainage ditches, beaver dams, pot holes, seismic tests, boiler tubes, fertilizer piles, silos, dimension stone, well shooting, metal forms, black powder or coal piles.

2. A person, who either holds a license as a licensed class 2 blaster or is under the direct supervision of a person who holds a license as a licensed class 2 blaster, may conduct blasting operations and activities for stumps, boulders, ice, frost, concrete, footings, foundations, pole settings, drainage ditches, beaver dams, pot holes, seismic tests, boiler tubes, fertilizer piles, silos, dimension stone, well shooting, metal forms, black powder or coal piles.

3. A person, who either holds a license as a licensed class 3 blaster or is under the direct supervision of a person who holds a license as a licensed class 3 blaster, may conduct blasting operations and activities for underground mining, underground construction or tunnels.

4. A person, who either holds a license as a licensed class 4 blaster or is under the direct supervision of a person who holds a license as a licensed class 4 blaster, may conduct blasting operation and activities not closer than 2500 feet to an inhabited building for quarries, open pits, road cuts, trenches, site excavations, basements, underwater demolition or underground excavations.

5. A person, who either holds a license as a licensed class 5 blaster or is under the direct supervision of a person who holds a license as a licensed class 5 blaster, may conduct blasting operations and activities 2500 feet and closer to an inhabited building for quarries, open pits and road cuts.

6. A person, who either holds a license as a licensed class 6 blaster or is under the direct supervision of a person who holds a license as a licensed class 6 blaster, may conduct blasting operations and activities 2500 feet and closer to an inhabited building for trenches, site excavations, basements, underwater demolition, underground excavations or structures 15 feet or less in height.

7. A person, who either holds a license as a licensed class 7 blaster or is under the direct supervision of a person who holds a license as a licensed class 7 blaster, may conduct blasting operations and activities for structures greater than 15 feet in height, bridges, towers or any of the objects or purposes specified under subds. 1. to 6.

(c) A person who holds a valid blaster license which was issued prior to November 1, 1996 shall be deemed to hold the category of blaster license specified in Table 305.20 and may conduct blasting operations and activities under par. (b).

Table 305.20

Blaster License Categories Prior to November 1, 1996	New Blaster License Categories
Class 1-Limited Blasting: 1a, 1b, 1c, 1d, 1g	Class 1 Blaster
Class 1-Limited Blasting: 1e, 1f, 1h; Class 4-Precision Blasting: 4g, 4h	Class 2 Blaster
Class 2-Underground Blasting: 2a, 2b	Class 3 Blaster
Class 3-Surface Blasting: 3a, 3b, 3c, 3d	Class 4 Blaster
Class 4-Precision Blasting: 4a, 4b	Class 5 Blaster
Class 4-Precision Blasting: 4c, 4d, 4e, 4f	Class 6 Blaster
Class 5-Special Blasting: 5a, 5b	Class 7 Blaster

(2) APPLICATION FOR EXAMINATION. A person applying to take a blaster license examination shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) QUALIFICATIONS FOR EXAMINATION. (a) A person applying to take a blaster license examination shall be at least 21 years old.

(b) A person applying to take a blaster license examination shall have one or more of the following qualifying experience:

1. At least 640 hours of experience working under the direct supervision of a person who holds a class 1 blaster license for a class 1 blaster license examination.

2. At least 640 hours of experience working under the direct supervision of a person who holds a class 2 blaster license for a class 2 blaster license examination.

3. At least 640 hours of experience working under the direct supervision of a person who holds a class 3 blaster license for a class 3 blaster license examination.

4. At least 640 hours of experience working under the direct supervision of a person who holds a class 4, class 5 or class 6 blaster license for a class 4 license examination.

5. At least 640 hours of experience working under the direct supervision of a person who holds a class 5 blaster license for a class 5 blaster license examination.

6. At least 1000 hours of experience working under the direct supervision of a person who holds a class 6 blaster license for a class 6 blaster license examination.

7. At least 2000 hours of experience working under the direct supervision of a person who holds a class 7 blaster license for a class 7 blaster license examination.

(4) EXAMINATION. A person seeking to obtain a blaster license shall take and pass an examination in accordance with s. [SPS 305.09](#).

(5) APPLICATION FOR LICENSE. Upon notification of the successful passage of the examination for a blaster license, a person may obtain the license by submitting an application and the license fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(6) RENEWAL. (a) 1. A person may renew his or her license as a blaster.

2. A blaster license shall be renewed in accordance with s. [SPS 305.07](#).

(b) The renewal of a blaster license shall be contingent upon the applicant completing and passing a take home examination.

(c) The renewal of a blaster license shall be contingent upon the department's review of the applicant's criminal history record from the state department of justice.

Note: The department will obtain the criminal history record directly from the state department of justice.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; cr. (2) (c), (6) (c), Register, March, 1998, No. 507, eff. 4-1-98; am. (1) (a) 1. and 2., (b) and (5), Register, April, 2000, No. 532, eff. 5-1-00; CR 03-075: r. (2) (c), am. (6) (c) Register June 2004 No. 582, eff. 8-1-04; correction in (1) (c), (2) (a), (b), (4), (5), (6) (a) 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.21 Fireworks manufacturers. (1) GENERAL. (a) Pursuant to s. [167.10 \(6m\)](#), Stats., no person may manufacture fireworks or a listed device in this state unless the person holds a license issued by the department as a licensed fireworks manufacturer.

(b) A fireworks manufacturer license shall be obtained and held for each plant where fireworks or listed devices are to be manufactured.

(2) APPLICATION FOR LICENSE. A person applying for a fireworks manufacturer license shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and a license fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) **QUALIFICATIONS FOR LICENSE.** (a) A person applying for a license as a fireworks manufacturer shall hold a federal license issued under 18 USC chapter 40 section 843.

(b) The person applying for a fireworks manufacturer license shall be the owner of the business, a partner in the business applying on behalf of a partnership, or the chairman of the board or chief executive officer applying on behalf of the corporation.

(3m) **RESPONSIBILITIES.** A person who holds a fireworks manufacturer license shall post the license at the plant where the fireworks are to be manufactured.

(4) **RENEWAL.** (a) 1. A person may renew his or her license as a fireworks manufacturer.

2. A fireworks manufacturer license shall be renewed in accordance with s. SPS 305.07.

(b) The renewal of a fireworks manufacturer license shall be contingent upon the applicant possessing a federal license issued under 18 USC chapter 40 section 843.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; cr. (3m), Register, March, 1998, No. 507, eff. 4-1-98; am. (1) (a) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; correction in (2) (a), (b), (4) (a) 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

Subchapter III — Dwellings, Structures and Sites

SPS 305.31 Dwelling contractor. (1) GENERAL. Pursuant to s. 101.654 (1) (a), Stats., no person may obtain a building permit for a one- or 2-family dwelling unless the person complies with all of the following, except as provided under s. 101.654 (1) (b) and (c) 2., Stats.:

(a) Holds one of the following credentials issued by the department:

1. A dwelling contractor certification.
2. A dwelling contractor — restricted certification.

(b) Holds or engages, as an employee, a person who holds a certification issued by the department as a dwelling contractor qualifier.

Note: Section 101.654 (1) (b), Stats., exempts an owner of a dwelling who resides or will reside in the dwelling and who applies for a building permit to perform work on the dwelling from obtaining a dwelling contractor financial responsibility certification.

Note: Section 101.654 (1) (c) 2., Stats., reads: “The continuing education requirements under par. (a) and the rules promulgated by the department under sub. (1m) do not apply to any person who holds a current license issued by the department at the time that the person obtains a building permit if the work the person does under the permit is work for which the person is licensed.”

(2) **APPLICATION FOR DWELLING CONTRACTOR CERTIFICATION.** A person applying for a dwelling contractor certification or a dwelling contractor — restricted certification shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and a certification fee in accordance with s. SPS 305.02, Table 305.02.

Note: A dwelling contractor — restricted certification will be issued to an individual who applies using a bond of less than \$25,000. The card issued by the department for a dwelling contractor — restricted certification will read “Financial Responsibility-by a bond under \$25,000 Certification”.

(3) **QUALIFICATIONS FOR CERTIFICATION.** (a) A person applying for a dwelling contractor certification or a dwelling contractor — restricted certification shall provide all of the following:

1. A statement certifying that the person complies with the worker’s compensation requirements and unemployment compensation requirements as specified under s. 101.654 (2), Stats.
2. Evidence of compliance with the liability or bond insurance requirements as specified under s. 101.654 (2) and (2m), Stats.

(b) The person applying for a dwelling contractor certification or a dwelling contractor — restricted certification shall be the owner of the contracting business, a partner in the contracting business applying on behalf of a partnership, or the chairman of the board or chief executive officer applying on behalf of the contracting corporation.

(4) **RESPONSIBILITIES.** (a) A person who holds a dwelling contractor certification or a dwelling contractor — restricted certification shall comply with the responsibilities under s. 101.654 (4), Stats.

(b) For any construction project that requires a uniform building permit under s. SPS 320.08, a person who holds a dwelling contractor certification or a dwelling contractor — restricted certification may not commence construction until a permit is issued for the construction.

(c) For any construction project that involves installation or modification of a private onsite wastewater treatment system, a person who holds a dwelling contractor certification or a dwelling contractor — restricted certification may not commence construction until a sanitary permit is issued for the construction in accordance with s. SPS 383.21.

Note: Section 101.16 (4) (a), Stats., provides that: The person performing the work of installing equipment utilizing liquefied petroleum gas for fuel purposes shall furnish the user of the equipment a statement, the form of which shall be prescribed by the department showing the design, construction, location, and installation of the equipment conforms with the rules promulgated by the department under this section.

(5) **RENEWAL.** (a) Pursuant to s. 101.654 (3), Stats., a dwelling contractor certification or a dwelling contractor — restricted certification shall be valid for no longer than one year after the date of issuance.

(b) 1. A person may renew his or her dwelling contractor certification or dwelling contractor — restricted certification.

2. A dwelling contractor certification or a dwelling contractor — restricted certification shall be renewed in accordance with s. SPS 305.07.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am., Register, March, 1998, No. 507, eff. 4-1-98; am. (1) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; CR 03-075: renum. (4) to be (4) (a), cr. (4) (b) and (c) Register June 2004 No. 582, eff. 8-1-04; CR 07-007: r. and recr. Register August 2007 No. 620, eff. 9-1-07, except (1) (b) eff. 1-1-08; CR 08-110: am. (1) (a), (4) and (5) Register September 2009 No. 645, eff. 10-1-09; correction in (2) (a), (b), (4) (b), (c), (d), (5) (b) 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 19-118: r. (d) Register May 2020 No. 773, eff. 6-1-20.

SPS 305.315 Dwelling contractor qualifier. (1) GENERAL. The purpose of the dwelling contractor qualifier certification is to provide proof of fulfilling the continuing education obligations to the issuers of building permits as required under s. 101.654 (1) (a), Stats.

(2) **APPLICATION.** A person applying for a dwelling contractor qualifier certification shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and a certification fee in accordance with s. SPS 305.02, Table 305.02.

(c) Evidence that the person has completed at least 12 hours in an approved course in dwelling construction within one year prior to the date of application. The course shall include instruction in at least the following subject matter and one or more tests on at least the following subject matter:

1. Construction laws.
2. Construction codes.
3. Construction business practices.

(3) **RENEWAL.** (a) 1. A person may renew his or her certification as a dwelling contractor qualifier.

2. A dwelling contractor qualifier certification shall be renewed in accordance with s. SPS 305.07.

(b) The renewal of a certification as a dwelling contractor qualifier shall be contingent upon the individual completing at least 12 hours of approved continuing education prior to the expiration of the certification as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in sub. (5).

(c) Continuing education shall be obtained through any of the following means:

1. Attending seminars, corporate in-house courses, workshops, or professional or technical presentations made at meetings, conventions, or conferences meeting the requirements of sub. (4). Attendance may be in person or via remote classroom where a provider is available to participate to comment and answer questions.

2. Teaching a continuing education program that meets the requirements of sub. (4). A person who teaches may only receive credit for the initial offering or presentation of a course or program during a biennium.

3. Participating in continuing education program that does not meet in person that meets the requirements of sub. (4) including the completion of interactive short courses or tutorials, delivery of educational programs and courses on CD-ROM or the Internet, webinars, or correspondence courses.

4. Attending technical or professional society meetings that meet the requirements of sub. (4). A maximum of 6 hours per biennial renewal cycle may be counted toward continuing education requirements.

(d) Each certification holder shall retain evidence of compliance with continuing education requirements in accordance with s. [SPS 305.08](#) (2).

(4) STANDARDS FOR CONTINUING EDUCATION. Only courses, programs, meetings, and seminars approved by the department in accordance with s. [SPS 305.08](#) shall be used to fulfill continuing education requirements for renewal of a dwelling contractor qualifier certification. Continuing education shall meet all of the following criteria:

(a) Include instruction in an organized method of learning contributing directly to the professional competency of the certification holder and pertaining to subject matters that integrally relate to the practice of the profession. The instruction shall include amplification, evaluation, examples, and explanation of the course subject matter to the certification holder.

(b) Be conducted by individuals or entities which have specialized education, training, or experience in the subject matter of the program.

(c) Include at least 10 review questions for each credit hour if the continuing education credit is obtained through distance education as specified in sub. (3) (c) 3. The department may require submittal of the review questions for approval.

(d) Include at least 30 questions for each credit hour if the continuing education course, program, or seminar is predominantly question-and-answer based. A minimum score of 70 percent is required to receive continuing education credit. The department may require submittal of the questions for approval.

(e) Include any of the following content:

1. Construction laws and codes.
2. Construction safety topics that are directly related to operating a residential construction business.
3. Business management, estimating, and job costing.
4. Changes in construction and business management laws.
5. Design and building science.
6. Contracts, liability, and risk management.
7. Marketing and sales topics regarding the provision of accurate and ethical information to the customer.

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8. Project management, personnel management, and scheduling.

9. Carpentry, concrete, swimming pool installation, damp proofing a basement, excavation, insulation work, masonry work, painting and decorating, roofing, siding and gutters, screen or storm sash installation, tile and marble work, or house wrecking.

10. Accounting, finance, and taxes.

11. Communication and customer service.

12. Environmental or land use analysis.

13. Zoning and governance policies and procedures.

14. Mold, lead, asbestos, or other hazardous material mitigation.

15. Energy codes and energy conservation methods applicable to residential structures.

16. Other subject matter approved by the department.

(5) WAIVER. A person who holds a certification as a dwelling contractor qualifier may apply to the department for waiver of the continuing education requirements under sub. (3) (b) on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: CR 07-007: cr. Register August 2007 No. 620, eff. 9-1-07; CR 11-020: r. (2) (c) (intro.), 2., renum. (2) (c) 1. to be (2) (c), correction in (2) (a), (b), (3) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: renum. (3) (b) 1., 2. to (3) (b), (5) and am. (b), cr. (3) (c), (d), (4) Register August 2014 No. 704, eff. 9-1-14; correction in (5) (title) made under s. 13.92 (4) (b) 2., Stats., Register August 2014 No. 704, eff. 9-1-14; correction in (5) made under s. 13.92 (4) (b) 7., Stats., Register July 2015 No. 715.

SPS 305.32 Manufactured home manufacturers.

(1) GENERAL. (a) Pursuant to s. [101.95](#), Stats., no manufacturer of manufactured homes may manufacture, sell or distribute for sale manufactured homes unless the manufacturer holds a license issued by the department as a licensed manufactured home manufacturer.

(b) A manufactured home manufacturer license shall be required for each manufacturing plant which manufactures homes to be sold or distributed for sale in the state.

(2) APPLICATION FOR LICENSE. A person applying for a manufactured home manufacturer license shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and a license fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) QUALIFICATIONS FOR LICENSE. The person applying for a manufactured home manufacturer license shall be the owner of the manufacturing business, a partner in the manufacturing business applying on behalf of the partnership, or the chairman of the board or chief executive officer applying on behalf of the manufacturing corporation.

(4) RESPONSIBILITIES. (a) A person who holds a manufactured home manufacturer license shall post the license at the plant which manufactures homes to be sold or distributed for sale in the state.

(b) A person who holds a manufactured home manufacturer license shall comply with the warranty and disclosure responsibilities under s. [101.953](#), Stats.

(5) RENEWAL. (a) A person may renew his or her manufactured home manufacturer license.

(b) A manufactured home manufacturer license shall be renewed in accordance with s. [SPS 305.07](#).

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; cr. (3m), Register, March, 1998, No. 507, eff. 4-1-98; am. (1) (a) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; CR 03-075: am. Register June 2004 No. 582, eff. 8-1-04; correction in (1) (a) made under s. 13.93 (2m) (b) 7., Stats., Register February 2006 No. 602; CR 06-071: renum. (3m) to be (3m) (a), cr. (3m) (b) Register November 2006 No.

611, eff. 12-1-06; CR 11-020: renum. (3m), (4) to be (4), (5), Register December 2011 No. 672, eff. 1-1-12; correction in (2) (a), (b), (5) (b), as renumbered, made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.323 Manufactured home dealer. (1) GENERAL. Under s. 101.951 (1), Stats., no person may engage in the business of selling manufactured homes to a consumer or to the retail market unless the person holds a license issued by the department as a licensed manufactured home dealer. A branch license shall also be obtained for each branch operated by the licensed manufactured home dealer to sell homes.

(2) APPLICATION FOR LICENSE. A person applying for a manufactured home dealer license shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and a license fee in accordance with s. SPS 305.02, Table 305.02.
- (c) A license fee for each branch in accordance with s. SPS 305.02, Table 305.02.
- (d) One of the following forms of security:
 1. 'Surety bond.' A surety bond shall be filed on form SBD-10679 and issued by a bonding company licensed by this state. The surety bond shall be payable for the benefit of any person sustaining a loss because of an act of the licensee constituting grounds for the suspension or revocation of a license under s. 101.951 (6), Stats.
 2. 'Financial statement.' A financial statement shall be filed on form SBD-10678 or the equivalent in accordance with generally accepted accounting principles and be dated not more than 90 days prior to the date of application. A small business, as defined in s. 227.114 (1), Stats., that does no interim financial reporting may submit a financial statement from the close of the business's most recent fiscal year. Financial statements anticipating some future event shall not be accepted.

(3) QUALIFICATIONS. (a) *Minimum net worth or bond.* The minimum level of net worth or surety bond of an applicant shall be determined in accordance with Table 305.323-1 for a non-broker or Table 305.323-2 for a broker. The department shall deny the license of any applicant who fails to meet the net worth or surety bond criteria specified in the tables.

Table 305.323-1
Minimum Net Worth or Bond for a Non-Broker

Number of Manufactured Homes Sold Per Year	Amount
New Dealer	\$50,000
2-50	\$50,000
51-up	\$100,000

Table 305.323-2
Minimum Net Worth or Bond for a Broker

Number of Manufactured Homes Sold Per Year	Amount
New Dealer	\$25,000
2-50	\$25,000
51-up	\$50,000

(b) *Person applying.* The person applying for a manufactured home dealer license shall be the owner of the business, a partner in the business applying on behalf of a partnership, or the chairperson of the board or chief executive officer applying on behalf of the corporation.

(4) RESPONSIBILITIES. A person who holds a manufactured home dealer license shall post the license at the main business office and shall comply with the trade practices, facilities and records requirements specified in subs. (5) to (9).

(5) ADVERTISING AND SALES REPRESENTATIONS. (a) *Truthful.* The use of false, deceptive or misleading advertising or representations by any licensee to induce the purchase of a manufactured home is prohibited.

(b) *Factual.* Any licensee, making a statement of fact to the public in an advertisement, written statement or representation concerning the manufactured home offered for sale, the services provided or any other aspects of business operation, shall, upon request of the department, furnish evidence of the validity and accuracy of the statement of fact at the time it was made.

(c) *Disclosures required when advertising price.* When the price of a manufactured home is advertised by a licensee, the advertised price shall include all charges that shall be paid by the retail purchaser to acquire ownership of the advertised home with the exception of sales tax, title registration fees, government required permits, and charges from lenders or other entities.

(d) *Name.* Advertisements for manufactured home sales shall include the licensed business name.

(e) *New or used.* When advertising a manufactured home, a licensee shall state the model year of the home or whether the home is a new manufactured home or a used manufactured home. If the manufactured homes in an advertisement are either all new or all used, one reference in the advertisement designating that they are new or used is sufficient.

(f) *Expiration terms of sales or promotions.* Whenever a sale or promotion offering gifts, merchandise, equipment, accessories, service, discounts, price reductions or cash is advertised, the advertisement shall specifically disclose the expiration terms or date of the sale or promotion.

(g) *Relocations.* Whenever a licensee advertises a manufactured home on a rental lot site that may have to be moved as a condition of the sale, that fact shall be stated in the advertisement.

Note: See Department of Agricultural, Trade and Consumer Protection rules under section ATPC 125.02 regarding tie-in sales; separate or discriminatory charges.

(6) PURCHASE CONTRACT. (a) *Usage.* 1. A licensee shall furnish retail purchasers with a manufactured home purchase contract that clearly states that the retail purchaser is making an offer to purchase a manufactured home. An exact copy of the purchase contract shall be provided to the retail purchaser at the time the retail purchaser signs the offer and again after the offer is accepted by the manufactured home dealer if accepted at a different time than accepted by the retail purchaser. Any changes in the purchase contract after signing by the retail purchaser or subsequent to acceptance by the manufactured home dealer shall be initialed by all the parties on all copies.

2. A manufactured home purchase contract shall be executed whenever the licensee accepts a down payment, deposit, or title for a trade-in unit from a prospective retail purchaser.

(b) *Contract requirements.* A manufactured home purchase contract shall be completed on form SBD-10807.

(c) *Termination of offer to purchase.* 1. Unless otherwise specified in the contract, the offer to purchase is automatically voided if the licensee fails to accept or reject the offer by the close of the manufactured home dealer's next business day.

2. The licensee shall not sell the manufactured home to any other person until the offer is rejected by the licensee or the offer is voided in accordance with this subsection, or the retail purchaser cancels the contract in accordance with par. (d).

3. Any down payment, deposit or title shall be returned to the prospective retail purchaser within 2 working hours of the time the offer to purchase is rejected by the licensee. If the prospective retail purchaser is not present or available during the 2 hour period, those items shall be returned in person or mailed by the close of the manufactured home dealer's next business day.

(d) *Cancellation of agreements.* 1. The purchase contract shall clearly state that cancellation of a manufactured home contract within one business day of acceptance by a manufactured home dealer may subject the retail purchaser to a penalty of up to

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1% of the cash price of the manufactured home and that cancellation after the close of the next business day may subject the retail purchaser to a penalty not to exceed the penalty amount specified in the contract. Modification of the purchase contract shall not extend the cancellation period. Documented proof of notification of cancellation is required regardless of the method of notification.

2. The title and any down payment or deposit which is not retained by the manufactured home dealer as a penalty in accordance with subd. 1. shall be returned to the retail purchaser by the close of the manufactured home dealer's next business day following receipt of the retail purchaser's notice of cancellation.

3. Whenever a manufactured home is sold away from the licensed place of business, the manufactured home dealer shall furnish the customer with a written notice of the 3-day consumer cancellation rights in accordance with s. 423.202, Stats.

(e) *Price changes.* Any increase in price to a retail purchaser after the manufactured home dealer has accepted an offer is prohibited except when the price increase is due to any of the following:

1. The addition of new equipment required by local, state or federal law.

2. Local, state or federal tax changes.

3. The reappraisal of a trade-in unit that has suffered damage or is missing furnishings, appliances or accessories that were part of the trade-in unit at the time the purchase contract was executed. Reappraisal by the licensee shall be limited to an amount equal to the retail repair costs of the damage incurred, or to the value of furnishings, appliances or accessories removed.

(f) *Contract notice.* The purchase contract shall include information regarding possible price increases due to any of the items in par. (e) 1. to 3.

(g) *Warranties.* Warranties and disclosures shall be provided in accordance with s. 101.953, Stats.

(h) *Name of prior owner.* The purchase contract shall include the name and address of the current titled owner if the manufactured home is consigned to or listed by the licensee. The name and address of the previous owner shall be kept on file at the manufactured home dealer's main business office if the manufactured home is owned and offered for sale by the licensee.

(i) *On-site sales.* If the manufactured home is displayed for sale on a rental lot site or if a licensee represents that a manufactured home may occupy a site in a specified manufactured home community, the manufactured home dealer shall do all of the following:

1. Clearly state on the purchase contract whether or not the manufactured home may have to be moved from the site.

2. Clearly state on the purchase contract that the contract is voidable by the retail purchaser if the retail purchaser is rejected by, or the purchaser's manufactured home is not permitted in, the manufactured home community.

3. If the manufactured home may remain on site, inform the prospective retail purchaser in writing prior to the execution of the contract that a copy of the current manufactured home community lease and rules may be obtained from the current manufactured home owner or manufactured home community operator.

(j) *Service fees.* A licensee shall not assess a retail purchaser an additional service charge or fee for completing any sales-related home inspection forms that are required by law or rule.

(k) *Waiver.* The use of a manufactured home purchase contract that requires the retail purchaser to waive any claims the re-

tail purchaser may have for breach of contract by the licensee is prohibited.

(7) **CONSIGNMENT AND LISTING AGREEMENTS.** (a) *Usage and contents.* 1. Form SBD-10808 shall be used whenever a manufactured home dealer lists or offers to sell a used manufactured home on consignment.

2. Form SBD-10807 shall be used whenever a manufactured home dealer sells a listed or consigned used manufactured home.

(b) *On-site sales on rental sites.* Manufactured homes selling agreements for units offered for sale on-site on rental sites shall comply with sub. (6) (i).

(c) *Net sales prohibited.* Licensees shall not obtain, negotiate, or attempt to negotiate any manufactured home selling agreement providing for a stipulated net price to the owner with the excess over the stipulated net price to be received by the licensee as commission.

(8) **DISCLOSURE OF THE CONDITIONS OF THE MANUFACTURED HOME.** (a) *Model year designation.* Changing the model year of a manufactured home is prohibited. If no model year is designated, the year of manufacture applies.

(b) *New manufactured home disclosure.* The licensee shall, on the face of the new manufactured home purchase contract, disclose all manufactured home dealer installed options or accessories and whether or not the options or accessories are warranted.

(c) *Used manufactured home general condition disclosure.* 1. Before the execution of a purchase contract for a used manufactured home owned by a licensee, the licensee shall inform a prospective retail purchaser of all significant structural or mechanical defects or damage on form SBD-10809. If the licensee is unable to determine whether specific damage or defects exist, that fact shall be noted on the disclosure form. Disclosure of information shall include that which the licensee discovers as a result of a reasonably competent and diligent inspection which shall consist of, but is not limited to, a walk-around and interior inspection, an under-home inspection, roof inspection and inspection of the appliances. A reasonably competent and diligent inspection is not required to cover every possible technical detail. The licensee is not required to dismantle any part of the manufactured home during the inspection process.

2. The seller of a listed or consigned used manufactured home shall provide a completed form SBD-10809 to the licensee. The licensee shall provide the completed disclosure statement to the prospective retail purchaser.

3. Unless otherwise agreed to in the purchase contract, the inspection disclosures shall not create any warranties, expressed or implied, or affect warranty coverage provided for in the purchase contract.

(9) **FACILITIES AND RECORDS.** (a) *Business facilities.* Manufactured home dealers shall provide and maintain business facilities that comply with all of the following:

1. A main business office that maintains books, records and files necessary to conduct business. The required business office may be established within a residence if the office is accessible to an outside entrance and is used primarily for conducting the manufactured home business.

2. A display lot within the same block or directly across the street from the main business office, if a display lot is provided.

3. A repair shop, or a service agreement with a nearby repair shop, where there are repair tools, repair equipment and personnel to perform the services provided for in a warranty applicable to a manufactured home sold by the manufactured home dealer. Any service agreement shall be on form SBD-10685.

(b) *Relocation.* A main business office may not be relocated without notice to the department.

(c) *Sign.* Manufactured home dealers who carry and display inventory shall provide an exterior business sign in compliance with s. 100.18 (5), Stats.

(d) *Temporary sales locations.* 1. Manufactured home dealers shall be permitted to display and sell manufactured homes at a temporary site other than the licensed place of business.

2. A temporary sales location may not be used for longer than 30 days.

3. A consigned, listed or model manufactured home shall not be considered a temporary sales location.

Note: There may be zoning, building code and permit requirements relating to business locations that are enforced by local municipalities.

(e) *Records kept.* The books, records and files required to be kept and maintained at the main business office by a manufactured home dealer shall include all of the following:

1. A written verification that the manufactured home dealer has in place a dealership arrangement or an established relationship with a manufacturer to sell and advertise the manufacturer's new manufactured homes.

2. The title or other evidence of ownership for each used manufactured home owned and offered for sale and the manufacturer's statement of origin information for each new manufactured home owned and offered for sale. The manufactured home dealer shall also have a factory invoice, a completed manufactured home dealer reassignment form or a purchase contract evidencing trade-in or purchase when a manufacturer or lending institution is holding the title or manufacturer's statement of origin of the manufactured home.

3. A written selling agreement between the owner and the manufactured home dealer for each manufactured home owned by an individual and offered for sale or listed by the manufactured home dealer.

4. The original or a copy of all manufactured home purchase contracts, purchase orders and invoices. The records shall also include a copy of form SBD-10687 as additional evidence of the sale as well as information regarding collection of sales tax and Wisconsin title and registration fees, if applicable.

5. A record of every manufactured home bought, sold, exchanged, consigned, or listed that includes the following information: date acquired, acquired from name and address, new or used, year, model and identification number, date sold or disposed of, disposed of or sold to name and address.

(f) *Maintenance of records.* The records under par. (e) shall be maintained for 5 years. The records shall be open to inspection and copying by the department during reasonable business hours.

(10) **RENEWAL.** (a) 1. A person may renew his or her manufactured home dealer license.

2. A manufactured home dealer license shall be renewed in accordance with s. SPS 305.07.

(b) The renewal of a license as a manufactured home dealer shall be contingent upon the applicant providing the information required under sub. (2) (d).

History: CR 04-134: cr. Register June 2005 No. 594, eff. 7-1-05; CR 06-031: am. (1) Register October 2006 No. 610, eff. 11-1-06; CR 06-071: r. and recr. (6) (f), am. (6) (h) Register November 2006 No. 611, eff. 12-1-06; CR 11-020: am. (6) (e) (intro.), (i) (intro.), (7) (b), renum. (6) (e) 4., (f) to (g) to be (6) (f), (g) to (k), Register December 2011 No. 672, eff. 1-1-12; correction in (2) (a), (b), (c), (3) (a), (10) (a) 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.325 Manufactured home salesperson. (1)

GENERAL. Under s. 101.952 (1), Stats., no person may engage in the business of selling manufactured homes to a consumer or to the retail market unless the person holds a license issued by the

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department as a licensed manufactured home salesperson. A manufactured home dealer who acts as a manufactured home salesperson shall secure a manufactured home salesperson license in addition to the manufactured home dealer license.

(2) **APPLICATION FOR LICENSE.** A person applying for a manufactured home salesperson license shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and a license fee in accordance with s. SPS 305.02, Table 305.02.

(3) **QUALIFICATIONS FOR LICENSE.** A person applying for a manufactured home salesperson license shall hold a manufactured home dealer license issued by the department or shall be employed by a person who holds a manufactured home dealer license issued by the department.

(4) **RESPONSIBILITIES.** (a) A person who holds a manufactured home salesperson license shall comply with the responsibilities under ss. 101.952 (3), and 101.953, Stats.

Note: Section 101.952 (3), Stats., indicates that every licensee shall carry his or her license when engaged in his or her business and display the same upon request.

(b) A person who holds a manufactured home salesperson license shall comply with the provisions under s. SPS 305.323 that apply to a licensee.

(5) **INVALID LICENSE.** A manufactured home salesperson license shall remain valid until one of the following conditions occur:

(a) The manufactured home salesperson is not employed by a person who holds a manufactured home dealer license issued by the department.

(b) The department suspends or revokes the manufactured home salesperson's license.

(6) **RENEWAL.** (a) A person may renew his or her manufactured home salesperson license.

(b) A manufactured home salesperson license shall be renewed in accordance with s. SPS 305.07.

History: CR 04-134: cr. Register June 2005 No. 594, eff. 7-1-05; CR 06-071: am. (4) (a) Register November 2006 No. 611, eff. 12-1-06; CR 11-020: renum. (1) (a) to be (1), renum. (5) (a) (intro.), 1., 4. to be (5) (intro.), (a), (b) and am., r. (1) (b), (5) (a) 2., 3., (b), Register December 2011 No. 672, eff. 1-1-12; correction in (2) (a), (b), (4) (b), (6) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.327 Manufactured home installer. (1)

GENERAL. (a) Except as provided in par. (b), beginning on January 1, 2007, pursuant to s. 101.96, Stats., no person may install a manufactured home onto a foundation or other support system unless the person complies with one of the following conditions:

1. The person holds a license issued by the department as a licensed manufactured home installer.

2. The person is under the general supervision of another person who holds a license issued by the department as a licensed manufactured home installer.

(b) 1. The owner of a manufactured home who will reside in the home may install his or her own manufactured home without holding a license as a licensed manufactured home installer. This exemption does not apply to the owner who contracts for or otherwise arranges for the installation.

2. A person is not required to hold a license as a licensed manufactured home installer for electrical, plumbing or HVAC work associated with the installation of a manufactured home.

Note: There may be other state or local licensing requirements involved in the installation of manufactured homes.

(2) **QUALIFICATIONS FOR LICENSE.** A person applying for a manufactured home installer license shall comply with all of the following conditions:

(a) The person is at least 18 years old.

(b) The person has not been found responsible in any judicial or administrative forum for any violation of s. 101.96, Stats., during the 2 years before the date on which the person's license application is submitted.

(c) The person has not been found responsible in any judicial or administrative forum during the 2 years before the date on which the person's license application is submitted for any failure to perform an installation of a manufactured home as required under contract or for defrauding any person with regard to the provision of installation services.

(3) APPLICATION FOR LICENSE. A person may apply for a license as a licensed manufactured home installer by submitting an application, an application fee and the license fee in accordance with ss. SPS 305.01 and 305.02 and one of the following:

(a) Evidence that the person holds a manufactured home installer license issued by the federal department of housing and urban development.

(b) Evidence that the person holds a manufactured home installer license issued by a state administrative agency (SAA) that has an installer licensing program that is equivalent to the rules under this section.

(c) Evidence that the person has completed at least 12 hours in an approved course or courses in the installation of manufactured homes within one year prior to the date of application. The course or courses shall include instruction in at least the following subject matter and one or more tests on the subject matter:

1. Soil mechanics.
2. Site preparation.
3. Structural support, stabilization and anchorage.
4. Setting.
5. Ventilation of crawl spaces.
6. Connections, plumbing, electrical, HVAC.
7. Joining of home sections.

(4) RESPONSIBILITIES. A person who installs or supervises the installation of manufactured homes as a licensed manufactured home installer shall be responsible for compliance with the installation requirements in ch. SPS 321.

(5) RENEWAL. (a) 1. A person may renew his or her license as a manufactured home installer.

2. A manufactured home installer license shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a license as a manufactured home installer shall be contingent upon the manufactured home installer obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the license as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a manufactured home installer may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

(c) The renewal of a license as a manufactured home installer shall be contingent upon all of the following conditions:

1. The person has not been found responsible in any judicial or administrative forum for any violation of s. 101.96, Stats., during the previous 2 years.

2. The person has not been found responsible in any judicial or administrative forum during the previous 2 years for any failure to perform an installation of a manufactured home as required

under contract or for defrauding any person with regard to the provision of installation services.

History: CR 06-071: cr. Register November 2006 No. 611, eff. 12-1-06; correction in (4) made under s. 13.93 (2m) (b) 7., Stats., Register July 2007 No. 619; CR 08-110: r. (3) (b), renum. (3) (a) and (4) to be (3) and (4) (a), cr. (4) (b) Register September 2009 No. 645, eff. 10-1-09; correction to renumber of (3) made under s. 13.92 (4) (b) 1., Stats., Register September 2009 No. 645; correction in (3) (intro.), (4) (a), (b), (5) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (5) (b) 1. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: renum. (4) (a) to (4), r. (4) (b) Register May 2020 No. 772, eff. 6-1-20.

SPS 305.33 Soil testers. (1) GENERAL. Pursuant to s. 145.045, Stats., no person may conduct soil evaluations relative to the discharge or disposal of liquid domestic wastes into the soil unless the person holds a certification issued by the department as a certified soil tester.

(2) APPLICATION FOR EXAMINATION. A person applying to take a soil tester certification examination shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and examination fee specified in s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR EXAMINATION. A person applying to take a soil tester certification examination shall be at least 18 years old.

(4) EXAMINATION. A person seeking to obtain a soil tester certification shall take and pass an examination in accordance with s. SPS 305.09.

(5) APPLICATION FOR CERTIFICATION. Upon notification of the successful passage of the examination for soil tester certification, a person may obtain the certification by submitting an application and a certification fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(6) RESPONSIBILITIES. A certified soil tester who, as an employee of a local governmental unit is responsible for administering regulations governing private onsite wastewater treatment systems may not provide soil evaluations relative to the design, installation or maintenance of private onsite wastewater treatment systems within the boundaries of the local governmental unit and adjacent local governmental units.

(7) RENEWAL. (a) 1. A person may renew his or her certification as a soil tester.

2. A soil tester certification shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a certification as a certified soil tester shall be contingent upon the soil tester obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the certification as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a certification as a certified soil tester may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1), (5) and (7) (b), Register, April, 2000, No. 532, eff. 5-1-00; CR 03-075: r. and recr. (7) (b) 1. Register June 2004 No. 582, eff. 8-1-04; CR 08-110: r. and recr. (7) (b) 1. Register September 2009 No. 645, eff. 10-1-09; CR 09-021: am. (6) Register November 2009 No. 647, eff. 12-1-09; correction in (2) (a), (b), (4), (5), (7) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (7) (b) 1. Register August 2014 No. 704.

SPS 305.34 Welders. (1) GENERAL. No person may perform structural steel welding under chs. SPS 334 and 361 to 366 unless the person holds a registration issued by the department as a registered welder.

(2) **APPLICATION FOR REGISTRATION.** A person applying for a welder registration shall submit all of the following:

- (a) An application in accordance with s. [SPS 305.01](#).
- (b) An application fee and registration fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) **QUALIFICATIONS FOR REGISTRATION.** (a) The person applying for a welder registration shall have taken and passed, not more than one year before the date the application is received by the department, one or more welding tests in accordance with the following standards:

- 1. American Welding Society D 1.1, section 4, part C.
- 2. American Welding Society D1.2, section 3, part D.
- 3. American Welding Society D 1.3, section 4, part C.
- 4. American Welding Society D1.6, section 4, part B.

(b) The test under par. (a) shall have been conducted by a person who is a certified weld test conductor in accordance with s. [SPS 305.35](#) or is under the general supervision of a certified weld test conductor.

(4) **RESPONSIBILITIES.** A person who does structural steel welding as a registered welder shall do all of the following:

- (a) Perform only those structural welding procedures for which the person has qualified by test within the last 4 years.
- (b) Carry proof as to which welding procedures the person has qualified by test.
- (c) Present upon request to the department or its representative proof of the qualified welding procedures.
- (d) Identify the welding on each structurally significant member with a distinguishing mark stamped on the member by the person doing the welding.

(5) **RENEWAL.** (a) A person may renew his or her registration as a welder.

(b) A welder registration shall be renewed in accordance with s. [SPS 305.07](#).

(c) The renewal of a welder registration shall be contingent upon the welder having taken and passed not more than one year before the date of the renewal application a welding test in accordance with sub. (3).

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (3) (a) (intro.), (b), (5) (c), Register, March, 1998, No. 507, eff. 4-1-98; am. (1), (2) (b) and (3) (a) (intro.), Register, April, 2000, No. 532, eff. 5-1-00; CR 01-139: am. (1) and (3) (a) (intro.) Register June 2002 No. 558, eff. 7-1-02; CR 03-075: am. (3) (a) Register June 2004 No. 582, eff. 8-1-04; CR 05-011: am. (4) (intro.), (a) and (b), cr. (4) (d) Register July 2005 No. 595, eff. 8-1-05; CR 06-120: am. (1), Register February 2008 No. 626, eff. 3-1-08; CR 07-089: am. (1) and (4) (intro.) Register June 2008 No. 630, eff. 7-1-08; CR 08-110: r. (5) (d) Register September 2009 No. 645, eff. 10-1-09; CR 11-020: am. (2) (b), renum. (3) (a) 2. to be (3) (a) 3., cr. (3) (a) 2., 4., Register December 2011 No. 672, eff. 1-1-12; correction in (1), (2) (a), (b), (3) (b), (5) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.35 Weld test conductors. (1) **GENERAL.** No person may conduct welding tests for the purpose of qualifying structural steel welders under s. [SPS 305.34](#) unless the person holds a certification issued by the department as a certified weld test conductor.

(2) **APPLICATION FOR EXAMINATION.** A person applying to take a weld test conductor certification examination shall submit all of the following:

- (a) An application in accordance with s. [SPS 305.01](#).
- (b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) **EXAMINATION.** The person seeking to obtain a weld test conductor certification shall take and pass an examination in accordance with s. [SPS 305.09](#).

(4) **APPLICATION FOR CERTIFICATION.** Upon notification of the successful passage of the examination for weld test conductor

certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. [SPS 305.01](#) and [305.09](#) (7) (c).

(5) **RESPONSIBILITIES.** A person who conducts welding tests for qualifying structural steel welders under s. [SPS 305.34](#) as a certified weld test conductor shall do all of the following:

(a) Ensure that the welding tests, the testing facilities and testing equipment conform with the following appropriate standard or standards:

- 1. American Welding Society D 1.1, section 4, part C.
- 2. American Welding Society D 1.2, section 3, part D.
- 3. American Welding Society D 1.3, section 4, part C.
- 4. American Welding Society D 1.6, section 4, part C.

(b) Provide to each individual who passes a qualifying welding test, documentation in a format specified by the department, indicating the welding procedures for which the individual qualified.

(c) 1. Maintain a record of those individuals who passed a structural welding qualifying test, including the procedures for which the individuals qualified, for at least 5 years after the date of the test.

2. Present upon request to the department or its representative the records under subd. 1.

(6) **RENEWAL.** (a) A person may renew his or her certification as a weld test conductor.

(b) A weld test conductor certification shall be renewed in accordance with s. [SPS 305.07](#).

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1), (4) and (5) (a) (intro.), Register, April, 2000, No. 532, eff. 5-1-00; CR 01-139: am. (5) (a) (intro.) Register June 2002 No. 558, eff. 7-1-02; CR 03-075: am. (5) (a) Register June 2004 No. 582, eff. 8-1-04; CR 05-011: am. (5) (intro.), (b) and (c) 1., Register July 2005 No. 595, eff. 8-1-05; CR 07-089: am. (1) and (5) (intro.) Register June 2008 No. 630, eff. 7-1-08; CR 08-110: r. (6) (c) Register September 2009 No. 645, eff. 10-1-09; CR 10-039: am. (1), (2) (intro.), (3) (a), (5) (intro.) and (6) Register November 2010 No. 659, eff. 12-1-10; CR 11-020: am. (2) (b), renum. (5) (a) 2. to be (5) (a) 3., cr. (5) (a) 2., 4., Register December 2011 No. 672, eff. 1-1-12; (3) (a) renumbered to be (3) under s. 13.92 (4) (b) 1., Stats., correction in (1), (2) (a), (b), (3), (4), (5) (intro.), (6) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.36 POWTS maintainers. (1) **GENERAL.** Pursuant to s. [SPS 383.52](#) (3), a person who holds a registration issued by the department as a registered POWTS maintainer may evaluate, monitor and maintain POWTS components for the purpose of providing the management of a POWTS under subch. V of Ch. [SPS 383](#).

(2) **APPLICATION FOR REGISTRATION.** A person applying for a POWTS maintainer registration shall submit all of the following:

- (a) An application in accordance with s. [SPS 305.01](#).
- (b) An application and registration fee in accordance with s. [SPS 305.02](#), Table 305.02.
- (c) Information or documentation relating to the qualifications under sub. (3).

(3) **QUALIFICATIONS FOR REGISTRATION.** A person applying for a POWTS maintainer registration shall have completed or obtained at least one of the following:

(a) At least 6 hours in a course or courses approved under s. [SPS 305.08](#) that relate to the theory, operation, maintenance and inspection of POWTS treatment and dispersal components, including instruction in at least all of the following:

- 1. Sand filters.
- 2. Effluent pumps and switches.
- 3. Alarms and floats.
- 4. Active filtration devices.
- 5. Valves and solenoids for distributing effluent.

6. Aerobic treatment units.

(b) At least 60 hours of experience as a licensed master plumber, master plumber-restricted service, journeyman plumber or journeyman plumber-restricted service installing POWTS treatment and dispersal components that involve installation of at least all of the devices delineated under par. (a) 1. to 6.

(4) RENEWAL. (a) 1. A person may renew his or her registration as a POWTS maintainer.

2. A POWTS maintainer registration shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a registration as a registered POWTS maintainer shall be contingent upon the POWTS maintainer obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the registration as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a registration as a POWTS maintainer may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. Register, April, 2000, No. 532, eff. 7-1-00; CR 03-075: r. and recr. (4) (b) 1. Register June 2004 No. 582, eff. 8-1-04; CR 07-100: am. (1) Register September 2008 No. 633, eff. 10-1-08; CR 08-110: r. and recr. (4) (b) 1. Register September 2009 No. 645, eff. 10-1-09; correction in (1), (2) (a), (b), (3) (a) (intro.), (4) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (4) (b) 1. Register August 2014 No. 704, eff. 9-1-14.

Subchapter IV — Electrical

SPS 305.40 Electricians. (1) Except as provided under s. 101.862 (4), Stats., no person as of April 1, 2014, may install, repair, or maintain electrical wiring unless the person holds a license or registration issued by the department or is enrolled by the department as one of the following:

- (a) A licensed master electrician.
- (b) A licensed residential master electrician.
- (bm) A registered master electrician.
- (c) A licensed journeyman electrician.
- (d) A licensed industrial journeyman electrician.
- (e) A licensed residential journeyman electrician.
- (f) An enrolled registered electrician.
- (g) A registered electrical apprentice.
- (h) A registered industrial electrical apprentice.
- (i) A registered residential electrical apprentice.

(2) (a) Except as provided in par. (b), the electrical wiring activities that may be undertaken by a person who holds a license or registration as a licensed residential master electrician, a licensed residential journeyman electrician or a registered residential electrical apprentice shall be limited to wiring associated with dwellings, dwelling units and detached accessory buildings and structures serving the dwellings or the dwelling units, such as garages, carports, gazebos, and swimming pools.

(b) A person who holds a license or registration as a licensed residential master electrician, a licensed residential journeyman electrician, or a registered residential electrical apprentice may perform electrical wiring not associated with dwellings and dwelling units, provided the person is under the direct supervision of a licensed master electrician, a registered master electrician, or a licensed journeyman electrician.

(3) (a) The electrical wiring activities that may be undertaken by a person who holds a license or registration as a licensed industrial journeyman electrician or a registered industrial electrical apprentice shall be limited to wiring within the facilities or

properties of the business establishment where the person is employed.

(b) A person who holds a license or registration as a licensed industrial journeyman electrician or a registered industrial electrical apprentice may perform electrical wiring not associated with the facilities or properties of the business establishment where the person is employed, provided the person is under the direct supervision of a licensed master electrician, a registered master electrician, or a licensed journeyman electrician.

(4) (a) 1. A person who holds a license as a licensed journeyman electrician or a registration as a registered electrical apprentice shall perform electrical wiring activities under the general supervision of a person who holds a license as a licensed master electrician or a registration as a registered master electrician, except as provided in subd. 2.

2. A person who holds a license as a licensed journeyman electrician or a registration as a registered electrical apprentice may perform electrical wiring activities under the general supervision of a person who holds a license as a licensed residential master electrician provided the wiring is associated with dwellings, dwelling units and detached accessory buildings and structures serving the dwellings or the dwelling units, such as garages, carports, gazebos, and swimming pools.

(b) A person who holds a license as a licensed industrial journeyman electrician or a registration as a registered industrial electrical apprentice shall perform electrical wiring within the facilities or properties of the business establishment where the person is employed under the general supervision of a person who holds a license as a licensed master electrician or a registration as a registered master electrician.

(c) A person who holds a license as a licensed residential journeyman electrician or a registration as a registered residential electrical apprentice shall perform electrical wiring activities associated with dwellings and dwelling units under the general supervision of a person who holds a license either as a licensed master electrician or a licensed residential master electrician, or holds a registration as a registered master electrician.

(d) 1. Except as provided in subd. 2., a person who is enrolled as a registered electrician shall perform electrical wiring activities under the direct supervision of a person who holds a license either as a licensed master electrician or a licensed journeyman electrician, or holds a registration as a registered master electrician.

2. A person who is enrolled as a registered electrician may perform electrical wiring activities under the direct supervision of a person who holds a license as a licensed residential master electrician or licensed residential journeyman electrician provided the wiring is associated with dwellings, dwelling units and detached accessory buildings and structures serving the dwellings or the dwelling units, such as garages, carports, gazebos, and swimming pools.

3. A person who is enrolled as a registered electrician may perform electrical wiring activities under the direct supervision of a person who holds a license as a licensed industrial journeyman electrician provided the wiring is within the facilities or properties of the business establishment where the industrial journeyman electrician is employed.

(5) At any time, for any electrical wiring project, the total number of registered beginning electricians at an installation site may not exceed twice the total number of licensed or registered master electricians and journeyman electricians at the installation site plus two.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. Register, April, 2000, No. 532, eff. 5-1-00; CR 05-011: r. (2) Register July 2005 No. 595, eff. 8-1-05; CR 09-028: r. and recr. Register August 2010 No. 656, eff. 4-1-13; EmR1415: Entire code is always current. The Register date on each page is the date the chapter was last published.

emerg. am. (2) (b), (3) (b), (4) (a) 1., (b), (c), (d) 1., (5), eff. 8-6-14; [CR 14-049](#): am. (2) (b), (3) (b), (4) (a) 1., (b), (c), (d) 1., (5) [Register July 2015 No. 715](#), eff. 8-1-15; [CR 16-093](#): am. (1) (intro.), (f), (4) (d) [Register June 2018 No. 750](#), eff. 8-1-18; [CR 19-118](#): am. (1) (intro.), [Register May 2020 No. 773](#), eff. 6-1-20; correction in (1) (intro.) made under s. 35.17, Stats., [Register May 2020 No. 773](#).

SPS 305.405 Terminology. For the purposes of this subchapter, electrical contractor certifications and master and journeyman electrician certifications issued prior to April 1, 2014, shall be considered to be licenses.

Note: 2007 Wisconsin Act 63 changed the nomenclature from electrical certifications to electrical licenses.

History: [CR 09-028](#): cr. [Register August 2010 No. 656](#), eff. 9-1-10; [CR 19-118](#): am. [Register May 2020 No. 773](#); correction made under s. 35.17, Stats., [Register May 2020 No. 773](#).

SPS 305.41 Electrical contractors. (1) GENERAL. (a) Pursuant to s. 101.862, Stats., no person or entity, as of April 1, 2014, may engage in the business or offer to engage in the business of installing, repairing, or maintaining electrical wiring unless the person or entity holds a license or certification issued by the department as a licensed electrical contractor, except as provided under s. 101.862 (4), Stats.

(b) For the purposes of this section, unexpired electrical contractor certifications issued prior to April 1, 2014, shall be considered licenses.

Note: 2007 Wisconsin Act 63 changed the nomenclature from electrical certifications to electrical licenses.

Note: Section 101.862 (4), Stats., exempts the following:

(a) A residential property owner who installs, repairs, or maintains electrical wiring on premises that the property owner owns and occupies as a residence, unless a license or registration issued by the department is required by local ordinance.

(am) A person engaged in installing electrical wiring within an existing industrial facility or existing manufacturing facility owned or leased by the person or by an entity for which the person is an agent or employee.

(b) A person engaged in maintaining or repairing electrical wiring within an existing facility or on premises owned or leased by the person or by an entity for which the person is an agent or employee.

(c) A person engaged in installing, repairing, or maintaining electrical wiring, apparatus, or equipment for elevators and escalators.

(d) A person engaged in installing, repairing, or maintaining equipment or systems that operate at 100 volts or less.

(e) A person engaged in installing, repairing, or maintaining an electronic system designed to monitor a premises for the presence of an emergency, to issue an alarm for an emergency, or to detect and summon aid for an emergency.

(f) A person engaged in installing, repairing, or maintaining electrical wiring of transmission facilities that support telecommunications service, as defined in s. 182.017 (1g) (cq), that is provided by a telecommunications provider, as defined in s. 196.01 (8p).

(g) A person engaged in installing, repairing, or maintaining manufactured equipment or utilization equipment, including ballasts, electric signs and luminaires, or any other manufactured system that is designed to provide a function that is not primarily electrical in nature if the installation, repair, or maintenance only involves the modification or installation of conductors beyond the disconnecting point or beyond the last junction, pull, or device box, whichever is nearer to the point where the person is performing the installation, repair, or maintenance that are considered part of the equipment or system under this paragraph. For purposes of this paragraph, any conductor going from the disconnecting point or the nearest junction, pull, or device box to the manufactured equipment or utilization equipment or the manufactured system is considered part of the equipment or system.

(h) A person engaged in installing electrical wiring for components of a manufactured home, as defined in s. 101.91 (2), or a manufactured building, as defined in s. 101.71 (6), while the manufactured home or the manufactured building is at or in the facility at which it is being manufactured.

(i) A person employed by an electricity provider, or a subcontractor of an electricity provider, who installs, repairs, or maintains electrical wiring for equipment that is installed in the normal course of providing utility services by the electricity provider.

(j) A person engaged in installing, repairing, or maintaining electrical wiring that provides lighting or signals for public thoroughfares and for public airports.

(k) A person engaged in installing, repairing, or maintaining electric lines on the utility side of substations and other distribution facilities owned or operated by customers or members of electricity providers.

(L) A person employed by an electricity provider, or a subcontractor of an electricity provider, who installs, repairs, or maintains primary voltage electric facilities that are owned by the electricity provider's customers or members and that operate at greater than 600 volts.

(m) A person employed by an electricity provider, or a subcontractor of an electricity provider, who restores service during an emergency.

(n) A person who installs a replacement for an existing switch or outlet if the replacement switch or outlet has a rating of not more than 20 amperes.

(p) A person engaged in installing, repairing, or maintaining a private on-site wastewater treatment system, as defined in s. 145.01 (12), if the activity only involves installing or modifying a conductor going from the system's junction, pull, or device box to the nearest disconnecting point and the conductor is buried with the system.

(q) A person engaged in installing, repairing, or maintaining a pump for a well if the activity only involves installing or modifying a conductor going from the pump's junction, pull, or device box to the nearest disconnecting point and the conductor is buried with the pump.

Note: As of April 1, 2014, the department will no longer issue or renew a certification for electrical contractor-restricted. The department will issue an electrical contractor license to those individuals who hold an electrical contractor-restricted certification prior to April 1, 2014. The issuance of the license will indicate the same expiration date as the current restricted-certification.

(2) APPLICATION FOR LICENSURE. A person applying for an electrical contractor license shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and a license fee in accordance with s. [SPS 305.02](#), Table 305.02.

(c) A statement certifying compliance with worker's compensation requirements under ch. 102, Stats., and unemployment compensation requirements under ch. 108, Stats.

(3) QUALIFICATIONS FOR LICENSURE. The person applying for an electrical contractor license shall be the owner of the contracting business, a partner in the contracting business applying on behalf of the partnership, or the chairman of the board or chief executive officer applying on behalf of the contracting corporation.

(4) RESPONSIBILITIES. (a) A licensed electrical contractor shall utilize the appropriately licensed or registered individuals to construct, install, repair or maintain electrical wiring.

(b) For any electrical installation that requires a uniform building permit under s. [SPS 320.08](#), a person who holds an electrical contractor license may not commence installation of electrical wiring until a permit is issued for the installation.

Note: Chapters [SPS 320](#) to [325](#) apply to one- and 2-family dwellings and manufactured dwellings. The department's uniform building permit is issued either by the municipality in which the dwelling is located or by a UDC inspection agency where the municipality does not administer the Uniform Dwelling Code.

(d) A person or entity that holds a electrical contractor license shall include his or her license number on all construction bids and contracts.

(5) RENEWAL. (a) A person may renew his or her license as an electrical contractor.

(b) An electrical contractor license shall be renewed in accordance with s. [SPS 305.07](#).

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; am. (3), [Register, March, 1998, No. 507](#), eff. 4-1-98; am. (1) (a) 2., [Register, April, 2000, No. 532](#), eff. 5-1-00; [CR 03-075](#): renum. (3) to be (3) (a), cr. (3) (b) [Register June 2004 No. 582](#), eff. 8-1-04; [CR 08-110](#): cr. (3) (c) [Register September 2009 No. 645](#), eff. 10-1-09; [CR 09-028](#): r. and recr. [Register August 2010 No. 656](#), eff. 9-1-10; correction in (2) (a), (b), (4) (b), (c), (5) (b) made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#); [CR 19-118](#): am. (1) (a), (b), r. (4) (c) [Register May 2020 No. 773](#), eff. 6-1-20; correction in (1) (b) made under s. 35.17, Stats., [Register May 2020 No. 773](#).

SPS 305.43 Master electricians. (1) APPLICATION FOR EXAMINATION. A person applying to take a master electrician license examination shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(2) QUALIFICATIONS FOR EXAMINATION. A person applying for a master electrician license examination shall have at least one of the following qualifications:

(a) A bachelor's degree or master's degree in electrical engineering.

(b) Twelve months of experience in installing, repairing, and maintaining electrical wiring while being licensed as a journeyman electrician.

(c) Experience in installing, repairing, and maintaining electrical wiring during a period of not less than 60 months, with at least 10,000 hours of experience over that period.

(3) **EXAMINATION.** A person seeking to obtain a master electrician license shall take and pass an examination in accordance with s. [SPS 305.09](#).

(4) **APPLICATION FOR CERTIFICATION.** Upon notification of the successful passage of the examination for a master electrician license, a person may obtain the license by submitting an application and the license fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(5) **RESPONSIBILITIES.** (a) For any electrical installation that requires a uniform building permit under s. [SPS 320.08](#), a person who holds a master electrician license may not commence installation of electrical wiring until a permit is issued for the installation.

Note: Chs. [SPS 320](#) to [325](#) apply to one- and 2-family dwellings and manufactured dwellings. The department's uniform building permit is issued either by the municipality in which the dwelling is located or by a UDC inspection agency where the municipality does not administer the Uniform Dwelling Code.

(b) A person who as a licensed master electrician is responsible for the installation, repair or maintenance of electrical wiring shall utilize the appropriately licensed or registered individuals to construct, install, repair or maintain electrical wiring.

(6) **EXCHANGES.** (a) A person who holds a master electrician license may, upon application to the department, exchange his or her master electrician license for a journeyman electrician license.

(b) A person who has exchanged his or her master electrician license for a journeyman electrician license may, upon application to the department, exchange his or her journeyman electrician license for a master electrician license in accordance with the following provisions:

1. The person holds a valid journeyman electrician license.
2. The person submits with the application a copy of his or her former master electrician license.
3. The license fee for a master electrician specified in s. [SPS 305.02](#), Table 305.02 is submitted.

(7) **RENEWAL.** (a) 1. A person may renew his or her license as a master electrician.

2. A master electrician license shall be renewed in accordance with s. [SPS 305.07](#).

(b) 1. The renewal of a license as a licensed master electrician shall be contingent upon the master electrician obtaining at least 24 hours of acceptable continuing education prior to the expiration date of the license as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a licensed master electrician may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. [Register](#), October, 1996, No. 490, eff. 11-1-96; am. (2) (b), (5) (b) 1., [Register](#), March, 1998, No. 507, eff. 4-1-98; am. (4) and (5) (b), [Register](#), April, 2000, No. 532, eff. 5-1-00; CR 03-075: renum. (5) to be (6) and r. and recr. (6) (b) 1., cr. (5) [Register](#) June 2004 No. 582, eff. 8-1-04; CR 09-028: am. (1) (intro.), (2) (a), (3) and (4), renum. (5) and (6) to be (5) (a) and (7) and am., cr. (5) (b) and (6) [Register](#) August 2010 No. 656, eff. 9-1-10, except (5) (b), eff. 4-1-13; correction in (1) (a), (b), (3), (4), (5) (a), (6) (b) 3., (7) (a) 2., (b) 1. made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register](#) December 2011 No. 672; CR 14-010: am. (7) (b) 1. [Register](#) August 2014 No. 704, eff. 9-1-14; CR 16-093: r. and recr. (2) [Register](#) June 2018 No. 750, eff. 8-1-18.

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SPS 305.435 Residential master electricians. (1) APPLICATION FOR EXAMINATION. A person applying to take a residential master electrician licensure examination shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(2) **QUALIFICATIONS FOR EXAMINATION.** (a) Except as provided in par. (b), a person applying for a residential master electrician licensure examination shall have at least 1,000 hours per year of experience for at least 5 years in electrical wiring work.

(b) Relative to the experience required under par. (a), each semester spent full-time in a school of electrical engineering or other accredited college, university, technical or vocational school in an electrical-related program shall be considered equivalent to 500 hours of experience, with no more than 3,000 hours and 3 years of experience through education being credited toward the required experience.

(3) **EXAMINATION.** A person seeking to obtain a residential master electrician license shall take and pass an examination in accordance with s. [SPS 305.09](#).

(4) **APPLICATION FOR LICENSURE.** Upon notification of the successful passage of the examination for a residential master electrician license, a person may obtain the license by submitting an application and the license fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(5) **RESPONSIBILITIES.** (a) For any electrical installation that requires a uniform building permit under s. [SPS 320.08](#), a person who holds a residential master electrician license may not commence installation of electrical wiring until a permit is issued for the installation.

Note: Chs. [SPS 320](#) to [325](#) apply to one- and 2-family dwellings and manufactured dwellings. The department's uniform building permit is issued either by the municipality in which the dwelling is located or by a UDC inspection agency where the municipality does not administer the Uniform Dwelling Code.

(b) A person who as a licensed residential master electrician is responsible for the installation, repair or maintenance of electrical wiring shall utilize the appropriately licensed or registered individuals to construct, install, repair or maintain electrical wiring.

(6) **EXCHANGES.** (a) A person who holds a residential master electrician license may, upon application to the department, exchange his or her residential master electrician license for a residential journeyman electrician license.

(b) A person who has exchanged his or her residential master electrician license for a residential journeyman electrician license may, upon application to the department, exchange his or her residential journeyman electrician license for a residential master electrician license in accordance with the following provisions:

1. The person holds a valid residential journeyman electrician license.
2. The person submits with the application a copy of his or her former residential master electrician license.
3. The license fee for a residential master electrician specified in s. [SPS 305.02](#), Table 305.02 is submitted.

(7) **RENEWAL.** (a) 1. A person may renew his or her license as a residential master electrician.

2. A residential master electrician license shall be renewed in accordance with s. [SPS 305.07](#).

(b) 1. The renewal of a license as a licensed residential master electrician shall be contingent upon the residential master electrician obtaining at least 18 hours of acceptable continuing education prior to the expiration date of the license as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a licensed residential master electrician may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: CR 09-028: cr. Register August 2010 No. 656, eff. 9-1-10; correction in (1) (a), (b), (3), (4), (5) (a), (6) (b) 3., (7) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (7) (b) 1. Register August 2014 No. 704, eff. 9-1-14.

SPS 305.437 Registered master electricians. (1) APPLICATION FOR REGISTRATION. A person applying for registration as a registered master electrician shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and a registration fee in accordance with s. SPS 305.02, Table 305.02.
- (c) Documented verification of meeting the requirements in subd. (2).

(2) **QUALIFICATIONS.** A person applying for registration as a registered master electrician shall have a birth date of on or before January 1, 1956; and shall have at least 15 years of experience in installing, repairing or maintaining electrical wiring.

(3) **RESPONSIBILITIES.** (a) For any electrical installation that is required to have a uniform building permit under s. SPS 320.08, a person who holds a master electrician registration may not commence installation of electrical wiring until a permit is issued for the installation.

Note: The Wisconsin Uniform Dwelling Code (UDC), which consists of chapters SPS 320 to 325, applies to one- and two-family dwellings and manufactured dwellings. The Department's uniform building permit is issued either by the municipality in which the dwelling is located, or by a UDC inspection agency where the municipality does not administer the Uniform Dwelling Code.

(b) A person who as a registered master electrician is responsible for the installation, repair or maintenance of electrical wiring shall utilize the appropriately licensed or registered individuals to construct, install, repair or maintain electrical wiring.

History: EmR1415: emerg. cr., eff. 8-6-14; CR 14-049: cr. Register July 2015 No. 715, eff. 8-1-15.

SPS 305.44 Journeyman electricians. (2) APPLICATION FOR EXAMINATION. A person applying to take a journeyman electrician license examination shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) **QUALIFICATIONS FOR EXAMINATION.** A person applying for a journeyman electrician license examination shall have at least one of the following qualifications:

(a) Completion of a construction electrician apprenticeship program in installing, repairing, and maintaining electrical wiring that has a duration of at least 3 years and that is approved by the U.S. department of labor or by the department of workforce development.

(b) Experience in installing, repairing, and maintaining electrical wiring during a period of not less than 48 months, with at least 8,000 hours of experience over that period. For purposes of meeting this requirement, a degree or diploma from a 2-year program in a school of electrical engineering or from a 2-year program in an accredited technical or vocational school in an electrical-related program shall be accepted by the department as being equivalent to 12 months and 2,000 hours of experience.

(4) **EXAMINATION.** A person seeking to obtain a journeyman electrician license shall take and pass an examination in accordance with s. SPS 305.09.

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(5) **APPLICATION FOR CERTIFICATION.** Upon notification of the successful passage of the examination for a journeyman electrician license, a person may obtain the license by submitting an application and the license fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(6) **RENEWAL.** (a) 1. A person may renew his or her license as a journeyman electrician.

2. A journeyman electrician license shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a license as a licensed journeyman electrician shall be contingent upon the journeyman electrician obtaining at least 24 hours of acceptable continuing education prior to the expiration date of the license as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a licensed journeyman electrician may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

3. A person who initially obtained his or her journeyman electrician license without having successfully passed a journeyman electrician license examination and whose request to renew his or her license is denied because of the failure to fulfill the continuing education requirements of subd. 1., shall be required to take and pass the journeyman electrician license examination in order to reacquire the journeyman electrician license.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (b), (3) (b), (5) (b) 2., (6) (b) 3., Register, March, 1998, No. 507, eff. 4-1-98; am. (1) (intro.), (5) (a), (b) (intro.) and 1., (6) (b) 1. and 2., Register, April, 2000, No. 532, eff. 5-1-00; CR 03-075: r. and recr. (6) (b) 1., am. (6) (b) 3. Register June 2004 No. 582, eff. 8-1-04; CR 09-028: am. (1) (intro.), (2) (intro.), (3) (a), (4), (5) (a), (b) (intro.), 1., and (6) Register August 2010 No. 656, eff. 9-1-10; correction in (2) (a), (b), (4), (5) (a), (b) 1., (6) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14; CR 16-093: r. (1), r. and recr. (3), renum. (5) (a) to (5), r. (5) (b), am. (6) (b) 3. Register June 2018 No. 750, eff. 8-1-18; correction in (4) made under s. 13.92 (4) (b) 7., Stats., Register June 2018.

SPS 305.443 Industrial journeyman electricians.

(1) **GENERAL.** A person may obtain a license as a licensed industrial journeyman electrician by either one of the following:

- (a) Taking and passing the industrial journeyman electrician licensure examination.
- (b) Completing an industrial electrical apprenticeship.

(2) **APPLICATION FOR EXAMINATION.** A person applying to take an industrial journeyman electrician licensure examination shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) **QUALIFICATIONS FOR EXAMINATION.** (a) Except as provided in par. (b), a person applying for a industrial journeyman electrician licensure examination shall have at least 1,000 hours per year of experience for at least 5 years in industrial electrical wiring work.

(b) Relative to the experience required under par. (a), each semester spent full-time in a school of electrical engineering or other accredited college, university, technical or vocational school in an electrical-related program shall be considered equivalent to 500 hours of experience, with no more than 2,000 hours and 2 years of experience through education being credited toward the required experience.

(4) **EXAMINATION.** Except as provided in sub. (1) (b), a person seeking to obtain an industrial journeyman electrician license

shall take and pass an examination in accordance with s. [SPS 305.09](#).

(5) APPLICATION FOR LICENSURE. (a) Upon notification of the successful passage of the examination for an industrial journeyman electrician license, a person may obtain the license by submitting an application and the license fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(b) A person may apply for a license as a licensed industrial journeyman electrician by submitting all of the following:

1. An application, application fee and a license fee in accordance with ss. [SPS 305.01](#) and [305.02](#), Table 305.02.

2. Evidence of completing an industrial electrical apprenticeship program and the program has been recognized by the department of workforce development and the federal department of labor.

(6) RENEWAL. (a) 1. A person may renew his or her license as an industrial journeyman electrician.

2. An industrial journeyman electrician license shall be renewed in accordance with s. [SPS 305.07](#).

(b) 1. The renewal of a license as a licensed industrial journeyman electrician shall be contingent upon the industrial journeyman electrician obtaining at least 18 hours of acceptable continuing education prior to the expiration date of the license as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a licensed industrial journeyman electrician may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

3. A person who initially obtained his or her industrial journeyman electrician license by completing an industrial electrical apprenticeship and whose request to renew his or her license is denied because of the failure to fulfill the continuing education requirements of subd. 1., shall be required to take and pass the industrial journeyman electrician licensure examination in order to reacquire the industrial journeyman electrician license.

History: CR 09-028: cr. Register August 2010 No. 656, eff. 9-1-10; correction in (2) (a), (b), (4), (5) (a), (b) 1., (6) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14.

SPS 305.447 Residential journeyman electricians.

(1) GENERAL. A person may obtain a license as a licensed residential journeyman electrician by either one of the following:

(a) Taking and passing the residential journeyman electrician licensure examination.

(b) Completing a residential electrical wiring apprenticeship.

(2) APPLICATION FOR EXAMINATION. A person applying to take a residential journeyman electrician licensure examination shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) QUALIFICATIONS FOR EXAMINATION. (a) Except as provided in par. (b), a person applying for a residential journeyman electrician licensure examination shall have at least 1,000 hours per year of experience for at least 3 years in residential electrical wiring work.

(b) Relative to the experience required under par. (a), each semester spent full-time in a school of electrical engineering or other accredited college, university, technical or vocational school in an electrical-related program shall be considered equiv-

alent to 500 hours of experience, with no more than 2,000 hours and 2 years of experience through education being credited toward the required experience.

(4) EXAMINATION. Except as provided in sub. (1) (b), a person seeking to obtain a residential journeyman electrician license shall take and pass an examination in accordance with s. [SPS 305.09](#).

(5) APPLICATION FOR LICENSURE. (a) Upon notification of the successful passage of the examination for a residential journeyman electrician license, a person may obtain the license by submitting an application and the license fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(b) A person may apply for a license as a licensed residential journeyman electrician by submitting all of the following:

1. An application, application fee and a license fee in accordance with ss. [SPS 305.01](#) and [305.02](#), Table 305.02.

2. Evidence of completing a residential electrical wiring apprenticeship program and the program has been recognized by the department of workforce development and the federal department of labor.

(6) RENEWAL. (a) 1. A person may renew his or her license as a residential journeyman electrician.

2. A residential journeyman electrician license shall be renewed in accordance with s. [SPS 305.07](#).

(b) 1. The renewal of a license as a licensed residential journeyman electrician shall be contingent upon the residential journeyman electrician obtaining at least 18 hours of acceptable continuing education prior to the expiration date of the license as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a licensed residential journeyman electrician may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

3. A person who initially obtained his or her residential journeyman electrician license by completing a residential electrical wiring apprenticeship and whose request to renew his or her license is denied because of the failure to fulfill the continuing education requirements of subd. 1., shall be required to take and pass the residential journeyman electrician licensure examination in order to reacquire the residential journeyman electrician license.

History: CR 09-028: cr. Register August 2010 No. 656, eff. 9-1-10; correction in (2) (a), (b), (4), (5) (a), (b) 1., (6) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14.

SPS 305.45 Registered electricians. (1) APPLICATION FOR ENROLLMENT.

A person applying for enrollment as a registered electrician shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and a registration fee in accordance with s. [SPS 305.02](#), Table 305.02.

(2) RENEWAL. (a) A person may renew his or her enrollment as a registered electrician.

(b) A registered electrician enrollment shall be renewed in accordance with s. [SPS 305.07](#).

(c) 1. The renewal of a registered electrician enrollment shall be for a term of one year.

2. The renewal of an enrollment as a registered electrician shall be contingent upon the registered electrician obtaining at least 24 hours of acceptable continuing education prior to the ex-

piration date of the enrollment as specified in s. SPS 305.08 and Table 305.06. This subdivision does not apply to an individual who, at the time of applying for renewal of an enrollment, is participating in a youth apprenticeship program under s. 106.13, Stats.

3. A person enrolled as a registered electrician may apply to the department for waiver of the continuing education requirements under subd. 2. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

4. A person who initially obtained a registered electrician enrollment and fails to renew the enrollment shall be required to complete at least 24 hours of acceptable continuing education within one year prior to date of application to reacquire the registered electrician enrollment. This subdivision does not apply to an individual who, at the time of applying for reacquisition of an enrollment, is participating in a youth apprenticeship program under s. 106.13, Stats.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (b), Register, April, 2000, No. 532, eff. 5-1-00; CR 09-028: r. and recr. Register August 2010 No. 656, eff. 9-1-10; correction in (1) (a), (b), (2) (b), (c) 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (2) (c) 2. Register August 2014 No. 704, eff. 9-1-14; CR 16-093: am. (title), (1) (intro.), (2) Register June 2018 No. 750, eff. 8-1-18; CR 20-035: am. (2) (c) 2., 4. Register April 2021 No. 784, eff. 5-1-21.

SPS 305.46 Electrical apprentices. (1) APPLICATION FOR REGISTRATION. A person applying for registration as a registered electrical apprentice, a registered industrial electrical apprentice, or a registered residential electrical apprentice shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and a registration fee in accordance with s. SPS 305.02, Table 305.02.

(2) QUALIFICATIONS. A person applying for an electrical apprentice, an industrial electrical apprentice, or a residential electrical apprentice registration shall be entered into an electrical apprentice contract recognized under ch. 106, Stats.

(3) RESPONSIBILITIES. A person who installs, repairs, or maintains electrical wiring as a registered electrical apprentice, registered industrial electrical apprentice, or registered residential electrical apprentice may do so as long as he or she is entered into an electrical apprentice contract recognized under ch. 106, Stats.

(4) RENEWAL. (a) A person may renew his or her registration as an electrical-apprentice, industrial electrical apprentice, or residential electrical apprentice.

(b) 1. An electrical-apprentice, industrial electrical apprentice, or residential electrical apprentice registration shall be renewed in accordance with s. SPS 305.07.

2. The renewal of registration as an electrical apprentice, industrial electrical apprentice, or residential electrical apprentice shall be contingent upon the person submitting evidence that the person is entered into an electrical apprentice contract recognized under ch. 106, Stats.

History: CR 09-028: cr. Register August 2010 No. 656, eff. 9-1-10; CR 11-020: am. (2), (3), (4) (b) 2., Register December 2011 No. 672, eff. 1-1-12; correction in (1) (a), (b), (4) (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.47 Reciprocity. As provided under s. 101.874, Stats., the department may enter into a reciprocal agreement with another state under which credentials issued to electricians, electrical apprentices, electrical contractors, and electrical inspectors by either state are recognized as comparable credentials by the other state.

History: CR 16-093: cr. Register June 2018 No. 750, eff. 8-1-18.

Subchapter V — Fire Sprinkler

SPS 305.50 Fire sprinkler installers. (1) (a) Except as provided in par. (b), pursuant to ss. 145.15 (4), 145.165 and 145.175, Stats., no person may install, maintain or repair automatic fire sprinkler systems unless the person holds a license or registration issued by the department as a licensed automatic fire sprinkler contractor, a licensed journeyman sprinkler fitter, a registered automatic fire sprinkler system apprentice, a registered automatic fire sprinkler contractor-maintenance, or a registered automatic fire sprinkler fitter-maintenance.

(b) Paragraph (a) does not apply to a person repairing, replacing or maintaining electrical supervisory devices for existing automatic fire sprinkler systems.

(2) No person may conduct the annual activities relative to inspection and testing of an existing automatic fire sprinkler system and components as required by ch. SPS 314 unless the person holds a license or registration issued by the department as a licensed automatic fire sprinkler contractor, a licensed journeyman sprinkler fitter, a registered automatic fire sprinkler system apprentice, a registered automatic fire sprinkler contractor-maintenance, a registered automatic fire sprinkler fitter-maintenance, a registered automatic fire sprinkler system tester or a registered sprinkler tester learner.

Note: The rules of this subchapter further restrict or limit the type of automatic fire sprinkler installations and activities that certain license or registration categories may perform or undertake.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (a), Register, March, 1998, No. 507, eff. 4-1-98; am. Register, April, 2000, No. 532, eff. 5-1-00; CR 01-139: am. (2) Register June 2002 No. 558, eff. 7-1-02; CR 11-020: am. (2), Register December 2011 No. 672, eff. 1-1-12; correction in (2) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.51 Sprinkler contractors. (1) GENERAL. Except as provided in s. SPS 305.54, a person licensed as an automatic fire sprinkler contractor shall be responsible for each installation of an automatic fire sprinkler system.

(2) APPLICATION FOR EXAMINATION. A person applying to take an automatic fire sprinkler contractor license examination shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR EXAMINATION. A person applying for an automatic fire sprinkler contractor license examination shall have one of the following qualifications relating to the engineering principles and skills associated with the design, installation and maintenance of automatic fire sprinkler systems:

(a) At least 1000 hours of experience per year for at least 3 consecutive years as a licensed journeyman automatic fire sprinkler fitter.

(b) Graduated from an accredited 4-year university or college with a degree in civil engineering, mechanical engineering or other approved engineering curriculum related to automatic fire sprinklers.

(c) At least 1000 hours of experience per year for at least 7 years in automatic fire sprinkler design or installation. Each semester spent full-time in a school of civil or mechanical engineering or other accredited college, university, technical or vocational school in an automatic fire sprinkler-related program shall be considered equivalent to 500 hours of experience, with no more than 3,000 hours and 3 years of experience through education being credited toward the 7 years of experience.

(d) A level III certification in fire protection/automatic fire sprinkler system layout from the national institute for certification in engineering technologies.

(4) **EXAMINATION.** A person seeking to obtain an automatic fire sprinkler contractor license shall take and pass an examination in accordance with s. [SPS 305.09](#).

(5) **APPLICATION FOR LICENSE.** Upon notification of the successful passage of the examination for an automatic fire sprinkler system contractor license, a person may obtain the license by submitting an application and the license fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(6) **RESPONSIBILITIES.** (a) A person who installs, inspects, tests or maintains an automatic fire sprinkler system as a licensed automatic fire sprinkler contractor shall utilize the appropriately licensed or registered persons to install, inspect, test or maintain automatic fire sprinkler systems.

(b) For any construction project that requires a uniform building permit under s. [SPS 320.08](#), a person who holds a sprinkler contractor certification may not commence installation of fire sprinklers until a general construction permit is issued for the installation.

Note: Chs. [SPS 320](#) to [325](#) apply to one- and 2-family dwellings and manufactured dwellings. The department's uniform building permit is issued either by the municipality in which the dwelling is located or by a UDC inspection agency where the municipality does not administer the Uniform Dwelling Code.

(7) **RENEWAL.** (a) A person may renew his or her license as an automatic fire sprinkler contractor.

(b) An automatic fire sprinkler contractor license shall be renewed in accordance with s. [SPS 305.07](#).

(c) 1. a. The renewal of a license as an automatic fire sprinkler contractor which has an expiration date on or before June 30, 2010 shall be contingent upon the automatic fire sprinkler contractor obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the license as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in subd. 2.

b. The renewal of a license as an automatic fire sprinkler contractor which has an expiration date after June 30, 2010 shall be contingent upon the automatic fire sprinkler contractor obtaining at least 24 hours of acceptable continuing education prior to the expiration date of the license as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as an automatic fire sprinkler contractor may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; cr. (2m) and (6) (c), am. (4) and (5), [Register, April, 2000, No. 532](#), eff. 5-1-00; [CR 03-075](#): renum. (5) to be (5) (a), cr. (5) (b) [Register June 2004 No. 582](#), eff. 8-1-04; [CR 06-031](#): renum. (6) (c) 1. to be 1. a. and am., cr. (6) (c) 1. b. [Register October 2006 No. 610](#), eff. 11-1-06; [CR 11-020](#): renum. (2m) to (6) to be (3) to (7), [Register December 2011 No. 672](#), eff. 1-1-12; correction in (1), (2) (a), (b), and in (4), (5), (6) (b), (7) (b), (c) 1. a., b., as renumbered, made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#); [CR 14-010](#): am. (7) (c) 1. [Register August 2014 No. 704](#), eff. 9-1-14.

SPS 305.52 Journeyman sprinkler fitters. (1) GENERAL. The activities under s. [SPS 305.50](#) that may be undertaken by a person who holds a license as a licensed journeyman automatic fire sprinkler fitter shall be performed under the general supervision of a person who holds a license as a licensed automatic fire sprinkler contractor.

(2) **APPLICATION FOR EXAMINATION.** A person applying to take a journeyman automatic fire sprinkler fitter license examination shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) **QUALIFICATIONS FOR EXAMINATION.** A person applying for journeyman automatic fire sprinkler fitter license examina-

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tion shall have completed an automatic fire sprinkler system apprenticeship recognized under ch. [106](#), Stats.

(4) **EXAMINATION.** A person seeking to obtain a journeyman automatic fire sprinkler fitter license shall take and pass an examination in accordance with s. [SPS 305.09](#).

(5) **APPLICATION FOR LICENSE.** Upon notification of the successful passage of the examination for a journeyman automatic fire sprinkler system fitter license, a person may obtain the license by submitting an application and the license fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(6) **RENEWAL.** (a) A person may renew his or her license as a journeyman automatic fire sprinkler fitter.

(b) A journeyman automatic fire sprinkler fitter license shall be renewed in accordance with s. [SPS 305.07](#).

(c) 1. a. The renewal of a license as a journeyman automatic fire sprinkler fitter which has an expiration date on or before June 30, 2010 shall be contingent upon the journeyman automatic fire sprinkler fitter obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the license as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in subd. 2.

b. The renewal of a license as a journeyman automatic fire sprinkler fitter which has an expiration date after June 30, 2010 shall be contingent upon the journeyman automatic fire sprinkler fitter obtaining at least 24 hours of acceptable continuing education prior to the expiration date of the license as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a journeyman automatic fire sprinkler fitter may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; am. (1) and (5), cr. (6) (c), [Register, April, 2000, No. 532](#), eff. 5-1-00; [CR 06-031](#): renum. (6) (c) 1. to be 1. a. and am., cr. (6) (c) 1. b. [Register October 2006 No. 610](#), eff. 11-1-06; correction in (1), (2) (a), (b), (4), (5), (6) (b), (c) 1. a., b. made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#); [CR 14-010](#): am. (6) (c) 1. a., b. [Register August 2014 No. 704](#), eff. 9-1-14.

SPS 305.53 Sprinkler system apprentices. (1) GENERAL. The activities under s. [SPS 305.50](#) that may be undertaken by a person who holds a registration as a registered automatic fire sprinkler system apprentice shall be performed under the general supervision of a person who is a licensed automatic fire sprinkler contractor.

Note: The Department of Workforce Development, Bureau of Apprenticeship Standards has additional supervision standards for apprentices for the purpose of training and education.

(2) **APPLICATION FOR REGISTRATION.** A person applying for an automatic fire sprinkler system apprentice registration to install, test or maintain automatic fire sprinkler systems shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and a registration fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) **QUALIFICATIONS FOR REGISTRATION.** A person applying for automatic fire sprinkler apprentice registration to install, test or maintain automatic fire sprinkler systems shall be entered into a sprinkler fitter apprentice contract recognized under ch. [106](#), Stats.

(4) **RENEWAL.** (a) 1. A person may renew his or her registration as an automatic fire sprinkler system apprentice.

2. An automatic fire sprinkler system apprentice registration shall be renewed in accordance with s. [SPS 305.07](#).

(b) The renewal of a registration as an automatic fire sprinkler apprentice is contingent upon the person submitting evidence that the person is entered into a sprinkler fitter apprentice contract recognized under ch. 106, Stats.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; CR 11-020: am. (3), (4) (b), Register December 2011 No. 672, eff. 1-1-12; correction in (1), (2) (a), (b), (4) (a) 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.54 Sprinkler maintenance contractors.

(1) **GENERAL.** Pursuant to s. 145.175, Stats., the activities under s. SPS 305.50 that may be undertaken by a person who holds a registration as a registered automatic fire sprinkler contractor-maintenance shall be:

(a) Performed only within the facilities or properties of the business establishment where the person is employed; and

(b) Limited to modifying or extending an existing automatic fire sprinkler system by no more than 15 sprinklers per project.

(2) **APPLICATION FOR EXAMINATION.** A person applying to take an automatic fire sprinkler contractor-maintenance registration examination shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) **EXAMINATION.** A person seeking to obtain an automatic fire sprinkler contractor-maintenance registration shall take and pass an examination in accordance with s. SPS 305.09.

(4) **APPLICATION FOR REGISTRATION.** Upon notification of the successful passage of the examination for an automatic fire sprinkler contractor-maintenance registration, a person may obtain the registration by submitting an application and the registration fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(5) **RENEWAL.** (a) A person may renew his or her registration as an automatic fire sprinkler contractor-maintenance.

(b) An automatic fire sprinkler contractor-maintenance registration shall be renewed in accordance with s. SPS 305.07.

(c) 1. a. The renewal of a registration as an automatic fire sprinkler contractor-maintenance which has an expiration date on or before June 30, 2010 shall be contingent upon the automatic fire sprinkler contractor-maintenance obtaining at least 6 hours of acceptable continuing education prior to the expiration date of the registration as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

b. The renewal of a registration as an automatic fire sprinkler contractor-maintenance which has an expiration date after June 30, 2010 shall be contingent upon the automatic fire sprinkler contractor-maintenance obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the registration as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a registration as an automatic fire sprinkler contractor-maintenance may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (intro.) and (4), cr. (5) (c), Register, April, 2000, No. 532, eff. 5-1-00; CR 06-031: renum. (5) (c) 1. to be 1. a. and am., cr. (5) (c) 1. b. Register October 2006 No. 610, eff. 11-1-06; CR 06-119: am. (5) (c) 1. b. Register July 2007 No. 619, eff. 8-1-07; correction in (1), (2) (a), (b), (3), (4), (5) (b), (c) 1. a., b. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (5) (c) 1. Register August 2014 No. 704, eff. 9-1-14.

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SPS 305.55 Sprinkler maintenance fitters. (1) GENERAL. Pursuant to s. 145.165, Stats., the activities under s. SPS 305.50 that may be undertaken by a person registered as an automatic fire sprinkler fitter-maintenance shall be performed:

(a) Only within the facilities or properties of the business establishment where employed; and

(b) Under the general supervision of a person who holds a registration as a registered automatic fire sprinkler contractor-maintenance.

(2) **APPLICATION FOR REGISTRATION.** A person applying for an automatic fire sprinkler fitter-maintenance registration shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and a registration fee in accordance with s. SPS 305.02, Table 305.02.

(3) **RENEWAL.** (a) A person may renew his or her registration as an automatic fire sprinkler fitter-maintenance.

(b) An automatic fire sprinkler fitter-maintenance registration shall be renewed in accordance with s. SPS 305.07.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (2) (b), Register, March, 1998, No. 507, eff. 4-1-98; am. (1) (b) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; correction in (1) (intro.), (2) (a), (b), (3) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.56 Sprinkler testers. (1) GENERAL. A person who holds a registration issued by the department as a registered automatic fire sprinkler system tester may conduct the annual activities relative to inspection and testing of an existing automatic fire sprinkler system and components as required by ch. SPS 314 and NFPA 25.

(2) **QUALIFICATIONS FOR EXAMINATION.** A person applying for an automatic fire sprinkler system tester shall have one of the following qualifications:

(a) A level II certification in the inspection and testing of water-based automatic fire sprinkler systems from the national institute for certification in engineering technologies.

(b) At least 1,500 hour of automatic fire sprinkler system testing as a registered automatic fire sprinkler system tester learner for at least 18 months.

(3) **APPLICATION FOR EXAMINATION.** A person applying to take an automatic fire sprinkler system tester registration examination shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(4) **EXAMINATION.** A person seeking to obtain an automatic fire sprinkler system tester registration shall take and pass an examination in accordance with s. SPS 305.09.

(5) **APPLICATION FOR REGISTRATION.** Upon notification of the successful passage of the examination for an automatic fire sprinkler system tester registration, a person may obtain the registration by submitting an application and the registration fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(6) **RENEWAL.** (a) A person may renew his or her registration as an automatic fire sprinkler system tester.

(b) An automatic fire sprinkler system tester registration shall be renewed in accordance with s. SPS 305.07.

(c) 1. The renewal of a registration as an automatic fire sprinkler system tester which has an expiration date after December 31, 2013 shall be contingent upon the automatic fire sprinkler system tester obtaining at least 12 hours of approved continuing education prior to the expiration date of the registration as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a registration as an automatic fire sprinkler system tester may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (2) (b), (4), Register, March, 1998, No. 507, eff. 4-1-98; am. (1) and (4), Register, April, 2000, No. 532, eff. 5-1-00; CR 01-139: am. (1) Register June 2002 No. 558, eff. 7-1-02; CR 11-020: cr. (6) (c), Register December 2011 No. 672, eff. 1-1-12; CR 11-020: renum. (3) to (5) to be (4) to (6), cr. (2), (6) (c), Register December 2011 No. 672, eff. 1-1-13; renumbering of (6) (c) to be (5) (c) under s. 13.92 (4) (b) 1., correction in (1), (3) (a), (b), (4), (5), (6) (b), (c) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (6) (c) 1. Register August 2014 No. 704, eff. 9-1-14.

SPS 305.57 Sprinkler tester learners. (1) GENERAL. The automatic fire sprinkler system tester activities that may be undertaken by a person who holds a registration as a registered automatic fire sprinkler system tester learner shall be performed under the direct supervision of a person who holds a fire sprinkler contractor license, a journeyman fire sprinkler license, or automatic fire sprinkler tester registration.

(2) APPLICATION FOR REGISTRATION. A person applying for an automatic fire sprinkler system tester learner registration shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and a registration fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATION FOR REGISTRATION. A person applying for an automatic fire sprinkler system tester learner registration shall be at least 16 years old and shall have completed the 12th grade in school or equivalent.

History: CR 11-020: cr., correction in (2) (a), (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672, eff. 1-1-12.

Subchapter VI — Inspection

SPS 305.60 Boiler-pressure vessel inspectors. (1) GENERAL. No person may inspect, as required under ch. SPS 341, a boiler or pressure vessel for the purpose of determining compliance with ch. SPS 341 or submit an inspection report to the department documenting compliance or noncompliance with ch. SPS 341 unless the person holds a certification issued by the department as a:

- (a) Certified boiler-pressure vessel inspector; or
- (b) Certified in-service field inspector working under the general supervision of a certified boiler-pressure vessel inspector who has assumed responsibility for the inspection or the report.

(2) APPLICATION FOR CERTIFICATION. A person applying for a boiler-pressure vessel inspector certification or an in-service field inspector certification shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and a certification fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR CERTIFICATION. (a) A person applying for a boiler-pressure vessel inspector certification shall have:

- 1. Passed the competency examination by the national board of boiler and pressure vessel inspectors; and

Note: See ch. SPS 302 for the fee for the competency examination.

- 2. a. A degree in engineering from an accredited college or university and at least 1,000 hours in one year of experience in the design, construction, operation or inspection of boilers or pressure vessels;

- b. An associate degree in mechanical technology from an accredited college or school and at least 1,000 hours per year for at least 2 years of experience in the design, construction, operation or inspection of boilers or pressure vessels; or

- c. At least 1,000 hours per year for at least 3 years of experience in the design, construction, operation, or inspection of boilers or pressure vessels.

(b) A person applying for an in-service field inspector certification shall have:

- 1. Passed the competency examination by the national board of boiler and pressure vessel inspectors; and

- 2. a. A degree in engineering from an accredited college or university;

- b. An associate degree in mechanical technology from an accredited college or school and at least 1,000 hours in one year of experience in the design, construction, operation or inspection of boilers or pressure vessels; or

- c. At least 1,000 hours per year for at least 2 years of experience in the design, construction, operation or inspection of boilers or pressure vessels.

(4) RESPONSIBILITIES. A person who inspects boilers and pressure vessels as a certified boiler-pressure vessel inspector or a certified in-service field inspector shall:

- (a) Maintain a record of the inspections made including the dates and the findings of the inspections;
- (b) Provide a copy of the inspection report to the property owner or his or her agent; and
- (c) Make available to the department upon request or as required under ch. SPS 341, his or her inspection records.

(5) RENEWAL. (a) A person may renew his or her certification as a boiler-pressure vessel inspector or an in-service field inspector.

- (b) A boiler-pressure vessel inspector certification and an in-service field inspector certification shall be renewed in accordance with s. SPS 305.07.

- (c) 1. The renewal of a certification as a certified boiler-pressure vessel inspector or certified in-service field inspector shall be contingent upon the boiler-pressure vessel inspector or in-service field inspector obtaining at least 24 hours of acceptable continuing education prior to the expiration date of the certification as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

- 2. A person who holds a certification as a certified boiler-pressure vessel inspector or certified in-service field inspector may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. The department shall consider each application for waiver individually on its merits.

- 3. A person who initially obtained his or her boiler-pressure vessel inspector certification or in-service field inspector certification by providing evidence of having passed the competency examination by the national board and whose request to renew his or her certification is denied because of the failure to fulfill the continuing education requirements of subd. 1., shall be required to take and pass the competency examination in order to reacquire the boiler-pressure vessel inspector certification or the in-service field inspector certification.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (3) (a) 2. a., (4) (b), Register, March, 1998, No. 507, eff. 4-1-98; am. (1) (intro.) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; corrections in (1) and (4) (c) made under s. 13.93 (2m) (b) 7., Stats., Register, April, 2000, No. 532; CR 05-025: cr. (5) (c) Register October 2005 No. 598, eff. 11-1-05; CR 08-110: r. and recr. (5) (c) 1. Register September 2009 No. 645, eff. 10-1-09; correction in (1) (intro.), (2) (a), (b), (4) (c), (5) (b), (c) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (5) (c) 1. Register August 2014 No. 704, eff. 9-1-14.

SPS 305.61 Commercial building inspectors. (1)

GENERAL. A person who holds a certification issued by the department as a certified commercial building inspector may conduct inspections of public buildings and places of employment for the purpose of administering and enforcing chs. [SPS 361](#) to [366](#) and [375](#) to [379](#).

Note: Pursuant to s. [101.14 \(2\)](#), Stats., deputies of the department may perform fire prevention inspections of public buildings and places of employment without holding the certification as a certified commercial building inspector.

(2) APPLICATION FOR EXAMINATION. A person applying to take a commercial building inspector certification examination shall submit all of the following:

- (a) An application in accordance with s. [SPS 305.01](#).
- (b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) EXAMINATION. Except as provided in sub. (4) (b), a person seeking to obtain a commercial building inspector certification shall take and pass an examination in accordance with s. [SPS 305.09](#).

(4) APPLICATION FOR CERTIFICATION. (a) Upon notification of the successful passage of the examination for a commercial building inspector certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(b) A person may apply for a certification as a certified commercial building inspector by submitting an application, an application fee and the certification fee in accordance with ss. [SPS 305.01](#) and [305.02](#) and one of the following:

- 1. Evidence that the person holds a certificate issued by the International Code Council as one of the following:
 - a. Commercial combination inspector.
 - b. Building inspector.
 - c. Combination plans examiner.
 - d. Commercial building inspector and commercial mechanical inspector.
 - e. Building plans examiner and mechanical plans examiner.
- 2. Evidence that the person holds a registration issued under ch. [443](#), Stats., as one of the following:
 - a. Architect.
 - b. Engineer.

(5) RESPONSIBILITIES. A person who inspects public buildings and places of employment as a certified commercial building inspector shall:

- (a) Maintain a record of the inspections made including the dates and the findings of the inspections;
- (b) Provide a copy of the inspection report to the owner of the property or his or her agent; and
- (c) Make available to the department upon request his or her inspection records.

(6) RENEWAL. (a) 1. A person may renew his or her certification as a commercial building inspector.

2. A commercial building inspector certification shall be renewed in accordance with s. [SPS 305.07](#).

(b) 1. The renewal of a certification as a certified commercial building inspector shall be contingent upon the commercial building inspector obtaining at least 24 hours of acceptable continuing education prior to the expiration date of the certification as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in subd. 2.

2. A person who holds a certification as a certified commercial building inspector may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstance. *Published under s. 35.93, Stats. Updated on the first day of each month. Entire code is always current. The Register date on each page is the date the chapter was last published.*

stances. Each application for waiver shall be considered individually on its merits by the department.

3. A person who initially obtained his or her commercial building inspector certification by providing evidence of registration as an architect or engineer and whose request to renew his or her certification is denied because of the failure to fulfill the continuing education requirements of subd. 1., shall be required to take and pass the commercial building inspector certification examination in order to reacquire the commercial building inspector certification.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (6) (a) 2., (b) 2., Register, March, 1998, No. 507, eff. 4-1-98; am. (1) and (4), r. (6) (b), renum. (6) (c) to be (6) (b) and am., Register, April, 2000, No. 532, eff. 5-1-00; CR 01-139: am. (1) Register June 2002 No. 558, eff. 7-1-02; CR 03-075: am. (3), renum. (4) to be (4) (a), cr. (4) (b) and (6) (b) 3., r. and recr. (6) (b) 1. Register June 2004 No. 582, eff. 8-1-04; CR 05-113: am. (1) Register December 2006 No. 612, eff. 4-1-07; CR 06-120: am. (1) Register February 2008 No. 626, eff. 3-1-08; CR 08-110: r. and recr. (6) (b) 1. Register September 2009 No. 645, eff. 10-1-09; CR 10-103: am. (1) Register August 2011 No. 668, eff. 9-1-11; correction in (1), (2) (a), (b), (3), (4) (a), (b) (intro.), (6) (a) 2., (b) 1. made under s. [13.92 \(4\) \(b\) 7.](#), Stats., Register December 2011 No. 672; CR 14-010: am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14.

SPS 305.62 Commercial electrical inspectors. (1)

GENERAL. Pursuant to s. [101.875 \(1\)](#), Stats., no person may conduct the inspection of electrical wiring in public buildings and places of employment for the purpose of administering and enforcing ch. [SPS 316](#) unless the person holds a certification issued by the department as a certified commercial electrical inspector.

Note: Those persons who hold a valid certification as a certified restricted commercial electrical inspector will be issued a certification as a certified commercial electrical inspector upon application for renewal.

(2) APPLICATION FOR EXAMINATION. A person applying to take a commercial electrical inspector certification examination shall submit all of the following:

- (a) An application in accordance with s. [SPS 305.01](#).
- (b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) QUALIFICATIONS FOR EXAMINATION. A person applying to take a commercial electrical inspector certification examination shall have:

- (a) 1. At least 1,000 hours per year for at least 6 years of experience in electrical work, except as provided in subd. 2.
- 2. Relative to the experience required under subd. 1., each full-time semester spent in a school of electrical engineering or other accredited college, university, technical or vocational school in an electrical-related program shall be considered equivalent to 500 hours of experience, with no more than 3,000 hours and 3 years of experience through education being credited toward the required experience;

(b) At least 1,000 hours per year for at least 3 years of experience in electrical work and has a degree in electrical engineering from an accredited college or university; or

(c) At least 1,000 hours per year for at least 3 years of experience in electrical work and holds a registration or certification under ch. [443](#), Stats., as a registered professional engineer, a registered architect or a certified designer of electrical systems.

(4) EXAMINATION. Except as provided in sub. (5) (b), a person seeking to obtain a commercial electrical inspector certification shall take and pass an examination in accordance with s. [SPS 305.09](#).

(5) APPLICATION FOR CERTIFICATION. (a) Upon notification of the successful passage of the examination for a commercial electrical inspector certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(b) A person may apply for a certification as a certified commercial electrical inspector by submitting an application, an application fee and the certification fee in accordance with ss. [SPS 305.01](#) and [305.02](#) and one of the following:

plication fee and the certification fee in accordance with ss. [SPS 305.01](#) and [305.02](#) and one of the following:

1. Evidence that the person holds a certification as a master electrician issued under s. [SPS 305.43](#).
2. Evidence that the person holds a certification issued by the International Code Council as either an electrical inspector or a commercial electrical inspector.
3. Evidence that the person holds a certification issued under the International Association of Electrical Inspectors/National Fire Protection Association certification program as a certified electrical inspector-master.

(6) RESPONSIBILITIES. A person who inspects electrical construction work as a certified commercial electrical inspector shall do all of the following:

- (a) Maintain a record of the inspections made including the dates and the findings of the inspections.
- (b) Document any compliance deficiencies in the inspection report, and include the specific code reference or citation relative to the deficiency.
- (c) Provide a copy of the inspection report to the property owner or his or her agent.
- (d) Make inspection records available to the department upon request.
- (e) Contact and indicate to the electrical utility, cooperative, or other entity furnishing electric current when an electrical service installation complies with ch. [SPS 316](#) within 2 business days of the determination of compliance.

(7) RENEWAL. (a) 1. A person may renew his or her certification as a commercial electrical inspector.

2. A commercial electrical inspector certification shall be renewed in accordance with s. [SPS 305.07](#).

(b) 1. The renewal of a certification as a certified commercial electrical inspector shall be contingent upon the commercial electrical inspector obtaining at least 24 hours of acceptable continuing education prior to the expiration date of the certification as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in subd. 2.

2. A person who holds a certification as a certified commercial electrical inspector may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1), (3), (4) and (7) (b) 2., Register, March, 1998, No. 507, eff. 4-1-98; am. (1), (3) (c) and (5), r. (7) (b), renum. (7) (c) to be (7) (b) and am., Register, April, 2000, No. 532, eff. 5-1-00; CR 03-075: am. (1), r. and recr. (5) (b) and (7) (b) 1. Register June 2004 No. 582, eff. 8-1-04; CR 08-110: r. and recr. (7) (b) 1. Register September 2009 No. 645, eff. 10-1-09; correction in (1), (2) (a), (b), (4), (5) (a), (b) (intro.), 1., (7) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (7) (b) 1. Register August 2014 No. 704, eff. 9-1-14; correction in (1) made under s. 13.92 (4) (b) 7., Stats., Register August 2014 No. 704; CR 16-093: r. and recr. (6) Register June 2018 No. 750, eff. 8-1-18.

SPS 305.625 Commercial plumbing inspectors. (1)

GENERAL. (a) Pursuant to s. [145.05 \(1\)](#), Stats., a city of the first, second or third class shall supervise the installation, alteration and repair of plumbing within its jurisdiction in accordance with one of the following approaches:

1. The city shall utilize at least one supervisor to oversee all plumbing inspections and all plumbing plan reviews who shall hold a certification as a commercial plumbing inspector issued under this section and who shall hold a license as a master plumber issued under s. [SPS 305.91](#) or a license as a journeyman plumber issued under s. [SPS 305.93](#).

2. The city shall utilize at least one individual to conduct all plumbing inspections and all plumbing plan reviews who shall hold a certification as a commercial plumbing inspector issued under this section and who shall hold a license as a master plumber issued under s. [SPS 305.91](#) or a license as a journeyman plumber issued under s. [SPS 305.93](#).

Note: Utilizing the approach under subd. 2. does not prevent the employment of individuals to organizationally supervise the plumbing inspectors and plumbing plan reviewers. In such cases, where the individuals are providing administrative supervision, the supervisors are not required to be certified as commercial plumbing inspectors or to be licensed plumbers.

Note: The requirements for review of plumbing plans by agent municipalities are contained in s. [SPS 382.20 \(2\)](#).

(b) 1. Under par. (a) 1., individuals who, under a supervisor, conduct plumbing inspections and plumbing plan reviews shall hold a certification as a commercial plumbing inspector, except as provided in subd. 2.

2. Individuals who, under a supervisor, conduct plumbing inspections and plumbing plan reviews for the purpose of administering and enforcing ch. [SPS 325](#) shall hold a certification as a commercial plumbing inspector issued under this section or as a UDC-plumbing inspector issued under s. [SPS 305.63](#).

(2) APPLICATION FOR EXAMINATION. A person applying to take a commercial plumbing inspector certification examination shall submit all of the following:

- (a) An application in accordance with s. [SPS 305.01](#).
- (b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) EXAMINATION. Except as provided in sub. (4) (b), a person seeking to obtain a commercial plumbing inspector certification shall take and pass an examination in accordance with s. [SPS 305.09](#).

(4) APPLICATION FOR CERTIFICATION. (a) Upon notification of the successful passage of the examination for a commercial plumbing inspector certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(b) A person may apply for certification as a certified commercial plumbing inspector by submitting an application, an application fee and the certification fee in accordance with ss. [SPS 305.01](#) and [305.02](#) and one of the following:

1. Evidence that the person holds a license as a master plumber issued under s. [SPS 305.91](#).
2. Evidence that the person holds a license as a journeyman plumber issued under s. [SPS 305.93](#).

(5) RESPONSIBILITIES. A person who inspects plumbing as a certified commercial plumbing inspector shall:

- (a) Maintain a record of the inspections made including the dates and the findings of the inspections;
- (b) Provide a copy of the inspection report to the property owner or his or her agent; and
- (c) Make his or her inspection records available to the department upon request.

(6) RENEWAL. (a) A person may renew his or her certification as a commercial plumbing inspector. A commercial plumbing inspector certification shall be renewed in accordance with s. [SPS 305.07](#).

(b) 1. The renewal of a certification as a certified commercial plumbing inspector shall be contingent upon the commercial plumbing inspector obtaining at least 24 hours of acceptable continuing education prior to the expiration date of the certification as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in subd. 2.

2. A person who holds a certification as a certified commercial plumbing inspector may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. The department shall consider each application for waiver individually on its merits.

History: CR 03-075: cr. Register June 2004 No. 582, eff. 8-1-04, except (1) is eff. 2-1-05; CR 06-031: r. (4) (c) Register October 2006 No. 610, eff. 11-1-06; correction in (3) made under s. 13.93 (2m) (b) 7., Register October 2006 No. 610; correction in (1) (a) 1., 2., (b) 2., (2) (a), (b), (3), (4) (a), (b) (intro.), 1., 2., (6) (a), (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14.

SPS 305.627 Fire detection, prevention, and suppression inspectors. (1) **GENERAL.** No person may perform inspections of fire detection, prevention, and suppression devices being installed during the construction or alteration of, or the addition to, public buildings and places of employment unless the person holds a certification issued by the department as a certified fire detection, prevention, and suppression inspector or holds a certification as a commercial building inspector.

(2) **APPLICATION FOR CERTIFICATION.** A person applying for a fire detection, prevention, and suppression inspector certification shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and a certification fee in accordance with s. SPS 305.02, Table 305.02.
- (c) Evidence that the person holds one of the following certifications to perform fire detection, prevention, and suppression inspections:

1. A valid certification from the national fire protection association qualifying him or her as a certified fire inspector I.

2. A valid equivalent certification as determined by the department.

(3) **CERTIFICATION MAINTENANCE.** A person holding a certification listed in sub. (2) (c) shall maintain that certification at all times during which he or she is certified as a fire detection, prevention, and suppression inspector under this section.

(4) **RESPONSIBILITIES.** A person who inspects fire detection, prevention, and suppression devices as a fire detection, prevention, and suppression inspector shall do all of the following:

- (a) Maintain a record of the inspections made including the dates and the findings of the inspections.
- (b) Provide a copy of the inspection report to the property owner or his or her agent.
- (c) Make their inspection records available to the department upon request.

(5) **RENEWAL.** Provisions for renewal of certification include all of the following:

- (a) A person may renew his or her certification as a fire detection, prevention, and suppression inspector.
- (b) If a fire detection, prevention, and suppression inspector certification is renewed, it shall be renewed in accordance with s. SPS 305.07.
- (c) The renewal of a certification as a fire detection, prevention, and suppression inspector is contingent upon the person submitting evidence as required by the department that the person holds a valid certification listed under sub. (2) (c). The department may audit compliance with this section.

History: EmR1524: cr., eff. 11-21-15; CR 15-086: cr. Register June 2016, No. 726, eff. 7-1-16.

SPS 305.629 Inspection agency. (1) **GENERAL.** No person or municipality may engage in or offer to engage in providing plan review, permit issuance, or inspections regarding

electrical wiring under the scope of ch. SPS 316 unless the person or municipality holds a registration from the department as a registered inspection agency.

(2) **APPLICATION FOR REGISTRATION.** A person applying for an inspection agency registration shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and registration fee in accordance with s. SPS 305.02, Table 305.02.

(3) **QUALIFICATIONS FOR REGISTRATION.** The person applying for an inspection agency registration shall be one of the following:

- (a) If a municipality, the department head of the agency administering the electrical program.
- (b) If not a municipality, the owner of the business, a partner in the business applying on behalf of a partnership, or the chairman of the board or chief executive officer applying on behalf of a corporation.

(4) **RESPONSIBILITIES.** A person or municipality who is responsible for facilitating plan review, permit issuance, or inspection regarding electrical wiring under ch. SPS 316 as a registered inspection agency shall be responsible for all of the following:

- (a) Utilizing persons appropriately certified under s. SPS 305.62 to conduct the inspections.
- (b) Maintaining a record of the electrical permits issued under s. SPS 316.012.
- (c) Making the records relative to permit issuance and inspections available to the department upon request.
- (d) Providing inspection services for all inspections required under s. SPS 316.013.

(e) Cooperating with the department in any program monitoring, enforcement activities, and investigations related to electrical wiring under the scope of ch. SPS 316.

(f) Following all procedures established by the department for enforcement.

(5) **RENEWAL.** (a) A person may renew his or her registration as an inspection agency.

(b) An inspection agency registration shall be renewed in accordance with s. SPS 305.07.

History: CR 16-093: cr. Register June 2018 No. 750, eff. 8-1-18, except sub. (1), eff. 3-1-19.

SPS 305.63 Dwelling inspectors. (1) **GENERAL.** (a) Pursuant to ss. 101.66 (2) and 101.96 (1), Stats., no person may conduct the inspection of one- and 2-family dwellings for the purpose of administering and enforcing chs. SPS 320 to 325, unless the person holds one or more of the following certifications issued by the department:

- 1. Certified UDC-construction inspector.
- 2. Certified UDC-electrical inspector.
- 3. Certified UDC-HVAC inspector.
- 4. Certified UDC-plumbing inspector.
- 5. Certified soil erosion inspector.
- 6. Certified commercial electrical inspector.
- 7. Certified commercial plumbing inspector.

Note: Pursuant to s. 101.14 (1) (bm), Stats., deputies of the department may perform inspections for smoke detector installation and maintenance without holding a certification issued by the department.

(b) A person who holds a certification as a:

- 1. Certified UDC-construction inspector may inspect one- and 2-family dwellings for the purpose of administering and enforcing chs. SPS 320 to 322.

2. Certified UDC-electrical inspector or certified commercial electrical inspector may inspect one- and 2-family dwellings for the purpose of administering and enforcing chs. [SPS 316](#) and [324](#).

3. Certified UDC-HVAC inspector may inspect one- and 2-family dwellings for the purpose of administering and enforcing ch. [SPS 323](#).

4. Certified UDC-plumbing inspector or certified commercial plumbing inspector may inspect one- and 2-family dwellings for the purpose of administering and enforcing chs. [SPS 325](#), [382](#) and [384](#).

5. Certified soil erosion inspector may inspect one- and 2-family dwellings for the purpose of administering and enforcing s. [SPS 321.125](#).

(2) **APPLICATION FOR EXAMINATION.** A person applying to take a UDC-construction inspector certification examination, UDC-electrical inspector certification examination, UDC-HVAC inspector certification examination, or UDC-plumbing inspector certification examination shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) **EXAMINATION.** Except as provided in sub. (4) (a) 2., (b) 2. and (c) 2., a person seeking to obtain a UDC-construction inspector certification, UDC-electrical inspector certification, UDC-HVAC inspector certification, or UDC-plumbing inspector certification shall take and pass an examination in accordance with s. [SPS 305.09](#).

(4) **APPLICATION FOR CERTIFICATIONS.** (a) *UDC-construction.* 1. Upon notification of the successful passage of the examination for a UDC-construction inspector certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

2. A person may apply for certification as a certified UDC-construction inspector by submitting all of the following:

a. An application, an application fee and the certification fee in accordance with ss. [SPS 305.01](#) and [305.02](#).

b. Evidence that the person holds a certification as a commercial building inspector issued under s. [SPS 305.61](#).

(b) *UDC-electrical.* 1. Upon notification of the successful passage of the examination for a UDC-electrical inspector certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

2. A person may apply for certification as a certified UDC-electrical inspector by submitting an application, an application fee and the certification fee in accordance with ss. [SPS 305.01](#) and [305.02](#) and one of the following:

a. Evidence that the person holds a certification as a journeyman electrician issued under s. [SPS 305.44](#).

b. Evidence that the person holds a certification issued under the International Association of Electrical Inspectors/National Fire Protection Association certification program as a certified electrical inspector-residential.

c. Evidence that the person holds a license as a residential master electrician issued under s. [SPS 305.435](#).

(c) *UDC-HVAC.* 1. Upon notification of the successful passage of the examination for a UDC-HVAC inspector certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

2. A person may apply for certification as a certified UDC-HVAC inspector by submitting an application, an application fee and the certification fee in accordance with ss. [SPS 305.01](#) and [305.02](#) and one of the following:

a. Evidence that the person holds a certification as an HVAC qualifier issued under s. [SPS 305.71](#).

b. Evidence that the person holds a certification as a commercial building inspector issued under s. [SPS 305.61](#).

(d) *UDC-plumbing.* Upon notification of the successful passage of the examination for a UDC-plumbing inspector certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(e) *Soil erosion.* A person may apply for certification as a certified soil erosion inspector by submitting all of the following:

1. An application, an application fee and the certification fee in accordance with ss. [SPS 305.01](#) and [305.02](#).

2. Evidence that the person has completed an approved training course on soil erosion control standards.

(5) **RESPONSIBILITIES.** (a) A person who inspects one- and 2-family dwellings as a certified UDC-construction inspector, certified UDC-electrical inspector, certified UDC-HVAC inspector, certified UDC-plumbing inspector, or certified soil erosion inspector shall do all of the following:

1. Maintain a record of the inspections made including the dates and the findings of the inspections.

2. Document any compliance deficiencies in the inspection report, and include the specific code reference or citation relative to the deficiency.

3. Provide a copy of the inspection report to the property owner or his or her agent.

4. Make inspection records available to the department upon request.

(b) A person who inspects one- and 2-family dwellings as a certified UDC-electrical inspector shall contact and indicate to the electrical utility, cooperative, or other entity furnishing electric current when an electrical service installation complies with ch. [SPS 316](#) within 2 business days of the determination of compliance.

(6) **LIMITATIONS.** A person who inspects the installation of manufactured homes as a certified UDC-construction inspector may not perform the inspection of a particular manufactured home if the person is, is employed by, or is an independent contractor of any of the following:

(a) A manufactured home manufacturer who was directly involved in the sale of the particular manufactured home.

(b) A manufactured home salesperson who was directly involved in the sale of the particular manufactured home.

(c) An installer who was directly involved in the sale of the particular manufactured home.

(7) **RENEWAL.** (a) 1. A person may renew his or her certification as a UDC-construction inspector, UDC-electrical inspector, UDC-HVAC inspector, UDC-plumbing inspector or soil erosion inspector.

2. An inspector certification under this section shall be renewed in accordance with s. [SPS 305.07](#).

(b) 1. The renewal of a certification as a certified UDC-construction inspector, certified UDC-electrical inspector, certified UDC-HVAC inspector or certified UDC-plumbing inspector shall be contingent upon the inspector obtaining at least 24 hours of acceptable continuing education prior to the expiration date of

the certification as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a certification as a certified UDC-construction inspector, certified UDC-electrical inspector, certified UDC-HVAC inspector, or certified UDC-plumbing inspector may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

3. A person who initially obtained his or her UDC-construction inspector certification or UDC-HVAC inspector certification by providing evidence of certification as a commercial building inspector and whose request to renew his or her certification is denied because of the failure to fulfill the continuing education requirements of subd. 1., shall be required to take and pass the UDC-construction inspector certification examination or UDC-HVAC inspector certification examination in order to reacquire the respective UDC inspector certification.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (a) (intro.), (5) (a), (6) (b), 2., Register, March, 1998, No. 507, eff. 4-1-98; am. (1) (a) (intro.), (b) (intro.), (4) (a) and (b) 1., r. (6) (b), renum. (6) (c) to be (6) (b) and am., Register, April, 2000, No. 532, eff. 5-1-00; corrections in (1) (a) and (b) 1. made under s. 13.93 (2m) (b) 7., Stats., Register, April, 2000, No. 532; CR 03-075: am. (1) (a), (b) 2., 4. and (3), r. and recr. (4) and (6) (b) 1., cr. (6) (b) 3. Register June 2004 No. 582, eff. 8-1-04; CR 06-071: am. (1) (a) (intro.), cr. (5m) Register November 2006 No. 611, eff. 12-1-06; CR 05-113: am. (1) (b) 5. Register December 2006 No. 612, eff. 4-1-07; CR 08-110: r. and recr. (6) (b) 1. Register September 2009 No. 645, eff. 10-1-09; CR 09-028: cr. (4) (b) 2, c. Register August 2010 No. 656, eff. 9-1-10; CR 10-103: am. (1) (b) 5. Register August 2011 No. 668, eff. 9-1-11; CR 11-020: renum. (5m), (6) to be (6), (7), Register December 2011 No. 672, eff. 1-1-12; correction in (1) (a) (intro.), (b) 1. to 5., (2) (a), (b), (3), (4) (a) 1., 2. a., b., (b) 1., 2. (intro.), a., c., (c) 1., 2. (intro.), a., b., (d), (e) 1., (7) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (7) (b) 1. Register August 2014 No. 704; CR 16-093: r. and recr. (5) Register June 2018 No. 750, eff. 8-1-18.

SPS 305.635 UDC inspection agency. (1) GENERAL.

No person may engage in or offer to engage in the activities of facilitating plan review, issuance of Wisconsin uniform building permits, or inspection of one- and 2-family dwellings in a municipality where the department has jurisdiction pursuant to s. 101.651 (3) (b), Stats., unless the person obtains a registration from the department as a registered UDC inspection agency.

Note: Section 990.01 (26), Stats., states that the term "person" includes all partnerships, associations and bodies politic or corporate.

(2) APPLICATION FOR REGISTRATION. A person applying for a UDC inspection agency registration shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and a registration fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR REGISTRATION. The person applying for a UDC inspection agency registration shall be the owner of the business, a partner in the business applying on behalf of a partnership, or the chairman of the board or chief executive officer applying on behalf of the corporation.

(4) RESPONSIBILITIES. A person who is responsible for facilitating plan review, issuance of Wisconsin uniform building permits and the inspections for one- and 2-family dwellings as a registered UDC inspection agency shall be responsible for all of the following:

(a) Utilizing persons appropriately certified under s. SPS 305.63 to review the plans, issue the permits and conduct the inspections.

(b) Making the records relative to the plan review, issuance of permits and inspections available to the department upon request.

(c) Providing inspection services for all inspections required under s. SPS 320.10.

(d) Cooperating with the department in any program monitoring, enforcement activities, and investigations.

(e) Following all procedures established by the department for UDC enforcement by inspection agencies.

(f) Reporting to the department in writing when the agency has been dismissed by the owner or builder.

(g) Making any records associated with their permit, plan review and inspection activities available to the permit holder upon request.

(5) RENEWAL. (a) A person may renew his or her registration as a UDC inspection agency.

(b) A UDC inspection agency registration shall be renewed in accordance with s. SPS 305.07.

History: CR 00-159: cr. Register September 2001 No. 549 eff. 10-1-01; correction in (2) (a), (b), (4) (a), (c), (5) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.64 Elevator inspectors. (1) GENERAL.

No person, as an authorized representative of the department, may provide inspections required under ch. SPS 318 unless the person holds a license issued by the department as a licensed elevator inspector.

(2) APPLICATION FOR LICENSE. A person may apply for a license as a licensed elevator inspector by submitting all of the following:

(a) An application, an application fee and the license fee in accordance with ss. SPS 305.01 and 305.02.

(b) Evidence that the person holds a certification in accordance with the procedures established under the standard for the Qualification of Elevator Inspector (QEI-1) from an independent organization acceptable to the department.

Note: As of October 1, 2013 acceptable independent organizations include the Elevator Industry Work Preservation Fund, the National Association of Elevator Safety Authorities International (NAESA International), and QEI Services, Inc.

(3) RESPONSIBILITIES. A person who inspects conveyances as a licensed elevator inspector shall be responsible for all of the following:

(a) Maintain a record of the inspections made including the dates and the findings of the inspections.

(b) Provide a copy of the inspection record to the conveyance owner or his or her agent.

(c) Make available to the department upon request his or her inspection records.

(d) Maintain his or her QEI certification.

(4) RENEWAL. (a) A person may renew his or her license as an elevator inspector.

(b) An elevator inspector license shall be renewed in accordance with s. SPS 305.07.

(c) 1. The renewal of a license as a licensed elevator inspector shall be contingent upon the elevator inspector obtaining at least 24 hours of acceptable continuing education prior to the expiration date of the license as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a licensed elevator inspector may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

(d) The renewal of a license as an elevator inspector is contingent upon the person submitting evidence that the person holds a certification as an QEI elevator inspector.

(e) The renewal of a license as an elevator inspector shall be contingent upon the department's review of the applicant's criminal history record from the department of justice.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; r. and recr. (1), renum. (2) and (3) to be (3) and (2) and r. and recr. (2) and (4), cr. (6) (c), Register, January, 1998, No. 505, eff. 2-1-98; am. (5) (c), Register, March, 1998, No. 507, eff. 4-1-98; am. (1), (2) (intro.), (4) and (6) (c) 2., Register, April, 2000, No. 532, eff. 5-1-00; CR 03-075: r. and recr. (6) (c) 1. Register June 2004 No. 582, eff. 8-1-04; CR 07-089: r. and recr. Register June 2008 No. 630, eff. 7-1-08; correction in (1), (2) (a), (4) (b), (c) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (2) (b), (3) (d), (4) (c) 1., (d) Register August 2014 No. 704, eff. 9-1-14.

SPS 305.66 POWTS inspectors. (1) GENERAL. A person who holds a certification issued by the department as a certified POWTS inspector or a commercial plumbing inspector may inspect privately owned wastewater treatment systems, POWTS, for the purpose of administering and enforcing the provisions of chs. SPS 381 to 387, as an authorized representative of the department or a local governmental unit.

(2) APPLICATION FOR EXAMINATION. A person applying to take a POWTS inspector certification examination shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.
- (3) EXAMINATION.** Except as provided in sub. (4) (b), a person seeking to obtain a POWTS inspector certification shall take and pass an examination in accordance with s. SPS 305.09.

(4) APPLICATION FOR CERTIFICATION. (a) Upon notification of the successful passage of the examination for a POWTS inspector certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(b) A person may apply for a certification as a certified POWTS inspector by submitting an application, an application fee and the certification fee in accordance with ss. SPS 305.01 and 305.02 and one of the following:

- 1. Evidence that the person holds a license as a master plumber issued under s. SPS 305.91.
- 2. Evidence that the person holds a license as a master plumber-restricted service issued under s. SPS 305.92.
- 3. Evidence that the person holds a license as a journeyman plumber issued under s. SPS 305.93.
- 4. Evidence that the person holds a license as a journeyman plumber-restricted service issued under s. SPS 305.94.

(5) RESPONSIBILITIES. A person who inspects privately owned wastewater treatment systems as a certified POWTS inspector shall:

- (a) Maintain a record of the inspections made including the dates and the findings of the inspections;
- (b) Provide a copy of the inspection record to the privately owned wastewater treatment system owner or his or her agent; and
- (c) Make available to the department upon request his or her inspection records.

(6) RENEWAL. (a) 1. A person may renew his or her certification as a POWTS inspector.

2. A POWTS inspector certification shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a certification as a certified POWTS inspector shall be contingent upon the inspector obtaining at least 24 hours of acceptable continuing education prior to the expiration date of the certification as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a certification as a certified POWTS inspector may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (5) (c), (6) (a) 2., (b) 2., March, 1998, No. 507, eff. 4-1-98; am. (1) and (4), r. (6) (b), renum. (6) (c) to be (6) (b) and am., Register, April, 2000, No. 532, eff. 5-1-00; CR 03-075: am. (1) and (3), renum. (4) to be (4) (a), cr. (4) (b), r. and recr. (6) (b) 1. Register June 2004 No. 582, eff. 8-1-04; CR 08-110: r. and recr. (6) (b) 1. Register September 2009 No. 645, eff. 10-1-09; correction in (1), (2) (a), (b), (3), (4) (a), (b) (intro.), 1. to 4., (6) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14.

SPS 305.68 Tank system inspectors. (1) GENERAL. No person may inspect a tank system that is regulated under ch. ATCP 93, to administer and enforce ch. ATCP 93, unless the person holds a certification issued by the department of agriculture, trade and consumer protection or the department of safety and professional services as a certified tank system inspector.

(2) APPLICATION FOR EXAMINATION. A person applying to take a tank system inspector certification examination shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR EXAMINATION. A person applying to take a tank system inspector certification examination shall have completed an approved educational course or training program that included at least 3 days of field exercises, within the 2 years immediately preceding the application.

(4) EXAMINATION. A person seeking to obtain a tank system inspector certification shall take and pass an examination in accordance with s. SPS 305.09.

(5) APPLICATION FOR CERTIFICATION. Upon notification of successfully passing the examination for a tank system inspector certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(6) RESPONSIBILITIES. A person who inspects tank systems as a certified tank system inspector shall:

- (a) Perform regulatory enforcement of related code requirements in chs. ATCP 93 and SPS 305.
 - (b) Issue non-compliance or violation-correction orders and conduct follow-up inspections as necessary to verify correction.
- Note:** Inspectors with authority granted by the local municipality may utilize the respective enforcement procedures as granted by the respective authority.
- (c) Pursue failure to comply with correction orders through local or department enforcement referral procedures.
 - (d) Maintain a record of the inspections made including the dates and the findings of the inspections.
 - (e) Provide a copy of the inspection report to the owner of the tank system or his or her agent.
 - (f) Make available to the department upon request his or her tank system inspection records.

Note: Section 19.32 (2), Stats., considers a record to be material containing written or electromagnetic information. The department will consider computer records to be equivalent to written reports.

(7) RENEWAL. (a) 1. A person may renew his or her certification as a tank system inspector.

2. A tank system inspector certification shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a certification as a certified tank system inspector shall be contingent upon the inspector obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the certification as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

tion date of the certification as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a certification as a certified tank system inspector may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

Note: Authority over s. SPS 305.68 was transferred to the Department of Agriculture, Trade and Consumer Protection under 2013 Wis. Act 20, s. 9138 (3) (fm) and (4) (f).

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (2) (b), r. and recr. (4) and (7) (a), Register, March, 1998, eff. 4-1-98; am. (1), (5) and (7) (b), Register, April, 2000, No. 532, eff. 5-1-00; CR 06-127: am. (1), (3) and (7) (b) 1., Register September 2007 No. 621, eff. 10-1-07; CR 11-020: renum. (6) (a) to (c) to be (d) to (f), cr. (6) (a) to (c), Register December 2011 No. 672, eff. 1-1-12; correction in (1), (2) (a), (b), (4), (5), (6) (a), (7) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; corrections in (1), (6) (a) made under s. 13.92 (4) (b) 7., Stats., Register October 2013 No. 694; CR 14-010: am. (7) (b) 1. Register August 2014 No. 704, eff. 9-1-14.

Subchapter VII — Mechanical

SPS 305.70 HVAC contractors. (1) **GENERAL.** (a) Except as provided in par. (b), pursuant to s. 101.178 (2), Stats., no person, entity, or business may engage or offer to engage in installing or servicing heating, ventilating, or air conditioning equipment, unless the person, entity, or business holds a registration issued by the department as a registered HVAC contractor.

(b) 1. A person, entity, or business is not required to hold a registration as a registered HVAC contractor to service existing heating, ventilating, air conditioning, or refrigeration equipment within facilities or properties owned by the person, entity, or business.

2. A person, entity, or business is not required to hold a registration as a registered HVAC contractor to install or service heating, ventilating, air conditioning, or refrigeration equipment within a dwelling owned by the person, entity, or business and in which the person, entity, or business resides or will reside.

3. A person, entity, or business is not required to hold a registration as a registered HVAC contractor for electrical or plumbing work associated with the installation or servicing of the HVAC equipment or systems.

Note: Pursuant to federal regulations individuals who install or service HVAC equipment involving ozone-depleting refrigerants are required to hold a Type I, II, III, or Universal technician certification issued in accordance with section 608 of the federal Clean Air Act and title 40 CFR part 82, subpart F.

(2) **APPLICATION FOR REGISTRATION.** A person applying for an HVAC contractor registration shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and a registration fee in accordance with s. SPS 305.02, Table 305.02.

(3) **QUALIFICATIONS FOR REGISTRATION.** The person applying for an HVAC contractor registration shall be the owner of the contracting business, a partner in the contracting business applying on behalf of a partnership, or the chairman of the board or chief executive officer applying on behalf of the contracting corporation.

(4) **RESPONSIBILITIES.** For any HVAC equipment installation that requires a uniform building permit under s. SPS 320.08, a person, entity or business which holds an HVAC contractor registration may not commence installation of HVAC equipment until a permit is issued for the installation.

Note: Chs. SPS 320 to 325 apply to one- and 2-family dwellings and manufactured dwellings. The department's uniform building permit is issued either by the municipality in which the dwelling is located or by a UDC inspection agency where the municipality does not administer the Uniform Dwelling Code.

Note: Section 101.16 (4) (a), Stats., provides that: The person performing the work of installing equipment utilizing liquefied petroleum gas for fuel purposes

shall furnish the user of the equipment a statement, the form of which shall be prescribed by the department showing the design, construction, location, and installation of the equipment conforms with the rules promulgated by the department under this section.

(5) **RENEWAL.** (a) 1. A person may renew his or her registration as an HVAC contractor.

2. An HVAC contractor registration shall be renewed in accordance with s. SPS 305.07.

(b) A person, entity or business upon expiration of their registration to handle ozone-depleting refrigerants may renew the registration as an HVAC contractor in accordance with s. SPS 305.07.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (b) 3., Register, March, 1998, No. 507, eff. 4-1-98; am. (1) (a), (b) 1., 2. and (2) (b), r. (1) (b) 3. and 4., Register, April, 2000, No. 532, eff. 5-1-00; CR 03-075: renum. (4) to be (5), cr. (4) Register June 2004 No. 582, eff. 8-1-04; CR 06-031: r. and recr. (1) Register October 2006 No. 610, eff. 11-1-06; CR 08-110: renum. (4) to be (4) (a), cr. (4) (b) Register September 2009 No. 645, eff. 10-1-09; correction in (2) (a), (b), (4) (a), (b), (5) (a) 2., (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 13-014: r. and recr. (1) Register September 2013 No. 693, eff. 10-1-13; CR 19-118: renum. (4) (a) to (4), r. (4) (b) Register May 2020 No. 773, eff. 6-1-20.

SPS 305.71 HVAC qualifiers. (1) **GENERAL.** (a) Pursuant to s. 101.178 (3), Stats., an individual may obtain in accordance with this section an HVAC qualifier certification from the department relative to the business of installing or servicing heating, ventilating or air conditioning equipment.

(b) A person or entity who utilizes a person who holds an HVAC qualifier certification under this section shall be deemed to be a certified HVAC business and pursuant to s. 101.178 (3) (c), Stats., may not be required to obtain a local certification, license or other approval in order to engage in the business of installing or servicing heating, ventilating or air conditioning equipment.

(2) **APPLICATION FOR EXAMINATION.** A person applying to take HVAC qualifier certification examination shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) **QUALIFICATIONS FOR EXAMINATION.** A person applying for an HVAC qualifier certification examination shall have completed:

(a) At least 1000 hours per year for at least 4 years of experience in supervising or performing the design, installation, servicing or maintenance of HVAC systems or equipment;

(b) At least 4 years of attendance in a school of mechanical engineering or in an accredited college, university, or technical, vocational or apprenticeship school in an HVAC-related program; or

(c) Any combination of 4 years of experience recognized under par. (a) and education recognized under par. (b).

(4) **EXAMINATION.** A person seeking to obtain an HVAC qualifier certification shall take and pass an examination in accordance with s. SPS 305.09.

(5) **APPLICATION FOR CERTIFICATION.** Upon notification of the successful passage of the examination for HVAC qualifier certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(6) **RESPONSIBILITIES.** For any HVAC equipment installation that requires a uniform building permit under s. SPS 320.08, a person who holds an HVAC qualifier certification may not commence installation of HVAC equipment until a permit is issued for the installation.

Note: Chs. SPS 320 to 325 apply to one- and 2-family dwellings and manufactured dwellings. The department's uniform building permit is issued either by the

municipality in which the dwelling is located or by a UDC inspection agency where the municipality does not administer the Uniform Dwelling Code.

Note: Section 101.16 (4) (a), Stats., provides that: The person performing the work of installing equipment utilizing liquefied petroleum gas for fuel purposes shall furnish the user of the equipment a statement, the form of which shall be prescribed by the department showing the design, construction, location, and installation of the equipment conforms with the rules promulgated by the department under this section.

(7) RENEWAL. (a) A person may renew his or her HVAC qualifier certification.

(b) An HVAC qualifier certification shall be renewed in accordance with s. SPS 305.07.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (5), Register, April, 2000, No. 532, eff. 5-1-00; CR 03-075: renum. (6) to be (7), cr. (6) Register June 2004 No. 582, eff. 8-1-04; correction in (2) (a), (b), (4), (5), (6), (7) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.73 Liquefied gas suppliers. (1) GENERAL.

(a) Pursuant to s. 101.16 (3g), Stats., as of August 1, 2009, no person may engage in the business of filling containers with liquefied petroleum gas that is intended to be used directly from the containers as fuel, unless the person holds a license issued by the department as a licensed liquefied gas supplier or liquefied gas supplier — restricted, except as provided under either of the following conditions:

1. The business is engaged in only filling containers that have a water capacity of less than 4 pounds.

2. The filling of the containers with liquefied petroleum gas is for the person's or the entity's own use.

(b) A person who holds a license as a licensed liquefied gas supplier — restricted shall be limited to filling only department of transportation cylinders with liquefied petroleum gas.

Note: Under s. 101.16 (1) (c), Stats., a "department of transportation cylinder" means a container that holds liquefied petroleum gas and that meets the specifications established by the federal department of transportation.

(2) APPLICATION FOR LICENSE. A person applying for a liquefied gas supplier or a liquefied gas supplier — restricted license shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and a license fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR LICENSE. (a) A person applying for either a liquefied gas supplier or a liquefied gas supplier — restricted license shall, as required under s. 101.16 (3r) (c), Stats., obtain commercial general liability insurance as an endorsement to an existing policy or as a separate policy from an insurer, or a risk retention group, that is licensed to transact the business of insurance in this state or that is eligible to provide insurance as a surplus lines insurer in one or more states.

(b) The person applying for either a liquefied gas supplier or a liquefied gas supplier — restricted license shall be the owner of the contracting business, a partner in the contracting business applying on behalf of a partnership, or the chairman of the board or chief executive officer applying on behalf of the contracting corporation.

(4) RESPONSIBILITIES. (a) A person who holds either a liquefied gas supplier or liquefied gas supplier — restricted license shall maintain commercial general liability insurance in accordance with s. 101.16 (3r) (a) or (b), Stats.

Note: Except as provided in s. 101.16 (3r) (b), Stats., s. 101.16 (3r) (a), Stats., requires a licensed liquefied gas supplier or liquefied gas supplier — restricted to maintain commercial general liability insurance in the amount of \$1,000,000 per occurrence with an annual aggregate of \$2,000,000 for compensating 3rd parties for bodily injury and property damages for incidents associated with the release of liquefied petroleum gas.

Section 101.16 (3r) (b), Stats., requires a licensed liquefied gas supplier or liquefied gas supplier — restricted who only fills department of transportation cylinders or who only fills containers for engine and recreational vehicle fueling systems to maintain commercial general liability insurance in the amount of \$500,000 per occurrence with an annual aggregate of \$1,000,000 for compensating 3rd parties for

bodily injury and property damages for incidents associated with the release of liquefied petroleum gas.

(b) Pursuant to s. 101.16 (3r) (g), Stats., a person who holds either a liquefied gas supplier or liquefied gas supplier — restricted license shall notify the department at least 60 days before cancelling or failing to renew commercial general liability insurance.

Note: Section 101.16 (3r) (f), Stats., requires a 3rd party that issues commercial general liability insurance to a licensed liquefied gas supplier or liquefied gas supplier — restricted to provide written notice to the licensee and to the department at least 60 days before canceling, revoking, suspending, or failing to renew the insurance.

(c) Pursuant to s. 101.16 (4) (c), Stats., a person who holds either a liquefied gas supplier or a liquefied gas supplier — restricted license and fills a container that is part of a propane gas system shall provide written information notices to customers in accordance with s. 101.16 (4) (c), Stats.

Note: Section 101.16 (4) (c), Stats., requires a licensed liquefied gas supplier or liquefied gas supplier — restricted filling a container that is part of a propane gas system to provide written notice to the customer of the customer's duty to timely notify the licensee of any interruption in the operation of the propane gas system due to the replacement, modification, repair, or servicing of the propane gas system by any person other than the licensee. The notice is required to be provided to the customer before the first delivery of propane gas to the customer and subsequently on an annual basis. The notice is required to include all of the following information concerning the customer's duty to notify:

1. The name, address, and telephone number of the licensee.

2. The purpose of giving the notification to the licensee.

3. A description of the type of propane gas system that is subject to the notification requirement.

4. A description of the types of activities that constitute a replacement, modification, repair, or servicing of a propane system.

5. A copy of the provisions under s. 101.16 (4) (b), Stats.

Note: Section 101.16 (4) (a), Stats., The person performing the work of installing equipment utilizing liquefied petroleum gas for fuel purposes shall furnish the user of the equipment a statement, the form of which shall be prescribed by the department showing the design, construction, location, and installation of the equipment conforms with the rules promulgated by the department under this section.

(5) RENEWAL. (a) A person may renew his or her liquefied gas supplier or liquefied gas supplier — restricted license.

(b) A liquefied gas supplier or a liquefied gas supplier — restricted license shall be renewed in accordance with s. SPS 305.07.

History: CR 08-092: cr. Register May 2009 No. 641, eff. 6-1-09; correction in (2) (a), (b), (5) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 16-092: am. (3) (a), (4) (a), (b) Register August 2017 No. 740, eff. 9-1-17; correction in (1) (a) made under s. 13.92 (4) (b) 7., Stats., Register June 2018 No. 750.

Subchapter VIII — Storage Tanks

SPS 305.80 PECFA consulting firms. (1) GENERAL.

(a) A corporation, partnership, sole proprietor or independent contractor that performs or provides professional level engineering or hydrogeological services related to a claim submitted for reimbursement under the PECFA program, ch. NR 747, shall hold a registration issued by the department of natural resources or department of safety and professional services as a registered PECFA consulting firm.

Note: See chs. 443 and 470, Stats., for additional requirements relating to the practice of professional engineering; and the practices of professional geology, professional hydrology, and professional soil science, respectively.

(b) The services referred to in par. (a) include but are not limited to:

1. Conducting site investigations;

2. Preparing remedial action plans and alternatives;

3. Designing and supervising the installation of remedial systems; and

4. Planning for passive bio-remediation with long term monitoring.

5. Preparing and submitting bids in the competitive public bidding process prescribed in ch. NR 747.

(2) APPLICATION FOR REGISTRATION. An entity applying for a PECFA consulting firm registration shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and a registration fee in accordance with s. SPS 305.02, Table 305.02.
- (c) Proof of employing at least one Wisconsin-registered PECFA consultant.
- (d) Proof of being registered by the department of safety and professional services to engage in the practice of professional engineering, geology, hydrology, or soil science.
- (e) Proof of the liability coverage specified in sub. (4) (a) 3. or (b), and (c).

(3) QUALIFICATIONS FOR REGISTRATION. The person applying for a PECFA consulting firm registration shall be the owner of the consulting business, a partner in the consulting business applying on behalf of a partnership, or the chairman of the board or chief executive officer applying on behalf of the consulting corporation.

(4) RESPONSIBILITIES. (a) An entity that performs or provides professional level engineering, geological, hydrological, or soil science services related to a claim submitted for reimbursement under the PECFA program, ch. NR 747, as a registered PECFA consulting firm shall do all of the following:

1. Ensure that only Wisconsin-registered professional engineers, professional geologists, professional hydrologists, or professional soil scientists perform professional-level engineering, geological, hydrological, or soil science services related to the PECFA program, unless those services are under the supervision of those professionals.
2. Ensure that only PECFA consultants who are so registered under this chapter perform the services referenced in s. SPS 305.81.
3. Hold errors and omissions professional liability coverage, including pollution impairment liability, of no less than \$1,000,000 per claim, \$1,000,000 annual aggregate and with a deductible of no more than \$100,000 per claim, except as provided in par. (b).
- (b) A consulting firm may request the department of natural resources' approval of an alternate mechanism for meeting the requirement of the maximum deductible in par. (a) 3. The department of natural resources shall review the request and determine whether it meets the requirement of the rule.
- (c) The insurance coverage required under this subsection shall be obtained from a firm that has an A.M. Best rating of at least "A-."

(5) RENEWAL. (a) An entity may renew their registration as a PECFA consulting firm.

- (b) A PECFA consulting firm registration shall be renewed in accordance with s. SPS 305.07.
- (c) The renewal of a registration as a PECFA consulting firm shall be contingent upon all of the following:

1. Employing at least one Wisconsin-registered PECFA consultant.
2. Being registered by the department of safety and professional services to engage in the practice of professional engineering, geology, hydrology, or soil science.
3. Holding the liability coverage specified in sub. (4) (a) 3. or (b), and (c).

Note: Authority over ss. SPS 305.80 and 305.81 was transferred to Department of Natural Resources under 2013 Wis. Act 20, s. 9138 (7) (f).

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (a) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; CR 04-058: cr. (1) (b) 5., (2) (c) and (d), (4) (a) 2., (b), (c), and (5) (c), r. (5) (b), renum. and am. (4) (intro.), (a) and (b)

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and (5) (a) 1. and 2. to be (4) (a) (intro.), 1. and 3. and (5) (a) and (b) Register February 2006 No. 602, eff. 5-1-06; CR 06-127: cr. (2) (e) and (5) (c) 3., Register September 2007 No. 621, eff. 10-1-07; correction in (1) (a), (b) 5., (2) (a), (b), (d) (4) (a) (intro.), 2., (5) (b), (c) 2. made under s. 13.92 (4) (b) 6., 7., Stats., Register December 2011 No. 672; corrections in (1) (a), (b) 5., (2) (d), (4) (a) (intro.), (b), (5) (c) 2. made under s. 13.92 (4) (b) 6., 7., Stats., Register October 2013 No. 694.

SPS 305.81 PECFA consultants. (1) GENERAL.

(a) A person who performs or provides professional level investigation, interpretation, design or technical project management services related to a claim submitted for reimbursement under the PECFA program, ch. NR 747, shall hold a registration issued by the department of natural resources or department of safety and professional services as a registered PECFA consultant.

Note: See chs. 443 and 470, Stats., for additional requirements relating to the practice of professional engineering; and the practices of professional geology, professional hydrology, and professional soil science, respectively.

(b) The services referred to in par. (a) include but are not limited to:

1. Conducting site investigations;
2. Preparing remedial action plans and alternatives; or
3. Interpretation of data for passive or active bio-remediation systems.

(2) APPLICATION FOR REGISTRATION. A person applying for a PECFA consultant registration shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and a registration fee in accordance with s. SPS 305.02, Table 305.02.
- (c) Proof of being registered by the department of safety and professional services as a professional engineer, professional geologist, professional hydrologist, or professional soil scientist, or proof of being supervised by a person who is so registered.
- (d) Proof of the liability coverage specified in sub. (3).

(3) RESPONSIBILITIES. A person who performs or provides professional level investigation, interpretation, design or technical project management services related to a claim submitted for reimbursement under the PECFA program, ch. NR 747, as a registered PECFA consultant shall either hold or be covered by errors and omissions professional liability coverage, including pollution impairment liability, of no less than \$1,000,000 per claim, \$1,000,000 annual aggregate and with a deductible of no more than \$100,000 per claim.

(4) RENEWAL. (a) A person may renew his or her registration as a PECFA consultant.

(b) A PECFA consultant registration shall be renewed in accordance with s. SPS 305.07.

(c) The renewal of a registration as a PECFA consultant shall be contingent upon both of the following:

1. Being registered by the department of safety and professional services as a professional engineer, professional geologist, professional hydrologist, or professional soil scientist, or proof of being supervised by a person who is so registered.
2. Holding or being covered by the liability coverage specified in sub. (3).

Note: Authority over ss. SPS 305.80 and 305.81 was transferred to Department of Natural Resources under 2013 Wis. Act 20, s. 9138 (7) (f).

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (a) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; CR 04-058: cr. (2) (c) and (4) (c), r. (4) (b), renum. (4) (a) 1. and 2. to be (4) (a) and (b) Register February 2006 No. 602, eff. 5-1-06; CR 06-127: cr. (2) (d), r. and recr. (4) (c), Register September 2007 No. 621, eff. 10-1-07; correction in (1) (a), (2) (a), (b), (c), (4) (b), (c) 1. made under s. 13.92 (4) (b) 6., 7., Stats., Register December 2011 No. 672; corrections in (1) (a), (2) (c), (3), (4) (c) 1. made under s. 13.92 (4) (b) 6., 7., Stats., Register October 2013 No. 694.

SPS 305.82 Tank specialty firms. (1) GENERAL.

A corporation, partnership, sole proprietor, independent contractor, or person that provides or offers to provide installation, removal,

testing, lining, cleaning or assessments for a tank system which is regulated under ch. [ATCP 93](#) shall hold both of the following:

(a) A registration issued by the department of agriculture, trade and consumer protection or the department of safety and professional services as a registered tank specialty firm.

(b) Contractor liability coverage, including pollution impairment liability, of no less than \$1,000,000 per claim and \$1,000,000 annual aggregate and with a deductible of no more than \$100,000 per claim.

(2) APPLICATION FOR REGISTRATION. An entity applying for a tank specialty firm registration shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and a registration fee in accordance with s. [SPS 305.02](#), Table 305.02.

(c) Proof of the liability coverage specified in sub. (1) (b).

(3) QUALIFICATIONS FOR REGISTRATION. The person applying for a tank specialty firm registration shall be the owner of the business, a partner in the business applying on behalf of a partnership, or the chairman of the board or chief executive officer applying on behalf of the corporation.

(4) RESPONSIBILITIES. An entity that provides storage tank system installation, removal, testing, lining, cleaning or site assessments as a registered tank specialty firm shall utilize the appropriate credentialed persons to install, remove, test, line, or clean storage tanks; to design or install a cathodic protection system for a tank system; or to provide tank-system site assessments.

(5) RENEWAL. (a) A person may renew his or her registration as a tank specialty firm.

(b) A tank specialty firm registration shall be renewed in accordance with s. [SPS 305.07](#).

(c) An application for a renewal under this section shall include proof of the liability coverage specified in sub. (1) (b).

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (5) (a) 2., Register, March, 1998, No. 507, eff. 4-1-98; am. (1) (a) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; CR 06-127: r. and recr. (1), cr. (2) (c) and (5) (c), am. (4), renum. (5) (a) 1. and 2. to be (5) (a) and (b), r. (5) (b), Register September 2007 No. 621, eff. 10-1-07; CR 11-020: am. (1) (intro.), (a), (2) (intro.), (3), (4), (5) (a), (b), Register December 2011 No. 672, eff. 1-1-12; correction in (1) (intro.), (2) (a), (b), (5) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; corrections in (1) (intro.), (a) made under s. 13.92 (4) (b) 6., 7., Stats., Register October 2013 No. 694.

Note: Authority over ss. [SPS 305.82](#) to [305.89](#) was transferred to Department of Agriculture, Trade and Consumer Protection under 2013 Wis. Act 20, s. 9138 (3) (fm) and (4) (f).

SPS 305.83 Tank-system site assessors. **(1) GENERAL.** (a) No person may conduct a tank-system site assessment required under ch. [ATCP 93](#) unless the person holds a certification issued by the department of agriculture, trade and consumer protection or department of safety and professional services as a certified tank-system site assessor.

(b) Each tank-system site assessment shall be performed by a person who has no personal or monetary interest in the facility and whose employer has no personal or monetary interest in the facility.

(2) APPLICATION FOR EXAMINATION. A person applying to take a tank-system site assessor certification examination shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) EXAMINATION. A person seeking to obtain a tank-system site assessor certification shall take and pass an examination in accordance with s. [SPS 305.09](#).

(4) APPLICATION FOR CERTIFICATION. Upon notification of successfully passing the examination for a tank-system site asses-

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sor certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. [SPS 305.01](#) and [305.09](#) (7) (c).

(5) RENEWAL. (a) A person may renew his or her certification as a tank-system site assessor.

(b) A tank-system site assessor certification shall be renewed in accordance with s. [SPS 305.07](#).

Note: Authority over ss. [SPS 305.82](#) to [305.89](#) was transferred to Department of Agriculture, Trade and Consumer Protection under 2013 Wis. Act 20, s. 9138 (3) (fm) and (4) (f).

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) and (4), Register, April, 2000, No. 532, eff. 5-1-00; CR 06-127: am. (title), (1), (2) (intro.), (3), and (4), renum. (5) (a) 1. and 2. to be (5) (a) and (b) and am., r. (5) (b), Register September 2007 No. 621, eff. 10-1-07; correction in (1) (a), (2) (a), (b), (3), (4), (5) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; corrections in (1) (a) made under s. 13.92 (4) (b) 6., 7., Stats., Register October 2013 No. 694.

SPS 305.84 Aboveground tank system installers.

(1) GENERAL. Except as provided in sub. (7), no person may install an aboveground tank system that is regulated under ch. [ATCP 93](#) unless the person complies with one of the following:

(a) The person holds a certification issued by the department of agriculture, trade and consumer protection or department of safety and professional services as a certified aboveground tank system installer.

(b) The person holds a registration as a professional engineer and is competent in the engineering methods and requirements in Wisconsin for designing and installing storage tank systems for flammable, combustible or hazardous liquids.

(c) The person is under the direct supervision of another person who holds a certification or registration under par. (a) or (b) and who is responsible for the installation.

(2) APPLICATION FOR EXAMINATION. A person applying to take an aboveground tank system installer certification examination shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) EXAMINATION. A person seeking to obtain an aboveground tank system installer certification shall take and pass an examination in accordance with s. [SPS 305.09](#).

(4) APPLICATION FOR CERTIFICATION. Upon notification of successfully passing the examination for an aboveground tank system installer certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. [SPS 305.01](#) and [305.09](#) (7) (c).

(5) RESPONSIBILITIES. A person who installs or supervises the installation of tank systems as a certified aboveground tank system installer shall be present at the job site for at least all of the following activities:

(a) Preinstallation tank system testing.

(b) Inspection and repair of coatings.

(c) Placement of tanks.

(d) Installation and testing of all connections and tank-related piping including vapor recovery, vents and supply pipes.

(e) Installation of monitoring or leak detection devices.

(f) Installation of pumps.

(g) Installation of any underground piping.

(6) RENEWAL. (a) 1. A person may renew his or her certification as an aboveground tank system installer.

2. An aboveground tank system installer certification shall be renewed in accordance with s. [SPS 305.07](#).

(b) 1. The renewal of a certification as an aboveground tank system installer shall be contingent upon the installer obtaining at least 12 hours of acceptable continuing education prior to the ex-

piration date of the certification as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a certification as an aboveground tank system installer may apply to the department of agriculture, trade and consumer protection for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department of agriculture, trade and consumer protection.

(7) EXCLUSION. This section does not apply to field-constructed aboveground tanks.

Note: Authority over ss. SPS 305.82 to 305.89 was transferred to Department of Agriculture, Trade and Consumer Protection under 2013 Wis. Act 20, s. 9138 (3) (fm) and (4) (f).

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (a), (b) and (4), Register, April, 2000, No. 532, eff. 5-1-00; CR 06-127: am. (1) (intro.) and (5) (e) and (f), cr. (5) (g) and (7), Register September 2007 No. 621, eff. 10-1-07; CR 11-020: r. and recr. (1), am. (6) (b) 1., Register December 2011 No. 672, eff. 1-1-12; correction of numbering (5) (a), as renumbered, under s. 13.92 (4) (b) 1., correction in (1) (intro.), (2) (a), (b), (3), (4), (5), (6) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; corrections in (1) (intro.), (a), (6) (b) 2. made under s. 13.92 (4) (b) 6., 7., Stats., Register October 2013 No. 694; CR 14-010: am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14; CR 14-010: am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14.

SPS 305.85 Underground tank system installers.

(1) GENERAL. No person may install an underground tank system that is regulated under ch. ATCP 93 unless the person complies with one of the following:

(a) The person holds a certification issued by the department of agriculture, trade and consumer protection or department of safety and professional services as a certified underground tank system installer.

(b) The person holds a registration as a professional engineer and is competent in the engineering methods and requirements in Wisconsin for designing and installing storage tank systems for flammable, combustible or hazardous liquids.

(c) The person is under the direct supervision of another person who holds a certification or registration under par. (a) or (b) and who is responsible for the installation.

(2) APPLICATION FOR EXAMINATION. A person applying to take an underground tank system installer certification examination shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) EXAMINATION. A person seeking to obtain an underground tank system installer certification shall take and pass an examination in accordance with s. SPS 305.09.

(4) APPLICATION FOR CERTIFICATION. Upon notification of successfully passing the examination for an underground tank system installer certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(5) RESPONSIBILITIES. A person who installs or supervises the installation of tanks as a certified underground tank system installer shall be present at the job site for at least all of the following activities:

(a) Preinstallation tank system testing.

(b) Inspection and repair of coatings.

(c) Placing of bedding material and the setting and bedding of tanks.

(d) Backfilling operations and compacting of backfill around tanks and piping.

(e) Installation or activation of department of agriculture, trade and consumer protection-accepted, factory-supplied cathodic protection systems.

Note: The Department of Agriculture, Trade and Consumer Protection has accepted factory-supplied cathodic protection systems that comply with the sti-P3® specifications from the Steel Tank Institute, and may accept other systems of this type without a rule change.

(f) Installation and testing of all connections and tank-related piping including vapor recovery, vents and supply pipes.

(g) Installation of leak detection devices and any monitoring wells.

(h) Testing of tanks and piping both prior to and after backfilling.

(i) Installation of pumps.

(6) RENEWAL. (a) 1. A person may renew his or her certification as an underground tank system installer.

2. An underground tank system installer certification shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a certification as an underground tank system installer shall be contingent upon the installer obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the certification as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a certification as an underground tank system installer may apply to the department of agriculture, trade and consumer protection for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department of agriculture, trade and consumer protection.

Note: Authority over ss. SPS 305.82 to 305.89 was transferred to Department of Agriculture, Trade and Consumer Protection under 2013 Wis. Act 20, s. 9138 (3) (fm) and (4) (f).

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (a), (b) and (4), Register, April, 2000, No. 532, eff. 5-1-00; CR 06-127: am. (1) (intro.), (5) (e) and (i), Register September 2007 No. 621, eff. 10-1-07; CR 11-020: r. and recr. (1), am. (6) (b) 1., Register December 2011 No. 672, eff. 1-1-12; correction in (1) (intro.), (2) (a), (b), (3), (4), (6) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; corrections in (1) (intro.), (a), (5) (e), (6) (b) 2. made under s. 13.92 (4) (b) 6., 7., Stats., Register October 2013 No. 694; CR 14-010: am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14.

SPS 305.86 Underground tank system liners. (1)

GENERAL. No person may line or reline an underground tank system that has held or will hold flammable or combustible liquids which are regulated under ch. ATCP 93 unless the person complies with one of the following:

(a) The person holds a certification issued by the department of agriculture, trade and consumer protection or department of safety and professional services as a certified tank system liner.

(b) The person is under the direct supervision of another person who holds a certification issued by the department of agriculture, trade and consumer protection or department of safety and professional services as a certified tank system liner.

(2) APPLICATION FOR EXAMINATION. A person applying to take a tank system liner certification examination shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) EXAMINATION. A person seeking to obtain a tank system liner certification shall take and pass an examination in accordance with s. SPS 305.09.

(4) APPLICATION FOR CERTIFICATION. Upon notification of successfully passing the examination for a tank system liner certification, a person may obtain the certification by submitting an

application and the certification fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(5) RESPONSIBILITIES. A person who lines or supervises the lining of underground tanks as a certified tank system liner shall be present at the job site for at least all of the following activities:

(a) Removal of product from the tanks and making the atmosphere of the tanks inert or vapor-free.

Note: Chapter [ATCP 93](#) requires plan submittal and approval prior to lining a tank.

(b) Cutting of openings in tanks.

(c) Removal and handling of sludge and other wastes from tanks.

(d) Sand blasting of the tank interior.

(e) Inspection for holes and wall thickness.

(f) Notifying the owner if an internal tank assessment determines that a tank system assessment under ch. [ATCP 93](#) is required.

(g) Repair of holes.

(h) Notifying and arranging for a certified tank system inspector to visit the site and authorize the lining, prior to applying the lining to the tank.

(i) Coating of tanks.

(j) Testing for holidays.

(k) Testing for coating hardness.

(L) Resealing of tanks.

(m) Completing an API 1631 inspection form B, as required by ch. [ATCP 93](#), and submitting it to the owner, inspector and department of agriculture, trade and consumer protection.

(6) RENEWAL. (a) A person may renew his or her certification as a tank system liner.

(b) A tank system liner certification shall be renewed in accordance with s. [SPS 305.07](#).

Note: Authority over ss. [SPS 305.82](#) to [305.89](#) was transferred to Department of Agriculture, Trade and Consumer Protection under [2013 Wis. Act 20](#), s. [9138 \(3\) \(fm\)](#) and (4) (f).

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; am. (1) (a), (b) and (4), [Register, April, 2000, No. 532](#), eff. 5-1-00; [CR 06-127](#): am. (1) (intro.), and (5) (intro.), renum. (5) (f) and (g) to (j) to be (5) (g) and (i) to (L), cr. (5) (f), (h) and (m), renum. (6) (a) 1. and 2. to be (6) (a) and (b), r. (6) (b), [Register September 2007 No. 621](#), eff. 10-1-07; [CR 11-020](#): r. and recr. (1), [Register December 2011 No. 672](#), eff. 1-1-12; correction in (1) (intro.), (2) (a), (b), (3), (4), (5) (f), (m), (6) (b) made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register December 2011 No. 672](#); corrections in (1) (intro.), (a), (b), (5) (f), (m) made under s. [13.92 \(4\) \(b\) 6.](#), 7., Stats., [Register October 2013 No. 694](#).

SPS 305.87 Tank system removers and cleaners.

(1) GENERAL. Except as provided in sub. (7), no person may remove or clean a tank system that is regulated under ch. [ATCP 93](#) unless the person complies with one of the following:

(a) The person holds a certification issued by the department of agriculture, trade and consumer protection or department of safety and professional services as a certified tank system remover-cleaner.

(b) The person is under the direct supervision of another person who holds a certification issued by the department of agriculture, trade and consumer protection or department of safety and professional services as a certified tank system remover-cleaner.

(2) APPLICATION FOR EXAMINATION. A person applying to take a tank system remover-cleaner certification examination shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(c) Proof of the liability coverage specified in s. [SPS 305.82 \(1\) \(b\)](#).

(3) EXAMINATION. A person seeking to obtain a tank system remover-cleaner certification shall take and pass an examination in accordance with s. [SPS 305.09](#).

(4) APPLICATION FOR CERTIFICATION. Upon notification of successfully passing the examination for a tank system remover-cleaner certification, a person may obtain the certification by submitting an application and the certification fee in accordance with ss. [SPS 305.01](#) and [305.09 \(7\) \(c\)](#).

(5) RESPONSIBILITIES. A person who removes or cleans or supervises the removing or cleaning of tanks as a certified tank system remover-cleaner shall be present at the job site for at least all of the following activities:

(a) Disconnecting and draining of piping.

(b) Capping of piping.

(c) Vapor freeing or inerting of tanks.

(d) Cleaning of tanks and handling of sludge and other wastes.

(e) Removal of tank systems from the ground and loading them for transport or filling the tank systems with an inert material.

(f) Visual inspection of the soils around the excavation or tank system location.

(6) RENEWAL. (a) A person may renew his or her certification as a tank system remover-cleaner.

(b) A tank system remover-cleaner certification shall be renewed in accordance with s. [SPS 305.07](#).

(c) An application for a renewal under this section shall include proof of the liability coverage specified in s. [SPS 305.82 \(1\) \(b\)](#).

(7) EXCLUSIONS. This section does not apply to any of the following:

(a) Field-constructed aboveground tanks.

(b) Heating fuel tanks located aboveground or in basements of 1- or 2-family dwellings.

Note: Authority over ss. [SPS 305.82](#) to [305.89](#) was transferred to Department of Agriculture, Trade and Consumer Protection under [2013 Wis. Act 20](#), s. [9138 \(3\) \(fm\)](#) and (4) (f).

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; am. (1) (b), (6) (a) 2., [Register, March, 1998, No. 507](#), eff. 4-1-98; am. (1) (a), (b) and (4), [Register, April, 2000, No. 532](#), eff. 5-1-00; [CR 06-127](#): r. and recr. (1) (intro.), renum. (1) (a) and (b) to be (1) (b) and (c) and am. (b), cr. (1) (d), (2) (c), (6) (c) and (7), renum. (6) (a) 1. and 2. to be (6) (a) and (b), r. (6) (b), [Register September 2007 No. 621](#), eff. 10-1-07; [CR 11-020](#): renum. (1) (a) to (c) to be (1) (intro.), (a), (b) and am., r. (1) (d), [Register December 2011 No. 672](#), eff. 1-1-12; correction in (1) (intro.), (2) (a), (b), (c), (3), (4), (6) (b), (c) made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register December 2011 No. 672](#); corrections in (1) (intro.), (a), (b) made under s. [13.92 \(4\) \(b\) 6.](#), 7., Stats., [Register October 2013 No. 694](#).

SPS 305.88 Tank system tightness testers.

(1) GENERAL. (a) No person may conduct the tightness testing specified in ch. [ATCP 93](#) for a tank system unless the person holds a certification issued by the department of agriculture, trade and consumer protection or department of safety and professional services as a certified tank system tightness tester.

(b) Tank system tightness testing shall be performed by a person with no personal or monetary interest in the facility and whose employer has no personal or monetary interest in the facility.

(2) APPLICATION FOR CERTIFICATION. A person applying for a tank system tightness tester certification shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and a certification fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) QUALIFICATIONS FOR CERTIFICATION. (a) A person applying for a tank system tightness tester certification shall have completed training in one or more tightness test methods that

have been approved under ch. [ATCP 93](#), within the 2 years immediately preceding the application.

(b) The test methodology training qualifying for certification shall have been provided by the person or entity that obtained the approval under ch. [ATCP 93](#) for the methodology.

(4) **RESPONSIBILITIES.** A person who conducts tightness tests for tank systems as a certified tank system tightness tester shall do all of the following:

(a) Conduct tightness tests in accordance with the material approval under ch. [ATCP 93](#) and any additional manufacturer's instructions.

(b) Employ only those test methodologies for which training has been obtained.

(5) **RENEWAL.** (a) A person may renew his or her certification as a tank system tightness tester.

(b) A tank system tightness tester certification shall be renewed in accordance with s. [SPS 305.07](#).

Note: Authority over ss. [SPS 305.82](#) to [305.89](#) was transferred to Department of Agriculture, Trade and Consumer Protection under [2013 Wis. Act 20](#), s. [9138 \(3\) \(fm\)](#) and (4) (f).

History: Cr. [Register, October, 1996, No. 490](#), eff. 11-1-96; am. (5) (b), [Register, March, 1998, No. 507](#), eff. 4-1-98; am. (1) and (2) (b), [Register, April, 2000, No. 532](#), eff. 5-1-00; [CR 06-127](#): renum. (1) to be (1) (a) and am., cr. (1) (b), am. (3) and (4) (a), [Register September 2007 No. 621](#), eff. 10-1-07; [CR 11-020](#): am. (3) (a), (4) (intro.), correction in (1) (a), (2) (a), (b), (3) (a), (b), (4) (a), (5) (b) made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register December 2011 No. 672](#); corrections in (1) (a), (3) (a), (b), (4) (a) made under s. [13.92 \(4\) \(b\) 6.](#), 7., Stats., [Register October 2013 No. 694](#).

SPS 305.89 Cathodic protection specialties. (1)

GENERAL. (a) *Cathodic protection tester.* No person may conduct cathodic protection testing of a tank system that is regulated under ch. [ATCP 93](#) unless the person holds a certification issued by the department of agriculture, trade and consumer protection or department of safety and professional services as a certified cathodic protection tester.

(b) *Corrosion expert.* 1. No person may design or install a cathodic protection system for a tank system that is regulated under ch. [ATCP 93](#) unless the person holds a certification issued by the department of agriculture, trade and consumer protection or department of safety and professional services as a certified corrosion expert.

2. This paragraph does not apply to department of agriculture, trade and consumer protection-accepted, factory-supplied cathodic protection systems.

Note: The Department of Agriculture, Trade and Consumer Protection has accepted factory-supplied cathodic protection systems that comply with the sti-P3® specifications from the Steel Tank Institute, and may accept other systems of this type without a rule change.

(c) *Independence.* Cathodic protection activities covered under this section shall be performed by a person with no personal or monetary interest in the facility and whose employer has no personal or monetary interest in the facility.

(2) **APPLICATION FOR CERTIFICATION.** A person applying for certification as a cathodic protection tester or a corrosion expert shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and certification fee in accordance with s. [SPS 305.02](#), Table 305.02.

(c) Documentation showing formal education relating to soil resistivity, stray current, structure-to-soil potential, component electrical isolation measurements of buried metal piping and tank systems, and corrosion control.

(d) Documentation from a cathodic protection certification entity recognized by the department of agriculture, trade and consumer protection, showing the applicant has successfully

completed a certification examination that corresponds to the cathodic protection specialty addressed in the application.

Note: The Department of Agriculture, Trade and Consumer Protection will accept the following certifications as demonstrating compliance with pars. (c) and (d), for a cathodic protection tester:

NACE certification as a CP1, CP2 or CP3 cathodic protection technician.

NACE certification as a senior corrosion technologist.

NACE certification as a corrosion technologist.

NACE certification as a corrosion technician.

STI certification in UST system cathodic protection monitoring.

Note: The department of agriculture, trade and consumer protection will accept the following certifications as demonstrating compliance with pars. (c) and (d), for a corrosion expert:

NACE certification as a corrosion specialist.

NACE certification as a CP4 cathodic protection specialist.

Note: NACE, formerly known as the National Association of Corrosion Engineers, can be contacted at NACE International, P.O. Box 218340, Houston, TX 77218. STI can be contacted at Steel Tank Institute, 570 Oakwood Road, Lake Zurich, IL 60047.

(3) **RESPONSIBILITIES.** A person who conducts cathodic protection tests or who designs or installs cathodic protection systems shall do all of the following:

(a) Conduct all cathodic protection tests in accordance with ch. [ATCP 93](#) and any manufacturer's instructions.

(b) Employ only those methodologies for which training has been obtained and documented.

Note: Although several different levels of expertise may qualify for the same certification, this section is intended to prohibit performing cathodic protection activities unless the specific expertise for that activity has been attained and documented.

(4) **RENEWAL.** (a) A person may renew his or her certification as a cathodic protection tester or corrosion expert.

(b) A certification for a cathodic protection tester or corrosion expert shall be renewed in accordance with s. [SPS 305.07](#).

Note: Authority over ss. [SPS 305.82](#) to [305.89](#) was transferred to Department of Agriculture, Trade and Consumer Protection under [2013 Wis. Act 20](#), s. [9138 \(3\) \(fm\)](#) and (4) (f).

History: [CR 06-127](#): cr. [Register September 2007 No. 621](#), eff. 10-1-07; [CR 11-020](#): am. (title), cr. (1) (c) (title), [Register December 2011 No. 672](#), eff. 1-1-12; correction in (1) (a), (b) 1., (2) (a), (b), (3) (a), (4) (b) made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register December 2011 No. 672](#); corrections in (1) (a), (b) 1., 2., (2) (d), (3) (a) made under s. [13.92 \(4\) \(b\) 6.](#), 7., Stats., [Register October 2013 No. 694](#).

Subchapter IX — Plumbing

SPS 305.90 Plumbing. (1) (a) Except as provided under s. [145.06 \(4\)](#), Stats., and pursuant to s. [145.06](#), Stats., no person may install plumbing unless the person holds a license or registration issued by the department as a master plumber, master plumber-restricted, journeyman plumber, journeyman plumber-restricted, plumbing apprentice, plumbing learner-restricted, utility contractor, or pipelayer.

(b) 1. Pursuant to s. [145.14](#), Stats., the plumbing activities that may be undertaken by a person who holds a license or registration as a master plumber-restricted service, journeyman plumber-restricted service, or a plumbing learner-restricted service shall be limited to the installation or modification of the following:

a. Privately owned wastewater treatment systems and components as defined in ch. [SPS 381](#).

b. Building sewers, sanitary; building sewers, storm; and private interceptor main sewers, as defined in ch. [SPS 381](#), from the street main to the immediate inside or proposed inside foundation wall of a building.

c. Water services, private water mains, manufactured home community water supply systems, and campground or recreational vehicle park water supply systems as defined in ch. [SPS 381](#).

d. That portion of the drain system or water supply system that connects a building sewer or water service to the connection provided by the manufactured/mobile home manufacturer.

e. Manufactured home community drain systems, sanitary; manufactured home community drain systems, storm; campground or recreational vehicle park drain systems, sanitary; and campground or recreational vehicle park drain systems, storm, as defined in ch. SPS 381.

f. Wastewater treatment devices, as defined in ch. SPS 381, not located within a building's foundation perimeter.

g. Stormwater use systems, not located within a building's foundation perimeter.

h. Reclaimed water systems, not located within a building's foundation perimeter.

2. a. The plumbing activities that may be undertaken by a person who holds a license as a master plumber-restricted service type 2 or journeyman plumber-restricted service type 2 shall be limited to the installation or modification of underground drain and vent piping and plumbing delineated under subd. 1.

b. The plumbing activities that may be undertaken by a person who holds a license as a master plumber-restricted service type 3 or journeyman plumber-restricted service type 3 shall be limited to the modification of existing water distribution systems and plumbing delineated under subd. 1.

c. The plumbing activities that may be undertaken by a person who holds a license as a master plumber-restricted service type 4 or journeyman plumber-restricted service type 4 shall be limited to the installation or modification of drain and vent piping to existing drain stacks and vent stacks for the conversion from a private sewage system to municipal sewers and plumbing delineated under subd. 1.

Note: Prior to November 1, 1996, plumber-restricted service licenses were referred to as plumber-restricted sewer licenses and those licenses formerly referred to as plumber-restricted sewer type 1 are now titled plumber-restricted service. Restricted service plumbing licenses types 2 to 4 are no longer available to new applicants. Individuals who currently hold these types of licenses are permitted to renew the licenses and continue to perform the activities under subd. 2. Individuals who hold a journeyman plumber-restricted service type 2 to 4 may seek to obtain the appropriate type of master plumber-restricted service license in accordance with s. SPS 305.92.

3. Pursuant to s. 145.14, Stats., the plumbing activities that may be undertaken by a person who holds a license or registration as a master plumber-restricted appliance, journeyman plumber-restricted appliance, or plumbing learner-restricted appliance shall be limited to connections with an existing water distribution system which do not require a direct connection to the drain system for the installation and modification of the following:

a. Items requiring connection with a water distribution system.

b. Stormwater use or reclaimed water supply systems.

c. The minimum required piping to connect allowed installations to the system.

4. The plumbing activities that may be undertaken by a person who holds a license or registration as a utility contractor or pipelayer shall be limited to the installation or modification of the following:

a. Water services and private water mains, as defined in ch. SPS 381, from the street main to the immediate inside building perimeter.

b. Building sanitary sewers, building storm sewers, and private interceptor main sewers, as defined in ch. SPS 381, from the street main to the immediate inside building perimeter.

(2) Pursuant to s. 145.06 (3m), Stats., no person may perform the required testing of cross connection control assemblies unless the person holds a registration issued by the department as a cross-connection control assembly tester.

(3) A business engaged in the installation of plumbing that utilizes plumbing learners shall maintain a ratio of at least one journeyman plumber or journeyman plumber-restricted for each plumbing learner. For this purpose, a master plumber or master plumber-restricted may act as a journeyman plumber or journeyman plumber-restricted, respectively.

(4) Pursuant to s. 145.09, Stats., a person may be accepted for examination for the appropriate classification of license upon submittal of any of the following:

(a) An application in accordance with s. SPS 305.01, together with the application fee, and examination fee in accordance with s. SPS 305.02, Table 305.02.

(b) A petition for variance documenting evidence of equivalency as provided in s. 145.09 (1m) (a) or (b), Stats., and a petition for variance fee in accordance with s. SPS 305.02 (4).

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) and (2), Register, April, 2000, No. 532, eff. 5-1-00; CR 03-075: am. (1) (b) 1. a. to c., cr. (1) (b) 1. d. and (4) Register June 2004 No. 582, eff. 8-1-04; CR 11-020: am. (1) (b) 4., Register December 2011 No. 672, eff. 1-1-12; correction in (1) (b) 1. a., b., c., (4) (a), (b), (c) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (4) (intro.), consol. (4) (a) and (b) and renum. to (a) and am., renum. (4) (c) to (b) and am., r. (4) (d) Register August 2014 No. 704, eff. 9-1-14; correction in (4) (b) made under s. 13.92 (4) (b) 7., Stats., Register June 2018; CR 23-006: am. (1) (a), (b) 1. (intro.), b., c., cr. (1) (b) 1. e. to h., am. (1) (b) 2., renum. (1) (b) 3. to (1) (b) 3. (intro.) and am., cr. (1) (b) 3. a. to c., renum. (1) (b) 4. to (1) (b) 4. (intro.) and a. and am., cr. (1) (b) 4. b., am. (2) Register September 2023 No. 813, eff. 10-1-23; correction in (1) (b) 4. a. made under s. 35.17, Stats., Register September 2023 No. 813.

SPS 305.91 Master plumbers. (1) **GENERAL.** A person may obtain a license as a master plumber by taking and passing the master plumber license examination.

(2) **APPLICATION FOR EXAMINATION.** A person applying to take a master plumber license examination shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) **QUALIFICATIONS FOR EXAMINATION.** A person applying for a master plumber license examination shall have one of the following qualifications:

(a) At least 1,000 hours of plumbing-related work experience per year for at least 3 years as a licensed journeyman plumber.

(b) Graduated from an accredited engineering university or college with a degree in civil engineering, mechanical engineering or other approved engineering curriculum related to plumbing.

(4) **EXAMINATION.** A person seeking to obtain a master plumber license shall take and pass an examination in accordance with s. SPS 305.09.

Note: After December 31, 2001, the examination for a master plumber license will include questions relative to the design and installation of multipurpose piping systems.

(5) **APPLICATION FOR LICENSE.** (a) Upon notification of the successful passage of the examination for a master plumber license, a person may obtain the license by submitting an application and the license fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(b) A person may apply for a license as a licensed master plumber by submitting an application, application fee, and a license fee in accordance with ss. SPS 305.01 and 305.02, Table 305.02.

(6) **RESPONSIBILITIES.** (a) A person who as a licensed master plumber is responsible for the installation or modification of plumbing shall utilize the appropriately licensed or registered persons to install or modify plumbing.

(b) 1. A person who has obtained his or her master plumber license prior to January 1, 2002 and who is responsible for the installation or modification of a multipurpose piping system shall have completed an approved course in the engineering principles and skills associated with the design, installation and maintenance of multipurpose piping systems prior to installing such a system.

2. A course to fulfill the obligation under subd. 1. shall be approved and conducted in accordance with s. SPS 305.08.

(c) For any plumbing installation that requires a uniform building permit under s. SPS 320.08, a person who holds a master plumber license may not commence installation of plumbing until a permit is issued for the installation.

Note: Chs. SPS 320 to 325 apply to one- and 2-family dwellings and manufactured dwellings. The department's uniform building permit is issued either by the municipality in which the dwelling is located or by a UDC inspection agency where the municipality does not administer the Uniform Dwelling Code.

(d) For any construction that involves installation or modification of a private onsite wastewater treatment system, a person who holds a master plumber license may not commence installation of plumbing until a sanitary permit is issued for the installation in accordance with s. SPS 383.21.

Note: Section 101.16 (4) (a), Stats., provides that: The person performing the work of installing equipment utilizing liquefied petroleum gas for fuel purposes shall furnish the user of the equipment a statement, the form of which shall be prescribed by the department showing the design, construction, location, and installation of the equipment conforms with the rules promulgated by the department under this section.

(7) EXCHANGES. (a) A person who holds a master plumber license may, upon application to the department, exchange his or her master plumber license for a journeyman plumber license.

(b) A person who has exchanged his or her master plumber license for a journeyman plumber license may, upon application to the department, exchange his or her journeyman plumber license for a master plumber license provided:

1. The person holds a valid journeyman plumber license;
2. The person submits with the application a copy of his or her former master plumber license; and
3. The license fee for a master plumber specified in s. SPS 305.02, Table 305.02 is submitted.

(8) RENEWAL. (a) 1. A person may renew his or her license as a master plumber.

2. A master plumber license shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a license as a master plumber shall be contingent upon the master plumber obtaining at least 24 hours of acceptable continuing education prior to the expiration date of the license as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a master plumber may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (intro.), (5), (7) (b) 3. and (8) (b), renum. (6) to be (6) (a) and am., cr. (6) (b), Register, April, 2000, No. 532, eff. 5-1-00, except (6) (b) 1. eff. 8-1-00; CR 03-075: am. (3) (a), cr. (6) (c) and (d) Register June 2004 No. 582, eff. 8-1-04; CR 06-031: renum. (8) (b) 1. to be 1. a. and am., cr. (8) (b) 1. b. Register October 2006 No. 610, eff. 11-1-06; CR 11-020: r. (8) (b) 1. a., renum. (8) (b) 1. b. to be (8) (b) 1. and amend, Register December 2011 No. 672, eff. 1-1-12; correction in (2) (a), (b), (4), (5) (a), (b) 1., (6) (b) 2., (c), (d), (7) (b) 3., (8) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 13-014: am. (3) (a) Register September 2013 No. 693, eff. 10-1-13; CR 14-010: renum. (1) (intro.) to (1) and am., r. (1) (a), (b), renum. (5) (b) (intro.) to (5) (b) and am., r. (5) (b) 1., 2., am. (8) (b) 1. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: am. (4) Register May 2020 No. 773, eff. 6-1-20; CR 23-006: am. (1) Register September 2023 No. 813, eff. 10-1-23.

SPS 305.92 Master plumbers-restricted. (1) GENERAL. A person may obtain a license as a master plumber-restricted by taking and passing the master plumber-restricted license examination.

(2) APPLICATION FOR EXAMINATION. A person applying to take a master plumber-restricted service license examination or master plumber-restricted appliance license examination shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR EXAMINATION. (a) A person applying for a master plumber-restricted service license examination shall have at least 1,000 hours of plumbing-related work experience per year for at least 2 years as a licensed journeyman plumber or a licensed journeyman plumber-restricted service.

(b) A person applying for a master plumber-restricted appliance license examination shall have at least 1,000 hours of plumbing-related work experience per year for at least 2 years as a licensed journeyman plumber or a licensed journeyman plumber-restricted appliance.

(4) EXAMINATION. A person seeking to obtain a master plumber-restricted service or a master plumber-restricted appliance license shall take and pass an examination in accordance with s. SPS 305.09.

Note: After December 31, 2001, the examination for a master plumber-restricted appliance license will include questions relative to the design and installation of multipurpose piping systems.

(5) APPLICATION FOR LICENSE. (a) Upon notification of the successful passage of the examination for a master plumber-restricted service or master plumber-restricted appliance license, a person may obtain the license by submitting an application and the license fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(b) A person may apply for a license as a master plumber-restricted service or a master plumber-restricted appliance by submitting an application, application fee, and a license fee in accordance with ss. SPS 305.01 and 305.02 and Table 305.02.

(6) RESPONSIBILITIES. (a) A person who, as a licensed master plumber-restricted service or licensed master plumber-restricted appliance, is responsible for an installation or modification of plumbing shall utilize the appropriately licensed or registered persons to install or modify plumbing.

(c) For any plumbing installation that requires a uniform building permit under s. SPS 320.08, a person who holds a master plumber-restricted appliance license or a master plumber-restricted service license may not commence installation of plumbing until a permit is issued for the installation.

Note: Chs. SPS 320 to 325 apply to one- and 2-family dwellings and manufactured dwellings. The department's uniform building permit is issued either by the municipality in which the dwelling is located or by a UDC inspection agency where the municipality does not administer the Uniform Dwelling Code.

(d) For any construction that involves installation or modification of a private onsite wastewater treatment system, a person who holds a master plumber-restricted service license may not commence installation of plumbing until a sanitary permit is issued for the installation in accordance with s. SPS 383.21.

Note: Section 101.16 (4) (a), Stats., provides that: The person performing the work of installing equipment utilizing liquefied petroleum gas for fuel purposes shall furnish the user of the equipment a statement, the form of which shall be prescribed by the department showing the design, construction, location, and installation of the equipment conforms with the rules promulgated by the department under this section.

(7) EXCHANGES. (a) A person who holds a master plumber-restricted service license or master plumber-restricted appliance license may, upon application to the department, exchange his or

her master plumber license for the appropriate journeyman plumber-restricted license.

(b) A person who has exchanged his or her master plumber-restricted license for a journeyman plumber-restricted license may, upon application to the department, exchange his or her journeyman plumber-restricted license for the appropriate master plumber-restricted license provided:

1. The person holds a valid journeyman plumber-restricted license;

2. The person submits with the application a copy of his or her former master plumber-restricted license; and

3. The license fee for a master plumber-restricted license specified in s. SPS 305.02, Table 305.02 is submitted.

(8) RENEWAL. (a) 1. A person may renew his or her license as a master plumber-restricted service or master plumber-restricted appliance.

2. A master plumber-restricted service license and a master plumber-restricted appliance license shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a license as a master plumber-restricted service or master plumber-restricted appliance shall be contingent upon the master plumber obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the license as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a master plumber-restricted service or master plumber-restricted appliance may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (7) (b) (intro.), Register, March, 1998, No. 507, eff. 4-1-98; am. (1) (intro.), (5), (6), (7) (b) 3, and (8) (b), Register, April, 2000, No. 532, eff. 5-1-00; am. (3), Register, May, 2001, No. 545, eff. 6-1-01; CR 03-075: am. (3), renum. (6) to be (6) (a), cr. (6) (b) and (c) Register June 2004 No. 582, eff. 8-1-04; CR 05-011: renum. (6) (b) and (c) to be (6) (c) and (d), cr. (6) (b) Register July 2005 No. 595, eff. 8-1-05; CR 06-031: renum. (8) (b) 1. to be 1. a. and am., cr. (8) (b) 1. b. Register October 2006 No. 610, eff. 11-1-06; CR 11-020: r. (8) (b) 1. a., renum. (8) (b) 1. b. to be (8) (b) 1. and amend, Register December 2011 No. 672, eff. 1-1-12; correction in (2) (a), (b), (4), (5) (a), (b) 1., (6) (b) 2., (c), (d), (7) (b) 3., (8) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 13-014: am. (3) Register September 2013 No. 693, eff. 10-1-13; CR 14-010: renum. (1) (intro.) to (1) and am., r. (1) (a), (b), renum. (5) (b) (intro.) to (5) (b) and am., r. (5) (b) 1., 2., r. (6) (b), am. (8) (b) 1. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: am. (4) Register May 2020 No. 773, eff. 6-1-20; CR 23-006: am. (1), (5) (b) Register September 2023 No. 813, eff. 10-1-23; correction in (5) (b) made under s. 35.17, Stats., Register September 2023 No. 813.

SPS 305.93 Journeyman plumbers. (1) GENERAL.

(a) The plumbing activities that may be undertaken by a person who holds a license as a journeyman plumber shall be performed under the general supervision of a person who holds a master plumber license, master plumber-restricted license, or utility contractor license.

Note: A journeyman plumber who is working under the general supervision of a licensed master plumber-restricted or licensed utility contractor is limited to the type of plumbing installations associated with the specific license of the person providing the supervision.

(b) A person may obtain a license as a journeyman plumber by taking and passing the journeyman plumber license examination.

(2) APPLICATION FOR EXAMINATION. A person applying to take a journeyman plumber license examination shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR EXAMINATION. A person applying for a journeyman plumber license examination shall have completed a plumbing apprenticeship program recognized under ch. 106, Stats.

(4) EXAMINATION. Except as provided in sub. (1) (b), a person seeking to obtain a journeyman plumber license shall take and pass an examination in accordance with s. SPS 305.09.

(5) APPLICATION FOR LICENSE. (a) Upon notification of the successful passage of the examination for a journeyman plumber license, a person may obtain the license by submitting an application and the license fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(b) A person may apply for a license as a journeyman plumber by submitting an application, application fee, and a license fee in accordance with ss. SPS 305.01 and 305.02 and Table 305.02.

(6) RENEWAL. (a) 1. A person may renew his or her license as a journeyman plumber.

2. A journeyman plumber license shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a license as a journeyman plumber shall be contingent upon the journeyman plumber obtaining at least 24 hours of acceptable continuing education prior to the expiration date of the license as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a journeyman plumber may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (6) (a) 2., Register, March, 1998, No. 507, eff. 4-1-98; am. (1) (a), (b) (intro.) and (5), Register, April, 2000, No. 532, eff. 5-1-00; CR 06-031: renum. (6) (b) 1. to be 1. a. and am., cr. (6) (b) 1. b. Register October 2006 No. 610, eff. 11-1-06; CR 11-020: r. (6) (b) 1. a., renum. (6) (b) 1. b. to be (6) (b) 1. and amend, Register December 2011 No. 672, eff. 1-1-12; correction in (2) (a), (b), (4), (5) (a), (b) 1., (6) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: renum. (1) (b) (intro.) to (1) and am., r. (1) (b) 1., 2., renum. (5) (b) (intro.) to (5) (b) and am., r. (5) (b) 1., 2., am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14; CR 23-006: am. (1), (5) (b) Register September 2023 No. 813, eff. 10-1-23; correction in (5) (b) made under s. 35.17, Stats., Register September 2023 No. 813.

SPS 305.94 Journeyman plumbers-restricted service. (1) GENERAL. (a) The plumbing activities as delineated under s. SPS 305.90 (1) (b) that may be undertaken by a person who holds a license as a journeyman plumber-restricted service shall be performed under the general supervision of a person who is a licensed master plumber or a licensed master plumber-restricted service.

(b) A person may obtain a license as a journeyman plumber-restricted service by taking and passing the journeyman plumber-restricted license examination.

(2) APPLICATION FOR EXAMINATION. A person applying to take a journeyman plumber-restricted service license examination shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR EXAMINATION. A person applying for a journeyman plumber-restricted service license examination shall have met all of the following:

(a) Completed one continuous year of plumbing-related work experience consisting of not less than 1,000 hours.

(b) Received shop training and instruction in at least the following:

1. Forty hours of plumbing code, chs. SPS 381 to 387.

2. Twenty hours of blueprint or blueline reading.
3. Ten hours of transit or builder's level.
4. Twenty hours of plumbing-related mathematics.
5. Ten hours of first aid and safety.

(4) **EXAMINATION.** Except as provided in sub. (1) (b), a person seeking to obtain a journeyman plumber-restricted service license shall take and pass an examination in accordance with s. SPS 305.09.

(5) **APPLICATION FOR LICENSE.** (a) Upon notification of the successful passage of the examination for a journeyman plumber-restricted license, a person may obtain the license by submitting an application and the license fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(b) A person may apply for a license as a journeyman plumber-restricted service by submitting an application, an application fee, and a license fee in accordance with ss. SPS 305.01 and 305.02.

(6) **RENEWAL.** (a) 1. A person may renew his or her license as a journeyman plumber-restricted service.

2. A journeyman plumber-restricted service license shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a license as a journeyman plumber-restricted service shall be contingent upon the journeyman plumber obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the license as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a journeyman plumber-restricted service may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (a), (b) (intro.) and (5), Register, April, 2000, No. 532, eff. 5-1-00; corrections in (3) made under s. 13.93 (2m) (b) 7., Stats., Register, April, 2000, No. 532; CR 03-075: r. and recr. (3) Register June 2004 No. 582, eff. 8-1-04; CR 06-031: renun. (6) (b) 1. to be 1. a. and am., cr. (6) (b) 1. b. Register October 2006 No. 610, eff. 11-1-06; CR 11-020: r. (6) (b) 1. a., renun. (6) (b) 1. b. to be (6) (b) 1. and amend. Register December 2011 No. 672, eff. 1-1-12; correction in (1) (a) 1., 2., (2) (a), (b), (3) (a) 2. a., (b) 2. a., (4), (5) (a), (b) 1., (6) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (title), renun. (1) (a) 1. to (1) (a), r. (1) (a) 2., renun. (1) (b) (intro.) to (1) (b) and am., r. (1) (b) 1., 2., am. (2) (intro.), renun. (3) (a) to (3) (intro.), r. (3) (b), renun. (3) (a) 1., 2. to (3) (a), (b) and am. (a), am. (4), renun. (5) (b) (intro.) to (5) (b) and am., r. (5) (b) 1., 2., am. (6) Register August 2014 No. 704, eff. 9-1-14; CR 23-006: am. (1), (3) (a), (5) (b) Register September 2023 No. 813, eff. 10-1-23.

SPS 305.945 Journeyman plumbers-restricted appliance. (1) **GENERAL.** The plumbing activities as delineated under s. SPS 305.90 (1) (b) 3. that may be undertaken by a person who holds a license as a journeyman plumber-restricted appliance shall be performed under the general supervision of a person who is a licensed master plumber or a licensed master plumber-restricted appliance.

(2) **QUALIFICATIONS FOR LICENSURE.** A person applying for a journeyman plumber-restricted appliance license shall complete all of the following:

(a) At least 1,000 hours of plumbing-related work experience as a registered learner-restricted appliance.

(b) Shop training and instruction in at least all of the following:

1. Plumbing code, chs. SPS 381 to 387.
2. Blueprint or blueline reading.
3. Appliance and equipment servicing.

(c) Successful passage of an examination administered by the department or an examination approved by the department in accordance with subs. (3) and (4).

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(3) **EXAMINATION.** A person seeking to obtain a journeyman plumber-restricted appliance license shall take and pass an examination administered by the department, as provided in s. SPS 305.09, or an examination approved by the department and deemed to be equivalent to the department administered examination. Examination providers shall receive written approval from the department prior to administering a journeyman plumber-restricted appliance license examination.

(4) **EXAMINATION APPROVAL.** (a) Examination providers seeking department approval of a journeyman plumber-restricted appliance license examination shall submit to the department all of the following:

1. All exam items in the exam item bank.
2. An example of an exam score report.
3. An example test form or forms.
4. An exam content outline clearly indicating exam topic areas.

(b) A journeyman plumber-restricted appliance license examination approved by the department shall be determined by the department to have examination content equivalent to the examination content of the journeyman plumbers-restricted appliance exam administered by the department. The department may conduct an examination site inspection during an exam administration to ensure compliance with general test industry standards. The department may revoke the approval status of any examination.

(c) A score determined by the department to represent minimum competence to practice is required to pass each examination.

(d) Providers of approved journeyman plumber restricted-appliance license examinations shall provide exam applicants with the results of the examination in writing within 21 days of the examination date.

(e) 1. Providers of approved journeyman plumber restricted-appliance license examinations shall maintain examination records of those individuals who completed the examination for at least 5 years from the date of the examination and must make the records available to the department and to individual exam candidates upon request.

2. The attendance record for each exam candidate shall include all of the following:

- a. The date the examination was held.
- b. The name of the exam candidate.
- c. The exam score and results indicating the pass or fail status of the exam candidate.
- d. The name and address of the exam provider.

(f) Providers of approved journeyman plumber restricted-appliance license examinations shall notify the department of changes to the examination content outline, newly developed items in the exam item bank, and any other changes that bring the examination out of compliance with this section.

Note: Additional information regarding exam equivalency is available from the Department of Safety and Professional Services at P.O. Box 8366, Madison, WI 53708-8366 or at the Department Web site: <http://dsps.wi.gov/Home>.

(5) **APPLICATION FOR LICENSE.** (a) Upon notification of the successful passage of a department administered examination for a journeyman plumber-restricted appliance license a person may apply for a license as a journeyman plumber-restricted appliance by submitting all of the following:

1. An application in accordance with ss. SPS 305.01 and SPS 305.09 (7) (c).
2. An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

3. Proof of satisfactory completion of the qualifications for licensure under sub. (2).

(b) Upon notification of the successful passage of an examination approved by the department for a journeyman plumber-restricted appliance license a person may apply for a license as a journeyman plumber-restricted appliance within 3 months after the date that notice of exam results is released by the exam provider to the candidate. Failure to apply for a journeyman plumber-restricted appliance license within 3 months, shall necessitate the applicant to apply, retake, and pass another license examination in order to obtain the journeyman plumber restricted appliance license. A person may apply for a journeyman plumber-restricted appliance license by submitting all of the following:

1. An application in accordance with s. SPS 305.01.
2. An application fee in accordance with s. SPS 305.02, Table 305.02.
3. Proof of satisfactory completion of the qualifications for licensure under sub. (2).

(6) RENEWAL. (a) 1. A person may renew his or her license as a journeyman plumber-restricted appliance.

2. A journeyman plumber-restricted appliance license shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a license as a journeyman plumber-restricted appliance shall be contingent upon the journeyman plumber obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the license as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a journeyman plumber-restricted appliance may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: CR 14-010: cr. Register August 2014 No. 704, eff. 9-1-14; correction in (4) (title) made under s. 13.92 (4) (b) 2., Stats., Register August 2014; CR 23-006: am. (1), (5) (a) (intro.), (b) (intro.) Register September 2023 No. 813, eff. 10-1-23.

SPS 305.95 Plumbing apprentices. (1) GENERAL. A person who holds a registration as a plumbing apprentice may install or modify plumbing under the general supervision of a person who is a licensed master plumber.

Note: The Department of workforce development, bureau of apprenticeship standards has additional supervision standards for apprentices for the purpose of training and education.

(2) APPLICATION FOR REGISTRATION. A person applying for a plumbing apprentice registration to install plumbing shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and a registration fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS. A person applying for plumbing apprentice registration to install plumbing shall be entered into a plumbing apprentice contract recognized under ch. 106, Stats.

(4) RESPONSIBILITIES. A person who installs or modifies plumbing as a registered plumbing apprentice may do so if he or she is entered into a plumbing apprentice contract recognized under ch. 106, Stats.

(5) RENEWAL. (a) 1. A person may renew his or her registration as a plumbing apprentice.

2. A plumbing apprentice registration to install plumbing shall be renewed in accordance with s. SPS 305.07.

(b) The renewal of a registration as a plumbing apprentice is contingent upon the person submitting evidence that the person is

entered into a plumbing apprentice contract recognized under ch. 106, Stats.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (5) (b), Register, March, 1998, No. 507, eff. 4-1-98; am. (1) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; CR 11-020: am. (3), (4), (5) (b), Register December 2011 No. 672, eff. 1-1-12; correction in (2) (a), (b), (5) (a) 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: am. (1) Register September 2023 No. 813, eff. 10-1-23.

SPS 305.96 Plumbing learners. (1) GENERAL. (a) The plumbing activities that may be undertaken by a person who holds a registration as a learner-restricted service shall be performed under the direct supervision of a person who holds a master plumber license, a master plumber-restricted service license, a journeyman plumber license or a journeyman plumber-restricted service license.

(b) The plumbing activities that may be undertaken by a person who holds a registration as a learner-restricted appliance shall be performed under the direct supervision of a person who holds a master plumber license, a master plumber-restricted appliance license, a journeyman plumber license or a journeyman plumber-restricted appliance license.

(2) APPLICATION FOR REGISTRATION. A person applying for a plumbing learner-restricted service registration or plumbing learner-restricted appliance registration shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and a registration fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR REGISTRATION. A person applying for a plumbing learner-restricted service registration or plumbing learner-restricted appliance registration to install or modify plumbing shall be at least 16 years old and shall have completed the 12th grade in school or its equivalent.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; correction in (2) (a), (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: am. (1) Register September 2023 No. 813, eff. 10-1-23.

SPS 305.97 Utility contractors. (1) GENERAL. A person may obtain a license as a utility contractor by taking and passing the utility contractor license examination.

(2) APPLICATION FOR EXAMINATION. A person applying to take an utility contractor license examination shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR EXAMINATION. The person applying for an utility contractor license examination shall be at least 18 years old.

(4) EXAMINATION. A person seeking to obtain an utility contractor license shall take and pass an examination in accordance with s. SPS 305.09.

(5) APPLICATION FOR LICENSE. Upon notification of the successful passage of the examination for a utility contractor license, a person may obtain the license by submitting an application and a license fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(6) RESPONSIBILITIES. A person who, as a licensed utility contractor, installs or modifies water services; private water mains; building sewers, sanitary; building sewers, storm; or private interceptor main sewers, as defined in ch. SPS 381, from the street main to the immediate inside or proposed inside foundation wall of the building shall utilize the appropriately licensed or registered persons to install or modify the plumbing.

(7) RENEWAL. (a) A person may renew his or her license as a utility contractor.

(b) An utility contractor license shall be renewed in accordance with s. SPS 305.07.

(c) 1. The renewal of a license as a utility contractor shall be contingent upon the utility contractor obtaining at least 6 hours of acceptable continuing education prior to the expiration date of the license as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a utility contractor may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (1), (5) and (6), Register, April, 2000, No. 532, eff. 5-1-00; CR 06-031: cr. (7) (c) Register October 2006 No. 610, eff. 11-1-06; CR 11-020: r. and recr. (1), am. (7) (c) 1., Register December 2011 No. 672, eff. 1-1-12; correction in (2) (a), (b), (4), (5), (7) (b), (c) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (7) (c) 1. Register August 2014 No. 704, eff. 9-1-14; CR 23-006: am. (1), (6) Register September 2023 No. 813, eff. 10-1-23.

SPS 305.98 Pipelayers. (1) GENERAL. Pursuant to s. 145.07 (11), Stats., a person who holds a registration as a pipelayer may install or modify water services; private water mains; building sewers, sanitary; building sewers, storm; or private interceptor main sewers, as defined in ch. SPS 381, from the street main to the immediate inside or proposed inside foundation wall of the building under the general supervision of a licensed utility contractor, licensed master plumber, or a licensed master plumber-restricted service.

(2) APPLICATION FOR REGISTRATION. A person applying for a pipelayer registration to install plumbing shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and a registration fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR REGISTRATION. A person applying for a pipelayer registration to install plumbing shall be at least 18 years old.

(4) RENEWAL. (a) A person may renew his or her registration as a pipelayer.

(b) A pipelayer registration shall be renewed in accordance with s. SPS 305.07.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (2) (a) and (b), Register, March, 1998, No. 507, eff. 4-1-98; am. (1) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; correction in (2) (a), (b), (4) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: am. (1) Register September 2023 No. 813, eff. 10-1-23.

SPS 305.99 Cross connection control assembly testers. (1) GENERAL. Pursuant to s. 145.06 (3m), Stats., no person may conduct a performance test of a cross connection control assembly as required by s. SPS 382.22 (8) unless the person holds a registration issued by the department as a cross connection control assembly tester.

(2) APPLICATION FOR REGISTRATION. A person applying for a cross connection control assembly tester registration shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and a registration fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR REGISTRATION. A person applying for a cross connection control assembly tester registration shall have completed, at a minimum, one of the following:

(am) At least 40 hours in a department approved course or courses in the theory of cross connection control, the operation,

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testing and maintenance of cross connection control assemblies, and the national standards for these cross connection control assemblies.

(bm) An ASSE approved course meeting standard ASSE 5150.

(4) RESPONSIBILITIES. A person who, as a registered cross connection control assembly tester, conducts performance tests of cross connection control assemblies shall be responsible for all of the following

(a) Maintaining a record of each cross connection control assembly performance test conducted, including the date and the result of the test, for at least 2 years.

(b) Making available to the department upon request his or her performance test records.

(c) Following all procedures established by the department for conducting performance tests and filing the results.

(5) RENEWAL. (a) A person may renew his or her registration as a cross connection control assembly tester.

(b) A cross connection control assembly tester registration shall be renewed in accordance with s. SPS 305.07.

(c) 1. The renewal of a certification as a cross connection control assembly tester shall be contingent upon the cross connection control assembly tester obtaining at least 6 hours of approved continuing education prior to the expiration date of the certification as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a certification as a cross connection control assembly tester may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. The department shall consider each application for waiver individually on its merits.

History: Cr. Register, October, 1996, No. 490, eff. 11-1-96; am. (3) (b) to (e), cr. (3) (f), Register, February, 1997, No. 494, eff. 3-1-97; am. (1) and (2) (b), Register, April, 2000, No. 532, eff. 5-1-00; CR 03-075: am. (3) (intro.) Register June 2004 No. 582, eff. 8-1-04; correction in (1) made under s. 13.92 (4) (b) 7., Stats., Register May 2009 No. 641; CR 09-050: am. (1) and (3), renum. (4) to be (5), cr. (4) Register December 2009 No. 648, eff. 1-1-10; CR 10-064: cr. (5) (c) Register December 2010 No. 660, eff. 1-1-11; correction in (1), (2) (a), (b), (5) (b), (c) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (5) (c) 1. Register August 2014 No. 704, eff. 9-1-14; CR 23-006: am. (title), (1), (2) (intro.), (3) (intro.), r. (3) (a) to (f), cr. (3) (am), (bm), am. (4) (intro.), (5) Register September 2023 No. 813, eff. 10-1-23.

Subchapter X — Conveyances

SPS 305.9905 Elevator contractor. (1) GENERAL. (a) Pursuant to s. 101.984 (1), Stats., no person or entity, as of June 1, 2008, may engage in the business or offer to engage in the business of constructing, installing, altering, servicing, replacing or maintaining conveyances unless the person or entity holds a license issued by the department as a licensed elevator contractor, except as provided under par. (b).

(b) A person, entity or business is not required to hold a license as a licensed elevator contractor to service or maintain existing conveyances within facilities or properties owned by the person, entity or business.

(2) APPLICATION FOR LICENSE. A person applying for an elevator contractor license shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and a license fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR LICENSE. (a) A person applying for an elevator contractor license shall provide all of the following:

1. A statement certifying that the person complies with the worker's compensation requirements under ch. 102, Stats.

2. Evidence of compliance with the liability insurance requirements as specified under s. 101.985 (1), Stats.

(b) The person applying for an elevator contractor license shall be the owner of the contracting business, a partner in the contracting business applying on behalf of a partnership, or the chairman of the board or chief executive officer applying on behalf of the contracting corporation.

(4) RESPONSIBILITIES. (a) A licensed elevator contractor shall be responsible for the contractor's work on conveyances with respect to compliance to ch. SPS 318.

(b) A licensed elevator contractor shall utilize the appropriately licensed or registered individuals to construct, install, alter, service, replace or maintain conveyances.

(c) For any construction, installation, alteration, repair or replacement of a conveyance or conveyance component that requires a permit under s. SPS 318.1007, a licensed elevator contractor may not commence the work until a permit is issued for the project.

(d) A licensed elevator contractor shall maintain their liability insurance as specified under s. 101.985 (1), Stats.

(5) RENEWAL. (a) 1. A person may renew his or her elevator contractor license.

2. An elevator contractor license shall be renewed in accordance with s. SPS 305.07.

(b) The renewal of a license as an elevator contractor shall be contingent upon the department's review of the applicant's criminal history record from the department of justice.

History: CR 07-089: cr. Register June 2008 No. 630, eff. 7-1-08, except (1) eff. 1-1-09; renumber from Comm 5.990 made under s. 13.92 (4) (b) 1., Stats., Register June 2008 No. 630; correction in (4) (c) made under s. 13.92 (4) (b) 7., Stats., Register June 2008 No. 630; CR 08-110: cr. (4) (e) Register September 2009 No. 645, eff. 10-1-09; correction in (2) (a), (b), (4) (a), (c), (e), (5) (a) 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 19-118: r. (3) (e) Register May 2020 No. 773, eff. 6-1-20.

SPS 305.991 Elevator installers. (1) GENERAL. (a) Except as specified in sub. (2), no person may erect, construct, alter, replace, maintain, repair, test, remove, or dismantle conveyances unless the person holds a license or registration issued by the department as one of the following:

1. A licensed elevator mechanic.
2. A licensed elevator mechanic-restricted.
3. A registered elevator apprentice.
4. A registered elevator apprentice-restricted.
5. A registered elevator helper.
6. A licensed lift mechanic.
7. A registered lift apprentice.
8. A registered lift helper.

(b) The activities under par. (a) (intro.) that may be undertaken by a person who holds a license or registration as a licensed elevator mechanic-restricted or a registered elevator apprentice-restricted shall be limited to the repair and maintenance of conveyances and the replacement of conveyance components and subsystems except the replacement of hoist ropes and governor ropes.

(c) The activities under par. (a) (intro.) that may be undertaken by a person who holds a license or registration as a licensed lift mechanic, a registered lift apprentice, or a registered lift helper shall be limited to the erection, construction, alteration, replacement, maintenance, repair, testing, removal, or dismantling of conveyances covered under ASME A18.1 and ASME A17.1 sections 5.2, 5.3, 5.4, 7.1, 7.2, 7.3 and 7.8.

(2) EXCEPTIONS. (a) *Removal or dismantling of conveyances.* The requirements under sub. (1) do not apply to the re-

moval or dismantling of conveyances as addressed under s. 101.984 (2) (c) 1., Stats.

(b) *Maintenance or repair of conveyances.* The requirements under sub. (1) do not apply to maintenance or repair activities that do not affect the operation of the conveyance including any of the following:

1. Changes to the interior finishes of a conveyance that do not significantly affect the dead load of the conveyance.
2. Changing lamps for conveyance illumination.

History: CR 07-089: cr. Register June 2008 No. 630, eff. 1-1-09; CR 08-030: am. (1) (c) Register December 2008 No. 636, eff. 1-1-09; CR 19-118: am. (1) (a) (intro.), (c) Register May 2020 No. 773, eff. 6-1-20.

SPS 305.992 Elevator mechanic. (1) GENERAL. A person may obtain a license as a licensed elevator mechanic by one of the following methods:

(a) Taking and passing the elevator mechanic license examination.

(b) Completing an elevator apprenticeship program lasting at least 4 years and recognized under ch. 106, Stats., or recognized by the U.S. department of labor.

(c) Completing a 4-year training program established by the national elevator industry educational program or department approved equivalent and having one of the following employment experiences:

1. Having been employed for at least 1,000 hours per year for 5 years immediately preceding the date of license application and the employment in each of the years involves any of the following:

- a. Management activities for a company that engages in the sale, installation, repair, or maintenance of conveyances.
- b. Supervision of elevator mechanic activities.
- c. Conveyance labor relations.

2. Having been employed for at least 1,000 hours per year for 5 years preceding the date of license application and the employment includes elevator mechanic level work experience in each year of the 5 years.

(2) APPLICATION FOR EXAMINATION. A person applying to take an elevator mechanic license examination shall submit all of the following:

- (a) An application in accordance with s. SPS 305.01.
- (b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR EXAMINATION. A person applying for an elevator mechanic license examination shall have been employed for at least 1,000 hours per year for 5 consecutive years immediately preceding the date of application and the employment includes elevator mechanic level work experience in each year of the 5 years.

(4) APPLICATION FOR LICENSE. (a) Upon notification of the successful passage of the examination for an elevator mechanic license, a person may obtain the license by submitting an application and the license fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(b) A person may apply for a license as a licensed elevator mechanic by submitting all of the following:

1. An application, application fee and a license fee in accordance with ss. SPS 305.01 and 305.02, Table 305.02.
2. The appropriate evidence documenting eligibility under sub. (1) (b) or (c).

(5) RESPONSIBILITIES. A person, who as a licensed elevator mechanic provides supervision of a registered elevator apprentice, a registered elevator apprentice-restricted, a registered eleva-

tor helper, a registered lift apprentice or a registered lift helper, shall be responsible for the work of the apprentice or helper with respect to compliance to ch. SPS 318.

(6) RENEWAL. (a) 1. A person may renew his or her license as an elevator mechanic.

2. An elevator mechanic license shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a license as an elevator mechanic shall be contingent upon the elevator mechanic obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the license as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as an elevator mechanic may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

3. A person, who initially obtained his or her elevator mechanic license by completing an elevator apprenticeship and whose request to renew his or her license is denied because of failure to fulfill the continuing education requirements of subd. 1., shall be required to take and pass the elevator mechanic examination in order to reacquire the elevator mechanic license.

(c) The renewal of a license as an elevator mechanic shall be contingent upon the department's review of the applicant's criminal history record from the department of justice.

History: CR 07-089: cr. Register June 2008 No. 630, eff. 7-1-08; correction in (2) (a), (b), (4) (a), (b) 1., (5), (6) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 13-014: r. and recr. (1) (c) Register September 2013 No. 693, eff. 10-1-13; CR 14-010: am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14.

SPS 305.993 Elevator mechanic-restricted. (1)

GENERAL. A person may obtain a license as a licensed elevator mechanic-restricted by one of the following methods:

(a) Taking and passing the elevator mechanic-restricted license examination.

(b) Completing an elevator maintenance apprenticeship program lasting at least 2 years and recognized under ch. 106, Stats., or recognized by the U.S. department of labor.

(2) APPLICATION FOR EXAMINATION. A person applying to take an elevator-restricted mechanic license examination shall submit all of the following:

(a) An application in accordance with s. SPS 305.01.

(b) An application fee and examination fee in accordance with s. SPS 305.02, Table 305.02.

(3) QUALIFICATIONS FOR EXAMINATION. A person applying for an elevator mechanic-restricted license examination shall have been employed for at least 1,000 hours per year for 3 consecutive years immediately preceding the date of application and the employment includes elevator mechanic-restricted level work experience in each year of the 3 years.

(4) APPLICATION FOR LICENSE. (a) Upon notification of the successful passage of the examination for an elevator mechanic-restricted license, a person may obtain the license by submitting an application and the license fee in accordance with ss. SPS 305.01 and 305.09 (7) (c).

(b) A person may apply for a license as a licensed elevator mechanic-restricted by submitting all of the following:

1. An application, application fee and a license fee in accordance with ss. SPS 305.01 and 305.02, Table 305.02.

2. The appropriate evidence documenting eligibility under sub. (1) (b).

(5) RESPONSIBILITIES. A person, who as a licensed elevator mechanic-restricted provides supervision of a registered elevator apprentice, a registered elevator apprentice-restricted, a registered elevator helper, a registered lift apprentice or a registered lift helper, shall be responsible for the work of the apprentice or helper with respect to compliance to ch. SPS 318.

(6) RENEWAL. (a) 1. A person may renew his or her license as an elevator mechanic-restricted.

2. An elevator mechanic-restricted license shall be renewed in accordance with s. SPS 305.07.

(b) 1. The renewal of a license as an elevator mechanic-restricted shall be contingent upon the elevator mechanic obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the license as specified in s. SPS 305.08 and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as an elevator mechanic-restricted may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

3. A person, who initially obtained his or her elevator mechanic-restricted license by completing a elevator maintenance apprenticeship and whose request to renew his or her license is denied because of failure to fulfill the continuing education requirements of subd. 1., shall be required to take and pass the elevator mechanic-restricted examination in order to reacquire the elevator mechanic-restricted license.

(c) The renewal of a license as an elevator mechanic-restricted shall be contingent upon the department's review of the applicant's criminal history record from the department of justice.

History: CR 07-089: cr. Register June 2008 No. 630, eff. 7-1-08; correction in (2) (a), (b), (4) (a), (b) 1., (5), (6) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 13-014: r. (1) (c) Register September 2013 No. 693, eff. 10-1-13; correction in (4) (b) 2. made under s. 13.92 (4) (b) 7., Stats., Register September 2013 No. 693; CR 14-010: am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14.

SPS 305.994 Elevator apprentice. (1) GENERAL.

(a) The activities of an individual, who holds a registration issued by the department as a registered elevator apprentice to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances, shall be performed under the general supervision of a person who is a licensed elevator mechanic, except as provided in par. (b).

(b) 1. The activities of an individual, who holds a registration issued by the department as a registered elevator apprentice to maintain and repair conveyances and to replace conveyance components and subsystems, except the replacement of hoist ropes and governor ropes, shall be performed under the general supervision of a person who is a licensed elevator mechanic or a licensed elevator mechanic-restricted.

2. The activities of an individual, who holds a registration issued by the department as a registered elevator apprentice to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances covered under ASME A18.1 and ASME A17.1 section 5.2, shall be performed under the general supervision of a person who is a licensed elevator mechanic or lift mechanic.

Note: The Department of workforce development, bureau of apprenticeship standards may have additional supervision standards for apprentices for the purpose of training and education.

(2) APPLICATION FOR REGISTRATION. A person applying for an elevator apprentice registration to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances shall submit all of the following:

- (a) An application in accordance with s. [SPS 305.01](#).
- (b) An application fee and a registration fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) QUALIFICATIONS. A person applying for an elevator apprentice registration to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances shall be entered into an elevator apprentice contract recognized under ch. 106, Stats., or by the U.S. department of labor.

(4) RESPONSIBILITIES. A person who erects, constructs, alters, replaces, maintains, repairs, removes or dismantles conveyances as a registered elevator apprentice may do so if he or she is entered into an elevator apprentice contract recognized under ch. 106, Stats., or the U.S. department of labor.

(5) RENEWAL. (a) 1. A person may renew his or her registration as an elevator apprentice.

2. An elevator apprentice registration to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances shall be renewed in accordance with s. [SPS 305.07](#).

(b) The renewal of a registration as an elevator apprentice is contingent upon the person submitting evidence that the person is entered into an elevator apprentice contract program recognized under ch. 106, Stats., or by the U.S. department of labor.

History: CR 07-089: cr. Register June 2008 No. 630, eff. 7-1-08; CR 11-020: am. (3), (4), (5) (b), Register December 2011 No. 672, eff. 1-1-12; correction in (2) (a), (b), (5) (a) 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.995 Elevator apprentice-restricted. (1)

GENERAL. (a) The activities of an individual, who holds a registration issued by the department as a registered elevator apprentice-restricted to maintain and repair conveyances and replace conveyance components and subsystems, except the replacement of hoist ropes and governor ropes, shall be performed under the general supervision of a person who is a licensed elevator mechanic or licensed elevator mechanic-restricted, except as provided in par. (b).

(b) The activities of an individual, who holds a registration issued by the department as a registered elevator apprentice-restricted to maintain and repair conveyances covered under ASME A18.1 and ASME A17.1 section 5.2, shall be performed under the general supervision of a person who is a licensed elevator mechanic, a licensed elevator mechanic-restricted, or a licensed lift mechanic.

Note: The Department of workforce development, bureau of apprenticeship standards may have additional supervision standards for apprentices for the purpose of training and education.

(2) APPLICATION FOR REGISTRATION. A person applying for an elevator apprentice-restricted registration to maintain or repair conveyances or replace conveyance components or subsystems, except the replacement of hoist ropes and governor ropes, shall submit all of the following:

- (a) An application in accordance with s. [SPS 305.01](#).
- (b) An application fee and a registration fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) QUALIFICATIONS. A person applying for an elevator apprentice-restricted registration to maintain or repair conveyances or replace conveyance components or subsystems, except the replacement of hoist ropes and governor ropes, shall be entered into an elevator apprentice contract recognized under ch. 106, Stats., or by the U.S. department of labor.

(4) RESPONSIBILITIES. A person who maintains or repairs conveyances or replaces conveyance components or subsystems, except the replacement of hoist ropes and governor ropes, as a registered elevator apprentice-restricted may do so if he or she is

entered into an elevator apprentice contract recognized under ch. 106, Stats., or the U.S. department of labor.

(5) RENEWAL. (a) 1. A person may renew his or her registration as an elevator apprentice-restricted.

2. An elevator apprentice-restricted registration to maintain or repair conveyances or replace conveyance components or subsystems, except the replacement of hoist ropes and governor ropes, shall be renewed in accordance with s. [SPS 305.07](#).

(b) The renewal of a registration as an elevator apprentice-restricted is contingent upon the person submitting evidence that the person is entered into an elevator apprentice contract recognized under ch. 106, Stats., or by the U.S. department of labor.

History: CR 07-089: cr. Register June 2008 No. 630, eff. 7-1-08; CR 11-020: am. (3), (4), (5) (b), Register December 2011 No. 672, eff. 1-1-12; correction in (2) (a), (b), (5) (a) 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.996 Elevator helpers. (1) GENERAL.

(a) Pursuant to s. 101.984 (2), Stats., the activities of an individual, who holds a registration as a registered elevator helper to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances, shall be performed under the direct supervision of a licensed elevator mechanic, except as provided in par. (b).

(b) 1. The activities of an individual, who holds a registration as a registered elevator helper to maintain and repair conveyances and to replace conveyance components and subsystems, shall be performed under the general supervision of a person who is a licensed elevator mechanic or a licensed elevator mechanic-restricted.

2. The activities of an individual, who holds a registration issued by the department as a registered elevator helper to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances covered under ASME A18.1 and ASME A17.1 section 5.2, shall be performed under the general supervision of a person who is a licensed elevator mechanic or lift mechanic.

(2) APPLICATION FOR REGISTRATION. A person applying for an elevator helper registration to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances shall submit all of the following:

- (a) An application in accordance with s. [SPS 305.01](#).
- (b) An application fee and a registration fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) QUALIFICATIONS FOR REGISTRATION. A person applying for an elevator helper registration to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances shall be at least 18 years old.

(4) RENEWAL. (a) A person may renew his or her registration as an elevator helper.

(b) An elevator helper registration shall be renewed in accordance with s. [SPS 305.07](#).

History: CR 07-089: cr. Register June 2008 No. 630, eff. 7-1-08; correction in (2) (a), (b), (4) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.997 Lift mechanic. (1) GENERAL. A person may obtain a license as a licensed lift mechanic by one of the following methods:

- (a) Taking and passing the lift mechanic license examination.
- (b) Completing a lift apprenticeship program lasting at least 2 years and recognized under ch. 106, Stats., or recognized by the U.S. department of labor.
- (c) 1. Having been employed for at least 1,000 hours per year for 3 years preceding the date of application and employment includes lift mechanic level work experience in each year of the 3 years.

2. This paragraph does not apply 2 years after July 1, 2008.

(2) **APPLICATION FOR EXAMINATION.** A person applying to take a lift mechanic license examination shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and examination fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) **QUALIFICATIONS FOR EXAMINATION.** A person applying for a lift mechanic license examination shall have been employed for at least 1,000 hours per year for 3 consecutive years immediately preceding the date of application and the employment includes lift mechanic level work experience in each year of the 3 years.

(4) **APPLICATION FOR LICENSE.** (a) Upon notification of the successful passage of the examination for a lift mechanic license, a person may obtain the license by submitting an application and the license fee in accordance with ss. [SPS 305.01](#) and [305.09](#) (7) (c).

(b) A person may apply for a license as a licensed lift mechanic by submitting all of the following:

1. An application, application fee and a license fee in accordance with ss. [SPS 305.01](#) and [305.02](#), Table 305.02.

2. The appropriate evidence documenting eligibility under sub. (1) (b) or (c).

(5) **RESPONSIBILITIES.** A person who as a licensed lift mechanic provides supervision of a registered lift apprentice or a registered lift helper shall be responsible for the work of the apprentice or helper with to respect to compliance to ch. [SPS 318](#).

(6) **RENEWAL.** (a) 1. A person may renew his or her license as a lift mechanic.

2. A lift mechanic license shall be renewed in accordance with s. [SPS 305.07](#).

(b) 1. The renewal of a license as a lift mechanic shall be contingent upon the lift mechanic obtaining at least 12 hours of acceptable continuing education prior to the expiration date of the license as specified in s. [SPS 305.08](#) and Table 305.06, except as provided in subd. 2.

2. A person who holds a license as a lift mechanic may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. Each application for waiver shall be considered individually on its merits by the department.

3. A person, who initially obtained his or her lift mechanic license by completing a lift apprenticeship and whose request to renew his or her license is denied because of failure to fulfill the continuing education requirements of subd. 1., shall be required to take and pass the lift mechanic examination in order to reacquire the lift mechanic license.

(c) The renewal of a license as a lift mechanic-restricted shall be contingent upon the department's review of the applicant's criminal history record from the department of justice.

History: CR 07-089: cr. Register June 2008 No. 630, eff. 7-1-08; correction in (2) (a), (b), (4) (a), (b) 1., (5), (6) (a) 2., (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-010: am. (6) (b) 1. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: am. (6) (c) Register May 2020 No. 773, eff. 6-1-20.

SPS 305.998 Lift apprentice. (1) **GENERAL.** (a) The activities of an individual, who holds a registration issued by the department as a registered lift apprentice to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances as described under s. [SPS 305.991](#), shall be performed under the general supervision of a person who is a licensed lift mechanic or a licensed elevator mechanic, except as provided in par. (b).

(b) The activities of an individual, who holds a registration issued by the department as a registered lift apprentice to maintain

and repair conveyances under the scope of ASME A18.1 and ASME A17.1 sections 5.2, 5.3, 5.4, 7.1, 7.2, 7.3 and 7.8, shall be performed under the general supervision of a person who is a licensed lift mechanic, a licensed elevator mechanic or a licensed elevator mechanic-restricted.

Note: The department of workforce development, bureau of apprenticeship standards may have additional supervision standards for apprentices for the purpose of training and education.

(2) **APPLICATION FOR REGISTRATION.** A person applying for a lift apprentice registration to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and a registration fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) **QUALIFICATIONS.** A person applying for a lift apprentice registration to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances shall be entered into an elevator apprentice contract recognized under ch. 106, Stats., or by the U.S. department of labor.

(4) **RESPONSIBILITIES.** A person who erects, constructs, alters, replaces, maintains, repairs, removes or dismantles conveyances as a registered lift apprentice may do so if he or she is entered into an elevator apprentice contract recognized under ch. 106, Stats., or the U.S. department of labor.

(5) **RENEWAL.** (a) 1. A person may renew his or her registration as a lift apprentice.

2. A lift apprentice registration to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances shall be renewed in accordance with s. [SPS 305.07](#).

(b) The renewal of a registration as a lift apprentice is contingent upon the person submitting evidence that the person is entered into an elevator apprentice contract recognized under ch. 106, Stats., or by the U.S. department of labor.

History: CR 07-089: cr. Register June 2008 No. 630, eff. 7-1-08; CR 08-030: am. (1) (b) Register December 2008 No. 636, eff. 1-1-09; CR 11-020: am. (3), (4), (5) (b), Register December 2011 No. 672, eff. 1-1-12; correction in (1) (a), (2) (a), (b), (5) (a) 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 305.999 Lift helpers. (1) **GENERAL.** (a) Pursuant to s. 101.984 (2), Stats., the activities of an individual, who holds a registration as a registered lift helper to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances as described under s. [SPS 305.991](#), shall be performed under the general supervision of a person who is a licensed lift mechanic or a licensed elevator mechanic, except as provided in par. (b).

(b) The activities of an individual, who holds a registration issued by the department as a registered lift helper to maintain and repair conveyances under the scope of ASME A18.1 and ASME A17.1 sections 5.2, 5.3, 5.4, 7.1, 7.2, 7.3, and 7.8, shall be performed under the general supervision of a person who is a licensed lift mechanic, a licensed elevator mechanic or a licensed elevator mechanic-restricted.

(2) **APPLICATION FOR REGISTRATION.** A person applying for a lift helper registration to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances shall submit all of the following:

(a) An application in accordance with s. [SPS 305.01](#).

(b) An application fee and a registration fee in accordance with s. [SPS 305.02](#), Table 305.02.

(3) **QUALIFICATIONS FOR REGISTRATION.** A person applying for a lift helper registration to erect, construct, alter, replace, maintain, repair, remove or dismantle conveyances shall be at least 18 years old.

(4) RENEWAL. (a) A person may renew his or her registration as a lift helper. (a), (b), (4) (b) made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register December 2011 No. 672.](#)

(b) A lift helper registration shall be renewed in accordance with s. [SPS 305.07](#).

History: CR 07-089: cr. [Register June 2008 No. 630](#), eff. 7-1-08; CR 08-030: am. (1) (b) [Register December 2008 No. 636](#), eff. 1-1-09; correction in (1) (a), (2)

Chapter SPS 316

ELECTRICAL

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Note: Chapter ILHR 16 as it existed on October 31, 1984 was repealed and a new chapter ILHR 16 was created effective November 1, 1984; Chapter ILHR 16 as it existed on February 29, 1988 was repealed and a new chapter ILHR 16 was created effective March 1, 1988; Chapter ILHR 16 as it existed on October 31, 1990, was repealed and a new chapter ILHR 16 was created effective November 1, 1990. Chapter ILHR 16 was renumbered chapter Comm 16 under s. 13.93 (2m) (b) 1., Stats., and corrections made under s. 13.93 (2m) (b) 7., Stats., [Register, August, 1996, No. 488](#). Chapter Comm 16 was renumbered chapter SPS 316 under s. 13.92 (4) (b) 1., Stats., [Register December 2011 No. 672](#).

Note: Chapter Comm 17 was repealed effective October 1, 1999. Sections Comm 16.60 to 16.67 were created to replace ch. Comm 17.

Note: Subchapter III of Ch. Comm 16 (sections Comm 16.15 through 16.52) as it existed on February 28, 2009 was repealed and a new subchapter III was created effective March 1, 2009.

Subchapter I — Purpose, Scope, and Application

SPS 316.001 Purpose. (1) PRACTICAL SAFEGUARDING. Pursuant to ss. 101.02 (1), 101.63 (1), 101.73 (1), and 101.82 (1), Stats., the purpose of this chapter is the practical safeguarding of persons and property from hazards arising from the installation and use of electricity.

Note: Hazards often occur because of overloading of wiring systems by methods or usage not in conformity with this chapter. This occurs because initial wiring did not provide for increases in the use of electricity. An adequate initial installation and reasonable provisions for system changes will provide for future increases in the use of electricity.

(2) CODE INTENTION. This chapter is not intended as a design specification or as an instruction manual for untrained persons.

Note: The Wisconsin state electrical code is issued and administered by the department and by the public service commission in 2 chapters of the Wisconsin administrative code. The department has the responsibility for issuance and administration of this chapter, and the public service commission has the responsibility for issuance and administration of ch. PSC 114.

History: Cr. [Register, October, 1990, No. 418](#), eff. 11-1-90; CR 08-047: renum. from Comm 16.01 and am. (2) [Register February 2009 No. 638](#), eff. 3-1-09; correction in (1) made under s. 13.92 (4) (b) 7., Stats., [Register February 2009 No. 638](#).

SPS 316.002 Scope. (1) GENERAL. Except as provided in sub. (2), this chapter applies to electrical wiring installations.

(2) EXCLUSIONS. This chapter does not cover any of the following electrical wiring installations:

(a) Installations in ships, watercraft other than floating buildings, railway rolling stock, aircraft, or automotive vehicles other than mobile homes and recreational vehicles.

(b) Installations for generation, transformation, or distribution of power used exclusively by railways for signaling and communication purposes.

(c) Installations of communication equipment under exclusive control of communication utilities, located outdoors or in building spaces used exclusively for such installations.

(d) Installations in manufactured homes, other than electrical wiring alterations in existing manufactured homes.

(e) Installations under the exclusive control of an electric utility, or an electric cooperative where such installations meet any of the following situations:

1. Consist of service drops or service laterals, and associated metering.

2. Are located in legally established easements or right-of-ways designated by public service commissions, utility commissions, or other regulatory agencies having jurisdiction for such installations.

3. Are on property owned or leased by the electric utility for the purpose of communications, metering, generation, control, transformation, transmission, storage, or distribution of electric energy.

(f) Installations for the purpose of street or area lighting owned and under exclusive control of electrical utilities or municipalities where located outdoors on property owned or leased by the utility; on or along public highways, streets, roads, or similar public thoroughfares; or outdoors on private property by estab-

lished rights such as easements shall comply with this chapter or ch. PSC 114.

History: Cr. Register, October, 1990, No. 418, eff. 11-1-90; am. (1) (b) and (c), Register, March, 1994, No. 459, eff. 4-1-94; cr. (1) (e), r. and recr. (2) (d), (e), Register, August, 1996, No. 488, eff. 9-1-96; cr. (1) (f), Register, September, 1999, No. 525, eff. 10-1-99; CR 02-072: am. (2) (e) Register April 2003 No. 568, eff. 5-1-03; CR 08-047: renum. from Comm 16.02 Register February 2009 No. 638, eff. 3-1-09; CR 16-093: r. and recr. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.003 Application. (1) TYPES OF INSTALLATIONS. The provisions of this chapter apply to all new installations, reconstructions, alterations and extensions.

(2) TESTING. Rooms which are used exclusively for routine or special electrical test work and are under the supervision of a qualified person, shall comply with this chapter where practicable for the character of the testing done.

(3) EXISTING INSTALLATIONS. Existing electrical installations shall conform to the electrical code that applied when the installations were installed. An existing electrical installation may be required to be brought into compliance with the current code's requirements by the department and within the time period determined by the department when a hazard to life, health or property exists or is created by the installation.

(4) REPAIRS. Repairs to electrical installations shall conform to the electrical code that applied when the installations were installed. A repair may be required to be brought into compliance with the current code's requirements by the department and within the time period determined by the department when a hazard to life, health or property exists or is created by the repair.

(5) DIFFERING RULES. (a) Where any department rule in this chapter differs from a requirement within a standard referenced in this chapter, the department rule shall govern.

(b) Where a provision of this chapter prescribes a general requirement and another provision of this chapter prescribes a specific or more detailed requirement regarding the same subject, the specific or more detailed requirement shall govern, except as provided in par. (a).

(c) Where different sections of this chapter specify conflicting requirements, the most restrictive requirement, as determined by the department, shall govern, except as provided in pars. (a) and (b).

(6) ADDITIONS AND ALTERATIONS. Additions and alterations to electrical systems covered by this chapter shall comply with all provisions of this chapter at the time of permit application or, if no permit is required, the beginning of the project.

Note: This chapter does not nullify any exclusions specified in the standards adopted under s. SPS 316.007.

History: Cr. Register, October, 1990, No. 418, eff. 11-1-90; CR 02-072: r. and recr. (3), cr. (4) Register April 2003 No. 568, eff. 5-1-03; CR 08-047: renum. from Comm 16.03 Register February 2009 No. 638, eff. 3-1-09; CR 13-042: am. (title), cr. (5) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: cr. (6) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.004 Department authority. Under s. 101.02 (1), Stats., the department reserves the right to interpret the requirements in this chapter and in all adopted codes and standards. Any interpretation under this section shall supersede any differing interpretation by either a lower level jurisdiction or an issuer of the adopted code or standard.

Note: Section 101.86, Stats., prohibits municipalities from enacting rules that are more restrictive than this chapter. Section 101.86 (1) (a), Stats., provides a municipality may "[e]nact an electrical code or otherwise exercise jurisdiction over electrical wiring and inspection of electrical wiring by enactment of ordinances, provided that the electrical code or ordinance strictly conforms with the state electrical wiring code promulgated by the department under s. 101.82 (1). A county ordinance shall apply in any city, village or town which has not enacted such an ordinance."

History: Cr. Register, October, 1990, No. 418, eff. 11-1-90; am. (1), Register, August, 1996, No. 488, eff. 9-1-96; am. (2) and r. (3), Register, September, 1999, No. 525, eff. 10-1-99; CR 08-047: renum. from Comm 16.04 Register February 2009 No. 638, eff. 3-1-09; corrections made under s. 13.92 (4) (b) 7., Stats., Register

February 2009 No. 638; correction in (1), (2) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 13-042: am. (1) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: r. and recr. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.005 Petition for variance. The department shall consider and may grant a variance to a provision of this chapter in accordance with ch. SPS 303. The petition for variance shall include, where applicable, a position statement from the fire department having jurisdiction.

Note: Chapter SPS 303 requires the submittal of a petition for variance form (SBD-9890) and a fee, and that an equivalency is established in the petition for variance that meets the intent of the rule being petitioned. Chapter SPS 303 also requires the department to process regular petitions within 30 business days and priority petitions within 10 business days.

Note: The Department forms required in this chapter are available for a nominal fee at telephone 800-DOC-SALE (800-362-7253) or 411 (Telecommunications Relay), or at docsales@doa.state.wi.us. Forms are also available at no charge at the Department's Web site at <http://dsps.wi.gov> through links to Division of Industry Services forms.

History: Cr. Register, October, 1990, No. 418, eff. 11-1-90; r. and recr., Register, September, 1999, No. 525, eff. 10-1-99; CR 08-047: renum. from Comm 16.05 Register February 2009 No. 638, eff. 3-1-09; correction made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 316.006 Definitions. In this chapter:

(1) "Department" means the department of safety and professional services.

(2) "Electrical wiring" has the meaning given in s. 101.80 (1m), Stats.

Note: Under s. 101.80 (1m), Stats., "electrical wiring" means all equipment, wiring, material, fittings, devices, appliances, fixtures, and apparatus used for the production, modification, regulation, control, distribution, utilization, or safeguarding of electrical energy for mechanical, chemical, cosmetic, heating, lighting, or similar purposes, as specified under the state electrical wiring code. "Electrical wiring" does not include the equipment, wiring, material, fittings, devices, appliances, fixtures, and apparatus used by a public utility, an electric cooperative, or a wholesale merchant operator for the purpose of generating, transmitting, distributing, or controlling heat, light, power, or natural gas to its customers or members.

(3) "Farm" means a place where farming is conducted.

(4) "Farming" has the meaning given in s. 102.04 (3), Stats.

Note: Under s. 102.04 (3), Stats., "farming" means the operation of farm premises owned or rented by the operator. "Farm premises" means areas used for operations herein set forth, but does not include other areas, greenhouses or other similar structures unless used principally for the production of food and farm plants.

Note: Section 102.04 (3), Stats., states that the operation of farm premises shall be deemed to be the planting and cultivating of the soil thereof; the raising and harvesting of agricultural, horticultural or arboricultural crops thereon; the raising, breeding, tending, training and management of livestock, bees, poultry, fur-bearing animals, wildlife or aquatic life, or their products, thereon; the processing, drying, packing, packaging, freezing, grading, storing, delivering to storage, to market or to a carrier for transportation to market, distributing directly to consumers or marketing any of the above-named commodities, substantially all of which have been planted or produced thereon; the clearing of such premises and the salvaging of timber and management and use of wood lots thereon, but not including logging, lumbering or wood cutting operations unless conducted as an accessory to other farming operations; the managing, conserving, improving and maintaining of such premises or the tools, equipment and improvements thereon and the exchange of labor, services or the exchange of use of equipment with other farmers in pursuing such activities.

(5) "Multifamily dwelling" has the meaning given in s. 101.01 (8m), Stats.

Note: Under s. 101.01 (8m), Stats., "multifamily dwelling" means "an apartment building, rowhouse, town house, condominium or modular home, as defined in s. 101.71 (6), that does not exceed 60 feet in height or 6 stories and that consists of 3 or more attached dwelling units, as defined in s. 101.61 (1), the initial construction of which is begun on or after January 1, 1993. 'Multifamily dwelling' does not include a facility licensed under ch. 50."

(6) "Municipality" means a city, village, town, or county in this state.

(7) "One- and 2- family dwellings" means any buildings that contain one or 2 dwelling units the construction of which commenced on or after December 1, 1978.

(8) "Place of employment" has the meaning given in s. 101.01 (11), Stats.

Note: Under s. 101.01 (11), Stats., "place of employment" includes every place, whether indoors or out or underground and the premises appurtenant thereto where either temporarily or permanently any industry, trade or business is carried on, or where any process or operation, directly or indirectly related to any industry, trade or business, is carried on, and where any person is, directly or indirectly, employed by

another for direct or indirect gain or profit, but does not include any place where persons are employed in private domestic service which does not involve the use of mechanical power or in farming. "Farming" includes those activities specified in s. 102.04 (3), Stats., and also includes the transportation of farm products, supplies or equipment directly to the farm by the operator of said farm or employees for use thereon, if such activities are directly or indirectly for the purpose of producing commodities for market, or as an accessory to such production. When used with relation to building codes, "place of employment" does not include an adult family home, as defined in s. 50.01 (1), Stats., or, except for the purposes of s. 101.11, Stats., a previously constructed building used as a community-based residential facility, as defined in s. 50.01 (1g), Stats., which serves 20 or fewer residents who are not related to the operator or administrator.

(9) "Public building" has the meaning given in s. 101.01 (12), Stats.

Note: Under s. 101.01 (12), Stats., "public building" means any structure, including exterior parts of such building, such as a porch, exterior platform or steps providing means of ingress or egress, used in whole or in part as a place of resort, assemblage, lodging, trade, traffic, occupancy or use by the public or by 3 or more tenants. When used in relation to building codes, "public building" does not include a previously constructed building used as a community-based residential facility as defined in s. 50.01 (1g), Stats., which serves 20 or fewer residents who are not related to the operator or administrator or an adult family home, as defined in s. 50.01 (1), Stats.

History: CR 16-093: cr. Register June 2018 No. 750, eff. 8-1-18; correction in (5) made under s. 13.92 (4) (b) 7., Stats., Register June 2018 No. 750; correction in (5) made under s. 13.92 (4) (b) 7., Stats., Register November 2018 No. 755.

SPS 316.007 Adoption of standards by reference.

(1) PRIMARY STANDARDS. The following standards are incorporated by reference into this chapter, subject to the modifications specified in this chapter:

(a) Except as provided under par. (am), National Fire Protection Association (NFPA), One Batterymarch Park, Quincy, MA 02169-7471, telephone 800-344-3555, www.nfpa.org: NFPA 70 National Electrical Code, (NEC) – 2017.

Note: Copies of the standards are on file in the offices of the Department and the Legislative Reference Bureau. A copy of the code may be purchased from the organization listed or may be reviewed on the organization's website at no cost if the person is a registered user for the site.

(am) Prior to January 1, 2020, for all electrical wiring, installations, equipment, and materials used in the construction of one- and 2- family dwellings, National Fire Protection Association (NFPA), One Batterymarch Park, Quincy, MA 02169-7471, telephone 800-344-3555, www.nfpa.org: NFPA 70 National Electrical Code, (NEC) – 2011.

(b) If a requirement in the standards adopted in pars. (a) and (am) contain a cross-reference to another requirement modified by this chapter, the modification shall apply to the cross-reference unless specified otherwise in this chapter.

(2) SECONDARY REFERENCES. Any codes or standards referenced in the standards adopted in sub. (1) (a) and (am) shall apply to the prescribed extent of each such reference, except as modified by this chapter.

(3) ALTERNATE STANDARDS. Any alternate standard that is equivalent to or more stringent than a standard incorporated by reference or otherwise referenced under this chapter may be used in lieu of the incorporated or referenced standard if the alternate standard is accepted in writing by the department.

History: Cr. Register, October, 1990, No. 418, eff. 11-1-90; am. (1), Register, March, 1994, No. 459, eff. 4-1-94; am. (1), Register, August, 1996, No. 488, eff. 9-1-96; r. and recr., Register, September, 1999, No. 525, eff. 10-1-99; CR 02-072: r. (1), renum. (2) to be Comm 16.12 and am. Register April 2003 No. 568, eff. 5-1-03; CR 05-010: am. Register August 2005 No. 596, eff. 9-1-05; CR 08-047: renum. from Comm 16.12 and am. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: r. and recr. Register November 2013 No. 695, eff. 12-1-13; CR 16-093: renum. from SPS 316.014 and am. (1) (intro.), (a), cr. (1) (am), am. (1) (b), (2) Register June 2018 No. 750, eff. 8-1-18.

Subchapter II — Administration and Enforcement

SPS 316.011 Administration. (1) MUNICIPAL ADMINISTRATION. (a) *Jurisdiction conditions.* Pursuant to s. 101.86 (1), Stats., municipalities may exercise jurisdiction over the inspection of electrical wiring installations at farms, public buildings, places of employment, campgrounds, manufactured home

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communities, public marinas, piers, docks, or wharves and recreational vehicle parks provided the municipality complies with all of the following:

1. The municipality holds a registration issued by the department as an inspection agency for the purpose of issuing permits and inspecting electrical wiring at farms, public buildings, places of employment, campgrounds, manufactured home communities, public marinas, piers, docks, or wharves and recreational vehicle parks.

2. The municipality notifies the department at least 60 days prior to the date upon which the municipality intends to assume the jurisdiction.

3. The municipality provides the department with a copy of its electrical ordinances and subsequent revisions to the ordinances.

4. The municipality's ordinances adopt this chapter in its entirety.

5. The municipality employs or contracts with certified commercial electrical inspectors or independent inspection agencies to perform electrical inspection activities.

6. The municipality provides the department with the names of its certified commercial electrical inspectors and independent inspection agencies employed or contracted by the municipality, if applicable.

Note: Section 13.48 (13), Stats., exempts state buildings from local ordinances or regulations relating to building construction, permits, and similar restrictions.

Note: These provisions do not limit municipal authority to implement regulatory oversight for other electrical wiring installations at other locations not addressed under this section. The permitting and inspection of electrical wiring installations for the construction of new one- and 2- family dwellings are addressed under ch. SPS 320.

(b) *County.* Ordinances enacted by a county under this subsection establishing electrical inspection functions may not prevent or prohibit a municipality within that county from assuming those functions at any time.

Note: Pursuant to s. 101.86 (1) (a), Stats., a county ordinance shall apply in any city, village or town which has not enacted such an ordinance.

(c) *Relinquishing of jurisdiction.* A municipality shall notify the department, in writing, at least 60 days prior to the date upon which the municipality intends to relinquish jurisdiction responsibilities.

(2) DEPARTMENT ADMINISTRATION. (a) In municipalities not exercising jurisdiction under sub. (1), the department shall provide permit and inspection services for the installation of electrical wiring on farms and in public buildings, places of employment, campgrounds, manufactured home communities, public marinas, piers, docks, or wharves and recreational vehicle parks.

(b) Pursuant to ss. 101.02 (5) and (15) and 101.82 (2m), Stats., municipalities engaging in providing plan review, permit issuance, or inspections regarding electrical wiring under the scope of this chapter as a designated inspection agency may be monitored or audited by the department for compliance with administrative requirements of this chapter and s. SPS 305.627.

History: CR 16-093: cr. Register June 2018 No. 750, eff. 8-1-18, except (1) (a) 1., eff. 3-1-19, and (2), eff. 1-1-20.

SPS 316.012 Permits. (1) (a) Except for an electrical wiring project described in s. 101.875 (2), Stats., and as provided in par. (b), no electrical wiring project may commence unless the owner of the premises where the installation is to occur or their agent holds a permit from the designated inspection agency if the project involves the installation of new or an addition to any electrical service, feeder, or branch circuit serving any of the following:

1. A farm.
2. A public building, structure, or premises.

3. A place of employment.
4. A campground.
5. A manufactured home community.
6. A public marina, pier, dock, or wharf.
7. A recreational vehicle park.

(b) Under emergency conditions, the necessary electrical wiring may commence without obtaining a permit, provided the owner of the premises where the installation is to occur or their agent submits a permit application to the inspection agency designated by the department to provide electrical inspections for the installation no later than the next business day after commencement of the installation.

(2) The application for a permit required under sub. (1) shall contain all of the following information:

- (a) The name of the applicant.
- (b) The name of the building or property owner.
- (c) The location of the electrical wiring installation.
- (d) The scope and extent of the electrical wiring installation.
- (e) 1. The name of the person responsible for the installation.

2. The name and license number of the master electrician, residential master electrician, or registered master electrician under s. SPS 305.437 responsible for the installation, unless exempted under s. 101.862 (4), Stats.

(3) (a) The issuing inspection agency shall indicate on the electrical permit the date of issuance.

(b) A permit required under sub. (1) shall expire 12 months after the date of issuance, if installation of the electrical wiring has not commenced.

History: CR 16-093: cr. Register June 2018 No. 750, eff. 1-1-20.

SPS 316.013 Inspections. (1) Except as provided under s. 101.875 (2), Stats., electrical wiring installations shall be subject to inspection.

Note: See s. SPS 320.10 regarding the inspections for the construction of new one- and 2- family dwellings.

(2) Inspections of electrical wiring installations described under s. SPS 316.012 (1) (a) shall be conducted by a certified commercial electrical inspector.

Note: See s. SPS 305.62 for certification provisions for commercial electrical inspectors.

(3) (a) The building owner or their agent shall notify the inspection agency designated by the department to provide electrical inspections when the electrical wiring installation is ready for inspection.

(b) Except as provided in par. (c), to facilitate inspection all of the following shall apply:

1. Electrical wiring shall remain accessible and exposed for inspection purposes.

2. Electrical wiring may not be energized.

(c) 1. The concealment or energizing of electrical wiring, other than an electrical service, may proceed if inspection has not been completed within 2 business days after notification is received or as otherwise agreed between the wiring installer and the designated inspection agency providing the inspection.

2. The notification that an electrical wiring installation is ready for final inspection shall be made to indicate when all electrical fixtures, outlets and face plates are in place and the installation or that portion of the installation is energized.

(d) 1. If upon inspection, it is found that the installation is in compliance with this chapter, the certified inspector shall approve the installation prior to concealment or energizing of the electrical wiring.

2. If upon inspection, it is found that the installation is in-

complete or not in compliance with this chapter, orders to correct shall be issued. An order may include the condition that the electrical wiring is to remain unconcealed and non-energized until re-inspected.

History: CR 16-093: cr. Register June 2018 No. 750, eff. 1-1-20.

SPS 316.014 Penalties. Penalties for violations of this chapter shall be assessed in accordance with s. 101.02 (12) and (13), or s. 101.88 (3), Stats.

Note: Section 101.02 (13) (a), Stats., indicates penalties will be assessed against any employer, employee, owner or other person who fails or refuses to perform any duty lawfully enjoined, within the time prescribed by the department, for which no penalty has been specifically provided, or who fails, neglects or refuses to comply with any lawful order made by the department, or any judgment or decree made by any court in connection with ss. 101.01 to 101.599, Stats. For each violation, failure or refusal, the employee, owner or other person must forfeit and pay into the state treasury a sum not less than \$10 nor more than \$100 for each violation.

Note: Section 101.02 (12), Stats., indicates that every day during which any person, persons, corporation or any officer, agent or employee thereof, fails to observe and comply with an order of the department will constitute a separate and distinct violation of such order.

History: Cr. Register, October, 1990, No. 418, eff. 11-1-90; am., Register, September, 1999, No. 525, eff. 10-1-99; CR 08-047: renum. from Comm 16.06 Register February 2009 No. 638, eff. 3-1-09; CR 16-093: renum. from SPS 316.006 Register June 2018 No. 750, eff. 8-1-18.

SPS 316.015 Appeals. (1) APPEAL OF LOCAL ORDER. Any person affected by a local order which may be in conflict with a provision of this chapter may petition the department for a hearing on the grounds that the local order is unreasonable and in conflict with the provision of this chapter. All appeals shall be acted on and a decision in writing shall be issued by the department within 30 business days of receiving an appeal.

Note: Section 101.01 (1) (f), Stats., defines "local order" as any ordinance, order, rule or determination of any common council, board of aldermen, board of trustees or the village board, of any village or city, or the board of health of any municipality, or an order or direction of any official of such municipality, upon any matter over which the department has jurisdiction.

(2) PETITION OF ADMINISTRATIVE RULE. Pursuant to s. 227.12, Stats., any municipality, corporation or any 5 or more persons having an interest in an administrative rule may petition the department requesting the adoption, amendment or repeal of the rule.

History: Cr. Register, October, 1990, No. 418, eff. 11-1-90; CR 08-047: renum. from Comm 16.07 Register February 2009 No. 638, eff. 3-1-09; CR 16-093: renum. from SPS 316.008 Register June 2018 No. 750, eff. 8-1-18.

SPS 316.016 Electrical plan review. Upon request, the department may perform electrical plan review for dwellings, public buildings, places of employment and electrical services.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 16-093: renum. from SPS 316.930 Register June 2018 No. 750, eff. 8-1-18.

SPS 316.017 Technical assistance. The department shall provide technical assistance to the extent possible with the available resources to any person, upon written request, regarding interpretation and application of this chapter. The technical assistance may consist of telephone, written, in-office or on-site review of specific problems.

History: Cr. Register, September, 1999, No. 525, eff. 10-1-99; CR 08-047: renum. from Comm 16.67 Register February 2009 No. 638, eff. 3-1-09; CR 16-093: renum. from SPS 316.960 Register June 2018 No. 750, eff. 8-1-18.

Subchapter III — General Requirements

SPS 316.020 Construction and operation. (1) GENERAL. All electrical power and communication equipment and lines shall be constructed, installed, operated, and maintained so as to minimize hazards to life and property. All electrical installations shall conform to the National Electrical Code, incorporated by reference in this chapter, and the requirements specified in this chapter.

Note: The federal and state Fair Housing Acts, the federal Americans with Disabilities Act, and the Wisconsin Commercial Building Code under chs. SPS 361 to

366 contain requirements relating to making buildings accessible to and usable by people with disabilities. Some of those requirements apply to the installation of various electrical devices. For example, in the federal Fair Housing Accessibility Guidelines, devices such as light switches, electrical outlets, thermostats and other environmental controls would meet the requirements if operable parts of the controls are located no higher than 48 inches, and no lower than 15 inches, above the floor. If the reach is over an obstruction between 20 and 25 inches in depth, the maximum height is reduced to 44 inches for forward approach; or 46 inches for side approach, provided the obstruction is no more than 24 inches in depth. Complete copies of the federal Fair Housing Accessibility Guidelines or the federal Americans with Disabilities Act Accessibility Guidelines can be obtained from the Superintendent of Documents, New Orders, P.O. Box 371954, Pittsburgh, PA 15250-7954.

(2) INSTALLATIONS OVER 600 VOLTS. Installations over 600 volts shall, in addition to the requirements of this chapter, comply with ch. **PSC 114**.

History: Cr. Register, October, 1990, No. 418, eff. 11-1-90; CR 08-047: renum. from Comm 16.08 Register February 2009 No. 638, eff. 3-1-09; CR 16-093: renum. from SPS 316.009 and am. (1) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.021 Maintenance. All electrical wiring installations and equipment shall be cleaned and inspected at intervals as experience has shown to be necessary. Any equipment or electrical wiring installation known to be defective so as to endanger life or property shall be promptly repaired, permanently disconnected or isolated until repairs can be made.

History: Cr. Register, October, 1990, No. 418, eff. 11-1-90; CR 08-047: renum. from Comm 16.09 Register February 2009 No. 638, eff. 3-1-09; CR 16-093: renum. from SPS 316.010 and am. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.022 Use of approved materials and construction methods. **(1) MATERIALS.** Materials, equipment, and products that do not comply with the requirements of this chapter shall not be used unless approved in writing by the department in an approval of a petition for variance. Approval of materials, equipment, and products shall be based on sufficient data, tests, and other evidence that prove the material, equipment, or product meets the intent of the requirements of this chapter. Data, tests, and other evidence shall be provided by a qualified independent third party.

Note: Examples of a qualified independent third party include a nationally recognized testing laboratory and a professional engineer.

(2) METHODS OF INSTALLATION. Methods of installation that do not comply with the regulations of this chapter shall not be used unless approved in writing by the department in an approval of a petition for variance.

(3) NEW PRODUCTS, CONSTRUCTIONS OR MATERIALS. The incorporated *National Electrical Code*® may require new products, constructions, or materials that may not be available at the time this chapter is adopted. In such event, the department may permit the use of the products, constructions or materials which comply with a previous edition of the *National Electrical Code*®.

History: Cr. Register, October, 1990, No. 418, eff. 11-1-90; CR 02-072: r. and recr. (1) Register April 2003 No. 568, eff. 5-1-03; CR 08-047: renum. from Comm 16.11 Register February 2009 No. 638, eff. 3-1-09; CR 13-042: am. (1) to (3) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: renum. from SPS 316.012 and am. (1), (2) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.023 Electric fences. The following are department rules in addition to the requirements of the *NEC*®:

(1) ELECTRIC FENCE CONTROLLERS. (a) Electric fence controllers shall be of a type listed by a nationally recognized testing laboratory.

(b) Electric fence controllers shall be installed and used in the exact manner and for the exact purpose indicated by the manufacturer's instructions, markings, listings or labels.

(2) GROUNDING. Electric fence controllers shall be grounded as specified in NEC 250, except that where stray voltages in dairy barns or milking parlors create physical problems to the animals, the use of a single made electrode shall be permitted.

(3) EXCEPTION. Subsections (1) and (2) do not apply to elec-

tric fence controllers designed and manufactured for the purpose of controlling humans.

Note: Under s. 101.18, Stats., the Department is responsible for establishing "...reasonable standards, rules or regulations for the erection, construction, repair and maintenance of electric fences as shall render them safe."

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 16-093: renum. from SPS 316.013, cr. (3) Register June 2018 No. 750, eff. 8-1-18.

Subchapter IV — Changes, Additions or Omissions to the *NEC*®

SPS 316.080 Changes, additions or omissions to *NEC*®. Changes, additions or omissions to the *National Electrical Code*® (*NEC*®) are specified in this subchapter and are rules of the department and not requirements of the *NEC*®.

Note: The referenced *NEC*® article or section number will correspond with the SPS designation number and title and will precede the text of the rule. Example: SPS 316.100 [NEC 100].

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 16-093: renum. from SPS 316.015 Register June 2018 No. 750, eff. 8-1-18.

SPS 316.090 Introduction. The requirements specified in 2011 and 2017 NEC 90.1, NEC 90.2, and NEC 90.4 are not included as part of this chapter.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: am. (title) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: am. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.100 Definitions. **(1) ADDITIONS.** The following are department definitions in addition to the definitions in NEC 100:

(a) "Floors" means stories as specified in chs. **SPS 361** to **366**.

(b) "Nonrated construction" means Types III, IV and V construction in accordance with chs. **SPS 361** to **366** and is considered to be nonfire-rated for the purposes of this chapter.

(c) "Private sewage system" has the meaning specified under s. **145.01 (12)**, Stats.

Note: Under s. **145.01 (12)**, Stats., "private sewage system" means a sewage treatment and disposal system serving a single structure with a septic tank and soil absorption field located on the same parcel as the structure. This term also means an alternative sewage system approved by the department including a substitute for the septic tank or soil absorption field, a holding tank, a system serving more than one structure or a system located on a different parcel than the structure. A private sewage system may be owned by the property owner or a special purpose district.

(2) SUBSTITUTIONS. The following department definition is a substitution for the respective definition in 2011 and 2017 NEC 100: "Special permission" means a petition for variance in accordance with s. **SPS 316.005**.

Note: See chs. **SPS 361** to **366** for fire-resistance standards.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; correction in (1) (a), (b), (c), (2) (b) made under s. **13.92 (4) (b) 6., 7., Stats., Register December 2011 No. 672; CR 16-093: r. (1) (a), renum. (1) (b) to (d) to (1) (a) to (c), (2) (intro.), (b) consolidated and renum. to (2) and am., r. (2) (a) Register June 2018 No. 750, eff. 8-1-18.**

SPS 316.110 Examination, identification, installation, use, and listing of equipment. **(1)** Substitute the following wording for the requirements in 2011 NEC 110.3 (B): Listed or labeled equipment shall be installed or used, or both, in accordance with any instructions included in the listing or labeling, provided the instructions, listing, or labeling do not conflict with this chapter.

(2) This is a department exception to the requirements of 2017 NEC 110.3 (C): Exception: As provided under s. **SPS 316.022 (1)**, product testing and evaluation may be conducted by a qualified independent third party, including a nationally recognized testing laboratory or a professional engineer.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: am. Register November 2013 No. 695, eff. 12-1-13; CR 16-093: r. and recr. Register June 2018 No. 750, eff. 8-1-18; correction in numbering made under s. **13.92 (4) (b) 1. Register June 2018 No. 750.**

SPS 316.210 Branch circuits. (1) GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. (a) The requirements in 2017 NEC 210.8 (A) (7) do not apply to sinks located in kitchens.

(b) The requirements in 2017 NEC 210.8 (A) (9) and (10) are not included as part of this chapter.

(c) Substitute the following wording for 2017 NEC 210.8 (B): All 125-volt, single-phase, 15- and 20-ampere receptacles installed in the following locations shall have ground-fault circuit interrupter protection for personnel.

(d) This is a department exception to the requirements in 2011 NEC 210.8 (A) and 2017 NEC 210.8 (A) and (B): Exception: Ground-fault circuit-interrupter protection shall not be required for a single receptacle providing power for sump, sewage, or condensate pumps where an accessible ground-fault circuit-interrupter protected receptacle is located within 900 mm (3 ft) of the non-GFCI protected receptacle.

(2) BRANCH CIRCUITS REQUIRED. (a) This is a department rule in addition to the requirements of 2011 NEC 210.11: Where an air conditioner sleeve is provided in a building wall, a receptacle outlet shall be located within 4 feet of the sleeve. If a circuit is not run to the outlet, a raceway shall be provided. When the air conditioner is installed in the sleeve, it shall be supplied by an individual branch circuit. A receptacle outlet installed for an air conditioner may not be counted as one of the receptacles required by NEC 210.52 (A).

(b) The requirements in 2017 NEC 210.11 (C) (4) are not included as part of this chapter.

(3) ARC-FAULT CIRCUIT-INTERRUPTER PROTECTION. The requirements in 2017 NEC 210.12 (A) do not apply to kitchens.

(4) BRANCH CIRCUIT EXTENSIONS OR MODIFICATIONS — DWELLING UNITS AND DORMITORY UNITS. The requirements in 2011 NEC 210.12 (B) and 2017 NEC 210.12 (D) are not included as part of this chapter.

(5) LIGHTING OUTLETS REQUIRED. Substitute the following wording for 2011 NEC 210.70 (A) (1): At least one wall switch-controlled lighting outlet shall be installed in every habitable room, kitchen, and bathroom.

(6) COUNTERTOP RECEPTACLES. The requirements in 2011 NEC 210.52 (A) (4) are not included as part of this chapter.

(7) GARAGES. Substitute the following wording for 2017 NEC 210.52 (G) (1): In each attached garage and in each detached garage with electric power.

(8) MEETING ROOMS. The requirements in 2017 NEC 210.71 do not apply to this chapter.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: r. (2) (a), (c), renum. (2) (b) to (2), r. and recr. (4), renum. (6) to (5), cr. (6) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: r. and recr. (1) to (6), cr. (7), (8) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.220 Branch-circuit, feeder and service calculations. (1) GENERAL. This is a department exception to the requirements in 2011 NEC 220.10: Circuit load calculations may use unit load values lower than those identified in NEC Table 220.12 for lighting loads calculated using the maximum electrical energy conservation values specified under ch. SPS 363 for public buildings and places of employment.

(2) EXCEPTION. This is a department exception to the requirements in 2011 and 2017 NEC 220.40: Exception: Under the supervision of a Wisconsin professional engineer, architect or designer of electrical systems, the feeder or service size may be computed using diversity factors or historical data of a similar type of building, other than one- and 2-family dwelling units.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-

042: r. and recr. (1) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: am. (1), (2) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.225 Outside branch circuits and feeders.

(1) CLEARANCES FROM BUILDINGS FOR CONDUCTORS NOT OVER 600 VOLTS. Substitute the following wording for 2011 NEC 225.19 (A) Exception No. 4: The requirement for maintaining the vertical clearance 3 feet from the edge of the roof does not apply to the final conductor span to the building.

(2) NUMBER OF SUPPLIES. The following are department rules in addition to the requirements in 2011 and 2017 NEC 225.30:

(a) For the purpose of this section, multiple feeders that are supplied from the same distribution point, having a total rating of 300 amperes or more, and that supply not more than 6 disconnecting means grouped at the same location shall be considered as one supply.

(b) Multi-occupancy buildings or structures may have one set of branch circuit conductors installed from a dwelling unit to the second building or structure's respective occupied space.

(3) LOCATION. This is a department rule in addition to the requirements of 2011 and 2017 NEC 225.32: The building disconnect required by NEC 225.31 shall be located in accordance with s. SPS 316.230 (3).

Note: See ch. PSC 114 regarding clearances of conductors of over 600 volts and for prohibition of constructing dwellings under or near overhead lines.

(4) CLEARANCES OVER ROADWAYS, WALKWAYS, RAIL, WATER AND OPEN LAND. Substitute the following wording for the note to 2011 and 2017 NEC 225.60 (C): Note: For clearances of conductors of over 600 volts, see ch. PSC 114.

(6) CLEARANCES OVER BUILDINGS AND OTHER STRUCTURES. Substitute the following wording for the note to 2011 and 2017 NEC 225.61 (B): Note: See ch. PSC 114 regarding clearances of conductors of over 600 volts and for prohibition of constructing dwellings under or near overhead lines.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; correction in (4) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 13-042: r. (1), renum. (2) to (5) to (1) to (4) and am. (2) (a) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: am. (1), (2) (intro.), (3), (4), (6) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.230 Services.

(1) NUMBER OF SERVICES. (a) This is a department informational note to be used under 2011 and 2017 NEC 230.2 (intro.): Note: It is recommended that the electric utility or cooperative supplying electric current be contacted prior to service equipment installations for any special requirements.

(b) Substitute the following wording for NEC 230.2 (B) (2): Two or more service drops or laterals for the same class of service if located more than 150 feet apart, measured in a straight line, and provided that all electrical wiring supplied by each service has no common raceway or connection with any other service.

(c) This is a department rule in addition to the requirements of 2011 NEC 230.2 (B): For a building which is not more than 3 stories in height and which contains only 3 or more attached, vertically separated, side-by-side, or back-to-back dwelling units, with each dwelling unit served by an individual exterior exit within 6 feet of the exit discharge grade, a separate service drop or lateral shall be permitted for each 2 attached units.

(2) NUMBER OF SERVICE-ENTRANCE CONDUCTOR SETS. The requirements specified in 2011 and 2017 NEC 230.40 Exception No. 3 are not included as part of this chapter.

(3) SERVICE EQUIPMENT — DISCONNECTING MEANS. (a) General. This is a department rule in addition to the requirements of 2011 and 2017 NEC 230.70: Disconnecting means shall be provided to disconnect the utility wiring from the

premises wiring at any point where utility wiring terminates and premises wiring extends overhead or underground to more than one building or structure.

(b) *Location.* This is a department rule in addition to the requirements of 2011 and 2017 NEC 230.70 (A): Raceways containing service conductors or cables, or service entrance cable not contained within a raceway, may not extend longer than 8 feet into a building to the service disconnect or the first service disconnect of a group of disconnects as permitted by NEC 230.71. The raceways or conductors shall be considered to have entered the building at the point where they pass through the outer surface of the building exterior, except as permitted by NEC 230.6.

(4) **RATING OF SERVICE DISCONNECTING MEANS – 2011 NEC.** This is a department rule in addition to the requirements of 2011 NEC 230.79:

(a) *Two- or multi-family dwellings.* Except as provided in par. (b), for 2-family or multi-family dwellings, the service equipment shall have a rating of not less than 150 amperes, 3-wire or 4-wire. Where the combined rating of all service disconnecting means is 150 amperes or larger, the service or feeder equipment rating for each dwelling unit shall have a rating of not less than 60 amperes.

(b) *Exception.* Service equipment having a rating of not less than 100 amperes, 3-wire or 4-wire, may be installed in an existing 2-family dwelling only where both of the following conditions are complied with:

1. The load computed in accordance with NEC 220 does not exceed 80 amperes.

2. Specific written approval is granted by the municipal inspection department having jurisdiction.

(5) **RATING OF SERVICE DISCONNECTING MEANS — 2017 NEC.** This is a department rule in addition to the requirements of 2017 NEC 230.79: For 2-family or multi-family dwellings, the service equipment shall have a rating of not less than 150 amperes, 3-wire or 4-wire.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: renum. (3) to (3) (b) and am. (3) (b) (title), renum. (4) to (3) (a) and am. (3) (title), (3) (a) (title), renum. (5) to (4) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: am. (1) (a) (intro.), (c), (2), (3) (a), (b), (4) (intro.), cr. (5) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.240 Overcurrent protection. The requirements in 2017 NEC 240.67 do not apply to this chapter.

History: CR 16-093: cr. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.250 Grounding and bonding. (1) SUPPLEMENTAL ELECTRODE REQUIRED. The exception in 2011 and 2017 NEC 250.53 (A) (2) is not included as part of this chapter.

(2) **SUPPLEMENTAL ELECTRODE.** This is a department rule in addition to the requirements in 2011 and 2017 NEC 250.53 (A) (3): A single electrode consisting of a rod, pipe or plate shall be augmented by one additional electrode of any of the types in NEC 250.52 (A) (4) to (A) (8).

(3) **TYPES OF EQUIPMENT GROUNDING CONDUCTORS.** This is a department rule in addition to the requirements of 2017 NEC 250.118: A metallic raceway installed in direct contact with earth, in concrete slabs or floors poured on earth, or in exterior concrete walls below grade shall be augmented with a supplemental equipment grounding conductor identified in NEC 250.118 (1). This supplemental conductor shall be sized in accordance with NEC 250.122. An aluminum equipment grounding conductor used for this purpose shall be insulated.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: r. and recr. Register November 2013 No. 695, eff. 12-1-13; CR 16-093: am. (1), (2), cr. (3) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.300 Wiring methods. (1) ELECTRICAL REQUIREMENTS FOR PRIVATE ONSITE WASTEWATER TREATMENT
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SYSTEMS. These department rules apply to private onsite wastewater treatment systems and are in addition to the requirements of 2011 and 2017 NEC 300:

(a) *Wiring methods.* All effluent pump circuit wiring shall comply with the approved wiring methods as specified in NEC 300 and all of the following requirements:

1. Effluent pumps shall be supplied by a separate branch circuit supplying no other loads.

2. Alarm wiring may not be connected to the pump circuit.

3. All aboveground cables and flexible cords shall be enclosed to protect against physical damage.

4. The neutral conductor may not be common to both alarm and pump circuits.

5. Where the wiring enclosure for the alarm and pump circuit is located outside the pump chamber, any openings into the pump chamber for circuit wiring shall be sealed or plugged to prevent the passage of gas or vapor into the wiring enclosure.

Note: This prohibits use of a multi-wire branch circuit to supply both the alarm and pump.

Note: See NEC 430.102 for location of disconnects.

(b) *Ground-fault circuit protection.* A single receptacle located at the pump chamber that has an alarm or pump connected to it does not require ground-fault circuit-interrupter protection.

(2) **PROTECTION AGAINST PHYSICAL DAMAGE.** (a) The requirements specified in 2011 NEC 300.4 (D) are not included as part of this chapter.

(b) This is a department exception in addition to the exceptions under 2017 NEC 300.4 (D): Exception No. 4: This distance does not need to be maintained within 8 inches of a device, junction box, splice, or termination point.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: cr. (1) (a) 5. Register November 2013 No. 695, eff. 12-1-13; CR 16-093: am. (1) (title), (intro.), renum. (2) to (2) (a) and am., cr. (2) (b) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.310 Conductors for general wiring. (1)

This is a department rule in addition to the requirements in 2011 NEC 310.15 (B) (3) (a): The derating factors shown in NEC Table 310.15 (B) (3) (a) do not apply to branch circuits supplying an individual dwelling unit except under the following conditions: Exception No. 6: The derating factors shown in NEC Table 310.15 (B) (3) (a) do not apply to branch circuits supplying an individual dwelling unit except under the following conditions:

(a) Where more than two NM cables containing two or more current-carrying conductors are installed, without maintaining spacing between the cables, through the same opening in wood framing that is to be fire- or draft-stopped using thermal insulation, caulk or sealing foam, the allowable ampacity of each conductor shall be adjusted in accordance with Table 310.15 (B) (3) (a) and the provisions of 310.15 (A) (2) shall not apply.

(b) Where more than two NM cables containing two or more current-carrying conductors are installed in contact with thermal insulation without maintaining spacing between cables, the allowable ampacity of each conductor shall be adjusted in accordance with Table 310.15 (B) (3) (a).

(2) This is a department rule in addition to the requirements in 2017 NEC 310.15 (B) (3) (a): The derating factors shown in NEC Table 310.15 (B) (3) (a) do not apply to branch circuits supplying an individual dwelling unit.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: am. (title), (intro.) Register November 2013 No. 695, eff. 12-1-13; corrections in (intro.), (1), (2) under s. 13.92 (4) (b) 7. Register November 2013 No. 695; CR 16-093: renum. (intro.) to (1) (intro.), cr. (2) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.312 Cabinets, cutout boxes and meter socket enclosures. (1) CABLES.

Substitute the following

wording for 2011 and 2017 NEC 312.5 (C) Exception (intro.):

Exception: Cables with entirely nonmetallic sheaths may enter an enclosure through one or more nonflexible raceways of not less than 12 inches and not more than 10 feet in length, provided all of the following conditions are met:

(2) OMISSION. The requirements specified in 2011 NEC 312.5 (C) Exception paragraph (b) and 2017 NEC 312.5 (C) Exception number 2 are not included as part of this chapter.

(3) FITTING. Substitute the following wording for 2011 NEC 312.5 (C) Exception paragraph (c) and 2017 NEC 312.5 (C) Exception number 3: A fitting is provided on each end of the raceway to protect the cable from abrasion.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 16-093: am. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.314 Outlet, device, pull and junction boxes; conduit bodies; fittings; and handhole enclosures. (1) CONDUCTORS ENTERING BOXES, CONDUIT BODIES, OR FITTINGS. This is a department exception to the requirements of 2011 and 2017 NEC 314.17 (B) and (C): Exception: Non-metallic sheathed cable is not required to be secured to the box or conduit body where it is installed in accordance with the wiring method specified in s. SPS 316.312.

(2) OUTLET BOXES. This is a department rule in addition to the requirements of 2011 NEC 314.27 (A): In a dwelling unit, a ceiling outlet box installed for use as a lighting fixture outlet in a habitable room or kitchen and located where a ceiling fan could be installed shall be a type listed for ceiling fan support.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; correction in (1) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 13-042: am. (title) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: am. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.334 Nonmetallic-sheathed cable: Types NM, NMC and NMS. (1) USES PERMITTED. Substitute the following wording for 2011 and 2017 NEC 334.10 (3): Other structures permitted to be of Types III, IV, and V construction except as prohibited in NEC 334.12.

(2) TYPES NM, NMC, AND NMS. The requirements specified in 2011 and 2017 NEC 334.12 (A) (2) are not included as part of this chapter.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: am. (2) (title) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: am. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.358 Uses permitted. This is a department rule in addition to the requirements of 2011 and 2017 NEC 358.12: Electrical metallic tubing may not be used in direct contact with earth, in concrete slabs or floors poured on earth, or in exterior concrete walls below grade.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 16-093: am. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.400 Flexible cords and cables. (1) This is a department exception in addition to the exception in 2011 NEC 400.8 (4): Exception No. 2: Flexible cords and cables permitted by NEC 400.7 (A) that are connected to sources other than busways may be attached to adequately supported equipment or building surfaces provided the type of cord or cable, the attachment to the building and equipment, and the support comply with the provisions of NEC 368.56 (B).

(2) This is a department exception in addition to the exception in 2017 NEC 400.12 (4): Exception No. 2: Flexible cords and cables permitted by NEC 400.10 (A) that are connected to sources other than busways may be attached to adequately supported equipment or building surfaces provided the type of cord or cable, the attachment to the building and equipment, and the support comply with the provisions of NEC 368.56 (B).

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-

042: am. (title) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: renun. SPS 316.400 to (1) and am., cr. (2) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.404 Switches controlling lighting loads. The requirements in 2017 NEC 404.2 (C) do not apply to dwelling units.

History: CR 16-093: cr. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.406 Receptacles, cord connectors and attachment plugs (caps). (1) The requirements in 2011 and 2017 NEC 406.4 (D) (4) are not included as part of this chapter.

(2) Substitute the following wording for 2017 NEC 406.9 (B) (1): Receptacles of 15 and 20 amperes, 125 and 250 volts installed in a wet location shall have an enclosure that is weather-proof whether or not the attachment plug cap is inserted.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: Register November 2013 No. 695, eff. 12-1-13; CR 16-093: renun. SPS 316.406 to (1) and am., cr. (2) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.450 Transformers and transformer vaults (including secondary ties). (1) OVERCURRENT PROTECTION. This is a department rule in addition to the requirements in 2011 and 2017 NEC Table 450.3 (A) Note 3: The qualified person shall be either an employee at that location or an employee contracted for this purpose who is readily available.

(2) LOCATION. Substitute the following wording for 2011 and 2017 NEC 450.41: Vaults containing oil-insulated transformers shall be located where the vaults can be ventilated to the outside air without using flues or ducts, except where a petition for variance is approved.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: am. (title), (1) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: am. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.511 Commercial garages, repair and storage. (1) The requirements specified in 2011 NEC 511.3 (C) (1) (a) are not included as part of this chapter.

(2) Substitute the following wording for 2011 NEC 511.3 (C) (2) (a): The ceiling area shall be unclassified where ventilation is provided from a point not more than 18 inches from the highest point in the ceiling. The ventilation shall conform to chs. SPS 361 to 366.

Note: The Commercial Building Code, chapters SPS 361 to 366, adopts and references the International Mechanical Code, IMC, for the design of ventilation systems. The adopted provisions of the International Mechanical Code under section 502.16 prescribe provisions for repair garages for natural gas- and hydrogen- fueled vehicles.

(3) Substitute the following wording for “Extent of Classified Location” in 2017 NEC Table 511.3 (C) under which the floor area of a major repair garage is considered unclassified: Up to 450 mm (18 in.) above floor level of the room where the room is provided with ventilation from a point not more than 300 mm (12 in.) from the lowest point of the floor area and the ventilation conforms to chs. SPS 361 to 366.

(4) Substitute the following wording for “Extent of Classified Location” in 2017 NEC Table 511.3 (D) under which the ceiling area of a major repair garage is considered unclassified: Within 450 mm (18 in.) of ceiling where ventilation is provided from a point not more than 450 mm (18 in.) from the highest point in the ceiling and the ventilation conforms to chs. SPS 361 to 366.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: renun. SPS 316.511 to (1) and am. (title) and (1), cr. (2) Register November 2013 No. 695, eff. 12-1-13; correction in (1) made under s. 13.92 (4) (b) 7., Stats., Register November 2013 No. 695; CR 16-093: am. (1), (2), cr. (3), (4) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.547 Agricultural buildings. This is a department exception to the requirements in 2011 and 2017 NEC 547.5 (G): Exception: Ground-fault circuit-interrupter protection is not required for a single receptacle providing power for an electric

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fence controller used for livestock containment where an accessible ground-fault circuit-interrupter protected receptacle is located within 900 mm (3 ft) of the non-GFCI protected receptacle.

History: CR 13-042: cr. Register November 2013 No. 695, eff. 12-1-13; CR 16-03: am. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.551 Recreational vehicles and recreational vehicle parks. Substitute the following wording for 2017 NEC 551.71 (C): A minimum of 20 percent of existing and 40 percent of all new recreational vehicle sites, with electrical supply, shall each be equipped with a 50-ampere, 125/250-volt receptacle conforming to the configuration as identified in Figure 551.46 (C) (1). These electrical supplies shall be permitted to include additional receptacles that have configurations in accordance with 551.81.

History: CR 16-093: cr. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.620 Elevators, dumbwaiters, escalators, moving walks, platform lifts and stairway chairlifts. This is a department exception to the requirements in 2011 and 2017 NEC 620: Exception: Wherever NEC 620 requires disconnecting means with overcurrent protection to be located in an elevator machine room, control room, machinery space or control space and the elevator does not have such a room or space directly accessible from a building floor level, such devices shall be located instead in lockable cabinets or electrical rooms accessible only to qualified persons.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: am. (title) Register November 2013 No. 695, eff. 12-1-13; CR 14-020: renum. 316.620 to (2), cr. (1) Register August 2014 No. 704, eff. 9-1-14; CR 16-093: renum. (1) to SPS 316.620 and am., r. (2) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.675 Electrically driven or controlled irrigation machines. (1) This is a department rule in addition to the requirements in 2011 NEC 675.8: A service disconnecting means with overcurrent protection shall be provided at the service point in accordance with NEC 230 subchapter VI.

(2) This is a department rule in addition to the requirements in 2017 NEC 675.8: A service disconnecting means with overcurrent protection shall be provided at the service point in accordance with NEC 230 Part VI.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: am. Register November 2013 No. 695, eff. 12-1-13; CR 16-093: renum. SPS 316.675 to (1) and am., cr. (2) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.680 Swimming pools, fountains and similar installations. (1) PERIMETER SURFACES. This is a department rule in addition to the requirements of 2011 NEC 680.26 (B) (2): The requirements specified in NEC 680.26 (B) (2) do not apply to a listed self-contained spa or hot tub constructed with nonmetallic walls.

(2) POOL WATER. This is a department rule in addition to the requirements of 2011 NEC 680.26 (C): The requirements specified in NEC 680.26 (C) do not apply to a listed self-contained spa or hot tub constructed with nonmetallic walls.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-

042: am. (title) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: am. Register June 2018 No. 750, eff. 8-1-18.

SPS 316.700 Emergency systems. (1) WIRING, EMERGENCY SYSTEM. This is a department rule in addition to the requirements of 2011 and 2017 NEC 700.10 (B):

(a) Except as provided in par. (b), emergency circuit wiring shall be listed raceways, Type AC cable or Type MC cable.

(b) Emergency lighting fixtures may use flexible cord connections in compliance with NEC 410.62 (C) for electric discharge luminaries.

(2) GENERAL REQUIREMENTS. This is a department rule in addition to the requirements in 2011 and 2017 NEC 700.12 (intro.): The enclosure of the alternate source of power located outdoors for emergency systems shall be located at least 10 feet horizontally from any combustible portion of a Type III, Type IV, or Type V building and at least 20 feet from an outdoor electrical transformer, electrical metering, service equipment, or normal power distribution equipment. These dimensions may be reduced where a noncombustible barrier is installed that extends at least 3 feet beyond each side of the alternate power source and transformer. The height of the barrier shall be at least one foot above the top of the transformer, electrical metering, service equipment, or alternate power source, whichever is higher.

(3) GENERAL REQUIREMENTS, DUAL SUPPLIES. The requirements in 2011 and 2017 NEC 700.12 (B) (3) are not included as part of this chapter.

Note: See chs. SPS 361 to 366 for further requirements.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; CR 13-042: am. (1) (intro.), (3) Register November 2013 No. 695, eff. 12-1-13; CR 16-093: am. (1) (intro.), (2), (3) Register June 2018 No. 750, eff. 8-1-18.

SPS 316.701 Legally required standby systems.

(1) ADDITION. This is a department rule in addition to the requirements in 2011 and 2017 NEC 701.12 (intro.): The enclosure of the alternate source of power located outdoors for legally required standby systems shall be located at least 10 feet horizontally from any combustible portion of a Type III, Type IV, or Type V building and at least 20 feet from an outdoor electrical transformer, electrical metering, service equipment, or normal power distribution equipment. These dimensions may be reduced where a noncombustible barrier is installed that extends at least 3 feet beyond each side of the alternate power source and transformer. The height of the barrier shall be at least one foot above the top of the transformer, electrical metering, service equipment, or alternate power source, whichever is higher.

(2) DELETION. The requirements specified in 2011 and 2017 NEC 701.12 (B) (3) are not included as part of this chapter.

Note: See chs. SPS 361 to 366 for further requirements.

History: CR 08-047: cr. Register February 2009 No. 638, eff. 3-1-09; correction in (1) made under s. 13.92 (4) (b) 7., Stats., Register February 2009 No. 638; corrections in (1), (2) made under s. 13.92 (4) (b) 7., Stats., Register November 2013 No. 695; CR 16-093: am. Register June 2018 No. 750, eff. 8-1-18.

Chapter SPS 318

ELEVATORS, ESCALATORS, AND LIFT DEVICES

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Note: Chapter Ind 4 as it existed on August 31, 1988 was repealed and a new chapter ILHR 18 was created effective September 1, 1988. Chapter ILHR 18 was renumbered to be chapter Comm 18 under s. 13.93 (2m) (b) 1., Stats., and corrections made under s. 13.93 (2m) (b) 6. and 7., Stats., [Register, October, 1996, No. 490](#). Corrections were made under s. 13.93 (2m) (b) 6., Stats., [Register, April, 1998, No. 508](#). Chapter Comm 18 as it existed on November 30, 1999 was repealed and a new chapter Comm 18 was created effective December 1, 1999. Chapter Comm 18 as it existed on March 31, 2004, was repealed and a new chapter Comm 18 was created, [Register March 2004 No. 579](#), effective April 1, 2004. Subchapters II to IV of chapter Comm 18 as they exist on December 31, 2008, are repealed and new subchapters II to IV are created [Register June 2008 No. 630](#), effective January 1, 2009. Chapter Comm 18 was renumbered chapter SPS 318 under s. 13.92 (4) (b) 1., Stats., [Register December 2011 No. 672](#); Chapter SPS 318 as it existed on August 31, 2014 was repealed and a new chapter SPS 318 was created [Register August 2014 No. 704](#), effective September 1, 2014.

Subchapter I — Scope and Application

SPS 318.1001 Purpose. Pursuant to ss. 101.982 and 101.983, Stats., the purpose of this chapter is to establish minimum safety standards for the design, construction, installation, operation, inspection, testing, maintenance, alteration, repair, and replacement of conveyances.

History: CR 03-047: cr. [Register March 2004 No. 579](#), eff. 4-1-04; CR 08-030: am. [Register December 2008 No. 636](#), eff. 1-1-09; CR 14-020: r. and recr. [Register August 2014 No. 704](#), eff. 9-1-14.

SPS 318.1002 Scope. This chapter applies to conveyances as defined in s. [SPS 318.1004 \(10\)](#).

History: CR 14-020: cr. [Register August 2014 No. 704](#), eff. 9-1-14.

SPS 318.1003 Application. (1) RETROACTIVITY. (a) The design, construction, and installation rules of this chapter, including the acceptance-inspection requirements and the applied criteria from the standards adopted in s. [SPS 318.1005](#), do not apply retroactively to conveyances existing prior to the effective date

of the rule unless specifically stated in the administrative rule or standard.

(b) 1. The operation, testing, maintenance, and periodic inspection requirements of this chapter apply to all conveyances that exist on or after June 1, 2020, except as provided in subd. 2. and pars. (c) to (e).

2. The provisions of subd. 1. do not apply to a conveyance with a contract date of prior to January 1, 2009, that serves a dwelling unit.

Note: Although the provisions of subdivision 1. do not apply as stated above, these conveyances are subject to the requirements in section 101.983 (3) of the Statutes, which reads as follows: "If the owner and a prospective buyer of an individual residential dwelling unit that is served by a dumbwaiter or an elevator enter into a contract of sale for the unit that includes a provision requiring that the dumbwaiter or elevator be inspected, the inspection shall be performed by an elevator inspector licensed under s. 101.985 (3)."

(c) 1. The design, construction, and installation requirements of this chapter, including the acceptance-inspection requirements apply to any alterations, repairs, and replacement parts or components for any conveyance that have a contract date of on or after June 1, 2020, except as provided in subd. 2., par. (e), and sub. (1m).

Note: See section [SPS 318.1007 \(3\)](#) for further information about plan review for alterations and replacements.

2. The provisions of subd. 1. do not apply to a conveyance with a contract date of prior to January 1, 2009, that serves a dwelling unit.

Note: A proposed alteration for an existing conveyance may necessitate modifying other components of the conveyance to make the proposed alteration comply with this chapter — and some alterations may necessitate modifying other features of a building that must comply with requirements in chapters SPS 320 to 325, the Wisconsin Uniform Dwelling (One- and Two-Family Dwelling) Code, and chapters SPS 361 to 366, the Wisconsin Commercial Building Code.

(e) Periodic inspections are not required under this chapter for

any conveyances that receive periodic inspections by United States government inspectors.

(1m) EXCLUSIONS. This chapter does not apply to any conveyances for any of the following buildings or structures:

(a) 1. Buildings or structures located on Indian reservation land that are held either in trust by the United States, or in fee by the tribe or a tribal member.

2. Buildings or structures which are located on off-reservation Indian land that is held in trust by the United States – and which are held either in trust by the United States, or in fee by the tribe or a tribal member.

(b) Buildings and portions of buildings that are federally owned or exempted by federal statutes, regulations, or treaties.

(c) Portions of buildings leased to the federal government provided all of the following conditions are met:

1. A statement is recorded with the register of deeds that describes the steps necessary for compliance to this chapter if the space is converted to a nonexempt use.

2. The statement recorded with the register of deeds is recorded in a manner that will permit the existence of the statement to be determined by reference to the property where the building is located.

3. The owner of the building submits a copy of the recorded document to the department or its authorized representative.

(d) Buildings and structures that are on a farm premises and used primarily for purposes relating to farming or livestock, provided any use of the building or structure by the public consists only of consumers directly using the livestock or receiving farm commodities, substantially all of which have been produced on the farm premises. In this paragraph, “substantially all” means at least 90 percent of the commodities have been planted or produced on the farm premises.

(2) DIFFERING RULES. (a) Where any department-written rule in this chapter differs from a requirement within a standard referenced in this chapter, the department-written rule shall govern.

(b) Where a provision of this chapter prescribes a general requirement and another provision of this chapter prescribes a specific or more detailed requirement regarding the same subject, the specific or more detailed requirement shall govern, except as provided in par. (a).

(c) Where different sections of this chapter specify conflicting requirements, the most restrictive requirement, as determined by the department, shall govern, except as provided in pars. (a) and (b).

(3) INTERPRETATIONS. Under s. 101.02 (1), Stats., the department reserves the right to interpret the requirements in this chapter and in all adopted codes and standards adopted under s. SPS 318.1005.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: am. (1) (b) 1., (c) 1., renun. (1) (d) to (1m), cr. (1m) (title), (1m) (d), r. (4) Register May 2020 No. 773, eff. 6-1-20.

Subchapter II — Definitions and Standards

SPS 318.1004 Definitions. In this chapter:

(1) “Agent municipality” means any municipality designated as an agent of the department under s. SPS 318.1012 (1) (a).

(2) “Alteration” means any change to equipment, including its parts, components, or subsystems, other than maintenance, repair, or replacement.

(3) “Approved” means acceptable to the department.

(4) “ANSI” means the American National Standards Institute.

Published under s. 35.93, Stats. Updated on the first day of each month. Entire code is always current. The Register date on each page is the date the chapter was last published.

(4m) “ANSI E1.42” means ANSI E1.42-2018, *Entertainment Technology – Design, Installation, and Use of Orchestra Pit Lifts*, as adopted under s. SPS 318.1005 (1) and modified by this chapter.

(5) “ASME” means the American Society of Mechanical Engineers.

(6) “ASME A17.1” means ASME A17.1–2016/CSA B44–16, *Safety Code for Elevators and Escalators*, as adopted under s. SPS 318.1005 (1) and modified by this chapter.

(7) “ASME A18.1” means ASME A18.1–2017, *Safety Standard for Platform Lifts and Stairway Chairlifts*, as adopted under s. SPS 318.1005 (1) and modified by this chapter.

(8) “Building code” means chs. SPS 361 to 366, which is the Wisconsin Commercial Building Code.

Note: The Wisconsin Commercial Building Code, chapters SPS 361 to 366, adopts by reference the *International Building Code*® (IBC), the *International Energy Conservation Code*® (IECC), the *International Mechanical Code*® (IMC), the *International Fuel Gas Code*® (IFGC), and the *International Existing Building Code*® (IEBC). Chapter SPS 314, Fire Prevention Code, may have rules that may affect the maintenance and use of an existing building.

(9) “Contract date” means the date of a written contract between an owner or owner’s agent, and an elevator contractor who is so licensed under ch. SPS 305, under which a conveyance has been or is to be installed or is to undergo an alteration, repair, or replacement.

(10) “Conveyance” means the following types of devices, as they are subsequently defined:

(ag) “Dumbwaiter” has the meaning as given in s. 101.981 (1) (d), Stats.

(ar) “Elevator” has the meaning as given in s. 101.981 (1) (e), Stats.

(b) “Escalator” has the meaning as given in s. 101.981 (1) (f), Stats.

(c) “Freight elevator” means an elevator used primarily for carrying freight and on which only the operator and the persons necessary for unloading and loading the freight are permitted to ride.

(d) “Inclined platform lift” means a powered hoisting and lowering mechanism designed to transport persons with physical disabilities on a guided platform that travels on an incline.

(e) “Limited-use, limited-application elevator” means a power passenger elevator in which the use and application is limited by size, capacity, speed, and rise.

(f) “Moving walk” means a type of passenger-carrying device on which passengers stand or walk, and in which the passenger-carrying surface remains parallel to its direction of motion and is uninterrupted.

(g) “Orchestra pit lift” means a permanent powered hoisting and lowering mechanism which is within or adjacent to a theatrical or musical stage and which is intended to accommodate performers and their equipment. “Orchestra pit lift” includes orchestra elevators and stage elevators.

(h) “Part V elevator” means an elevator of the private-residence type serving a commercial building and having a contract date of between September 1, 1988, and April 1, 2004.

(i) “Passenger elevator” means an elevator used primarily to carry persons other than the operator and persons necessary for loading and unloading. This term does not include limited-use, limited-application elevators, elevators in dwelling units, orchestra pit lifts, special purpose personnel elevators, sidewalk elevators, rooftop elevators, and type B material lifts.

(j) “Private residence elevator” means a power passenger elevator which is limited in size, capacity, rise, and speed, and which

is installed to provide access to or within an individual dwelling unit.

(k) “Rooftop elevator” means a power passenger or freight elevator operating between a landing at roof level and other landings, and that opens onto the exterior roof level of a building through a horizontal opening.

(L) “Sidewalk elevator” means a device with on-car controls for the raising or lowering of materials operating between a landing in a sidewalk or other exterior area and floors below the sidewalk or grade level and that opens onto the exterior area through a horizontal opening.

(m) “Special purpose personnel elevator” means an elevator that is to provide vertical transportation of authorized personnel and their tools and equipment only; is limited in size, capacity, and speed; and is permanently installed in any of the following structures:

1. Antenna towers.
2. Assembly facilities, such as installations providing access to catwalks or equipment.
3. Breweries.
4. Bridge towers.
5. Dams.
6. Feed or grain facilities.
7. Mine-product drying facilities.
8. Observatories.
9. Paper mills.
10. Power plants.
11. Refineries.
12. Underground facilities, excluding mine-shaft elevators.
13. Wastewater treatment structures.

(o) “Stairway chairlift” means a powered hoisting and lowering mechanism that is guided and equipped with a seat to transport a passenger along a stairway.

(om) “Type B material lift” means a powered hoisting and lowering mechanism used for carrying material and on which only the operator or the person necessary for unloading and loading the material is permitted to ride.

(p) “Vertical platform lift” means a powered hoisting and lowering mechanism designed to transport mobility-impaired persons on a guided platform that travels vertically.

(11) “Department” means the department of safety and professional services.

(12) “Dwelling unit” has the meaning given in s. 101.61 (1), Stats.

(12e) “Electrical code” means ch. SPS 316, which is the Wisconsin Electrical Code.

(12m) “First-aid treatment” has the meaning given to “first aid” in 29 CFR 1904.7 (b) (5) (ii), regardless of who is providing the treatment.

(12s) “Hoistway” means a shaft or opening through a building or structure for the travel of elevators, dumbwaiters, or material lifts, extending from the pit floor to a ceiling above.

(13) “Licensed elevator inspector” means an individual who holds a valid credential issued by the department under ch. SPS 305 as an elevator inspector.

(14) “Maintenance” means a process of routine examination, lubrication, cleaning, and adjustment of parts, components, or subsystems for the purpose of ensuring performance in accordance with the applicable requirements of this chapter.

(15) “Repair” means the reconditioning or renewal of parts,

components, or subsystems necessary to keep equipment in compliance with the applicable requirements of this chapter.

(16) “Replacement” means the substitution of a device, component, or subsystem, in its entirety, with a unit that is basically the same as the original for the purpose of ensuring performance in accordance with the applicable requirements of this chapter.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: cr. (4m), am. (6), (7), renum. (10) (a) to (10) (ar), cr. (10) (ag), am. (10) (g), (i), (L), r. (10) (n), cr. (10) (om), (12e), (12m), (12s) Register May 2020 No. 773, eff. 6-1-20.

SPS 318.1005 Adoption of standards by reference.

(1) PRIMARY STANDARDS. The following standards are hereby incorporated by reference into this chapter, subject to the modifications specified in this chapter:

(a) *Safety Code for Elevators and Escalators*, ASME A17.1-2016/CSA B44-16.

(b) *Safety Standard for Platform Lifts and Stairway Chairlifts*, ASME A18.1-2017.

(c) *Entertainment Technology-Design, Installation, and Use of Orchestra Pit Lifts*, ANSI E1.42-2018.

(2) SECONDARY REFERENCES. Any codes or standards referenced in the standards adopted in sub. (1) shall apply to the prescribed extent of each such reference, except as modified by this chapter.

(3) ALTERNATE STANDARDS. Any alternate standard that is equivalent to or more stringent than a standard incorporated by reference or otherwise referenced under this chapter may be used in lieu of the incorporated or referenced standard if the alternate standard is accepted in writing by the department.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: am. (1) (intro), (a), (b), cr. (c) Register May 2020 No. 773, eff. 6-1-20.

Subchapter III — Administration and Enforcement

SPS 318.1006 Fees. Fees for plan review, permit application, inspection, permit to operate, and other services performed by the department pertaining to elevators, escalators, and lift devices shall be as determined in ch. SPS 302.

History: CR 03-047: cr. Register March 2004 No. 579, eff. 4-1-04; CR 07-089: am. Register June 2008 No. 630, eff. 1-1-09; correction made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 14-020: r. and recr. Register August 2014 No. 704, eff. 9-1-14.

SPS 318.1007 Plan review and approval. (1) APPROVALS. (a) 1. Before commencing the construction or installation of a conveyance, an approval shall be obtained from the department or agent municipality within whose boundaries the conveyance is to be located.

2. Before commencing an alteration of an existing conveyance as delineated in Tables SPS 318.1007-1 to 318.1007-4, an approval shall be obtained from the department or agent municipality within whose boundaries the conveyance is located.

(b) Pursuant to s. 101.983 (1) (a), Stats., the approval issued by the department or agent municipality shall be considered a permit.

(2) NEW INSTALLATIONS. (a) *Number of plans.* 1. When seeking an approval from the department, at least 3 copies of plans and one set of specifications shall be submitted for review for a new conveyance installation, except as provided in subd. 2.

2. In lieu of 3 copies of an installation plan, a plan in an electronic format acceptable to the department may be submitted.

Note: An acceptable electronic format does not include a facsimile.

(b) *Level of detail.* An installation plan submitted for review shall be of sufficient clarity and detail to show how the proposed design will conform to this chapter.

(c) *Material to submit.* 1. ‘Plan submittals.’ A plan submittal

to the department for installation approval shall be accompanied by all of the following:

a. At least 3 copies of the completed application, on an approved form.

Note: Forms required under this chapter are available on the department's website at <https://dsps.wi.gov>, or by request from the Department of Safety and Professional Services, P. O. Box 7302, Madison, Wisconsin 53708, or call (608) 266-2112.

b. A plan review fee.

c. An acceptance-inspection fee.

d. The initial permit-to-operate fee.

e. Sufficient information, calculations, or data to substantiate compliance with this chapter.

2. 'Elevators or dumbwaiters.' For an elevator or dumbwaiter, submitted materials shall include the information in the layout-drawings section in the applicable Part of ASME A17.1, and at least all of the following:

a. A plan of the car and hoistway showing all clearances, including all inside car or platform dimensions, as specified in this chapter and the building code.

b. A plan of the machine room, control room, or control space showing clearances around the machine, controller, and disconnecting means, as specified in this chapter, the building code, and the electrical code, where applicable.

c. A cross-section through the hoistway, pit, and car, showing all applicable dimensions.

d. The size and weight per foot of guiderails and details of their support, including reinforcements where required.

e. Landings indicating types of hoistway doors or gates.

3. 'Escalators or moving walks.' For an escalator or moving walk, plans submitted for review shall include all of the following:

a. A plan view showing step, pallet, or belt-treadway width and machine-space clearances.

b. An elevation view showing all applicable dimensions.

Note: Under this subdivision, if the scope of work for an escalator includes a replacement of the majority of internal parts, the work is considered to be a new installation even if a majority of the truss is retained.

4. 'Vertical platform lifts.' For a vertical platform lift, plans submitted for review shall include all of the following:

a. A plan of the platform enclosure and runway including all inside platform dimensions and clearances specified in this chapter and the building code where applicable.

b. A section through the runway, pit, and platform showing all dimensions and clearances.

c. Landings indicating types of runway doors or gates. Where manual doors or gates are provided, plans showing the clearances at manual doors or gates meeting the building code.

5. 'Inclined platform lifts or stairway chair lifts.' For an inclined platform lift or stairway chair lift, plans submitted for review shall include the following:

a. A plan of the lift shown in its unfolded operational position at each landing and on the stairway with egress past the lift dimensioned.

b. A section through the stairway or runway showing clearances to steps and overhead with the lift in its unfolded, usable position.

c. A calculation of egress width past the lift meeting the building code, prepared by a licensed architect or engineer, or evidence such calculation has been approved by the building code authority.

(3) SCOPE OF ALTERATIONS, REPAIRS, AND REPLACEMENTS.

(a) For proposed alterations, repairs, or replacements listed in Table SPS 318.1007-1 Items 1. to 4. and Tables SPS 318.1007-2, 318.1007-3, and 318.1007-4, all of the following shall be submitted with the request for approval:

1. At least 3 copies of the completed application, on an approved form, if the submittal is to the department.

Note: Forms required under this chapter are available on the department's website at <https://dsps.wi.gov>, or by request from the Department of Safety and Professional Services, P. O. Box 7302, Madison, Wisconsin 53708, or call (608) 266-2112.

2. At least 3 copies of bound equipment layout plans and specifications that conform to the applicable sections in ASME A17.1 or ASME A18.1.

3. A plan review fee.

4. An acceptance-inspection fee.

Note: See chapter SPS 302 for the amount of the fee remitted to the department when a conveyance plan is filed.

5. Sufficient data and information to determine if the proposed alteration complies with the requirements of this chapter.

(b) For proposed alterations listed in Table SPS 318.1007-1 Items 5. to 33., all of the following shall be submitted with the request for approval:

1. At least 3 copies of the completed application, on an approved form, if the submittal is to the department.

2. A plan review fee.

3. An acceptance-inspection fee.

4. Sufficient data and information to determine if the proposed alteration complies with this chapter.

Table SPS 318.1007-1

Elevators and Orchestra Pit Lifts

Item	Scope of Work
1.	Alteration or replacement of hoistway enclosure walls, pit, or ceiling; or to number or location of landings served
2.	Alteration of machine-room, machinery-space, control-room, or control-space walls, floor, ceiling, or entrance; or to location of machinery
3.	Alteration of passenger elevator to freight type, or freight to passenger type
4.	Alteration of loading class for a freight elevator
5.	Alteration of traction driving machine, motor, sheave, driving machine brake, or emergency brake
6.	Replacement of entire driving machine, driving machine brake, or emergency brake
7.	Installation of a fire sprinkler in a machine room, machinery space, control room, control space, or top of hoistway
8.	Increase in loading of more than 5% to machinery, beams, supports, or foundations
9.	Alteration of hoistway door or gate
10.	Alteration of hoistway-door interlock or combination mechanical lock and contacts
11.	Alteration of a solely contact type to another type of reopening device on an elevator with firefighters' emergency operation
12.	Increase or decrease of more than 5% of the total load of car deadweight plus rated load
13.	Increase or decrease in rated load
14.	Increase or decrease in speed of more than 5%

Table SPS 318.1007-1 (Continued)
Elevators and Orchestra Pit Lifts

Item	Scope of Work
15.	Alteration or replacement of safety device
16.	Alteration or replacement of overspeed governor
17.	Alteration or addition of an emergency brake or device protecting against unintended movement or ascending car overspeed
18.	Alteration to suspension material, grade, number or size as defined in ASME A17.1 sections 8.7.2.21 and 8.7.3.25
19.	Increase in stresses of more than 5% to guiderails, supports, and fastenings
20.	Alteration to type or location of car or counterweight buffer or bumper
21.	Alteration to type of terminal stopping device
22.	Alteration to or addition of a top-of-car operating device
23.	Replacement of controller
24.	Alteration to type of motion control
25.	Alteration to type of operation control
26.	Addition of emergency or standby power system
27.	Alteration to or addition of firefighters' emergency operation system
28.	Alteration to or addition of auxiliary power supply raising or lowering operation
29.	Replacement or addition of a plunger gripper
30.	Replacement of a complete hydraulic pumping unit including motor, pump, and tank
31.	Alteration or replacement of hydraulic control valve
32.	Alteration or replacement of hydraulic plunger or cylinder
33.	Increase in hydraulic working pressure of more than 5%
34.	Removal or disabling of devices subject to ASME A17.1 section 8.6.1.7.5

Table SPS 318.1007-2
Escalators and Moving Walks

Item	Scope of Work
1.	Alteration or repair of truss
2.	Alteration to rated speed or installation of speed varying system
3.	Installation or addition of skirt brushes
4.	Alterations to safety component or safety switch as defined in ASME A17.1 sections 6.1.6.3 and 6.2.6.3, 'Electrical protective device'

Table SPS 318.1007-3
Dumbwaiters and Type B Material Lifts

Item	Scope of Work
1.	Increase or decrease in rated load
2.	Increase or decrease in speed of more than 5%
3.	Alteration to car size

Table SPS 318.1007-4
Platform Lifts

Item	Scope of Work
1.	Alteration to or replacement of overspeed or slack suspension safety device
2.	Alteration to or replacement of hydraulic jack plunger or cylinder
3.	Alteration to or replacement of hydraulic valve
4.	Alteration to or addition of machine room

Note: See chapter SPS 302 for fee requirements.

History: CR: 14-020: cr. [Register August 2014 No. 704](#), eff. 9-1-14; correction in (2) (a) (title), (b) (title), (c) (title) made under s. 13.92 (4) (b) 2., Stats., [Register August 2014 No. 704](#); CR 19-118: am. (2) (c) 1. a., (3) (title), (a) (intro.), 1., Table SPS 318.1007-1, Table SPS 318.1007-2, Table SPS 318.1007-3, Table SPS 318.1007-4 [Register May 2020 No. 773](#), eff. 6-1-20.

SPS 318.1008 Plan review actions. (1) PROCESSING. The department shall review and make a determination on a request for plan approval within 15 business days, except as provided in sub. (2) (d).

(2) DETERMINATIONS. (a) *Conditional approval.* 1. If the department determines the application and plans for installation or alteration substantially comply with the provisions of this chapter, the department shall grant a conditional approval in writing.

2. Non-code-complying conditions stated in the conditional approval shall be corrected before or during installation.

3. A conditional approval issued by the department may not

be construed as an assumption of any responsibility for the design or construction of the equipment.

4. The issuance of a conditional approval by the department does not alleviate the responsibility to correct any non-code-complying condition, element, or component not specifically enumerated in a conditional approval.

(b) *Revocation of approval.* The department may revoke any approval issued by department if the department determines any of the following:

1. That information provided for obtaining the approval contains false statements or misinterpretations of material fact.

2. That the approval was issued in error.

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3. That the work performed is not consistent with the approval or is in violation of this chapter.

(c) *Denial of approval.* The request for plan approval shall be denied, in writing, if the department determines that the plans or the application do not substantially comply with the provisions of this chapter.

(d) *Hold.* 1. The request for plan approval shall be placed on hold if the department determines that the submittal is not of sufficient detail or missing information to determine whether the proposal conforms to this chapter.

2. If the request for plan approval is placed on hold, the permit-processing timeframe in par. (a) shall also be interrupted until the appropriate information is submitted to complete the review, except the request for approval and the hold shall expire if the appropriate information is not submitted within 90 calendar days of being requested.

(e) *Expiration.* As required under s. 101.983 (1) (d), Stats., an approval issued under this chapter expires under any of the following circumstances:

1. If the work authorized under the approval does not commence within 6 months after the date on which the approval is issued.

2. If the work authorized under the approval is suspended or abandoned for 60 consecutive days at any time following the commencement of the work.

3. a. On the date specified by the department under subd. 3. b.

b. The department may, notwithstanding subds. 1. and 2., specify a shorter period of time at the time the approval is issued, which shall be no later than 2 years after the approval date shown on the approved plans. Upon request to the secretary, the expiration date may be extended for a one-time, 2-year period at the discretion of the secretary provided the written request is submitted prior to expiration of the original approval.

(f) *Re-submittal.* When an approval expires under par. (e), plans shall be resubmitted in accordance with s. SPS 318.1007.

(3) **REVISIONS TO APPROVED PLANS.** (a) All proposed revisions and modifications which involve rules under this chapter and which are made to construction documents that have previously been granted approval by the department or agent municipality shall be submitted for review to the entity that granted the approval, unless determined by the department or agent municipality to be too minor to warrant re-submittal.

(b) All revisions and modifications to the plans shall be approved in writing by the department or agent municipality prior to the work involved in the revision or modification being carried out.

(4) **EVIDENCE OF APPROVAL.** Where plan approval is required by this chapter, one set of plans bearing the stamp of approval, a copy of the specifications, the approval-application form, and the approval letter shall be kept at the installation or alteration site from the beginning of construction until an inspection determines compliance with this chapter for the approved scope of work.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: cr. (2) (e) 3. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.1009 Identification of conveyances. (1) **REGISTRATION NUMBER.** All conveyances that are required to have a permit to operate shall be identified by a registration number supplied by the department or agent municipality.

(2) **POSTING.** The registration number shall be posted in the following manner:

(a) For a conveyance having a machine room, control room, or

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control space accessed directly from a building floor level or roof, on the main electrical disconnect or controller.

(b) For a conveyance having an inspection and test panel, inside the cover of the inspection and test panel.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14.

SPS 318.1010 Product approvals. (1) **VOLUNTARY APPROVAL.** (a) Materials, equipment, and products regulated by this chapter may receive a written approval from the department indicating code compliance.

(b) 1. Approval of materials, equipment, and products shall be based on sufficient data, tests, and other evidence that prove the material, equipment, or product is in compliance with the standards specified in this chapter.

2. Tests, compilation of data, and calculations documenting compliance shall be provided by one of the following:

- a. A qualified independent third party.
- b. A Wisconsin-registered architect or engineer.

(2) **REVIEW, APPROVAL, AND REVOCATION PROCESSES.** (a) 1. Upon receipt of a fee and a written request, the department may issue an approval for a material, equipment, or product.

2. The department shall review and make a determination on an application for approval after receipt of all forms, fees, plans, and information required to complete the review.

3. A determination shall be made within 45 business days of receipt of all required materials.

(b) 1. The department may include specific conditions in issuing an approval, including an expiration date for the approval.

2. Violations of the conditions under which an approval is issued shall constitute a violation of this chapter.

(c) If the department determines that the material, equipment, or product does not comply with this chapter or the intent of this chapter, the request for approval shall be denied in writing.

(d) If an approved material, equipment, or product is modified, the approval shall be considered null and void, and the modification shall be submitted to the department for review.

(e) 1. The department may revoke or deny an approval for any false statements or misrepresentations of relevant facts or data; unacceptability of a third party that provided any information on which the approval was based; or as a result of material, equipment, or product failure.

2. The department may reexamine an approved material, equipment, or product and issue a revised approval at any time.

3. The department may revoke an approval if the department determines that the material, equipment, or product does not comply with this chapter or the intent of this chapter due to a change in the chapter or department interpretation of the chapter.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14.

SPS 318.1011 Inspections and permits to operate.

(1) **GENERAL.** Pursuant to s. 101.983 (2), Stats., no person may allow a conveyance to operate on property owned by the person unless the person holds a valid permit to operate for the conveyance, except this requirement does not apply to elevators or dumbwaiters that serve dwelling units.

Note: Although a permit to operate is not required under this subsection for elevators and dumbwaiters serving dwelling units, these elevators and dumbwaiters are subject to the requirements in section 101.983 (3) of the Statutes, which reads as follows: "If the owner and a prospective buyer of an individual residential dwelling unit that is served by a dumbwaiter or an elevator enter into a contract of sale for the unit that includes a provision requiring that the dumbwaiter or elevator be inspected, the inspection shall be performed by an elevator inspector licensed under s. 101.985 (3)."

(2) **INITIAL ISSUANCE.** (a) The department or agent municipality shall issue a permit to operate for the installation of a con-

veyance after an acceptance inspection by one of the following determines and documents that the conveyance was installed and constructed in compliance with this chapter:

1. The department.
2. An agent municipality.
3. A licensed elevator inspector who is referred to as enforcing this chapter, in a written contract between the inspection provider and the department.

(b) The issuance of a permit to operate by the department or agent municipality shall occur within 10 business days of completing and filing the inspection report.

(4) **PERMIT EXPIRATION.** (a) Each conveyance shall be assigned an inspection anniversary date by the department or agent municipality.

(b) A permit to operate shall be valid for one year from the assigned inspection anniversary date.

(5) **PERMIT RENEWAL.** (a) 1. The renewal of a permit to operate shall be contingent upon one or more inspections that determine that a conveyance is in compliance with this chapter and any preceding design, construction, and installation requirements of this chapter that were in effect during construction or installation of the conveyance.

2. The inspection or inspections under subd. 1. shall be conducted no sooner than 120 days prior to the expiration of the permit to operate.

3. The owner of an existing conveyance for which a permit to operate was issued by the department or agent municipality may have the inspection or inspections for the renewal of the permit conducted by one of the following:

- a. The department.
- b. An agent municipality.
- c. An independent licensed elevator inspector.
- d. A licensed elevator inspector who is referred to as enforcing this chapter, in a written contract between the inspection provider and the department.

4. If an independent licensed elevator inspector conducts the inspection or inspections under subd. 1, the renewal of the permit by the department or agent municipality shall be contingent upon receipt of a report under sub. (8) and the recommendation to issue the permit to operate.

(b) The inspection to renew a permit to operate shall include at least all of either of the following:

1. For elevators, escalators, moving walks, dumbwaiters, and material lifts, the items listed in ASME A17.1 sections 8.6 and 8.11.2 to 8.11.5, as modified by this chapter and depending upon the type of conveyance.

2. For platform lifts and stairway chairlifts, the items listed in ASME A18.1 sections 10.2.2, 10.3.1.1 to 10.3.1.7, and 10.3.3.4, as modified by this chapter and depending upon the type of conveyance.

(6) **ALTERATION INSPECTIONS.** The alteration of a conveyance requiring plan approval as specified under s. SPS 318.1007 shall be inspected by one of the following before placing the conveyance back into service:

- (a) The department.
- (b) An agent municipality.

(c) A licensed elevator inspector who is referred to as enforcing this chapter, in a written contract between the inspection provider and the department.

Note: Under section 101.983 (2) (e) and (3) of the Statutes, alterations, repairs, and replacements of components for an elevator or dumbwaiter that serves a dwelling unit — short of a complete replacement of the conveyance — are not re-

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quired to have plan approvals, or acceptance inspections corresponding to such approvals.

(7) **PREPARATIONS FOR DEPARTMENT INSPECTION.** (a) *No-tice of inspection.* Where the installation or alteration inspection is to be conducted by the department or agent municipality for a conveyance which has received an approval under s. SPS 318.1007, the installation contractor or the owner or owner's agent shall notify the department or agent municipality at least 5 business days in advance of when all work will be completed and the conveyance will be ready for inspection. If the equipment is not complete and ready for inspection at the scheduled time, all of the following may occur:

1. The inspection may be cancelled.
2. A cancellation fee may be assessed in accordance with ch. SPS 302.
3. The inspection may be rescheduled.

Note: All notifications under this paragraph should occur only with the consent of the installing contractor, in order to avoid the penalties in subdivisions 1. to 3.

(b) *Arrangements.* The owner or owner's agent shall make arrangements to enable the department or agent municipality to inspect all parts of the conveyance and any related equipment during the scheduled time.

(bm) *Elevator mechanic.* The installation contractor or the owner or owner's agent shall make arrangements to ensure that a licensed elevator mechanic or a licensed elevator mechanic-restricted is present for the inspection of the conveyance or related equipment during the entire inspection.

(c) *Cancellation.* Where a scheduled inspection is to be cancelled, the owner or owner's agent of a conveyance shall notify the department or agent municipality at least 2 business days before the scheduled time. Failure to do so may result in a cancellation fee assessed in accordance with ch. SPS 302.

(8) **INSPECTION REPORT.** Where an inspection specified in sub. (2), (5), or (6) is performed by someone other than an a licensed elevator inspector of the department or an agent municipality, the licensed elevator inspector shall file an inspection report with the department in accordance with all of the following:

(a) Reports shall be sent to the department in accordance with the department's electronic data interchange transfer guidelines, except as provided in par. (b), within 5 business days after completing the inspection unless additional time is authorized by the department.

(b) An approved form may be used in lieu of the electronic data interchange system where approved in advance by the department.

Note: Forms required under this chapter are available on the department's website at <https://dps.wi.gov>, or by request from the Department of Safety and Professional Services, P. O. Box 7302, Madison, Wisconsin 53708, or call (608) 266-2112.

(c) 1. The inspection report shall explain any violation or unsafe condition, with references to specific code sections and the nature of the deficiency.

2. Where an inspection report denotes conditions that pose an imminent threat to life or limb and require the conveyance to be taken out of service, both of the following shall be done immediately:

- a. The owner or owner's agent shall take the conveyance out of service.
- b. The licensed elevator inspector shall notify the department.

Note: The Department may be contacted at telephone (608) 266-7548 during normal business hours. The State Division of Emergency Management can be contacted at (800) 943-0003 during non-business hours.

3. The licensed elevator inspector shall provide the owner or owner's agent with a copy of the inspection report within 5 business days of the inspection.

(d) The inspection report shall be legible and complete.

(9) INDEPENDENT LICENSED ELEVATOR INSPECTOR PROCEDURES. Where inspections are provided by an independent licensed elevator inspector, all of the following requirements apply:

(a) The licensed elevator inspector shall submit written verification to the department of an agreement between the owner and the inspector for inspection services, no later than 30 calendar days after inspection service on equipment covered by this chapter is started. If the owner or inspector discontinues that service, the inspector shall notify the department no later than 30 days after the date of cancellation.

(b) If the licensed elevator inspector does not file a periodic inspection report with the department by 30 calendar days prior to the expiration date of the permit to operate, the department may conduct the inspection. If the department conducts the inspection, the owner will be charged a fee in accordance with ch. SPS 302 for each inspection.

(c) If the licensed elevator inspector is unable to obtain compliance with this chapter, the inspector shall notify the department. If the department conducts the inspection, the owner will be charged a fee in accordance with ch. SPS 302 for each inspection.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: r. (3), cr. (7) (bm), am. (8) (intro.), (c) 2. b., 3. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.1012 Agent municipalities. **(1) DESIGNATION.** (a) Pursuant to ss. 101.12 and 101.983 (4), Stats., the department may designate a municipality as an agent of the department and thereby assign the authority to review and approve conveyance plans and specifications, conduct inspections and issue permits to operate those installations located within the municipality's boundaries.

(b) The plan review activities of a municipality that is not a 1st or 2nd class city shall be limited to parameters specified in s. 101.12 (3) (b), Stats.

(2) CONDITIONS OF AGENT DESIGNATION. (a) In addition to the statutory provisions under s. 101.12 (3) (a) to (b), Stats., all agent municipalities shall comply with all of the following:

1. Employ or contract with licensed elevator inspectors to perform plan review and inspection functions.

2. Forward to the department any information requested by the department relative to the examination of plans and inspections of conveyances.

3. Notify the department, in writing, at least 60 days prior to the date upon which the agent municipality intends to relinquish the plan examination and inspection responsibilities for equipment covered under this chapter.

(b) An agent municipality may waive its jurisdiction for plan review and approval for any project. In that case, plans shall be submitted to the department for review and approval.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14.

SPS 318.1013 Accident reporting. **(1)** (a) Any bodily injury requiring more than first-aid treatment, that occurs in conjunction with a conveyance, shall be reported by the owner or owner's agent to the department or agent municipality within 2 business days of the injury, except as provided in par. (b).

(b) 1. Any fatality under par. (a) shall be reported to the department or agent municipality within 24 hours of the fatality.

2. For the purposes of this section, the agent municipality is the entity that issued the permit to operate for the conveyance.

(c) At minimum, a report in an acceptable format shall be submitted to the department or agent municipality.

Note: The department may be contacted by telephone at (262) 548-8600 during
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normal business hours. The State Division of Emergency Management can be contacted at (800) 943-0003 during non-business hours. A copy of the elevator/escalator accident report form SBD-10782 and the minimum information needed is available on the Industry Services' website at <http://dps.wi.gov/programs/industry-services>.

(2) The owner of a conveyance that causes a bodily injury under sub. (1) may not remove or disturb the conveyance or any of its components or permit any such removal or disturbance prior to receiving authorization from the department or agent municipality, except for the purpose of reducing further bodily injury or property damage, or as provided in sub. (4).

(3) The owner of a conveyance that causes a bodily injury under sub. (1) may not return or allow the return of the conveyance back into operation or service until receiving authorization from the department or agent municipality that issued the permit to operate, except as provided in sub. (4).

(4) Where authorized by a licensed elevator inspector, the conveyance may be temporarily returned to service until an inspection by the department or agent municipality verifies that continuation of service is acceptable.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: am. (2) Register May 2020 No. 773, eff. 6-1-20.

SPS 318.1014 Petition for variance. A petition for variance relating to a provision in this chapter may be submitted and shall be processed in accordance with ch. SPS 303. The petition for variance shall include, where applicable, a position statement from the fire department or local building official having jurisdiction, or both.

Note: Chapter SPS 303 requires the submittal of a petition for variance form (SBD 9890X) and a fee, and that an equivalency is established in the petition for variance which meets the intent of the rule being petitioned. Chapter SPS 303 also requires the Department to process regular petitions within 30 business days and priority petitions within 10 business days.

Note: Forms required under this chapter are available on the department's website at <https://dps.wi.gov>, or by request from the Department of Safety and Professional Services, P. O. Box 7302, Madison, Wisconsin 53708, or call (608) 266-2112.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14.

SPS 318.1015 Enforcement. Where an agent municipality administers and enforces this chapter, a regulated item or activity shall be directed to or addressed by the agent municipality before requesting input from the department.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14.

SPS 318.1016 Appeals. **(1) APPEAL OF DEPARTMENT ORDER.** Pursuant to s. 101.02 (6) (e), Stats., any person who owns or operates a conveyance that is affected by an order of the department may petition the department for a hearing on the reasonableness of the order.

(2) APPEAL OF LOCAL ORDER. Pursuant to s. 101.02 (7) (b), Stats., any person affected by a local order that is in conflict with a provision of this chapter may petition the department for a hearing on the grounds that the local order is unreasonable and in conflict with the rule of the department.

(3) CONTESTED CASE HEARING. In addition to any other right provided by law, any interested person may file a written request for a contested case hearing, as specified in s. 227.42, Stats.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: r. (4) Register May 2020 No. 773, eff. 6-1-20.

SPS 318.1017 Penalties. Penalties for violations of this chapter are subject to and may be assessed in accordance with s. 101.988 (3), Stats.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14.

SPS 318.1018 Investigations initiated by public.

(1) VERIFICATION OF RECEIPT. The department shall provide verification of receipt for any notice filed in accordance with s. 101.988 (1) (b), Stats. The department shall provide electronic
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verification of receipt of a web-based complaint form within 5 days of submission.

Note: Generally, the department provides verification of receipt within 60 days, unless submitted using the web-based complaint form. The web-based complaint form is available at <https://dpsps.wi.gov>.

(2) **REASONABLE GROUNDS TO INVESTIGATE.** The department shall provide electronic notice, or other notice as appropriate, to the person who filed the written notice of whether the department has determined that there are reasonable grounds to investigate within 45 days of making this determination.

(3) **INVESTIGATION CONCLUDED.** The department shall provide electronic notice, or other notice as appropriate, to the person who filed the written notice within 30 days after the conclusion of the resulting investigation.

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

Subchapter IV — Changes, Additions, or Omissions to ASME A17.1

SPS 318.1700 Changes, additions, or omissions to ASME A17.1. (1) **GENERAL.** Elevators, escalators, moving walks, and lifts shall be designed, constructed, installed, operated, maintained, tested, and inspected in accordance with ASME A17.1, except as otherwise provided in this chapter.

(2) **CHANGES, ADDITIONS, AND OMISSIONS.** Changes, additions, or omissions to ASME A17.1 are specified in this subchapter and are rules of the department and are not requirements of ASME A17.1.

(3) **ASME A17.2, A17.3, AND A17.5.** All references in ASME A17.1 to ASME A17.2, A17.3, and A17.5 are informational only and are not requirements of this chapter.

Note: The sections in this subchapter are generally numbered to correspond with the section numbering in ASME A17.1. For example, section SPS 318.1702 corresponds to ASME A17.1 Part 2.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: renum. (1) (a) to (1), r. (1) (b) Register May 2020 No. 773, eff. 6-1-20.

SPS 318.1701 Scope, application, and definitions.

(1) Substitute the following informational notes for the requirements in ASME A17.1 section 1.1:

Note: See sections SPS 318.1002 and 318.1003 for scope and application requirements.

Note: See ASME A18.1 and subchapter V for requirements relating to vertical and inclined platform lifts, and stairway chairlifts serving public buildings and places of employment.

(2) Substitute the following definitions for the corresponding definitions specified in ASME A17.1 section 1.3:

(a) “Authority having jurisdiction” means the department of safety and professional services, except as designated under s. SPS 318.1012.

(b) “Rated speed, down” means all of the following:

1. Prior to passing an acceptance inspection, the speed at which the car, platform, or chair of an electric elevator, dumbwaiter, material lift, vertical platform lift, inclined platform lift, or stairway chairlift is designed to operate in the down direction with rated load.

2. Upon acceptance inspection, the actual speed at which the car, platform, or chair of an electric elevator, dumbwaiter, material lift, vertical platform lift, inclined platform lift, or stairway chairlift operates in the down direction with rated load.

Note: “Rated speed, down” applies to components where “rated speed” is used to describe the speed in the down direction for determining performance criteria for that code section. For the actual downspeed of a hydraulic elevator, dumbwaiter, or material lift, see the definition for “operating speed in the down direction.”

(c) “Rated speed, up” means all of the following:

1. Prior to passing an acceptance inspection, the speed which

the car, platform, or chair of an elevator, dumbwaiter, material lift, vertical platform lift, inclined platform lift, or stairway chairlift is designed to operate in the up direction with rated load.

2. Upon acceptance inspection, the actual speed at which the car, platform, or chair of an elevator, dumbwaiter, material lift, vertical platform lift, inclined platform lift, or stairway chairlift operates in the up direction with rated load.

Note: “Rated speed, up” applies to components where “rated speed” is used to describe the speed in the up direction for determining performance criteria for that code section.

(3) This is a department informational note to be used under ASME A17.1 section 1.3:

Note: See subsections SPS 318.1004 (8) and (10) (ar) in subchapter I for definitions of “building code” and “elevator” because under section SPS 318.1003 (2) (a) those definitions supersede the corresponding definitions in ASME A17.1 section 1.3.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: renum. (2) to (2) (intro.) and am., cr. (2) (a) to (c), am. (3) Register May 2020 No. 773, eff. 6-1-20.

SPS 318.1702 Electric elevators. (1) PIT DRAINS AND SUMPS.

(a) This is a department informational note to be used under ASME A17.1 section 2.2.2.3:

Note: See ch. SPS 362 of the building code for hoistway drain and sump requirements for elevators in commercial buildings.

(b) Substitute the following informational note for the requirements in ASME A17.1 section 2.2.2.5:

Note: See chapter SPS 362 of the building code for hoistway drain and sump requirements for elevators in commercial buildings.

(bm) This is a department rule in addition to the requirements in ASME A17.1 section 2.4.5: The data plate shall indicate the minimum designed counterweight runby.

(c) This is a department informational note to be used under ASME A17.1 section 2.7:

Note: See section SPS 382.33 for prohibition of sumps and sump pumps in elevator machine rooms for elevators in commercial buildings.

(2) **MACHINERY SPACES, MACHINE ROOMS, CONTROL SPACES, AND CONTROL ROOMS.** (a) *Access to machine rooms and machinery spaces.* This is a department rule in addition to the requirements in ASME A17.1 section 2.7.3.1: Access to a machine room, machinery space, control room, or control space may not be through any toilet room, locker room, sleeping room, or similar room or space, except in one- or two-family dwellings.

(b) *Access doors and openings.* 1. This is a department rule in addition to the requirements in ASME A17.1 section 2.7.3.4.1: The entrance to a machine room, control space, or control room shall be identified with a permanent sign. The lettering on the sign shall be at least 1-inch high and state “elevator machine room,” or equivalent wording.

2. This is a department rule in addition to the requirements in ASME A17.1 section 2.7.3.4.3: Hoistway access doors shall be provided with an electric contact to remove power to the driving means when the panel is not in the closed position.

(c) *Headroom in machine rooms, machinery spaces, control rooms, and control spaces.* This is a department rule in addition to the requirements in ASME A17.1 section 2.7.4.1: For elevators installed to serve one- and two-family dwellings, headroom in these spaces may comply with the requirements in ASME A17.1 section 5.2.1.7.1.

(d) *Temperature and humidity.* This is a department informational note to be used under ASME A17.1 section 2.7.9.2:

Note: See the building code for requirements prohibiting the transfer of contaminated air in commercial buildings.

(3) EQUIPMENT IN HOISTWAYS, MACHINERY SPACES, MACHINE ROOMS, CONTROL SPACES, AND CONTROL ROOMS. (a) *Equipment allowed.* This is a department rule in addition to the requirements in ASME A17.1 section 2.8.1: Access to machinery, equipment, wiring, piping, and other building components that are not used directly in connection with the elevator may not be permitted through hoistways, machine rooms, machinery spaces, control rooms, and control spaces.

(b) *Sprinklers.* This is a department rule in addition to the requirements in ASME A17.1 section 2.8.3.3.2: A means to disconnect the main-line power is not required for elevators installed to serve one- and two-family dwellings.

(4) PROTECTION OF HOISTWAY OPENINGS. (a) *Opening of hoistway doors.* The requirements in ASME A17.1 section 2.11.6.3 (e) are not included as part of this chapter.

(b) *Illumination at landing sills.* This is a department rule in addition to the requirements in ASME A17.1 section 2.11.10.2: Landing sills are not required to be illuminated at all times for elevators installed to serve one- and two-family dwellings.

(5) HOISTWAY DOOR LOCKING DEVICES AND ELECTRIC CONTACTS, AND HOISTWAY ACCESS SWITCHES. These are department rules in addition to the requirements in ASME A17.1 section 2.12.6.2:

(a) Where the elevator has a machine room, control room, or control space accessed from a floor level of the building, the unlocking device operating key shall be located adjacent to the elevator disconnecting means in that room or space. A label at the key shall state: "Hoistway door unlocking key. Place the disconnecting means in the off position and lock it, prior to using the hoistway door unlocking key."

(b) Where the elevator has an inspection and test panel without a machine room, control room, or control space, the unlocking device operating key shall be located in the key box required by sub. (10) (b) 3. A label inside the key box or on the key shall identify the key and state: "Place the disconnecting means in the off position and lock it, prior to using the hoistway door unlocking key."

(6) CAR FRAMES AND PLATFORMS. This is a department rule in addition to the requirements in ASME A17.1 section 2.15.9: Where an existing elevator is required to comply with ASME A17.1 section 2.15.9.2(a) as part of an alteration, and the depth of the existing pit does not allow for a platform guard of 48 inches in height, the car platform guard shall conform to section 2.15.9 to the extent that the existing pit will permit, but in no case less than the leveling or truck zone plus 3 inches. Raising the car buffer to provide only 1 inch of bottom-car runby may be necessary to maximize the height of the platform guard.

(7) CAPACITY AND LOADING. This is a department informational note to be used under ASME A17.1 section 2.16.1.1:

Note: See chapter SPS 362 of the building code for stretchersized elevator requirements in some commercial buildings.

(8) CAR AND COUNTERWEIGHT SAFETIES. This is a department rule in addition to the requirements in ASME A17.1 section 2.17.14: The manufacturer's model number shall also be marked on the metal plate.

(9) SPEED GOVERNORS. This is a department rule in addition to the requirements in ASME A17.1 section 2.18.9: The manufacturer's model number shall also be marked on the metal plate.

(10) EMERGENCY OPERATION AND SIGNALING DEVICES. (a) *Emergency or standby power system.* This is a department informational note to be used under ASME A17.1 section 2.27.2:

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Note: Standby power requirements for elevators in healthcare facilities are found in Article 517 of the *National Electrical Code*®, as adopted under chapter SPS 316. In other types of commercial buildings, stand-by power requirements are found in the building code under IBC chapter 27.

(b) *Firefighters' emergency operation.* 1g. This is a department informational note to be used under ASME A17.1 section 2.27.3.2.1:

Note: Where a conflict between NFPA 13 and NFPA 72 occurs relating to this section, the department will refer to NFPA 13.

1r. Substitute the following wording for the requirements in ASME A17.1 section 2.27.3.2.3 (a): The activation of a fire alarm initiating device specified in ASME A17.1 section 2.27.3.2.1 at any elevator lobby, other than at the designated level, shall cause all elevators that serve that lobby, and any associated elevator of a group automatic operation, to be returned nonstop to the designated level.

2. Substitute the following wording for the requirements in ASME A17.1 section 2.27.3.2.4 (a): The activation of a fire alarm initiating device specified in ASME A17.1 section 2.27.3.2.1(a) that is located in the elevator lobby at the designated level, shall cause all elevators serving that lobby to be recalled to the alternate level, unless Phase I emergency recall is in effect.

3. These are department rules in addition to the requirements in ASME A17.1 section 2.27.8:

a. An additional set of switch keys shall be kept in a lockable metal box mounted in a conspicuous location adjacent to the main elevator entrance or entrances at the designated level landing. Where a building has no fire command center and multiple lockable metal boxes, each box shall be openable by the same key. The box shall be openable only by the fire department, police department, licensed elevator inspector, and other authorized personnel. This does not prohibit additional keys from being placed in other approved locations.

b. Where the elevator has a machine room, control room, or control space, the key box shall also contain a key to access the machine room, control room, or control space, and the key shall be labeled for its use. A label inside the key box shall provide directions to the location of the disconnects, including room number where applicable.

c. Where the elevator has an inspection and test panel without a machine room, control room, or control space, the key box shall also contain the key for the lock used to secure the space, panel, or panels for the main disconnect, car light disconnect, and disconnects for any other elevator-utilization equipment. A label inside the key box shall provide directions to the location of the disconnects including room number where applicable.

4. This is a department exception to the requirements in ASME A17.1 section 2.27.9: The department may approve an equivalent sign.

(c) *One- and two-family dwellings.* 1. This is a department exception to the requirements in ASME A17.1 sections 2.27.3 to 2.27.9: The requirements in ASME A17.1 sections 2.27.3 to 2.27.9 apply to elevators serving one- or two-family dwellings as follows: where components addressed in those sections are installed, such components shall operate in accordance with those sections.

2. Substitute the following wording for the requirements in ASME A17.1 section 2.27.1: The elevator shall be provided with a hard-wired telephone or a telephone utilizing wireless, cellular, or other technology capable of operating at all points of elevator travel. The telephone shall be available in the elevator, charged if battery powered, and operational any time the elevator is in use.

If the telephone is not a hard-wired land line type, the elevator shall include a sign informing riders that a telephone is required to be present while operating the elevator.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: cr. (1) (bm), renum. (10) (b) 1. to (10) (b) 1r., cr. (10) (b) 1g., am. (10) (b) 3. a., b., cr. (10) (b) 4., renum. (10) (c) to (10) (c) 1., cr. (10) (c) 2. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.1703 Hydraulic Elevators. (1) HYDRAULIC JACKS. Substitute the following wording for the requirements in ASME A17.1 section 3.18.3.8.3(b):

(a) The cylinder bottom and sides below the pit floor shall be completely surrounded by a protective material designed to withstand a static head of water from the ground level to the bottom of the cylinder, based on the manufacturer's rating of the material.

(b) The top of the material shall be visible at the pit floor.

(c) A means shall be provided between the material and cylinder to monitor the space for the entrance of water. The means to monitor shall comply with all of the following:

1. Extend from above the pit floor to below the bottom of the jack.

2. Be open on the bottom.

3. Be exposed and visible at the pit floor.

4. Be capped, plugged, or otherwise sealed at the top with a removable means.

(d) The space between the material, the means to monitor and the jack shall be sealed at or near the pit floor to prevent the entrance of water from the pit.

(e) The material shall be one of the following:

1. Rigid, non-metallic material such as polyvinylchloride or high-density polyethylene, of a schedule that will withstand the installation process.

2. Flexible material that is approved by the department. Monitoring for the entrance of ground water shall be performed according to the following schedule with findings recorded in the maintenance record:

a. At the time of the acceptance inspection.

b. Quarterly for the first 2 years corresponding with quarterly checking of oil usage required by s. SPS 318.17086 (11) (a).

c. Annually thereafter.

(f) If at any time water is found that cannot be explained by some type of accidental entry, the material shall be replaced within 6 months.

(2) OPERATING DEVICES AND CONTROL EQUIPMENT. Substitute the following informational note for the requirements in ASME A17.1 section 3.26.3.1.2:

Note: Under ICC/ANSI A117.1, as applied through the building code, the anti-creep device must maintain the car within 1/2 inch of the landing irrespective of the position of the hoistway door.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: am. (1) (e) 2. b. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.1705 Special application elevators. (1) LIMITED-USE, LIMITED-APPLICATION ELEVATORS. Substitute the following wording for the requirements in ASME A17.1 section 5.2.1.7: Equipment shall be permitted to be located in rooms containing other equipment essential for the operation of the building.

(2) HYDRAULIC LIMITED-USE, LIMITED-APPLICATION ELEVATORS. This is a department exception to the requirements in ASME A17.1 section 5.2.2: Hydraulic limited-use, limited-application elevators are not required to conform to the requirements in ASME A17.1 section 5.2.1.19.

(3) PRIVATE RESIDENCE ELEVATORS. (a) This is a depart-

ment rule in addition to the requirements in ASME A17.1 section 5.3: Machinery spaces, machine rooms, control spaces, and control rooms where provided shall conform to the requirements in ASME A17.1 section 5.2.1.7.

(ag) This is a department rule in addition to the requirements in ASME A17.1 section 5.3: A previously approved residential elevator installed to serve a commercial building may be replaced with a residential type elevator in the existing hoistway. A new installation permit is required.

(ar) This is a department rule in addition to the requirements in ASME A17.1 section 5.3.1.1.1: With the car at the lowest landing, the space above the car shall be guarded on all accessible sides by a partial enclosure extension or skirt. The extension shall be solid material or openwork that will reject a ball 1/2 inch diameter. The extension shall extend from the lower landing ceiling to 1 to 2 inches below the top edge of the car. Horizontal clearance between the car and the extension shall be 3/8 inch to 3/4 inch.

(c) This is a department rule in addition to ASME A17.1 requirement 5.3.1.7.2: The vertical clearance between the hoistway door and the floor surface shall not exceed 3/8 inch.

(cc) This is a department rule in addition to the requirements in ASME A17.1 section 5.3.1.8.1:

1. The top of the car enclosure shall comply with the load requirements specified under ASME A17.1 section 2.14.1.6, except as specified in subd. 2.

2. A car enclosure shall be permitted to have a top that is not load bearing provided the top of the car enclosure is not needed to be accessed to service, maintain, or inspect any part of the elevator equipment and contains a sign meeting ANSI Z535.4 or its equivalent indicating the car top is not load bearing.

(cg) This is a department rule in addition to the requirements in ASME A17.1 section 5.3.1.6.1: Ropes and chains passing through a wall outside the hoistway enclosure shall be enclosed with a solid or openwork enclosure. If the enclosure is openwork, the enclosure shall reject a ball 13 mm, or 0.5 in., in diameter. Means for inspection shall be provided. The openings may not be larger than is necessary to clear the suspension means.

(cn) The allowance in ASME A17.1 section 5.3.1.7.4 (a) is not included as part of this chapter.

(cr) This is a department rule in addition to the requirements in ASME A17.1 section 5.3.1.14: Where the hoistway ends above an occupiable area, the floor below the car and counterweight must have sufficient strength to withstand, without failure, the impact of the car with rated load and counterweight descending at 125% of rated speed or governor tripping speed if a governor is provided.

(cw) This is a department rule in addition to the requirements in ASME A17.1 section 5.3.1.16: Rotating parts located outside of the hoistway for private residence elevators shall be enclosed with a solid or openwork enclosure. If the enclosure is openwork, the enclosure shall reject a ball 13 mm, or 0.5 in., in diameter. Means for inspection shall be provided. The openings may not be larger than is necessary to clear the rotating parts.

(d) The requirements in ASME A17.1 section 5.3.1.16.2(i)(2) are not included as part of this chapter.

(e) Substitute the following wording for the requirements in ASME A17.1 section 5.3.1.19: The elevator shall be provided with a hard-wired telephone or a telephone utilizing wireless, cellular, or other technology capable of operating at all points of elevator travel. The telephone shall be available in the elevator, charged if battery powered, and operational any time the elevator is in use. If the telephone is not a hard-wired land line type, the elevator

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shall include a sign informing riders that a telephone is required to be present while operating the elevator.

Note: *Accessible and Usable Buildings and Facilities, ICC A117.1*, Section 409 for private residence elevators standards is applicable in commercial buildings, under the incorporation of the International Building Code® in chs. SPS 361 to 366.

(4) ELEVATORS USED FOR CONSTRUCTION. This is a department rule in addition to the requirements in ASME A17.1 section 5.10.1.2.1.2: All elevators shall have an assigned operator while in use.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: cr. (3) (ag), (ar), renum. (3) (b) to (3) (cc) and, as renumbered, am. (3) (cc) 2., cr. (3) (c) 5., (cg), (cn), (cr), (cw) Register May 2020 No. 773, eff. 6-1-20; correction in (3) (c) 5. made under s. 35.17, Stats., Register May 2020 No. 773, eff. 5-1-20; CR 20-057: renum. (3) (c) (intro.) to (3) (c) and am., r. (3) (c) 1. to 5. Register April 2021 No. 784.

SPS 318.1707 Dumbwaiter and Type B material lifts. **(1) POWER AND HAND DUMBWAITERS WITHOUT AUTOMATIC TRANSFER DEVICES.** Substitute the following wording for the requirements in ASME A17.1 Part 7, Scope: This part applies to power dumbwaiters and Type B material lifts.

(2) HOISTWAY-ACCESS DOORS. This is a department rule in addition to the requirements in ASME A17.1 section 7.1.11.5: Hoistway access door panels for power dumbwaiters shall be provided with an electric contact to remove power to the driving machine when the panel is not in the closed position.

(3) HOISTWAY-DOOR VISION PANELS. Substitute the following wording for the requirements in ASME A17.1 section 7.1.11.8: Vision panels shall be provided in hoistway doors where position indicators are not provided. Vision panels shall comply with the requirements in ASME A17.1 sections 2.11.7.1.2, 2.11.7.1.3, 2.11.7.1.4, and 2.11.7.1.6, and the total area of one or more vision panels in any hoistway door may not be less than 4 square inches and not more than 25 square inches.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14.

SPS 318.17081 Security. This is a department rule in addition to the requirements in ASME A17.1 section 8.1: Key access for installations after June 1, 2020, as specified in this section, shall be verified by the department or agent municipality.

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.17086 Maintenance, repair, replacement, and testing. **(1) APPLICATION OF ASME A17.1 SECTION 8.6.** The introductory paragraph of ASME A17.1 section 8.6 is not included as part of this chapter.

(2) DOCUMENTATION. (a) These are department rules in addition to the requirements in ASME A17.1 section 8.6.1.1.3:

1. A new or updated maintenance control program, maintenance records, and wiring diagrams in electronic form shall be transferred to a paper copy of the documents by the installing or service contractor within 3 months of the associated maintenance, repair, replacement, or alteration.

2. The maintenance control program, including any devices and procedures needed to meet ASME A17.1 section 8.6.1.2.1 (f), and the maintenance records and wiring diagrams are the property of the conveyance owner, not a conveyance installer or service company. They may be removed only with the permission of the owner.

3. An additional set of electrical wiring diagrams may be securely located on the top of the car only if another complete set is located in a place that is accessible by the owner or the owner's agent.

(b) Substitute the following wording for the requirements in ASME A17.1 section 8.6.1.2.1 (a): For new installations, the initial maintenance control program shall be provided by the equipment manufacturer. For existing equipment undergoing any alter-

ation, repair, or replacement, the maintenance control program for the altered, repaired, or replaced components shall be provided by the person or firm performing the work. The maintenance control program shall be made available to elevator personnel at the scheduled time for service, tests, or inspection.

(c) Substitute the following wording for the requirements in ASME A17.1 section 8.6.1.2.1 (d): A copy of the maintenance control program shall be located as follows:

1. For a conveyance serving a commercial building and having a machine room, control room, or control space accessed directly from a building floor level or the roof, the program shall be located in that machine room, control room, or control space.

2. For a conveyance serving a commercial building and having an inspection and test panel, the inside cover of the inspection and test panel shall provide instructions for locating the maintenance control program. Instructions shall be permanently legible with lettering not less than 1/8 inch in height.

3. For a conveyance serving a dwelling unit, either the maintenance control program shall be at the controller or the front of the controller shall provide instructions for locating the maintenance control program. Instructions shall be permanently legible with lettering not less than 1/8 inch in height.

(d) Substitute the following wording for the requirements in the introductory paragraph of ASME A17.1 section 8.6.1.2.2: The documents specified in ASME A17.1 sections 8.6.1.2.2 (a), (b), and (c), and par. (e) shall be located as follows:

1. For a conveyance serving a commercial building and having a machine room, control room, or control space accessed directly from a building floor level or the roof, the documents shall be located in that machine room, control room, or control space.

2. For a conveyance serving a commercial building and having an inspection and test panel, the inside cover of the inspection and test panel shall provide instructions for locating the on-site documentation. Instructions shall be permanently legible with lettering not less than 1/8 inch in height.

3. For a conveyance serving a dwelling unit, either the on-site documentation shall be at the controller or the front of the controller shall provide instructions for locating the onsite documentation. Instructions shall be permanently legible with lettering not less than 1/8 inch in height.

(e) This is a department rule in addition to the requirements in ASME A17.1 section 8.6.1.2.2 (a), (b), and (c): Any plan approval letter, application form, and the plans issued under s. SPS 318.1008.

(f) This is a department rule in addition to the requirement in ASME A17.1 section 8.6.1.2.2 (c) (3): Written checkout procedures for two-way communication means shall be required for installations after June 1, 2020.

(g) Substitute the following wording for the requirements in the introductory paragraph of ASME A17.1 section 8.6.1.4: Maintenance records shall document compliance with the requirements in ASME A17.1 section 8.6. The maintenance records shall be retained for the most recent 5 years minimum, or from the date of installation or adoption of this chapter edition. Existing maintenance records up to 5 years minimum shall be retained. Maintenance records shall be located as follows:

1. For a conveyance serving a commercial building and having a machine room, control room, or control space accessed directly from a building floor level or the roof, the maintenance records shall be located in that machine room, control room, or control space.

2. For a conveyance serving a commercial building and having an inspection and test panel, the inside cover of the inspection

and test panel shall provide instructions for locating the maintenance records. Instructions shall be permanently legible with lettering not less than 1/8 inch in height.

3. For a conveyance serving a dwelling unit, either the maintenance records shall be at the controller or the front of the controller shall provide instructions for locating the maintenance records. Instructions shall be permanently legible with lettering not less than 1/8 inch in height.

(h) This is a department rule in addition to the requirements in ASME A17.1 section 8.6.1.4.2: The record of trouble calls shall be included in the on-site maintenance record.

(3) FIRE EXTINGUISHERS. Substitute the following wording for the requirements in ASME A17.1 section 8.6.1.6.5: In commercial buildings, a class “ABC” fire extinguisher shall be provided inside of, or within view and within 25 feet of, a dedicated elevator machine room, control room, machinery space, control space, or inspection and test panel as applicable, or a walk-in machine or control room for an escalator or moving walk.

(4) WITNESSING PERIODIC TESTS. Substitute the following wording for the requirements in ASME A17.1 section 8.6.1.7.1: Periodic tests may be witnessed by the department or agent municipality or by a person authorized by the department or agent municipality.

(5) PERIODIC TEST RECORD. Substitute the following wording for the requirements in ASME A17.1 section 8.6.1.7.2.: A record of the required periodic tests shall be included in the maintenance record and comply with all of the following:

(a) The test record shall include the tests, applicable code requirements, dates performed, the test results, and the name of the person performing the tests.

(b) The test record shall include the license number of the person performing the tests and the name of the company employing the license holder, for tests listed in ASME A17.1 sections 8.6.4.19, 8.6.4.20, 8.6.5.14, 8.6.5.15, 8.6.6.1.1, 8.6.6.2.1, 8.6.6.3.1, 8.6.7.1.1, 8.6.7.2.1, 8.6.7.5.1, 8.6.7.6.1, 8.6.7.7.1, 8.6.7.10, 8.6.8.15, 8.6.10.1.1, and 8.6.10.2.1.

(c) If an alternative test method in ASME A17.1 section 8.6.4.20 is utilized, the test report and test tag shall indicate alternative testing was utilized for the applicable requirement.

(6) EMERGENCY COMMUNICATIONS. This is a department rule in addition to the requirements in ASME A17.1 section 8.6.4.19.15: Written checkout procedures for emergency communications shall be required for installations after June 1, 2020.

(7) AUXILIARY POWER SYSTEM TESTS. Where an existing conveyance has an auxiliary power system designed to move the car in order to evacuate passengers, the system shall be tested as part of the Category 1 tests in accordance with manufacturers’ recommendations.

(8) MAINTENANCE AND TESTING OF ELECTRIC ELEVATORS. (a) *Periodic test requirements, Category 5.* This is a department rule in addition to the requirements in ASME A17.1 section 8.6.4.20: Results of all Category 5 tests shall be submitted to the department or agent municipality on approved forms.

Note: Forms required under this chapter are available on the department’s website at <https://dps.wi.gov>, or by request from the Department of Safety and Professional Services, P. O. Box 7302, Madison, Wisconsin 53708, or call (608) 266-2112.

(b) *Car and counterweight safeties.* This is a department rule in addition to the requirements in ASME A17.1 section 8.6.4.20.1: Any damaged section of wood guide rails shall be replaced.

(9) PERIODIC TEST REQUIREMENTS - CATEGORY 1. (a) *Hydraulic tests.* Substitute the following wording for the requirements in the introductory paragraph of ASME A17.1 section

8.6.5.8: An elevator that has hydraulic piping or a portion of its hydraulic cylinder either in the ground or below the pit floor, and not visible for inspection, shall be tested in accordance with the requirements in ASME A17.1 sections 8.6.5.14.1 and 8.6.5.14.2 or shall conform to the requirements in ASME A17.1 section 8.6.5.8 (a) or 8.6.5.8 (b).

(b) *Relief valve verification of setting and system pressure test.* This is a department rule in addition to the requirements in ASME A17.1 section 8.6.5.14.1: Results of the relief valve setting and system pressure test shall be submitted to the department or agent municipality on approved forms.

Note: Forms required under this chapter are available on the department’s website at <https://dps.wi.gov>, or by request from the Department of Safety and Professional Services, P. O. Box 7302, Madison, Wisconsin 53708, or call (608) 266-2112.

(c) *Hydraulic cylinders and pressure piping.* This is a department rule in addition to the requirements in ASME A17.1 section 8.6.5.14.2.: Results of the hydraulic cylinder and pressure piping tests shall be submitted to the department or agent municipality on approved forms.

Note: Forms required under this chapter are available on the department’s website at <https://dps.wi.gov>, or by request from the Department of Safety and Professional Services, P. O. Box 7302, Madison, Wisconsin 53708, or call (608) 266-2112.

(d) *Remove from service.* An elevator that fails a test specified in ASME A17.1 sections 8.6.5.14.1 or 8.6.5.14.2 may not be issued a permit to operate and may not be returned to service until the elevator conforms with the testing requirements.

(e) *Additional tests.* These are department rules in addition to the requirements in ASME A17.1 section 8.6.5.14.3:

1. Additional tests shall be performed including the emergency communications, in accordance with ASME A17.1 section 8.6.4.19.15, and the means to restrict hoistway or car door opening, in accordance with ASME A17.1 section 8.6.4.19.16.

2. Where an auxiliary power lowering operation, in accordance with ASME A17.1 section 3.26.10, is installed as part of the standby or emergency power operation, a test shall be performed as part of the Category 1 test requirements.

(10) PERIODIC TEST REQUIREMENTS. (a) This is a department rule in addition to the requirements in ASME A17.1 section 8.6.5.16: Results of all Category 5 tests shall be submitted to the department or agent municipality on approved forms,

(b) This is a department rule in addition to the requirements in ASME A17.1 section 8.6.7.3.1: Where an elevator of the private-residence type or Part V type serves a commercial building and is equipped with a safety device that is subject to testing, the 5-year safety test in ASME A17.1 section 8.6.4.20.1 – and where applicable, the governor test in ASME A17.1 section 8.6.4.20.2 – shall be performed. The test results shall be submitted to the department or agent municipality on an approved form.

Note: Forms required under this chapter are available on the department’s website at <https://dps.wi.gov>, or by request from the Department of Safety and Professional Services, P. O. Box 7302, Madison, Wisconsin 53708, or call (608) 266-2112.

(11) SPECIAL PROVISIONS. (a) These are department rules in addition to the requirements in ASME A17.1 section 8.6.11:

1. The record of oil level and oil usage shall be kept quarterly, as part of the record of oil usage required under ASME A17.1 section 8.6.5.7.

2. The record of oil level and oil usage required under subd. 1. shall be included in the maintenance record.

(b) Substitute the following wording for the requirements in ASME A17.1 section 8.6.11.1: Elevators provided with firefighters’ emergency operation shall be subjected quarterly by authorized personnel to Phase I recall by use of the key switch, and a minimum of one floor operation on Phase II where equipped.

Deficiencies shall be corrected. A record of the findings shall be included in the maintenance record.

Note: Other federal and state laws may require certain facilities to perform at more frequent intervals.

(c) This is a department informational note to be used under ASME A17.1 sections 8.6.11.4 to 8.6.11.9:

Note: Written procedures as specified in these sections will not be evaluated by the department.

(12) ALTERNATIVE TEST METHOD REPORT. This is a department rule in addition to the requirements in ASME A17.1 section 8.6.11.10.4: Where a completed test report for a Category 5 test is required to be sent to the department or agent municipality, the alternative test method report shall be sent to the department or agent municipality.

(13) EXAMINATIONS AFTER EVENTS. This is a department rule in addition to the requirements in ASME A17.1 sections 8.6.11.11 to 8.6.11.14: A record of the findings shall be included in the maintenance record.

(14) PERMIT TO OPERATE - CATEGORY 1. Category 1 test results shall be valid for one permit to operate term, regardless of whether the test is valid for the purposes of ASME A17.1.

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.17087 Alterations. (1) This is a department rule in addition to the requirements in ASME A17.1 section 8.7.2.8: Where sprinklers are added to an existing elevator machine room, machinery space, control room, control space, or top of hoistway, the installation shall comply with the requirements in ASME A17.1 section 8.7.2.28 (c) and (e), except as follows:

(a) Where the elevator already is equipped with Phase I and Phase II firefighters' emergency operation and the existing car operating panel will remain, the elevator is not required to have the firefighters' emergency operation functions on the car operating panel behind a locked cover, unless required by another part of ASME A17.1 section 8.7.

(b) Where the elevator already is equipped with a Phase I key switch of the bypass-off-on type, the key switch is not required to meet ASME A17.1 section 2.27.3.1 unless required by another part of ASME A17.1 section 8.7.

(2) Substitute the following wording for the requirements in ASME A17.1 section 8.7.2.14.1: Where an alteration consists of the installation of a new car, the installation shall conform to sections 2.14, 2.15, and 2.17.

(3) Substitute the following wording for the requirements in ASME A17.1 section 8.7.2.14.2 (i): Where an alteration consists of the installation of a car door or gate on an existing elevator car, the installation shall conform to 2.14.4, 2.14.5, and 2.14.6.

(4) Substitute the following wording for the requirements in ASME A17.1 section 8.7.2.16.4 (a): Car doors or gates shall be provided at all car entrances. Where new car doors or gates are installed, they shall conform to 2.14.4, 2.14.5, and 2.14.6.

(5) This is a department rule in addition to the requirements in ASME A17.1 section 8.7.2.17.1: Where an elevator is not equipped with Phase I and Phase II firefighters' emergency operation and an increase in rise results in travel of 25 feet or more above or below the designated level, the installation shall meet the requirements in ASME A17.1 sections 2.27.3 to 2.27.9 for the installation of firefighters' emergency operation.

(6) Substitute the following wording for the requirements in ASME A17.1 section 8.7.2.17.2 (b) (4): Car doors or gates shall be provided at all car entrances. Where new car doors or gates are installed, they shall conform to section 2.14.

(7) This is a department rule in addition to the requirements in ASME A17.1 section 8.7.2.28 (c): All elevators in the building

equipped with firefighters' emergency operation shall conform to the requirements in ASME A17.1 section 2.27.8 for switch keys.

(8) This is a department rule in addition to the requirements in ASME A17.1 section 8.7.2.28 (d): All elevators in the building equipped with firefighters' emergency operation shall conform to the requirements in ASME A17.1 section 2.27.8 for switch keys.

(9) This is a department rule in addition to the requirements in ASME A17.1 section 8.7.3.8: Where sprinklers are added to an existing elevator machine room, machinery space, control room, control space, or top of hoistway, the installation shall comply with the requirements in ASME A17.1 section 8.7.3.31.8 (c) and (e), except as follows:

(a) Where the elevator already is equipped with Phase I and Phase II firefighters' emergency operation and the existing car operating panel will remain, the elevator is not required to have the firefighters' emergency operation functions on the car operating panel behind a locked cover, unless required by another part of ASME A17.1 section 8.7.

(b) Where the elevator already is equipped with a Phase I key switch of the bypass-off-on type, the key switch is not required to meet ASME A17.1 section 2.27.3.1 unless required by another part of ASME A17.1 section 8.7.

(10) These are department rules in addition to the requirements in ASME A17.1 section 8.7.3.22.1:

(a) Where an elevator is not equipped with Phase I and Phase II firefighters' emergency operation and an increase in rise results in travel of 25 feet or more above or below the designated level, the installation shall meet the requirements in ASME A17.1 section 8.7.3.31.8 (c) for the installation of firefighters' emergency operation.

(b) A decrease in travel shall conform to the requirements of ASME A17.1 section 3.4.3.

(11) This is a department rule in addition to the requirements in ASME A17.1 section 8.7.3.31.8 (c): All elevators in the building equipped with firefighters' emergency operation shall conform to the requirements in ASME A17.1 section 2.27.8 for switch keys.

(12) This is a department rule in addition to the requirements in ASME A17.1 section 8.7.3.31.8 (d): All elevators in the building equipped with firefighters' emergency operation shall conform to the requirements in ASME A17.1 section 2.27.8 for switch keys.

(13) Substitute the following wording for the requirements in ASME A17.1 section 8.7.4.1: Where any alteration is made to a rack-and-pinion elevator, the altered portion shall comply with section 4.1.

(14) Substitute the following wording for the requirements in ASME A17.1 section 8.7.4.2: Where any alteration is made to a screw-column elevator, the altered portion shall comply with section 4.2.

(15) The requirements in ASME A17.1 section 8.7.5.3 are not included as part of this chapter.

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.17089 Code data plate. Substitute the following wording for the requirements in the introductory paragraph of ASME A17.1 section 8.9: ASME A17.1 section 8.9 contains requirements for all new equipment within the scope of this chapter.

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.170810 Acceptance inspections and tests, general requirements. (1) PERSONS AUTHORIZED TO MAKE ACCEPTANCE INSPECTIONS AND TESTS. Substitute the fol-

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following wording for the requirements in ASME A17.1 sections 8.10.1.1.1 and 8.10.1.1.3: All acceptance inspections shall be performed by licensed elevator inspectors.

(2) **PERSONS INSTALLING OR ALTERING EQUIPMENT.** This is a department rule in addition to the requirements in ASME A17.1 section 8.10.1.1.2: The installation may not be placed in service until authorized by the department or agent municipality.

(3) **ACCEPTANCE TEST REPORTS.** This is a department rule in addition to the requirements in ASME A17.1 section 8.10.1.1.5: The results of acceptance tests including those required to be witnessed by the licensed elevator inspector shall be recorded on forms of the department or agent municipality. Where witnessed, forms are not required to be submitted to the department or agent municipality.

Note: Forms required under this chapter are available on the department's website at <https://dps.wi.gov>, or by request from the Department of Safety and Professional Services, P. O. Box 7302, Madison, Wisconsin 53708, or call (608) 266-2112.

(4) **REPLACEMENT OF SPEED GOVERNOR INSPECTION AND TEST REQUIREMENTS.** This is a department rule in addition to the requirements in ASME A17.1 section 8.10.2.3.2 (f): Where a speed governor is replaced, in accordance with 8.6.3.6.1, tests shall be performed as specified in ASME A17.1 sections 8.10.2.2.2 (hh) and 8.6.4.20.2 (b).

(5) **ELEVATORS USED FOR CONSTRUCTION.** This is a department rule in addition to the requirements in ASME A17.1 section 8.10.5.10: The department may conduct a maximum of 2 billable construction use inspections in a 90-day period unless the department finds probable cause for additional inspections.

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.170811 General requirements for periodic inspections and witnessing of tests. (1) **PERSONS AUTHORIZED TO PERFORM PERIODIC INSPECTIONS AND TO WITNESS TESTS.** Substitute the following wording for the requirements in ASME A17.1 sections 8.11.1.1 and 8.11.1.1.1: Licensed elevator inspectors performing periodic inspections shall comply with the applicable credentialing requirements in ch. SPS 305.

(2) **PERSONS AUTHORIZED TO PERFORM PERIODIC TESTS.** Substitute the following wording for the requirements in ASME A17.1 section 8.11.1.1.2 (a): Licensed or registered elevator personnel performing periodic inspections and tests under ASME A17.1 section 8.11 shall comply with ch. SPS 305. Licensed elevator inspectors may choose to witness tests.

(3) **PERIODIC TEST REPORTS.** Substitute the following wording for the requirements in ASME A17.1 section 8.11.1.1.2 (b): Results of required tests shall be reported by the person performing the test, on approved forms, where required.

Note: Forms required under this chapter are available on the department's website at <https://dps.wi.gov>, or by request from the Department of Safety and Professional Services, P.O. Box 7302, Madison, Wisconsin 53708, or call (608) 266-2112.

(4) **PERIODIC INSPECTION AND TEST FREQUENCY.** Substitute the following wording for the requirements in ASME A17.1 section 8.11.1.3:

(a) Periodic inspections shall be made at intervals not longer than one year.

(b) Except as provided in sub. (8), category 1 periodic tests shall be made at intervals not longer than one year.

(c) Category 3 periodic tests shall be made at intervals not longer than 3 years.

(d) Category 5 periodic tests shall be made at intervals not longer than 5 years.

(5) **INSTALLATION PLACED OUT OF SERVICE.** Substitute the following wording for the requirements in ASME A17.1 section 8.11.1.4:

(a) Placing a conveyance out of service shall include all of the following:

1. Removal of power feed lines from the load side terminals of the electrical disconnecting means.

2. Sealing of the disconnecting means in the open position.

3. Hoistway doors and access doors for an elevator, dumb-waiter, or material lift shall be permanently barricaded or mechanically fastened in the closed position with additional means. Only the landing where the car or platform is located may be secured by using the interlock.

Note: See ASME A17.1 section 8.1.3 for requirements relating to Group 2 security.

4. Securing the car and counterweights, where provided, to prevent either from falling due to suspension-member or equipment failure.

5. For escalators or moving walks, barricading of entrances to prevent access. Barricades shall be constructed in accordance with the building code.

6. Verification of compliance with subds. 1. to 4. by the department or agent municipality.

7. Written approval of the building code authority where a conveyance is part of a required accessible route in an occupied building.

(b) A conveyance placed out of service is no longer required to have periodic inspections or tests.

(c) Before the conveyance may be returned to service, a conveyance placed out of service shall have all applicable periodic inspections and tests performed, and shall meet the permit to operate requirements in s. SPS 318.1011.

(6) **INSTALLATION CONVERTED TO A TYPE A MATERIAL LIFT.** These are department rules in addition to the requirements in ASME A17.1 section 8.11.1.4:

(a) Converting an existing elevator to a type A material lift shall include all of the following:

1. Removal of in-car controls.

2. Installations of signs meeting ANSI Z535.4 or its equivalent stating "For Material Only. No Riders Permitted" at the hall controls and the former location of the car operating panel in letters not less than 1/2 inch in height and centered on the back wall of the car 72 inches above the car floor in letters not less than 2 inches in height.

3. Verification of compliance with subds. 1. and 2. by the department or agent municipality.

4. Written approval of the building code authority where the elevator is part of a required accessible route in an occupied building.

(b) A conveyance converted to a type A material lift is no longer required to have periodic inspections or tests.

Note: A type A material lift, although not regulated by the department, is still subject to federal or state regulations regarding occupational safety. Improper maintenance can result in injury or death for persons loading or unloading materials, maintaining equipment, or otherwise occupying the building.

(c) Converting a type A material lift back to a conveyance shall include complying with the permit-to-operate requirements in s. SPS 318.1011 and satisfactory completion of all applicable tests and inspections prior to returning the elevator to service.

(7) **PERIODIC INSPECTION AND TESTS OF ESCALATORS AND MOVING WALKS.** (a) *Clearance between step and skirt.* This is a department rule in addition to the requirements in ASME A17.1 section 8.6.8.2: Results of the clearance between the step and skirt shall be submitted to the department or agent municipality on approved forms.

(b) *Step/skirt performance index.* This is a department rule in addition to the requirements in ASME A17.1 sections 8.6.8.3.1 to

8.6.8.3.3: Results of the step/skirt performance index test shall be submitted to the department or agent municipality on approved forms.

Note: Forms required under this chapter are available on the department's website at <https://dsps.wi.gov>, or by request from the Department of Safety and Professional Services, P. O. Box 7302, Madison, Wisconsin 53708, or call (608) 266-2112.

(8) PERIODIC TESTS OF DUMBWAITERS. Category 1 periodic tests of dumbwaiters shall be made at intervals of not longer than 5 years.

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20; correction in (5) (a) 6. made under s. 35.17, Stats., Register May 2020 No. 773.

SPS 318.1709 Reference codes, standards, and specifications. (1) This is a department rule in addition to the requirements in ASME A17.1 Part 9: Any code or standard listed in section 9.1 without a specific year of issuance shall mean the published edition of that code or standard which was available on May 30, 2017, except where a different edition is specified directly or indirectly in the building code, that different edition applies.

(2) (a) Substitute chs. SPS 361 to 366 for the reference to ICC/ANSI A117.1 in ASME A17.1 section 9.1 and in any other ASME A17.1 section where that reference appears.

(b) Substitute ch. SPS 316 for the reference to NFPA 70 in ASME A17.1 section 9.1 and in any other ASME A17.1 section where that reference appears.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: cons. and renum. (1) (intro.) and (a) to (1) and am., r. (1) (b) Register May 2020 No. 773, eff. 6-1-20.

Subchapter V — Changes, Additions, or Omissions to ASME A18.1

SPS 318.1800 Platform lifts and stairway lifts. (1) **GENERAL.** Vertical platform lifts, inclined platform lifts, and stairway lifts shall be designed, constructed, installed, operated, maintained, tested, and inspected in accordance with ASME A18.1, except as otherwise provided in this chapter.

Note: The commercial building code, chapters SPS 361 to 366, establishes standards for buildings and components that may be associated with platform lifts and stairway lifts, including ramps, ramp slopes, stairway egress width, and the location, clearances, or position of controls for people with disabilities.

(2) CHANGES, ADDITIONS, AND OMISSIONS. Changes, additions, or omissions to ASME A18.1 are specified in this subchapter and are rules of the department and are not requirements in ASME A18.1.

Note: The sections in this chapter are generally numbered to correspond with the section numbering in ASME A18.1. For example, section SPS 318.1801 corresponds to ASME A18.1 Section 1.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14.

SPS 318.1801 Scope, application, and definitions. (1) **SCOPE AND APPLICATION.** Substitute the following informational note for the requirements in ASME A18.1 section 1.1:

Note: See sections SPS 318.1002 and 318.1003 for scope and application requirements.

(2) DEFINITIONS. (a) Substitute the following definitions for the corresponding definitions specified in ASME A18.1 section 1.3:

1. "Authority having jurisdiction" means the department of safety and professional services, except as designated under s. SPS 318.1012.

2. "Building code" means chs. SPS 361 to 366.

(b) This definition is in addition to the definitions in ASME A18.1 section 1.3: "Periodic inspection and tests" means routine inspection and tests plus additional detailed examination and op-

eration of equipment at specified intervals to check for compliance with the applicable requirements.

(3) REFERENCE CODES, STANDARDS, AND SPECIFICATIONS.

(a) This is a department rule in addition to the requirements in ASME A18.1 section 1.5: Any code or standard listed in Table 1.5-1 without a specific year of issuance shall mean the published edition of that code or standard which was available on August 3, 2017, except where a different edition is specified directly or indirectly in the building code.

(b) Substitute ASME A17.1–2016 for the ASME A17.1 reference in ASME A18.1 Table 1.5-1.

(c) Substitute ch. SPS 316 for the reference to NFPA 70 in ASME A18.1 Table 1.5-1 and in any other ASME A18.1 section where that reference appears.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: renum. (2) (intro.), (a), (b) to (2) (a) (intro.), 1., 2., renum. (2) (c) to (2) (b) and am., am. (3) (a), (b) Register May 2020 No. 773, eff. 6-1-20.

SPS 318.1802 Vertical platform lifts. (1) **RUNWAY ENCLOSURE PROVIDED.** (a) This is a department rule in addition to the requirements in ASME A18.1 sections 2.1.1.2 and 2.1.1.3: The clearance between the platform and the glazing in a fire-rated runway door shall be not more than 1 1/4 inches. The shear condition at the top of any glazing in the door shall be beveled at not less than 45 degrees.

(b) This is a department rule in addition to the requirements in ASME A18.1 section 2.1.1.7: Where the platform enclosure extends less than 79 inches above the platform, the horizontal clearance between the platform enclosure on a side not containing an entrance and the adjacent runway enclosure wall or the vertical surface of the machine tower may not exceed 4 inches. The horizontal clearance between the platform enclosure and the runway enclosure walls on either side of the machine tower may not exceed 12 inches. These maximum clearances do not apply to spaces above the machine tower or to any point more than 42 inches above the top landing.

(2) PARTIAL RUNWAY ENCLOSURE PROVIDED. (ag) This is a department rule in addition to the requirements in ASME A18.1 sections 2.1.1.2 and 2.1.1.3: Where the lift side of the door and sill present a smooth surface located not closer than 3/8 inch and not more than 3/4 inch from the access edge of the platform floor, the clearance between the edge of the platform floor and the glazing in a fire-rated runway door may not be more than 1 1/4 inches. The shear condition at the top of any glazing in the door shall be beveled at not less than 45 degrees.

(ar) This is a department rule in addition to the requirements in ASME A18.1 section 2.1.2.1: Where the platform enclosure extends less than 79 inches above the platform, the horizontal clearance between the platform enclosure on a side not containing an entrance and the adjacent runway enclosure wall or the vertical surface of the machine tower may not exceed 4 inches. The horizontal clearance between the platform enclosure and the runway enclosure walls on either side of the machine tower may not exceed 12 inches. These maximum clearances do not apply to spaces above the machine tower or to any point more than 42 inches above the top landing.

(b) This is a department rule in addition to the requirements in ASME A18.1 section 2.1.2.3: Where the lift side of the door and sill present a smooth surface located not closer than 3/8 inch and not more than 3/4 inch from the access edge of the platform floor, the clearance between the edge of the platform floor and the glazing in a fire-rated runway door shall be not more than 1 1/4 inches. The shear condition at the top of any glazing in the door shall be beveled at not less than 45 degrees.

(3) RUNWAY ENCLOSURE NOT PROVIDED. This is a depart-

ment rule in addition to the requirements in ASME A18.1 section 2.1.3: Lifts without runway enclosures shall meet the building code, specifically for any unguarded space below the lift platform of more than 27 inches above the floor.

(3m) RELOCATABLE LIFTS. The requirements of ASME A18.1 section 2.1.5 are not included as part of this chapter.

(4) RAMPS. (a) Substitute the following wording for the requirements in ASME A18.1 section 2.1.7.1: Ramps, where provided, shall be in accordance with the building code.

Note: A surface steeper than 1:48 within the wheelchair-maneuvering clearances that are required by the building code at a lift entrance are also required by the building code to have a power-opening entrance, with clearances to the lift call and door-opener button also meeting the building code.

(b) Substitute the following wording for the requirements in the last sentence and pars. (a) to (e) of ASME A18.1 section 2.1.7.2: When in use, the inclination of retractable ramps shall be in accordance with the building code.

(5) SIZE OF END ENTRANCE PLATFORMS. Substitute the following wording for the requirements in ASME A18.1 section 2.6.5: Platform lifts shall have a minimum clear width of 36 inches and a minimum clear length of 54 inches. For lifts complying with ASME A18.1 sections 2.1.1, 2.1.2, and 2.1.3, the net inside floor area may not exceed 18 square feet. For lifts complying with ASME A18.1 section 2.1.4, the net inside floor area may not exceed 25 square feet. Platform lift controls and the required grab rail or grab bar may not project more than 4 inches from the platform side wall measured between a minimum of 30 inches to a maximum of 48 inches above the platform floor.

(6) ILLUMINATION. Substitute the following wording for the requirements in ASME A18.1 section 2.6.6.3: An auxiliary illumination source shall be provided to give general illumination of not less than 0.2 foot candles on the floor and controls. The auxiliary illumination system shall function according to all of the following:

- (a) Activate when normal illumination fails.
- (b) Utilize not less than 2 lamps of approximately equal intensity.
- (c) Provide illumination of at least 0.2 foot candles for at least 90 minutes if the lift is designed and installed to operate normally for at least 2 cycles up and down after the lift's main power fails.
- (d) Provide illumination of at least 0.2 foot candles for at least 4 hours if the lift is not designed and installed to operate normally for at least 2 cycles up and down after the lift's main power fails.

(7) LIMITATION ON LOAD SPEED AND TRAVEL. Substitute the following wording for the requirements in the first and second sentences of ASME A18.1 section 2.7.1: Platforms with a floor area of 18 square feet or less shall have a rated load of not less than 750 pounds.

(8) OPERATING DEVICES. Substitute the following wording for the requirements in ASME A18.1 section 2.10.1: Operation of the lift from the landings and platform shall be controlled by continuous-pressure-type switches. The operating devices shall be designed so that both the up and down circuits cannot be operated at the same time.

Note: See the building code for requirements relating to accessible controls, operation, and signage.

(9) MANUAL OPERATION. Substitute the following wording for the requirements in ASME A18.1 section 2.10.10: A vertical platform lift which is not connected to a building's standby or emergency power and which is not equipped with rechargeable battery power capable of cycling the lift under full load for at least 2 cycles after normal building power is removed shall be provided with a means to manually raise or lower the platform to a landing. The means shall be operable only by lift personnel, and from a landing, without working directly over the platform.

(10) EMERGENCY SIGNALS. (am) These are department rules in addition to the requirements in ASME A18.1 sections 2.11, 2.11.1, and 2.11.3:

1. A vertical platform lift installed outdoors shall have an emergency signaling device provided in accordance with the requirements in ASME A18.1 sections 2.11.1 and 2.11.3, with a sound pressure rating of not less than 80 decibels nor greater than 90 decibels at 10 feet away. The signal shall respond without delay when the switch is activated.

2. A vertical platform lift installed indoors in a building that is staffed 24 hours per day shall have a signaling device provided in accordance with ASME A18.1 sections 2.11.1 and 2.11.3, which is audible at 10 decibels minimum above ambient sound, at a continuously-staffed location. The signal shall respond without delay when the switch is activated.

(bm) Substitute the following wording for the requirements in ASME 18.1 section 2.11.2: A vertical platform lift meeting the requirements in ASME A18.1 sections 2.1.1, 2.1.2, or 2.1.3 that is installed indoors in an area which is not visible to personnel at all times shall have emergency signaling devices provided in accordance with the requirements in ASME A18.1 section 2.11.1 and ASME A17.1 sections 2.27.1.1.1 to 2.27.1.1.3 and 2.27.1.1.5 except "in the elevator" and "in the car" mean "on the platform."

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: renum. (2) (a) to (2) (ar), cr. (2) (ag), am. (2) (b), cr. (3m), am. (4) (a), (b), cons. and renum. (5) (intro.) and (a) to (5) and am., r. (5) (b), am. (9), renum. (10) (intro.), (a), (b), (c) to (10) (am) (intro.), 1., 2., (bm) and, as renumbered, am. (10) (am) (intro.), (bm) Register May 2020 No. 773, eff. 6-1-20.

SPS 318.1803 Inclined platform lifts. (1) RUNWAYS. Substitute the following wording for the requirements in ASME A18.1 section 3.1.1: Inclined platform lifts shall be installed so that the necessary means of egress is maintained as required in the building code. For new installations, the egress width shall be measured with the inclined platform lift in the unfolded, usable position. For replacement of a previously approved inclined platform lift, the egress width may remain as it has been with the original lift in place, but may not be reduced by the replacement.

(2) LOWER LEVEL ACCESS RAMPS AND PITTS. (a) Substitute the following wording for the requirements in ASME A18.1 section 3.1.4.1: Ramping inclinations for floor-mounted ramps shall be in accordance with the building code.

Note: Under the building code, a floor surface steeper than 1:48 within the required wheelchair-maneuvering clearances at a lift entrance is a ramp, and a lift entrance at a ramp must have a power-opening device. Clearances to the lift call and door-opener button must also meet the building code.

(b) Substitute the following wording for the requirements in the last sentence and pars. (a) to (e) of ASME A18.1 section 3.1.4.2: When in use, the inclination of retractable ramps shall be in accordance with the building code.

(3) OPERATING DEVICES. Substitute the following wording for the requirements in A18.1 section 3.10.1: Operation of the lift from the landings and platform shall be controlled by continuous-pressure-type switches. The operating devices shall be designed so that both the up and down circuits cannot be operated at the same time.

Note: See the building code for requirements relating to accessible controls, operation, and signage.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14.

SPS 318.1804 Inclined stairway chair lifts. Substitute the following wording for the requirements in ASME A18.1 section 4.1.1: Stairway chairlifts shall be installed so that the required means of egress is maintained as required in the building code. For new installations, the egress width shall be measured with the stairway chair lift in the unfolded, usable position. For replacement of a previously approved stairway chair lift, the

egress width may remain as it has been with the original lift in place, but may not be reduced by the replacement.

Note: Stairway chairlifts complying with this section may be installed as a convenience for individuals but are not recognized by the building code as providing accessibility due to the inability of a wheelchair user to use them without assistance.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14.

SPS 318.1808 Hydraulic driving means. These are department rules in addition to the requirements in ASME A18.1 section 8.1:

(1) SHUTOFF VALVE. (a) A manually operated shutoff valve shall be provided between the hydraulic pump unit and the hydraulic cylinder.

(b) For a lift with a machine room, the shutoff valve under par. (a) shall be located inside the machine room and adjacent to the hydraulic pump unit.

(2) PUMP RELIEF VALVE. (a) *General.* Each pump or group of pumps shall be equipped with one or more relief valves conforming to all of the following, except as specified in par. (b):

1. Be located between the pump and the check valve.
2. Be of such a type and so installed in the bypass connection, that the valve cannot be shut off from the hydraulic system.
3. Be of sufficient size, individually or accumulatively, to pass the maximum rated capacity of the pump without raising the pressure more than 50% above the working pressure. Two or more relief valves may be used to obtain the required capacity.
4. Be sealed after being set to the correct pressure.

(b) *No relief valve.* A relief valve is not required for centrifugal pumps driven by induction motors, provided the shut-off, or maximum pressure that the pump can develop, is not greater than 135% of the working pressure at the pump.

(3) CHECK VALVE. A check valve shall be provided that will hold the platform lift with the rated load at any point if either of the following occurs:

- (a) The pump stops and the down valves are closed.
- (b) The maintained pressure drops below the minimum operating pressure.

(4) PRESSURE-GAUGE FITTINGS. A pressure-gauge fitting with a shutoff valve shall be provided at either of the following locations:

- (a) On the cylinder side of the check valve.
- (b) Immediately adjacent to the hydraulic control valve.

(5) TYPE TESTS, CERTIFICATION, AND MARKING PLATES FOR CONTROL VALVES. (a) *Engineering tests and certification process.* Each type or model and make of a hydraulic control valve shall be subjected to the engineering tests and to the certification process specified in ASME A17.1 section 8.3.5, except ASME A17.1 section 8.3.5.3.1 does not apply.

(b) *Hydraulic controls.* Hydraulic control valves shall be plainly marked in a permanent manner with all of the following information:

1. The certifying organization's name or identifying symbol.
2. The name, trademark, or file number by which the organization that manufactured the product can be identified.
3. Type designation.
4. Component-rated pressure.
5. Electrical coil data.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14.

SPS 318.1809 Rope sockets. This is a department rule in addition to the requirements in ASME A18.1 section 9.8: Where wedge rope sockets are provided, they shall conform to the requirements in ASME A17.1 section 2.20.9.5.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14.

Published under s. 35.93, Stats. Updated on the first day of each month. Entire code is always current. The Register date on each page is the date the chapter was last published.

SPS 318.1810 Routine, periodic, and acceptance inspections and tests. **(1) INSPECTORS.** The requirements in ASME A18.1 sections 10.1.1 to 10.1.4 are not included as part of this chapter.

Note: See s. SPS 318.1011 for additional requirements relating to inspections

(2) APPLICABILITY OF INSPECTION AND TEST REQUIREMENTS. Substitute the following wording for the requirements in ASME A18.1 section 10.1.5: Inspections and tests required by subs. (4) to (8) are to determine whether the equipment conforms to whichever of the following are applicable:

(a) The standard in effect on the contract date for the original installation.

(b) For altered components, the standard in effect on the contract date for the alteration.

(3) INSTALLATION PLACED OUT OF SERVICE. Substitute the following wording for the requirements in ASME A18.1 section 10.1.6:

(a) When an installation is placed out of service, all of the following requirements shall be met:

1. The power feed lines shall be disconnected from the machine disconnect switch or equivalent.
2. For a vertical platform lift, the doors or gates shall be secured against opening.
3. The department or agent municipality shall be notified.
4. The department or agent municipality may inspect the lift and charge an inspection fee.
5. Periodic inspections and tests may be discontinued while a lift is out of service.
6. Written approval of the building code authority where a conveyance is part of a required accessible route in an occupied building.

(b) Before the lift may be placed back into service, all applicable inspections and tests shall be performed as required by subs. (2) and (4) to (8), and the permit-to-operate requirements in s. SPS 318.1011 shall be met.

Note: The building code may prohibit placing a vertical or inclined platform lift out of service where used by persons with disabilities. Consult with a building inspector for written permission prior to placing it out of service.

(4) ROUTINE INSPECTIONS AND TESTS. Substitute the following wording for the requirements in ASME A18.1 section 10.2.1: Routine inspections and tests of sections 2 and 3 lifts shall be performed at intervals of not longer than one year. Routine inspections and tests of section 4 lifts shall be performed at intervals of not longer than 3 years.

(5) INSPECTIONS AND TEST REQUIREMENTS. Substitute the following wording for the requirements in ASME A18.1 section 10.2.2: Routine inspections shall include the applicable items listed in ASME A18.1 sections 10.2.2.1 to 10.2.2.4. Where an inspection reveals a need for a test to be conducted, the licensed elevator inspector may order the test.

(6) PERIODIC INSPECTIONS AND TESTS. Substitute the following wording for the requirements in ASME A18.1 section 10.3: Periodic inspections shall be performed at the same time as routine inspections. Where an inspection reveals a need for a test to be conducted, the inspector may order the test.

(7) FIVE-YEAR INSPECTION AND TEST REQUIREMENTS. (a) This is a department rule in addition to the requirements in ASME A18.1 section 10.3.3.1: Where a lift is equipped with a safety device that is subject to testing, the 5-year safety test – and where applicable, the governor test in ASME A18.1 section 10.3.3.2 – shall be performed. The test results shall be submitted to the department or agent municipality on an approved form.

Note: Forms required under this chapter are available on the department's website at <https://dps.wi.gov>, or by request from the Department of Safety and Profes-

sional Services, P. O. Box 7302, Madison, Wisconsin 53708, or call (608) 266-2112.

(b) This is a department rule in addition to the requirements in ASME A18.1 section 10.1.3: The hydraulic control valves shall be tested in accordance with the requirements in ASME A17.1 8.10.3.2.2 (v).

(c) Substitute the following wording for the requirements in ASME A18.1 subsection 10.3.3.1 (b): For Type A safeties and Type A safety parts of Type C safeties, there shall be sufficient travel of the safety rollers or dogs remaining after the test to bring the platform and its rated load to rest on safety application at governor tripping speed. A metal tag shall be attached to the lift tower in a permanent manner that is readily visible to inspectors without disassembly, giving the date of the safety test together with the name of the person or firm who performed the test.

(8) INSPECTION AND TEST REQUIREMENTS FOR ALTERED INSTALLATIONS. Substitute the following wording for the requirements in ASME A18.1 section 10.5: Where an alteration is made to an existing installation, the affected components shall comply with the applicable portions of ASME A18.1 sections 2 to 4, 8, and 9.

Note: Where plan submittal and approval and inspections are required under Table SPS 318.1007-4, inspections and tests are required as specified in subsection (2).

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 19-118: cr. (3) (a) 6., am. (4), (5), renum. (7) to (7) (a), cr. (7) (b), (c) Register May 2020 No. 773, eff. 6-1-20.

SPS 318.1811 Maintenance logs. (1) WEEKLY OPERATION PROCEDURE. The requirements in ASME A18.1 section 11.1.2 (c) are not included as part of this chapter.

(2) ON-SITE DOCUMENTATION. This is a department rule in addition to the requirements in ASME A18.1 part 11.3: For a lift having an inspection and test panel, the inside cover of the inspection and test panel shall provide instructions for locating the on-site documentation. Instructions shall be permanently legible with lettering not less than 1/8 inch in height.

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

Subchapter VI — Changes, Additions, or Omissions to ANSI E1.42

SPS 318.4200 Entertainment technology. (1) GENERAL. Orchestra pit lifts shall be designed, constructed, installed, operated, maintained, tested, and inspected in accordance with ANSI E1.42, except as otherwise provided in this subchapter.

(2) CHANGES, ADDITIONS, AND OMISSIONS. Changes, additions, or omissions to ANSI E1.42 are specified in this subchapter and are rules of the department and are not requirements in ANSI E1.42.

Note: The sections in this subchapter are generally numbered to correspond with the chapter numbering in ANSI E1.42. For example, section SPS 318.4201 corresponds to ANSI E1.42 Chapter 1.

(3) RETROACTIVITY. The operation, testing, maintenance, and periodic inspection requirements of this subchapter apply to all orchestra pit lifts existing prior to June 1, 2020.

(4) PIT ACCESS. Orchestra pit lifts installed after June 1, 2020, in accordance with this subchapter shall include a means to access the pit for use when the lift is at the lowest landing.

(5) STAGE FALL PROTECTION PLAN. An orchestra pit lift owner shall develop and implement a protection plan to address the hazard of stage edge falls.

Note: An example of a stage edge fall protection plan is available in ANSI E1.42 Annex B.

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.4201 Scope and application. (1) The state—
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ment in ANSI E1.42 section 1.1.1.1 is not included as part of this subchapter.

(2) This is a department rule in addition to the requirements in ANSI E1.42 section 1.1.2: This subchapter covers the design, construction, operation, inspection, testing, maintenance, alteration, and repair of orchestra pit lifts and the associated parts, rooms, spaces, and hoistways.

(3) This is a department rule in addition to the requirements in ANSI E1.42 section 1.1.4: An orchestra pit lift that is not covered by this subchapter shall be subject to s. SPS 318.1700 (1).

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.4202 Reference codes, standards, and specifications. Substitute the following requirement for ANSI E1.42 section 2.1: All references listed in ANSI E1.42 section 2.2 are informational only and are not requirements of this subchapter.

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.4203 Definitions. (1) Substitute the following definitions for the corresponding definitions specified in ANSI E1.42 chapter 3:

(a) “Authority having jurisdiction” means the department of safety and professional services, except as designated under s. SPS 318.1012.

(b) “Lifting load” means the load that the equipment is designed and installed to lift at the rated speed.

(c) “Qualified person” means one who is licensed for the corresponding work by the department under s. SPS 305.991.

(d) “Static load” means the live load that the orchestra pit lift is designed and installed to support while the lift platform is not in motion as provided by the manufacturer upon installation or as approved by the department.

(2) This is a department definition in addition to the definitions in ANSI E1.42 chapter 3: “Orchestra pit lift” has the meaning given in s. SPS 318.1004 (10) (g).

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.4204 Design requirements. (1) Substitute the following wording for the requirements in ANSI E1.42 section 4.3.3: The horizontal gaps between the edges of the lift platform floor and fixed floors shall be greater than zero, in order to avoid direct contact, and not greater than 3/4 inch.

(2) This is a department rule in addition to the requirements in ANSI E1.42 section 4.1.4.1: The means of stopping and preventing unintended movement of the lift platform shall be tested at 100% of rated load.

(3) Substitute the following wording for the requirements in ANSI E1.42 section 4.1.4.1.2: An inherently self-locking gear reducer or actuator that resists motion by a restraining force 150% or greater than the applied force may be permitted for use as secondary means against uncontrolled or unintended movement, where available from the manufacturer. Where the secondary means is installed, it shall be inspected by a qualified person.

(4) This is a department rule in addition to requirements in ANSI E1.42 section 4.3.3.1: The horizontal gaps shall be measured between the edge of the lift platform surface and the edge of the fixed floor.

(5) This is a department rule in addition to requirements in ANSI E1.42 section 4.6.1: The illumination levels shall be a minimum of 19 foot candles at the controller with the door open or closed, at the main disconnect location, and at the drive machines. The remainder of the pit floor shall be a minimum of 10 foot candles, including at access levels, the route to controller and

disconnect location, and any other Group 2 areas, in accordance with ASME A17.1, section 2.2.5, as applicable.

History: CR 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.4205 Control systems. (1) This is a department informational note to be used under ANSI E1.42 section 5.1.3:

Note: See s. SPS 316.620 and NEC 620 for additional requirements.

(2) Substitute the following wording for the requirements in ANSI E1.42 section 5.5.4: When actual and stored position data differ, setting or restoring position data for the lift shall only be done by qualified or competent persons.

(3) Substitute the following wording for the requirements in ANSI E1.42 section 5.6.1.2: The circumstances requiring the override shall be investigated by a competent person before an override is engaged and may only be performed by an authorized person in communication with the operator. Override devices shall be located in a position so as to provide the authorized person a clear line of sight to the condition requiring the override. Indicators at all operator positions shall change state to inform the operator that the override has been engaged. The override device may not initiate motion without the direct action of the lift operator and shall limit speed and direction of travel while engaged.

History: CR: 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.4206 Safety systems. (1) This is a department rule in addition to requirements in ANSI E1.42 section 6.3.1.2: Suitable active guarding mechanisms shall be per manufacturer's recommendations or as approved by the department.

(2) This is a department rule in addition to requirements in ANSI E1.42 section 6.4.6: The emergency unlocking or unlatching release systems shall be accessible only to competent persons.

History: CR: 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.4207 Installation and inspections. (1) Substitute the following for the requirements in ANSI E1.42 section 7.1.1: Orchestra pit lifts shall be tested in accordance with the applicable criteria in ASME A17.1 section 8.6.

(2) The requirement in ANSI E1.42 section 7.1.4 is not included as part of this subchapter.

(3) Substitute the following for the requirements in ANSI E1.42 section 7.2.2: Compliance testing may be observed by the department.

(4) Substitute the following wording for the requirements in ANSI E1.42 section 7.9.7.5: Any additional issues as identified by the manufacturer's instructions or noted by the department during previous inspections.

(5) These are department rules in addition to requirements in ANSI E1.42 chapter 7:

(a) Periodic inspections shall be made at intervals not longer than one year.

(b) Periodic tests in conformance with ANSI E1.42 sections 7.3, 7.4, 7.5, and 7.8 shall be made at intervals not longer than one year.

(c) Periodic tests in conformance with ANSI E1.42 sections 7.6, 7.7, 7.9, and 7.10 shall be made at intervals not longer than 5 years.

History: CR: 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

SPS 318.4208 Operation, maintenance, and repair.

(1) Substitute the following wording for the requirements in ANSI E1.42 section 8.1.2: A written record of all trainings for competent persons and authorized persons, including the names of the competent persons, the names of the authorized persons, the names and affiliations of the trainers, and the dates of any training received from the trainers shall be maintained and shall be made available for inspection on request.

(2) Substitute the following wording for the requirements in ANSI E1.42 section 8.2.4: If a fault, malfunction, damage, unusual sound, or other unusual performance of the orchestra pit lift occurs, then the operator shall stop the lift and evaluate the lift status. If corrective action cannot be taken within the authority of the operator, then the lift shall be taken out of service and referred to a competent person. Any such event and resulting actions shall be reported in accordance with section 8.3.4.

(3) Substitute the following wording for the requirements in ANSI E1.42 section 8.3.3: For new installations, the initial maintenance control program shall be provided by the equipment manufacturer. For existing equipment undergoing any alteration, repair, or replacement, the maintenance control program for the altered, repaired, or replaced components shall be provided by the person or firm performing the work. The maintenance control program shall be made available at the scheduled time for service, tests, or inspection.

(4) This is a department rule in addition to requirements in ANSI E1.42 section 8.3.4: A paper copy of the record shall be available.

(5) Substitute the following wording for the requirements in ANSI E1.42 section 8.4.1.2: Alterations and repairs to orchestra pit lifts manufactured to this standard shall be performed or supervised by qualified persons, in accordance with s. 101.984, Stats.

(6) Substitute the following wording for the requirements in ANSI E1.42 section 8.4.6.1: Orchestra pit lifts subject to this subchapter shall be inspected and operationally tested in accordance with ANSI E1.42 by a qualified person after any alterations, replacements, or repairs listed in table SPS 318.1007-1, as applicable. An orchestra pit lift may not be returned to service until it is in compliance with ANSI E1.42 section 8.4.6.

History: CR: 19-118: cr. Register May 2020 No. 773, eff. 6-1-20.

Chapter SPS 321

CONSTRUCTION STANDARDS

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Subchapter II — Design Criteria

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 SPS 321.03 Exits.
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Subchapter VII — Walls

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 SPS 321.28 Weather protection for roofs.

Subchapter IX — Fireplace Requirements

SPS 321.29 Masonry fireplaces.
 SPS 321.30 Masonry chimneys.
 SPS 321.32 Factory-built fireplaces.

Subchapter X — Construction in Floodplains

SPS 321.33 Construction in floodplains.
 SPS 321.34 Construction in coastal floodplains.

Subchapter XI — Installation of Manufactured Homes

SPS 321.40 Installation standards.

Note: Chapter Ind 21 was renumbered to be chapter ILHR 21, *Register*, February, 1985, No. 350, eff. 3-1-85. Chapter ILHR 21 was renumbered chapter Comm 21 under s. 13.93 (2m) (b) 1., Stats., and corrections made under s. 13.93 (2m) (b) 6. and 7., Stats., *Register*, January, 1999, No. 517. Chapter Comm 21 was reprinted to correct the Table of Contents, *Register* October 2009 No. 646. Chapter Comm 21 was renumbered chapter SPS 321 under s. 13.92 (4) (b) 1., Stats., *Register* December 2011 No. 672.

Subchapter I — Scope

SPS 321.01 Scope. The provisions of this chapter shall apply to the design and construction of all one- and 2-family dwellings.

History: Cr. *Register*, November, 1979, No. 287, eff. 6-1-80.

Subchapter II — Design Criteria

SPS 321.02 Loads and materials. Every dwelling shall be designed and constructed in accordance with the requirements of this section.

(1) **DESIGN LOAD.** Every dwelling shall be designed and constructed to support the actual dead load, live loads and wind loads acting upon it without exceeding the allowable stresses of the material. The construction of buildings and structures shall result in a system that provides a complete load path capable of transferring all loads from point of origin through the load-resisting elements to the foundation.

(a) **Dead loads.** Every dwelling shall be designed and constructed to support the actual weight of all components and materials. Earth-sheltered dwellings shall be designed and constructed to support the actual weight of all soil loads.

(b) **Live loads.** 1. 'Floors and ceilings.' Floors and ceilings shall be designed and constructed to support the minimum live loads listed in Table 321.02. The design load shall be applied uniformly over the component area.

Table 321.02-1

Component	Live Load (pounds per sq. ft.)
Floors.....	40
Garage floors.....	50
Exterior balconies, decks, porches.....	40
Ceilings (with storage).....	20
Ceilings (without storage).....	5

2. 'Snow loads.' Roofs shall be designed and constructed to support the minimum snow loads listed on the zone map. The loads shall be assumed to act vertically over the roof area projected upon a horizontal plane.

(c) **Wind loads.** Dwellings shall be designed and constructed to withstand either a horizontal and uplift pressure of 20 pounds per square foot acting over the surface area or the wind loads determined in accordance with ASCE 7-05, *Minimum Design Loads for Buildings and Other Structures*.

Note: ASCE 7-05 allows for substantial reduction from 20 psf as applied to the surface area.

(2) **METHODS OF DESIGN.** All dwellings shall be designed by the method of structural analysis or the method of accepted practice specified in each part of this code.

Note: See ch. NR 116, rules of the department of natural resources, for special requirements relating to buildings located in flood plain zones. Information regarding the elevation of the regional flood may be obtained from the local zoning official.

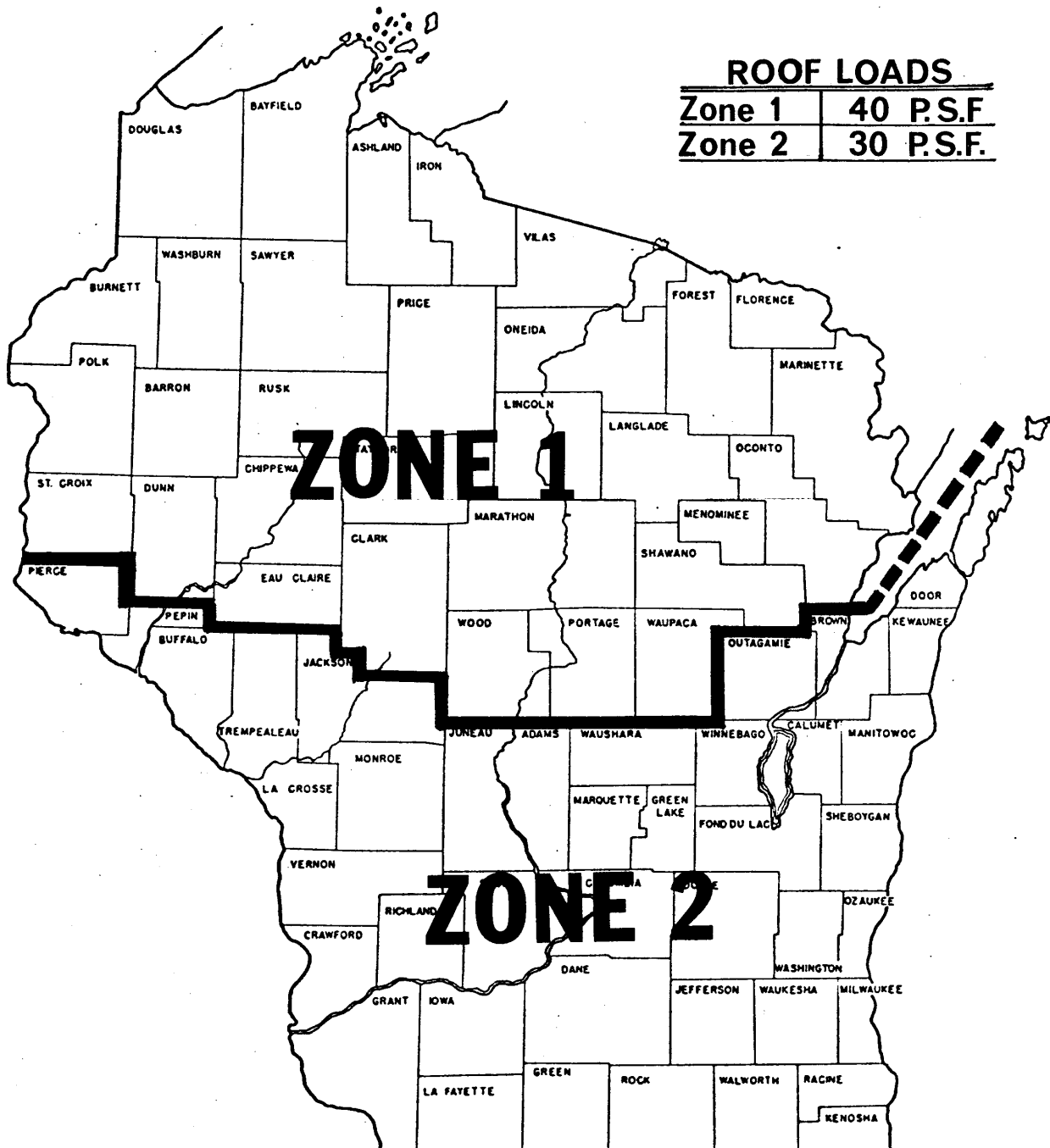
(3) **STRUCTURAL STANDARDS.** (a) *General.* Design, construction, installation, practice and structural analysis shall conform to the following nationally recognized standards.

(b) *Wood.* 1. Except as provided in subd. 1. a. and b., structural lumber, glue-laminated timber, timber pilings and fastenings shall be designed in accordance with the "National Design

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Specification for Wood Construction” and the “Design Values for Wood Construction,” a supplement to the National Design Specification for Wood Construction.

Figure 321.02
ZONE MAP FOR ROOF LOADS



a. Section 2.2.5.3. The cumulative effects of short-time loads, such as snow, shall be considered in determining duration of load. For snow load, no greater duration of load factor than 1.15 shall be used.

b. Section 4.1.7. The provisions of this section shall also apply to reused lumber. Reused lumber shall be considered to have a duration of load factor of 0.90.

2. Span tables for joists and rafters printed in ch. SPS 325 Appendix A or approved by the department may be used in lieu of designing by structural analysis.

3. Sawn lumber that is not graded in accordance with the standards under subd. 1., shall use the NDS published allowable design stresses for the lumber species using grade number 3 when used for studs, stringers, rafters or joists and may use grade number 1 when used for beams, posts or timbers.

(c) *Structural steel*. The design, fabrication, and erection of structural steel for buildings shall conform to Specification for Structural Steel Buildings and the provisions of the accompanying commentary as adopted under Table 320.24-3.

(d) *Concrete*. Plain, reinforced or prestressed concrete construction shall conform to the following standards:

1. ACI Standard 318, Building Code Requirements for Structural Concrete.

2. ACI Standard 332, Residential Code Requirements for Structural Concrete.

Note: Concrete construction in one- and two-family dwellings should meet the standards established in ACI 332. Construction means, materials, or methods not addressed in ACI 332 should meet the standards established in ACI 318.

(e) *Masonry*. The design and construction of masonry shall conform to the following standards:

1. ACI 530, Building Code Requirements for Masonry Structures.

2. ACI 530.1, Specification for Masonry Structures.

(f) *Engineered structural components*. Engineered structural components shall be used in accordance with structural analysis or with load tables supplied by the manufacturer, provided those load tables were developed using structural analysis or load testing.

(g) *Whole logs*. Dwellings constructed of whole logs shall conform to ICC 400, Standard on the Design and Construction of Log Structures.

Note: This standard requires the minimum log diameter to be 8 inches.

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

2. Fasteners shall comply with the schedule listed in Table 321.02-2.

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

Table 321.02-2
MINIMUM FASTENER SCHEDULE 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	3-8d
Joist to sill or girder, toe nail	3-8d
Band or rim joist to joist, end nail	3-16d
Band or rim joist to sill or top plate	2-16d at 16" o.c.
Bridging to joist, toe nail each end	2-8d
Built-up girder and beams, top loaded	10d at 32" o.c. at top and bottom and staggered and two at ends and at each splice
Built-up girder and beams, side-loaded	16d at 16" o.c. at top and bottom and staggered and two at ends and at each splice
Ledger strip to beam, face nail	3-16d each joist
Joist on ledger to beam, toe nail	3-8d
Wall Framing	
Sole plate to joist or blocking, face nail	2-16d at 16" o.c.
Top or sole plate to stud, end nail	2-16d
Stud to sole plate, toe nail	3-8d or 2-16d
Doubled studs, face nail	10d at 24" o.c.
Doubled top plates, face nail	10d at 24" o.c.
Doubled top plates, minimum 24-inch offset of end joints, face nail in lapped area	8-16d
Top plates, laps and intersections, face nail	2-10d
Continuous header, two pieces	16d at 16" o.c. along each edge
Continuous header to stud, toe nail	4-8d
1" corner brace to each stud and plate, face nail	2-8d or 2 staples, 1¾"
Built-up corner studs	10d at 24" o.c.
Roof/Ceiling Framing	
Ceiling joists to plate, toe nail	3-8d
Ceiling joist, laps over partitions, face nail	3-10d
Ceiling joist to parallel rafters, face nail	3-16d
Rafter to plate, toe nail (maximum 6 rafter span, engineered connector for longer)	2-16d

Table 321.02-2
MINIMUM FASTENER SCHEDULE TABLE (Continued)

Roof rafters to ridge, valley or hip rafters, toe nail	4-16d
Roof rafters to ridge, valley or hip rafters, face nail	3-16d
Collar ties to rafters, face nail	3-8d

Boards and planks

1" x 6" subfloor or less to each joist, face nail	2-8d or 2 staples, 1 $\frac{3}{4}$ "
Wider than 1" x 6" subfloor toe to each joist, face nail	3-8d or 4 staples 1 $\frac{3}{4}$ "
2" subfloor to joist or girder, blind and face nail	2-16d
1" x 6" roof or wall sheathing to each bearing, face nail	2-8d or 2 staples, 1 $\frac{3}{4}$ "
1" x 8" roof or wall sheathing to each bearing, face nail	2-8d or 3 staples, 1 $\frac{3}{4}$ "
Wider than 1" x 8" roof sheathing to each bearing, face nail	3-8d or 4 staples, 1 $\frac{3}{4}$ "
2" planks	2-16d at each bearing

Panel Sheathing

Material	Fastener	Spacing of Fastener	
		Edges	Intermediate Supports
Engineered wood panel for subfloor and roof sheathing and wall corner wind bracing to framing			
$\frac{5}{16}$ " to $\frac{1}{2}$ "	6d common or deformed nail or staple, $1\frac{1}{2}$ "	6"	12" ⁴
$\frac{5}{8}$ " to $\frac{3}{4}$ "	8d smooth or common, 6d deformed nail, or staple, 14 ga. $1\frac{3}{4}$ "	6"	12" ⁴
$\frac{7}{8}$ " to 1 "	8d common or deformed nail	6"	12"
$1\frac{1}{8}$ " to $1\frac{1}{4}$ "	10d smooth or common, or 8d deformed nail	6"	12"
Combination subfloor/ underlayment to framing			
$\frac{3}{4}$ " or less	6d deformed or 8d smooth or common nail	6"	12"
$\frac{7}{8}$ " to 1 "	8d smooth, common or deformed nail	6"	12"
$1\frac{1}{8}$ " to $1\frac{1}{4}$ "	10d smooth or common or 8d deformed nail	6"	12"
Wood panel siding to framing			
$\frac{1}{2}$ " or less	6d corrosion-resistant siding and casing nails	6"	12"
$\frac{5}{8}$ "	8d corrosion-resistant siding and casing nails	6"	12"
$\frac{1}{2}$ " structural cellulosic fiberboard sheathing	$1\frac{1}{2}$ " galvanized roofing nail; 8d common nail; staple 16 ga., $1\frac{1}{2}$ " long	3"	6"
$\frac{25}{32}$ " structural cellulosic fiberboard sheathing	$1\frac{3}{4}$ " galvanized roofing nail; 8d common nail; staple 16 ga., $1\frac{3}{4}$ " long	3"	6"
$\frac{1}{2}$ " gypsum sheathing ⁵	$1\frac{1}{2}$ " galvanized roofing nail; 6d common nail; staple galvanized $1\frac{1}{2}$ " long; $1\frac{1}{4}$ " screws, Type W or S	4"	8"
$\frac{5}{8}$ " gypsum sheathing ⁵	$1\frac{3}{4}$ " galvanized roofing nail; 8d common nail; staple galvanized $1\frac{5}{8}$ " long; $1\frac{5}{8}$ " screws, Type W or S	7"	7"

¹ All nails are smooth-common, box or deformed shank except where otherwise stated.

² Nail is a general description and may be T-head, modified round head or round head.

³ Staples are 16-gauge wire, unless otherwise noted, and have a minimum $\frac{7}{16}$ " o.d. crown width.

⁴ Staples shall be spaced at not more than 10" o.c. at intermediate supports for floors.

⁵ Apply vertically 4' x 8' or 4' x 9' panels.

(4) 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 fiberglass house, or any other nonconventional structure.

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*.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; r. and recr. (3) (a), am. (3) (c) and Table 21.02, cr. (3) (c) 2., Register, February, 1985, No. 350, eff. 3-1-85; cr. (3) (a) 3., am. (3) (b), renum. (3) (e) to be (3) (d), and am., Register, November, 1995, No. 479, eff. 12-1-95; renum. and am. (1) (c) to be (1) (c) 1., cr. (1) (c) 2. and 3., am. (3) (d), Register, January, 1999, No. 517, eff. 2-1-99; r. (3) (a) 3. and cr.

(3) (e), Register, March, 2001, No. 543, eff. 4-1-01; correction in (3) (b) made under s. 13.93 (2m) (b) 7., Stats., Register, March, 2001, No. 543; CR 02-077: am. (1) (intro.) and (d) Register May 2003 No. 569, eff. 8-1-03; corrections in (3) (b) and (d) made under s. 13.93 (2m) (b) 7., Stats., Register May 2003 No. 569; CR 08-043: r. (1) (c) 2. and 3., renum. (1) (c) 1., (3) (a) to (e) and (intro.) to be (1) (c), (3) (b) to (f) and (3) (a) and am. (3) (a) and (e), am. (3) (title), cr. (3) (b) 3., (e) 1., 2. and (g), am. (3) (e) Register March 2009 No. 639, eff. 4-1-09; correction in (1) (b) 1., (3) (c) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; EmR1403: emerg. am. (1) (c), eff. 4-1-14; CR 14-015: am. (1) (c) Register August 2014 No. 704, eff. 9-1-14; CR 15-041: renum. Table 321.02 to Table 321.02-1 and (1) (d) to (3) (h) 1. and am., am. (3) (c), (d) 1., 2., consol. (3) (g) (intro.) and 2. and renum. to (3) (g) and am., r. (3) (g) 1., cr. (3) (h) 2., Table 321.02-2 renum. from SPS 320 to 325 Appendix and am., (4) renum. from SPS 320.02 (5) and am. Register December 2015 No. 720, eff. 1-1-16; correction in (3) (b) 2. under s. 13.92 (4) (b) 7., Stats., Register December 2015 No. 720.

SPS 321.03 Exits. Exits, doors and hallways shall be constructed as specified in this section.

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(1) EXITS FROM THE FIRST FLOOR. (a) Except as allowed under par. (h), every dwelling unit shall be provided with at least 2 exit doors accessible from the first floor.

(b) At least one of the exits shall discharge to grade and may not go through a garage. This exit may include interior or exterior stairs.

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

(c) Any exit that does not comply with par. (b) may discharge to an outside balcony that complies with sub. (8).

(d) 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.

(e) Except as allowed under pars. (f) and (h), the 2 required exit doors shall be separated by at least the greater of the following distances:

1. One-third the length of the longest diagonal of the floor in plan view, exclusive of an attached garage.
2. 20 feet.

Note: See ch. SPS 325 Appendix A for examples of exit separation design.

(f) 1. First floor levels that do not meet the separation requirements under par. (e), shall have at least one egress window complying with sub. (6) on that floor level.

2. An egress window to comply with subd. 1. shall be separated from at least one door on the first floor by one of the distances under par. (e).

3. If first floor levels that do not meet the separation requirements under par. (e) contain one or more sleeping rooms, each sleeping room shall have at least one egress window complying with sub. (6).

(g) 1. The exit separation distance required under par. (e) shall be calculated or measured as a straight line from the midpoint of one doorway to the midpoint of the other doorway.

2. For exiting through an attached garage, the separation distance shall be measured using the door connecting the garage and the dwelling. Distance within the garage shall be ignored.

(h) 1. Dwellings consisting of no more than a first floor with a maximum floor area of 400 square feet and a loft area not exceeding half of the first floor area, shall be provided with at least one exit door leading directly to the exterior and at least one egress window that complies with sub. (6).

2. a. Dwellings that meet the size restrictions under subd. 1., are not required to meet the exit separation requirements under par. (e) or (f).

b. If a dwelling that meets the size restrictions under subd. 1., has more than one room on the first floor, the door and the egress window shall be located in different rooms.

3. One of the exit doors required in par. (a) may be omitted for a dwelling unit that has one or more egress windows on the first floor. If there are bedrooms, each must have a window that complies with sub. (6).

(2) EXITS FROM THE SECOND FLOOR. (a) At least 2 exits shall be provided from the second floor. 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 that discharges to grade, or to a balcony which complies with sub. (8), or to a deck that complies with s. SPS 321.225 and that is no more than 15 feet above the grade below.

(b) Windows that 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 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, no exit from the unit may go through another dwelling unit or other party's occupancy on the first floor.

(3) EXITS ABOVE THE SECOND FLOOR. (a) Except as provided under pars. (b) and (c), each habitable floor above the second floor shall be provided with at least 2 exits that meet all of the following requirements:

1. The exits shall be stairways or ramps that lead to the second floor or discharge to grade.

2. The exits shall be located such that an exit is accessible to the second floor if another exit is blocked.

(b) A second stairway or ramp exit is not required for habitable areas on a third floor that meet all of the following requirements:

1. The habitable area consists of a single room.

Note: Non-habitable areas, such as closets and bathrooms may be partitioned off.

2. The room is not used for sleeping.

3. The habitable area has a floor area of 400 square feet or less.

4. There is at least one egress window meeting the requirements of sub. (6) in the habitable area.

(c) A second stairway or ramp exit is not required for habitable areas on a third floor that meet all of the following requirements:

1. The dwelling is fully sprinklered in accordance with NFPA 13R or NFPA 13D.

2. If a required exit includes an attached garage, the garage shall be sprinklered.

(4) EXITS FROM LOFTS. (a) At least one stairway exit shall be provided, to the floor below, for a loft exceeding 400 square feet in area.

(b) At least one stairway or ladder exit shall be provided to the floor below for a loft, 400 square feet or less, in area.

(5) EXITS FROM BASEMENTS AND GROUND FLOORS. (a) *General.* Except as provided in par. (b), all basements and ground floors shall be provided with at least one exit of the following types:

1. A door to the exterior of the dwelling.

2. A stairway or ramp that leads to the floor above.

(b) *Basements and ground floors used for sleeping.* 1. Basements and ground floors used for sleeping shall be provided with at least 2 exits.

2. The exits shall be located as far apart as practical.

3. The exits may not be accessed from the same ramp or stairway.

4. In addition to the exit type required under par. (a), the second exit from a basement or ground floor used for sleeping shall be one of the following types:

a. A door to the exterior of the dwelling.

b. A stairway or ramp that leads to the floor above.

c. A stairway that leads to a garage provided the garage has an exit door other than the overhead door.

d. An egress window that complies with sub. (6), located in each bedroom.

(6) WINDOWS USED FOR EXITING. Windows which are installed for exit purposes shall comply with the requirements of this subsection.

(a) The window shall be openable from the inside without the use of tools or the removal of a sash. If equipped with a storm or screen, it shall be openable from the inside.

(b) 1. The nominal size of the net clear window opening shall be at least 20 inches by 24 inches irrespective of height or width. Nominal dimensions shall be determined by rounding up fractions of inches if they are ½-inch or greater or rounding down fractions of inches if they are less than ½-inch.

2. No portion of the window, including stops, stools, meeting rails and operator arms, shall infringe on the required opening.

(c) The area and dimension requirements of par. (b) may be infringed on by a storm window.

(d) 1. For any window used for exiting, the lowest point of clear opening shall be no more than 60 inches above the floor.

2. If the lowest point of clear opening is more than 46 inches above the floor, a permanent platform or fixture shall be installed such that a flat surface at least 20 inches wide and 9 inches deep is located no more than 46 inches directly below the clear opening.

3. The topmost surface of the platform or fixture shall be no more than 24 inches above the floor.

4. The topmost surface of the platform or fixture shall support a live load of at least 200 pounds.

5. A 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) 1. An egress window with any point of clear opening below adjacent grade shall be provided with an areaway in accordance with this section.

2. The width of the areaway shall be at least equal to the width of the window.

3. The areaway shall be a minimum of 36 inches measured perpendicular from the outer surface of the below-grade wall.

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 stair to aid egress. Stairs used to comply with this section are exempt from the requirements of s. [SPS 321.04](#).

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

b. Ladder rungs shall have a minimum inside width of at least 12 inches and shall project at least 3 inches from the wall behind the ladder.

c. Ladder rungs shall be able to support a concentrated load of 200 pounds.

d. Ladder rungs shall have a maximum rise of 12 inches between rungs and shall extend to within 12 inches of exterior grade.

6. The areaway shall be constructed such that water entering the areaway does not enter the dwelling.

(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.

(7) **DOORS USED FOR EXITING.** (a) Doors used for exiting from a dwelling shall meet the following dimensions:

1. At least one exit door shall be a swing-type door at least 80 inches high by 36 inches wide.

2. Except as allowed under subds. 3. and 4., other required exit doors shall be at least 76 inches high by 32 inches wide.

3. Where double doors are used as a required exit, each door leaf shall provide a clear opening at least 30 inches wide and be at least 76 inches high.

4. Where sliding doors are used as a required exit, the clear opening shall be at least 29 inches wide and be at least 76 inches high.

(b) All exit doors shall be openable from the interior without the use of a key.

(8) **BALCONIES.** (a) Balconies shall be made of concrete, metal or wood which is treated, protected or naturally decay-resistant in accordance with s. [SPS 321.10](#).

(b) Balconies shall be provided with guards in accordance with s. [SPS 321.04](#) (3).

(c) Balconies which are required for exit purposes shall also comply with all of the following requirements:

1. The balcony guard shall terminate no more than 46 inches above the floor level of the balcony.

2. The floor level of the balcony shall be no more than 15 feet above the grade below.

3. The floor of the balcony shall have minimum dimensions of 3 feet by 3 feet. The guard and its supports may infringe on the dimensions of the required area no more than 4.5 inches.

(9) **SPLIT LEVEL DWELLINGS.** In determining the exit requirement in a split level dwelling, all levels that are to be considered a single story shall be within 5 feet of each other.

(10) **TWO-FAMILY DWELLINGS.** In a 2-family dwelling, each dwelling unit shall be provided with exits in compliance with this section.

(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.

History: Cr. [Register, November, 1979, No. 287](#), eff. 6-1-80; r. and recr. [Register, February, 1985, No. 350](#), eff. 3-1-85; emerg. am. (1) (b), (2) and (5) (b) 2., eff. 5-7-85; r. (1) (b), renum. (1) (a) to be (1), am. (2), (7) and (8), r. and recr. (5) to (6), cr. (6m) and (10) to (12), [Register, January, 1989, No. 397](#), eff. 2-1-89; am. (3) and (7), r. and recr. (10) and (11), [Register, March, 1992, No. 435](#), eff. 4-1-92; am. (8), r. and recr. (10) (a), [Register, November, 1995, No. 479](#), eff. 12-1-95; am. (6m) (b) 1. and 2., r. (6m) (b) 3., [Register, January, 1999, No. 517](#), eff. 2-1-99; r. and recr. (1), (5), (7) and (8), am. (2) (b), r. (6), renum. (6m) to be (6) and r. and recr. (6) (d) and (e) as renum., [Register, March, 2001, No. 543](#), eff. 4-1-01; reprinted to correct printing error in (6) (e) 2., [Register September 2001 No. 549](#); CR 02-077: am. (1) (a), (5) (a) (intro.) and (10) (b), r. and recr. (1) (e), cr. (1) (f) to (h), [Register May 2003 No. 569](#), eff. 8-1-03; CR 03-097: am. (1) (h) 1., [Register November 2004 No. 587](#), eff. 1-1-05; CR 08-043: am. (title) and (1) (b), r. and recr. (3) and (7), renum. (6) (e) 5. and (10) to (12) to be (6) (e) 5. a. and (8) to (10), cr. (6) (e) 5. b. to d., r. (8) and (9) [Register March 2009 No. 639](#), eff. 4-1-09; correction in (2) (a) made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register March 2009 No. 639](#); CR 09-104: am. (1) (c) [Register December 2010 No. 660](#), eff. 1-1-11; correction in (6) (d) 5., (e) 4., (8) (a), (b) made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register December 2011 No. 672](#); CR 15-041: am. (1) (c), (d), cr. (1) (h) 3., am. (2) (a) to (c), (6) (d) 5., (e) 4., 5. a., cr. (6) (f), am. (7) (a) 4., (8) (b), (c) 1., 3., cr. (11) [Register December 2015 No. 720](#), eff. 1-1-16.

SPS 321.035 Interior circulation. (1) **DOORS AND OPENINGS.** All doors and openings to the following areas shall be at least 80 inches high and provide either a net clear opening width of 30 inches or be a 32-inch door:

(a) Except as provided under pars. (b) and (c), all entrances into common use areas.

(b) At least 50% of the bedrooms.

(c) 1. At least one full bathroom, including doors or openings to a sink, toilet and tub or shower. If this bathroom is accessible only through a bedroom, the bedroom door shall meet the minimum width requirements of this section.

2. If one or more full bathrooms are provided on the first floor, the bathroom meeting the requirements under this section shall be on the first floor.

Note: This section does not require a full bathroom on the first floor.

(2) **HALLWAYS.** (a) Except as allowed under par. (b), the clear width of hallways shall be at least 36 inches.

(b) The following are allowed to infringe on the required clear width of a hallway:

1. Door hardware and finish trim.

2. Handrails may infringe into the minimum width of a hallway up to 4½ inches on each side.

3. Heating registers may infringe into the minimum width of a hallway up to 4½ inches and no part of the register may be more than 38 inches above the floor.

4. Ducts, pipes, light fixtures, structural features, and corner treatments that are within 84 inches of the floor may infringe into the minimum width of a hallway by a maximum of 4½ inches on each side.

5. Unlimited infringements are allowed in a hallway more than 84 inches above the floor.

(3) **KITCHENS.** (a) There shall be at least 30 inches of clear-

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ance between a wall, a permanently-installed kitchen island, permanently-installed kitchen cabinets and the following kitchen appliances, if provided:

1. A range, cook top or oven.
2. A sink, refrigerator or freezer.

(b) Measurements shall be taken from the face of the wall, island, cabinet or appliance, ignoring knobs and handles.

Note: See ICC/ANSI A117.1 chapter 10 for more guidelines relating to doors and accessible routes. Under that standard, doors must be at least 80-inches in height and provide a minimum net clear opening of 31¾-inches in width in order to provide accessibility for people with disabilities.

History: CR 08-043; cr. Register March 2009 No. 639, eff. 4-1-09.

SPS 321.04 Stairways and elevated areas. (1)

SCOPE. (a) *General.* Except as provided under par. (b), the following stairways shall conform to the requirements of this section.

1. Every interior and exterior stairway attached to, or supported by any part of the structure covered under this code.

2. Tub access stairs, unless they are an integral part of an approved plumbing product.

(b) *Exceptions.* The following stairways are not required to comply with the requirements of this section:

1. Stairways leading to non-habitable attics or crawl spaces.
2. Non-required stairways connecting the basement directly to the exterior of the structure without communicating with any other part of the structure.

(2) *DETAILS.* (a) *Width.* 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.

2. Spiral staircases shall be at least 26 inches wide measured from the outer edge of the supporting column to the inner edge of the handrail.

(b) *Riser height.* 1. a. Except for spiral staircases under subd. 2., risers may not exceed 8 inches in height measured vertically from tread to tread.

b. At the top and bottom of a flight, measurement shall be taken from the top of the nosing to the finished floor surface unless the finished surface is carpeting, in which case measurement shall be made to the hard surface below the carpeting.

2. Risers in spiral staircases may not exceed 9.5 inches in height measured vertically from tread to tread.

(c) *Tread depth.* 1. 'Rectangular treads.' Rectangular treads shall have minimum tread depth of 9 inches measured horizontally from nosing to nosing.

2. 'Spiral staircase treads.' Spiral staircase treads shall have a minimum tread depth of 7 inches from nosing to nosing measured at a point 12 inches from the outer edge of the center column.

3. 'Winder treads in series.' Two or more winder treads may be placed immediately adjacent to each other anywhere in a stairway provided both of the following conditions are met:

a. The winder treads shall have a minimum tread depth of 7 inches measured at a point 12 inches from the narrow end of the tread.

b. The depth of the immediately adjoining winder treads shall be equal at a point 12 inches from the narrow end of the tread or inside face of spindles or balusters.

c. Winder treads may not be used on a straight stairway.

4. 'Individual winder treads.' 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 distance of 12 inches from the narrow end of the tread or from the inside face of the wall.

b. There may be more than one individual winder tread in a stairway.

c. Winder treads may not be used on a straight stairway.

(d) *Headroom.* 1. Stairways shall be provided with a minimum headroom clearance of 76 inches measured vertically from a line parallel to the nosing of the treads to the ceiling, soffit or any overhead obstruction directly above that line.

2. The headroom clearance shall be maintained over an intermediate landing.

3. The headroom clearance shall be maintained over a landing that is at the top or bottom of a stairway for a minimum distance of 36 inches in the direction of travel of the stairway.

(e) *Uniformity.* 1. Within a stairway flight, the greatest tread depth may not exceed the smallest tread depth by more than 3/8 inch and the greatest riser height may not exceed the smallest riser height by more than 3/8 inch.

2. The allowed variation in uniformity under subd. 1. may not be used to exceed the maximum riser height under par. (b) or to decrease the minimum tread depth under par. (c).

(f) *Open risers.* Stairways with open risers shall be constructed to prevent the through-passage of a sphere with a diameter of 4 inches or larger between any 2 adjacent treads.

(g) *Walking surface.* The walking surface of stair treads and landings shall be a planar surface that is free of lips or protrusions that could present a tripping hazard.

(3) *HANDRAILS AND GUARDS.* (a) *General.* 1. A flight of stairs with more than 3 risers shall be provided with at least one handrail for the full length of the flight.

2. Guards shall be provided on all open sides of 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.

Note: A handrail provided at 30 to 38 inches above the tread nosing meets the height requirement for a guard on a stairway.

3. a. Except as provided in subd. 3. b., guards shall be constructed to prevent the through-passage of a sphere with a diameter of 4 3/8 inches, 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, when applying a force of 4 pounds.

c. Rope, cable, or similar materials used in guard infill shall be strung with maximum openings of 3 1/2 inches with vertical supports a maximum of 4 feet apart.

Note: In some cases, the vertical supports could be simple cable stays that offer vertical support to the rope or cable span. Structural posts must be supplied to provide the rail with the minimum 200 pound load resistance, as well as to resist the tensile loads exerted by the tightened rope or cable.

4. a. Handrails and guards shall be designed and constructed to withstand a 200 pound load applied in any direction.

b. Handrail or guard infill components, balusters and panel fillers shall withstand a horizontally applied perpendicular load of 50 pounds on any one-foot-square area.

c. Glazing used in handrail or guard assemblies shall be safety glazing.

5. Exterior handrails and guards shall be constructed of metal, decay resistant or pressure-treated wood, or shall be protected from the weather.

(b) *Handrails.* 1. 'Height.' 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 tread.

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 guard, or at the start of a flight, the height at the fittings or bendings may exceed 38 inches.

2. 'Clearance.' The clearance between a handrail and the wall surface shall be at least 1 1/2 inches.

3. 'Winders.' a. Except as provided under subd. 3. b., the required handrail on winder stairs shall be placed on the side where the treads are wider.

b. Where all winder treads in a flight have a 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.

4. 'Projection.' Handrails and associated trim may project into the required width of stairs and landings a maximum of 4 1/2 inches on each side.

5. 'Size and configuration.' Handrails shall be symmetrical about the vertical centerline to allow for equal wraparound of the thumb and fingers.

a. Handrails with a round or truncated round cross sectional gripping surface shall have a maximum whole diameter of 2 inches.

b. Handrails with a rectangular cross sectional gripping surface shall have a maximum perimeter of 6 1/4 inches with a maximum cross sectional dimension of 2 7/8 inches.

c. Handrails with other cross sections shall have a maximum cross sectional dimension of the gripping surface of 2 7/8 inches with a maximum linear gripping surface measurement of 6 1/4 inches and a minimum linear gripping surface of 4 inches.

Note: See ch. SPS 325 Appendix A for further information on handrail measurement.

6. 'Continuity.' Handrails shall be continuous for the entire length of the stairs except in any one of the following cases:

a. A handrail may be discontinuous at an intermediate landing.

b. A handrail may have newel posts.

c. A handrail may terminate at an intermediate wall provided the lower end of the upper rail is returned to the wall or provided with a flared end, the horizontal offset between the 2 rails is no more than 12 inches measured from the center of the rails, and both the upper and lower rails can be reached from the same tread without taking a step.

(c) *Guards.* 1. 'Application.' a. All openings between floors, and open sides of landings, platforms, balconies or porches that are more than 24 inches above grade or a floor shall be protected with guards.

b. The requirements under subd. 1. a. apply where insect screens are the only means of enclosure or protection for a surface that is more than 24 inches above grade or a floor.

c. For exterior applications, the 24 inch vertical measurement shall be taken from the lowest point within 3 feet horizontally from the edge of the deck, landing, porch or similar structure.

d. This paragraph does not apply to window wells, egress wells, and retaining walls.

2. 'Height.' Guards shall extend to at least 36 inches above the floor or to the underside of a stair handrail complying with s. SPS 321.04 (3) (b). Measurement shall be taken from the hard structural surface beneath any finish material to the top of the guard.

3. 'Opening size.' Guards shall be constructed to prevent the through-passage of a sphere with a diameter of 4 3/8 inches, when applying a force of 4 pounds.

(4) *LANDINGS.* (a) *Intermediate landings.* 1. A level intermediate landing shall be provided in any stairway with a height of 12 feet or more.

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 treads and shall measure at least 36 inches in the direction of travel.

3. Curved or irregular landing shall have a radius of at least 36 inches.

4. Curved or irregular landings shall have a minimum straight line measurement of 26 inches between the nosing of the 2 connecting treads measured at a point 18 inches from the narrow end of the landing measured along the nosing of the 2 treads.

(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 treads and shall measure at least 3 feet in the direction of travel.

(c) *Doors at landings.* Except as provided in subds. 1. to 3. and par. (d), level landings shall be provided on each side of any door located at the top or base of a stair, regardless of the direction of swing. In the following exceptions, a stairway between a dwelling and an attached garage, carport or porch is considered to be an interior stair:

1. A landing is not required between the door and the top of interior stairs if the door does not swing over the stairs.

2. A landing is not required between the door and the top of an interior stairs of 1 or 2 risers regardless of the direction of swing.

3. A landing is not required between a sliding glass door or an in-swinging glass door and the top of an exterior stairway of 3 or fewer risers.

(d) *Exterior landings.* 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 have a length of at least 36 inches in the direction of travel out of the dwelling.

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

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; r. and recr. Register, February, 1985, No. 350, eff. 3-1-85; am. (intro.), r. and recr. (1) (c), renum. (3) (f) to Comm 21.042, Register, January, 1989, No. 397, eff. 2-1-89; r. and recr. (intro.) and (3) (c), am. (1) (a), (2) (a) and (c) 2. and (3) (a), cr. (2) (c) 6., March, 1992, No. 435, eff. 4-1-92; r. and recr., Register, November, 1995, No. 479, eff. 12-1-95; am. (1) (c) 1. and (d), renum. (2) (intro.) to (b) to be (2) (a) to (c) and am. (a), r. (2) (b) (intro.), Register, February, 1997, No. 494, eff. 3-1-97; reprinted to restore dropped copy, Register, March, 1997, No. 495; r. (1), renum. (intro.) to be (1) and am., renum. (2) and (3) to be (3) and (4), cr. (2) and r. and recr. (4) (a), Register, March, 2001, No. 543, eff. 4-1-01; CR 02-077: am. (2) (b) 1., (c) 1. and (3) (a), cr. (2) (f) and (3) (c) 3., r. and recr. (3) (b) 3., renum. (4) (c) to be (4) (c) 1. (intro.), a. to c. and 2. and am. (4) (c) 1. (intro.) and 2. Register May 2003, No. 569, eff. 8-1-03; CR 03-097: am. (2) (f), (3) (a) 3., and (c) 3. Register November 2004 No. 587, eff. 1-1-05; CR 08-043: r. and recr. (1), am. (2) (c) 2., 3. b. and (e) 1., cr. (2) (c) 3. c., 4. c., (g), (3) (a) 3. c., 4. b., c., (c) 1. b. and c., renum. (3) (a) 4. and (c) 1. to be (3) (a) 4. a. and (c) 1. a. Register March 2009 No. 639, eff. 4-1-09; CR 15-041: am. (1) (a) 2., (2) (a) 1., (c) 4. a., b., (3) (title), (a) 1. to 5., renum. (3) (b) 1. to (3) (b) 1. a. and am., cr. (3) (b) 1. b. to d., am. (3) (b) 3. a., b., (c) (title), 1. a., cr. (3) (c) 1. d., am. (3) (c) 2., 3., (4) (a) 2., (b), renum. (4) (c) 1. to (c) and am. (intro.) and 3., renum. (4) (c) 2. to (4) (d) 1. and am., cr. (4) (d) (title), 2. Register December 2015 No. 720, eff. 1-1-16; CR 15-041: am. (4) (c) 3. (omitted Register December 2015 No. 720) Register January 2016 No. 721.

SPS 321.042 Ladders. Ladders which are used as part of a required exit shall conform to this section.

(1) *DESIGN LOAD.* Ladders shall be designed to withstand loads of at least 200 pounds.

(2) *TREAD OR RUNGS.* (a) Minimum tread requirements shall be specified in Table 321.042. Treads less than 9 inches in width shall have open risers. All treads shall be uniform in dimension.

Table 321.042

Pitch of Ladder Angle to Horizontal (degrees)	Maximum rise (inches)	Minimum Tread (inches)
41.6 to 48.4	8	9
greater than 48.4 to 55.0	9	8
greater than 55.0 to 61.4	10	7
greater than 61.4 to 67.4	11	6
greater than 67.4 to 71.6	12	5
greater than 71.6 to 75.9	12	4
greater than 75.9 to 80.5	12	3
greater than 80.5 to 90	12	2

(b) Rungs may only be used for ladders with a pitch range of 75° to 90°. Rungs shall be at least 1 inch in diameter for metal ladders and 1 1/2 inch for wood ladders. All rungs shall be uniform in dimension.

(3) **RISERS.** Risers shall be uniform in height and shall conform with Table 321.042.

(4) **WIDTH.** The width of the ladder shall be a minimum of 20 inches wide and a maximum of 30 inches wide.

(5) **HANDRAILS.** (a) Handrails shall be required for ladders with pitches less than 65°.

(b) Handrails shall be located so the top of the handrail is at least 30 inches, but not more than 38 inches, above the nosing of the treads.

(c) Open handrails shall be provided with intermediate rails or an ornamental pattern such that a sphere with a diameter of 6 inches or larger cannot pass through.

(d) The clearance between the handrail and the wall surface shall be at least 1 1/2 inches.

(e) Handrails shall be designed and constructed to withstand a 200 pound load applied in any direction.

(6) **CLEARANCES.** (a) The ladder shall have a minimum clearance of at least 15 inches on either side of the center of the tread.

(b) The edge of the tread nearest to the wall behind the ladder shall be separated from the wall by at least 7 inches.

(c) A passage way clearance of at least 30 inches parallel to the slope of a 90° ladder shall be provided. A passage way clearance of at least 36 inches parallel to the slope of a 75° ladder shall be provided. Clearances for intermediate pitches shall vary between these 2 limits in proportion to the slope.

(d) For ladders with less than a 75° pitch the vertical clearance above any tread or rung to an overhead obstruction shall be at least 6 feet 4 inches measured from the leading edge of the tread or rung.

History: Renum. from Comm 21.04 (3) (f), cr. (intro.), Register, January, 1989, No. 397, eff. 2-1-89; am. (6) (b), Register, November, 1995, No. 479, eff. 12-1-95; am. (5) (b) and (c), Register, January, 1999, No. 517, eff. 2-1-99; correction in (2) (a), (3) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 321.045 Ramps. (1) **GENERAL.** Every exterior or interior ramp which leads to or from an exit shall comply with the requirements of this section.

Note: See ICC/ANSI A117.1 chapter 5 for more guidelines relating to the design and construction of an accessible ramp. Under that standard, ramps along an accessible route for people with disabilities should have a slope of not more than 1-foot of rise in 12-feet of run and should have handrails on both sides of the ramp.

(2) **SLOPE.** Ramps shall not have a gradient greater than 1 in 8 or one foot of rise in 8 feet of run. Walkways with gradients less than 1 in 20 or one foot of rise in 20 feet of run are not considered to be ramps.

(3) **SURFACE AND WIDTH.** Ramps shall have a slip resistant surface and shall have a minimum width of 36 inches measured between handrails.

(4) **HANDRAILS.** Handrails shall be provided on all open sides of ramps. Every ramp that overcomes a change in elevation of more than 8 inches shall be provided with at least one handrail.

(a) Ramps which have a gradient greater than 8.33% or 1:12 or one foot rise in 12 feet of run and which overcome a change in

elevation of more than 24 inches, shall be provided with handrails on both sides.

(b) Handrails shall be located so the top of the handrail is at least 30 inches, but not more than 38 inches above the ramp surface.

(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 when applying a force of 4 pounds, except as provided in subd. 2.

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 the toe-kick or side rail and the handrail.

(d) The clear space between the handrail and any adjoining wall shall be at least 1 1/2 inches.

(5) **LANDINGS.** A level landing shall be provided at the top, at the foot and at any change in direction of the ramp. The landing shall be at least as wide as the ramp and shall measure at least 3 feet in the direction of travel.

History: Cr. Register, January, 1989, No. 397, eff. 2-1-89; am. (3) (intro.), Register, March, 1992, No. 435, eff. 4-1-92; am. (3) (c), Register, November, 1995, No. 479, eff. 12-1-95; am. (3) (b), Register, January, 1999, No. 517, eff. 2-1-99; CR 03-097: am. (3) (c) Register November 2004 No. 587, eff. 1-1-05; CR 08-043: renum. (intro.) and (1) to (4) to be (1) to (5) and am. (1) Register March 2009 No. 639, eff. 4-1-09; CR 15-041: renum. (4) (c) to (4) (c) 1. and am., cr. (4) (c) 2. Register December 2015 No. 720, eff. 1-1-16.

SPS 321.05 Natural light and natural ventilation.

(1) **NATURAL LIGHT.** Each habitable 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:

(a) *Exception.* Habitable rooms, other than bedrooms, located in basements, ground floors or above garages do not require natural light.

(b) *Exception.* Natural light may be obtained from adjoining areas through glazed openings, louvers or other approved methods. Door openings into adjoining areas may not be used to satisfy this requirement.

(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.

(2) **VENTILATION.** (a) *Natural ventilation.* 1. Natural ventilation shall be provided to each habitable 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.

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

(b) *Exhaust ventilation.* All exhaust ventilation shall terminate outside the building.

(3) **SAFETY GLASS.** (am) Except as provided in par. (bm), glazing shall consist of safety glass meeting the requirements of 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. The nearest point of the glazing is within 5 feet of the floor.

c. The plane of the glazing is within 30 degrees of the plane of the door when the door is in the closed position.

2. In any wall where the glazing is within 5 feet vertically of the lowest drain inlet and within 3 feet horizontally of the nearest part of the inner rim of a bathtub, hot tub, shower, spa or whirlpool appliance.

3. Within 4 feet vertically of a tread or landing in a stairway and within one foot horizontally of the near edge of the tread or landing.

4. Within 4 feet vertically of the floor and 3 feet horizontally of the nosing of the top or bottom tread of a stair.

5. In guard assemblies.

(bm) Safety glass is not required where glazing meets any of the following:

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

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

Note: The U.S. Consumer Product Safety Commission requires safety glass for glazing in internal and external doors, including storm doors and patio doors, as well as for the tub or shower enclosures themselves. These federal rules, contained in 16 CFR, subchapter B, part 1201, apply in addition to any state rules or statutes.

Note: Glass blocks are considered to be masonry products and are regulated under the ACI 530 standard adopted under s. SPS 320.24. They are not required to be safety glazing.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; r. and recr. (1) and (2), Register, February, 1985, No. 350, eff. 3-1-85; r. and recr. (3) and (4), Register, July, 1986, No. 367, eff. 1-1-87; am. (4), Register, January, 1989, No. 397, eff. 2-1-89; am. (2) (a), (4) and (5), Register, March, 1992, No. 435, eff. 4-1-92; am. (2) (a), Register, November, 1995, No. 479, eff. 12-1-95; am. (3), r. and recr. (4) and (5), Register, January, 1999, No. 517, eff. 2-1-99; CR 02-077: am. (1) (a) and (5) (b) Register May 2003 No. 569, eff. 8-1-03; CR 08-043: am. (title), r. (3) and (4), renum. (5) to be (3) and am. (3) (intro.), r. and recr. (3) (a) and (b) Register March 2009 No. 639, eff. 4-1-09; CR 15-041: am. (1) (intro.), cr. (1m), renum. (2) (a) to (2) (a) 1. and am., cr. (2) (a) 2., renum. (3) (intro.) and (a) to (d) to (3) (am) (intro.) and 1. to 4. and am. (am) (intro.), 1. (intro.), a., cr. (3) (am) 5., renum. (3) (e) to (3) (bm) (intro.) and am., cr. (3) (bm) 1. to 3. Register December 2015 No. 720, eff. 1-1-16; CR 15-089: am. (1) (a) Register May 2016 No. 725, eff. 6-1-16.

SPS 321.06 Ceiling height. All habitable rooms, kitchens, hallways, bathrooms and corridors shall have a ceiling height of at least 7 feet, 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 may project to no more than 8 inches below the required ceiling height.

(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.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; r. and recr. Register, February, 1985, No. 350, eff. 3-1-85; CR 15-041: renum. 321.06 to 321.06 (intro.),

(1) (a), and (2) and am., cr. (1) (b), (3) to (6) Register December 2015 No. 720, eff. 1-1-16.

SPS 321.07 Attic and crawl space access. (1) ATTIC. Attics with 150 or more square feet of area and 30 or more inches of clear height between the top of the ceiling framing and the bottom of the rafter or top truss chord framing shall be provided with an access opening of at least 14 by 24 inches, accessible from inside the structure.

(2) CRAWL SPACES. Crawl spaces with 18 inches of clearance or more between the crawl space floor and the underside of the house floor joist framing shall be provided with an access opening of at least 14 by 24 inches.

Note: Access to plumbing or electrical systems may be required under chs. SPS 382 to 387, Plumbing Code or ch. SPS 316, Electrical Code, Volume 2.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; am. Register, March, 1992, No. 435, eff. 4-1-92; am. (1), Register, November, 1995, No. 479, eff. 12-1-95.

SPS 321.08 Fire separation and dwelling unit separation. (1) FIRE SEPARATION. Dwelling units shall be separated from garage spaces, accessory buildings, property lines and other dwelling units in accordance with Table 321.08 and the following requirements:

Table 321.08

Between Dwelling And:	Distance Between Objects ¹	Fire Rated Construction ^{2,5}
Detached garage or accessory building on same property	Less than 5 feet	3/4-hour wall ³
Another dwelling on same property	Less than 5 feet	1/3-hour door or window ³
Detached garage, accessory building, or other dwelling on same property	5 to 10 feet	3/4-hour wall ⁴
Detached garage, accessory building, or other dwelling on same property	More than 10 feet	1/3-hour door or window ³
Property Lines	Less than 3 feet	No requirements
Zero Lot Line	3 feet or more	3/4-hour wall
	None	1/3-hour door or window
		No Requirements
		Follow sub. (2) (d) requirements

¹Distance shall be measured perpendicular from wall to wall or property line, ignoring overhangs.

²Fire rated construction shall protect the dwelling from an exterior fire source.

³Fire rated construction may be in either facing wall.

⁴Fire rated construction shall be in both facing walls.

⁵The methods for garage separation in par. (a) 1. are examples of ¾ hour wall construction.

(a) Attached garages. 1. The walls and ceiling between an attached garage and any portion of the dwelling, including attic or soffit areas, shall be ¾-hour fire-resistive construction or shall be constructed as specified in any of the following:

a. One layer of 5/8-inch Type X gypsum drywall shall be used on the garage side of the separation wall or ceiling.

b. One layer of 1/2-inch gypsum drywall shall be used on each side of the separation wall or ceiling.

c. Two layers of 1/2-inch gypsum drywall shall be used on the garage side of the separation wall or ceiling.

2. For all methods listed under subd. 1., drywall joints shall comply with one of the following:

a. Joints shall be taped or sealed.

b. Joints shall be fitted so that the gap is no more than 1/20-inch with joints backed by either solid wood or another layer of drywall such that the joints are staggered.

Note: 1/20-inch is approximately the thickness of a U.S. dime.

3. Vertical separations between an attached garage and a dwelling shall extend from the top of a concrete or masonry foundation to the underside of the roof sheathing or fire-resistive ceiling construction.

(b) Structural elements exposed in an attached garage. Beams, columns and bearing walls which are exposed to the

garage and which provide support for habitable portions of the dwelling shall be protected by one of the methods specified in par. (a) 1. a. or c. or other $\frac{3}{4}$ hour fire-resistive protection.

(c) *Doors.* 1. The door and frame assembly between the dwelling unit and an attached garage shall be labeled by an independent testing agency as having a minimum fire-resistive rating of 20 minutes. The test to determine the 20-minute rating is not required to include the hose stream portion of the test.

Note: Acceptable tests for fire rating of door assemblies include ASTM E-152, UL 10B, and NFPA 252.

2. Only glazing allowed by the door's listing may be installed in any door required under this section.

(d) *Other openings.* 1. Access openings in fire separation walls or ceilings shall be protected in one of the following ways:

a. The opening is protected with a material that has a finish rating of at least 20 minutes.

b. The opening is protected in the same way as the wall or ceiling where the opening is located.

2. The cover or door of the access opening shall be permanently installed with hardware that will maintain it in the closed position when not in use.

(2) **DWELLING UNIT SEPARATION.** (a) *General.* In 2-family dwellings, dwelling units shall be separated from each other and from shared tenant spaces including attics, basements, garages, vestibules and corridors.

(b) *Attic separation.* Dwelling units with attic space that extends over both units shall be separated in accordance with one of the following:

1. 'Complete separation.' The units shall be provided with wall construction under par. (d) that extends all the way to the underside of the roof deck.

2. 'Vertical and horizontal separation.' a. The units shall be provided with wall construction under par. (d) that extends to the dwelling unit ceiling and ceiling construction under par. (e).

b. Dwelling units using this method of separation shall provide attic draft stopping under par. (f) that extends all the way to the underside of the roof deck above and in line with the separation wall.

(c) *Doors.* Any door installed in the dwelling unit separation shall have the door and frame assembly labeled by an independent testing agency as having a minimum fire-resistive rating of 20 minutes. The test to determine the 20-minute rating is not required to include the hose stream portion of the test.

(d) *Walls.* Walls in the dwelling unit separation shall be protected by not less than one layer of $\frac{5}{8}$ -inch Type X gypsum wallboard or 2 layers of $\frac{1}{2}$ -inch gypsum wallboard or equivalent on each side of the wall with joints in compliance with sub. (1) (a) 2.

(e) *Floors and ceilings.* A fire protective membrane of one layer of $\frac{5}{8}$ -inch Type X gypsum wallboard with joints in compliance with sub. (1) (a) 2., shall be provided on the ceiling beneath the floor construction that provides the separation.

(f) *Draft stopping for concealed roof spaces and attics.* 1. Attic areas, mansards, overhangs and other concealed roof spaces shall be draft stopped above and in line with the separation wall.

2. Acceptable draft stopping materials include:

a. $\frac{3}{8}$ -inch wood structural panel.

b. $\frac{1}{2}$ -inch gypsum board.

(3) **PENETRATIONS.** (a) *Ducts.* 1. Except as allowed under subd. 2., all heating and ventilating ducts that penetrate a required separation shall be protected with a listed fire damper with a rating of at least 90 minutes.

2. The fire damper required under subd. 1. may be omitted in any of the following cases:

a. There is a minimum of 6 feet of continuous steel ductwork on at least one side of the penetration.

b. The duct has a maximum cross-sectional area of 20 square inches.

(b) *Electrical and plumbing components.* Penetrations of a required separation by electrical and plumbing components shall be firmly packed with noncombustible material or shall be protected with a listed through-penetration firestop system with a rating of at least one hour.

(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.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; r. and recr. Register, February, 1985, No. 350, eff. 3-1-85; cr. (1m), am. (2), (5) (c) and Table, Register, January, 1989, No. 397, eff. 2-1-89; am. (2), (4) and (5) (a) (intro.), renum. (5) (b) and (c) to be (5) (c) and (d) and am. (5) (d), cr. (5) (b) and (e), (6), Register, March, 1992, No. 435, eff. 4-1-92; r. (3) (a), (5) (d), renum. (3) (b) and (c), (5) (e) to be (3) (a) and (b), (5) (d), am. (5) (a) (intro.), (6), cr. (6) (c) to (e), Register, November, 1995, No. 479, eff. 12-1-95; r. and recr. (5) and (6) (b), am. (6) (c) and (d), r. (6) (e) and cr. (7), Register, January, 1999, No. 517, eff. 2-1-99; r. (1) to (4), renum. (5) to (7) to be (1) to (3), and cr. (2) (e), Register, March, 2001, No. 543, eff. 4-1-01; corrections in (2) (c) and (d) were made under s. 13.93 (2m) (b) 7., Stats., Register, March, 2001, No. 543; CR 02-077: am. (1) (a) 1. and (2) (a) to (c) Register May 2003 No. 569, eff. 8-1-03; CR 08-043: am. (1) (intro.) and Table, r. (1) (a) 4. and (2) (e), renum. (1) (c), (2) (b), (c) and (d) to be (1) (c) 1., (2) (c), (d) and (e) and am. (2) (d), cr. (1) (c) 2., (2) (b) and (f), r. and recr. (1) (d) 1. and (2) (a) Register March 2009 No. 639, eff. 4-1-09; correction in Table 21.08 made under s. 13.92 (4) (b) 7., Stats., Register March 2009 No. 639; correction in (1) (intro.) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 15-041: am. Table 321.08, cr. (3) (c) Register December 2015 No. 720, eff. 1-1-16.

SPS 321.085 Fireblocking. (1) **FIREBLOCKING LOCATIONS.** Fireblocking shall be provided in all of the following locations:

(a) In concealed spaces of walls and partitions, including furred spaces, at the ceiling and floor levels.

(b) At all interconnections between concealed vertical and horizontal spaces including the attachment between a carport and a dwelling.

(c) In concealed spaces between stair stringers at the top and bottom of the run and at any intervening floor level.

(d) At all openings around wires, cables, vents, pipes, ducts, chimneys and fireplaces at ceiling and floor level.

(2) **FIREBLOCKING MATERIALS.** Fireblocking shall consist of one of the following:

(a) 2-inch nominal lumber.

(b) Two layers of one-inch nominal lumber.

(c) One thickness of $\frac{3}{4}$ -inch nominal plywood or wood structural panel with any joints backed with the same material.

(d) One thickness of $\frac{1}{2}$ -inch gypsum wallboard, face nailed or face screwed to solid wood, with any joints backed with the same material.

(e) Fiberglass or mineral wool batt insulation may be used if both of the following conditions are met:

1. The least dimension of the opening may not exceed 4 inches.

2. The batt shall be installed to fill the entire thickness of the opening or stud cavity.

(f) For wires, cables, pipes and vents only, non-shrinking caulk, putty mortar, or similar material may be used provided no dimension of the opening exceeds $\frac{1}{2}$ inch around the penetrating object.

(g) For chimneys, fireplaces and metal vents, fireblocking shall be metal, cement board or other noncombustible material.

History: Cr. Register, March, 2001, No. 543, eff. 4-1-01; CR 02-077: am. (1) (b) Register May 2003 No. 569, eff. 8-1-03.

SPS 321.09 Smoke detectors. (1) A listed and labeled multiple-station smoke alarm with battery backup shall be installed in all of the following locations:

(a) An alarm shall be installed inside each sleeping room.

(b) On floor levels that contain one or more sleeping areas, an alarm shall be installed outside of the sleeping rooms, within 21 feet of the centerline of the door opening to any sleeping room and in an exit path from any sleeping room.

(c) On floor levels that do not contain a sleeping area, an alarm shall be installed in a common area on each floor level.

Note: Section 50.035 (2), Stats., requires the installation of a complete low voltage, interconnected or radio-transmitting smoke detection system in all community-based residential facilities including those having 8 or fewer beds.

Note: Section 101.645 (3), Stats., requires the owner of a dwelling to install a functional smoke detector in the basement of the dwelling and on each floor level except the attic or storage area of each dwelling unit. The occupant of such a dwelling unit shall maintain any smoke detector in that unit, except that if any occupant who is not the owner, or any state, county, city, village or town officer, agent or employee charged under statute or municipal ordinance with powers or duties involving inspection of real or personal property, gives written notice to the owner that the smoke detector is not functional the owner shall provide, within 5 days after receipt of that notice, any maintenance necessary to make that smoke detector functional.

Note: Section 101.745 (4), Stats., requires that the manufacturer of a modular home shall install a functional smoke detector on each floor level except the attic or storage area of each dwelling unit.

(2) (a) Except for dwellings with no electrical service, smoke detectors required by this section shall be continuously powered by the house electrical service, and shall be interconnected so that activation of one detector will cause activation of all detectors.

Note: Wireless interconnectivity is permitted under this paragraph.

(b) Dwellings with no electrical service shall be provided with battery-powered smoke detectors in the locations under sub. (1). Interconnection and battery-backup are not required in these dwellings.

(3) For family living units with one or more communicating split levels or open adjacent levels with less than 5 feet of separation between levels, one smoke detector on the upper level shall suffice for an adjacent lower level, including basements. Where there is an intervening door between one level and the adjacent lower level, smoke detectors shall be installed on each level.

(4) Smoke alarms and detectors shall be maintained in accordance with the manufacturer's specifications.

(5) For envelope dwellings, at least 3 smoke alarms shall be placed in the air passageways. The alarms shall be placed as far apart as possible.

(6) In basements where two required exits are separated by a continuous wall, a smoke detector shall be placed on each side of the wall within 21 feet of each exit.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; r. and recr. Register, February, 1985, No. 350, eff. 3-1-85; r. and recr. Register, April, 1990, No. 412, eff. 5-1-90; renum. to be (1), cr. (2) and (3), Register, March, 1992, No. 435, eff. 4-1-92; renum. (2) and (3) to be (3) and (4), cr. (2), Register, November, 1995, No. 479, eff. 12-1-95; r. and recr. (1), r. (2), renum. (3) and (4) to be (2) and (3), and cr. (4) and (5), Register, March, 2001, No. 543, eff. 4-1-01; CR 08-043: am. (1) (b) and (3), renum. (2) to be (2) (a) and am., cr. (2) (b) and (6) Register March 2009 No. 639, eff. 4-1-09.

SPS 321.095 Automatic fire sprinklers. (1) Except as provided in subs. (2) and (3), the design, installation, testing and maintenance of automatic fire sprinklers shall conform to NFPA 13D.

(2) (a) The requirements of NFPA 13D sections 6.3 (4), 8.1.3 and 8.6 are not included as part of this code.

(b) Fire department connections are prohibited in multipurpose piping systems.

(3) (a) Limited area automatic fire sprinkler systems are allowed in dwellings.

(b) 1. A limited area automatic fire sprinkler system shall add the following wording to the warning sign required in 6.3(5) of NFPA 13D: "The number and location of sprinklers in this system does not conform to NFPA 13D."

2. An automatic fire sprinkler system providing fire protection throughout the dwelling in accordance with NFPA 13D shall add the following wording to the warning sign required in 6.3(5)

of NFPA 13D: "The number and location of sprinklers in this system conform with NFPA 13D."

Note: Multipurpose piping systems need to conform to provisions of the Plumbing Code, chs. SPS 381 to 387. These systems attach fire sprinkler heads to the dwelling's potable water piping system.

Note: Chapter 145 of the Statutes requires automatic fire sprinkler systems on dedicated water supply systems, to be installed by a licensed sprinkler fitter.

History: CR 08-043: cr. Register March 2009 No. 639, eff. 4-1-09; CR 10-103: r. and recr. Register August 2011 No. 668, eff. 9-1-11.

SPS 321.097 Carbon monoxide detectors. (1) DEFINITIONS. In this section:

(ag) "Carbon monoxide detector" has the meaning given in s. 101.149 (1) (am), Stats.

Note: Section 101.149 (1) (am), Stats., reads as follows: "Carbon monoxide detector" means an electronic or battery-operated device or system that sounds an alarm when an unsafe level of carbon monoxide is in the air.

(ar) "Fuel-burning appliance" has the meaning given in s. 101.149 (1) (as), Stats. Fuel-burning appliances include stoves, ovens, grills, clothes dryers, furnaces, boilers, water heaters, fireplaces and heaters.

Note: Section 101.149 (1) (as), Stats., reads as follows: "Fuel-burning appliance" means a device that burns fossil fuel or carbon-based fuel and that produces carbon monoxide as a combustion by-product.

(2) NEW CONSTRUCTION. (a) *General.* Listed and labeled carbon monoxide detectors shall be installed and maintained in accordance with s. 101.647 (2) to (6), Stats., in one and 2-family dwellings, for which building permit applications were made or construction commenced on or after February 1, 2011.

Note: Section 101.647 (2) to (6), Stats., reads:

(2) INSTALLATION AND SAFETY CERTIFICATION. The owner of a dwelling shall install any carbon monoxide detector required under this section according to the directions and specifications of the manufacturer of the carbon monoxide detector. A carbon monoxide detector required under this section shall bear an Underwriters Laboratories, Inc., listing mark and may be a device that is combined with a smoke detector.

(3) REQUIREMENTS. (a) The owner of a dwelling shall install a functional carbon monoxide detector in the basement of the dwelling and on each floor level except the attic, garage, or storage area of each dwelling unit. A carbon monoxide detector wired to the dwelling's electrical wiring system shall have a backup battery power supply. Except as provided under par. (b), the occupant of the dwelling unit shall maintain any carbon monoxide detector in that unit. This paragraph does not apply to the owner of a dwelling that has no attached garage, no fireplace, and no fuel-burning appliance.

(am) 1. If the building permit for the initial construction of a dwelling was issued on or after February 1, 2011, and the electrical service for the dwelling is provided by a public utility, as defined in s. 196.01 (5), the owner of the dwelling shall install each carbon monoxide detector required under par. (a) so that it is powered by the dwelling's electrical wiring system, except as provided under subd. 2.

2. The requirement that each carbon monoxide detector be installed in the manner provided under subd. 1. does not apply to a dwelling if the dwelling, when initially constructed, had no attached garage, no fireplace, and no fuel-burning appliance.

(b) If any occupant who is not the owner of a dwelling, or any person authorized by state law or by city, village, town, or county ordinance or resolution to exercise powers or duties involving inspection of real or personal property, gives written notice to the owner that the carbon monoxide detector is not functional, the owner shall provide, within 5 days after receipt of that notice, any maintenance necessary to make that carbon monoxide detector functional.

(4) INSPECTION. Except as provided under s. 101.64 (2m), the department or person authorized by state law or by city, village, town, or county ordinance or resolution to exercise powers or duties involving inspection of real or personal property may inspect a new dwelling and, at the request of the owner or renter, may inspect the interior of a dwelling unit in a dwelling to ensure compliance with this section.

(5) LIABILITY EXEMPTION. The owner of a dwelling is not liable for damages resulting from any of the following:

(a) A false alarm from a carbon monoxide detector if the carbon monoxide detector was reasonably maintained by the owner of the dwelling.

(b) The failure of a carbon monoxide detector to operate properly if that failure was the result of tampering with, or removal or destruction of, the carbon monoxide detector by a person other than the owner of the dwelling or the result of a faulty detector that was reasonably maintained by the owner of the dwelling.

(6) TAMPERING PROHIBITED. No person may tamper with, remove, destroy, disconnect, or remove batteries from an installed carbon monoxide detector, except in the course of inspection, maintenance, or replacement of the detector.

(b) *Location.* 1. On floor levels that contain one or more sleeping areas, a carbon monoxide detector shall be installed outside of the sleeping area, within 21 feet of the centerline of the door opening to any sleeping area and in an exit path from any sleeping area.

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2. On floor levels that do not contain a sleeping area, a carbon monoxide detector shall be installed in a common area on each floor level.

(c) *Electrical service and interconnection.* 1. Except as provided in subd. 2., carbon monoxide detectors shall be continuously powered by the house electrical service, shall have a backup power supply and shall be interconnected so that activation of one alarm will cause activation of all alarms.

2. Dwellings with no electrical service shall be provided with battery-powered carbon monoxide detectors in the locations under par. (b). Interconnection is not required in these dwellings.

(d) *Standards.* The devices shall conform with one of the following standards:

1. Carbon monoxide detectors shall be listed and labeled identifying conformance with UL 2034.

Note: Pursuant to this subdivision, carbon monoxide detectors need to be acceptable under the 2005 edition of the UL 2034 standard, *Single and Multiple State Carbon Monoxide Alarms*.

2. Carbon monoxide detectors and sensors as part of a gas detection or emergency signaling system shall be listed and labeled identifying conformance with UL 2075.

Note: Pursuant to this subdivision, carbon monoxide detectors and sensors need to be acceptable under the 2007 edition of the UL 2075 standard, *Gas and Vapor Protectors and Sensors*.

(3) EXISTING DWELLINGS. Listed and labeled carbon monoxide detectors shall be installed and maintained in accordance with s. 101.647 (2) to (6), Stats., in one and 2-family dwellings, for which building permit applications were made or initial construction commenced on or after June 1, 1980, and before February 1, 2011.

Note: See statutory reprint under s. SPS 321.097 (2) (a).

History: EmR0826: emerg. cr. eff. 10-1-08; CR 08-085: cr. Register May 2009 No. 641, eff. 6-1-09; renumbered under s. 13.92 (4) (b) 1. and corrections in (1) (b) 2. and (6) made under s. 13.92 (4) (b) 7., Stats., Register May 2009 No. 641; CR 10-089: renum. (1) (a), (2), (3), (5), (6), (7) to be (4) (a), (b), (c), (e), (g), (h) and am. (4) (g) and (h), r. (1) (b), (4), cr. (1), (2), (3), (4) (title), (d), (f) Register January 2011 No. 661, eff. 2-1-11; correction in (1) (b) made under s. 13.92 (4) (b) 7., Stats., Register February 2017 No. 734; CR 21-047: am. (title), renum. (1) (a) to (1) (ar) and am., cr. (1) (ag), r. (1) (b), am. (2) (a) to (c), (d) 1., (3), r. (4) Register May 2022 No. 797, eff. 6-1-22.

SPS 321.10 Protection against decay and termites.

(1) Wood used in any of the applications under this section shall meet all of the following requirements:

(a) The wood shall be labeled and pressure treated with preservative in accordance with an AWP standard or shall be naturally durable and decay-resistant or shall be engineered to be decay resistant.

(b) The wood shall be pressure treated with preservative or shall be naturally termite-resistant unless additional steps are taken to make the wood termite-resistant.

(2) Wood used in the following locations shall be as required under sub. (1):

(a) Resting directly upon or embedded in earth.

(b) Floor joists or sleepers that meet all of the following conditions:

1. The joists or sleepers are protected from the weather.

2. The joists or sleepers are within 18 inches above a lower floor surface, deck or soil.

3. There is no vapor retarder that meets the requirements under s. SPS 322.38 (1) (a) between the joists or sleepers and the soil below.

Note: This situation could occur with a floor over a crawl space or when a floor is added over a patio deck or a garage slab.

(c) Floor joists exterior to the dwelling that are within 18 inches above exterior grade, unless protected with a moisture barrier.

Note: Acceptable moisture barriers for this application include ¾-inch exterior preservative-treated plywood, or ice dam protection material listed as meeting the requirements of ASTM D 1970 or vapor retarder material, provided they are protected from physical and UV light damage.

(d) Girders that span directly over and within 12 inches of earth.

(e) Sills and rim joists that rest on concrete or masonry and are also below grade or within 8 inches above final exterior grade.

(f) 1. Siding and sheathing in contact with concrete, masonry or earth and within 6 inches above final exterior grade.

2. Siding and sheathing in contact with concrete or masonry and within 2 inches above an impervious surface.

(g) Ends of wood structural members and their shims resting on or supported in masonry or concrete walls and having clearances of less than ½ inch on the top, sides and ends.

(h) Bottom plates or sole plates of walls that rest on concrete or masonry and that are below exterior grade or less than 8 inches above final exterior grade.

(i) Columns in direct contact with concrete or masonry unless supported by a structural pedestal or plinth block at least one inch above the floor.

(j) Any structural part of an outdoor deck, including the decking.

(k) Permanent wood foundations.

(3) Wood girders that rest directly on exterior concrete or masonry shall be protected by one of the following methods:

(a) The wood shall be pressure treated with preservative or shall be a naturally durable and decay-resistant species.

(b) Material, such as pressure-treated plywood, flashing material, steel shims, or water-resistant membrane material shall be placed between the wood and the concrete or masonry.

(4) All pressure-treated wood and plywood shall be identified by a quality mark or certificate of inspection of an approved inspection agency which maintains continued supervision, testing and inspection over the quality of the product.

Note: Heartwood of redwood, cypress, black walnut, catalpa, chestnut, sage orange, red mulberry, white oak, or cedar lumber are considered by the department to be naturally decay-resistant. Heartwood of bald cypress, redwood, and eastern red cedar are considered by the department to be naturally termite resistant.

(5) FASTENERS. (a) Fasteners for pressure-preservative treated wood and fire-retardant-treated wood shall meet one of the following requirements:

1. The fastener is a steel bolt with a diameter of 0.5 inch or greater.

2. The fastener is made of stainless steel.

3. The fastener is made of hot-dipped, zinc-galvanized steel with the coating weight and thickness labeled as complying with ASTM A 153.

4. The fastener is made of steel with a mechanically-deposited zinc coating labeled as complying with ASTM B 695, Class 55 or greater.

5. The fastener has coating types and weights in accordance with the fastener manufacturer's recommendations. In the absence of the manufacturer's recommendations subd. 1., 2., 3., or 4. shall apply.

Note: "Zinc plated," "zinc coated," "chrome plated," etc., fasteners do not necessarily comply with either of these standards.

(b) When a fastener is used with a hanger or other metal fixture, the fastener shall be of the same material as the hanger or metal fixture.

Note: When separate pieces are in close contact, zinc corrodes rapidly in the presence of plain steel. Zinc corrodes much more rapidly in the presence of stainless steel.

(c) For the purposes of this section, a fastener includes nails, screws and bolts, along with nuts and washers.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; r. and recr. Register, February, 1985, No. 350, eff. 3-1-85; am. (1) (b) and (3), Register, January, 1989, No. 397, eff. 2-1-89; r. and recr. (1) (intro.) and (b), am. (1) (f), renum. (3) (intro.) to be (3) (a), cr. (3) (b), Register, March, 1992, No. 435, eff. 4-1-92; am. (1) (a), (b), (3), cr. (1) (g), Register, November, 1995, No. 479, eff. 12-1-95; r. (1) and (2), renum. (3) to be (4), and cr. (1) to (3), Register, March, 2001, No. 543, eff. 4-1-01; CR 02-077: am. (4) (a) Register May 2003 No. 569, eff. 8-1-03; CR 08-043: am. (1), (2) (a) and (i), r. and recr. (2) (b) and (h), r. (2) (g) and (4) (b), renum. (2) (c) to (f) and (4) (a) to be (2) (d) to (g) and (4) and am. (2) (e), (f) 1. and (g), cr. (2) (c), (k) and (5) Register March 2009 No. 639, eff. 4-1-09; correction in (2) (a) 3. made under s.

13.92 (4) (b) 7., Stats., Register March 2009 No. 639; correction in (2) (b) 3, made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 15-041: renum. (2) (f) to (2) (f) 1., cr. (2) (f) 2. Register December 2015 No. 720, eff. 1-1-16.

SPS 321.11 Foam plastic. (1) (a) *General.* Foam plastic insulation shall have a flame-spread rating of 75 or less and a smoke-developed rating of 450 or less when tested in accordance with ASTM E-84.

(b) *Thermal barrier.* Except as provided in par. (c), foam plastic insulation shall be separated from the interior of the dwelling by one of the following thermal barriers:

1. ½-inch gypsum wallboard.
2. ½-inch nominal wood structural panel.
3. ¾-inch sawn lumber with tongue-and-groove or lap joints.
4. 1-inch of masonry or concrete.
5. A product or material shown by an independent laboratory to limit the temperature rise on the unexposed surface to 250°F for 15 minutes when tested in accordance with ASTM E-119.

6. For doors only, sheet metal with a minimum thickness of 26 standard steel gauge or aluminum with a minimum thickness of 0.032 inch.

Note: Number 26 standard steel gauge is approximately equal to 0.018-inch.

(c) *Exemptions from thermal barrier requirement.* The following applications of foam plastic do not require a thermal barrier:

1. On overhead garage doors.
2. In the box sill of the basement or ground floor, above the bottom of the floor joists.

(2) Insulation that does not meet the requirements of this section may be approved by the department in accordance with s. SPS 320.18. Approval will be based on tests that evaluate materials or products representative of actual end-use applications.

Note: See s. SPS 322.21 (3) for requirements for protecting foam plastic on the exterior of a dwelling.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; am. (1) (b), Register, January, 1989, No. 397, eff. 2-1-89; r. and recr. (1) (intro.), am. (1) (a), renum. (1) (b) and (c) to be (1) (c) and (d) and am. (1) (c), cr. (1) (b), Register, March, 1992, No. 435, eff. 4-1-92; am. (1) (d), (2), Register, November, 1995, No. 479, eff. 12-1-95; r. and recr. Register, March, 2001, No. 543, eff. 4-1-01; correction in (2) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 321.115 Installation of elevators or dumbwaiters. Elevators or dumbwaiters serving dwelling units shall comply with the requirements under ch. SPS 318.

History: CR 08-030: cr. Register December 2008 No. 636, eff. 1-1-09; correction made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

Subchapter III — Excavations

SPS 321.12 Drainage. (1) *GRADE.* The finished grade of the soil shall slope away from the dwelling at a rate of at least 1/2 inch per foot for at least 10 feet, except as provided in subs. (2) and (3).

(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), swales or other means shall be provided to ensure equivalent drainage away from the dwelling.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; CR 02-077: am. Register May 2003 No. 569, eff. 8-1-03; CR 15-041: renum. 321.12 to 321.12 (1) and am., cr. 321.12 (title), (2), (3) Register December 2015 No. 720, eff. 1-1-16.

SPS 321.125 Erosion control and sediment control. (1) *GENERAL.* (a) Where land disturbing construction activity is to occur erosion and sediment control practices shall be employed, as necessary, and maintained to prevent or reduce the potential deposition of soil or sediment to all of the following:

1. The waters of the state.
2. Adjacent properties.

Note: Authority over erosion and sediment control at construction sites having a

land-disturbance area of one acre or more was transferred to the Department of Natural Resources (DNR) under 2013 Wis. Act 20, sections 1712 and 2088. Consequently, the Department of Safety and Professional Services no longer applies the requirements in this section to those sites. Information regarding the DNR permit requirements and standards may be available at <http://dnr.wi.gov/topic/stormwater/construction>.

(b) Land disturbing construction activities, except those activities necessary to implement erosion or sediment control practices, may not begin until the sediment control practices are in place for each area to be disturbed in accordance with the approved plan.

(c) Erosion and sediment control practices shall be maintained until the disturbed areas are stabilized. A disturbed area shall be considered stabilized by vegetation when a perennial cover has been established with a density of at least 70%.

(d) Erosion and sediment control practices shall either be approved by the department or listed by the department of natural resources in accordance with the process under s. NR 151.32 (2).

Note: Listed practices can be found through the Division of Industry Services website at <http://dps.wi.gov/programs/industry-services> or by contacting the Division at telephone (608) 266-3151 or (877) 617-1565 or 411 (Telecommunications Relay).

(2) **MANDATED PRACTICES.** Specific practices at each site where land disturbing construction activity is to occur shall be utilized to prevent or reduce all of the following:

(a) The deposition of soil from being tracked onto streets by vehicles.

(b) The discharge of sediment from disturbed areas into on-site storm water inlets.

(c) The discharge of sediment from disturbed areas into abutting waters of the state.

(d) The discharge of sediment from drainage ways that flow off the site.

(e) The discharge of sediment by dewatering activities.

(f) The discharge of sediment eroding from soil stockpiles existing for more than 7 days.

(3) **CONTROL STANDARDS.** Including the practices under sub. (2), additional erosion and sediment control practices shall be employed, as necessary, to accomplish one of the following:

(a) A potential annual cumulative soil loss rate of not more than one of the following:

1. Five tons per acre per year where sand, loamy sand, sandy loam, loam, sandy clay loam, clay loam, sandy clay, silty clay or clay textures are exposed.

2. Seven and 1/2 tons per acre per year where silt, silty clay loam, or silt loam textures are exposed.

(c) A reduction of at least 40% of the potential sediment load in storm water runoff from the site on an average annual basis as compared with no sediment or erosion controls for the site where less than one acre of land disturbing construction activity is to occur.

Note: See ch. SPS 325 Appendix A for further explanatory material regarding compliance solutions for 80 and 40% reductions.

(4) **SOIL LOSS ANALYSIS.** Potential soil loss shall be determined using an engineer analytical modeling acceptable to the department.

Note: The Revised Universal Soil Loss Equation II is an example of an acceptable model to determine soil loss.

(5) **MONITORING.** (a) The owner or owner's agent shall check the erosion and sediment control practices for maintenance needs at all the following intervals until the site is stabilized:

1. At least weekly.

2. Within 24 hours after a rainfall event of 0.5 inches or greater. A rainfall event shall be considered to be the total amount of rainfall recorded in any continuous 24 hour period.

3. At all intervals cited on the erosion and sediment control plan.

(b) The owner or owner's agent shall maintain a monitoring record when the land disturbing construction activity involves one or more acres.

(c) The monitoring record shall contain at least the following information:

1. The condition of the erosion and sediment control practices at the intervals specified under par. (a).

2. A description of the maintenance conducted to repair or replace erosion and sediment control practices.

(6) MAINTENANCE. (a) 1. Except as provided in subd. 3., off-site sediment deposition resulting from the failure of an erosion or sediment control practice shall be cleaned up by the end of the next day.

Note: Contact the Department of Natural Resources before attempting to clean up any sediment deposited or discharged into the waters of the state.

2. Except as provided in subd. 3., off-site soil deposition, resulting from construction activity, that creates a nuisance shall be cleaned up by the end of the work day.

3. A municipality may enact more stringent requirements regarding cleanup of soil or sediment deposition onto public ways.

(b) 1. Except as required in subd. 2., the owner or owner's agent shall complete repair or replacement of erosion and sediment control practices as necessary within 48 hours of an interval specified under sub. (5).

2. When the failure of erosion or sediment control practices results in an immediate threat of sediment entering public sewers or the waters of the state, procedures shall be implemented immediately to repair or replace the practices.

Note: See ch. SPS 325 Appendix A for further explanatory material.

History: Cr. Register, September, 1992, No. 441, eff. 12-1-92; am. (1) (b), Register, November, 1995, No. 479, eff. 12-1-95; am. (1) (a), renum. (1) (b) to (e) to be (1) (c) to (f) and am. (c), cr. (1) (b), Register, February, 1997, No. 494, eff. 3-1-97; CR 02-077: cr. (4) Register May 2003 No. 569, eff. 8-1-03; CR 05-113: r. and recr. Register December 2006 No. 612, eff. 4-1-07; CR 15-041: am. (3) (a) 2., r. (3) (b) Register December 2015 No. 720, eff. 1-1-16.

SPS 321.13 Excavations adjacent to adjoining property. (1) **NOTICE.** Any person making or causing an excavation which may affect the lateral soil support of adjoining property or buildings shall provide at least 30 days written notice to all owners of adjoining buildings of the intention to excavate. The notice shall state that adjoining buildings may require permanent protection.

(a) *Exception.* The 30-day time limit for written notification may be waived if such waiver is signed by the owner(s) of the adjoining properties.

(2) RESPONSIBILITY FOR UNDERPINNING AND FOUNDATION EXTENSIONS. (a) *Excavations less than 12 feet in depth.* If the excavation is made to a depth of 12 feet or less below grade, the person making or causing the excavation shall not be responsible for any necessary underpinning or extension of the foundations of any adjoining buildings.

(b) *Excavations greater than 12 feet in depth.* If the excavation is made to a depth in excess of 12 feet below grade, the owner(s) of adjoining buildings shall be responsible for any necessary underpinning or extension of the foundations of their buildings to a depth of 12 feet below grade. The person making or causing the excavation shall be responsible for any underpinning or extension of foundations below the depth of 12 feet below grade.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80.

SPS 321.14 Excavations for footings and foundations. (1) **EXCAVATIONS BELOW FOOTINGS AND FOUNDATIONS.** No excavation shall be made below the footing and foundation unless provisions are taken to prevent the collapse of the footing or foundation.

(2) EXCAVATIONS FOR FOOTINGS. All footings shall be located on undisturbed or compacted soil, free of organic material, unless the footings are reinforced to bridge poor soil conditions.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80.

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Subchapter IV — Footings

SPS 321.15 Footings. (1) **GENERAL.** (a) The dwelling and attached structures, such as decks and garages, shall be supported on a structural system designed to transmit and safely distribute the loads to the soil.

(b) The loads for determining the footing size shall include the weight of the live load, roof, walls, floors, pier or column, plus the weight of the structural system and the soil over the footing.

(c) Footings shall be sized to not exceed the allowable material stresses.

(d) The bearing area shall be at least equal to the area required to transfer the loads to the supporting soil without exceeding the bearing capacity of the soil.

(e) 1. Structures supported on floating slabs or similar shallow foundations may not be physically attached to structures that are supported by footings that 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.

2. Exterior ramps are not required to comply with subd. 1.

(2) SIZE AND TYPE. Unless designed by structural analysis, unreinforced concrete footings shall comply with the following requirements:

(a) *Continuous footings.* The minimum width of the footing on each side of the foundation wall shall measure at least 4 inches wider than the wall. The footing depth shall be at least 8 inches nominal. Footing placed in unstable soil shall be formed. Lintels may be used in place of continuous footings when there is a change in footing elevation.

Note: Unstable soil includes soils that are unable to support themselves at a 90 degree angle for the full depth of the footing.

(b) *Column or pier footing.* 1. The minimum width and length of column or pier footings shall measure at least 2 feet by 2 feet.

2. The minimum depth of column or pier footings shall measure at least 12 inches nominal.

(c) *Trench footings.* Footings poured integrally with the wall may be used when soil conditions permit. The minimum width shall be at least 8 inches nominal.

(d) *Chimney and fireplace footings.* Footing for chimneys or fireplaces shall extend at least 4 inches on each side of the chimney or fireplace. The minimum depth shall measure at least 12 inches nominal.

(e) *Floating slabs.* Any dwelling supported on a floating slab on grade shall be designed through structural analysis.

(f) *Deck footings.* Decks attached to dwellings and detached decks which serve an exit shall be supported on a structural system designed to transmit and safely distribute the loads to the soil. Footings shall be sized to not exceed the allowable material stresses. The bearing area shall be at least equal to the area required to transfer the loads to the supporting soil without exceeding the bearing values of the soil.

(3) SOIL-BEARING CAPACITY. No footing or foundation shall be placed on soil with a bearing capacity of less than 2,000 pounds per square foot unless the footing or foundation has been designed through structural analysis. The soil-bearing values of common soils may be determined through soil identification.

Note: The department will accept the soil-bearing values for the types of soil listed in the following table:

Type of soil	PSF
1. Wet, soft clay; very loose silt; silty clay	2,000
2. Loose, fine sand; medium clay; loose sandy clay soils.....	2,000
3. Stiff clay; firm inorganic silt.....	3,000
4. Medium (firm) sand; loose sandy gravel; firm sandy clay soils; hard dry clay	4,000
5. Dense sand and gravel; very compact mixture of clay, sand and gravel.....	6,000
6. Rock.....	12,000

(a) *Minimum soil-bearing values.* If the soil located directly under a footing or foundation overlies a layer of soil having a smaller allowable bearing value, the smaller soil-bearing value shall be used.

(b) *Unprepared fill material, organic material.* No footing or foundation shall be placed upon unprepared fill material, organic soil, alluvial soil or mud unless the load will be supported. When requested, soil data shall be provided.

Note: The decomposition of organic material in landfill sites established for the disposal of organic wastes may produce odorous, toxic and explosive concentrations of gas which may seep into buildings through storm sewers and similar underground utilities unless provisions are taken to release the gases to the atmosphere.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; am. (1) (a), Register, January, 1989, No. 397, eff. 2-1-89; cr. (1) (f), Register, March, 1992, No. 435, eff. 4-1-92; am. (1) (e), Register, November, 1995, No. 479, eff. 12-1-95; am. (1) (e), Register, March, 2001, No. 543, eff. 4-1-01; CR 08-043: renum. (intro.), (1) and (2) to be (1), (2) and (3) and am. (1), (2) (b) and (e), cr. (1) (e) Register March 2009 No. 639, eff. 4-1-09; CR 15-041: renum. (1) (e) to (1) (e) 1. and am., cr. (1) (e) 2. Register December 2015 No. 720, eff. 1-1-16.

SPS 321.16 Frost protection. (1) GENERAL. (a) Footings and foundations, including those for 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).

(b) Footings may not be placed on frozen material.

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

(b) Portions of footings or foundations located directly under window areaways do not require frost protection provided the rest of the foundation is protected in accordance with this section.

(c) Footings and foundations may bear directly on bedrock less than 48 inches below adjacent grade provided all of the following conditions are met.

1. The rock shall be cleaned of all earth prior to placement.

2. All clay in crevices of the rock shall be removed to the level of frost penetration or to 1.5 times the width of the rock crevice, whichever is less.

3. Provisions shall be taken to prevent water from collecting anywhere along the foundation.

(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.

Note: See ch. SPS 325 Appendix A for further information.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; am. (intro.), Register, February, 1985, No. 350, eff. 3-1-85; renum. (intro.) and (1) to be (1) and (2) and am. (2) (d), cr. (2) (e), Register, January, 1989, No. 397, eff. 2-1-89; am. (1), Register, November, 1995, No. 479, eff. 12-1-95; correction in (2) (e) made under s. 13.93 (2m) (b) 7., Stats., Register, March, 2001, No. 543; CR 08-043: r. and recr. Register March 2009 No. 639, eff. 4-1-09; correction in (2) (a) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 15-041: am. (1) (a), cr. (2) (d) Register December 2015 No. 720, eff. 1-1-16.

SPS 321.17 Drain tiles. (1) DETERMINATION OF NEED. (a) *New construction.* 1. Except as provided under sub. (2), a complete drain tile or pipe system shall be installed around the foundation of dwellings under construction where groundwater occurs above the bottom of the footing.

2. For the purposes of this section, a complete drain tile or pipe system includes all of the following:

a. The drain tile or pipe installed inside and outside the foundation, except as allowed under s. SPS 321.17 (3) (d) 1. b.

b. Bleeders connecting the inside tile or pipe to the outside tile or pipe.

c. The sump pit or crock.

d. The discharge piping.

e. A pump or other means of discharging water to grade.

(b) *Optional systems.* 1. If a complete drain tile or pipe sys-

tem is not required by natural conditions under par. (a) or by a municipality or registered UDC inspection agency, a partial drain tile or pipe system may be installed.

2. For the purposes of this section, a partial drain tile or pipe system includes a means of discharging water from the tile or pipe and may include any of the other elements under par. (a) 2.

Note: Means of discharging water include a sump pit, a crock or natural means of drainage to daylight.

(2) OPTIONAL SYSTEMS. (a) *New construction.* 1. For new dwelling construction, a municipality or registered UDC inspection agency may determine the soil types and natural or seasonal groundwater levels for which a complete drain tile or pipe system is required.

2. For new dwelling construction, a municipality may not enact requirements for other than complete drain tile or pipe systems.

(b) *Alterations to an existing dwelling.* For an alteration to an existing dwelling covered by this code, a municipality may not require a complete drain tile or pipe system.

(c) *Partial systems.* Municipalities may allow partial drain tile or pipe systems for new dwellings under construction or existing dwellings.

(3) MATERIAL AND INSTALLATION REQUIREMENTS FOR REQUIRED SYSTEMS. (a) *General.* Complete drain tile or pipe systems required by natural conditions under sub. (1) (a) or by a municipality or registered UDC inspection agency shall comply with the requirements of this subsection.

(b) *Basement floor slabs.* The basement slab shall be placed on at least 4 inches of clean graded sand, gravel or crushed stone.

(c) *Manufactured drainage systems.* Manufactured drainage systems not meeting the requirements of this section shall be submitted to the department for review and approval prior to installation.

(d) *Drain tile or pipe installation.* Drain tile or pipe used for foundation drainage shall comply with the following requirements:

1. a. Except as allowed under subd. 1. b., the top of the tile or pipe shall be at or below the top of the footing.

b. Where the top of the footing is more than 4 inches below the bottom of the floor slab, tile or pipe is required on the interior of the foundation only and it shall be placed directly under the floor.

Note: This situation will commonly occur with a walk-out basement.

2. Drain tile or pipe shall have an inside diameter of at least 3 inches.

3. Drain tile or pipe shall have open seams, joints or perforations to allow water to enter.

4. Where individual tiles are used, they shall be laid with $\frac{1}{8}$ inch open joints. Joints between tiles shall be covered with a strip of asphalt or tar impregnated felt.

5. The tile or pipe shall be placed upon at least 2 inches of coarse aggregate and shall be covered on the top and the side facing away from the dwelling with at least 12 inches of coarse aggregate that meets all of the following criteria:

a. 100% of the aggregate shall pass a 1-inch sieve.

b. 90-100% of the aggregate shall pass a $\frac{3}{4}$ -inch sieve.

c. 0-55% of the aggregate shall pass a $\frac{3}{8}$ -inch sieve.

d. 0-5% of the aggregate shall pass a #8 sieve.

Note: A #8 sieve has square openings of 2.36 mm or 0.09 inch.

Note: These specifications encompass aggregate sizes #6 and #67 per ASTM standard C 33. Of the two sizes, #6 is coarser.

6. a. Bleeder tiles or pipes shall be provided at no more than 8-foot intervals to connect the exterior drain tile or pipe to the interior drain tile or pipe.

b. Bleeder tiles or pipes shall have a minimum interior diameter of 3 inches.

c. Direct connection of the bleeders is not required if the in-

tersection of the bleeder with the tile or pipe is covered with a membrane or fabric that prevents soil and fines from entering the system.

7. The drain tiles or pipe that lead from the footing tiles to the sump pit shall be laid at a grade of at least $\frac{1}{8}$ inch per foot leading to the sump pit. The remaining drain tiles or pipe shall be level or graded downward to the line leading to the sump pit.

(e) *Drain tile or pipe discharge.* 1. Drain tiles or pipe shall be connected to the sump pit.

2. The sump pit shall discharge to natural grade or be equipped with a pump.

3. All other aspects of drain tile discharge shall be in accordance with the uniform plumbing code, chs. SPS 382 to 387.

Note: The following is a reprint of a pertinent section of the plumbing code:

SPS 382.36 (8) SUMPS AND PUMPS. (a) *Sumps.* 1. 'General.' All storm building subdrains shall discharge into a sump, the contents of which shall be automatically lifted and discharged, dispersed or used in accordance with sub. (4).

2. 'Construction and installation.' a. Except as provided in subd. 2. c. and d., an interior sump shall have a rim extending at least one inch above the floor immediately adjacent to the sump.

b. A sump shall have a removable cover of sufficient strength for anticipated loads.

c. Where a sump is installed in an exterior meter pit or elevator pit, the rim may be level with the floor.

d. When a sump is provided with an airtight, solid cover.

3. 'Location.' All sumps installed for the purpose of receiving clearwater, groundwater or stormwater shall be separated from water wells by the applicable separation distances contained in chs. NR 811 and 812, or as otherwise permitted by the department of natural resources.

Note: See Appendix A-382.30 (11) (d) for material reprinted from s. NR 812.08.

4. 'Size.' Except as recommended by the pump manufacturer, the size of each sump shall be no smaller than 16 inches in diameter at the top, 14 inches in diameter at the bottom, and 22 inches in depth.

(b) *Pumps.* 1. 'Size.' The pump shall be of a capacity appropriate for the anticipated use.

2. 'Discharge piping.' a. Where a pump discharges into a storm drain system, a check valve shall be installed.

b. The minimum diameter discharge piping shall be based on the design flow rate of the pump and a minimum velocity of one foot/second.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; r. and recr. Register, February, 1985, No. 350, eff. 3-1-85; r. and recr. (3) (a) 3. and (4), Register, May, 1988, No. 389, eff. 6-1-88; am. (2) (f), Register, January, 1989, No. 397, eff. 2-1-89; r. and recr. (4) (c) 3., Register, August, 1991, No. 428, eff. 9-1-91; cr. (5), Register, March, 1992, No. 435, eff. 4-1-92; r. and recr. Register, January, 1999, No. 517, eff. 2-1-99; am. (3) (d) 4., Register, March, 2001, No. 543, eff. 4-1-01; CR 03-097: am. (1) (b) 1., (2) (a) 1., and (3) (a) Register November 2004 No. 587, eff. 1-1-05; CR 08-043: am. (1) (a) 2. and (b) 2., renun. (3) (d) 1. to 4., 5. and 6. to be (3) (d) 2. to 5., 6. a. and 7., cr. (3) (d) 1., 6. b. and c. Register March 2009 No. 639, eff. 4-1-09; correction in (1) (a) 2. a., (3) (e) 3. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

Subchapter V — Foundations

SPS 321.18 Foundations. (1) **GENERAL.** (a) *Design.* Foundation walls shall be designed and constructed to support the vertical loads of the dwelling, lateral soil pressure, and other loads without exceeding the allowable stresses of the materials of which the foundations are constructed.

(b) *Lateral support at base.* Lateral support such as floor slabs or framing shall be provided at the base of foundation walls.

(c) *Lateral support at top.* Lateral support shall be provided at the top of the foundation walls by one of the following:

2. Structural analysis. A system designed through structural analysis.

3. Anchor bolts. a. Structural steel anchor bolts, at least 1/2 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.

b. A properly sized nut and washer shall be tightened on each bolt to the plate or sill.

c. When vertical-reinforcing steel is provided in masonry construction, as required under sub. (3), the location require-

ments under subd. 3. a. shall be modified as necessary so anchor bolts are placed in the same core as the reinforcement without exceeding the limits of subd. 3. a.

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

4. Other mechanical fasteners. a. Mechanical fasteners used in accordance with the manufacturer's testing and listing.

b. When vertical-reinforcing steel is provided in masonry construction, as required under sub. (3), the location requirements under subd. 4. a. shall be modified as necessary so the fasteners are placed in the same core as the reinforcement without exceeding the limits of subd. 4. a.

(d) *Floor framing.* 1. Floor framing shall be fastened to the sill plate by one of the following methods:

a. Mechanical fasteners used in accordance with the manufacturer's testing and listing.

b. In accordance with structural analysis.

c. In accordance with the fastener table printed in ch. SPS 325 Appendix A.

Note: Per s. SPS 321.22 (1), sill plates are not required on foundation walls of poured concrete or on masonry walls with mortar- or grout-filled cores or on masonry walls with a solid block top course.

2. a. Where the floor framing is parallel to the foundation wall, solid blocking or bridging shall be installed in at least the first adjacent joist space at a spacing of no more than 32 inches on center.

b. Blocking and bridging shall be the same depth as the joist.

c. Fastening of the blocking or bridging shall be in accordance with structural analysis or the fastener schedule in Table 321.02-2.

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.

(e) *Soil lateral load.* Unless designed through structural analysis, soil lateral loads shall be determined from Table 321.18-A.

**Table 321.18-A
SOIL LATERAL LOAD**

Description of Backfill Material ^a	Unified Soil Classification	Design Lateral Soil Load ^b PSF per Foot of Depth
Well graded, clean gravels; gravel-sand mixes	GW	30 ^c
Poorly graded clean gravels; gravel-sand mixes	GP	30 ^c
Silty gravels, poorly graded gravel-sand mixes	GM	40 ^c
Clayey gravels, poorly graded gravel-and-clay mixes	GC	45 ^c
Well-graded, clean sands; gravelly sand mixes	SW	30 ^c
Poorly graded clean sands; sand-gravel mixes	SP	30 ^c
Silty sands, poorly graded sand-silt mixes	SM	45 ^c
Sand-silt clay mix with plastic fines	SM-SC	45 ^d
Clayey sands, poorly graded sand-clay mixes	SC	60 ^d
Inorganic silts and clayey silts	ML	45 ^d
Mixture of inorganic silt and clay	ML-CL	60 ^d
Inorganic clays of low to medium plasticity	CL	60 ^d
Organic silts and silt clays, low plasticity	OL	^b
Inorganic clayey silts, elastic silts	MH	60 ^d
Inorganic clays of high plasticity	CH	^b
Organic clays and silty clays	OH	^b

^aDesign lateral soil loads are given for moist conditions for the specified soils at their optimum densities. Actual field conditions shall govern. Submerged or saturated soil pressures shall include the weight of the buoyant soil plus the hydrostatic loads.

^bUnsuitable as backfill material.

^cFor relatively rigid walls, as when braced by floors, the design lateral soil load shall be increased for sand and gravel type soils to 60 psf per foot of depth. Basement walls extending not more than 8 feet below grade and supporting flexible floor systems are not considered relatively rigid walls.

⁴For relatively rigid walls, as when braced by floors, the design lateral load shall be increased for silt and clay type soils to 100 psf per foot of depth. Basement walls extending not more than 8 feet below grade and supporting flexible floor systems are not considered relatively rigid walls.

⁵Soil classes are in accordance with the Unified Soil Classification System, ASTM D2487, and design lateral loads are for moist soil conditions without hydrostatic pressure.

(2) **CONCRETE FOUNDATION WALLS.** (a) *General structural requirements.* Except as provided in par. (b), unless designed through structural analysis, the minimum thickness of concrete foundation walls shall be determined from Table 321.18-B, but in no case shall the thickness of the foundation wall be less than the thickness of the wall it supports.

(b) *Equalized loading.* A 6-inch nominal wall thickness may be used provided the fill on one side of the wall is within 12 inches vertically of the fill on the other side of the wall.

Note: See s. SPS 321.15 (1) (c) for trench footing requirements.

Table 321.18-B
CONCRETE WALL THICKNESSES

Type of Concrete	Nominal Thickness (inches)	Maximum Height of Unbalanced Fill ¹ for Material of Wall Being Supported (Wood frame — feet)
3000 psi	8	8
Unreinforced concrete	10	9
	12 ²	10
	14	11.5

¹Unbalanced fill is the difference in elevation between the outside grade and the basement floor.

²The maximum height of unbalanced fill for a 12-inch thick plain concrete wall may be increased to 12 feet provided the wall is constructed of concrete with a minimum compressive value of 6,000 psi at 28 days.

(3) **MASONRY FOUNDATION WALLS.** (a) *Dampproofing.* 1. Except as allowed under subd. 3., masonry block foundation walls shall be coated with a layer of minimum $\frac{3}{8}$ -inch thick type M or S portland cement mortar parging on the exterior of the wall from footing to finished grade.

2. Masonry foundation walls shall be damp-proofed by applying to the exterior surface of the portland cement parging from footing to finished grade, a continuous coating of one of the following:

a. A bituminous coating applied in accordance with the manufacturer's instructions.

b. Acrylic-modified cement applied at a minimum rate of 3 pounds per square yard.

c. A layer of minimum $\frac{1}{8}$ -inch thick structural surface bonding material labeled as complying with ASTM C887.

Note: The ASTM C887 standard is entitled, "Standard Specification for Packaged, Dry, Combined Materials for Surface Bonding Mortar."

d. A waterproofing treatment applied in accordance with the manufacturer's instructions.

3. a. Parging of masonry block foundation walls is not required where a dampproofing material is sufficiently flexible to be listed or designed for direct application to masonry block.

b. Parging of masonry block foundation walls is not required where a layer of minimum $\frac{1}{4}$ -inch thick structural surface bonding material labeled as complying with ASTM C887 is used for dampproofing.

(b) *Structural requirements.* Unless designed through structural analysis, the masonry foundation walls shall be constructed in accordance with ACI 530.1 and the following requirements:

1. The minimum thickness of unreinforced masonry foundation walls shall be determined by Table 321.18-C, but in no case

shall the thickness be less than the thickness of the wall it supports.

2. Reinforced masonry walls shall be reinforced in accordance with the requirements of Tables 321.18-D, 321.18-E or 321.18-F. Vertical reinforcement shall be provided on each side of any opening and at intervals indicated in the appropriate table.

Table 321.18-C
PLAIN MASONRY FOUNDATION WALLS^d

Maximum Wall Height (ft-in)	Depth of unbalanced backfill height (ft)	Minimum nominal wall thickness (inches)		
		Soil classes and lateral soil load ^a (psf per foot below exterior grade)		
		GW, GP, SW and SP soils 30	GM, GC, SM, SM-SC and ML soils 45	SC, MH, ML-CL and inorganic CL soils 60
7-8	4 (or less)	8	8	8
	5	8	10	10 (solid ^b)
	6	10	12	12 (solid ^b)
	7	12	10 (solid ^b)	12 (solid ^b)
8-4	4 (or less)	8	8	8
	5	8	10	12
	6	10	12	12 (solid ^b)
	7	12	12 (solid ^b)	Note c
9-1	8	10 (solid ^b)	12 (solid ^b)	Note c
	4 (or less)	8	8	8
	5	8	10	12
	6	12	12	12 (solid ^b)
	7	12 (solid ^b)	12 (solid ^b)	Note c
	8	12 (solid ^b)	Note c	Note c
	9	Note c	Note c	Note c

^aFor design lateral soils, see s. SPS 321.18 (1) (e). Soil classes are in accordance with the Unified Soil Classification System and design lateral soil loads are for moist soil conditions without hydrostatic pressure.

^bSolid grouted hollow units.

^cAn analysis in compliance with ACI 530 or reinforcement in accordance with Table 321.18-D, 321.18-E or 321.18-F is required.

^dMortar shall be Type M or S and masonry shall be laid in running bond.

Table 321.18-D^{b,c,d}
8, 10 OR 12 IN. REINFORCED MASONRY FOUNDATION WALLS
WHERE d $\geq$ 5 in.^c

Maximum Wall Height (ft-in)	Height of unbalanced backfill (ft)	Vertical reinforcement		
		Soil classes and lateral soil load ^a (psf per foot below exterior grade)		
		GW, GP, SW and SP soils 30	GM, GC, SM, SM-SC and ML soils 45	SC, MH, ML-CL and inorganic CL soils 60
7-8	4 (or less)	#4 at 48" o.c.	#4 at 48" o.c.	#4 at 48" o.c.
	5	#4 at 48" o.c.	#4 at 48" o.c.	#4 at 40" o.c.
	6	#4 at 48" o.c.	#5 at 48" o.c.	#5 at 40" o.c.
	7	#4 at 40" o.c.	#5 at 40" o.c.	#6 at 48" o.c.
8-4	4 (or less)	#4 at 48" o.c.	#4 at 48" o.c.	#4 at 48" o.c.
	5	#4 at 48" o.c.	#4 at 48" o.c.	#4 at 40" o.c.
	6	#4 at 48" o.c.	#5 at 48" o.c.	#5 at 40" o.c.
	7	#5 at 48" o.c.	#6 at 48" o.c.	#6 at 40" o.c.
9-1	8	#5 at 40" o.c.	#6 at 40" o.c.	#7 at 40" o.c.
	4 (or less)	#4 at 48" o.c.	#4 at 48" o.c.	#4 at 48" o.c.
	5	#4 at 48" o.c.	#4 at 48" o.c.	#5 at 48" o.c.
	6	#4 at 48" o.c.	#5 at 48" o.c.	#6 at 48" o.c.
	7	#5 at 48" o.c.	#6 at 48" o.c.	#7 at 48" o.c.
	8	#5 at 40" o.c.	#7 at 48" o.c.	#8 at 48" o.c.
	9	#6 at 40" o.c.	#8 at 48" o.c.	#8 at 32" o.c.

^aFor design lateral soil loads, see s. SPS 321.18 (1) (e). Soil classes are in accordance with the Unified Soil Classification System and design lateral soil loads are for moist soil conditions without hydrostatic pressure.

^bProvisions for this table are based on construction requirements specified in s. SPS 321.18 (3) (b).

^cFor alternative reinforcement, see s. SPS 321.18 (3) (b).

^dMortar shall be Type M or S and masonry shall be laid in running bond.

^eThe specified location of the reinforcement shall equal or exceed the effective depth distance, d, measured from the face of the soil side of the wall to the center of vertical reinforcement.

Table 321.18-E^{b,c,d}
10 OR 12 IN. REINFORCED MASONRY FOUNDATION WALLS
WHERE $d \geq 6.75$ in.^a

Maximum Wall Height (ft-in)	Height of unbalanced backfill (ft)	Vertical reinforcement		
		Soil classes and lateral soil load ^a (psf per foot below exterior grade)		
		GW, GP, SW and SP soils 30	GM, GC, SM, SM-SC and ML soils 45	SC, MH, ML-CL and inorganic CL soils 60
7-8	4 (or less)	#4 at 56" o.c.	#4 at 56" o.c.	#4 at 56" o.c.
	5	#4 at 56" o.c.	#4 at 56" o.c.	#4 at 56" o.c.
	6	#4 at 56" o.c.	#4 at 48" o.c.	#4 at 40" o.c.
	7	#4 at 56" o.c.	#5 at 56" o.c.	#5 at 40" o.c.
8-4	4 (or less)	#4 at 56" o.c.	#4 at 56" o.c.	#4 at 56" o.c.
	5	#4 at 56" o.c.	#4 at 56" o.c.	#4 at 48" o.c.
	6	#4 at 56" o.c.	#4 at 48" o.c.	#5 at 56" o.c.
	7	#4 at 48" o.c.	#4 at 32" o.c.	#6 at 56" o.c.
9-1	4 (or less)	#4 at 56" o.c.	#4 at 56" o.c.	#4 at 56" o.c.
	5	#4 at 56" o.c.	#4 at 56" o.c.	#4 at 48" o.c.
	6	#4 at 56" o.c.	#4 at 40" o.c.	#4 at 32" o.c.
	7	#4 at 48" o.c.	#5 at 48" o.c.	#6 at 48" o.c.
	8	#4 at 32" o.c.	#6 at 48" o.c.	#4 at 16" o.c.
	9	#5 at 40" o.c.	#6 at 40" o.c.	#7 at 40" o.c.

^aFor design lateral soil loads, see s. SPS 321.18 (1) (e). Soil classes are in accordance with the Unified Soil Classification System and design lateral soil loads are for moist soil conditions without hydrostatic pressure.

^bProvisions for this table are based on construction requirements specified in s. SPS 321.18 (3) (b).

^cFor alternative reinforcement, see s. SPS 321.18 (3) (b).

^dMortar shall be Type M or S and masonry shall be laid in running bond.

^eThe specified location of the reinforcement shall equal or exceed the effective depth distance, d , measured from the face of the soil side of the wall to the center of vertical reinforcement.

Table 321.18-F^{b,c,d}
12 IN. REINFORCED MASONRY FOUNDATION WALLS WHERE $d \geq 8.75$ in.^a

Maximum Wall Height (ft-in)	Height of unbalanced backfill (ft)	Vertical reinforcement		
		Soil classes and lateral soil load ^a (psf per foot below exterior grade)		
		GW, GP, SW and SP soils 30	GM, GC, SM, SM-SC and ML soils 45	SC, MH, ML-CL and inorganic CL soils 60
7-8	4 (or less)	#4 at 72" o.c.	#4 at 72" o.c.	#4 at 72" o.c.
	5	#4 at 72" o.c.	#4 at 72" o.c.	#4 at 72" o.c.
	6	#4 at 72" o.c.	#4 at 64" o.c.	#4 at 48" o.c.
	7	#4 at 72" o.c.	#4 at 48" o.c.	#5 at 56" o.c.
8-4	4 (or less)	#4 at 72" o.c.	#4 at 72" o.c.	#4 at 72" o.c.
	5	#4 at 72" o.c.	#4 at 72" o.c.	#4 at 72" o.c.
	6	#4 at 72" o.c.	#4 at 56" o.c.	#5 at 72" o.c.
	7	#4 at 64" o.c.	#5 at 64" o.c.	#4 at 32" o.c.
9-1	4 (or less)	#4 at 72" o.c.	#4 at 72" o.c.	#4 at 72" o.c.
	5	#4 at 72" o.c.	#4 at 72" o.c.	#4 at 64" o.c.
	6	#4 at 72" o.c.	#4 at 56" o.c.	#5 at 64" o.c.
	7	#4 at 56" o.c.	#4 at 40" o.c.	#6 at 64" o.c.
	8	#4 at 40" o.c.	#6 at 64" o.c.	#6 at 48" o.c.
	9	#5 at 56" o.c.	#7 at 72" o.c.	#6 at 40" o.c.

^aFor design lateral soil loads, see s. SPS 321.18 (1) (e). Soil classes are in accordance with the Unified Soil Classification System and design lateral soil loads are for moist soil conditions without hydrostatic pressure.

^bProvisions for this table are based on construction requirements specified in s. SPS 321.18 (3) (b).

^cFor alternative reinforcement, see s. SPS 321.18 (3) (b).

^dMortar shall be Type M or S and masonry shall be laid in running bond.

^eThe specified location of the reinforcement shall equal or exceed the effective depth distance, d , measured from the face of the soil side of the wall to the center of vertical reinforcement.

3. Vertical reinforcement shall have a minimum yield strength of 60,000 psi.

4. Solid-grouted hollow units or cores containing vertical reinforcement shall be filled with masonry grout that complies with ASTM C 476.

5. In lieu of the reinforcement provisions of Tables 321.18-D, 321.18-E and 321.18-F, alternative reinforcing bar size and spacing having an equivalent cross-sectional area or reinforcement per linear foot of wall is permitted, provided the spacing of the reinforcement does not exceed 72 inches and reinforcing bar size does not exceed No. 11.

6. The depth below grade, wall height and reinforcement spacing may exceed the maximum values indicated in Tables 321.18-D, 321.18-E and 321.18-F only if the design is based on structural analysis.

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

Note: The department will accept Permanent Wood Foundations Design and Construction Guide published by the Southern Forest Products Association through the Southern Pine Council, as complying with this standard. The Design and Construction Guide requires a 3.5 inch thick floor slab if a poured concrete floor slab is used.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; am. (3) (intro), Register, February, 1985, No. 350, eff. 3-1-85; cr. (2) (c) to (e), r. and recr. Tables C and D, r. (3) (a) 2., renum. (3) (a) 1. to be (a), Register, January, 1989, No. 397, eff. 2-1-89; am. (intro.), (2) (b), (3) (b) and Table 21.18-D, cr. Table 21.18, r. (2) (c), renum. (2) (d) and (e) to be (2) (c) and (d), Register, March, 1992, No. 435, eff. 4-1-92; renum. (1) to (3) to be (2) to (4), and am. (3) (b), (4) (intro.) and (b), Table 21.18-A, r. (intro.) and Table 21.18, cr. (1), (3) (e), Register, November, 1995, No. 479, eff. 12-1-95; am. (2), Register, January, 1999, No. 517, eff. 2-1-99; r. and recr. (1) (b), (3), Tables 21.18-C and D, am. (2) (a), r. Table 21.18-B, renum. Table 21.18-A to be Table 21.18-B and cr. (1) (c), (d), Tables 21.18-A, E and F, Register March 2001 No. 543, eff. 4-1-01; CR 02-077: r. (1) (c) 1., renum. (1) (d) to be (1) (e), cr. (1) (d), am. (4) (intro.), (b) and Tables 21.18-A, C and F Register May 2003 No. 569, eff. 8-1-03; CR 08-043: am. (1) (d) 2. b. and Tables 21.18-C to F, cr. (2) (a) (title) and (b) (title), r. and recr. (3) (a) and (4) Register March 2009 No. 639, eff. 4-1-09; correction in (1) (e), (2) (a), (3) (b) 1., 2., 5., 6., (4), Table 321.18-C to -F made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 15-041: am. (1) (c) 3. a., cr. (1) (c) 3. d., am. (1) (d) 2. c., (4) Register December 2015 No. 720, eff. 1-1-16; CR 15-043: am. (1) (d) 1. c. Register December 2015 No. 720, eff. 1-1-16; correction under s. 13.92 (4) (b) 7. Register December 2015 No. 720.

Subchapter VI — Floors

SPS 321.19 Floor design. Floors shall support all dead loads plus the minimum unit live loads as set forth in s. SPS 321.02. The live loads shall be applied to act vertically and uniformly to each square foot of horizontal floor area. Basements shall be provided with wood or concrete or similar type floors that comply with s. SPS 321.20 or 321.205.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; r. and recr., Register, March, 1992, No. 435, eff. 4-1-92; correction made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 321.20 Concrete floors. (1) When concrete floors are provided, the thickness of the concrete shall measure at least 3 inches.

(2) When a concrete floor is placed in clay soils, a 4-inch thick base course shall be placed in the subgrade consisting of clean graded sand, gravel or crushed stone.

(3) When a concrete floor is placed on sand or gravel soils, the base course may be omitted unless drain tile is installed. If drain tile is installed, the requirements of s. SPS 321.17 shall be met.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; am. Register, January, 1989, No. 397, eff. 2-1-89; r. and recr. Register, January, 1999, No. 517, eff. 2-1-99; correction in (3) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 321.203 Garage floors. (1) MATERIALS. Garage floors shall be constructed of concrete or other noncombustible materials which are impermeable to petroleum products. Slab-on-grade concrete garage floors shall be at least 4 inches thick and placed over at least 4 inches of granular fill.

Note: It is not the intent of sub. (1) to require a concrete floor to be sealed to make it completely impermeable.

(2) CONFIGURATION. The floor shall be sloped such that water is removed in accordance with one of the following:

(a) Water drains toward the overhead door or to exterior grade such that no damage will be caused to any structural member or wall covering of the garage or the dwelling.

(b) Water drains into an interior floor drain that complies with the requirements of ch. SPS 382.

Note: See s. SPS 382.34 for floor drain requirements.

History: Cr. Register, November, 1995, No. 479, eff. 12-1-95; CR 02-077: r. and recr. (2) Register May 2003 No. 569, eff. 8-1-03; correction in (2) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 321.205 Wood floors in contact with the ground. Wood floors in contact with the ground shall comply with the requirements under s. SPS 321.18 (4).

History: Cr. Register, January, 1989, No. 397, eff. 2-1-89; am. Register, January, 1999, No. 517, eff. 2-1-99; correction made under s. 13.93 (2m) (b) 7., Stats., Register, March, 2001, No. 543; CR 02-077: r. and recr. Register May 2003 No. 569, eff. 8-1-03; correction made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 321.21 Precast concrete floors. Precast concrete floors shall be designed through structural analysis, or load tables furnished by the precast product fabricator may be used, provided the load tables were developed using structural analysis or load testing.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; r. and recr. Register, March, 1992, No. 435, eff. 4-1-92.

SPS 321.22 Wood frame floors. Unless designed through structural analysis, wood frame floors shall comply with the following requirements:

(1) FLOOR JOISTS. (a) *General.* 1. Floor joists shall comply with the structural requirements and live load determination under s. SPS 321.02.

Note: See ch. SPS 325 Appendix A for design information.

2. Where the joists of a floor system are parallel to, and located between bearing walls above and below, the joists shall be doubled.

(b) *Floor joists on concrete walls.* Where a sill plate is provided for floor joists on poured concrete, the sill plates shall be fastened to the foundation.

Note: Section SPS 321.18 (1) (d) requires the floor joists to also be fastened to the sill plate.

(c) *Floor joists on masonry walls with a solid top course.* Where a sill plate is provided for floor joists on solid block top course masonry, the sill plate shall be fastened to the foundation.

(d) *Floor joists on masonry walls with open top course.* 1. Where the masonry wall has an open top course, a sill plate at least as wide as the foundation wall shall be fastened to the foundation.

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

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

(2) FLOOR TRUSSES. Metal plate connected wood floor trusses shall be designed in accordance with the Design Specifications for Metal Plate Connected Parallel Chord Wood Trusses and the National Design Specification for Wood Construction. Truss members shall not be cut, bored or notched.

(3) GIRDERS AND BEAMS. (a) Girders and beams shall be selected from Table 321.22-A1 or Table 321.22-A2 or shall be designed through structural analysis.

(b) Wood girders and beams shall be fitted at the post or column. Adjoining ends shall be fastened to each other to transfer horizontal loads across the joint. Beams shall also be fastened to the posts with framing anchors, angle clips, or equivalent.

(c) Where intermediate beams are used, they shall rest on top of the girders; or shall be supported by ledgers or blocks fastened to the sides of the girders; or they may be supported by approved metal hangers into which the ends of the beams shall be fitted.

(d) Lateral restraint for all wood beams shall be provided at all columns using a saddle or other approved connection where the beam meets one of the following conditions:

1. The beam is not restrained at both ends.

2. The beam is more than 11.25 inches deep using actual measurement.

Note: A saddle supports the beam on the bottom and allows for the through-connection of fasteners into the side of the beam.

(4) BEARING AND END CONFIGURATION. (a) *Sawn lumber.* 1. 'Joists.' Wood joists made of sawn lumber shall meet the following bearing requirements:

a. Wood joists supported on wood or metal shall have a bearing surface of at least 1½-inches measured from the end of the joist.

b. Wood joists supported on masonry or concrete shall have a bearing surface of at least 3 inches measured from the end of the joist.

c. The tail end of a floor joist may not extend past the edge of a beam by more than the depth of the floor joist.

d. Wood floor joists with ends that intersect over a beam shall have the ends overlap at least 3 inches and be securely fastened together with at least two 12d common nails or the ends shall be butt-jointed or face-jointed and fastened with ties, straps, plates or solid blocking.

2. 'Beams and girders.' Beams and girders made of sawn lumber shall have a bearing surface on their supports of at least 3 inches parallel to the beam or girder and be at least as wide as the beam or girder.

(b) *Engineered wood products.* Bearing surface for engineered wood products shall be in accordance with the manufacturer's instructions provided those instructions were developed through structural analysis or product testing and are applicable to the configuration.

(5) NOTCHING AND BORING. Notching and boring of beams or girders is prohibited unless determined through structural analysis.

(a) *Notching of floor joists.* 1. Notches located in the top or bottom of floor joists shall not have a depth exceeding 1/6 the depth of the joist, shall not have a length exceeding 1/3 the joist depth nor be located in the middle 1/3 of the span of the joist.

2. Where floor joists are notched on the ends, the notch shall not exceed 1/4 the depth of the joist. Notches over supports may extend the full bearing width of the support.

(b) *Boring of floor joists.* 1. 'General.' A hole may not be bored in a floor joist within 2 inches of a notch or another hole. In no case shall the distance between adjacent holes be less than the diameter of the larger hole.

2. 'Holes near the edge.' Holes bored in the top or bottom 2 inches of a joist shall follow the limitations for notching under par. (a).

3. 'Other holes.' Holes bored in floor joists that are not within 2 inches of the top or bottom of the joist shall have their diameter limited to 1/3 the depth of the joist.

(c) *Engineered wood products.* Notching or boring of engineered wood products shall be done in accordance with the manufacturer's instructions provided those instructions were developed through structural analysis or product testing.

(6) OVERHANG OF FLOORS. (a) *General.* Except as provided in pars. (b) and (c), a floor joist overhang shall be cantilevered beyond the outer edge of the supporting wall below it by no more than the actual depth of the joist or shall be designed through structural analysis in accordance with s. SPS 321.02 (3).

(b) *Joist overhangs parallel to the main floor framing system.* Joist overhangs that are extensions of, and parallel to, the main floor framing system may extend beyond the depth of the joist without structural analysis provided they meet all of the following conditions:

1. The overhang is cantilevered no more than 2 feet beyond the outer edge of the supporting wall below it.

2. a. The overhang supports a uniform load limited to the weight of the bearing wall and the tributary roof area above it.

b. The tributary length of the roof area, excluding the eave overhang, is no more than 2 feet greater than the actual length of the joist directly below.

c. The eave overhang is no more than 2 feet.

Note: The tributary length is usually half the span of the joist or rafter.

3. The joist overhang does not support any concentrated

loads. For the purposes of this subsection, a framed opening in the wall with a rough opening of 4 feet or less shall be considered uniform loading.

4. a. The cantilevered joist is doubled at the supporting wall.
- b. The doubled joist length extends inward beyond the inner edge of the supporting wall by the same distance as the cantilever.
- c. The added joist member is secured to the main joist as stated in the nailing schedule in ch. SPS 325 Appendix A, under the heading for “floor framing, built-up girder and beams, top loaded”.

(c) *Joist overhangs perpendicular to the main floor framing system.* Joist overhangs that are perpendicular to the main floor framing system, or lookout joists, may extend beyond the depth of the joist without structural analysis provided they meet all of the following conditions:

1. The joist overhang is cantilevered no more than 2 feet beyond the outer edge of the supporting wall below it.
2. a. A double floor joist is used to support the lookout joist.

b. The double floor joist is located a distance of at least 2 times the cantilever length inward from the outer edge of the supporting wall below.

c. The lookout joists are fastened to the double joist with metal hangers.

3. The joist overhang supports no more than either a non-bearing wall or a wall that supports only a roof which spans no more than the floor overhang cantilever length plus the eave overhang.

(d) All overhangs longer than the depth of the supporting joist that do not meet all of the conditions under par. (b) or (c) shall be designed through structural analysis.

(7) FLOOR OPENINGS. Trimmers and headers shall be doubled when the span of the header exceeds 4 feet. Headers which span more than 6 feet shall have the ends supported by joist hangers or framing anchors, unless the ends are supported on a partition or beam. Tail joists (joists which frame into headers) more than 8 feet long shall be supported on metal framing anchors or on ledger strips of at least 2 inches by 2 inches nominal.

TABLE 321.22-A1
MINIMUM SIZES FOR BEAMS AND GIRDERS OF STEEL OR WOOD

Column Spacing	One Floor Only		Roof/Ceiling and One Floor				Roof/Ceiling+ One Floor/Ceiling + One Floor			
	Wood Beams ¹ (in., nominal)	A 36 Steel Beams ²	Wood Beams ^{1,3} (in., nominal)		A 36 Steel Beams ²		Wood Beams ^{1,3} (in., nominal)		A 36 Steel Beams ²	
			Zone 2	Zone 1	Zone 2	Zone 1	Zone 2	Zone 1	Zone 2	Zone 1
24 ft. wide house:										
8 ft.	8x8	—	8x10	10x10	—	—	8x12	10x12	—	—
			6x12	6x12	—	—	6x14	8x14	—	—
10 ft.	8x10	—	8x12	10x12	M 10x9	M 10x9	10x14	10x14	M 12x11.8	M 12x11.8
			6x14	8x14	W 6x12	W 8x10	8x16	8x16	W 8x15	W 8x15
12 ft.	8x12	—	12x12	10x14	W 12x10	M 12x11.8	14x14	14x14	W 12x16	W 12x16
			10x14	8x16	W 10x11.5	W 8x15	10x16	12x16	W 10x17	W 8x21
15 ft.	12x12	—	—	—	W 12x16	W 12x16	—	—	W 12x22	W 14x22
			—	—	W 10x17	W 6x25	—	—	W 8x28	W 8x31
26 ft. wide house:										
8 ft.	6x10	—	10x10	10x10	—	—	10x12	10x12	—	—
			6x12	8x12	—	—	8x14	8x14	—	—
10 ft.	10x10	—	10x12	10x12	M 10x9	M 12x10	10x14	12x14	M 12x11.8	W 12x14
			8x14	8x14	W 8x10	W 8x13	8x16	8x16	W 8x15	W 8x17
12 ft.	8x12	—	10x14	10x14	M 12x11.8	M 12x11.8	14x14	12x16	W 12x16	W 10x19
			8x16	8x16	W 8x15	W 6x20	12x16	10x18	W 8x21	W 8x24
15 ft.	10x14	—	—	—	W 12x16	W 10x19	—	—	W 14x22	W 14x22
			—	—	W 8x21	W 8x24	—	—	W 8x31	W 8x35
28 ft. wide house:										
8 ft.	6x10	—	10x10	8x12	—	—	10x12	10x12	—	—
			8x12	4x16	—	—	8x14	8x14	—	—
10 ft.	10x10	M 10x7.5	10x12	12x12	M 12x10	W 10x12	12x14	12x14	W 12x14	W 12x14
		W 6x9	8x14	8x14	W 8x13	W 8x13	8x16	10x16	W 8x17	W 10x15
12 ft.	10x12	M 10x9	10x14	12x14	M 12x11.8	W 12x14	12x16	12x16	W 10x19	M 14x18
		W 6x12	8x16	10x16	W 8x15	W 8x18	10x18	10x18	W 8x24	W 8x24
15 ft.	10x14	M 12x10	—	—	W 10x19	M 14x18	—	—	W 14x22	W 14x26
		W 8x13	—	—	W 8x24	W 8x24	—	—	W 8x35	W 8x35
30 ft. wide house:										
8 ft.	8x10	—	10x10	8x12	—	—	10x12	12x12	—	—
			8x12	6x14	—	—	8x14	8x14	—	—
10 ft.	10x10	M 10x7.5	10x12	12x12	M 12x10	M 12x10	12x14	12x14	W 12x14	W 12x14
		W 6x9	8x14	10x14	W 8x13	W 8x13	10x16	10x16	W 10x15	W 10x15
12 ft.	10x12	M 10x9	12x14	12x14	W 12x14	W 12x14	12x16	14x16	M 14x18	M 14x18
		W 6x12	8x16	10x16	W 8x18	W 8x18	10x18	12x18	W 8x24	W 8x24
15 ft.	12x14	M 12x11.8	—	—	M 14x18	W 10x21	—	—	W 14x26	W 14x26
		W 8x15	—	—	W 8x24	W 8x28	—	—	W 8x35	W 10x33
32 ft. wide house:										
8 ft.	8x10	—	8x12	8x12	—	—	12x12	12x12	—	—
			6x14	6x14	—	—	8x14	10x14	—	—
10 ft.	10x10	M 10x7.5	12x12	12x12	W 10x12	W 10x12	12x14	14x14	W 12x14	W 12x16
		W 6x9	8x14	10x14	W 8x13	W 6x16	10x16	10x16	W 10x15	W 10x17
12 ft.	10x12	M 10x9	12x14	14x14	W 12x14	W 12x14	14x16	14x16	M 14x18	W 12x22
		W 6x12	10x16	10x16	W 10x15	W 10x17	12x18	12x18	W 8x24	W 8x28
15 ft.	12x14	M 12x11.8	—	—	M 14x18	W 12x22	—	—	W 14x26	W 14x26
		W 8x15	—	—	W 8x24	W 8x28	—	—	W 10x33	W 10x33

¹This table is based upon wood with a fiber bending stress of 1,000 psi. Two acceptable wood beam selections are listed for each loading condition.

²Two acceptable steel beam selections are listed for each loading condition. The first entry is the most economical selection based upon beam weight.

³Wood main beams or girders may be built up from nominal 2-inch members. The 2-inch members shall be laid on edge and fastened together with a double row of common nails not less than 3½-inches in length. Nails shall be spaced not more than 18 inches apart in each row with the end nails placed 4 inches to 6 inches from the end of each piece. Where built-up beams are employed over a single span, the length of each individual piece used to fabricate the beam shall equal the length of the beam.

TABLE 321.22-A2

MINIMUM SIZES FOR BUILT-UP WOOD BEAMS IN BASEMENTS AND CRAWL SPACES SUPPORTING ONE FLOOR ONLY

HOUSE WIDTH	F _b =800 psi		F _b =1000 psi		F _b =1200 psi		F _b =1400 psi	
	Col. Spacing ft-in	Beam size	Col. Spacing ft-in	Beam size	Col. Spacing ft-in	Beam size	Col. Spacing ft-in	Beam size
16 ft.	7-8	3-2x8	8-7	3-2x8	9-4	3-2x8	10-2	3-2x8
	8-11	4-2x8	9-11	4-2x8	10-11	4-2x8	11-10	4-2x8
	9-11	3-2x10	11-1	3-2x10	12-1	3-2x10	13-1	3-2x10
	11-4	4-2x10	12-8	4-2x10	13-1	4-2x10	15-0	4-2x10
	12-0	3-2x12	13-5	3-2x12	14-8	3-2x12	15-10	3-2x12
	13-10	4-2x12	15-7	4-2x12	17-0	4-2x12	18-4	4-2x12
20 ft.	6-11	3-2x8	7-8	3-2x8	8-5	3-2x8	9-1	3-2x8
	7-11	4-2x8	8-11	4-2x8	9-9	4-2x8	10-7	4-2x8
	8-10	3-2x10	9-11	3-2x10	10-10	3-2x10	11-8	3-2x10
	10-2	4-2x10	11-4	4-2x10	12-6	4-2x10	13-6	4-2x10
	10-9	3-2x12	12-0	3-2x12	13-2	3-2x12	14-3	3-2x12
	11-5	4-2x12	13-11	4-2x12	15-2	4-2x12	16-5	4-2x12
24 ft.	6-3	3-2x8	7-1	3-2x8	7-8	3-2x8	8-4	3-2x8
	7-3	4-2x8	8-2	4-2x8	8-11	4-2x8	9-8	4-2x8
	8-1	3-2x10	9-0	3-2x10	9-11	3-2x10	10-8	3-2x10
	9-4	4-2x10	10-4	4-2x10	11-5	4-2x10	12-4	4-2x10
	9-9	3-2x12	10-11	3-2x12	12-0	3-2x12	12-11	3-2x12
	11-3	4-2x12	12-7	4-2x12	13-11	4-2x12	15-0	4-2x12
28 ft.	5-10	3-2x8	6-6	3-2x8	7-2	3-2x8	7-8	3-2x8
	6-8	4-2x8	7-6	4-2x8	8-3	4-2x8	8-11	4-2x8
	7-5	3-2x10	8-4	3-2x10	9-1	3-2x10	9-11	3-2x10
	8-7	4-2x10	9-8	4-2x10	10-6	4-2x10	11-4	4-2x10
	9-0	3-2x12	10-1	3-2x12	11-1	3-2x12	10-11	3-2x12
	10-5	4-2x12	11-8	4-2x12	12-10	4-2x12	13-10	4-2x12
32 ft.	5-4	3-2x8	6-1	3-2x8	6-8	3-2x8	7-3	3-2x8
	6-3	4-2x8	7-1	4-2x8	7-8	4-2x8	8-4	4-2x8
	7-0	3-2x10	7-9	3-2x10	8-7	3-2x10	9-2	3-2x10
	8-1	4-2x10	8-11	4-2x10	9-10	4-2x10	10-8	4-2x10
	8-5	3-2x12	9-6	3-2x12	10-4	3-2x12	11-1	3-2x12
	9-9	4-2x12	11-0	4-2x12	12-0	4-2x12	12-11	4-2x12
36 ft.	5-1	3-2x8	5-9	3-2x8	6-3	3-2x8	6-9	3-2x8
	5-11	4-2x8	6-7	4-2x8	6-9	4-2x8	7-10	4-2x8
	6-6	3-2x10	7-4	3-2x10	8-1	3-2x10	8-8	3-2x10
	7-6	4-2x10	8-6	4-2x10	9-4	4-2x10	10-0	4-2x10
	7-11	3-2x12	8-11	3-2x12	9-9	3-2x12	10-7	3-2x12
	9-2	4-2x12	10-4	4-2x12	11-4	4-2x12	12-4	4-2x12

¹This table provides maximum allowable spans in feet and inches for main beams or girders which are built-up from nominal 2-inch members.

²Fiber bending stress for various species and grades of wood is given in Appendix A321.

³The 2-inch members shall be laid on edge and fastened together with a double row of common nails not less than 3½-inches in length. Nails shall be spaced not more than 18 inches apart in each row with the end nails placed 4 inches to 6 inches from the end of each piece.

⁴Where built-up wood beams are employed over a single span, the length of each individual piece used to fabricate the beam shall equal the length of the beam.

⁵Where built-up wood beams are continued over more than one span and where lengths of individual pieces are less than the total length of the complete beam, butt joints shall be located over supports or within 6 inches of the quarter points of the clear span. Where located near the quarter points, the joints in built-up beams shall be separated by at least one lamination and shall not exceed the beam width.

(8) **FLOOR SHATHING, BOARDS AND PLANKS.** (a) *Plywood sheathing.* Plywood sheathing used for floors shall be limited to the allowable loads and spans shown in Table 321.22-B.

(c) *Combination subfloor-underlayment.* Combination subfloor-underlayment shall be installed in accordance with Table 321.22-D.

(d) *Floor boards.* Where wood boards are used for floor sheathing, the boards shall comply with the minimum thicknesses shown in Table 321.22-E.

(e) *Planks.* Planks shall be tongue and groove or splined and at least 2 inches, nominal, in thickness. Planks shall terminate over beams unless the joints are end matched. The planks shall be laid so that no continuous line of joints will occur except at points of support. Planks shall be nailed to each beam.

(9) **BRIDGING.** (a) *Sawn lumber.* Bridging shall be provided for sawn lumber framing at intervals not exceeding 8 feet where the nominal depth to thickness ratio is greater than 4 to 1.

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) *Engineered products.* Bridging shall be provided for engineered framing products in accordance with the manufacturer's recommendations.

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.

(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 that 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 sub. (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.

Table 321.22-B

**ALLOWABLE SPANS FOR PLYWOOD FLOOR SHEATHING
CONTINUOUS OVER TWO OR MORE SPANS AND FACE GRAIN PERPENDICULAR TO SUPPORTS¹**

Span Rating ²	Plywood Thickness (in inches)	Maximum span ³ (in inches)
³² / ₁₆	¹⁷ / ₃₂ , ¹ / ₂ , ³ / ₈	16 ⁵
⁴⁰ / ₂₀	¹⁹ / ₃₂ , ⁵ / ₈ , ³ / ₄ , ¹ / ₈	20 ^{4,5}
⁴⁸ / ₂₄	²³ / ₃₂ , ³ / ₄ , ⁷ / ₈	24

¹These values apply to C-D, C-C, and Structural I and II grades only. Spans shall be limited to values shown because of possible effect of concentrated loads.

²Span Rating appears on all panels in the construction grades listed in footnote 1.

³Plywood edges shall have approved tongue and groove joints or shall be supported with blocking, unless 3/4-inch minimum thickness underlayment or 1 1/2 inches of approved cellular or lightweight concrete is installed or finished floor is 23/32-inch wood strip. Allowable uniform load based on deflection of 1/360 of span is 165 pounds per square foot.

⁴For joists spaced 24 inches on center, plywood sheathing with Span Rating ⁴⁰/₂₀ or greater can be used for subfloors when supporting 1 1/2 inches lightweight concrete.

⁵May be 24 inches if 23/32-inch wood strip flooring is installed at right angles to joists.

Table 321.22-D

**MINIMUM THICKNESS FOR PLYWOOD COMBINATION
SUBFLOOR-UNDERLAYMENT. PLYWOOD CONTINUOUS OVER
TWO OR MORE SPANS AND FACE GRAIN PERPENDICULAR TO
SUPPORTS^{1,2}**

Plywood Grade	Plywood Species Group	Maximum Support Spacing ³		
		16" o.c. Panel Thickness (inches)	20" o.c. Panel Thickness (inches)	24" o.c. Panel Thickness (inches)
Sanded	1	¹ / ₂	⁵ / ₈	³ / ₄
exterior type	2 & 3	⁵ / ₈	³ / ₄	⁷ / ₈
	4	³ / ₄	⁷ / ₈	1
Underlayment C-C Plugged Sturd-I-Floor ⁴	All Groups	APA Rated Sheathing and APA Rated Sturd-I-Floor shall be installed consistent with their rating.		

¹Spans shall be limited to values shown, based on possible effect of concentrated loads.

²Unsupported edges shall be tongue and groove or blocked except where 3/4-inch underlayment or 23/32-inch finish floor is used.

³Underlayment, C-C Plugged, sanded exterior type: allowable uniform load based on deflection of L/360 span for spans 24 inches or less is 125 psf; and for spans 48 inches, 65 psf.

⁴The department will accept subfloor underlayment panels such as Sturd-I-Floor which meet the requirements of APA manufacturing specifications for Sturd-I-Floor panels.

Table 321.22-E

MINIMUM THICKNESS OF FLOOR BOARDS

Joist Spacing (inches)	Minimum Net Thickness (inches)	
	Perpendicular to Joist	Diagonal to Joist
24	¹¹ / ₁₆	³ / ₄
16	⁵ / ₈	⁵ / ₈

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; am. (1) and cr. (1m), Register, February, 1985, No. 350, eff. 3-1-85; renum. (8) (c) and (d) to be (8) (d) and (e) and am. (8) (d), renum. Table 21.22-A and D to be Table 21.22 A1 and E, cr. (8) (c), Table 21.22 A2, r. and recr. Tables 21.22 B and C, Register, January, 1989, No. 397, eff. 2-1-89; am. (2), (4), (5), (6) and (9), r. and recr. Table 21.22-A2, Register, March, 1992, No. 435, eff. 4-1-92; am. (5) (b) and cr. (5) (c), Table 21.22-A1, r. Table 21.22-A, Register, November, 1995, No. 479, eff. 12-1-95; r. and recr. (9), Register, January, 1999, No. 517, eff. 2-1-99; r. and recr. (1m), (4), and (5) (b), Register, March, 2001, No. 543, eff. 4-1-01; CR 02-077: am. (5) (b) 1., r. and recr. (6) Register May 2003 No. 569, eff. 8-1-03; CR 08-043: r. and recr. (1), r. (1m), (8) (b) and Table 21.22-C, renum. (3) (intro.), (a) and (b) to be (3) (a), (b) and (c), cr. (3) (d) Register March 2009 No. 639, eff. 4-1-09; correction in (1) (a) 1., (3) (a), (6) (a), (8) (a), (c), (d), Table 321.22-A2 made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 15-041: cr. (10) Register December 2015 No. 720, eff. 1-1-16; CR 15-043: am. (6) (b) 4. c. Register December 2015 No. 720, eff. 1-1-16.

SPS 321.225 Decks. (1) Decks attached to dwellings and any detached decks that serve an exit shall comply with the applicable provisions of subchs. II to X of ch. SPS 321, including all of the following:

- Excavation requirements under s. SPS 321.14;
- Footing requirements under s. SPS 321.15 (2) (f);
- Frost penetration requirements under s. SPS 321.16;
- Load requirements under s. SPS 321.02;
- Stair, handrail and guard requirements of s. SPS 321.04.
- Decay protection requirements of s. SPS 321.10.

(2) A deck that complies with the standards in ch. SPS 325 Appendix B, and ch. SPS 325 Appendix C, if applicable, shall be considered as complying with sub. (1).

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92; correction in (1) to (6) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 15-043: Renum. to (1) and am., cr. (2) Register December 2015 No. 720, eff. 1-1-16.

Subchapter VII — Walls

SPS 321.23 Wall design. (1) **LIVE AND DEAD LOADS.** All walls shall support all superimposed vertical dead loads and live loads from floors and roofs.

(2) **HORIZONTAL WIND LOAD.** Walls shall be designed to withstand a horizontal wind pressure of at least 20 pounds per square foot applied to the vertical projection of that portion of the dwelling above grade. No wind load reduction shall be permitted for the shielding effect of other buildings.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80.

SPS 321.24 Exterior covering. (1) **GENERAL.** The exterior walls shall be covered with a permanent weather resistant finish.

(2) **DURING CONSTRUCTION.** During construction, wall cavity insulation may not be installed until a water-resistant covering is in place over the wall cavity and windows, doors and a roof with at least underlayment are installed.

Note: An example of acceptable water-resistant covering for a wall is foam sheathing with permanently taped joints.

(3) **FLASHING.** (a) Corrosion-resistant flashing shall be installed in the exterior wall to prevent water from entering the wall cavity or coming in contact with the structural framing components.

(b) The flashing shall extend to the surface of the exterior wall finish and prevent water from reentering the exterior wall.

(c) 1. Any joints between 2 pieces of flashing that form a vertical joint shall be lapped a minimum of 6 inches and sealed.

2. Any joints between 2 pieces of flashing that form a horizontal joint shall be lapped a minimum of 2 inches and sealed unless otherwise specified by the flashing manufacturer.

3. Sealants used for flashing shall be exterior grade and shall be compatible with the materials being sealed.

(d) Flashing shall be provided at all of the following locations:

1. At the top of all exterior door and window openings, unless using self-flashing windows that provide at least one inch of flashing around the opening, including the corners.

2. At the intersection of chimneys or other masonry construction with frame walls.

3. Under and at the ends of masonry, wood or metal copings and sills.

4. Continuously above all projecting wood trim.

5. Where porches, decks or stairs attach to a wall or floor assembly of wood frame construction.

6. At wall and roof intersections.

7. At built-in gutters.

8. Along the bottom of door openings that are elevated above-grade.

Note: Flashing placed along the bottom of a door opening that is elevated above-grade can subsequently accommodate adding a deck outside the door.

(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.

(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.

Note: See s. SPS 321.26 (5) for additional flashing requirements with masonry cavity walls and s. SPS 321.28 (7) for additional flashing requirements with roofing.

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

(4) **WATER-RESISTIVE BARRIER REQUIREMENTS.** (a) *General.* 1. Exterior walls of wood or metal frame construction shall be provided with a water-resistive barrier from the highest point to the bottom of the permanent weather-resistant covering.

Note: Acceptable water-resistive barrier materials include polymeric-based house wraps and spray-applied water-resistive barriers installed per the manufacturer's instructions, #15 or greater asphalt-saturated felts that comply with ASTM D 226 for type I felt and extruded foam sheathing with permanently taped joints. Duct tape or similar will not result in a permanently taped joint.

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turer's instructions, #15 or greater asphalt-saturated felts that comply with ASTM D 226 for type I felt and extruded foam sheathing with permanently taped joints. Duct tape or similar will not result in a permanently taped joint.

2. Structural products with an integral water-resistive barrier may be approved by the department as a complete assembly.

(b) *Material compatibility.* The water-resistive barrier material shall be compatible with the other materials in the wall with which it will come into contact.

Note: Spray-applied water-resistive barriers may not be compatible with foam plastic insulation.

(c) *Performance requirements.* 1. Polymer-based house wraps shall meet all of the following requirements:

a. A water vapor permeability rating of 5 perms or higher when tested in accordance with ASTM E96.

b. An acceptable water-resistance rating determined in accordance with ASTM D779, AATCC 127 or CCMC 07102.

Note: Asphalt-saturated felt or "tar paper" is not a polymeric-based house wrap. **Note:** For more information on the water-resistance tests and their results, see the International Code Council Evaluation Services Acceptance Criteria AC 38.

2. Spray-applied water-resistive barriers shall be approved under the International Code Council Evaluation Services.

Note: For approval criteria, see ICC-ES acceptance criteria AC 212 or successor document.

(d) *Application.* 1. Horizontal seams in sheet or strip material shall be overlapped such that the upper layer extends over the lower layer at least 2 inches.

2. Vertical seams in sheet or strip materials shall be overlapped at least 6 inches.

3. Any rips, tears or voids shall be patched in accordance with subds. 1. and 2.

(e) *Penetrations.* 1. Penetrations caused by fasteners of the water-resistive barrier or the weather-resistant exterior covering do not require sealing.

2. Penetrations of 5 square inches or less with an annular space of no more than ½ inch shall be sealed with caulk or similar material.

3. Penetrations of greater than 5 square inches shall be flashed in accordance with sub. (3).

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; r. and recr. Register, March, 2001, No. 543, eff. 4-1-01; CR 02-077: cr. (3) Register May 2003 No. 569, eff. 8-1-03; CR 08-043: am. (2), renun. (3) (c) to be (3) (d), cr. (3) (c) and (4) Register March 2009 No. 639, eff. 4-1-09; CR 15-041: cr. (3) (e), (f) Register December 2015 No. 720, eff. 1-1-16; CR 15-043: cr. (3) (d) 8. Register December 2015 No. 720, eff. 1-1-16.

SPS 321.25 Wood frame walls. Unless designed through structural analysis, wood frame walls shall comply with the following requirements.

(1) **STUD CONFIGURATION.** Wood studs shall comply with the size and spacing requirements indicated in Table 321.25-A. Studs in the exterior walls shall be placed with the wide faces perpendicular to the plane of the wall.

Note: See ch. SPS 325 Appendix A for acceptable nailing schedule.

Note: See s. SPS 321.10 for requirements on treating wood for decay and termite resistance.

(2) **TOP PLATES.** (a) *General.* Except as allowed under subd. 3., top plates shall be provided and configured as follows:

1. Studs at bearing walls shall be capped with double top plates.

2. End joints in double top plates shall be offset at least 2 stud spaces.

3. Double top plates shall be overlapped at the corners and at intersections of partitions.

4. The plate immediately above the stud may have a joint only when directly over the stud.

(b) *Notching and boring.* 1. When piping or ductwork is placed in an exterior wall or an interior load-bearing wall, such

that at least half of the top plate is removed, the plate shall be reinforced with a steel angle at least 2 inches by 2 inches by 20 gauge thick.

Note: 20 gauge is approximately 0.036 inch.

2. The steel angle shall span the gap and extend at least to the midpoint of the adjacent stud spaces.

3. Other equivalent materials may be used in accordance with s. SPS 321.02.

(c) *Exceptions.* 1. A single top plate may be used in place of a double top plate provided a rafter is located directly over the studs and the plate is securely tied at the end joints, corners and intersecting walls. Joints may occur in single top plates only when directly over a stud.

2. A continuous header, consisting of two 2-inch members set on edge, may be used in lieu of a double plate if tied to the adjacent wall.

(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 1/2 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.

(3) WALL OPENINGS. (am) *Headers.* Where doors or windows occur, headers shall be used to carry the load across the opening.

(bm) *Header size.* The size of headers shall be determined in accordance with the spans and loading conditions listed in Tables 321.25-B, 321.25-C and 321.25-D. Headers for longer spans shall be designed by an engineering method under s. SPS 321.02.

(cm) *Header support.* Headers in bearing walls shall be supported in accordance with subd. 1. or 2. or 3.

1. Headers 3 feet or less in length shall be directly supported on each end by either:

a. The single common stud and a shoulder stud; or

b. The single common stud with a framing anchor attached.

2. Headers greater than 3 feet but less than or equal to 6 feet in length shall be directly supported on each end by the single common stud and a shoulder stud.

3. Headers greater than 6 feet in length shall be directly supported on each end by the single common stud and 2 shoulder studs.

(4) NOTCHING. Notching and boring of columns or posts is prohibited unless designed through structural analysis. Studs shall not be cut or bored more than 1/3 the depth of the stud, unless the stud is reinforced.

(5) PARTITIONS. Load-bearing partitions shall be placed over beams, girders, or other load-bearing partitions. Load-bearing partitions running at right angles to the joists shall not be offset from the main girder or walls more than the depth of the joist unless the joists are designed to carry the load.

(6) POSTS AND COLUMNS. (a) *General.* 1. Posts and columns shall be installed to resist imposed loads.

2. Posts and columns shall bear directly over the middle 1/3 of a footing.

3. Posts and columns shall be restrained at the top and bottom to resist displacement.

4. All columns shall be positively attached to the beams they support using clips, straps or saddles.

5. Posts and columns that use a height adjustment mechanism shall have the mechanism imbedded in concrete or permanently disabled after installation.

(b) *Bearing surface.* Posts and columns shall have a steel bearing plate affixed to one or both ends to distribute any applied loads and to prevent fiber crushing of any structural member being supported.

(c) *Steel posts or columns.* Steel posts or columns shall be sized according to one of the following methods:

1. Manufactured columns shall follow the manufacturer's testing and listing.

Table 321.25-A
SIZE, HEIGHT AND SPACING OF WOOD STUDS^{a,c}

Nominal Stud Size (inches)	Bearing and Exterior Nonbearing Walls					Interior Nonbearing Walls	
	Maximum Laterally Unsupported Stud Height ^a (feet)	Maximum Spacing When Supporting Roof and Ceiling Only (inches)	Maximum Spacing When Supporting One Floor, Roof and Ceiling (inches)	Maximum Spacing When Supporting Two Floors, Roof and Ceiling (inches)	Maximum Spacing When Supporting One Floor Only (inches)	Maximum Laterally Unsupported Stud Height ^a (feet)	Maximum Spacing (inches)
							
2 x 3 ^b	-	-	-	-	-	10	16
2 x 4	10	24	16	-	24	14	24
3 x 4	10	24	24	16	24	14	24
2 x 5	10	24	24	-	24	16	24
2 x 6	12 ^d	24	24	16	24	20	24

^aListed heights are distances between points of lateral support placed perpendicular to the plane of the wall. Increases in unsupported height are permitted where justified by analysis. Studs shall be stud grade or better, except that utility grade may be used when spaced not more than 16 inches on center, supports no more than a roof and ceiling and does not exceed 8 feet in height for exterior walls or 10 feet in height for interior nonload-bearing walls.

^bMay not be used in exterior walls.

^cAll spacing dimensions are to the center of the studs.

^dUse of stud heights that range from over 10 feet to 12 feet for bearing and exterior nonbearing walls is prohibited unless supported by structural analysis. The allowable deflection may 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.

Note: A 3-story frame house with walls constructed of 2 x 4 standard grade studs would require a 12-inch stud spacing on the lowest level, a 24-inch stud spacing on the intermediate level, and a 24-inch stud spacing on the upper level.

2. Columns made solely of steel pipe stock shall follow Table 321.25-E.

3. Columns made of steel stock, not meeting the requirements of subd. 1. or 2., shall follow a nationally accepted design specification or the size shall be determined through structural analysis or load testing.

(d) *Wood posts or columns.* Wood posts or columns shall be sized according to Table 321.25-F or the size shall be determined through structural analysis or load testing.

Table 321.25-B
ALLOWABLE SPANS (FEET) FOR HEADERS SUPPORTING ROOF/CEILING ASSEMBLIES*

House Width (feet)	Header Members									
	Two 2 x 4s		Two 2 x 6s		Two 2 x 8s		Two 2 x 10s		Two 2 x 12s	
	Zone 2/Zone 1		Zone 2/Zone 1		Zone 2/Zone 1		Zone 2/Zone 1		Zone 2/Zone 1	
24	2.5	2.5	4	4	5	5	7	6	9	8
26	2.5	2	4	3	5	5	7	6	8	7
28	2.5	2	4	3	5	4	6	6	8	7
30	2.5	2	4	3	5	4	6	6	8	7
32	2	2	3	3	5	4	6	5	7	7

Table 321.25-C
ALLOWABLE SPANS (FEET) FOR HEADERS SUPPORTING ONE FLOOR*

House Width (feet)	Header Members									
	Two 2 x 4s		Two 2 x 6s		Two 2 x 8s		Two 2 x 10s		Two 2 x 12s	
	Zone 2/Zone 1		Zone 2/Zone 1		Zone 2/Zone 1		Zone 2/Zone 1		Zone 2/Zone 1	
24	2.5		4		5		6		8	
26	2.5		3		5		6		8	
28	2		3		5		6		7	
30	2		3		4		6		7	
32	2		3		4		5		7	

Table 321.25-D
ALLOWABLE SPANS (FEET) FOR HEADERS SUPPORTING ONE FLOOR AND ROOF/CEILING ASSEMBLY*

House Width (feet)	Header Members									
	Two 2 x 4s		Two 2 x 6s		Two 2 x 8s		Two 2 x 10s		Two 2 x 12s	
	Zone 2/Zone 1		Zone 2/Zone 1		Zone 2/Zone 1		Zone 2/Zone 1		Zone 2/Zone 1	
24	1.5	1.5	3	2.5	4	3	5	4	6	5
26	1.5	1.5	2.5	2.5	3	3	4	4	5	5
28	1.5	1.5	2.5	2.5	3	3	4	4	5	5
30	1.5	1.5	2.5	2.5	3	3	4	4	5	5
32	1.5	1.5	2.5	2	3	3	4	4	5	5

*These tables are based on wood with a fiber bending stress of 1,000 psi. For other species with different fiber bending stresses, multiply the span by the square root of the ratio of the actual bending stress to 1,000 psi. Example: From Table 321.25-B, the allowable roof/ceiling span for a 28-foot wide house in zone 2, using two 2 x 8 header members with a 1400 psi bending stress, is 5 feet $\times \sqrt{1400/1000} = 5.9$ feet.

Table 321.25-E
COLUMNS MADE OF STEEL PIPE STOCK^{1,2}

Column Diameter (inches)	Wall Thickness (inches)	Weight/ft (pounds)	Height (feet)	Allowable Load (pounds)
3	0.216	7.58	8	34,000
			10	28,000
			12	22,000
3.5	0.226	9.11	8	44,000
			10	38,000
			12	32,000
4	0.237	10.79	8	54,000
			10	49,000
			12	43,000
5	0.258	14.62	8	78,000
			10	73,000
			12	68,000
6	0.280	18.97	8	106,000
			10	101,000
			12	95,000

¹This Table is based on a yield strength or Fy of 36,000 psi.

²This table is for columns made solely of steel pipe stock. The addition of any adjustment mechanism or other feature will alter the load-carrying capacity of the column.

Table 321.25-F
WOOD COLUMNS

Wood Nominal Size (inches)	Cross Section Area (inches)	Height (feet)	Allowable Load (pounds)
4 x 4	12.25	8	4,900
		10	3,100
		12	2,150
4 x 6	19.25	8	7,700
		10	4,900
		12	3,400
6 x 6	30.25	8	30,000
		10	18,900
		12	13,300

Note: This Table is based on a modulus of elasticity or E of 1,000,000 psi and a fiber bending strength or F_b of 1,000 psi.

(7) FOUNDATION CRIPPLE WALLS. (a) Foundation cripple walls shall be framed with studs at least as large as the studs above.

(b) When more than 4 feet in height, cripple walls shall be framed with studs needed for an additional floor level.

(c) Cripple walls with a stud height of less than 14 inches shall be sheathed on at least one side for its entire length with a wood structural panel that is fastened to both the top and bottom plates or the cripple walls shall be constructed of solid blocking.

(d) Cripple walls with a stud height of 14 inches or greater shall be braced in accordance with sub. (8).

(e) Cripple walls shall be fully supported by a continuous foundation.

(8) WALL BRACING. (a) *General.* Dwellings using wood-framed walls shall be braced in accordance with this section. Where a building, or a portion thereof, does not comply with one or more of the bracing requirements in this section, those portions shall be designed and constructed in accordance with accepted engineering practice.

Note: Acceptable engineering wall bracing practices include any of the following:

1. The provisions under section R602.10 or R602.12 of the International Residential Code (IRC) – 2012.

2. Design in accordance with the engineering basis of the 2012 IRC bracing provisions, such as described in Crandell, J. and Martin, Z., “The Story Behind the 2009 IRC Wall Bracing Provisions (Part 2: New Wind Bracing Requirements),” *Wood Design Focus*, Forest Products Society, Peachtree Corners, GA, Spring 2009.

3. Installation instructions from the manufacturer of the bracing product that are compliant with s. [SPS 321.02](#).

Note: 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.

(b) *Bracing Materials and Methods.* Wall bracing shall consist of the materials and methods listed in Table 321.25–G or approved alternatives capable of providing the required wind load resistance as determined in accordance with s. [SPS 321.02 \(1\)](#)

(c).

Table 321.25-G
BRACING METHODS^{a,f}

BRACING METHODS					
Material	Minimum Brace Material Thickness or Size	Maximum Nominal Wall Height ^b	Minimum Braced Wall Panel Width or Brace Angle	Connection Criteria	
				Minimum Fasteners	Maximum Spacing
Intermittent Bracing Methods					
LIB ^c Let-in bracing	1x4 wood brace (or approved metal brace installed per manufacturer instructions)	10'	45° angle and maximum 16" o.c. stud spacing ^b	2-8d common nails or 3-8d box nails (2 3/8" long x 0.113" diameter)	Per stud and top and bottom plates ^e
DWB Diagonal wood boards	¾" (1" nominal) for maximum 24" o.c. stud spacing	10'	48"	2-8d box nails (2 3/8" long x 0.113" diameter) or 2 - 1 3/4" long 16-gage staples	Per stud and top and bottom plates ^e
WSP Wood structural panel	3/8" for maximum 16" o.c. stud spacing; 7/16" for maximum 24" o.c. stud spacing	10'	48"	6d common nail or 8d box nail (2 3/8" long x 0.113" diameter); or 7/16"- or 1/2"- crown 16-gage staples, 1 1/4" long	6" edges, 12" field (nails) 3" edges, 6" field (staples)

Table 321.25-G**BRACING METHODS^{a, f} (Continued)**

Material	Minimum Brace Material Thickness or Size	Maximum Nominal Wall Height ^b	Minimum Braced Wall Panel Width or Brace Angle	Connection Criteria	
				Minimum Fasteners	Maximum Spacing
Intermittent Bracing Methods					
SFB Structural fiberboard sheathing	½" for maximum 16" o.c. stud spacing	10'	48"	1 1/2" long x 0.120" diameter galvanized roofing nails or 1"-crown 16-gage staples, 1 1/4" long	3" edges, 6" field
GB Gypsum board (installed on both sides of wall)	½" for maximum 24" o.c. stud spacing	10'	96"	5d cooler nails, or #6 screws	7" edges, 7" field (including top and bottom plates)
Continuous Sheathed Bracing Methods					
CS-WSP ^d Continuous sheathed WSP	3/8" for maximum 16" o.c. stud spacing; 7/16" for maximum 24" o.c. stud spacing	12'	Refer to Table 321.25-H	Same as WSP	Same as WSP
CS-SFB ^d Continuous sheathed SFB	½" for maximum 16" o.c. stud spacing			Same as SFB	Same as SFB
Narrow Panel Bracing					
PF Portal frame	7/16"	12'	Refer to Figure 321.25-A	Refer to Figure 321.25-A	Refer to Figure 321.25-A

^aThe interior side of all exterior walls shall be sheathed with minimum ½-inch gypsum wallboard unless otherwise permitted to be excluded by this subsection. All edges of panel-type wall bracing, except horizontal joints in GB bracing, shall be attached to framing or blocking.

^bThe actual measured wall height shall include stud height and thickness of top and bottom plates. The actual wall height shall be permitted to exceed the listed nominal values by not more than 4½ inches. Tabulated bracing amounts in s. SPS 321.25 (8) (c) are based on a 10-foot nominal wall height for all bracing methods and shall be permitted to be adjusted to other nominal wall heights not exceeding 12 feet in accordance with footnotes to Table 321.25-I or Table 321.25-J.

^cLIB is not permitted for walls supporting a roof and two floors. Two LIB braces installed at a 60° angle from horizontal shall be permitted to be substituted for each 45° angle LIB brace.

^dBracing with CS-WSP and CS-SFB shall have sheathing installed on all sheathable surfaces above, below, and between wall openings.

^eShall be attached to the top and bottom plates and any intermediate studs, in one continuous length.

^fEach braced panel may contain no more than one hole, having a maximum dimension of no more than ten percent of the least dimension of the panel, and confined to the middle three-fourths of the panel.

Table 321.25-H^{a, b}**MINIMUM WIDTHS OF CS-WSP AND CS-SFB BRACED WALL PANELS**

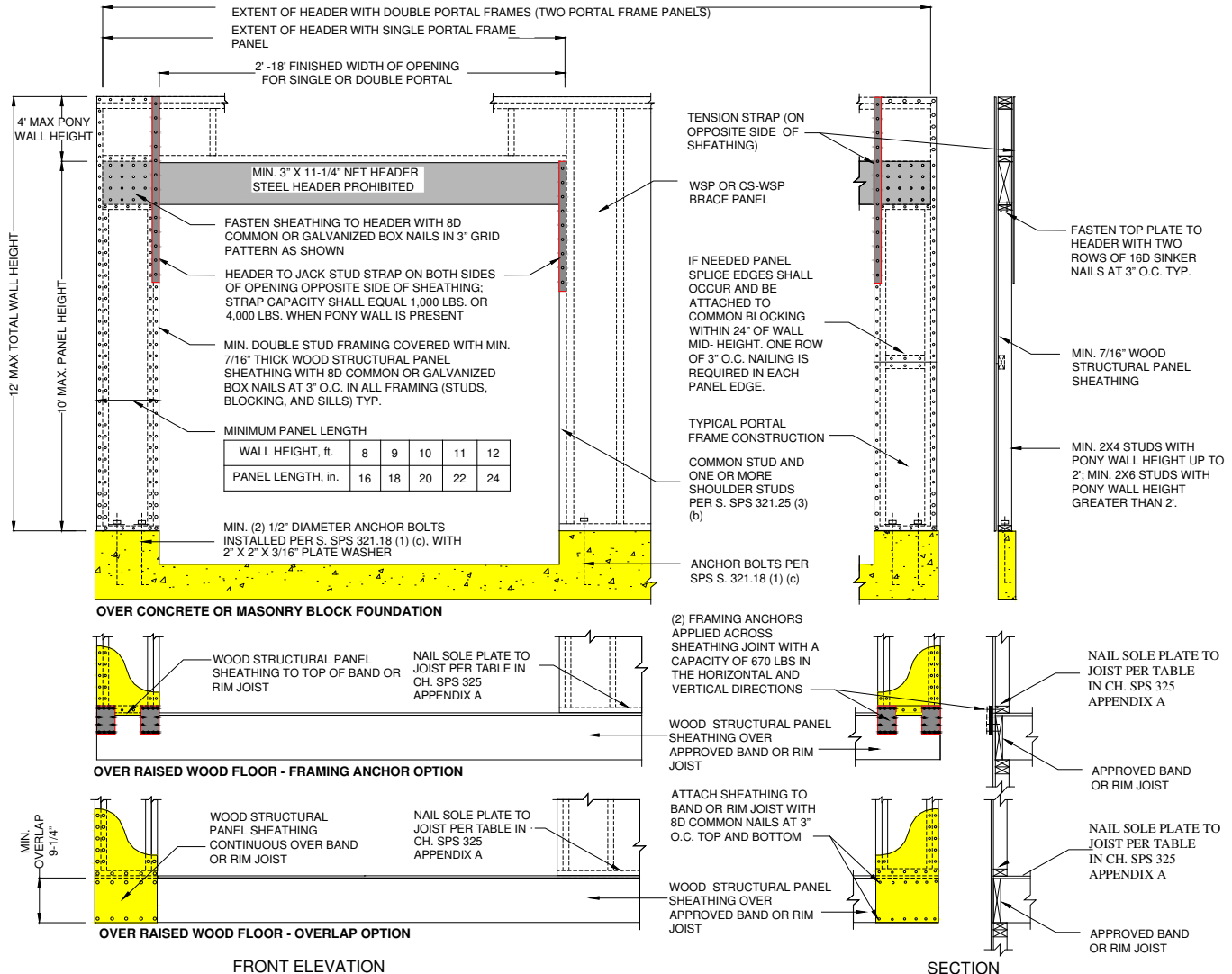
Maximum Opening Height Adjacent to Braced Wall Panel	Minimum Width of Full-Height Braced Wall Panel (inches)			
	8' Tall Wall	9' Tall Wall	10' Tall Wall	12' Tall Wall
5'-4"	24	27	30	36
6'-8"	32	30	30	36
8'	48	41	38	36
9'	-	54	46	41
10'	-	-	60	48
12'	-	-	-	72

^aSheathing shall extend from the top of the top plate to the bottom of the bottom plate and may be multiple sheets. All joints shall be blocked.

^bInterpolation is permitted.

Figure 321.25-A

METHOD PF – PORTAL FRAME BRACE CONSTRUCTION



Note: Steel headers are permitted if designed by structural analysis.

Note: As shown in the above cross-section, 1/2-inch gypsum wallboard is not required on the interior side of the wall.

(c) **Bracing amount.** Bracing methods and materials complying with Table 321.25-G shall be applied to walls in accordance with all of the following requirements:

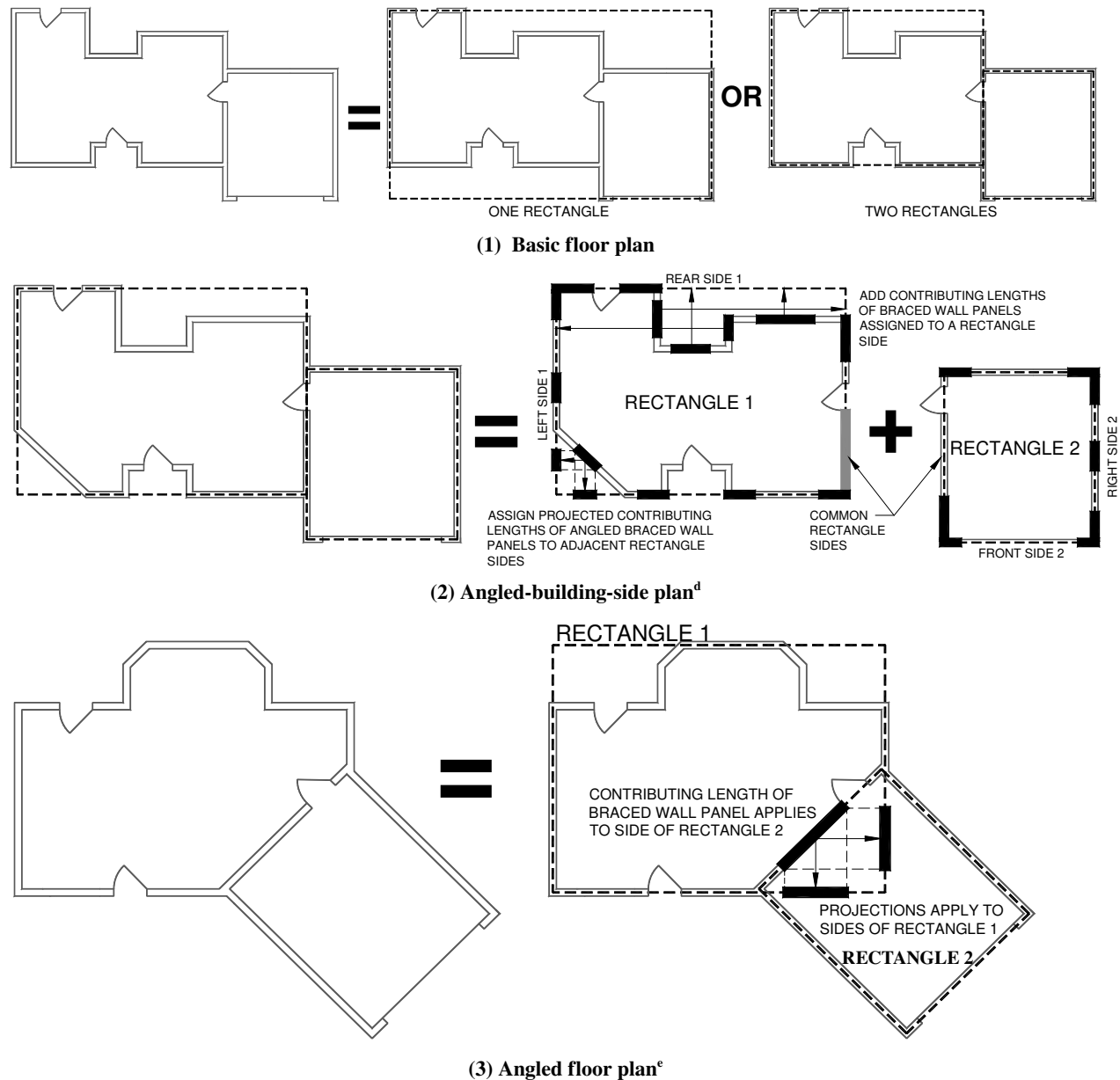
1. For the purpose of determining bracing amounts, the outermost extents of the building plan at each floor level shall be circumscribed with a rectangle to define the overall length of each building side as shown in Figure 321.25-B.
2. In no case may the amount of bracing be less than two braced wall panels on walls parallel to each rectangle side for each floor level of the building.
3. Where used, the number of intermittent brace panels applied to walls parallel to each rectangle side shall comply with Table 321.25-I.
4. Where used, the total length of continuous sheathed brace panels applied to walls parallel to each building side shall comply with Table 321.25-J.

5. The location of brace panels applied to walls parallel to each building side shall comply with Figure 321.25-C.

6. Balloon-frame walls may be no longer than 21 feet and shall have a maximum height of two floors unless constructed in accordance with an approved design. Wall framing shall be continuous from the lowest floor to the wall top plate at the roof. All edges of sheathing shall be supported on and fastened to blocking or framing. Braced wall panels may not be required on the balloon-frame wall portion provided the bracing amount and brace spacing requirement are satisfied for the building side. Where brace panels are located on the balloon-frame wall portion, they shall have a height-to-width ratio of not more than 2.5:1.

7. For a gable end wall, if the brace-panel height does not exceed 12 feet at the highest portion and if the 12½-foot and 21-foot spacing requirements in Figure 321.25-C are met, the wall is adequately braced. Where a brace panel exceeds 12 feet in height, it shall have a height-to-width ratio of not more than 2.5:1, and comply with Figure 21.25-C.

FIGURE 321.25-B
DEFINING BUILDING SIDES AND LENGTHS WITH ONE OR MORE
CIRCUMSCRIBED RECTANGLES^{a,b,c}



^aEach floor plan level shall be circumscribed with one or more rectangles around the entire floor plan at the floor level under consideration as shown. When multiple rectangles are used, each side shall be braced as though it were a separate building and the bracing amount added together along the common wall where adjacent rectangles overlap or abut.

^bRectangles shall surround all enclosed plan offsets and projections. Chimneys, partial height projections, and open structures, such as carports and decks, shall be excluded from the rectangle.

^cEach rectangle shall have a maximum rectangle length-to-width ratio of 3:1.

^dProjected contributing lengths of angled braced wall panels shall be assigned to the closest rectangle sides, as shown for the angled corner in the angled-building-side-plan shown above.

^eBraced wall panels located on a common wall where angled rectangles intersect, as shown in Figure 321.25-B(3), shall have their contributing length applied towards the required length of bracing for the parallel rectangle side and its projected contributing lengths towards the adjacent angled rectangle sides. Where the common side of rectangle 2 as shown in Figure 321.25-B(3) has no physical wall, the portion shall be designed in accordance with ^fSPS 321.25 (8) (a).

TABLE 321.25–I
REQUIRED NUMBER OF INTERMITTENT BRACED WALL PANELS
ON WALLS PARALLEL TO EACH RECTANGLE SIDE
AT EACH FLOOR LEVEL^{a,b,c,d,e,f, h, j}

Wall Supporting:		Required Number of Brace Panels on a Building Side		
		Length of Perpendicular Side (feet) ^g		
		≤25	≤50	≤75
Roof and ceiling only		1 ⁱ	2	3
One floor, roof and ceiling		2	4	6
Two floors, roof and ceiling		3	6	9

^aInterpolation is permitted. Extrapolation to buildings larger than addressed in this table is prohibited.

^bThis table applies to wind exposure category B. For wind exposure category C or D, multiply the number of braced wall panels required by 1.3 or 1.6, respectively.

Wind exposure category B is comprised of urban and suburban areas, wooded areas, or other terrain with numerous closely spaced obstructions having the size of single-family dwellings or larger. Exposure B shall be assumed unless the site meets the definition of another type exposure.

Wind exposure category C is comprised of flat, open country and grasslands with scattered obstructions, including surface undulations or other irregularities, having heights generally less than 30 feet extending more than 1,500 feet from the building site in any quadrant. This exposure also applies to any building located within Exposure B type terrain where the building is directly adjacent to open areas of Exposure C type terrain in any quadrant for a distance of more than 600 feet.

Wind exposure category D is comprised of flat, unobstructed areas exposed to wind flowing over open water for a distance of at least 1 mile. This exposure applies only to those buildings and other structures exposed to the wind coming from over the water. Exposure D extends inland from the shoreline a distance of 1,500 feet or 10 times the height of the building or structure, whichever is greater.

^cTabulated values are based on a nominal wall height of 10 feet. For nominal wall heights other than 10 feet and not more than 12 feet, multiply the required number of brace panels by the following factors: 0.9 for 8 feet, 0.95 for 9 feet, 1.15 for 11 feet, or 1.3 for 12 feet.

^dTabulated values are based on a roof with a top-of-wall-to-ridge height of 10 feet. For top-of-wall-to-ridge heights other than 10 feet, multiply the required number of brace panels by the following factors for each floor level support condition:

Roof only – 0.7 for 5 feet, 1.3 for 15 feet, or 1.6 for 20 feet

Roof + 1 Floor – 0.85 for 5 feet, 1.15 for 15 feet, or 1.3 for 20 feet

Roof + 2 Floors – 0.9 for 5 feet or 1.1 for 15 feet.

^eWhere minimum 1/2-inch gypsum wallboard is not included on the interior side of the wall, multiply the number of braced wall panels by 1.7 for LIB bracing or 1.4 for all other bracing methods, except this increase is not required for the portal frame method.

^fAdjustments in footnotes b to e apply cumulatively. Fractions of panels shall be rounded to the nearest one-half braced wall panel.

^gPerpendicular sides to the front and rear sides are the left and right sides. Perpendicular sides to the left and right sides are the front and rear sides. See Figure 321.25–B.

^hThe following braced wall panel conditions shall be permitted to be counted as one-half a braced wall panel toward meeting the required number of panels: (1) one 60 degree LIB; (2) one 48" GB or one 96" GB with gypsum wallboard on one side; (3) one 36" WSP or SFB braced wall panel for wall heights not more than 9 feet; (4) a 48" WSP or SFB braced wall panel where there is no more than one unblocked horizontal joint; or (5) one PF brace panel complying with Figure 321.25–A.

ⁱThis value of less than 2 serves only as the beginning value for calculation purposes. The resulting value shall be 2 or greater, to be consistent with subd. 2.

^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.

Table 321.25–J
REQUIRED LENGTH OF CONTINUOUS BRACING ON WALLS PARALLEL TO EACH RECTANGLE SIDE AT
EACH FLOOR LEVEL^{a,b,c,d,e,g,h, j}

Top-of-Wall-to-Ridge Height (feet)	Wall Supporting:		Total Required Length (feet) of Full-Height Bracing on Any Side of Rectangle							
			Length of Perpendicular Side (feet) ⁱ							
			10	20	30	40	50	60	70	80
10	Roof and ceiling only		2.0 ⁱ	3.5 ⁱ	5.0	6.0	7.5	9.0	10.5	12.0
	One floor, roof and ceiling		3.5 ⁱ	6.5	9.0	12.0	14.5	17.0	19.8	22.6
	Two floors, roof and ceiling		5.0	9.5	13.5	17.5	21.5	25.5	29.2	33.4

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Table 321.25–J
REQUIRED LENGTH OF CONTINUOUS BRACING ON WALLS PARALLEL TO EACH RECTANGLE SIDE AT
EACH FLOOR LEVEL^{a,b,c,d,e,g,h,j} (Continued)

Top-of-Wall-to-Ridge Height (feet)	Wall Supporting:		Total Required Length (feet) of Full-Height Bracing on Any Side of Rectangle							
			Length of Perpendicular Side (feet) ^f							
15	Roof and ceiling only		2.6 ⁱ	4.6	6.5	7.8	9.8	11.7	13.7	15.7
	One floor, roof and ceiling		4.0	7.5	10.4	13.8	16.7	19.6	22.9	26.2
	Two floors, roof and ceiling		5.5	10.5	14.9	19.3	23.7	27.5	32.1	36.7
20	Roof and ceiling only		2.9 ⁱ	5.2	7.3	8.8	11.1	13.2	15.4	17.6
	One floor, roof and ceiling		4.5	8.5	11.8	15.6	18.9	22.1	25.8	29.5
	Two floors, roof and ceiling		6.2	11.9	16.8	21.8	27.3	31.1	36.3	41.5

^aInterpolation is permitted. Extrapolation to buildings larger than addressed in this table is prohibited.

^bThis table applies to wind exposure category B. For wind exposure category C or D, multiply the required length of wall bracing by 1.3 or 1.6, respectively. Wind exposure categories are as defined in Table 321.25–I footnote b.

^cTabulated values are based on a nominal wall height of 10 feet. For nominal wall heights other than 10 feet, multiply the required length of bracing by the following factors: 0.90 for 8 feet, 0.95 for 9 feet, 1.05 for 11 feet, or 1.10 for 12 feet.

^dWhere minimum ½-inch gypsum wallboard interior finish is not provided, the required bracing amount for the affected rectangle side shall be multiplied by 1.4, except this increase is not required for the portal frame method.

^eAdjustments in footnotes b to d apply cumulatively.

^fPerpendicular sides to the front and rear sides are the left and right sides. Perpendicular sides to the left and right sides are the front and rear sides. See Figure 321.25–B.

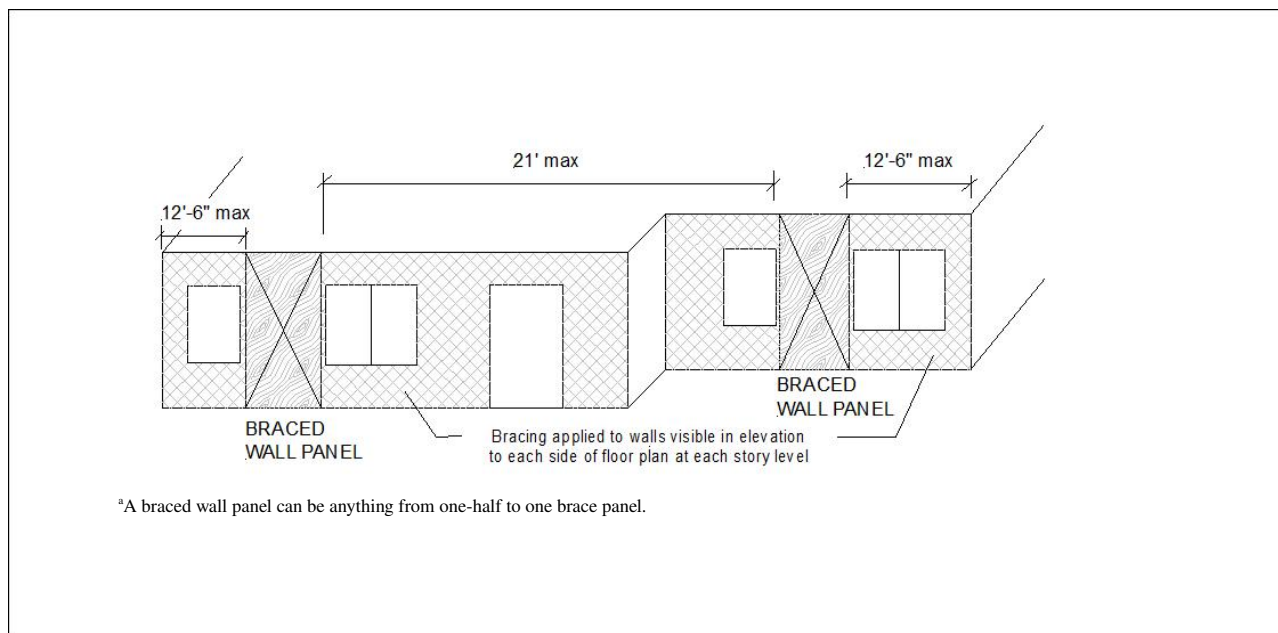
^gContinuous sheathing shall be applied to all surfaces of the wall, including areas between brace panels and above and below wall openings.

^hWhen used on a wall line with continuous sheathing, each portal frame panel is counted for its actual length in contributing toward the length of continuous sheathing used on other portions of the same wall line, such as the building side at a given story level.

ⁱAny value of less than 4.0 in this table serves only as the beginning value for calculation purposes. The resulting value shall be 4.0 or greater, to be consistent with Table 321.25–H and subd. 2.

^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.

Figure 321.25-C
LOCATION OF BRACED WALL PANELS ALONG A BUILDING SIDE^a



(d) **Braced wall panel support.** Braced wall panels shall be supported on floor framing or foundations as follows:

1. Where joists are perpendicular to braced wall lines above or below, blocking shall be provided between the joists at braced wall panel locations to permit fastening of wall plates in accordance with the fastener table in the ch. [SPS 325 Appendix A](#).

2. Where joists are parallel to braced wall lines above or below, a rim joist or other parallel framing member shall be provided at the wall to permit fastening of wall plates in accordance with the fastener table in the ch. [SPS 325 Appendix A](#).

3. Braced wall panels shall be permitted to be supported on cantilevered floor joists meeting the cantilever limits of s. [SPS 321.22 \(6\)](#) provided joists are blocked at the nearest bearing wall location, except such blocking is not required for cantilevers not exceeding 24 inches where a full height rim joist is provided.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; cr. (1) (d) and am. (3) (b), Register, February, 1985, No. 350, eff. 3-1-85; r. and recr. (3) (b), am. Table 21.25 B and E, Register, January, 1989, No. 397, eff. 2-1-89; am. (3) (a) and (6), Register, March, 1992, No. 435, eff. 4-1-92; r. and recr. (1) (c), am. Table 21.25-D, cr. Table 21.25-F, Register, November, 1995, No. 479, eff. 12-1-95; am. Table 21.25-A, Register, January, 1999, No. 517, eff. 2-1-99; r. (1) (b) and (c), renum. (1) (d) to be (b), r. and recr. (2), (6) and Tables 21.25-E and F, and am. (3) (b) 3., Register, March, 2001, No. 543, eff. 4-1-01; CR 02-077: r. (3) (c) Register May 2003 No. 569, eff. 8-1-03; CR 08-043: am. (1) (title), r. (1) (b), renum. (1) (a) and (6) (a) 4. to be (1) and (6) (a) 5., r. and recr. Table 21.25-A, cr. (6) (a) 4., (7), (8) and (9) Register March 2009 No. 639, eff. 4-1-09; correction in Figure 21.25-E made under s. 13.92 (4) (b) 7., Stats., Register March 2009 No. 639; CR 09-104: am. 21.25 (8) (e) 2., Table 21.25-H, (9) (b) 3., Table 21.25-J, Figure 21.25-G (c), (9) (c) 4. Register December 2010 No. 660, eff. 1-1-11; correction in (1), (2) (b) 3., (3) (a), (6) (c) 2., (d), (8) (c) 1. d., 2. c., (d), (e) 2., 3., (f) 2., (g) 3., (h) 2. b., (9) (b) 1., 2. b., d., 4. b., c., i., (c) 2. (intro.), b., c., d., 3., 4., 5. a., c., d., g., h., i., Table 321.25-H, Figure 321.25-F, -H to -K made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; EmR1403: emerg. am. Table 321.25-A, (7) (d), r. and recr. (8) (b), (c), Tables 321.25-G to 321.25-J, Figures 321.25-A to 321.25-C, r. (8) (d) to (f), renum. (8) (g) (title), (intro.), 1. to 3. to (8) (d) (title), (intro.), 1. to 3., r. (8) (g) 4., (h), (9), Tables 321.25-K, 321.25-L, Figures 321.25-D to 321.25-K, eff. 4-1-14; CR 14-015: am. Table 321.25-A, (7) (d), r. and recr. (8) (b), (c), Tables 321.25-G to 321.25-J, Figures 321.25-A to 321.25-C, r. (8) (d) to (f), renum. (8) (g) (title), (intro.), 1. to 3. to (8) (d) (title), (intro.), 1. to 3., r. (8) (g) 4., (h), (9), Tables 321.25-K, 321.25-L, Figures 321.25-D to 321.25-K Register August 2014 No. 704, eff. 9-1-14; CR 15-041: cr. (2m), renum. (3) (intro.), (a), (b) to (3) (am), (bm), (cm), cr. (3) (am) (title), am Table I (title), Table J (title) Register December 2015 No. 720, eff. 1-1-16; CR 15-043: am. (8) (d) 1., 2. Register December 2015 No. 720, eff. 1-1-16.

SPS 321.26 Masonry walls. Masonry walls shall be constructed in accordance with the requirements of this section.

(1) COLD WEATHER WORK. When ambient air temperature is below 40°F, the cold weather construction procedures under ACI 530.1 shall be followed.

Note: The requirements for cold weather work are in sections 1.8 and 1.8C of the 2005 edition of the ACI standard.

(2) MASONRY UNITS. (a) *Unused concrete units.* Previously unused concrete masonry units shall conform to the ASTM C 90 standard.

(b) *Unused clay or shale units.* Previously unused clay or shale masonry units shall conform to the appropriate ASTM standard: C 62; C 216; or C 652. Units which will be exposed to weathering or frost action shall be Grade SW as specified in these standards.

(c) *Used masonry units.* All previously used masonry units shall be free from physical defects which interfere with the installation or impair the structural properties of the unit.

(3) TYPES OF MORTAR. (a) *Mortar specifications.* The type of mortar shall be determined from Table 321.26-A. The mortar shall conform to the requirements of ASTM C-270.

(b) *Surface bond mortars.* Surface bond mortars for masonry walls shall be mixed in accordance with the proportions specified on the bag.

(4) MORTAR COMPONENTS. Mortar components shall comply with the following requirements:

(a) *Water.* Water shall be clean and free of deleterious amounts of acids, alkalis, or organic materials.

(b) *Admixtures or mortar colors.* Admixtures or mortar colors shall not be added to the mortar unless the resulting mortar conforms to the mortar specifications. Only mineral oxide may be used as mortar color and shall not exceed 10% by weight of the cement.

(c) *Mixing.* Mortar shall be mixed for at least 3 minutes after all ingredients have been added with the maximum amount of water to produce a workable consistency. Mortars that have stiffened due to water evaporation shall be retempered by adding water as frequently as needed to restore the required consistency. Mortars shall be used and placed in final position within 2½ hours after mixing.

Note: To ensure proper mortar mixing, machine mixing is recommended.

Table 321.26-A
TYPES OF MORTAR FOR VARIOUS KINDS OF MASONRY

Kind of Masonry	Types of Mortar
Foundations:	
Footings.....	M, S
Walls of solid units.....	M, S, N
Walls of hollow units.....	M, S
Hollow walls.....	M, S
Masonry other than foundation masonry:	
Piers of solid masonry.....	M, S, N
Piers of hollow units.....	M, S
Walls of solid masonry.....	M, S, N, O
Walls of solid masonry not less than 12 in. thick or more than 35 ft. in height, supported laterally at intervals not exceeding 12 times the wall thickness.....	M, S, N, O
Walls of hollow units; load-bearing or exterior, and hollow walls 12 in. or more in thickness.....	M, S, N
Hollow walls, less than 12 in. thick.....	M, S, N
Linings of existing masonry, either above or below grade.....	M, S
Masonry other than above.....	M, S, N

(d) **Cementitious material.** Cementitious material shall conform to the standards approved by the department.

Note: The department will accept cementitious material conforming to the following standards: ASTM C91, Masonry Cement; ASTM C150, Portland Cement; ASTM C595, Portland Blast-Furnace Slag Cement; ASTM C207, Hydrated Lime for Masonry Purposes; and ASTM C5, Quick Lime for Structural Purposes.

(e) **Aggregates.** Aggregates for use in masonry mortar shall consist of natural sand or manufactured sand and shall be graded.

Note: The department will accept aggregates in accordance with ASTM C144.

(5) **CAVITY WALL.** (a) **Corbels.** Corbels shall be constructed in accordance with ACI 530.

(b) **Projections.** The projection of a wall beyond the edge of a supporting member other than masonry, such as a shelf angle or edge of a beam, shall not exceed 1¼ inches, unless at least ⅔ the mass of the wythe of masonry involved is located directly over the load-carrying member.

(6) **OPENINGS AND LINTELS.** (a) **Openings.** The masonry above openings shall be supported. The bearing length of structural elements which support the masonry above the opening shall be not less than 4 inches.

(b) **Lintels.** Unless designed through structural analysis, lintels shall be provided using either steel angles or reinforcing bars in accordance with Table 321.26-C.

Table 321.26-C
ALLOWABLE SPANS FOR LINTELS SUPPORTING MASONRY VENEER

Size of Steel Angle ^{1,3}	No Story Above	One Story Above	Two Stories Above	No. of ½" or Equivalent Reinforcing Bars ²
L 3 x 3 x ¼	6' - 0"	3' - 6"	3' - 0"	1
L 4 x 3 x ¼	8' - 0"	5' - 0"	3' - 0"	1
L 6 x 3½ x ¼	14' - 0"	8' - 0"	3' - 6"	2
2 - L 6 x 3½ x ¼	20' - 0"	11' - 0"	5' - 0"	4

¹Long leg of the angle shall be placed in a vertical position.

²Depth of reinforced lintels shall be not less than 8 inches and all cells of hollow masonry lintels shall be grouted solid. Reinforcing bars shall extend not less than 8 inches into the support.

³Steel members indicated are adequate typical examples; other steel members meeting structural design requirements may be used.

(7) **MASONRY VENEERS.** (a) **Veneer over frame construction.** 1. Masonry veneers may be corbeled over the foundation wall, but the corbeling shall not exceed one inch.

2. A minimum one-inch air space shall be provided between the veneer and the sheathing unless a manufactured offset material is used.

3. Where no brick ledge is formed in the foundation wall, corrosion resistant metal or other water-resistant flashing shall extend over the top of the foundation wall from the outside face

of the wall and shall extend at least 6 inches up on the sheathing. The flashing shall be installed to drain any water outward.

4. Weep holes shall be provided at the bottom masonry course at maximum intervals of 2 feet.

5. Ventilation openings shall be provided at the top of the wall.

Note: The ventilation opening could be other than a weep hole.

6. Studs and sheathing behind masonry veneer shall be covered with material used to construct the water-resistive barrier as required under s. SPS 321.24 (4).

Note: Acceptable water-resistive barrier materials include polymeric-based house wraps and #15 or greater asphalt-saturated felts that comply with ASTM D 226 for type I felt.

7. Masonry or brick veneer shall be above final exterior grade unless there is through-wall flashing at grade or within 2 courses above grade.

(b) **Veneer over masonry back-up.** Corrosion-resistant metal or other water-resistant base flashing shall be provided at the bottom of the veneer and shall extend over the top of the foundation and up at least 6 inches and be embedded in the back-up course. The flashing shall be installed to drain any water outward. Weep holes shall be provided at maximum intervals of 3 feet.

(c) **Veneer attachment.** Veneers shall be anchored or adhered in accordance with ACI 530 and ACI 530.1.

(8) **FLASHING.** (a) **General.** 1. Flashing shall be installed in accordance with this section to drain any water outward away from structural members, sheathing and insulation.

2. Open joints or weep holes shall be provided in the facing immediately above the flashing at a horizontal spacing not exceeding 2 feet.

3. Flashing that will be exposed to ultraviolet light shall consist of materials which are durable and permanently UV-resistant, such as sheet metal or heavy-gauge PVC.

Note: Materials including house wrap, asphalt-impregnated building paper, plastic sheathing, peel-and-stick rubberized sheet material, and light-gauge PVC are not acceptable as meeting this requirement.

(b) **Location.** 1. 'Lintels and chimneys.' In exterior hollow masonry walls, flashing shall be installed at the backsides of chimneys and at the bottom of the cavity formed by openings such as lintels over doors and windows.

2. 'Veneer.' Flashing shall be installed at the bottom of veneer and shall extend over the top of the foundation and up at least 8 inches and be embedded in the backing course.

(c) **Weep holes.** 1. Weep holes may not be placed below final grade.

2. Rope or similar material used to form a weep hole shall be removed as soon as the mortar sets.

3. Weep holes shall be ⅜-inch minimum diameter.

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

(9) **BEARING.** (a) **Concentrated loads.** Beams, girders, trusses, joists and other members producing concentrated loads shall bear a minimum of 3 inches on one of the following:

1. 'Concrete beam.' The equivalent of a nominally reinforced 2,500 psi concrete beam 8 inches in height.

2. 'Solid masonry.' At least 8 inches in height of masonry composed of solid masonry units with all voids and joints completely filled with mortar.

3. 'Metal plate.' A metal plate of sufficient thickness and size to distribute the load to masonry units. For piers and columns, the bearing plate shall not exceed 60% of the cross-sectional area of the pier or column and the resultant reaction of all vertical and horizontal loads shall fall within the middle third of the member.

4. 'Bond beam.' The bond beam shall be the equivalent of not less than an 8-inch lintel (bond beam) block with 2 No. 4 bars embedded in high strength mortar fill or equivalent. The loads shall bear on the fill.

(b) *Continuous loads.* Joists, trusses and beams other than wood, spaced 4 feet or less on center and 40 feet or less in length, slabs or other members causing continuous loads shall be transmitted to masonry with a minimum bearing of 3 inches upon solid masonry at least 2½ inches in height, or as indicated for concentrated loads.

(c) *Stack bond walls.* Concentrated loads shall be distributed into masonry laid in stack bond by a concrete beam or bond beam as defined in par. (a). For masonry of solid units, 2 additional rows of a continuous tie assembly may be used instead of a concrete beam or bond beam.

(d) *Support of wood floor members.* Where a wood structural member is buried in masonry for support, it shall be firecut or a self-releasing device shall be used. Where the end of a wood structural member is built into an exterior wall, a ½-inch air space shall be provided at the sides, top and end of such member.

(10) **BONDING.** Unless designed through structural analysis, all masonry walls shall be bonded as follows:

(a) *Single-wythe walls.* Masonry units in single-wythe walls shall be lapped at least 2 inches or one-third the height of the masonry unit, whichever is greater, or through the use of continuous tie assemblies spaced at 16-inch vertical intervals.

(b) *Multi-wythe walls.* Adjacent wythes shall be bonded with continuous tie assemblies spaced at vertical intervals not exceeding 16 inches; or individual ties of at least ¾-inch diameter for each 4½ square feet of wall area, spaced at a maximum vertical distance of 18 inches and a maximum horizontal distance of 36 inches; or bonded with a full course of masonry headers every seventh course. The clear distance between bond courses shall not exceed 16 inches for solid masonry units and 24 inches for hollow masonry units. Hollow walls shall not be bonded with headers.

(11) **BOLTS AND ANCHORS.** The allowable shear on steel bolts and anchors shall not exceed the values given in Table 321.26.

Table 321.26
ALLOWABLE SHEAR ON BOLTS AND ANCHORS

Bolt or Anchor Diameter (inches)	Embedment ¹ (inches)	Allowable Shear (pounds)
¼	4	270
⅜	4	410
½	4	550
⅝	4	750
¾	5	1100
⅞	6	1500
1	7	1850
1 ⅛	8	2250

¹Bolts and anchors shall be solidly embedded in mortar or grout.

(12) **JOINTS.** Joints in masonry construction shall be constructed in accordance with ACI 530.1.

(13) **CLEANING.** Chemical cleaning agents shall be prevented from harming the metal reinforcement of structural components and shall not be of a strength which will adversely affect the mortar.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; am. (3) and cr. Table 21.26-B1 Register, February, 1985, No. 350, eff. 3-1-85; am. (9) (b), Register, January, 1989, No. 397, eff. 2-1-89; am. (6) (b), Register, March, 1992, No. 435, eff. 4-1-92; r. and recr. (2), am. (5) (c), (7) (a) 3., 4., (b), r. (14), Register, November, 1995, No. 479, eff. 12-1-95; CR 02-077: am. (7) (a) 4. Register May 2003 No. 569, eff. 8-1-03; CR 08-043: r. and recr. (1), (5) (a), (8) and (12), renum. (3) (intro.) and (a) to be (3) (a) and (b) and am. (3) (a), am. (4) (b) and (7) (a) 2., r. (5) (c), Tables 21.26-B and B1, cr. (7) (a) 5. to 7. and (c) Register March 2009 No. 639, eff. 4-1-09; CR 09-104: am. (8) (a) 3. Register December 2010 No. 660, eff. 1-1-11; correction in (9) (c) made under s. 13.92 (4) (b) 7., Stats., Register January 2011 No. 661; cor-

rection in (3) (a), (6) (b), (7) (a) 6., (11) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

Subchapter VIII — Roof and Ceilings

SPS 321.27 Roof design and framing. (1) **STRUCTURAL DESIGN.** (a) *General.* Roof and roof-ceiling assemblies shall support all dead loads plus the minimum live loads under par. (c) and s. SPS 321.02.

(b) *Applicability of tables.* The joist and rafter tables in ch. SPS 325 Appendix A are valid for roofs with a minimum slope of 3 in 12. Lesser slopes require engineering analysis or shall be provided with a ridge beam.

(c) *Sloped roof snow loads.* Snow loads specified in s. SPS 321.02 (1) (b) 2. may be reduced for roof slopes greater than 30° by multiplying the snow load by Cs. The value of Cs shall be determined by the following:

$$C_s = 1 - \frac{(a - 30)}{40}$$

where a is the slope of the roof expressed in degrees.

Note: A roof pitch of 7 in 12 is equal to 30°.

(2) **LATERAL RESTRAINT OF WALLS.** Provisions shall be taken to absorb the horizontal thrust produced by a sloping roof through the use of wall ties, ceiling joists, beams at the ridge or at the wall or a system designed through structural analysis.

(3) **UPLIFT AND SUCTION FORCES.** (a) *General.* 1. Roofs shall withstand a pressure of at least 20 pounds per square foot acting upward normal to the roof surface.

2. Roof overhangs, eaves, canopies and cornices shall withstand an upward wind pressure of at least 20 pounds per square foot applied to the entire exposed area.

(b) *Anchorage.* 1. Roof framing members spanning more than 6 feet measured from the outermost edge of the roof shall be permanently fastened to the top plate of load bearing walls using engineered clips, straps or hangers.

2. Roof framing members spanning 6 feet or less measured from the outermost edge of the roof shall be permanently fastened to the top plate of load bearing walls using toe-nailing or engineered clips, straps or hangers.

Note: For information on toe nailing, see the fastener schedule table in the ch. SPS 325 Appendix A.

(4) **ROOF RAFTERS.** (a) *General.* 1. Rafters shall be notched to fit the exterior wall plate and fastened to the wall.

2. Collar ties shall be installed on the upper third of every third pair of abutting roof rafters or every 48 inches, whichever is less.

Note: Collar ties are intended to provide stability to the roof at the ridge. Lateral restraint for the walls must be provided in accordance with sub. (2).

(b) *Ridge boards.* 1. Where rafters meet to form a ridge, the rafters shall be attached to a ridge board.

2. The ridge board shall have a depth at least equal to the length of the cut end of the rafter abutting it.

3. Where all rafters are placed directly opposite each other or are offset at the ridge board by less than the thickness of the rafter, the ridge board shall have a nominal thickness of at least 1 inch.

4. Where one or more rafters are offset at the ridge board by more than the thickness of the rafter, the ridge board shall have a nominal thickness of at least 2 inches.

(c) *Ridge beams.* Rafters shall be attached to ridge beams using engineered clips, straps or hangers or the connection shall be designed through structural analysis.

(d) *Bearing.* The required bearing for wood rafters shall be in

accordance with the NDS adopted in Table 320.24-6m, except in no case shall the bearing be less than 1 1/2 inches on wood or metal or less than 3 inches on masonry or concrete.

(e) *Ladders*. 1. Overhangs at gable end walls of more than 12 inches shall be provided with ladders which extend into the structure a distance no less than the length of the overhang.

2. The ladders shall be fastened at the wall.

3. The interior end of each ladder shall be attached to a rafter or truss with a hanger.

Note: For the purposes of this section, a ladder is defined as a perpendicular projection extending beyond the face of the wall below.

(5) *CEILING JOISTS*. (a) Ceiling joists shall be nailed to exterior walls and to the ends of rafters.

(b) Ends of ceiling joists shall be lapped at least 3 inches and be fastened either with 3-16d nails or in accordance with the floor joist requirements under s. SPS 321.22 (4) (a) 1. d.

Note: See the fastener table in the ch. SPS 325 Appendix A for a nailing schedule for ceiling joists.

(c) Where ceiling joists are placed at right angles to the rafters, the lookout joist or ties shall be fastened to the parallel ceiling joists or rafters using engineered clips, straps or hangers or the connection shall be designed through structural analysis.

(6) *VALLEY AND HIP RAFTERS*. (a) *Valley rafters*. 1. Where no bearing is provided under valley rafters at the intersection of 2 roof areas, the valley rafters shall be doubled in thickness and shall be at least 2 inches deeper than the required common rafter to permit full bearing at the beveled end.

2. Where ridges are provided at different elevations, vertical support shall be provided for the interior end of the lower ridge board or ridge beam.

(b) *Hip rafters*. Where no bearing is provided under hip rafters, the hip rafters shall be of the same thickness as common rafters and shall be at least 2 inches deeper than required to permit full contact with the jack rafter.

(7) *ROOF TRUSSES*. (a) Metal plate connected wood roof trusses shall be designed in accordance with TPI 1 and the NDS adopted under s. SPS 320.24.

(b) Truss members shall not be cut, bored or notched, except as allowed under sub. (8) (d).

(c) If connection is provided to stabilize a non-load bearing wall, a slotted expansion joint or clip shall be used.

(8) *NOTCHING AND BORING*. (a) *General*. 1. Notching and boring of beams or girders is prohibited unless determined through structural analysis.

2. Notching and boring of ceiling joists and rafters shall comply with pars. (b) and (c).

(b) *Notching*. 1. Notches located in the top or bottom of ceiling joists and rafters are prohibited from all of the following:

- Having a depth exceeding 1/6 the depth of the member.
- Having a length exceeding 1/3 the depth of the member.
- Being located in the middle 1/3 of the span of the member.

2. Where ceiling joists or rafters are notched at the ends, the notch may not exceed 1/4 the depth of the member.

3. Bird mouth cuts may not exceed 1/3 the depth of the rafter unless the seat cut bears fully on the wall plate.

(c) *Boring*. 1. Holes bored within 2 inches of the top or bottom of ceiling joists or rafters may not be located in the middle 1/3 of the span of the member.

2. The diameter of a hole may not exceed 1/3 the depth of the member.

3. A hole may not be bored within 2 inches of a notch or another hole.

4. The distance between adjacent holes may not be less than the diameter of the larger hole.

(d) *Engineered wood products*. Notching or boring of engineered wood products shall be done in accordance with the manufacturer's instructions provided those instructions were developed through structural analysis or product testing.

(9) *ROOF SHEATHING, BOARDS AND PLANKING*. (a) *Structural sheathing*. The allowable loads and spans for structural sheathing shall be in accordance with the grade stamp on the panel.

(b) *Roof boards*. 1. Where the rafter spacing is 24 inches on center or less, roof boards may be used that have a minimum thickness of 3/8-inch for solid sheathing and 3/4-inch for spaced sheathing.

2. Where the rafter spacing is greater than 24 inches on center, roof boards shall be tongue and groove, at least 1.5 inches thick.

(c) *Roof planks*. 1. Roof planks shall be tongue and groove or splined and at least 2 inches, nominal, in thickness.

2. Planks shall terminate over beams unless the joints are end matched.

3. The planks shall be laid so that no continuous line of joints will occur except at points of support.

4. Planks shall be nailed or fastened to each beam.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; am (3) (a), Register, January, 1989, No. 397, eff. 2-1-89; r. and recr. (1), am. (3) (a), Register, March, 1992, No. 435, eff. 4-1-92; r. and recr. (3) (a), Register, November, 1995, No. 479, eff. 12-1-95; r. and recr. (3) (a) 1. and 2. c., Register, January, 1999, No. 517, eff. 2-1-99; am. (3) (a) 1. a., Register, March, 2001, No. 543, eff. 4-1-01; CR 02-077: r. and recr. (3) (b) Register May 2003 No. 569, eff. 8-1-03; CR 08-043: r. and recr. Register March 2009 No. 639, eff. 4-1-09; correction in (1) (a), (c), (4) (d), (5) (b), (7) (a) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 15-041: am. (4) (d) Register December 2015 No. 720, eff. 1-1-16.

SPS 321.28 Weather protection for roofs. (1) GENERAL. (a) All roofs shall be designed and constructed to assure drainage of water.

(b) All fasteners shall be corrosion resistant.

(2) *UNDERLAYMENT FOR SHINGLES*. Underlayment consisting of number 15 asphalt-impregnated felt paper or equivalent or other type I material that shows no water transmission when tested in accordance with ASTM D 226 or ASTM D 4869 shall be provided under shingles.

Note: Underlayment materials meeting the requirements of ASTM D 1970 meet the performance requirements of this section.

(3) *ASPHALT SHINGLES*. (a) *General*. 1. Shingles that have a self-sealing adhesive strip shall include a sealant which has an average bond strength of at least 1.5 pounds per 3.75 inches of shingle width, at 32°F.

Note: The department will accept results of testing conducted in accordance with an approved test method for verifying compliance with the sealant uplift resistance required in this paragraph. Information on the applicable test method may be obtained from the department.

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. (c).

3. Shingles shall be installed in accordance with the manufacturer's recommendations.

4. Shingles shall have at least 4 fasteners per strip shingle or 2 fasteners per interlocking shingle, unless the manufacturer has other specifications.

5. Shingle head lap shall be at least 2 inches, unless the manufacturer has other specifications.

6. All fasteners for shingles shall be corrosion-resistant.

Note: See s. SPS 320.07 (62) for definitions of shingle terms.

Note: Section SPS 320.04 (2) requires compliance with all parts of this code, including these roofing provisions, for an alteration to any dwelling that is regulated under this code.

(c) *Fiberglass shingles.* Fiberglass asphalt shingles shall conform to ASTM D 3462 except that laminated shingles shall have a tear strength of at least 1450 grams in each ply.

(4) **ICE DAM PROTECTION.** (a) Shingled or shake roofs that extend over a heated area of a dwelling or attached garage and that have a slope of 4:12 or less shall be provided with ice dam protection in the form of sheet metal or a product labeled as meeting the requirements of ASTM D 1970.

(b) The ice dam protection shall extend at least 30 inches up the roof slope from the roof edge and at least 12 inches up the roof slope beyond the inner face of the exterior wall.

(5) **OTHER ROOF COVERINGS.** All roof coverings not otherwise addressed in this section shall be installed in accordance with the manufacturer's instructions or a national standard recognized by the department.

(6) **REROOFING.** New roof coverings may not be installed over existing roof coverings where any of the following conditions exist:

(a) The existing roof or roof covering is water-soaked or has deteriorated such that it is inadequate as a base for additional roofing.

(b) The existing roof is wood shake, slate, clay, cement or asbestos-cement tile.

(c) The existing roof has 2 or more applications of any type of permanent roof covering.

(7) **FLASHING.** (a) *General.* Flashing shall be installed at the junction of chimneys and roofs, in all valleys, and around all roof openings.

(b) *Flashing of open valleys.* 1. Open valleys shall be flashed with at least No. 28 gauge corrosion-resistant sheet metal, 16 inches wide, or a layer of at least 50-pound roll roofing, 16 inches wide, placed over a layer of number 15 roofing underlayment.

2. Flashing sections shall be overlapped by at least 4 inches.

(c) *Flashing of closed valleys.* Where shingles are laced or woven over the valley, the valley shall be flashed with 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.

(d) *Chimney flashing.* 1. Chimneys shall be flashed and counter-flashed to a height of at least 6 inches.

2. Chimney crickets or saddles shall be installed where the upper side of a chimney is more than 30 inches wide on a sloping roof.

3. The intersection of the cricket and the chimney shall be flashed and counter-flashed to a height of at least 6 inches.

History: Cr. Register, November, 1979, No. 287, eff. 6-1-80; am. (7) (a), r. and recr. Table 321.28-A, Register, January, 1989, No. 397, eff. 2-1-89; am. (1), (5) and (6), cr. (2m) and (6) (a) 3., r. and recr. (4) (c), Register, March, 1992, No. 435, eff. 4-1-92; cr. (6) (c), Register, November, 1995, No. 479, eff. 12-1-95; CR 02-077: r. and recr. (1) (a), renum. (6) (intro) to (c) to be (6) (a) to (d) and am. (6) (a) to (c) Register May 2003 No. 569, eff. 8-1-03; CR 08-043: r. and recr. Register March 2009 No. 639, eff. 4-1-09; CR 15-041: am. (3) (a) 2., cr. (3) (a) 6., r. (3) (b), renum. (7) (c) to (7) (c) (intro.) and 1. and am., cr. (7) (c) 2. Register December 2015 No. 720, eff. 1-1-16; correction in (3) (a) 2. under s. 13.92 (4) (b) 7., Stats., Register December 2015 No. 720.

Subchapter IX — Fireplace Requirements

SPS 321.29 Masonry fireplaces. Masonry fireplaces shall be constructed of masonry, stone or concrete. Masonry fireplaces shall be supported on foundations of concrete or masonry. Structural walls shall be at least 8 inches thick. Masonry fireplaces shall conform to the following requirements:

(1) **FLUE SIZE.** The fireplace flue size shall be based on the type of flue and the fireplace opening indicated in Table 321.29.

Table 321.29

MINIMUM FLUE SIZE FOR MASONRY FIREPLACES

Type of Flue	Minimum Cross-Sectional Area
Round	$\frac{1}{12}$ of fireplace opening but not less than 75 square inches.
Square or rectangular	$\frac{1}{10}$ of fireplace opening but not less than 75 square inches.

(2) **TERMINATION OF CHIMNEY.** Masonry fireplace chimneys shall extend at least 3 feet above the highest point where the chimney passes through the roof and at least 2 feet higher than any portion of the dwelling within 10 feet of the chimney.

(3) **FIREBOX MATERIALS.** The firebox shall be of the pre-formed metal type, at least $\frac{1}{4}$ -inch thick, or listed by a nationally recognized laboratory; or shall be lined with firebrick, at least 2 inches thick and laid in thin joints of refractory cement. The back and sidewalls of the firebox, including the lining, shall be at least 8 inches nominally thick masonry, at least 4 inches of which shall be solid.

(4) **LINTEL.** Masonry over the fireplace opening shall be supported by a lintel of steel or masonry.

(5) **DUCTS.** Warm-air circulating ducts shall be constructed of masonry or metal.

(5m) **RETURN AIR GRILLES.** Return air grilles shall not be located in bathrooms, kitchens, garages, utility spaces or in a confined space defined under s. SPS 323.06 in which a draft diverter or draft regulator is located.

(6) **HEARTH EXTENSION.** (a) Masonry fireplaces shall have a hearth extension made of noncombustible material.

(b) The structural support for the hearth and hearth extension shall be a minimum of 4 inches of reinforced concrete.

(c) There shall be no structural framing material within 1 inch of the hearth or hearth extension in any direction. Any wooden forms or supports used during construction shall be removed.

(d) The minimum dimensions of the hearth extension shall be in accordance with Table 321.29-1.

Table 321.29-1

HEARTH EXTENSION DIMENSIONS

Fireplace Opening (Sq. Ft.)	Extension from Fireplace Opening (inches)	
	Side	Front
Less than 6	8	16
6 or Greater	12	20

(7) **DAMPERS.** Dampers shall be made of cast iron or at least No. 12 gauge sheet metal. The area of the damper opening shall be at least 90% of the required flue area when in the open position.

(8) **HOODS.** Metal hoods, used in lieu of a masonry smoke chamber, shall be constructed of at least No. 19 gauge corrosion-resistant metal with all seams and connections of smokeproof construction. The hood shall be sloped at an angle of 45° or less from the vertical and shall extend horizontally at least 6 inches beyond the firebox limits. Metal hoods shall be kept a minimum of 18 inches from the combustible materials unless approved for reduced clearances.

Note: The department will accept dampers and hoods listed by nationally recognized laboratories.

(9) **FLUE LINERS.** (a) Flue liners shall be installed in accordance with s. SPS 321.30 (7) and this section.

(b) Flue liners shall start at the top of the fireplace throat and extend to a point at least 4 inches above the top of the chimney cap.

(c) Firebrick may be used in the throat of the fireplace as an inlet to the flue liner.

(10) **CLEANOUT OPENINGS.** Fireplaces with ash dumps shall be provided with cleanout openings at the base. Doors and frames of the opening shall be made of ferrous materials.

(11) **MANTEL SHELVES AND COMBUSTIBLE TRIM.** Woodwork or other combustible materials shall not be placed within 6 inches of the fireplace opening. Combustible materials located within 12 inches of the fireplace opening shall not project perpendicularly more than $\frac{1}{8}$ -inch for each inch distance from the opening.

(12) **FRAMING AROUND FIREPLACES.** Combustible materials located near fireplaces shall be installed in accordance with s. [SPS 321.30 \(9\)](#).

(13) **CORBELING.** Unless designed through structural analysis, masonry chimneys shall not be corbeled from a wall more than 6 inches nor shall a masonry chimney be corbeled from a wall less than 12 inches in nominal thickness unless it projects equally on each side of the wall. The corbeling shall not exceed one-inch projection for each brick course.

History: Cr. [Register, November, 1979, No. 287](#), eff. 6-1-80; am. [Register, February, 1985, No. 350](#), eff. 3-1-85; am. (6) and Table 21.29-1, [Register, January, 1989, No. 397](#), eff. 2-1-89; am. (intro.) and (12), cr. (5m), r. and recr. (6), [Register, March, 1992, No. 435](#), eff. 4-1-92; r. (12) and renum. (13) and (14) to be (12) and (13), [Register, January, 1999, No. 517](#), eff. 2-1-99; r. and recr. (6) and (9), [Register, March, 2001, No. 543](#), eff. 4-1-01; correction in (1), (5m), (6) (d), (9) (a), (12) made under s. [13.92 \(4\) \(b\) 7](#), Stats., [Register December 2011 No. 672](#).

SPS 321.30 Masonry chimneys. Masonry chimneys shall conform to the following provisions:

(1) **MATERIALS.** No masonry chimney shall rest upon wood. The foundation shall be designed and built in conformity with the requirements for foundations. Masonry chimney walls shall be at least 4 inches in nominal thickness. Hollow cored masonry units may be used to meet the 4 inch nominal thickness requirement.

(2) **FLUE SIZE.** Chimney flues for appliances shall be at least equal in area to that of the area of the connector from the appliance.

(3) **MULTIPLE FLUE SEPARATION.** When more than one flue is contained in the same chimney, a masonry separation of at least 4 inches nominal in thickness shall be provided between the individual flues. The joints of adjacent flue linings shall be staggered by at least 7 inches.

(4) **CORBELING.** Unless designed through structural analysis, masonry chimneys shall not be corbeled from a wall more than 6 inches nor shall a masonry chimney be corbeled from a wall less than 12 inches in nominal thickness unless it projects equally on each side of the wall. The corbeling shall not exceed one-inch projection for each brick course.

(5) **INLETS.** Inlets to masonry chimneys shall enter the side and be provided with thimbles. Thimbles shall be at least No. 24 manufacturer's standard gauge (0.024 inch) or $\frac{5}{8}$ -inch thick, refractory material. Each chimney shall have an inlet installed at the time of construction.

(6) **CLEAN-OUT OPENING.** Every masonry chimney shall be provided with a clean-out opening at the base. Such openings shall be equipped with metal doors and frames arranged to remain closed when not in use. Clean-out openings shall be located below the lowest inlet to the flue.

(7) **FLUE LINERS.** (a) Masonry chimneys shall be lined with a material that will resist corrosion, softening and cracking at temperatures up to 1800°F, such as vitrified clay sewer pipe or minimum $\frac{5}{8}$ -inch thick fireclay lining material.

(b) All flue liners shall be laid in a full bed of refractory mortar or refractory cement.

(c) Variations in inside and outside dimensions shall not exceed $\frac{1}{4}$ inch for clay flue liners.

(d) There shall be a minimum clearance of $\frac{1}{2}$ -inch and a max-

imum clearance of 1-inch between the flue liner and the chimney walls.

(e) Unless serving a masonry fireplace under s. [SPS 321.29](#), flue liners shall commence at the chimney footing.

(8) **CHIMNEY CAPS.** Chimneys shall be provided with precast or cast-in-place concrete chimney caps. Chimney caps shall have a minimum thickness of 2 inches, shall slope outwards away from the flue, and shall provide a one-inch overhang and drip edge on all sides. A slip joint shall be installed between the flue and the cap. The slip joint shall be filled with $\frac{1}{4}$ -inch felt or similar material and shall be caulked with high-temperature caulk or similar material to prevent water infiltration.

(9) **CLEARANCE TO COMBUSTIBLES.** (a) The minimum clearance between combustibles and masonry chimneys which have any portion located within the exterior wall of the dwelling shall be 2 inches. The minimum clearance between combustibles and masonry chimneys which have all parts completely outside the dwelling, exclusive of soffit or cornice areas, shall be one inch.

(b) Except as required under pars. (c) and (d), the clearance spaces shall remain completely open.

(c) The clearance spaces between chimneys and wood joists, beams, headers or other structural members shall be fireblocked at each floor level from chimney footing all the way to the roof flashing with galvanized steel, at least 26 gage thick or with non-combustible sheet material.

(d) Noncombustible material shall be used to prevent entry of debris into the clearance spaces.

History: Cr. [Register, February, 1985, No. 350](#), eff. 3-1-85; am. (8), [Register, March, 1992, No. 435](#), eff. 4-1-92; r. and recr. (8) and (9), [Register, November, 1995, No. 479](#), eff. 12-1-95; r. and recr. (7) (a), cr. (7) (d) and (e), and am. (9) (c), [Register, March, 2001, No. 543](#), eff. 4-1-01; [CR 02-077](#): am. (7) (b) and (d) [Register May 2003 No. 569](#), eff. 8-1-03; correction in (7) (e) made under s. [13.92 \(4\) \(b\) 7](#), Stats., [Register December 2011 No. 672](#).

SPS 321.32 Factory-built fireplaces. Factory-built fireplaces consisting of a fire chamber assembly, one or more chimney sections, a roof assembly and other parts shall be tested and listed by a nationally recognized testing laboratory.

(1) **FIREPLACE ASSEMBLY AND MAINTENANCE.** The fireplace assembly shall be erected and maintained in accordance with the conditions of the listing.

(a) All joints between the wall or decorative facing material and the fireplace unit shall be completely sealed, firestopped or draft-stopped with a noncombustible caulk or equivalent.

(b) Doors installed on factory built fireplaces shall conform with the terms of the listing and the manufacturers installation instructions for the fireplace unit.

(2) **DISTANCE FROM COMBUSTIBLES.** Portions of the manufactured chimney extending through combustible floors or roof/ceiling assemblies shall be installed in accordance with the distances listed on the chimney in order to prevent contact with combustible materials.

(3) **HEARTH EXTENSIONS.** Hearth extensions shall be provided in accordance with the manufacturer's listing. Where no hearth extension is specified in the listing, a hearth extension shall be provided in accordance with s. [SPS 321.29 \(6\)](#).

History: Cr. [Register, November, 1979, No. 287](#), eff. 6-1-80; renum. from Ind 21.30 and r. and recr. (3), [Register, February, 1985, No. 350](#), eff. 3-1-85; cr. (1) (a) and (b), am. (3) and Table 21.32-1, [Register, January, 1989, No. 397](#), eff. 2-1-89; r. and recr. [Register, March, 1992, No. 435](#), eff. 4-1-92; correction in (3) made under s. [13.92 \(4\) \(b\) 7](#), Stats., [Register December 2011 No. 672](#).

Subchapter X — Construction in Floodplains

SPS 321.33 Construction in floodplains. (1) **GENERAL.** Where dwelling construction is allowed by local zoning

ordinances to take place in floodfringe areas of floodplains, the dwelling shall meet the requirements of this subchapter.

Note: The department of natural resources (DNR) and the federal emergency management agency (FEMA) also have regulations that apply to construction in floodfringe areas.

(2) **ELEVATION.** (a) *General.* Except as provided in pars. (b) and (c), all dwellings constructed within a floodfringe area shall be elevated so the lowest floor and all basement floor surfaces are located at or above the base flood elevation.

(b) *Certified floodproof basements.* Floodproof basements may have the top of the basement floor no more than 5 feet below the base flood elevation provided the basement is designed by a registered architect or engineer to be watertight and impermeable. No limitation is placed on the use or occupancy of a certified floodproof basement by the provisions of this subchapter.

(c) *Other enclosed spaces.* 1. Enclosed spaces not meeting the requirements of par. (b) are allowed at any depth below the base flood elevation provided the spaces are used only for one or more of the following purposes:

- a. Means of egress.
- b. Entrance foyers.
- c. Stairways.
- d. Incidental storage of portable or mobile items.

2. Fully enclosed spaces used only for those purposes listed in subd. 1. shall be designed to automatically equalize the hydrostatic pressure on exterior walls by allowing the entry and exit of floodwaters. Designs for meeting this requirement shall be certified by a registered architect or engineer or shall meet all of the following requirements:

- a. There shall be at least 2 pressure relieving openings and the openings shall have a total net area of not less than one square inch for every square foot of enclosed area subject to flooding.
- b. The bottom of all openings shall be no more than 12 inches above grade.
- c. Openings may not be equipped with screens, louvers, valves or other coverings or devices unless such devices permit the automatic entry and discharge of floodwaters.

(3) **CERTIFICATION OF ELEVATION.** A registered land surveyor, architect or engineer shall certify the actual elevation in relation to mean sea level of the lowest structural member required to be elevated by the provisions of this subchapter.

(4) **ANCHORAGE.** The structural systems of all dwellings shall be designed, connected and anchored to resist flotation, collapse or permanent lateral movement due to structural loads and stresses at the base flood elevation.

(5) **PROTECTION OF ELECTRICAL AND MECHANICAL SYSTEMS.** Electrical and mechanical equipment shall be placed above the base flood elevation or shall be designed to prevent water contact with the equipment in case of a flood up to the base flood elevation.

(6) **CONSTRUCTION MATERIALS AND METHODS.** All dwellings constructed in floodplains shall be constructed using materials and methods designed to minimize flood and water damage.

History: Emerg. cr. eff. 5-8-96; cr. Register, February, 1997, No. 494, eff. 3-1-97.

SPS 321.34 Construction in coastal floodplains.

(1) **GENERAL.** All dwellings constructed in coastal floodplains shall be designed by a registered architect or engineer and shall meet the requirements of this section and s. SPS 321.33.

(2) **ELEVATION.** All dwellings constructed in a coastal floodplain shall be elevated so the lowest portion of all structural members supporting the lowest floor, with the exception of mat or raft

foundations, pilings, piling caps, columns, grade beams and bracing, is located at or above the base flood elevation.

(3) **ENCLOSURES BELOW BASE FLOOD ELEVATION.** Enclosures below the base flood elevation in a coastal floodplain may not be used for human occupancy and shall be free of all obstructions, except for non-loadbearing walls and partitions. Non-loadbearing walls and partitions below base flood elevation shall be constructed to break away without causing any structural damage to the elevated portion of the dwelling or foundation system due to the effect of wind loads and water loads acting simultaneously.

(4) **FOUNDATIONS.** All dwellings located in a coastal floodplain shall be supported and anchored on pilings or columns. The piling or column shall have adequate soil penetration to resist combined water and wind loads at the base flood elevation. Piling or column design shall consider the effect of scour of soil strata. Mat or raft foundations to support columns may not be used where soil under the mat or raft is subject to scour or other erosion from wave flow conditions.

History: Emerg. cr. eff. 5-8-96; cr. Register, February, 1997, No. 494, eff. 3-1-97; correction in (1) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

Subchapter XI — Installation of Manufactured Homes

SPS 321.40 Installation standards. (1) **PRODUCED ON OR AFTER APRIL 1, 2007.** (a) *Adoption of standards.* The federal *Model Manufactured Home Installation Standards*, 24 CFR part 3285, as in effect on December 1, 2014, is hereby incorporated by reference into this chapter.

Note: A copy of this edition of 24 CFR 3285 is on file in the offices of the Department and the Legislative Reference Bureau. Copies of 24 CFR 3285 are available at <http://www.gpo.gov/fdsys/granule/CFR-2013-title24-vol5/CFR-2013-title24-vol5-part3285>.

Note: Section 24 CFR 3285.1(a)(1) reads as follows: “States that choose to operate an installation program for manufactured homes in lieu of the federal program must implement installation standards that provide protection to its residents that equals or exceeds the protection provided by these Model Installation Standards.”

(b) *Compliance.* 1. A manufactured home produced on or after April 1, 2007, shall be installed in accordance with 24 CFR part 3285 except as otherwise provided by this subsection.

Note: As provided under 24 CFR 3285.1(a)(intro.), “The manufacturer’s installation instructions, including specific methods for performing a specific operation or assembly, will be deemed to comply with these Model Installation Standards, provided they meet or exceed the minimum requirements of these Model Installation Standards and do not take the home out of compliance with the Manufactured Home Construction and Safety Standards (24 CFR part 3280).”

2. If a requirement of this code applies to a manufactured home or to an attachment to a manufactured home, the manufactured home owner shall comply with that requirement. If the manufactured home is located in a manufactured home community, the manufactured home community operator is not responsible for compliance with that requirement unless the manufactured home community operator is the manufactured home owner.

(c) *Additional definitions.* These are department definitions in addition to the definitions in 24 CFR 3285.5:

1. “Department” means the department of safety and professional services.
2. “HUD” means the federal department of housing and urban development.
- 2m. “Manufactured home owner” has the meaning given in s. 101.652 (1) (d), Stats.

Note: Section 101.652(1)(d), Stats. reads as follows: “Manufactured home owner” does not include a person that leases a manufactured home from another.

3. “Manufactured home section” means a portion of a manufactured home which when installed does not provide all the facilities for year-round residential occupancy.

4. “Manufactured home unit” means a complete manufac-

tured home which when installed provides all the facilities for year-round residential occupancy.

(d) *Substituted definitions.* Substitute the following definitions and informational note for the corresponding definitions in 24 CFR 3285.5:

1. "Approved" means acceptable to the department.
2. "Base flood elevation" means the elevation of the base flood, including wave height, relative to the datum specified on a county's flood hazard map.
3. "Flood hazard area" means the greater of either of the following:
 - a. The special flood hazard area shown on the flood insurance rate map.
 - b. The area subject to flooding during the design flood and shown on a county's flood hazard map, or otherwise legally designated.
4. "Flood hazard map" means a map delineating the flood hazard area and adopted by a county.
5. "Local authority having jurisdiction (LAHJ)" means the department; except where it is used in conjunction with "flood hazard map," in which case it means the county.
6. "Manufactured home" has the meaning given in s. 101.91 (2), Stats.

Note: Section 101.91 (2) of the Statutes is reprinted in a Note under s. SPS 320.07 (52m).

(e) *Fire separation.* Substitute the following wording for the requirements in 24 CFR 3285.101: Fire separation distances shall be provided in accordance with the distances specified in s. SPS 326.12.

(f) *Flood hazard.* Substitute the following wording and informational note for the requirements in 24 CFR 3285.102(c): Prior to the initial installation of a new manufactured home, the owner or permit applicant is responsible to determine whether the home site lies wholly or partly within a special flood hazard area as shown on the county's flood insurance rate map, flood boundary and floodway map, or flood hazard boundary map. If so located, the map and supporting studies adopted by the county may be used to determine the flood hazard zone and base flood elevation at the site.

Note: The department of natural resources and the federal emergency management agency may also have regulations that apply to construction in flood hazard areas.

(g) *Wind loads.* This is a department informational note to be used under 24 CFR 3285.103(a):

Note: The HUD-required wind loads for Wisconsin, Zone 1, are not less than 15 psf horizontal and not less than 9 psf uplift.

(h) *Roof loads.* This is a department informational note to be used under 24 CFR 3285.103(b):

Note: See ch. SPS 325 Appendix A for a reprint of HUD's roof-load zone map.

(i) *Thermal zone.* This is a department informational note to be used under 24 CFR 3285.103(c):

Note: The HUD-required thermal zone for Wisconsin is Zone 3, for an overall maximum coefficient of heat transmission not to exceed 0.079 Btu/(hr.)(sq. ft.)(°F).

(j) *Soil test.* This is a department requirement in addition to the requirements in 24 CFR 3285.202(a): Where a community-wide soil test does not exist and a soil test is required by this chapter, such as for a proposed frost-free-foundation design, the test shall be conducted to determine the soils in the entire community rather than at an individual site.

(k) *Footings and foundations.* This is a department requirement in addition to the requirements in 24 CFR 3285.301: Footings and foundations may be designed in accordance with subchs. IV and V, which include a frost depth of at least 48 inches.

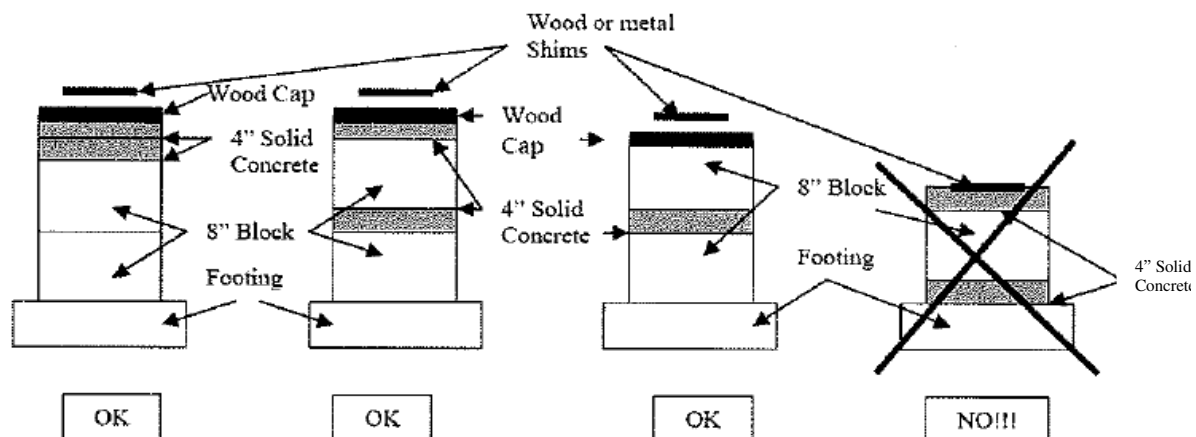
(L) *Caps.* Substitute the following wording for the requirements in 24 CFR 3285.304(b)(2): A combination of up to two 4-inch-thick solid-concrete blocks and no more than one 2-inch-thick piece of hardwood lumber shall be permitted as cap material. Lumber used as cap and gap filler material may be of 2-inch nominal lumber at least equal to No. 2 spruce/pine/fir having a minimum fiber bending stress rating of 1200 psi. All lumber used as cap and gap filler shall be the same species of wood. Lumber used to fill a gap in the pier may only be placed at the top of the pier.

(m) *Gaps.* This is a department informational note to be used under 24 CFR 3285.304(c)(1):

Note: See lumber specifications under par. (L).

(n) *Additional blocking.* Substitute the following wording for the requirements in 24 CFR 3285.304(c)(3): If a pier is provided with a cap block of 4-inch concrete or 2-inch lumber, another 4-inch concrete block may be placed anywhere in the pier but may not be placed directly upon the footing.

(o) *Illustration.* This is a department figure to be used under 24 CFR 3285.304:

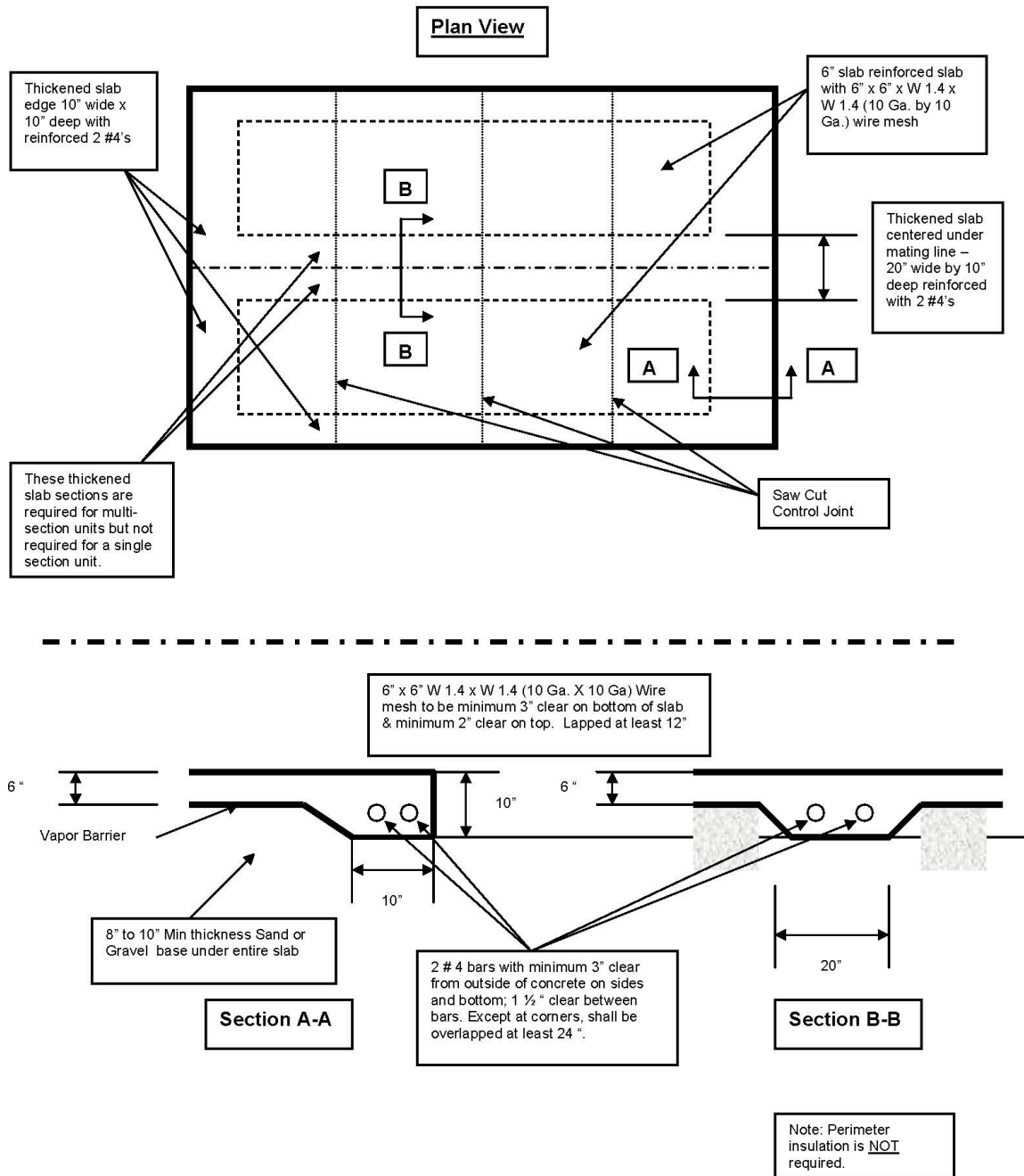


(p) *Footings and foundations.* This is a department requirement in addition to the requirements in 24 CFR 3285.312: Foot-

ings and foundations may be designed in accordance with any of the following:

1. Subchs. IV and V.
2. The department-approved slab design that is shown in the figure and limitations at the end of this paragraph.
3. Other proprietary designs approved by the department.

**Acceptable slab on grade for pier supported manufactured home produced on or after April 1, 2007
[per SPS 321.40 (1)]**



Limitations:

1. Minimum 3,000 psi concrete. [24 CFR 3285.312(a)(1)(ii)]

Published under s. 35.93, Stats. Updated on the first day of each month. Entire code is always current. The Register date on each page is the date the chapter was last published.

2. Rebar and mesh at least grade 40.
3. Soil bearing capacity at least 2,000 psf. [SPS 321.40 (2) (b) 2.]
4. Placed on undisturbed soil. May not be placed on unprepared fill material, organic soil, alluvial soil, mud, or frozen soil. [SPS 321.40 (2) (b) 1. and 24 CFR 3285.312(a)]
5. 8 to 10" of clean, graded sand, gravel, or crushed stone base in clay soils. [SPS 321.20 (2) with added thickness to resist frost.] Compaction of sand, etc., should be 95% of modified Proctor.
6. 6 mil vapor retarder overlapped 12 inches and sealed. [24 CFR 3285.204]
7. Maximum pier spacing of 7 feet with max. load per pier of 5,300 lbs. when placed on 6" thick slab. [SPS 321.40 (2) (b) 10. and 24 CFR 3285.310]
8. Maximum load per pier of 11,900 lbs. at mating line when centered on the 20" W. X 10" D. thickened slab, Section B-B, reinforced with 2 - #4 bars. Individual pier footings at mating line meeting sizing requirements in 24 CFR 3285 Table to 3285.312 may be used in lieu of continuous thickened slab. [24 CFR 3285.312(c)]
9. Site shall drain away from the home per SPS 321.12. Ensure drainage of sand fill zone so that any clay does not cause water to pool under the slab.
10. The water table may not be above the frost penetration depth, i.e. at least 4 feet below grade. [SPS 321.16 (1) (a)]
11. Saw cut joints in slab so that sections are approximately square. (Example: 16' by 76' slab = 4 segments.)

(q) *Anchors and tie-down straps.* This is a department requirement in addition to the requirements in 24 CFR 3285.402(b)(1) and (2): Ground anchors and tie-down straps may be of painted steel to provide the weather-deterioration protection required by this section.

(r) *Severe climate.* Substitute the following wording for the requirements in 24 CFR 3285.404: In frost-susceptible soil locations, ground-anchor augers shall be installed to the design depth of the anchor but not less than 30 inches, unless the foundation system is frost-protected to prevent the effects of frost heave, in accordance with acceptable engineering practice and ss. 24 CFR 3280.306 and 3285.312.

(s) *Ventilation openings.* Substitute the following wording for the requirements in 24 CFR 3285.505(d): Ventilation openings shall be covered for their full height and width with a perforated corrosion- and weather-resistant covering that is designed to prevent entry of rodents.

(t) *Plumbing.* This is a department informational note to be used under 24 CFR 3285.601:

Note: The Department's rules relating to registration and licensing of plumbers are in ch. SPS 305. The Department's rules relating to pipe supports; pitch of sanitary drainage piping, storm water or clear water piping, and water supply piping; and plumbing specific to manufactured homes and manufactured home communities are in chapter SPS 382.

(u) *Access for a transporter.* Substitute the following wording for the recommended requirements in 24 CFR 3285.902(a): Before attempting to move a home, ensure that the transportation equipment and home can be routed to the installation site and that all special transportation permits required by the department of transportation have been obtained.

(v) *Drainage structures.* Substitute the following wording for the recommended requirements in 24 CFR 3285.902(b): The use of ditches and culverts to drain surface runoff is subject to local and state regulations and shall be included and considered in the overall site preparation.

(w) *Local permits.* Substitute the following wording and informational note for the recommended requirements in 24 CFR 3285.903(a): All locally required permits shall be obtained and all corresponding fees shall be paid.

Note: See s. SPS 320.08 for the Department's requirements for obtaining a Wisconsin uniform building permit prior to each installation.

(x) *Local plan approval.* Substitute the following wording for the recommended requirements in 24 CFR 3285.903(b): Prior to alteration of a home's pier blocking, the local municipality shall be contacted to determine if plan approval and permits are required.

(y) *Accessory buildings and structures.* Substitute the following wording for the recommended requirements in 24 CFR 3285.903(c): Each accessory building and structure is designed to support all of its own live and dead loads, unless the structure, including any attached garage, carport, deck, or porch, is attached to the manufactured home and is otherwise included in the installation instructions.

(z) *Contacting the utility providers.* Substitute the following wording for the recommended requirements in 24 CFR 3285.904(a): The utility providers shall be consulted before connecting the manufactured home to any utilities.

(za) *Conversion of gas appliances.* Substitute the following wording for the recommended requirements in 24 CFR 3285.904(d)(1): A service person acceptable to the utility provider shall convert the appliance from one type of gas to another, following instructions by the manufacturer of each appliance.

(zb) *Gas appliance startup procedures.* Substitute the following wording for the recommended requirements in 24 CFR 3285.904(d)(4)(intro.): When required by the utility provider, the installer shall perform the following procedures:

(zc) *Heating oil systems.* This is a department informational note to be used under 24 CFR 3285.905:

Note: See ch. ATCP 93 for additional requirements relating to installation of heating oil systems.

(2) PRODUCED BEFORE APRIL 1, 2007. (a) Except as provided in par. (b), the installation of a manufactured home produced before April 1, 2007 shall be installed in conformance with the requirements in effect at the time the manufactured home was produced.

(b) The installation of a manufactured home produced before April 1, 2007 to be installed on piers shall conform to at least all of the following requirements:

1. No footing may be placed upon unprepared fill material, topsoil, alluvial soil or mud. All organic matter shall be removed from the area that will be beneath any footing.

2. The soil bearing capacity shall be determined through test by a pocket penetrometer or other means of analysis. If the soil bearing capacity under each intended pier location is less than 2000 pounds per square foot, piers shall be located in accordance with the manufacturer's instructions.

3. The home site shall be graded to permit water to drain from under the home and away from the home for a minimum of 5 feet from the home.

4. Every pier shall be supported by a footing. Each footing shall be no less than a nominal 16 inches by 16 inches.

5. Each footing shall consist of one of the following:

a. One nominal 4-inch by 16-inch by 16-inch solid concrete block or 2 nominal 4-inch by 8-inch by 16-inch solid concrete blocks. If a single block pier and 2 footing blocks are used, the 2 footing blocks shall be positioned with the joint parallel to the main frame. If a double block pier and 2 footing blocks are used, the 2 footing blocks shall be positioned with the joint either parallel or perpendicular to the main frame.

b. A 16-inch by 16-inch pad constructed of acrylonitrile-butadiene-styrene (ABS) having a rated load bearing capacity of not less than 6000 pounds.

c. An 18-inch diameter hole bored to below the frost line or to unfractured bedrock and filled with poured concrete.

d. Any other materials and systems approved in advance by the department.

6. Piers shall be constructed of concrete blocks, manufactured steel stands or manufactured concrete stands. Manufactured stands shall be labeled for use as piers for manufactured homes.

7. Piers constructed of single stacked concrete blocks shall be limited to a height of 36 inches. Piers constructed of concrete blocks and exceeding 36 inches but less than 80 inches shall be constructed using double stacked blocks with each layer opposing the direction of the layer underneath it. Piers constructed of concrete blocks and exceeding 80 inches shall be constructed using double blocks laid in concrete mortar with each layer opposing the direction of the layer underneath it and with each core filled with concrete and a ½-inch steel reinforcing rod.

8. All concrete blocks shall be 2-core design, construction grade blocks having nominal dimensions of at least 8 inches by 8 inches by 16 inches. All concrete blocks shall be placed with the cores open vertically. The concrete block nearest the main frame of the manufactured home shall be perpendicular to the linear direction of the frame. None of these concrete blocks may contact the main frame of the home.

9. Alternative materials may be used for pier installations provided they are approved in advance by the department.

10. Piers shall be placed under the main frame of the chassis at intervals of not more than 7 feet on-center and no more than 3 feet from the exterior side of each end wall. The 7-foot spacing requirement may be varied as permitted by footing, spacing and soil capacity tables provided by the home manufacturer.

11. Piers shall be placed under the bearing points of clear-span openings of 4 feet or more in center mating walls.

12. Piers shall be plumb and centered under the contact area at the point of support.

13. a. Each pier shall be capped with a solid concrete block at least 4 inches thick or a solid wood block having a nominal thickness of at least 2 inches.

b. The cap shall be the same width and length as the top of the pier.

c. The cap shall consist of no more than 2 pieces.

d. Two-piece caps shall be positioned with the joint perpendicular to the main frame.

14. Where shims are utilized, wood shims shall be installed between the pier cap and the frame. Shims shall be driven from opposing sides and shall be no less than 4 inches by 8 inches.

15. Wood caps and shims shall be at least equal to No. 2 spruce pine fir having a minimum fiber bending stress rating of 1200 psi. All wood caps shall be the same species of wood, and all shims shall be the same species of wood.

16. The combination of a nominal 2-inch solid concrete block or a nominal 2-inch wood cap plus shims shall not exceed 3 ½ inches.

17. A minimum clearance of 12 inches shall be maintained beneath the lowest point of the main frame in the area of any utility connection. A minimum clearance of 12 inches shall also be maintained under the home for at least 75% of the home. The remainder of the home may be less than 12 inches above the ground but may not touch the ground.

History: CR 05-113: cr. Register December 2006 No. 612, eff. 4-1-07; CR 08-043: am. (2) (b) 13. Register March 2009 No. 639, eff. 4-1-09; CR 14-017: r. and recr. (1), cr. (2) (title), am. (2) (b) 8. Register August 2014 No. 704, eff. 9-1-14; correction in numbering in (1) (za) to (zc) made under s. 13.92 (4) (b) 1., Stats., Register August 2014 No. 704; correction in (1) (p) (intro.) made under s. 13.92 (4) (b) 7., Stats., Register August 2014 No. 704; corrections in (1) (g) to (i) made under s. 35.17, Stats., Register August 2014 No. 704; CR 15-034: am. (1) (a) Register December 2015 No. 720, eff. 1-1-16; CR 21-047: renum. (1) (b) to (1) (b) 1., cr. (1) (b) 2., (c) 2m. Register May 2022 No. 797, eff. 6-1-22.

Chapter SPS 362

BUILDINGS AND STRUCTURES

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SPS 362.0202	Definitions.	SPS 362.1505	Roof covering classification.
SPS 362.0306	Cheese factories classified as F-2 occupancy.	SPS 362.1506	Roof covering materials.
SPS 362.0307	Pyrophoric materials.	SPS 362.1507	Roof slope.
SPS 362.0308	Classification of institutions with 5 or fewer persons receiving medical care.	SPS 362.1603	Roof snow load.
SPS 362.0310	Use and occupancy classification.	SPS 362.1604	Alternate standards.
SPS 362.0400	Special detailed requirements based on use and occupancy.	SPS 362.1607	Live loads.
SPS 362.0401	Chapter ATCP 93 compliance.	SPS 362.1608	Snow loads.
SPS 362.0412	Aircraft storage.	SPS 362.1611	Roof drains.
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SPS 362.0423	Storm shelters.	SPS 362.1700	Structural tests and special inspections.
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SPS 362.0506	Allowable building area.	SPS 362.1803	Deep foundations.
SPS 362.0509	Incinerator rooms.	SPS 362.1804	Ground improvement.
SPS 362.0603	Allowable materials.	SPS 362.1805	Basement floor base course.
SPS 362.0702	Definitions.	SPS 362.1806	Presumptive load-bearing values for saturated soils.
SPS 362.0705	Exterior Walls.	SPS 362.1807	Shallow post foundations.
SPS 362.0706	Fire wall identification.	SPS 362.1808	Foundations.
SPS 362.0713	Chute discharge room.	SPS 362.1809	Frost-protected shallow foundations.
SPS 362.0717	Ducts and air-transfer openings.	SPS 362.1810	Deep foundations.
SPS 362.0722	Calculated fire resistance.	SPS 362.1908	Shotcrete clearance.
SPS 362.0901	Fire protection systems.	SPS 362.2109	Empirical design of masonry.
SPS 362.0902	Definitions.	SPS 362.2204	Welded Connections.
SPS 362.0903	Automatic fire sprinkler systems.	SPS 362.2211	Steel trusses spanning 60 feet or greater.
SPS 362.0904	Alternative automatic fire-extinguishing systems.	SPS 362.2303	Wood trusses spanning 60 feet or greater.
SPS 362.0907	Fire alarm and detection systems.	SPS 362.2304	Girder ends.
SPS 362.0909	Smoke control systems.	SPS 362.2409	Glass and glazing for elevators.
SPS 362.0915	Carbon monoxide detection.	SPS 362.2503	Gypsum board and plaster.
SPS 362.1004	Egress for outdoor areas.	SPS 362.2510	Water-resistive barriers.
SPS 362.1006	Exits.	SPS 362.2701	Electrical code.
SPS 362.1009	Accessible means of egress.	SPS 362.2900	Additional criteria for toilets.
SPS 362.1010	Doors, gates, and turnstiles.	SPS 362.2901	Plumbing code.
SPS 362.1011	Stairway width.	SPS 362.2902	Plumbing fixtures.
SPS 362.1013	Floor-level exit signs.	SPS 362.2903	Drinking facilities.
SPS 362.1015	Guards.	SPS 362.3001	Elevators.
SPS 362.1020	Corridor continuity.	SPS 362.3002	Hoistway enclosures.
SPS 362.1029	Spaces under bleachers and grandstands.	SPS 362.3003	Standardized fire service elevator keys.
SPS 362.1101	Design of Type A and B units.	SPS 362.3005	Machine rooms.
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SPS 362.1104	Accessible route.	SPS 362.3102	Membrane structures and blower equipment.
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SPS 362.1111	Signage.	SPS 362.3104	Pedestrian walkways and tunnels.
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SPS 362.1204	Interior environment.	SPS 362.3200	Encroachments into the public right-of-way.
SPS 362.1206	Court drainage.	SPS 362.3300	Safeguards during construction.
SPS 362.1207	Sound transmission.	SPS 362.3307	Protection of adjoining property.
SPS 362.1210	Toilet rooms.	SPS 362.3500	Referenced standards.
SPS 362.1405	Exterior walls.	SPS 362.3600	Appendices.

Note: Chapter Comm 62 as it existed on June 30, 2002 was repealed and a new chapter Comm 62 was created, [Register December 2001 No. 552](#), effective July 1, 2002. Chapter Comm 62 was renumbered chapter SPS 362 under s. 13.92 (4) (b) 1., Stats., [Register December 2011 No. 672](#).

Note: Chapters [SPS 361](#) to [366](#) are affected by [2017 Wisconsin Acts 59, 198, 243, 317, 329, 330, and 331](#). Future rule-making will update chs. [SPS 361](#) to [366](#) to reflect this legislation.

SPS 362.0100 Administration. The requirements in IBC chapter 1 are not included as part of chs. [SPS 361](#) to [366](#).

Note: The sections in this chapter are generally numbered to correspond with the section numbering in the IBC, e.g., s. [SPS 362.0202](#) corresponds to IBC section 202.

Note: As used throughout chs. [SPS 361](#) to [366](#), “not included as part of chs. [SPS 361](#) to [366](#)” is intended to convey that the referenced requirements are not incorporated, and therefore cannot be enforced through chs. [SPS 361](#) to [366](#). However, local ordinances may include the referenced requirements, as specified in s. [SPS 361.03](#).

Note: IBC section 101.2 addresses the scope of the IBC. For the scope of the Wisconsin Commercial Building Code, see s. [SPS 361.02](#). Three or more attached townhouses, as referenced in an exception under IBC section 101.2, are included within the scope listed in s. [SPS 361.02](#). Detached one- and two-family dwellings, as likewise referenced in an exception under IBC section 101.2, and elsewhere in the

IBC, are not included within the scope listed in s. [SPS 361.02](#), but are regulated in Wisconsin by chs. [SPS 320](#) to [325](#), in accordance with subch. [II of ch. 101](#), Stats.

History: CR 00-179: cr. [Register December 2001 No. 552](#), eff. 7-1-02; CR 01-139: renum. (1) and (2) to be Comm 62.0100 and Comm 62.0115 [Register June 2002 No. 558](#), eff. 7-1-02; CR 04-016: am. [Register December 2004 No. 588](#), eff. 1-1-05; CR 06-120: am. [Register February 2008 No. 626](#), eff. 3-1-08; CR 16-094: am., [Register April 2018 No. 748](#) eff. 5-1-18.

SPS 362.0202 Definitions. (1) ADDITIONS. These are department definitions for this chapter in addition to the definitions in IBC section 202:

(a) “High-piled combustible storage” means storage of combustible materials in closely packed piles or on pallets, racks, or shelves where the top of storage is greater than 12 feet in height. When required by the fire code official, high-piled combustible storage also includes certain high-hazard commodities, such as rubber tires, Group A plastics, flammable liquids, idle pallets, and similar commodities, where the top of storage is greater than 6 feet in height.

(b) “Neutral plane for a deep foundation” means the level at which drag load, accumulated from the top down, added to the long-term static service load, equals the upward acting shaft resistance accumulated from the bottom up, added to the deep foundation’s toe resistance.

(c) “Self-service storage facility” has the meaning given in s. 704.90 (1) (g), Stats.

(2) **SUBSTITUTIONS.** Substitute the following definitions for the corresponding definition in IBC section 202:

(a) “Approved” means acceptable to the department.

(b) “Automatic sprinkler system” or “automated fire sprinkler system” has the meaning given in s. 145.01 (2), Stats.

Note: Section 145.01 (2), Stats., reads as follows: “ ‘Automatic fire sprinkler system,’ for fire protection purposes, means an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The system includes a suitable water supply, such as a gravity tank, fire pump, reservoir or pressure tank or connection beginning at the supply side of an approved gate valve located at or near the property line where the pipe or piping system provides water used exclusively for fire protection and related appurtenances and to standpipes connected to automatic sprinkler systems. The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, structure or area, generally overhead, and to which sprinklers are connected in a systematic pattern. The system includes a controlling valve and a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area.”

(c) “Commercial motor vehicle” means a motor vehicle used to transport passengers or property if the motor vehicle meets either of the following:

1. The vehicle has a gross vehicle weight rating of 26,000 pounds or more.
2. The vehicle is designed to transport 16 or more passengers including the driver.

(d) “Fire area” means the aggregate floor area enclosed and bounded by fire walls, fire barriers, exterior walls, or fire-resistance-rated horizontal assemblies of a building.

(e) “Fire separation distance” means the distance measured at right angles from the face of the building wall to one of the following:

1. The closest interior lot line.
2. A permanent no-build easement line.
3. The centerline of a street, an alley, or a public way.
4. An imaginary line between two buildings on the same property.

(f) “Fuel-burning appliance” means a device that is installed in a building and burns fossil-fuel or carbon-based fuel when carbon dioxide is a combustion by-product, including ranges, ovens, grills, clothes dryers, furnaces, boilers, water heaters, heaters, fireplaces, and stoves.

(g) “Immediately dangerous to life and health (IDLH)” means a concentration of air-borne contaminants that poses a threat of death, immediate or delayed permanent adverse health effects, or effects that could prevent escape from such an environment. This contaminant concentration level is established by the National Institute of Occupational Safety and Health based on both toxicity and flammability. It generally is expressed in parts per million by volume, or milligrams per cubic meter.

(h) “Live/work unit” means a dwelling unit that includes a “home-based business” as defined in s. SPS 361.04 (3m).

Note: SPS 361.04 (3m) reads as follows: “Home-based business” 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.

(i) “Sealed combustion appliance” means a listed appliance that acquires all air for combustion through a dedicated sealed passage from the outside to a sealed combustion chamber and all combustion products are vented to the outside through a separate dedicated sealed vent.

(3) **DELETIONS.** The following terms and corresponding definitions in IBC section 202 are not included as part of chs. SPS

361 to 366: approved agency, approved fabricator, base flood, base flood elevation, certificate of compliance, design flood, design flood elevation, designated seismic system, dry floodproofing, fabricated item, label, lowest floor, manufacturer’s designation, mark, special flood hazard area, special inspection, sprayed fire-resistant materials, start of construction, and structural observation.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 01-139: renum. (1) (b) to be (2) (c) and renum. (1) (c) to (k) to be (1) (b) to (j) Register June 2002 No. 558, eff. 7-1-02; CR 04-016: am. (1) (a), renum. (1) (b) to (j) to be (1) (c) to (j) and Comm 61.04 (4), cr. (1) (b) and (3), r. and cr. (2) (b) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: am. (1) (intro.) and (3), renum. (1) (c), (d) and (e) to (j) to be Comm 61.04 (5), (6) and (8) to (13) and am. (5) and (8) to (11) Register February 2008 No. 626, eff. 3-1-08; correction made in (2) (c) under s. 13.92 (4) (b) 7., Stats., Register February 2008 No. 626, eff. 3-1-08; CR 10-103: r. and recr. (1), (2) Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. (1) to (1) (intro.), (a) and am., cr. (1) (b), (c), renum. (2) to (2) (intro.), (a) and am., cr. (2) (b) to (i), am. (3), Register April 2018 No. 748 eff. 5-1-18; correction in (2) (h) made under s. 35.17, Stats.

SPS 362.0306 Cheese factories classified as F-2 occupancy. This is a department rule in addition to the examples in IBC section 306.3: Cheese factory.

History: CR 16-094: cr., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0307 Pyrophoric materials. This is a department informational note to be used under IBC section 307.4: Note: See ch. SPS 314 for additional requirements for pyrophoric materials.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08.

SPS 362.0308 Classification of institutions with 5 or fewer persons receiving medical care. Substitute the following wording for IBC section 308.4.2: Five or fewer persons receiving medical care. A facility with 5 or fewer persons receiving medical care shall be classified as Group R-3.

History: CR 16-094: cr., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0310 Use and occupancy classification. This is a department informational note to be used under IBC section 310.2: Note: See s. SPS 361.02 Notes for statutory definitions of adult family home and community-based residential facility. See s. SPS 361.04 for definitions of dwelling unit and multifamily dwelling.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: renum. to be (2), cr. (1) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: r. (1), renum. (2) to be Comm 62.0310 Register February 2008 No. 626, eff. 3-1-08.

SPS 362.0400 Special detailed requirements based on use and occupancy. These are department rules in addition to the requirements in IBC chapter 4:

(1) **FIREWORKS, BLACK POWDER AND EXPLOSIVE MATERIALS.** Fireworks, black powder and explosive materials shall be stored and isolated in accordance with ch. SPS 314.

Note: Pursuant to s. 167.10 (6) (d), Stats., no wholesaler, dealer or jobber may store fireworks within 50 feet of a dwelling.

(2) **RECYCLING SPACE.** An owner of a building shall provide a separate room or designated space within or adjacent to the building for the separation, temporary storage and collection of recyclable materials that are likely to be generated by the building occupants, under any of the following conditions:

(a) The construction of a new building.

Note: See Appendix for guidelines for recommended designated areas.

Note: The collection and temporary storage of recyclable materials that are flammable or combustible is regulated by ch. SPS 314. Storage of liquids that are flammable or combustible is regulated by ch. ATPC 93. Owners of buildings where these materials are stored should consult those chapters for isolation, removal, and storage standards.

(3) **LUNCHROOMS.** A space for eating lunches shall be provided in all places of employment where there is exposure to injurious dusts, toxic material and industrial poisons. Such space

shall be physically separate from any location where there is exposure to toxic materials. Toilet rooms shall not be permitted to serve as lunchrooms.

(4) **COMMUNITY-BASED RESIDENTIAL FACILITIES.** A newly constructed building or portion thereof that is a community-based residential facility serving 5 to 8 unrelated adults shall comply with chs. SPS 320 to 325 instead of all other requirements of chs. SPS 361 to 366.

(5) **NO-SMOKING SIGNS.** No-smoking signs shall include the international “No Smoking” symbol consisting of a pictorial burning cigarette enclosed in a red circle with a red bar across the cigarette.

(6) **LIVE LOADS POSTED.** Where the live loads for which each floor or portion thereof of a commercial or industrial building is or has been designed to exceed 100 pounds per square foot, such design live loads shall be conspicuously posted by the owner in that part of each story in which they apply, using durable signs. It shall be unlawful to remove or deface such notices.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: am. (4) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: am. (1), r. (2) (b) and (c) Register February 2008 No. 626, eff. 3-1-08; correction in (2) made under s. 13.92 (4) (b) 1., Stats., Register February 2008 No. 626; CR 09-104: cr. (5) Register December 2010 No. 660, eff. 1-1-11; CR 10-103: renum. (6) from Comm 62.1603 (5) and am. Register August 2011 No. 668, eff. 9-1-11; correction in (1), (4) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 16-094: am. (4), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0401 Chapter ATPC 93 compliance. This is a department informational note to be used under IBC section 401.1: Note: See ch. ATPC 93 for additional requirements relating to motor fuel dispensing facilities and repair garages and to the storage, handling, processing and transporting of flammable, combustible and hazardous liquids.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; correction in (title) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 362.0412 Aircraft storage. (1) Substitute the following wording for exception 1 in IBC section 412.4.4: Heating equipment that is suspended at least 10 feet above the upper surface of wings or engine enclosures of the highest aircraft which may be housed in the hangar; or at least 8 feet above the floor in shops, offices, and other sections of the hangar communicating with storage or service areas.

(2) Substitute the following wording for the requirements, but not the exception, in IBC section 412.4.3: Floor surface. Floors shall be graded and drained to meet the requirements of ch. SPS 382.

History: CR 04-016: cr. Register December 2004 No. 588, eff. 1-1-05; CR 16-094: renum. 362.0412 to 362.0412 (1) and am., cr. (2) Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0415 Hazardous materials. (1) Substitute the definition in s. SPS 362.0202 (2) (g) for the corresponding definition in IBC section 415.2: “Immediately dangerous to life and health (IDLH).”

(2) This is a department rule in addition to the requirements in IBC section 415: A magazine for detonators in quantities of 100 or less shall have sides, bottoms and doors constructed of not less than number 12-gauge metal and lined with a nonsparking material. Hinges and hasps shall be attached so they cannot be removed from the outside. One steel padlock, which need not be protected by a steel hood, having at least 5 tumblers and a case-hardened shackle of at least 3/8 inch diameter shall be provided for locking purposes.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: renum. to (1), cr. (2) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: r. and recr. (2) Register February 2008 No. 626, eff. 3-1-08; CR 16-094: am. (1) Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0423 Storm shelters. The requirements in IBC sections 423.3 and 423.4 are not included as part of chs. SPS 361 to 366.

History: CR 16-094: cr. Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0504 Building height and number of stories. The following is a department exception to the requirements in IBC section 504: The requirements in IBC section 504 do not apply to buildings and structures listed under SPS 362.0903 (18) (b) 2.

History: CR 16-094: cr. Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0506 Allowable building area. Substitute the following for the requirements in IBC Table 506.2 for I-3 occupancies of Type IIA construction: The allowable area for a single story sprinkled building shall be 60,000 square feet. The allowable area for a multistory sprinkled building shall be 45,000 square feet.

Note: This substitution corrects an error that appears in IBC Table 506.2.

History: CR 16-094: cr. Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0509 Incinerator rooms. In IBC section 509, Table 509, “incinerator rooms” does not include a crematory as defined in SPS 361.04 (1r).

History: CR 16-094: cr. Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0603 Allowable materials. Substitute the following wording for application 18 in IBC section 603.1: Sprayed fire-resistant materials and intumescent and mastic fire-resistant coating, determined on the basis of fire-resistance tests in accordance with Section 703.2.

History: CR 04-016: cr. Register December 2004 No. 588, eff. 1-1-05; CR 06-120: r. (1), renum. (2) to be Comm 62.0603 and am. Register February 2008 No. 626, eff. 3-1-08.

SPS 362.0702 Definitions. Substitute the definition in s. SPS 362.0202 (2) (e) for the corresponding definition listed in IBC section 202: “Fire separation distance.”

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 10-103: r. and recr. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. 362.0702 (intro.) to 362.0702 and am., r. (1) to (4) Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0705 Exterior Walls. (1) **CONNECTIONS BETWEEN BUILDINGS.** This is a department exception to the requirements in IBC section 705.1: This section does not apply to connections between buildings that are in compliance with IBC section 3104.

(2) **PROJECTIONS.** Substitute Table 362.0705-2 for IBC Table 705.2.

Table 362.0705–2
Minimum Distance of Projection

Fire Separation Distance (FSD)	Minimum Distance From Line Used to Determine FSD
0 feet to 2 feet	Projections not permitted
Greater than 2 feet to 3 feet	24 inches
Greater than 3 feet to less than 30 feet	24 inches plus 8 inches for every foot of FSD beyond 3 feet or fraction thereof
30 feet or greater	40 inches

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 10-103: renum. from Comm 62.0704 and am. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. 362.0705 to 362.0705 (1), cr. (2) and Table, Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0706 Fire wall identification. These are department rules in addition to the requirements in IBC section 706:

(1) **PURPOSE.** Pursuant to s. 101.135, Stats., the purpose of this section is to establish uniform standards for the identification of fire walls on the exterior of buildings.

(3) **SIGN REQUIREMENTS.** (a) *General.* The sign shall consist of 3 circles arranged vertically on the exterior wall, marking the location of the fire wall and centered on the fire wall. The circles shall either be affixed directly to the surface of the building or may be placed on a background material that is affixed to the building.

(b) *Size of circle.* Each circle shall be the same size. The diameter of the circle shall be at least 1 1/2 inches, but no greater than 2 inches.

(c) *Spacing.* The circles shall be spaced an equal distance apart. The distance measured from the top of the uppermost circle to the bottom of the lowermost circle shall be no more than 12 inches.

(d) *Color.* The color of the circle shall be red, amber (orange-yellow) or white (clear) and shall be reflective. The color of the circle shall contrast with the color of the background.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 10-103: renum. from Comm 62.0705 and am. (intro.) Register August 2011 No. 668, eff. 9-1-11; CR 16-094: r. (2), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0713 Chute discharge room. This is a department rule in addition to the requirements in IBC section 713: The requirements of IBC 713.13.4 shall apply to recycling chutes in addition to waste and linen chutes.

History: CR 16-094: cr., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0717 Ducts and air-transfer openings. (1) SMOKE DAMPER ACTUATION. This is an additional method in addition to the methods listed in IBC section 717.3.3.2: Method 6: Where a single listed duct smoke detector is installed inside the duct or outside the duct with sampling tubes protruding into the duct in the supply air ductwork downstream of the air handling equipment, including air filters, and ahead of any branch ductwork and return air duct smoke detectors are installed inside the duct or outside the duct with sampling tubes protruding into the duct within 5 feet (1524 mm) of each return air smoke damper, all supply and return smoke dampers shall be closed when any of the duct smoke detectors in the supply or return air ducts are in alarm. Other than in mechanical smoke control systems, dampers shall be closed upon fan shutdown when local smoke detectors require a minimum velocity to operate.

(2) **DUCT SMOKE DAMPERS.** This is a department exception to the requirements in IBC section 717.5.3: Smoke dampers are not required in ducts that are used in the exhaust portion of laboratory ventilating systems that are designed and installed in accordance with NFPA 45.

History: CR 16-094: renum. (1) to (2) and am., cr. (1) Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0722 Calculated fire resistance. (1) NON-SYMMETRICAL ASSEMBLIES. Substitute the following wording for the exception in each of IBC sections 722.2.1.4.3, 722.3.2.3 and 722.4.1.4: Exception: For an exterior wall with a fire separation distance greater than 10 feet, the fire shall be assumed to occur on the interior side only.

(2) **EXTERIOR WALLS.** Substitute the following wording for IBC Section 722.6.2.3: For an exterior wall with a fire separation distance greater than 10 feet, the wall is assigned a rating dependent on the interior membrane and the framing as described in IBC Tables 722.6.2 (1) and 722.6.2 (2). The membrane on the

outside of the nonfire-exposed side of exterior walls with a fire separation distance greater than 10 feet may consist of sheathing, sheathing paper and siding as described in IBC Table 722.6.2 (3).

History: CR 10-103: cr. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. 362.0721 to 362.0722 and am., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0901 Fire protection systems. (1) MODIFICATIONS. Substitute the following informational note for the requirements in IBC section 901.3: Note: Chapter SPS 314 has requirements relating to shutting down or impairing fire sprinkler systems. Chapter SPS 361 has requirements relating to availability of sprinkler documents and to submittal and approval of plans prior to altering, modifying, or removing sprinkler systems.

(2) **FIRE HOSE THREADS.** These are department informational notes to be used under IBC section 901.4: Note: Section 213.15, Stats., regulates fire hose threads and fittings and reads as follows: "All fire hose fittings, apparatus fittings, 1.5 and 2.5 inches in diameter purchased or procured by a fire department or fire company shall be of the national standard hose thread as adopted by the national fire protection association. No fire department shall utilize hose and equipment not in conformance with the requirement that all threads shall be national standard hose thread as adopted by the national fire protection association. Any person offering for sale nonstandard hose couplings, fittings or apparatus fittings may be fined not less than \$100 nor more than \$500."

Note: 2014 NFPA 1963 contains the specifications for national standard hose thread.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02.

SPS 362.0902 Definitions. Substitute the following definitions and informational note in s. SPS 362.0202 (2) (b) and (d) for the corresponding definitions listed in IBC section 902.1:

(1) "Automatic sprinkler system" or "automatic fire sprinkler system."

(2) "Fire area."

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 10-103: am. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: am. (intro.), (1), (2), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0903 Automatic fire sprinkler systems. (1) GROUP A-1. Substitute the following wording for condition 3 in IBC section 903.2.1.1: None of the stories in which the fire area is located include a level of exit discharge.

(2) **GROUP A-2.** Substitute the following wording for condition 3 in IBC section 903.2.1.2: None of the stories in which the fire area is located include a level of exit discharge.

(3) **GROUP A-3.** Substitute the following wording for condition 3 in IBC section 903.2.1.3: None of the stories in which the fire area is located include a level of exit discharge.

(4) **GROUP E.** Substitute the following wording for the requirements in IBC section 903.2.3:

(a) Except as provided in par. (b), an automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than 20,000 square feet in area.

2. Throughout every story of educational buildings that is located below a story which includes the lowest level of exit discharge.

(b) An automatic sprinkler system is not required in any fire area, or in any story that is located below a story which includes the lowest level of exit discharge, where every classroom throughout the building has at least one exterior exit door at ground level.

(5) **GROUP R.** Substitute the following wording for the requirements in IBC section 903.2.8:

(a) Except as provided in pars. (b) to (cm), an automatic sprinkler system installed in accordance with IBC section 903.3 shall be provided throughout all buildings with a Group R fire area.

(b) An automatic sprinkler system installed in a multifamily dwelling may conform with sub. (10) provided the multifamily dwelling complies with all of the following:

1. The multifamily dwelling does not contain more than 20 dwelling units.

Note: See s. 101.971 (2), Stats., for the definition of “multifamily dwelling”.

Note: See s. 101.14 (4m), Stats., for requirements relating to automatic fire sprinkler systems for a multifamily dwelling.

2. The multifamily dwelling is not more than 2 stories above grade plane in height.

3. The multifamily dwelling is not served by either a community water system or a municipal water system as defined under s. NR 811.02.

Note: Under s. NR 811.02 “community water system means a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. Any water system serving 7 or more homes, 10 or more mobile homes, 10 or more apartment units or 10 or more condominium units shall be considered a community water system unless information is provided by the owners indicating that 25 year-round residents will not be served.”

Note: Under s. NR 811.02 “municipal water system means a community water system owned by a city, village, county, town, town sanitary district, utility district, public inland lake and rehabilitation district, municipal water district or a federal, state, county or municipal owned institution for congregate care or correction, or a privately owned water utility serving the foregoing.”

(cm) An automatic sprinkler system installed in a building with a Group R-3 fire area may conform with sub. (10) provided the Group R-3 use complies with all of the following:

1. The Group R-3 use is limited to a single-room bunkhouse type sleeping unit.

2. The fire area does not exceed 1,500 square feet.

3. The fire area is not more than one story above grade plane in height.

4. The fire area has an occupant load of 10 or less.

5. The Group R-3 use is not served by either a community water system or a municipal water system as defined under s. NR 811.02.

Note: Under s. NR 811.02, “community water system” means a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. Any water system serving 7 or more homes, 10 or more mobile homes, 10 or more apartment units or 10 or more condominium units shall be considered a community water system unless information is provided by the owners indicating that 25 year-round residents will not be served.”

Note: Under s. NR 811.02, “municipal water system” means a community water system owned by a city, village, county, town, town sanitary district, utility district, public inland lake and rehabilitation district, municipal water district or a federal, state, county or municipal owned institution for congregate care or correction, or a privately owned water utility serving the foregoing.”

(6) STUDENT HOUSING. These are department rules in addition to the requirements in IBC section 903.2.8:

(a) *Definition.* In this paragraph, “private student residential building” has the meaning as given under s. 101.14 (4) (b) 1m., Stats.

Note: Section 101.14 (4) (b) 1m., Stats., reads: “In this paragraph, “private student residential building” means a privately owned and operated residential building that has a capacity of at least 100 occupants, that is occupied by persons at least 80 percent of whom are enrolled in an institution of higher education, and that has attributes usually associated with a student residence hall or dormitory such as a food service plan or occupancy by a resident advisor.”

(b) *Existing housing.* 1. An automatic fire sprinkler system shall be provided by January 1, 2014 throughout every residence hall and dormitory greater than 60 feet in height, the initial construction of which was begun before January 7, 2006, that is owned or operated by an institution of higher education, other than a residence hall or dormitory owned or operated by the Board of Regents of the University of Wisconsin System.

2. An automatic fire sprinkler system shall be provided by January 1, 2014 throughout every private student residential building greater than 60 feet in height, the initial construction of which was begun before January 7, 2006.

3. An automatic fire sprinkler system shall be provided by January 1, 2014 throughout every student residential facility operated by a fraternity, sorority or other organization authorized or sponsored by an institution of higher education, the initial construction of which was begun before January 7, 2006.

(c) *New housing.* 1. An automatic fire sprinkler system shall be provided throughout every residence hall and dormitory, the initial construction which is begun on or after April 26, 2000, that is owned or operated by the Board of Regents of the University of Wisconsin System.

2. An automatic fire sprinkler system shall be provided throughout every residence hall and dormitory, the initial construction which is begun on or after January 7, 2006, that is owned or operated by an institution of higher education, other than a residence hall or dormitory owned or operated by the Board of Regents of the University of Wisconsin System.

3. An automatic fire sprinkler system shall be provided throughout every student residential facility, operated by a fraternity, sorority or an organization authorized or sponsored by an institution of higher education, the initial construction of which is begun on or after January 7, 2006.

4. An automatic fire sprinkler system shall be provided throughout every private student residential building, the initial construction of which is begun on or after January 7, 2006.

(7) BUILDINGS OVER 60 FEET IN HEIGHT. This is a department rule in addition to the requirements in IBC section 903.2.11.3:

(a) Except as provided in par. (b), pursuant to s. 101.14 (4) (b) 1r., Stats., automatic fire sprinkler systems shall be installed throughout buildings and structures that are more than 60 feet in height.

(b) An automatic fire sprinkler system is not required to be provided in any of the following buildings or structures or portions of buildings or structures that are more than 60 feet in height:

1. Airport control towers.

2. Open parking structures complying with IBC section 406.3.

3. Telecommunications equipment spaces used exclusively for telecommunications equipment, associated electrical power distribution equipment and standby engines, provided that those spaces or areas are equipped throughout with an automatic fire detection system in accordance with IBC section 907.2 and are separated from the remainder of the building with fire barriers consisting of 1-hour fire-resistance-rated walls and 2-hour fire-resistance-rated floor/ceiling assemblies.

4. Special industrial occupancies complying with the criteria outlined in IBC section 503.1.1.

5. Occupancies of Group F-2 when omission of the automatic fire sprinkler system is approved in accordance with s. SPS 361.22.

(8) EXEMPT LOCATIONS. Substitute the following wording for exempt location 2 in IBC section 903.3.1.1.1: Any room or space where sprinklers are considered undesirable because of the nature of the contents, where approved by the department.

(9) BALCONIES. Substitute the following wording for the requirements in IBC section 903.3.1.2.1: Sprinkler protection complying with NFPA 13 shall be provided for exterior balconies, decks and ground-floor patios of dwelling units where the building is of Type V construction, provided there is a roof or deck above. Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch to 6 inches below the structural members, and a maximum distance of 14 inches below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

(10) NFPA 13D SPRINKLER SYSTEMS. (a) Substitute the following wording for the requirements in IBC section 903.3.1.3: Where allowed, automatic sprinkler systems in townhouses and multifamily dwellings shall be installed throughout in accordance with NFPA 13D, except as provided in par. (b).

(b) 1. The requirements in NFPA 13D section 6.3.2 are not included as part of chs. SPS 361 to 366.

2. Fire department connections are prohibited in multi-purpose piping systems.

Note: Multi-purpose piping systems must conform with the applicable provisions of the Plumbing Code, chs. SPS 381 to 387.

(11) TESTING AND MAINTENANCE. Substitute the following informational note for the requirements in IBC section 903.5: Note: See ch. SPS 314 for requirements for inspection, testing, and maintenance of fire sprinkler systems

(12) UPHOLSTERED FURNITURE. The requirement in IBC section 903.2.9 condition 5 is not included as part of chs. SPS 361 to 366.

(13) RECYCLING CHUTES. The requirements of IBC section 903.2.11.2 shall apply to recycling chutes in addition to rubbish and linen chutes.

(14) ALTERNATE AUTOMATIC FIRE SPRINKLER SYSTEM DESIGN STANDARD. This is a department rule in addition to the requirements of IBC section 903.3.1.1: When the provisions of chs. SPS 361 to 366 require that a building or portion thereof be equipped with an automatic sprinkler system in accordance with this section, sprinklers may be installed throughout in accordance with the alternate design standard of the FM Global Loss Prevention Data Sheets 2-0 Installation Guidelines for Automatic Sprinklers and 8-9 Storage of Class 1, 2, 3, 4 and Plastic Commodities.

(15) FAIRGROUND BUILDINGS. Pursuant to s. 101.14 (4), Stats., no city, village, or town may enact or enforce an ordinance that requires a county or organized agricultural society, association, or board to install or maintain an automatic fire suppression system in a building on a fairgrounds if all of the following apply:

(a) The building is open to the public only for seasonal or temporary event use for 180 cumulative days or fewer per year.

(b) Public access to the building is provided by garage style doors that remain open when the building is open to the public.

(16) ASSEMBLY OCCUPANCIES ON ROOFS. The requirements in IBC section 903.2.1.6 are not included as part of chs. SPS 361 to 366.

(17) LIMITED AREA SPRINKLER SYSTEMS. Substitute the following wording for IBC Section 903.3.8.1: Limited area sprinklers may not exceed 20 sprinklers in any single fire area.

(18) BUILDINGS WITHOUT ACCESS TO MUNICIPAL WATER. (a) *Exemptions.* These are department exceptions to the automatic fire sprinkler system requirements in IBC section 903: An automatic fire sprinkler system is not required for a building that meets all of the requirements of this section.

(b) *Building types and occupancies.* These are department rules in addition to requirements in IBC section 903.2: An automatic fire sprinkler system is not required under this section in a building that does not have access to a municipal water supply.

1. A Group A-2 occupancy banquet hall, restaurant, tavern, or bar that is not already exempt under IBC section 903.2.1.2 when all of the following apply:

- a. The fire area does not exceed 12,000 square feet.
- b. The occupant load of the fire area does not exceed 300.
- c. The fire area is located on a floor with exit discharge at grade.

2. Buildings and structures that are on a farm premises used for farming purposes and temporarily or permanently repurposed

as a Group A-2 occupancy that is not already exempt under IBC section 903.2.1.2 when all of the following apply:

- a. The building is used for assembly purposes no more than 180 cumulative days per calendar year.
- b. The fire area does not exceed 12,000 square feet.
- c. The occupant load of the fire area does not exceed 300.
- d. The fire area is located on a floor with exit discharge at grade.

3. A Group A-3 occupancy place of religious worship, or an accessory to a place of worship as specified in IBC section 303.1.4, that is not already exempt under IBC section 903.2.1.3 when all of the following apply:

- a. The building is used for a place of worship no more than 180 cumulative days per calendar year.
- b. The fire area does not exceed 12,000 square feet.
- c. The occupant load of the fire area does not exceed 300.
- d. The fire area is located on a floor with exit discharge at grade.

4. A single story Group R occupancy cabin or camp lodge building, or a building or space that is used for assembly purposes at a camp when all of the following apply:

- a. The building or space is used no more than 180 cumulative days per calendar year.
- b. The fire area does not exceed 12,000 square feet.
- c. The occupant load of the fire area does not exceed 300.
- d. The fire area is located on a floor with exit discharge at grade.

e. All sleeping rooms have a direct exit to the exterior.

(c) *Additional requirements.* These are department rules in addition to the requirements in IBC section 903.2 for the buildings in par. (b): A building that meets the requirements of par. (b) shall also comply with all of the following:

1. The occupant load shall be displayed in accordance with IBC section 1004.3.

2. All open flames, including smoking, shall be prohibited in the building and within 50 feet or less from the building, except for flame equipment used to reheat or maintain food temperatures.

3. A smoke detection and fire alarm system shall be installed in accordance with IBC section 907.

4. Portable fire extinguishers shall be installed in accordance with IBC section 906.

5. A municipal fire and building inspection position statement shall be submitted to the department on an approved form indicating the municipality's review and approval of the proposed building design. The position statement shall be completed by the fire code official if there is no commercial building inspector for the jurisdiction.

Note: Position statement forms are available from the department's website at dps.wi.gov.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: renum. (2) to (5) to be (6), (7), (11) and (12), cr. (2) to (5), (8) to (10) and (13) Register December 2004 No. 588, eff. 1-1-05; CR 04-043: cr. (1m) Register December 2004 No. 588, eff. 1-1-05; emerg. renum. (6) to be (6) (a) and am. (6) (a) (intro.), cr. (6) (intro.) and (b), eff. 3-4-06; CR 06-040: renum. (6) to be (6) (a) and am. (6) (a) (intro.), cr. (6) (intro.) and (b), r. (7) Register September 2006 No. 609, eff. 10-1-06; CR 06-120: r. (1m) and (12), r. and recr. (5) and (6), cr. (6m), (11), (13) and (14), am. (8) to (10), renum. (11) and (13) to be (12) and (15) Register February 2008 No. 626, eff. 3-1-08; corrections in (6) (a) and (d) and (11) (a) made under s. 13.92 (4) (b) 7., Stats., Register February 2008 No. 626; CR 10-103: r. (1), (6) (b), Table 62.0903, (6m) (b) 1. and 2., (8) to (10) and (14) (b), r. and recr. (5) (c), cr. (5) (d), (10) (b), renum. (2) to (5) to be (1) to (4), (6) (intro.), (a), (c) and (d) to be (5) (intro.), (a), (b) and (c), (6m) (intro.) (a), (b) 3. to 5. and (c) to be (6) (intro.) (a), (b) 1. to 3. and (c), (11) to (13) to be (7) to (9), (14) to be (10), (15) to be (11) and am. (4) (intro.), (5) (intro.), (b) (intro.), (c) 3. (intro.) and 3. b., (6) (intro.), (7) (intro.), (b) 4. and (9), Register August 2011 No. 668, eff. 9-1-11, r. and recr. (5) (c) Register August 2011 No. 668, eff. 7-1-14; correction in (7) (b) 5. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; 2015 Wis. Act 330 s. 20: am. (6) (b) 1., (c) 1., 2. Register April 2016 No. 724, eff. 5-1-16; CR 16-094: am. (5) (b) 1., r. (5) (c), renum. (5) (d) to (5) (cm), am. (10) (b) 1., cr. (12) to (18), Register April 2018 No.

748 eff. 5-1-18; correction in (5) (a) made under s. 13.92 (4) (b) 7., Stats., Register April 2018 No. 748.

SPS 362.0904 Alternative automatic fire-extinguishing systems. (1) GENERAL. Substitute the following wording and informational note for the requirements in IBC section 904.1: Automatic fire-extinguishing systems, other than automatic sprinkler systems, shall be designed and installed in accordance with the provisions of IBC section 904 and the applicable referenced standards.

(2) ADDITIONAL REQUIREMENTS. These are department rules in addition to the requirements in IBC section 904:

(b) *Manual-wet sprinkler systems.* 1. ‘Where allowed.’ A manual-wet sprinkler system may not be installed in a building unless all of the following conditions are met:

a. There is no municipal water system available to serve the property.

b. There is no provision under chs. SPS 361 to 366 that requires the building or a portion of the building to have an automatic fire sprinkler system.

c. The municipality where the building is to be located has an adopted ordinance that requires the installation of manual-wet sprinkler systems and requires these systems to meet the provisions of this subsection.

2. ‘General requirements.’ a. A building protected with a manual-wet sprinkler system shall be considered unsprinklered under all other code provisions.

b. Each manual-wet sprinkler system shall be provided with a fire department connection. The fire department connection shall be installed in an accessible location acceptable to the fire chief.

c. All above ground piping of the manual-wet sprinkler system shall be labeled as a “manual-wet sprinkler system.” Labels shall be placed at the fire department connection; at all valves and hose outlets; and on the piping at intervals of not more than 25 feet and at each side where the piping passes through a wall, floor or roof.

d. The manual-wet sprinkler system design and installation shall comply with the automatic fire sprinkler system requirements of NFPA 13 or NFPA 13R, as applicable, except that the system comprised of the pilot line, fire department connection and fire department apparatus is considered as the approved water supply for the system.

e. A manual-wet sprinkler system shall be supplied with water through the fire department connection using fire department apparatus.

f. The plumbing well, water service and pressure tank shall be of a size and capacity to supply the hydraulically most remote sprinkler with the required waterflow and pressure for a minimum of 10 minutes.

g. A pilot line shall be connected from the manual-wet sprinkler system to the plumbing water supply system at the well pressure tank. The pilot line shall be of a size that is adequate to supply the hydraulically most remote sprinkler in the system.

h. The connection of a manual-wet sprinkler system to a plumbing water supply system shall be protected against backflow conditions in accordance with ch. SPS 382.

i. The actuation of any sprinkler in the system shall operate the waterflow indicating device, which shall initiate a fire alarm within the building.

j. Upon actuation of the building fire alarm, a fire alarm signal shall be sent automatically to the fire department providing fire protection to the building.

3. ‘Installer qualifications.’ The installation or alteration of a manual-wet sprinkler system shall be performed by a licensed individual as specified for the installation of an automatic fire sprinkler system under subch. V of ch. SPS 305.

(c) *System interconnection.* Substitute the following wording for IBC 904.12.2: The actuation of the fire suppression system shall automatically shut down all sources of fuel and power to all equipment located beneath the exhaust hood and protected by the suppression system. The fuel and power reset shall be manual.

(3) DOMESTIC COOKING SYSTEMS IN GROUP I-2 CONDITION 1. The requirements in IBC sections 904.13, 904.13.1, and 904.13.2 are not included as part of chs. SPS 361 to 366.

Note: The requirements in IBC sections 904.13, 904.13.1, and 904.13.2 are similar to those contained in the 2012 edition of the Life Safety Code. Section DHS 132.82 (1) and the medicare conditions of participation for long-term care facilities under 42 CFR 483 require all nursing homes to meet the 2012 edition of the Life Safety Code.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 01-139: am. (2) (b) 8. Register June 2002 No. 558, eff. 7-1-02; CR 04-016: renum. (intro.), (1) and (2) to be (2) (intro.), (a) and (b), and r. and recr. (2) (b) 2. c., cr. (1) Register December 2004 No. 588, eff. 1-1-05; correction in (2) (b) 2. h., 3. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 16-094: cr. (1) (title), (2) (title), r. (2) (a), am. (2) (b) 1. b., cr. (2) (c), (3), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.0907 Fire alarm and detection systems.

(1) GENERAL. Substitute the following wording and informational note for the requirements in IBC section 907.1: IBC section 907 covers the application and installation of fire alarm systems and their components. Note: See ch. SPS 314 for requirements for performance and maintenance of fire alarm systems and their components.

(2) SMOKE ALARMS. These are department informational notes to be used under IBC section 907.2.11:

Note: Section 101.145 (4), Stats., addresses retroactivity requirements for buildings constructed prior to the effective date of this section. This statute section applies beyond the application of chs. SPS 361 to 366, as established in s. SPS 361.03 (2), and states “The owner of a residential building the initial construction of which is commenced before, on or after May 23, 1978, shall install and maintain a functional smoke detector in the basement and at the head of any stairway on each floor level of the building and shall install a functional smoke detector either in each sleeping room of each unit or elsewhere in the unit within 6 feet of each sleeping area and not in a kitchen.”

(2m) ELEVATOR EMERGENCY OPERATION. Substitute the following wording for the requirements in IBC section 907.3.3: Except as provided in s. SPS 362.0907 (5) (a) and (b), fire alarm initiating devices installed for elevator emergency operation shall be installed in accordance with ch. SPS 318 and NFPA 72.

(3) PROTECTIVE COVERS. Substitute the following wording for the requirements in IBC section 907.4.2.5: The building official is authorized to require the installation of listed manual fire alarm box protective covers to prevent malicious false alarms or provide the manual fire alarm box with protection from physical damage. The protective cover shall be transparent or red in color with a transparent face to permit visibility of the manual fire alarm box. Each cover shall include proper operating instructions. Protective covers shall not project more than that permitted by IBC section 1003.3.3.

(4) EMPLOYEE WORK AREAS. Substitute the following wording for the exception in IBC section 907.5.2.3.1: Where employee work areas have audible alarm coverage, the alarm system shall be designed so that visible notification appliances can be integrated into the system.

(5) INSTALLATION AND MONITORING. The following are department exceptions to the requirements in IBC section 907.6:

(a) The requirements in NFPA 72 section 21.3.3 do not apply to elevator pits.

(b) The requirements in NFPA 72 section 21.3.7 (2) are not included as part of chs. SPS 361 to 366.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: renum. (1) to (3) to be (2) to (4), cr. (1) Register December 2004 No. 588, eff.

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1-1-05; CR 06-120: renum. (3) and (4) to be (5) and (6), cr. (3), (4) and (7) Register February 2008 No. 626, eff. 3-1-08; CR 10-103: r. (2) to (4), renum. (5) to (7) to be (2) to (4) and am. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: cr. (2m), am. (4), cr. (5), Register April 2018 No. 748 eff. 5-1-18; correction in (5) (b) under s. 35.17, Stats., Register April 2018 No. 748.

SPS 362.0909 Smoke control systems. (1) INSPECTION AND TEST REQUIREMENTS. Substitute the following wording for the requirements in IBC section 909.3: In addition to the ordinary inspection and test requirements that buildings, structures and parts thereof are required to undergo, smoke control systems subject to the provisions of IBC section 909 shall undergo inspections and tests sufficient to verify the proper commissioning of the smoke control design in its final installed condition. The design submission accompanying the construction documents shall clearly detail procedures and methods to be used and the items subject to such inspections and tests. Such commissioning shall be in accordance with generally accepted engineering practice and, where possible, based on published standards for the particular testing involved.

(2) INSPECTIONS FOR SMOKE CONTROL. Substitute the following wording for the requirements in IBC section 909.18.8: Smoke control systems shall be tested by a qualified agency.

(3) SCOPE OF TESTING. Substitute the following wording for the requirements in IBC section 909.18.8.1: Inspections shall be conducted in accordance with the following:

(a) During erection of ductwork and prior to concealment for the purposes of leakage testing and recording of device location.

(b) Prior to occupancy and after sufficient completion for the purposes of pressure-difference testing, flow measurements, and detection and control verification.

(4) QUALIFICATIONS. Substitute the following wording for the requirements in IBC section 909.18.8.2: Inspection agencies for smoke control shall have expertise in fire protection engineering, mechanical engineering and certification as air balancers.

(5) REPORTS. Substitute the following wording for the requirements in IBC section 909.18.8.3: A complete report of testing shall be prepared. The report shall include identification of all devices by manufacturer, nameplate data, design values, measured values and identification tag or mark. The report shall be reviewed by the responsible registered design professional and, when satisfied that the design intent has been achieved, the responsible registered design professional shall seal, sign and date the report.

(6) REPORT FILING. Substitute the following wording for the requirements in IBC section 909.18.8.3.1: A copy of the final report shall be maintained and made available to the building official upon request.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02, CR 06-120: renum. (5) and (6) to be (6) and (7), cr. (5) Register February 2008 No. 626, eff. 3-1-08.; CR 10-103: r. (7) Register August 2011 No. 668, eff. 9-1-11.

SPS 362.0915 Carbon monoxide detection. Substitute the following wording for the requirements in IBC section 915:

(1) DEFINITIONS. In this section:

(a) “Dwelling unit” has the meaning as given in s. 101.61 (1), Stats.

Note: Section 101.61 (1), Stats., reads: “Dwelling unit” means a structure or that part of a structure which is used or intended to be used as a home, residence or sleeping place by one person or by 2 or more persons maintaining a common household, to the exclusion of all others.

(b) “Fuel-burning appliance” has the meaning given in s. SPS 362.0202 (2) (f).

(c) “Residential building” has the meaning as given in s. 101.149 (1) (b), Stats.

Note: Section 101.149 (1) (b), Stats., reads: “Residential building” means a tourist rooming house, a bed and breakfast establishment, or any public building that is used for sleeping or lodging purposes. “Residential building” does not include a hospital or nursing home.

(d) “Sealed combustion appliance” has the meaning given in s. SPS 362.0202 (2) (i).

(e) “Sleeping area” has the meaning as given in s. 101.145 (1) (b), Stats.

Note: Section 101.145 (1) (b), Stats., reads: “Sleeping area” means the area of the unit in which the bedrooms or sleeping rooms are located. Bedrooms or sleeping rooms separated by another use area such as a kitchen or living room are separate sleeping areas but bedrooms or sleeping rooms separated by a bathroom are not separate sleeping areas.

(2) INSTALLATION. (a) 1. Listed and labeled carbon monoxide alarms or detectors shall be installed at locations specified in s. 101.149 (2), Stats., and maintained in accordance with s. 101.149 (3), Stats., in buildings, including buildings existing on October 1, 2008, which are residential buildings or include residential buildings, and contain fuel-burning appliances, except as provided in subd. 5.

2. The installation of carbon monoxide alarms or detectors in accordance with s. 101.149 (2) and (3), Stats., shall be throughout the entire building where a portion of the building includes a residential building.

3. The installation of carbon monoxide alarms or detectors in adjacent units required under s. 101.149 (2) (a) 3., Stats., shall apply to those units located on the same floor level.

4. The 75-foot installation limit specified under s. 101.149 (2) (a) 5., Stats., shall be measured from the door of the unit along the hallway leading from the unit.

5. The installation of carbon monoxide alarms or detectors is not required in buildings if construction of the building was initiated before October 1, 2008, or if the department approved the plans for the construction of the building under s. SPS 361.30, provided the building does not have an attached enclosed garage and either of the following circumstances applies:

a. All of the fuel-burning appliances in the building are of a sealed-combustion type that are covered by the manufacturers’ warranties against defects.

b. All of the fuel-burning appliances in the building are of sealed-combustion type that are inspected in accordance with sub. (3) or rules promulgated by the department of agriculture, trade and consumer protection under s. 97.625 (1) (am), Stats.

6. a. For the purposes of s. 101.149 (2) (a) 4., Stats., “room” means an enclosed area affording space for any other human activity besides just servicing mechanical equipment, including fuel-burning appliances.

b. For the purposes of s. 101.149 (2) (a) 4., Stats., where a fuel-burning appliance is located within a closet or other enclosure affording space only for the appliance and any other mechanical equipment, a carbon monoxide alarm or detector shall be installed either within or outside of the enclosure. Installation may be within the enclosure only if specifically permitted by the manufacturer of the alarm or detector. Installation outside of the enclosure shall be within 75 feet of the appliance in a space adjacent to the enclosure and on the same floor as the appliance.

(b) 1. Carbon monoxide alarms shall conform to UL 2034.

2. Carbon monoxide alarms shall be listed and labeled identifying conformance to UL 2034.

3. Carbon monoxide detectors and sensors as part of a gas detection or emergency signaling system shall conform to UL 2075.

(c) Carbon monoxide alarms to be installed in a building shall be wired to the building’s electrical service and include battery secondary power supplies, if either of the following conditions applies:

1. Plans for the construction of the building were submitted for review under s. [SPS 361.30](#) on or after October 1, 2008.

2. Construction of the building was initiated on or after October 1, 2008, if plans were not required to be submitted and approved under s. [SPS 361.30](#).

(d) Carbon monoxide alarms to be installed within a dwelling unit shall be interconnected so that activation of one alarm will cause activation of all alarms within the dwelling unit, if either of the following conditions applies:

1. Plans for the construction of the building were submitted for review under s. [SPS 361.30](#) on or after October 1, 2008.

2. Construction of the building was initiated on or after October 1, 2008, if plans were not required to be submitted and approved under s. [SPS 361.30](#).

(3) INSPECTION OF SEALED COMBUSTION APPLIANCES. (a) The owner of a building or their agent shall arrange the inspection of sealed combustion appliances and the vents and chimneys serving the appliances under sub. (2) (a) 5. b.

(b) Pursuant to sub. (2) (a) 5. b., the inspection of the sealed combustion appliances, vents and chimneys shall be for the purpose of determining carbon monoxide emission levels.

(c) Pursuant to sub. (2) (a) 5. b., the inspection of the sealed combustion appliances, vents and chimneys shall be performed at least once a year.

(d) For the propose of sub. (2) (a) 5. b., the inspection of the sealed combustion appliances, vents and chimneys shall be performed by an individual who holds a certification issued under s. [SPS 305.71](#) as an HVAC qualifier.

(e) If upon inspection, the carbon monoxide emissions from a fuel burning appliance, vent or chimney are not within manufacturer's specifications, the appliance may not be operated until repaired or carbon monoxide alarms or detectors are installed in accordance with s. [101.149 \(2\)](#) and (3), Stats.

(4) ORDERS. Pursuant to s. [101.149 \(6\) \(b\)](#), Stats., the department may issue orders for a violation of the provisions of this section.

(5) PENALTIES. Violation of the provisions of this section shall be subject to the penalties provided under s. [101.149 \(8\)](#), Stats.

Note: Section [101.149 \(8\)](#), Stats., reads:

(8) PENALTIES. (a) If the department of safety and professional services or the department of agriculture, trade and consumer protection determines after an inspection of a building under this section or s. [97.625 \(1g\)](#) that the owner of the building has violated sub. (2) or (3), the respective department shall issue an order requiring the person to correct the violation within 5 days or within such shorter period as the respective department determines is necessary to protect public health and safety. If the person does not correct the violation within the time required, he or she shall forfeit \$50 for each day of violation occurring after the date on which the respective department finds that the violation was not corrected.

(b) If a person is charged with more than one violation of sub. (2) or (3) arising out of an inspection of a building owned by that person, those violations shall be counted as a single violation for the purpose of determining the amount of a forfeiture under par. (a).

(c) Whoever violates sub. (4) is subject to the following penalties:

1. For a first offense, the person may be fined not more than \$10,000 or imprisoned for not more than 9 months, or both.

2. For a 2nd or subsequent offense, the person is guilty of a Class I felony.

History: [EmR0826](#); emerg. cr. eff. 10-1-08; [CR 08-085](#); cr. [Register May 2009 No. 641](#), eff. 6-1-09; corrections in (3) (a) to (d) and (4) made under s. [13.92 \(4\) \(b\) 2.](#) and [7.](#), Stats., [Register May 2009 No. 641](#); [CR 09-104](#): cr. (2) (a) 6. [Register December 2010 No. 660](#), eff. 1-1-11; [CR 10-103](#): am. (2) (a) 1., (3) (d) [Register August 2011 No. 668](#), eff. 9-1-11; correction in (2) (a) 5., (c) 1., 2., (d) 1., 2., (3) (d) made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register December 2011 No. 672](#); correction in (2) (a) 5. b. made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register February 2017 No. 734](#); [CR 16-094](#): renum. 362.1210 to 362.0915 and am. (title), (intro.), (1) (b), (d), (2) (a) 5. b., [Register April 2018 No. 748](#) eff. 5-1-18.

SPS 362.1004 Egress for outdoor areas. Substitute the following wording for the requirements, but not the exceptions, in IBC section 1004.5: Yards, patios, courts and similar outdoor areas accessible to and usable by the building occupants shall be provided with means of egress as required by this chapter. The occupant load of such outdoor areas shall be based on

the anticipated use. Where outdoor areas are to be used by persons in addition to the occupants of the building, and the path of egress travel from the outdoor areas passes through the building, means of egress requirements for the building shall be based on the sum of the occupant load of the building plus the outdoor areas.

History: [CR 06-120](#): cr. [Register February 2008 No. 626](#), eff. 3-1-08; [CR 16-094](#): am., [Register April 2018 No. 748](#) eff. 5-1-18.

SPS 362.1006 Exits. (1) EXIT ACCESS. This is a department exception to the requirements in IBC section 1006.3: The length of a common path of egress travel requirements may not be more than 200 feet within townhouse dwelling units provided the townhouse complies with all of the following:

(a) The townhouse does not exceed more than 3 stories above grade plane in height.

(b) Each dwelling unit within the townhouse is separated from other dwelling units by at least 2-hour fire-resistive-rated separation walls constructed in accordance with the requirements of IBC section 706 and do not contain any openings and plumbing equipment or mechanical equipment. The separation wall does not have to comply with the structural stability requirements of IBC section 706.2 and the horizontal continuity requirements of IBC section 706.5.

(2) REFRIGERATED SPACES. Substitute the following wording for the exception in IBC section 1006.2.2.3: When using refrigerants in quantities limited to the amounts based on the volume set forth in ch. [SPS 345](#).

(3) EXITS FROM STORIES. This is a department exception to the requirements in IBC section 1006.3: Buildings of Group I-3 occupancy that are used as guard towers, provided the towers are no higher than 2 stories above grade, accommodate no more than 10 occupants, and have a travel distance of no more than 75 feet.

(4) SALT AND SAND STORAGE. This is a department exception to the requirements in IBC table 1006.2.1: A single exit is allowed, and the common path of travel shall be a maximum of 250 feet in buildings or portions of buildings used exclusively for non-combustible bulk material storage of salt and sand storage when the building walls contain the materials stored.

(5) SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY. Substitute the following wording for Table 1006.2.1 footnote a.: Buildings equipped throughout with an automatic sprinkler system in accordance with IBC section 903.3.1.1, 903.3.1.2, or 903.3.1.3. See IBC section 903 for occupancies where automatic sprinkler systems are permitted in accordance with IBC section 903.3.1.1, 903.3.1.2, or 903.3.1.3.

History: [CR 16-094](#): cr. (title), (4), (5), renum. 362.1014 to (1) and am., renum. 362.1015 to (2) and am., renum. 362.1021 to (3) and am., [Register April 2018 No. 748](#) eff. 5-1-18.

SPS 362.1009 Accessible means of egress. This is a department exception in addition to IBC section 1009.3: Areas of refuge are not required at floors that are not required to be accessible.

History: [CR 16-094](#): cr., [Register April 2018 No. 748](#) eff. 5-1-18.

SPS 362.1010 Doors, gates, and turnstiles. (1) CLEAR DOOR OPENINGS FOR NONACCESSIBLE STALLS. This is a department exception to the requirements in IBC section 1010.1.1: The clear door opening for a nonaccessible toilet stall, shower stall, or other similar compartment, may be less than 32-inches wide.

(2) DOOR ARRANGEMENT. This is a department exception to the requirements in IBC section 1010.1.8: Where maneuvering space is provided between the doors in accordance with IBC section 1101.2 such that use by an individual in a wheelchair will not block the operation of the doors.

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(3) **PANIC AND FIRE EXIT HARDWARE.** Substitute the following wording for the requirements relating to electrical rooms in IBC section 1010.1.10:

(a) An electrical room that contains equipment rated 800 amperes or more, and contains overcurrent devices, switching devices, or control devices, and contains a personnel door intended for entrance to and egress from the working space less than 25 feet from the nearest edge of the working space, the door shall be equipped with panic hardware or fire exit hardware and open in the direction of egress.

(b) An electrical room that is over 6 feet wide and contains equipment rated 1,200 amperes or more, and contains overcurrent devices, switching devices or control devices, and contains an exit or exit access door, the door shall be equipped with panic hardware or fire exit hardware and open in the direction of egress.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: am. (2) Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. 362.1008 to 362.1010 and am. (1), (2), cr. (3), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1011 Stairway width. (1) GENERAL. This is a department rule in addition to the requirements in IBC section 1011.1: Where installing an inclined platform lift or stairway chairlift, the clear-passage width shall be provided with the lift in the unfolded, usable position.

(2) **WIDTH AND CAPACITY.** This is a department rule in addition to the requirements in IBC section 1011.7: For platform buildings designed in accordance with IBC section 510.2 in which a stair shaft serves 2 or more classes of construction and one of those classes of construction allows combustible materials, the entire stair construction within the enclosure may be of combustible materials.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 16-094: renum. 362.1009 to 362.1011 and am., cr. (2), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1013 Floor-level exit signs. The requirements in IBC section 1013.2 are not included as part of chs. SPS 361 to 366.

History: CR 16-094: cr., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1015 Guards. Substitute the following wording for the requirements, but not the exception in IBC section 1015.2: Guards shall be located along the open side of walking surfaces, balconies, mezzanine, stairs, ramps, landings, roofs, and similar surfaces intended to be used by building occupants or the public where the change in elevation is more than 30 inches (762 mm) to the floor or roof below or more than 30 inches (762 mm) measured vertically to the grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Guards shall be adequate in strength and attachment in accordance with IBC section 1607.8.

History: CR 16-094: cr., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1020 Corridor continuity. This is a department exception to the requirements in IBC section 1020.6: Other spaces or rooms constructed as required for corridors, and that are adjacent to a fire-resistance-rated corridor, may not be construed as intervening rooms; and may be open to the corridor when all of the following are satisfied:

- (1) The spaces are not occupied for hazardous uses.
- (2) The spaces are not occupied for the incidental uses listed in IBC Table 508.2.
- (3) The spaces are arranged so as to not obstruct access to the required exits.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: renum. from Comm 62.1017 and am. (intro.) Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. 362.1018 to 362.1020 and am., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1029 Spaces under bleachers and grandstands. The requirements in IBC section 1029.1.1.1 are not included as part of chs. SPS 361 to 366.

History: CR 16-094: cr., Register April 2018 No. 748 eff. 5-1-18; (title) created under s. 13.92 (4) (b) 2. Register April 2018 No. 748.

SPS 362.1101 Design of Type A and B units. These are department rules in addition to the requirements in IBC section 1101.2 and ICC/ANSI A117.1 sections 1003 and 1004:

(1m) **CIRCUIT BREAKERS.** Circuit breakers, when provided for use by tenants in occupancies with dwelling and sleeping units, shall comply with ICC/ANSI A117.1 section 309.2 and 309.3.

(2m) **DOORS AND DOORWAYS.** A renter of a dwelling unit may request the landlord to install lever door handles on any doors inside the dwelling unit or install single-lever controls on any plumbing fixtures used by the renter. These controls shall be provided and installed by the landlord at no additional cost to the renter.

Note: These requirements are based on language from s. 101.132 (2) (a) 4., Stats.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: am. (2) (a), cr. (2) (c) Register August 2011 No. 668, eff. 9-1-11; CR 16-094: am. (title), r. (1) (title), renum. (1) (a), (b) to (1m), (2m), r. (2), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1103 Scoping requirements — limited access spaces. Substitute the following wording for the requirements in IBC section 1103.2.7:

(1) Storage spaces that do not include permanent workstations, are infrequently accessed by employees, and are not open to the general public are not required to be accessible.

(2) Nonoccupiable spaces accessed only by ladders, catwalks, crawl spaces, freight elevators, very narrow passageways, or tunnels are not required to be accessible.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08, CR 10-103: r. (1), renum. (2) to be Comm 62.1103, Register August 2011 No. 668, eff. 9-1-11; correction under s. 13.92 (4) (b) 1. and 2., Stats., Register August 2011 No. 668, eff. 9-1-11; CR 16-094: am. (intro.), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1104 Accessible route. This is a department limitation to the exception in IBC section 1104.4, Exception 1.: Government-owned or -operated facilities that are outside the scope of IBC section 1104.3.2.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 16-094: r. (1) (title), renum. (1) to 362.1104, r. (2), Register April 2018 No. 748 eff. 5-1-18; correction under s. 13.92 (4) (b) 7., Stats., Register April 2018 No. 748.

SPS 362.1107 Dwelling units and sleeping units.

(1) **GROUP I.** (a) *Group I-1.* Substitute the following wording for the requirements, but not the exception, in IBC section 1107.5.1.2: In structures with three or more dwelling units or sleeping units intended to be occupied as a residence, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

(b) *Group I-2 nursing homes.* Substitute the following wording for the requirement, but not the exception, in IBC section 1107.5.2.2: In structures with three or more dwelling units or sleeping units intended to be occupied as a residence, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

(c) *Group I-2 hospitals.* Substitute the following wording for the requirement, but not the exception, in IBC section 1107.5.3.2: In structures with three or more dwelling units or sleeping units intended to be occupied as a residence, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

(2) **GROUP R.** (a) *Group R-1.* Substitute the following wording for the requirement, but not the exception, in IBC section 1107.6.1.2: In structures with three or more dwelling units or

sleeping units intended to be occupied as a residence, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

(b) *Group R-2*. 1. ‘Apartment houses, monasteries and convents.’ Substitute the following wording for the requirement, but not the exception, in IBC section 1107.6.2.1.2: Where there are three or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

2. ‘Boarding houses, dormitories, fraternity houses and sorority houses.’ Substitute the following wording for the requirement, but not the exception, in IBC section 1107.6.2.2.2: Where there are three or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

(c) *Group R-3*. Substitute the following wording for the requirement, but not the exception, in IBC section 1107.6.3: In Group R-3 occupancies where there are three or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

(d) *Group R-4*. Substitute the following wording for the requirement, but not the exception, in IBC section 1107.6.4.2: In structures with three or more dwelling units or sleeping units intended to be occupied as a residence, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

(3) **SITE IMPRACTICALITY.** (a) *Petition for variance.* This is a department rule in addition to the requirements in IBC section 1107.7.4: In accordance with s. 101.132 (2) (b) 4. and (c) 2., Stats., the owner may use the petition for variance procedure specified in s. SPS 361.22 to request a reduction in the number of Type A or Type B dwelling units due to site impracticality.

Note: The Department may grant a variance in accordance with ch. SPS 303 which requires the submittal of a petition for variance form (SBD-9890) and a fee, and that an equivalency is established in the petition for variance that meets the intent of the rule being petitioned. Chapter SPS 303 also requires the Department to process regular petitions within 30 business days and priority petitions within 10 business days. The SBD-9890 form is available at the Department’s Web site at www.dpsps.wi.gov through links to Division of Industry Services forms.

(b) *Condition.* Substitute the following wording for condition 1 under IBC section 1107.7.4: Not less than 50% of the units required by IBC section 1107.7.1 on the site are Type A or Type B units.

(4) **MULTISTORY UNITS.** Substitute the following wording for IBC section 1107.7.2: A multistory dwelling or sleeping unit that is not provided with elevator service is not required to be a Type B unit. Where a multistory unit is provided with external elevator service to only one floor, the floor provided with elevator service shall be the primary entry to the unit, shall comply with the requirements for a Type B unit and a toilet facility shall be provided on that floor.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: cr. (2) (c), am. (title), (1) (a) to (c), (2) (a), (3) (a), (3) (b) (title), renum. (2) (c) to be (2) (d) Register August 2011 No. 668, eff. 9-1-11; correction in (3) (a) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 16-094: cr. (4), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1111 Signage. (1) **SIGNS.** (a) *General.* Substitute the following wording for the requirements for location 1 in IBC section 1111.1: Except as specified par. (b), accessible parking spaces required in IBC section 1106 for the general public shall be identified with a sign complying with the accessible parking sign requirements specified in s. Trans 200.07.

(b) *Exceptions.* 1. ‘Small parking facilities.’ Accessible parking spaces required by IBC section 1106.1 are not required to be signed when the total number of parking spaces provided is four or less.

2. ‘Employee and resident parking.’ Accessible parking facilities identified for use only by employees of any building or facility or by tenants in Group R-2 occupancies may be identified with signs other than the s. Trans 200.07 signs.

(2) **DIRECTIONAL SIGNAGE.** (a) Substitute the following wording for the introductory paragraph of IBC section 1111.2: Signage indicating directional information or information about functional spaces or signage indicating special accessibility provisions shall comply with ICC A117.1 and be provided at the following locations:

(b) This is a department informational note to be used under IBC section 1111.3. Note: Refer to s. SPS 362.0400 (5) for requirements for no-smoking signs.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: am. (1) (title), (2) (title), (a) Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum 362.1110 to 362.1111 and am. (1) (a), (2) (a), (b), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1203 Natural ventilation. This is a department rule in addition to the requirements in IBC section 1203.5: The use of natural ventilation shall be permitted in any of the following:

(1) Occupancies specified in s. SPS Table 364.0402.

(2) Any occupancy with an engineered design, approved by the department, that satisfies the ventilation needs of the occupancy.

History: CR 16-094: cr., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1204 Interior environment. Substitute the following wording for the requirements and exception in IBC section 1204.1: Interior spaces intended for human occupancy shall conform to the IMC.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 06-120: renum. Comm 62.1203 to be Comm 62.1204 and am. Register February 2008 No. 626, eff. 3-1-2008.

SPS 362.1206 Court drainage. Substitute the following wording and informational note for the requirements in IBC section 1206.3.3: The bottom of every court shall be properly graded and drained.

Note: See ch. SPS 382 for requirements for storm water piping.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 06-120: renum. Comm 62.1205 to be Comm 62.1206 and am. Register February 2008 No. 626, eff. 3-1-08.

SPS 362.1207 Sound transmission. This is a department exception to the requirement in IBC section 1207.1: The requirements in IBC section 1207 do not apply to sleeping units in buildings at seasonal recreational and educational camps.

History: CR 22-069: cr. Register July 2023 No. 811, eff. 8-1-23.

SPS 362.1210 Toilet rooms. (1m) PRIVACY AND ACCESS. This is a department rule in addition to the requirements in IBC section 1210: Every toilet room shall be enclosed and separated from other areas of the building in a manner that will ensure privacy of the users of the toilet rooms. Restriction of access to toilet rooms, such as by use of key locks or other similar devices, is prohibited, except this subsection does not apply to the following:

(a) Toilet rooms for a service or filling station that are accessed from the exterior may be key locked.

(b) A self-service filling station that has a key- or card-operated fuel dispensing device which can be used while the station is unattended by an employee is not required to have toilet rooms available during the unattended periods.

(c) Single-occupant toilet rooms may have privacy locks.

(d) Compartments are not required for water closets in prison or jail cells.

(2m) URINALS SEPARATION. Substitute the following wording for the requirements in IBC section 1210.3.2: Urinals shall be arranged individually with or without partitions.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 06-120: renum. Comm 62.1209 to be Comm 62.1210 and am. (intro.) Register February 2008 No. 626, eff. 3-1-08; CR 16-094: r. (intro.), renum. (1) to (1m) (intro.) and am., r. (2) (title), renum. (2) (a), (b), (c) to (1m) (a), (b), (c), cr. (2m), renum. 362.2900 (3) (b) 3. to 362.1210 (1m) (a) 4., Register April 2018 No. 748 eff. 5-1-18; renum. (1m) (a) 4. to (1m) (b) 2. under s. 13.92 (4) (b) 1. Register April 2018 No. 748.

SPS 362.1405 Exterior walls. (1m) Substitute the following wording for the requirements, but not the exceptions, in IBC section 1405.3.1: Class I and II vapor retarders. Class I or II vapor retarders shall be provided on the interior side of frame walls and ceiling assemblies.

(2m) This is a department exception in addition to the exceptions in IBC section 1405.3.1: Where other approved means to avoid condensation in unventilated framed wall, floor, roof and ceiling cavities, and box sills are provided.

(3m) This is a department rule in addition to the requirements in IBC section 1405.14.1: Polystyrene sheathing may be utilized as the required backing material for vinyl siding provided all of the following characteristics and conditions are met:

- (a) The sheathing is extruded, rigid and cellular.
- (b) The sheathing is type IV, as specified in ASTM C578.
- (c) The sheathing has a thickness of at least one inch.
- (d) The sheathing is installed with an on-center stud spacing of 16 inches or less.
- (e) The mean roof height of the building is 40 feet or less.
- (f) The building wall has a wind exposure category of B or C, as established in IBC section 1609.4; and the building is not sited on the upper half of an isolated hill or escarpment meeting conditions 1, 2, and 3 in IBC section 1609.1.1.1.

History: CR 04-016: cr. Register December 2004 No. 588, eff. 1-1-05; CR 06-120: am. (2) (c) 3. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: r. and recr. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. (1) and (2) to (2m) and (3m) and am., cr. (1m), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1503 Secondary Roof drainage. These are department rules in addition to IBC section 1503.4: Design and installation of roof drainage systems shall comply with IBC section 1503 and all applicable provisions in ch. SPS 382.

History: CR 16-094: cr., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1505 Roof covering classification. The requirements in Footnote a. in IBC Table 1505.1 are not included as part of chs. SPS 361 to 366.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: renum. to be (1), cr. (2) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: r. and recr. Register February 2008 No. 626, eff. 3-1-08; CR 16-094: am. Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1506 Roof covering materials. Substitute the following wording for the requirements in IBC section 1506.3: Roof covering materials shall conform to the applicable standards listed in IBC chapter 15.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02.

SPS 362.1507 Roof slope. (1) This is a department exception to the requirements in IBC section 1507.12.1: Thermoset single-ply membrane roofs may have a design slope of less than 2 percent, if permitted by the manufacturer's literature or listing criteria.

(2) This is a department exception to the requirements in IBC section 1507.13.1: Thermoplastic single-ply membrane roofs may have a design slope of less than 2 percent, if permitted by the manufacturer's literature or listing criteria.

(3) This is a department exception to the requirements in IBC section 1507.14.1: Sprayed polyurethane foam roofs may have a design slope of less than 2 percent, if permitted by the manufacturer's literature or listing criteria.

(4) This is a department exception to the requirements in IBC section 1507.15.1: Liquid-applied roofs may have a design slope of less than 2 percent, if permitted by the manufacturer's literature or listing criteria.

History: CR 04-016: cr. Register December 2004 No. 588, eff. 1-1-05.

SPS 362.1603 Roof snow load. Substitute the following wording for the requirements in IBC section 1603.1.3: The ground snow load, P_g , shall be indicated. In areas where the ground snow load, P_g , exceeds 10 pounds per square foot, the following additional information shall also be provided, regardless of whether snow loads govern the design of the roof:

- (1) Flat-roof snow load, P_f .
- (2) Snow exposure factor, C_e .
- (3) Snow load importance factor, I .
- (4) Thermal factor, C_t .
- (5) Any sloped-roof snow load, P_s .
- (6) Any unbalanced, drift or sliding snow loads.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: renum. (1) and (2) to be (3) and (4), cr. (1) and (2) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: renum. (1) to (4) to be (2) and (4) to (6), cr. (1) and (3) Register February 2008 No. 626, eff. 3-1-08; CR 10-103: r. (title), (1), (3), (4), (6), renum. (2) to be Comm 62.1603, (5) to be Comm 62.0400 (6) Register August 2011 No. 668, eff. 9-1-11.

SPS 362.1604 Alternate standards. Substitute the following wording for the requirements in IBC section 1604.7: Materials and methods of construction that are not capable of being designed by approved engineering analysis or that do not comply with the applicable material design standards listed in IBC chapter 35 shall be submitted for approval in accordance with ch. SPS 361 subch. VI.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: renum. to be (1), cr. (2) Register December 2004 No. 588, eff. 1-1-05; CR 10-103: r. (title), (1), renum. (2) to be Comm 62.1604 Register August 2011 No. 668, eff. 9-1-11; correction made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 16-094: am. Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1607 Live loads. (1) RESIDENTIAL FLOOR LOADS. Substitute the following wording and live loads for the requirements in line 25 and footnote j. of IBC Table 1607.1:

Table 1607.1
Minimum Uniformly Distributed Live Loads
and Minimum Concentrated Live Loads^a
(Partial Table)

Occupancy or Use	Uniform (psf)	Concentrated (lbs.)
25. Residential		
Uninhabitable attics without storage ⁱ	5	
Uninhabitable attics with storage ^{i,j,k}	20	
Habitable attics	40	--
Hotels and Group R-2		
Private rooms and corridors serving them	40	
Public rooms and corridors serving them	100	

j. For attics with storage and constructed with trusses, this live load need only be applied to those portions of the bottom chord where there are two or more adjacent trusses with the same web configuration capable of containing a rectangle 42 inches high by 2 feet wide or greater, located within the plane of the truss. The rectangle shall fit between the top of the bottom chord and the bottom of any other truss member, provided that each of the following criteria is met:

- The attic area is accessible by a pull-down stairway or framed opening in accordance with IBC section 1209.2, and
- The truss shall have a bottom chord pitch less than 2:12.
- Bottom chords of trusses shall be designed for the greater of actual imposed dead load or 10 psf, uniformly distributed over the entire span.

(2) TRUCK AND BUS GARAGES. Substitute the following wording for the requirements in IBC section 1607.7.3: Minimum live loads for garages having trucks or buses shall be as specified in IBC section 1607.7.3, but may not be less than 50 pounds per square foot, unless other loads are specifically justified and approved by the department. Actual loads shall be used where they are greater than the loads specified in the table.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: renum. to (3), cr. (1), (2), (4) and (5) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: r. and recr. (1) and Table 1607.1, r. (4) and (5) Register February 2008 No. 626, eff. 3-1-08; CR 10-103: am. (1), Table 1607.1, r. (2), renum. (3) to be (2) and am. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: am. (1), (Table), (2), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1608 Snow loads. (1) UNBALANCED SNOW LOADS. This is a department alternative to the requirements in IBC section 1608.1: Unbalanced snow loads on a hip or gable roof may be calculated in accordance with the following equation:

$$S = S_s(I_s)(C_b C_w C_s C_a)$$

Where:

S = Alternate unbalanced roof snow load

S_s = Ground snow load from IBC Figure 1608.2

I_s = Importance factor from IBC section 1608.1 [ASCE 7, Table 7-4]

C_b = Basic roof snow load factor of 0.8

C_w = Wind exposure factor of 1.0

C_s = Slope factor; see Tables 362.1608-1 and 362.1608-2

C_a = Accumulation factor; see Table 362.1608-3

Table 362.1608-1
Non-Slippery Roof^a

Roof Slope, α	Factor, C_s
$\alpha \leq 30^\circ$	1.0
$30^\circ < \alpha \leq 70^\circ$	$(70^\circ - \alpha) / 40^\circ$
$70^\circ < \alpha$	0

^a Such as with shingles.

Table 362.1608-2
Unobstructed Slippery Roof^a

Roof Slope, α	Factor, C_s
$\alpha \leq 15^\circ$	1.0
$15^\circ < \alpha \leq 60^\circ$	$(60^\circ - \alpha) / 45^\circ$
$60^\circ < \alpha$	0

^a Where snow and ice can slide completely off, such as with steel.

Table 362.1608-3
Accumulation Factor

Roof Slope, α	Factor, C_a
$\alpha \leq 15^\circ$	N/A. Analysis for balanced loading only.
$15^\circ < \alpha \leq 20^\circ$	$0.25 + \alpha / 20^\circ$
$20^\circ < \alpha \leq 90^\circ$	1.25

(2) EXISTING ROOFS. These are department rules in addition to the requirements in IBC section 1608.1:

(a) *Buildings on the same property.* 1. Where an existing roof, regardless of the date of its construction, is horizontally within 20 feet of a proposed, taller structure on the same property, IBC section 1608.1 or an alternate recognized engineering method shall be applied to the existing roof, to address any drifting or sliding of snow onto the existing roof, as caused by the taller structure.

2. Where an analysis under subd. 1. shows that an existing roof or corresponding supporting elements will not be adequate to support the additional snow load caused by the taller structure, the existing roof or supporting elements shall be strengthened to support those loads, in accordance with chs. SPS 361 to 366.

(b) *Buildings on adjoining properties.* Where an existing roof, regardless of the date of its construction, is horizontally within 20 feet of a proposed, taller structure on an adjoining property, the owner of the proposed structure shall notify the adjoining owner of the potential for increased structural loads on the existing roof, due to sliding or drifting of snow, as caused by the taller structure.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: cr. (3) and (4) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: r. (1) and (2), renum. (3) and (4) to be (1) and (2) and am. (1) (intro.), (2) (intro.) and (a) 1. Register February 2008 No. 626, eff. 3-1-08; correction in (1) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 16-094: am. (2) (a), (b), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1611 Roof drains. This is a department informational note to be used under IBC section 1611.1: Note: See ch. SPS 382 for requirements to not connect a secondary roof-drain system to a primary roof-drain system, and to discharge a secondary roof-drain system to the ground surface.

History: CR 04-016: cr. Register December 2004 No. 588, eff. 1-1-05.

SPS 362.1613 Earthquake loads. This is a department informational note to be used under IBC section 1613.5: Note: A website maintained by the U. S. Geological Survey, at earthquake.usgs.gov/designmaps/us/application.php can be used in

lieu of IBC Figures 1613.5 (1) and (2) to determine the spectral response acceleration values for an inputted zip-code area.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: r. (1), (2), renum. (3) to be Comm 62.1613 Register August 2011 No. 668, eff. 9-1-11.

SPS 362.1700 Structural tests and special inspections. The requirements in IBC chapter 17, except for the requirements in IBC sections 1706 to 1709, are not included as part of chs. SPS 361 to 366.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 06-120: am. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: am. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: am., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1802 Definitions. In addition to the definitions in IBC section 1802.1, the following term has the meaning given in s. SPS 362.0202 (1): “Neutral plane.”

History: CR 10-103: renum. from Comm 16.1808 (1) and am. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: am., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1803 Deep foundations. Item 5 in IBC section 1803.5.5 is not included as part of this code.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: r. and recr. Register August 2011 No. 668, eff. 9-1-11.

SPS 362.1804 Ground improvement. These are department rules in addition to the requirements in IBC section 1804:

(1) **DESIGN OF GROUND IMPROVEMENT.** Ground improvement for support of foundations or floor slabs shall be designed by an architect or engineer who is registered by the department.

(2) **ALLOWABLE FOUNDATION PRESSURE OF IMPROVED GROUND.** The allowable foundation pressure for improved ground shall incorporate a minimum safety factor of 3 with respect to a bearing capacity failure within the composite improved ground.

(3) **SETTLEMENT OF STRUCTURES SUPPORTED ON IMPROVED GROUND.** The improved ground shall be designed and constructed for a maximum anticipated total settlement of one inch and a maximum anticipated differential settlement of three fourths of an inch, unless it can be shown that the predicted total and differential settlement will not cause any of the following:

- (a) Harmful distortion of the structure.
- (b) Instability in the structure.
- (c) Any element to be loaded beyond its capacity.

(4) **DESIGN CONFIRMATION TESTING.** The registered design professional responsible for the design of the ground improvement shall determine the scope of field testing required to confirm the design, shall supervise the testing, and shall write a report indicating whether the test results confirm the design. At the discretion of that design professional, testing may be limited to a modulus load test to measure deformation behavior of a single ground improvement element. The design of the ground improvement shall be modified as appropriate based on the results of the confirmatory testing.

(5) **QUALITY CONTROL OBSERVATIONS AND TESTING.** The registered design professional responsible for the design of the ground improvement, or a technician working under supervision of that professional, shall observe construction of the ground improvement, perform quality control testing, and upon completion of work, prepare a report stating whether the ground improvement meets the intent of the approved construction documents. A copy of the report shall be provided to the registered design professional in responsible charge of the project, and to the building official if requested.

History: CR 10-103: cr. Register August 2011 No. 668, eff. 9-1-11; correction in (1) made under s. 13.92 (4) (b) 6., Stats., Register December 2011 No. 672.

SPS 362.1805 Basement floor base course. This is a department rule in addition to the requirements in IBC section 1805.4.1: A required base course shall be placed on a geotextile fabric that is designed to limit migration of silt and fine sand into the base course.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: renum. to (1), cr. (2) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: r. and recr. (2) Register February 2008 No. 626, eff. 3-1-08; CR 10-103: r. and recr. Register August 2011 No. 668, eff. 9-1-11.

SPS 362.1806 Presumptive load-bearing values for saturated soils. This is an additional department footnote for IBC Table 1806.2: Footnote c. Values to be multiplied by 0.5 for saturated soils.

History: CR 10-103: r. and recr. Register August 2011 No. 668, eff. 9-1-11.

SPS 362.1807 Shallow post foundations. This is a department alternative to the requirements in IBC section 1807.3.2: The design criteria in ANSI/ASAE EP 486.1 may be used in lieu of the design criteria in IBC section 1807.3.2.

History: CR 10-103: r. and recr. Register August 2011 No. 668, eff. 9-1-11.

SPS 362.1808 Foundations. Substitute the following wording for the requirements in IBC section 1808.7.5: Alternate setbacks and clearances are permitted, subject to the approval of the department.

History: CR 10-103: cr. Register August 2011 No. 668, eff. 9-1-11.

SPS 362.1809 Frost-protected shallow foundations. (1) This is a department rule in addition to the requirements in IBC section 1809.5: Where a frost-protected shallow foundation is relied upon for a heated or semi-heated structure, permanent, legible notices shall be posted near the thermostats of all building heating appliances that indicates all of the following:

(a) That the structure is designed using a frost-protected-shallow foundation.

(b) The minimum monthly average temperature that the structure must be maintained at to avoid frost damage to the foundation.

(2) This is a department exception in addition to the exception in IBC 1809.5: Floating slabs used with non-masonry, unheated, single-story buildings in Risk Category I that are less than 12,000 square feet are exempt from the requirements for frost protection.

History: CR 10-103: cr. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. (intro.), (1), (2) to (1) (intro.), (a), (b), cr. (2), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1810 Deep foundations. (1) **DOWNDRAW.** This is a department rule in addition to the requirements in IBC section 1803.5.5: Investigations and reports for deep foundations shall include analysis of whether downdraw is anticipated. Where downdraw is anticipated, the report shall include a determination of the position of the deep foundation’s neutral plane, an estimate of the soil settlement at the neutral plane, and a determination of the maximum load at the neutral plane.

(2) **DETERMINATION OF ALLOWABLE LOADS.** Substitute the following wording for the requirements in IBC section 1810.3.3:

(a) The allowable axial and lateral loads on deep foundations shall be determined by an approved formula, load tests or static analysis.

(b) The factor of safety to be used for deep foundation design shall depend on the extent of field testing performed to verify capacity.

(c) If the ultimate capacity is assessed solely by static analysis, a minimum factor of safety of 3.0 shall be applied to the ultimate capacity to determine allowable load capacity.

(d) If only static analysis and dynamic field testing are performed, a minimum factor of safety of 2.5 shall be applied to the ultimate capacity to determine allowable load capacity.

(e) 1. If one or more static load tests are performed, in addition to a static analysis, a minimum factor of safety of 2.0 shall be applied to the ultimate capacity to determine allowable load capacity, except as provided in subd. 2.

2. A minimum factor of safety of 1.5 may be used for structures in occupancy category I, provided all of the following conditions are met:

a. The deep foundations are required only to control settlement.

b. The deep foundations are not required to prevent a bearing capacity failure.

c. A static load test, a static analysis and dynamic field testing have been performed.

(3) DRIVING CRITERIA. This is a department rule in addition to the requirements in IBC section 1810.3.3.1.1: Driving criteria for deep foundations shall be submitted prior to installing the foundations, if requested by the building official.

(4) APPROVED FORMULAS. This is a department informational note to be used under IBC section 1810.3.3.1.1:

Note: The Department has approved the following two dynamic driving formulas, when used within the parameters prescribed below.

1. Washington State Department of Transportation formula:

$$Rn = 6.6F_{eff}WH \ln(10N)$$

Where:

R_n is the ultimate axial compression capacity in kips.

F_{eff} is an efficiency factor based on hammer and pile type.

W is the hammer weight in kips.

H is the drop height of the hammer in feet.

N is the average penetration resistance at the end of driving, in blows per inch.

Acceptable F_{eff} values are:

0.55 for all pile types driven with an air or steam hammer.

0.37 for open-ended diesel hammers for concrete and timber piles.

0.47 for open-ended diesel hammers for steel piles.

0.35 for closed-ended diesel hammers for all pile types.

2. Corrected FHWA-Modified Gates Equation:

$$R_u = [(1.75)((eE_r)^{0.5}) (\log(10N_b) - 100) (F_o) (F_s) (F_p) (F_h)]$$

Where:

R_u is the ultimate axial compression capacity in kips.

e is the hammer efficiency.

E_r is the hammer energy in foot-pounds.

N_b is the final penetration resistance in blows per inch.

F_o is an overall correction factor.

F_s is a correction factor for soil type.

F_p is a correction factor for pile type.

F_h is a correction factor for hammer type.

Acceptable hammer-efficiency values are:

0.75 for drop hammers.

0.85 for other hammers, or an efficiency recommended by the hammer manufacturer.

Acceptable correction factors are:

Overall F_o : 0.94.

Soil F_s : 1.00 for mixed soil profile.

0.87 for sandy soil profile.

1.20 for clayey soil profile.

Pile F_p : 1.00 for closed-ended pipe.

1.02 for open-ended pipe.

0.80 for H-Section piles.

Hammer F_h : 1.00 for open-ended diesel.

0.84 for closed-ended diesel.

1.16 for air or steam single-acting.

1.01 for air or steam double-acting.

1.00 for hydraulic.

If at least 1 static load test is performed to field-check the penetration resistance criteria calculated by the above dynamic formulas, a minimum safety factor of 2.5 must be applied to the ultimate axial compression capacity calculated by the dynamic formula to determine the allowable pile load. If only dynamic testing (including signal matching) is performed to field-check the penetration resistance criteria determined by the dynamic formula, a minimum safety factor of 2.75 must be applied to the ultimate axial compression capacity calculated by the dynamic formula to determine the allowable pile load. If no field testing is performed to check the penetration resistance criteria calculated by the dynamic formula, a minimum safety factor of 3.0 must be applied to the ultimate axial compression capacity calculated by the dynamic formula to determine the allowable pile load.

The above formulas are predicated on the following three conditions: (1) static load testing and/or dynamic testing being performed on pile(s) driven in uniform site soil conditions, (2) test pile(s) being driven with the same hammer and cushion used for installation of production piles, and (3) test pile(s) being of the same type and section used for production piles. If any of the three conditions is not met, additional field testing is required. With static load testing and/or dynamic testing, penetration resistance criteria calculated by the dynamic formula must be modified as appropriate based on the results of the field testing. A site must be defined as a project site, or a portion of it, where subsurface conditions can be characterized as geologically similar in terms of subsurface stratigraphy, including the sequence, thickness, geologic history, engineering properties and groundwater aspects.

(5) FACTOR OF SAFETY FOR UPLIFT. The exception in IBC section 1810.3.3.1.5 is not included as part of chs. SPS 361 to 366.

(6) HELICAL PILES. This is a department informational note to be used under IBC section 1810.3.3.1.9: Note: See sub. (2) for factors of safety that supersede the criteria in this section. For example, under sub. (2) (c), (d) and (e), this factor may be 3, 2.5 or 1.5, respectively.

(7) DEEP FOUNDATIONS IN SUBSIDING AREAS. Substitute the following wording for the requirements in IBC section 1810.3.4:

(a) Where deep foundations are installed through subsiding fills or other subsiding strata and derive support from underlying firmer materials, consideration shall be given to the downward drag load that may be imposed on the deep foundations by the subsiding upper strata.

(b) Where the influence of subsiding fills is considered as imposing loads on the deep foundation, the allowable stresses specified in this chapter are permitted to be increased where satisfactory substantiating data are submitted.

(c) The position of the deep foundation's neutral plane shall be determined, and the settlement of the soil at the level of the neutral plane shall be estimated. The maximum load in the deep foundation, which occurs at the neutral plane, shall be determined.

(8) DESIGN CRACKING MOMENT. Substitute the following equation for IBC equation 18-11: $\phi M_n = 3(f'_c)^{0.5}(S_m)$.

(9) DRIVEN TIMBER PILES. Substitute the following wording for the requirements in IBC section 1810.4.1.5: Any sudden decrease in driving resistance of an end-supported timber pile shall be investigated with regard to the possibility of damage. If the sudden decrease in driving resistance cannot be correlated to load-bearing data, the pile shall be removed for inspection or rejected, or shall be assigned a reduced capacity commensurate

with the loss of end-bearing in lieu of removing or rejecting the pile.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: am. (3) (e), cr. (6) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: renum. Comm 62.1807 to be Comm 62.1808 and am. (1), (2), (3) (intro.), (4) (intro.), (5) (intro.) and (a) and (6) Register February 2008 No. 626, eff. 3-1-08; CR 10-103: (title), (1), (2), (7) renum. from Comm 62.1808, (title), (2), (3), (5) and am., (9) renum. from Comm 62.1809 and am.; cr. (3) to (6), (8) Register August 2011 No. 668, eff. 9-1-11; CR 16-094: am. (5), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.1908 Shotcrete clearance. Substitute the following wording for the exception under IBC section 1908.4.2: Subject to the approval of the department, required clearances may be reduced where it is demonstrated by preconstruction tests that adequate encasement of the bars used in the design will be achieved.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 06-120: renum. Comm 62.1914 to be Comm 62.1913 and am. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: r. and recr. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum 362.1913 to 362.1908 and am., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.2109 Empirical design of masonry. (1) BEARING ON MASONRY. This is a department rule in addition to the requirements in IBC section 2109.1: Lintels shall be consid-

ered structural members and shall be designed in accordance with the applicable provisions of IBC chapter 16.

(2) JOINTING. These are department rules in addition to the requirements in IBC section 2109:

(a) *Expansion and shrinkage.* Joints commensurate with lateral stability requirements shall be installed in all exterior masonry to allow for expected growth of clay products and shrinkage of concrete products.

(b) *Vertical jointing.* Vertical movement joints shall be provided at a spacing in compliance with Table 362.2109.

Note: To accomplish the intended purpose, joints should be located at critical locations, such as changes in building heights, changes in framing systems, columns built into exterior walls, major wall openings, and changes in materials.

(c) *Horizontal jointing.* Where supports such as shelf angles or plates are required to carry the weight of masonry above the foundation level, a pressure-relieving joint shall be provided between the structural support and any masonry that occurs below this level. The joint width shall be such as to prevent any load being transmitted from the support to any element directly below. All mortar and rigid materials shall be kept out of this joint. This type of joint shall be provided at all such supports in a concrete frame structure where clay masonry is exposed to the weather.

Table 362.2109
Maximum Spacing of Exterior Masonry Movement Joints
Between Unrestrained Ends[†] (Feet)

Loading Conditions	Type of Material	Openings (Percent of Total Wall Area)			
		0 to 20		More than 20	
		Joint to Joint	Joint to Corner	Joint to Joint	Joint to Corner
Load-bearing	Clay units	140	70	100	50
	Concrete units	60	30	40	20
Nonload-bearing walls	Clay units	100	50	60	40
	Concrete units	50	25	30	20

[†] Jointing required is a minimum and is not intended to prevent minor cracking. The distances given for maximum spacing of joints are for a single wall plane. For composite walls, the maximum spacing of joints shall be governed by the masonry material type used in the exterior wythe.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 10-103: r. (2), Table 62.2109-1, renum. (3) to be (2), Table 62.2109-2 to be Table 62.2109 and am. (2) (b) Register August 2011 No. 668, eff. 9-1-11; correction in (2) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672.

SPS 362.2204 Welded Connections. This is a department informational note to be used under IBC section 2204.1: Note: The rules pertaining to registration of structural welders are specified in ch. SPS 305.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: r. and recr. Register August 2011 No. 668, eff. 9-1-11.

SPS 362.2211 Steel trusses spanning 60 feet or greater. The requirements in IBC section 2211.3.3 are not included as part of chs. SPS 361 to 366.

History: CR 10-103: cr. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. 362.2210 to 362.2211 and am., Register April 2018 No. 748 eff. 5-1-18; correction in (title) made under s. 13.92 (4) (b) 2., Stats., Register April 2018 No. 748.

SPS 362.2303 Wood trusses spanning 60 feet or greater. The requirements in IBC section 2303.4.1.3 are not included as part of chs. SPS 361 to 366.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: renum. to be (2), cr. (1) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: r. and recr. (1), am. (2), cr. (3) Register February 2008 No. 626, eff. 3-1-08; CR 10-103: r. and recr. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: am., Register April 2018 No. 748 eff. 5-1-18; correction in (title) made under s. 13.92 (4) (b) 2., Stats., Register April 2018 No. 748.

SPS 362.2304 Girder ends. This is a department rule in addition to the requirements in IBC section 2304.12.2.1: A mois-

ture barrier shall be provided between an untreated or nondurable wood girder and an exterior masonry or concrete bearing surface.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 06-120: am. Register February 2008 No. 626, eff. 3-1-08; CR 16-094: am., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.2409 Glass and glazing for elevators. This is a department informational note to be used under IBC section 2409: Note: See ch. SPS 318 [ASME A17.1] for additional glass and glazing requirements relating to elevators. Those requirements include a prohibition against elevator hoistway windows that give a false appearance of a floor level.

History: CR 06-120: cr. Register February 2008, No. 626, eff. 3-1-08.

SPS 362.2503 Gypsum board and plaster. The requirements in IBC section 2503.1 are not included as part of this code.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02.

SPS 362.2510 Water-resistive barriers. This is a department rule in addition to the requirements in IBC section 2510.6: The vertical leg of flashing at the base of a wall with two layers of a water-resistive barrier shall be installed behind both layers of the water-resistive barrier.

History: CR 16-094: cr., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.2701 Electrical code. This is a department informational note to be used under IBC section 2701.1: Note: As defined in s. [SPS 361.04 \(6\)](#), “ICC Electrical Code” means ch. [SPS 316](#).

History: CR 01-139: cr. Register June 2002 No. 558, eff. 7-1-02.

SPS 362.2900 Additional criteria for toilets. These are department rules in addition to the requirements in IBC chapter 29:

(1) **PLUMBING FIXTURE ALTERNATIVES.** (a) *Water closets.* 1. Systems or devices recognized under ss. [SPS 391.10](#) and [391.11](#) may be substituted for water closets required under IBC chapter 29.

2. Privies recognized under ch. [SPS 391](#) may be substituted for water closets required under IBC chapter 29 in any of the following situations:

a. A building accommodating a seasonal occupancy when occupancy of the building does not extend for more than 3 of the 4 seasons.

b. A building accommodating a school or a assembly that is operated by and for members of a bona fide religious denomination in accordance with the teachings and beliefs of the denomination.

c. As approved by the department.

3. Portable restrooms recognized under ch. [SPS 391](#) may be substituted for water closets required under IBC chapter 29 for buildings accommodating events or temporary occupancies not exceeding 12 consecutive days or as approved by the department.

(b) *Lavatories.* Waterless antiseptic cleansing provisions may be substituted for lavatories required under IBC chapter 29 where systems or devices under par. (a) 2. are substituted for water closets. Where water-based water closets or urinals are used, water-based lavatories shall be provided in numbers to accommodate the number of people served by the water closets and urinals.

(2) **PERMANENT OUTDOOR TOILETS.** (a) A permanent outdoor toilet room shall be provided with a suitable approach such as a concrete, gravel or cinder walk.

(b) All windows, ventilators, and other openings for a permanent outdoor toilet room shall be screened to limit the entrance of flies, and all doors shall be self closing.

(3) **URINALS.** Urinals shall be placed against walls at least 6 feet 8 inches high.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 01-139: am. (2) Register June 2002 No. 558, eff. 7-1-02; CR 04-016: am. (2), cr. (4) (b) 3, Register December 2004 No. 588, eff. 1-1-05; CR 06-120: r. and recr. Register February 2008 No. 626, eff. 3-1-08; CR 08-055: am. (1) Register February 2009 No. 638, eff. 3-1-09; correction in (1) (a) 1., 2., 3. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 16-094: r. and recr., Register April 2018 No. 748 eff. 5-1-18; CR 16-094: renum. (3) (a) to (3) and am., r. (3) (b) 1., 2., renum. (3) (b) 3. to 362.1210 (1m) (a) 4., Register April 2018 No. 748 eff. 5-1-18.

SPS 362.2901 Plumbing code. This is a department informational note to be used under IBC section 2901.1: Note: As defined in s. [SPS 361.04 \(12\)](#) and [\(13\)](#), “IPC and International Plumbing Code” and “IPSC and International Private Sewage Code” mean chs. [SPS 381](#) to [387](#).

History: CR 01-139: cr. Register June 2002 No. 558, eff. 7-1-02.

SPS 362.2902 Plumbing fixtures. (1) **MINIMUM NUMBER OF FIXTURES.** (a) *Exceptions.* These are department exceptions to the requirements in IBC section 2902.1:

1. Where more than one water closet is required for males, urinals may be substituted for up to 50 percent of the required number of water closets, except that urinals may be substituted for up to 67 percent of the required number of water closets in Group A and E occupancies.

2. Where drinking fountains are required, other reasonable alternatives are acceptable, as approved by the department.

3. For child day care facilities, bathtubs or showers are not required where other personal hygiene washing arrangements are provided that satisfy the licensing requirements of the Wisconsin department of health services.

4. For day nurseries and child day care facilities, children under the age of 30 months need not be considered as a part of the occupant load used to determine the minimum number of water closets.

5. Service sinks may be omitted for any occupancy where privies have been substituted for water closets under s. [SPS 362.2900 \(1\) \(a\) 2](#).

(b) *Additional fixtures.* These are department informational notes to be used under IBC sections 2902.1 and 2902.2: Note: Additional plumbing fixtures may be required for employees by the U.S. department of labor, occupational safety and health act (OSHA) regulations.

Note: Additional plumbing fixtures may be required by the department of health services for restaurants, mobile home parks, camping grounds, camping resorts, recreational camps and educational camps.

Note: Chapter [SPS 390](#) also has requirements for minimum numbers of sanitary fixtures for a public swimming pool, as based on the pool area. For some buildings, the minimum number of sanitary fixtures determined in that manner may be larger than the minimum number determined in accordance with this section. Compliance with this section does not relieve an owner from complying with ch. [SPS 390](#).

Note: Chapter [SPS 391](#) has requirements for equal speed of access to toilets for each gender, at facilities where the public congregates that do not fall under the scope of this chapter.

(c) *Substitutions in IBC Table 2902.1.* 1. Substitute the following wording for the water closets heading in IBC Table 2902.1: Water closets^c (see s. [SPS 362.2902 \(1\) \(a\) 1](#). for urinals).

2. Substitute the following wording for the drinking fountains heading in IBC Table 2902.1: Drinking fountains (see s. [SPS 362.2902 \(1\) \(a\) 2](#)).

3. In IBC Table 2902.1, substitute the following wording for the required minimum number of water closets for females in type A-4 and A-5 occupancies: 1 per 37 for the first 1,500 and 1 per 60 for the remainder exceeding 1,500.

4. Substitute the following wording for the required number of bathtubs or showers in storage occupancies in IBC Table 2902.1: See the *International Plumbing Code*.

5. Substitute the following wording for the required number of bathtubs or showers in factory and industrial occupancies in IBC Table 2902.1: See the *International Plumbing Code*.

(d) *Addition to IBC Table 2902.1.* This is an additional department footnote for IBC Table 2902.1: Footnote e. Wherever more than 500 people congregate and more than the required minimum number of water closets or urinals are provided for males, twice as many of those additional toilet facilities shall be provided for females.

(e) *Alternative to IBC Table 2902.1.* This is a department alternative to the minimum fixture requirements of IBC Table 2902.1: The required number of toilet fixtures may be based on the actual occupancy load rather than the load determined by square footage per IBC Table 1004.1.1. The actual occupancy load shall be based on justification found acceptable to the department.

(2) (a) *Lavatories for toilet rooms.* This is a department rule in addition to the requirements in IBC section 2902.1: At least one lavatory shall be provided in each toilet room or in a gender-designated lounge adjacent to the toilet room. If a multiple-use lavatory is provided, 24 lineal inches of wash sink, or 20 inches measured along the edge of a circular basin will be considered equivalent to one lavatory.

(b) This is a department exception to the requirements in IBC section 2902.2: Separate facilities may not be required in all occupancies when the number of fixtures is provided as required under IBC Table 2902.1 in individual user toilet rooms.

(4) PUBLIC FACILITIES. This is a department exception to the requirements in IBC section 2902.3: Toilet rooms may be omitted in a small retail or mercantile building where all of the following requirements are met:

- (a) No more than 25 occupants are accommodated.
- (b) Other restrooms are conveniently located and available to the patrons and employees during all hours of operation.
- (c) The omission is approved in writing by the local unit of government.
- (d) A copy of the written approval from the local unit of government is provided to the department or its authorized representative upon request.

(5) LOCATION OF RESTAURANT TOILET ROOMS. This is a department informational note to be used under IBC section 2902.3:

Note: Additional requirements for restaurant toilet rooms may be applied by the Department of Health Services.

(5m) LOCATION OF TOILET FACILITIES. Substitute the following wording for the exception in IBC section 2902.3.2: The location and maximum travel distance to required employee facilities in factory and industrial occupancies and to required employee and patron or camper facilities serving seasonal recreational and educational camp buildings are permitted to exceed that required by this section, provided that the location and maximum distance of travel are approved.

(6) PAY FACILITIES. Substitute the following wording for the requirements in IBC section 2902.3.4 All toilet facilities shall be free of charge.

Note: Section 146.085, Stats., prohibits charging a fee for the use of toilet facilities and imposes a fine of \$10 to \$50 for violations.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 01-139: am. (2) Register June 2002 No. 558, eff. 7-1-02; CR 02-002: cr. (1) (c) Register April 2003 No. 568, eff. 5-1-03; CR 04-016: r. and recr. (1) (a), am. (1) (c) 1. and 2., renum. (1) (c) 3., 4., and (4) to (7) to be (1) (c) 4., 5., and (6) to (9), cr. (1) (c) 3., (d), (4) and (5) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: am. (1) (c) 1. and (d), r. and recr. (1) (c) 3., r. (3), (4) and (8), renum. (5) to (7) and (9) to be (3) to (5) and (6) and am. (4) (intro.), (5) and (6) Register February 2008 No. 626, eff. 3-1-08; CR 08-055: cr. (1) (a) 5. Register February 2009 No. 638, eff. 3-1-09; correction in (1) (a) 3. made under s. 13.92 (4) (b) 6., Stats., Register February 2009 No. 638; correction in (1) (a) 5., (c) 1., 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; corrections in (4) (intro.), (5), (6) made under s. 13.92 (4) (b) 7., Stats., Register September 2014 No. 705; CR 16-094: am. (1) (a) 1., 2., cr. (1) (e), renum. (2) to (2) (a), cr. (2) (b), r. (3), Register April 2018 No. 748 eff. 5-1-18; CR 22-069: cr. (5m) Register July 2023 No. 811, eff. 8-1-23.

SPS 362.2903 Drinking facilities. This is a department rule in addition to the requirements in IBC section 2903: Drinking fountains, water coolers and bottled water dispensers may not be located or installed in public restrooms.

History: CR 10-103: cr. Register August 2011 No. 668, eff. 9-1-11.

SPS 362.3001 Elevators. (1) REFERENCED STANDARDS. Substitute the following wording for the requirements in IBC section 3001.2: Except as otherwise provided for in chs. SPS 361 to 366, the design, construction, installation, alteration, repair, and maintenance of conveyances and their components shall comply with ch. SPS 318.

(2) CHANGE IN USE. Substitute the following wording for the requirements in IBC section 3001.4: A change in use of an elevator from freight to passenger, passenger to freight, or from one freight class to another freight class shall comply with ch. SPS 318.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-043: cr. (4) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: r. (4) Register February 2008 No. 626, eff. 3-1-08; CR 10-103: r. (1), renum. (2), (3) to be (1), (2) and am. Register August 2011 No. 668, eff. 9-1-11; correction in (1), (2) made under

s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 16-094: am. (1), Register April 2018 No. 748 eff. 5-1-18.

SPS 362.3002 Hoistway enclosures. (1) ELEVATOR CAR TO ACCOMMODATE AMBULANCE STRETCHER. Substitute the following wording for IBC section 3002.4:

(a) Where passenger elevators are provided, at least one elevator shall be provided for fire department emergency access to all floors served by passenger elevators in all of the following situations:

- 1. A building four or more stories above or four or more stories below grade plane.
- 2. Any floor above or below the level affording fire department vehicle access, if the floor accommodates any one of the following occupancies:
 - a. Group I.
 - b. R-2.
 - c. Outpatient clinic and ambulatory health care facility.

(b) The elevator car provided for fire department emergency access shall be of such a size and configuration to accommodate an ambulance stretcher 24 inches by 84 inches with not less than 5-inch radius corners, in the horizontal, open position.

(c) Except in hospitals and except where all of a building's elevators are large enough for fire department emergency access, all elevator cars that are provided for fire department emergency access shall be identified by the international symbol for emergency medical services, star of life. The symbol may not be less than 3 inches high and shall be placed on both sides of the elevator hoistway door frame on all floor levels, approximately 60 inches above the floor.

(2) VENTING. This is a department rule in addition to the requirements in IBC section 3002: A ventilation opening in a hoistway wall, where provided, shall have guards securely anchored to the supporting structure inside the hoistway. The guards shall consist of a wire-mesh screen of at least 0.0915-inch diameter steel wire with openings that will reject a ball one-inch in diameter, or expanded metal screen of equivalent strength and open area.

(3) AREA OF VENTS. This is a department rule in addition to the requirements in IBC section 3002: Where vent openings automatically open upon detection of smoke in the elevator lobbies or hoistway, upon power failure and upon activation of a manual override control, the manual override control shall comply with all of the following:

- (a) Be a keyed switch of the open-auto-close type with the three positions labeled, that is operated with an FEO-K1 key or other approved key.
- (b) Be located adjacent to the elevator hoistway door frame at the level of fire department vehicle access, approximately 48 inches above the floor, or other approved location. This location may be behind a locked panel.
- (c) Be labeled "hoistway vent control."

(4) PLUMBING AND MECHANICAL SYSTEMS. Substitute the following wording for the requirements and the exception in IBC section 3002.9:

(a) *General.* Except as specified in par. (b), plumbing and mechanical systems shall not be located in an elevator shaft.

(b) 1. Except as provided in subd. 2., A drain or sump complying with ss. SPS 382.33 and 382.36 shall be provided in an elevator pit. Connection of the drain or sump to a sanitary system is prohibited.

2. An elevator pit is exempt from the sump or drain requirement under subd. 1. for any of the following situations:

- a. The floor of an elevator walk-in pit is level with the adjacent floor.

b. The elevator does not extend to the building's lowest floor level and the pit floor is not in contact with the earth.

c. The pit floor is above adjacent grade where the elevator hoistway shaft has one or more exterior walls.

d. The pit will not allow the entrance of ground water and will not be greater than 16 inches in depth.

3. The aggregate capacity for drainage from the pit shall be at least one of the following:

- a. 30 gpm in a hoistway with one elevator.
- b. 50 gpm in a hoistway with two or three elevators.
- c. 80 gpm in a hoistway with four elevators.

Note: See s. [SPS 382.36](#) for the width or diameter and depth of a sump pump located in an elevator pit.

History: CR 10-103: cr. [Register August 2011 No. 668](#), eff. 9-1-11; CR 14-020: r. and recr. (3) [Register August 2014 No. 704](#), eff. 9-1-14; CR 16-094: renum. 362.3002 to (1), r. and recr. (title), renum. 362.3004 (1) to (3) to (2) to (4) and am., [Register April 2018 No. 748](#) eff. 5-1-18.

SPS 362.3003 Standardized fire service elevator keys. Substitute the following for the requirements in IBC section 3003.3. All elevators shall be equipped to operate with a standardized fire service elevator key in accordance with ch. [SPS 318](#).

History: CR 16-094: cr., [Register April 2018 No. 748](#) eff. 5-1-18.

SPS 362.3005 Machine rooms. (1) SCOPE. This is a department rule in addition to the requirements in IBC section 3005: This section applies to elevator machine rooms, machinery spaces, control rooms, and control spaces not within the hoistway.

(2) ACCESS. This is a department informational note to be used under IBC section 3005.1: **Note:** See ch. [SPS 318](#) for additional requirements, including a prohibition against accessing elevator machine rooms, machinery spaces, control rooms, or control spaces through a toilet room, sleeping room or other private space; and a prohibition against accessing spaces, machinery or equipment not related to a conveyance through machine rooms, machinery spaces, control rooms, control spaces, or hoistways.

(3) TEMPERATURE AND HUMIDITY. Substitute the following wording for the requirements in IBC section 3005.2: Elevator machine rooms that contain solid-state equipment for elevator operation shall be provided with an independent means to control the temperature and humidity in the machine room.

Note: See IBC section 3003.1.4 and ASME A17.1 section 2.7.9.2 for additional requirements that may apply.

(4) PRESSURIZATION. This is a department exception to the requirements in IBC section 3005.3: An elevator machine room which serves a pressurized elevator hoistway and which is not directly connected to the pressurized elevator shaft is not required to be pressurized.

(4m) SHUNT TRIP. The following is an exception to IBC section 3005.5. A sprinkler of a sidewall type installed 24 inches or less above the elevator pit floor may not require a heat detector or other means to disconnect the main line power supply.

(5) PLUMBING SYSTEMS. Substitute the following wording for the requirements in IBC section 3005.6: Plumbing systems not used in connection with the operation of the elevator may not be located in elevator equipment rooms.

History: CR 00-179: cr. [Register December 2001 No. 552](#), eff. 7-1-02; CR 01-111: renum. (1) and (2) to be (2) and (3) and cr. (1) [Register June 2002 No. 558](#), eff. 7-1-02; CR 04-016: renum. (3) to be (4), cr. (3) [Register December 2004 No. 588](#), eff. 1-1-05; CR 14-020: renum. (1), (2), (4) to (2), (4), (5), cr. (1), (r) (3), cr. (3) [Register August 2014 No. 704](#), eff. 9-1-14; (1) (title), (3) (title) added under s. 13.92 (4) (b) 2., Stats., [Register August 2014 No. 704](#); CR 16-094: renum. 362.3006 to 362.3005 and am., cr. (4m), [Register April 2018 No. 748](#) eff. 5-1-18; correction in (4) and (5) made under s. 13.92 (4) (b) 7., Stats., [Register April 2018 No. 748](#).

SPS 362.3100 Special construction. These are department rules in addition to the requirements in IBC chapter 31: Mausoleum structures shall be designed, constructed, and maintained in accordance with chs. [SPS 361](#) to [366](#). Mausoleums shall be classified as a Group S-1 storage occupancy and shall be constructed of reinforced concrete or other materials of similar durability.

Note: Section 157.12 (2) (d), Stats., reads as follows: "A mausoleum shall be constructed to last as long as possible, taking into consideration the technology and economics applicable to mausoleum construction at the time of construction."

History: CR 00-179: cr. [Register December 2001 No. 552](#), eff. 7-1-02; CR 01-139: am., cr. (2) [Register June 2002 No. 558](#), eff. 7-1-02; CR 06-120: r. (1), renum. (2) to be Comm 62.3100 [Register February 2008 No. 626](#), eff. 3-1-08; CR 16-094: am., [Register April 2018 No. 748](#) eff. 5-1-18.

SPS 362.3102 Membrane structures and blower equipment. (1) TEMPORARY STRUCTURES. This is a department exception to the requirements in IBC section 3102.1: Membrane structures that are seasonal recreational and educational camp buildings erected on balconies, decks, or other permanent raised platforms no more than 36" above grade at any point shall comply with the *International Fire Code*.

(2) BLOWER EQUIPMENT. Substitute the following wording for requirement 2 in IBC section 3102.8.1.2: Blowers shall be provided with inlet screens, belt guards and other protective devices as required to provide protection from injury.

History: CR 00-179: cr. [Register December 2001 No. 552](#), eff. 7-1-02; CR 06-120: am. [Register February 2008 No. 626](#), eff. 3-1-08; CR 22-069: r. and recr. [Register July 2023 No. 811](#), eff. 8-1-23.

SPS 362.3103 Temporary structures. This is a department rule in addition to the requirements in IBC section 3103: Under IBC sections 3103.1.2 and 3103.2, the requirements for permits and construction documents for temporary structures are at the option of the local code official.

History: CR 00-179: cr. [Register December 2001 No. 552](#), eff. 7-1-02; CR 16-094: am., [Register April 2018 No. 748](#) eff. 5-1-18.

SPS 362.3104 Pedestrian walkways and tunnels. Substitute the following wording for the requirements and exception in IBC section 3104.2: Buildings that are connected in accordance with IBC section 3104 shall be considered to be separate structures.

History: CR 00-179: cr. [Register December 2001 No. 552](#), eff. 7-1-02; CR 06-120: r. (1) (title) and (2), renum. (1) to be Comm 62.3104 [Register February 2008 No. 626](#), eff. 3-1-08.

SPS 362.3109 Swimming pool enclosures. Substitute the following informational note for the requirements in IBC section 3109. **Note:** See ch. [SPS 390](#) for requirements for swimming pool enclosures.

History: CR 00-179: cr. [Register December 2001 No. 552](#), eff. 7-1-02.

SPS 362.3200 Encroachments into the public right-of-way. The requirements in IBC chapter 32 are not included as part of chs. [SPS 361](#) to [366](#).

History: CR 00-179: cr. [Register December 2001 No. 552](#), eff. 7-1-02; CR 16-094: am., [Register April 2018 No. 748](#) eff. 5-1-18.

SPS 362.3300 Safeguards during construction. Except for the requirements in IBC sections 3302.1 and 3303.5, the requirements in IBC chapter 33 are not included as part of this code.

History: CR 00-179: cr. [Register December 2001 No. 552](#), eff. 7-1-02; CR 01-139: renum. (1) to be Comm 62.3300 and renum. (2) to be Comm 62.3307 [Register June 2002 No. 558](#), eff. 7-1-02.

SPS 362.3307 Protection of adjoining property. This is a department informational note to be used under IBC chapter 33: **Note:** Sections [101.111 \(1\)](#) to [\(6\)](#), Stats., read as follows:

“(1) DEFINITION. In this section ‘excavator’ means any owner of an interest in land making or causing to be made an excavation.

(2) CAVE-IN-PREVENTION. Any excavator shall protect the excavation site in such a manner so as to prevent the soil of adjoining property from caving in or settling.

(3) LIABILITY FOR UNDERPINNING AND FOUNDATION EXTENSIONS. (a) If the excavation is made to a depth of 12 feet or less below grade, the excavator may not be held liable for the expense of any necessary underpinning or extension of the foundations of buildings on adjoining properties.

(b) If the excavation is made to a depth in excess of 12 feet below grade, the excavator shall be liable for the expense of any necessary underpinning or extension of the foundations of any adjoining buildings below the depth of 12 feet below grade. The owners of adjoining buildings shall be liable for the expense of any necessary underpinning or extension of the foundations of their buildings to the depth of 12 feet below grade.

(4) NOTICE. Unless waived by adjoining owners, at least 30 days prior to commencing the excavation the excavator shall notify, in writing, all owners of adjoining buildings of his or her intention to excavate. The notice shall state that adjoining buildings may require permanent protection. The owners of adjoining property shall have access to the excavation site for the purpose of protecting their buildings.

(5) EMPLOYEES NOT LIABLE. No worker who is an employee of an excavator may be held liable for his or her employer’s failure to comply with this section.

(6) FAILURE TO COMPLY; INJUNCTION. If any excavator fails to comply with this section, any aggrieved person may commence an action to obtain an order under ch. 813 directing such excavator to comply with this section and restraining the excavator from further violation thereof. If the aggrieved person prevails in the action, he or she shall be reimbursed for all his or her costs and disbursements together with such actual attorney fees as may be approved by the court.”

History: CR 01-139: renum. from Comm 62.3300 (2) Register June 2002 No. 558, eff. 7-1-02.

SPS 362.3500 Referenced standards. (1) INTRODUCTION. Substitute the following wording for the introductory paragraph in IBC chapter 35: This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in s. SPS 361.03 (1) (b) and (3) (a).

(3) ADDITION. This is a department rule in addition to the requirements in IBC chapter 35: NFPA 45-2015, Standard on Fire Protection for Laboratories Using Chemicals, is incorporated by reference into chs. SPS 361 to 366.

Note: NFPA standards may be viewed online free of charge at NFPA.org or purchased from the National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

Copies of the standard adopted under this chapter are on file in the offices of the department and the legislative reference bureau.

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 01-139: am. Register June 2002 No. 558, eff. 7-1-02; CR 04-016: r. and recr. Register December 2004 No. 588, eff. 1-1-05; CR 06-120: am. (1), r. (2) and (3) (a), renum. (3) (b) to (e) to be (3) (a) to (d) and am. (3) (c) Register February 2008 No. 626, eff. 3-1-08; EmR0826: emerg. cr. (3) (e), eff. 10-1-08; CR 08-085: cr. (3) (e) and (f) Register May 2009 No. 641, eff. 6-1-09; CR 10-103: r. (3) (a), am. (3) (b), (d) Register August 2011 No. 668, eff. 9-1-11; correction in (1) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 16-094: renum. (3) (intro.) to (3) and am., r. (3) (b) to (f), Register April 2018 No. 748 eff. 5-1-18; correction in (3) under s. 35.17, Stats., Register April 2018 No. 748.

SPS 362.3600 Appendices. (1) EXCLUSIONS. The provisions in IBC Appendices A, B, D, F to K, and M are not included as part of chs. SPS 361 to 366.

(2) APPENDIX C. The provisions in IBC Appendix C apply to Group U agricultural buildings, as described in IBC section C 101.1, that are not exempt from chs. SPS 361 to 366 as outlined in ss. SPS 361.01 and 361.02 (2) and (3).

History: CR 00-179: cr. Register December 2001 No. 552, eff. 7-1-02; CR 04-016: am. (1) Register December 2004 No. 588, eff. 1-1-05; CR 06-120: am. (1) Register February 2008 No. 626, eff. 3-1-08; correction in (2) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 16-094: am. (1), (2), Register April 2018 No. 748 eff. 5-1-18.

Chapter SPS 366

EXISTING BUILDINGS

Subchapter I — Purpose, Scope and Application

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Note: Chapter Comm 66 was renumbered chapter SPS 366 under s. 13.92 (4) (b) 1., Stats., [Register December 2011 No. 672](#).

Note: Chapters [SPS 361](#) to [366](#) are affected by [2017 Wisconsin Acts 59, 198, 243, 317, 329, 330, and 331](#). Future rule-making will update chs. [SPS 361](#) to [366](#) to reflect this legislation.

Subchapter I — Purpose, Scope and Application

SPS 366.0001 Purpose and scope. (1) **PURPOSE.** The purpose of ch. [SPS 366](#) is to establish minimum requirements to safeguard public health, safety and welfare insofar as existing public buildings and place of employment are affected by the repair, alteration, change of occupancy, addition or relocation.

(2) **SCOPE.** The scope of ch. [SPS 366](#) is as specified in s. [SPS 361.02](#).

(3) **INTENT.** The intent of this chapter is to provide flexibility to permit the use of alternative approaches to achieve compliance with minimum requirements to safeguard the public health, safety, and welfare insofar as they are affected by the repair, alteration, change of occupancy, addition, and relocation of existing buildings.

History: [CR 06-120](#): cr. [Register February 2008 No. 626](#), eff. 3-1-08; correction in (1), (2) made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register December 2011 No. 672](#).

SPS 366.0100 Changes, additions or omissions to IEBC. Changes, additions or omissions to the IEBC are specified in this subchapter and are rules of the department and are not requirements of the IEBC.

Note: The requirements of s. [101.132](#), Stats., may be more restrictive than the administrative rules when a project involves the remodeling of housing. The term “re-modeled” has the meaning given in s. [101.132 \(1\) \(h\)](#), Stats., and the term “housing” has the meaning given in s. [106.50 \(1m\) \(L\)](#), Stats. Section [101.132 \(2\) \(b\)](#), Stats., regarding remodeling percentages, reads:

1. If more than 50 percent of the interior square footage of any housing with 3 or more dwelling units is to be remodeled, the entire housing shall conform to the standards in par. (a), regardless of when the housing was first intended for occupancy.

2. If 25 percent to 50 percent of the interior square footage of any housing with three or more dwelling units is to be remodeled, that part of the housing that is to be remodeled shall conform to the standards in par. (a), regardless of when the housing was first intended for occupancy.

3. If less than 25 percent of the interior square footage of any housing with three or more dwelling units is to be remodeled, the remodeling is not subject to the standards in par. (a) unless the alteration involves work on doors, entrances, exits or toilet rooms, in which case the doors, entrances, exits or toilet rooms shall conform to the standards in par. (a) regardless of when the housing was first intended for occupancy.

Note: Section [101.126](#), Stats., requires the owner of a building to provide a separate room or designated space within or adjacent to the building for the separation, temporary storage and collection of recyclable materials that are likely to be generated by the building occupants, if there is an increase in the size of the building by

50% or more or an alteration of 50% or more of the existing area of a building that is 10,000 square feet or more in area. See Appendix B for guidelines for recommended designated areas.

History: [CR 06-120](#): cr. [Register February 2008 No. 626](#), eff. 3-1-08.

SPS 366.0101 Administration. Except for IEBC section 102.4, substitute the following wording for the requirements in IEBC chapter 1:

(1) **APPLICATION.** The provisions of the IEBC shall apply to the repair, alteration, change of occupancy, addition, and relocation of existing buildings. Repairs, alterations, change of occupancy, existing buildings to which additions are made, historic buildings, and relocated buildings complying with the provisions of the IBC, IMC, IPC, and IRC as applicable shall be considered in compliance with the provisions of chs. [SPS 361](#) to [366](#).

(2) **CHANGE OF OCCUPANCY TO A PUBLIC BUILDING OCCUPANCY.** (a) Except as provided in par. (b), where a building or portion of a building that has not been previously occupied or used as a public building or place of employment is to be changed to an occupancy or use that constitutes a public building or place of employment, the building or portion of a building shall comply with the IBC for new construction.

(b) 1. Under par. (a) the IBC rules for new construction do apply to the properties of existing building materials.

2. An alteration or a change of occupancy in a qualified historic building which has not been previously occupied or used as a public building or place of employment may utilize the provisions of the IEBC as modified by this subchapter.

(3) **TEMPORARY USE.** (a) A municipal fire or building code official may allow an existing building or a portion of an existing building to be used temporarily in a manner that differs from the approved use for the building or space subject to all of the following provisions:

1. The official shall determine the time frame within which the temporary use is permitted, based on the extent hazards are created by the temporary use. This time frame may not exceed 180 days, except the official may grant extensions for demonstrated cause.

2. Except as provided in subd. 3., buildings or spaces considered for temporary use shall conform to the requirements of this code as necessary to ensure the public safety, health, and general welfare.

3. The official may require additional safety requirements for a temporary use as a trade-off for any safety provisions that may be lacking.

4. The official may terminate the approval for a temporary use at any time and order immediate discontinuance of the use or complete evacuation of the building or space.

(b) A temporary use permit issued by a local authority may not supersede a state corrective building order.

(4) **COMPLIANCE METHOD.** (a) The repair, alteration, change of occupancy, addition, or relocation of all existing buildings shall comply with one of the methods listed in par. (b) or (c) as selected by the applicant. Application of a method shall be the sole basis for assessing the compliance of work by the code official. Paragraphs (b) and (c) shall not be applied in combination with each other.

(b) Repairs, alterations, additions, changes in occupancy, and relocated buildings complying with the applicable requirements of IEBC chapters 5 through 13 shall be considered in compliance with the provisions of chs. SPS 361 to 366.

(c) Repairs, alterations, additions, changes in occupancy, and relocated buildings complying with IEBC chapter 14 shall be considered in compliance with the provisions of chs. SPS 361 to 366.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: renum. (2) to be (2) (a) and am., cr. (2) (b) Register August 2011 No. 668, eff. 9-1-11; CR 16-094: am. (1), renum. (3) to (3) (a) and am. (3) (a) 2., cr. (3) (b), am. (4) (b), (c) Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0202 General definitions. (1) **ADDITIONS.** This is a department definition for this chapter in addition to the definitions in IEBC section 202: “Exhibit building” means a qualified historic building that is open to the general public only for display or tours.

(2) **SUBSTITUTIONS.** (a) Substitute the following definition for the corresponding definition in IEBC section 202: “Historic building” means a “qualified historic building” as defined under s. 101.121 (2) (c), Stats.

Note: Section 101.121 (2) (c) of the Statutes reads as follows: “Qualified historic building” means a historic building which:

1. Is listed on, or has been nominated by the state historical society for listing on, the national register of historic places in Wisconsin or the state register of historic places;

2. Is included in a district which is listed on, or has been nominated by the state historical society for listing on, the national register of historic places in Wisconsin or the state register of historic places, and has been determined by the state historical society to contribute to the historic significance of the district;

2m. Is determined by the state historical society to be eligible for listing on the national register of historic places in Wisconsin or the state register of historic places;

3. Is listed on a certified local register of historic property; or

4. Is included in a district which is listed on a certified local register of historic property, and has been determined by the city, village, town or county to contribute to the historic significance of the district.

Note: Form SBD-7728 may be utilized to provide the status on a historic commercial building. This form is available on the department’s website at dps.wi.gov, or by request from the Department of Safety and Professional Services, P. O. Box 7302, Madison, Wisconsin 53707-7302, or call (608) 266-2112.

(b) Substitute the following definition for the corresponding definition in IEBC section 202: “Unsafe” means buildings, structures or equipment that are unsanitary, or that are deficient due to inadequate means of egress facilities, inadequate light and ventilation, or that constitute a fire hazard, or in which the structure or individual structural members meet the definition of “dangerous,” or that are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance shall be deemed unsafe.

(c) Substitute the following definition for the corresponding definition in IEBC section 202: “Work area” means that portion or portions of a building consisting of all reconfigured spaces as

indicated on the construction documents. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed and portions of the building where work not initially intended by the owner is specifically required by chs. SPS 361 to 366. The work area is the area reconfigured with full height walls or the area that has its required egress reconfigured.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; correction in (2) made under s. 13.92 (4) (b) 7., Stats., Register February 2008 No. 626; CR 10-103: am. (2), cr. (2) (b) Register August 2011 No. 668, eff. 9-1-11; CR 16-094: cr. (2) (c) Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0400 Prescriptive compliance method. The requirements in IEBC chapter 4 are not included as part of chs. SPS 361 to 366, except for the requirements in IEBC section 410 when applied by IEBC section 1401.2.5.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: am. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. from 366.0300 and am. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0600 Carbon monoxide alarms for CBRF’s accommodating fewer than 20 residents. These are department rules in addition to the requirements in IEBC chapter 6 and are established under the authority of s. 101.127, Stats.:

(1) (a) Existing buildings converted to be community-based residential facilities accommodating fewer than 20 residents shall be provided with carbon monoxide alarms by July 1, 2013, when either one of the following conditions exists:

1. The building contains fuel-burning appliances.
2. The building has an attached garage.

(b) This section applies to community-based residential facilities described under par. (a) in existence prior to January 1, 2005.

Note: Pursuant to s. 101.01 (12), Stats., an existing building converted to be community-based residential facility accommodating fewer than 20 residents is not defined to be a “public building.” See also s. SPS 361.02 (4).

(2) Carbon monoxide alarms shall be listed and labeled to be in conformance with one of the following standards:

- (a) UL 2034.
- (b) UL 2075.

(3) (a) A carbon monoxide alarm shall be installed in accordance with the instructions of its manufacturer.

(b) A carbon monoxide alarm shall be provided on each floor level of an existing building accommodating a community-based residential facility described under sub. (1) (a), if the building contains fuel-burning appliances.

(c) A carbon monoxide alarm shall be provided on each floor level where sleeping units are located in an existing building accommodating a community-based residential facility described under sub. (1) (a), if the building has an attached garage and no fuel-burning appliances.

History: CR 10-103: cr. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. from 366.0500 and am. (intro.) Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0603 Smoke alarms. These are department rules in addition to the requirements in IEBC section 603:

(1) No smoke alarm, including an alarm that exists on September 1, 2011, may remain in service for more than that specified by the manufacturer.

(2) The replacement of a smoke alarm that uses a battery as its primary power source shall be a new smoke alarm that complies with UL 217 and either of the following:

- (a) The alarm is hardwired in accordance with IBC section 907.2.11.4 and has backup power in accordance with that section.

(b) The alarm uses, as its primary power source, a non-removable, non-removable battery that is capable of powering the alarm for at least 10 years.

History: CR 10-103: cr. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. from 366.0503 and am. (intro.) Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0605 Accessibility. Substitute the following wording for the requirements in IIBC section 605.1: General. Repairs shall maintain accessibility in accordance with IIBC section 705.1.13.

History: CR 16-094: cr. Register April 2018 No. 748, eff. 5-1-18; correction made under s. 13.92 (4) (b) 1., Stats., Register October 2018 No. 754.

SPS 366.0606 Structural evaluation. The requirements in IIBC sections 606.2 to 606.2.5 are not included as part of chs. SPS 361 to 366.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 16-094: renum. from 366.0506 and am. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0609 Repairs — plumbing. The requirements in IIBC section 609 are not included as part of chs. SPS 361 to 366.

Note: See the Wisconsin Uniform Plumbing Code, chs. SPS 382 to 387, for plumbing and water conservation provisions.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 16-094: renum. from 366.0509 and am. Register April 2018 No. 748, eff. 5-1-18; correction in (title) made under s. 13.92 (4) (b) 2., Stats., Register April 2018 No. 748.

SPS 366.0701 Alterations. Substitute the following wording for the requirements in IIBC section 701.2: Conformance. An existing building or portion thereof may not be altered such that the building becomes less safe than was required in its existing condition.

History: CR 16-094: cr. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0702 Building elements and materials. (1) MATERIALS AND METHODS. Substitute the following wording for the requirements in IIBC section 702.4: All new work shall comply with materials and methods requirements in the IBC, IECC, IFGC, IMC, and IPC, as applicable, that specify material standards, detail of installation and connection, joints, penetrations, and continuity of any element, component, or system in the building.

(2) INTERNATIONAL FUEL GAS CODE. The requirements in IIBC section 702.4.1 are not included as part of chs. SPS 361 to 366.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: am. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. from 366.0602 and am. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0704 Means of egress. (1) ALTERATIONS. Substitute the following wording for the requirements in IIBC section 704.1: Alterations shall be done in a manner that maintains the level of protection required for the means of egress prior to the alteration.

(2) STAIRWAY WIDTH. This is a department rule in addition to the requirements in IIBC section 704: Where installing an inclined platform lift or stairway chairlift, the clear-passage width shall be provided with the lift in the unfolded, usable position—except where an existing, previously approved lift is being replaced, the clear-passage width may remain as it was with the original lift in place, but it may not be reduced by the replacement.

History: CR 14-020: cr. Register August 2014 No. 704, eff. 9-1-14; CR 16-094: cr. (title), (1), renum. (2) from 366.0604 and am. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0804 Automatic sprinkler systems. This is a department exception to the requirement in IIBC section 804.2: The installation or extension of an automatic sprinkler system
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may exclude the protection of combustible concealed spaces that are not accessible in existing buildings. This exclusion is also applicable to sprinkler systems triggered by changes of use or additions.

History: CR 10-103: renum. from Comm 66.0701 and am. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. from 366.0704 and am. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0809 Altered existing mechanical systems. The exception to the requirements in IIBC section 809.1 and the requirements in IIBC section 809.2 are not included as part of chs. SPS 361 to 366.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 16-094: renum. from 366.0709 and am. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0810 Minimum plumbing fixtures. Substitute the following wording for the requirements in IIBC section 810.1: Where the occupant load of a story is increased by more than 20 percent, plumbing fixtures for the story shall be provided in quantities specified in the IBC based on the increased occupant load.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 16-094: renum. from 366.07010 and am. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0902 Special use and occupancy. (1) BOILER AND FURNACE EQUIPMENT ROOMS. Substitute the following wording for the requirements, but not the exceptions, in IIBC section 902.1.2: Boiler and furnace equipment rooms. Boiler and furnace equipment rooms adjacent to or within Groups I-1, I-2, I-4, R-1, R-2, and R-4 occupancies shall be enclosed in compliance with IBC 509 heating equipment enclosure requirements.

(2) EMERGENCY CONTROLS. The requirements in IIBC section 902.2.1 are not included as part of chs. SPS 361 to 366.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 16-094: cr. (title), (1), renum. (2) from 366.0802 and am. Register April 2018 No. 748, eff. 5-1-18; correction in (1) made under s. 13.92 (4) (b) 7., Stats., Register October 2018 No. 754.

SPS 366.0903 Building elements and materials. Substitute the following wording for the requirements in IIBC section 803.2.1: All existing interior vertical openings in the work area connecting two or more floors shall be enclosed with approved assemblies having a fire resistance rating of not less than one hour with approved opening protectives.

History: CR 16-094: cr. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0904 Level 3 alterations fire protection. (1) UPHOLSTERED FURNITURE. The requirement in IIBC section 904.1.3 condition 3 is not included as part of chs. SPS 361 to 366.

(2) FIRE ALARM AND DETECTION SYSTEMS. Substitute the requirements from 2009 IIBC section 804.2 for the requirements in IIBC section 904.2.

History: CR 16-094: cr. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.0909 Level 3 alterations plumbing. These are department rules in addition to the requirements in IIBC chapter 9:

(1) Pursuant to s. 101.128, Stats., level 3 alterations within an existing facility where the public congregates shall necessitate that plumbing fixtures serving the work area be provided in a ratio of at least 2 water closets for females as to each water closet and urinal for the males.

(2) (a) Under this section “facility where the public congregates” has the meaning has given in s. 101.128 (1) (b), Stats.

Note: Section 101.128 (1) (b), Stats., reads: “Facility where the public congregates” means any of the following that has a general capacity or a seating capacity of 500 or more persons:

1. An amusement facility.

2. A convention or trade hall or center.
3. A specialty event center.
4. A sports or entertainment arena, center or building.
5. A stadium.
6. An airport, bus terminal, train station or other transportation center.

(b) Under this section “alterations” has the meaning has given in s. 101.128 (1) (d), Stats., for “renovation”.

Note: Section 101.128 (1) (d), Stats., reads: “Renovation” means any structural remodeling, improvement or alteration of an existing facility where the public congregates. “Renovation” does not include any of the following:

1. Reroofing.
2. Cosmetic remodeling, including painting or the installation of wall covering, of paneling, of floor covering or of suspended ceilings.
3. An alteration to an electrical or mechanical system.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 16-094: renum. from 366.0809 and am. (intro.) Register April 2018 No. 748, eff. 5-1-18; correction in (title) made under s. 13.92 (4) (b) 2., Stats., Register April 2018 No. 748.

SPS 366.1001 Change of occupancy. (1) CHANGE OF OCCUPANCY APPROVAL. Substitute the following wording for the requirements in IIBC section 1001.2: A change of occupancy or a change of occupancy within a space where there is a different fire protection system threshold requirement in IBC chapter 9 may not be made to any structure without the approval of the code official. An increased occupant load may trigger additional means of egress or fire protection requirements.

(2) CHANGE OF OCCUPANCY CLASSIFICATION. This is a department rule in addition to the requirements in IIBC section 1001.2.2: Buildings undergoing a change in occupancy that would result in an increase in demand for either fossil fuel or electrical energy shall comply with the IECC.

(3) CERTIFICATION OF OCCUPANCY REQUIRED. The requirements in IIBC section 1001.3 are not included as part of chs. SPS 361 to 366.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: am. (1) Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. (title), (1) to (3) from 366.0901 (title), (1) to (3) and am., renum. (4) to SPS 366.1012 Register April 2018 No. 748, eff. 5-1-18.

SPS 366.1010 Change of occupancy plumbing. Substitute the following wording for the requirements in IIBC section 1010: Where the occupant load of a story is increased by more than 20 percent, plumbing fixtures for the story shall be provided in quantities specified in the IBC based on the increased occupant load.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: renum. from Comm 66.0910 Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. from 366.0912 and am. Register April 2018 No. 748, eff. 5-1-18; correction in (title) made under s. 13.92 (4) (b) 2., Stats., Register April 2018 No. 748.

SPS 366.1011 Other requirements. (1) ELEVATOR RECALL. This is a department rule in addition to the requirements in IIBC section 1011: At least one existing elevator shall be provided with emergency recall operation and emergency in-car operation complying with ch. SPS 318 when an existing building or structure that is greater than 60 feet in height is changed to include a Group R-1 or R-2 occupancy.

(2) CARBON MONOXIDE ALARMS. This is a department rule in addition to the requirements in IIBC section 1011: A building or a portion of a building changed to be or include a residential building as defined under s. 101.149 (1) (b), Stats., shall be provided with carbon monoxide alarms or detectors in accordance with s. SPS 362.0915.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; EmR0826: emerg. renum. to be (1), cr. (1) (title) and (2), eff. 10-1-08; CR 08-085: renum. to be (1), cr. (1) (title) and (2) Register May 2009 No. 641, eff. 6-1-09; correction in (1), (2) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 16-094: renum. from 366.0911 and am. Register April 2018 No. 748, eff. 5-1-18; correction in (2) under s. 13.92 (4) (b) 7., Stats., Register April 2018 No. 748.

SPS 366.1012 Standpipe systems. This is a department rule in addition to the requirements in IIBC section 1012.2: Standpipe systems shall be provided in existing buildings and structures or portions of existing buildings and structures in accordance with IBC chapter 9 when existing buildings or structures that are greater than 60 feet in height are changed to include a Group R-1 or R-2 occupancy.

History: CR 16-094: renum. SPS 366.0901 (4) and am. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.1102 Heights and areas. (1) AREA LIMITATIONS. This is a department exception in addition to the exception in IIBC section 1102.2: Buildings meeting the legacy Wisconsin unlimited area provisions are allowed to have unlimited area additions per the current code without a separating firewall.

(2) FIRE PROTECTION SYSTEMS. This is a department exception to the requirements in IIBC section 1102.3: An automatic sprinkler system is not required for additions to individual dwelling units within existing townhouses that are not already protected with an automatic sprinkler system.

History: CR 10-103: cr. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: cr. (title), (1), renum. (2) from 366.1002 and am. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.1201 Historic buildings. (1) SCOPE. This is a department rule in addition to the requirements in IIBC section 1201.1: Any historic building is exempt from the energy requirements of chs. SPS 361 to 366.

(2) REPORT. The requirements in IIBC section 1202.2 are not included as part of chs. SPS 361 to 366.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: renum. (1) to be (2), (2) to be Comm 66.1105 and am. (2) (title), cr. (1) Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. from 366.1101 and am. Register April 2018 No. 748, eff. 5-1-18.

SPS 366.1204 Historic buildings alterations. Historic buildings are not required to comply with the IECC for building envelope compliance except as follows:

(1) Existing ceiling, wall, or floor cavities exposed during alterations shall be filled with insulation.

(2) All replacement skylight, window, and/or door assemblies shall meet the minimum code requirements of the IECC unless specifically designed to address unique aesthetics associated with the historic nature of the building. Glass only replacements in an existing sash and frame are exempt from the application of the IECC.

(3) Roofs without insulation in the cavity and where the sheathing or insulation is exposed during reroofing shall be insulated either above or below the sheathing so as to meet the minimum insulation required by the IECC, or shall provide insulation to the greatest extent possible.

History: CR 16-094: cr. Register April 2018 No. 748, eff. 5-1-18; correction in (title) made under s. 13.92 (4) (b) 2., Stats., Register April 2018 No. 748.

SPS 366.1205 Exhibit buildings. These are department rules in addition to the requirements in IIBC section 1205: Historic buildings to be used as exhibit buildings shall comply with all of the following requirements:

(1) The building shall be open to the public only under the supervision of a tour guide.

(2) The building may not be lived in, slept in or worked in, except for the purpose of demonstrating to the public how people lived in a particular era.

(3) Smoking is prohibited in the building.

(4) Open flame equipment may not be used in the building, except for fire places and other mechanical equipment original to the building.

(5) Fire extinguishers shall be installed in exhibit buildings and may be located in a nonconspicuous location but accessible to the occupants.

(6) (a) At least one smoke detector shall be provided for each 1,200 square feet of floor area with a minimum of one smoke detector per floor level.

(b) 1. Except as specified in subd. 2., where electricity is provided in the exhibit building, the smoke detectors shall be connected to the electrical power.

2. Where no electrical power is provided to an exhibit building, the smoke detectors shall be of a battery type.

3. Smoke detectors shall be tested weekly.

(7) Exhibit buildings provided with only one means of egress shall be restricted to a total capacity of 12 people, and not more than 6 people may be located above or below the first floor at any one time.

(8) Stairways without 6-foot, 4-inch vertical headroom clearance shall have signs posted warning occupants of the headroom clearance available.

(9) Exit signs shall be provided in accordance with the prevailing code in exhibit buildings occupied prior to ½-hour before sunrise and ½-hour after sunset and in all areas not provided with natural lighting.

History: CR 10-103: renum. from Comm 66.1101 (2) Register August 2011 No. 668, eff. 9-1-11; correction in (b) 1. made under s. 13.92 (4) (b) 7., Stats., Register August 2011 No. 668; CR 16-094: renum. from 366.1105 and am. (intro.) Register April 2018 No. 748, eff. 5-1-18.

SPS 366.1401 Performance compliance methods.

(1) **APPLICABILITY.** Substitute the following wording for the requirements in IEBC section 1401.2: The provisions of sections 1401.2.1 through 1401.2.5 shall apply to existing occupancies that will continue to be, or are proposed to be, in Groups A, B, E, F, M, R, and S. These provisions may not apply to buildings with occupancies in Group H or Group I.

(2) **ACCESSIBILITY REQUIREMENTS.** Substitute the following wording for the requirements in IEBC section 1401.2.5: All portions of the buildings proposed for change of occupancy or being altered shall conform to the accessibility provisions of IEBC section 410.

(3) **OTHER CODES.** The requirements in IEBC section 1401.3.2 are not included as part of chs. SPS 361 to 366.

(4) **MINIMUM PLUMBING FIXTURES.** This is a department rule in addition to the requirements in IEBC section 1401.2: Where the occupant load of a story is increased by more than 20 percent, plumbing fixtures for the story shall be provided in quantities specified in the IBC based on the increased occupant load.

History: CR 06-120: cr. Register February 2008 No. 626, eff. 3-1-08; CR 10-103: am. (title), renum. (2) to be (3), cr. (2) Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. from 366.1301 and am., cr. (4) Register April 2018 No. 748, eff. 5-1-18; correction in (2) made under s. 13.92 (4) (b) 7., Stats., Register December 2023 No. 816, eff. 1-1-24.

SPS 366.1500 Construction safeguards. The requirements in IEBC chapter 15 are not included as part of chs. SPS 361 to 366.

History: CR 10-103: cr. Register August 2011 No. 668, eff. 9-1-11; CR 16-094: renum. from 366.1400 and am. Register April 2018 No. 748, eff. 5-1-18.

Chapter SPS 381

DEFINITIONS AND STANDARDS

SPS 381.01 Definitions.

SPS 381.20 Incorporation of standards by reference.

Note: Chapter Comm 81 was renumbered chapter SPS 381 under s. 13.92 (4) (b) 1., Stats., Register December 2011 No. 672.

SPS 381.01 Definitions. In chs. SPS 381 to 387, except as otherwise specifically defined:

(1) “Accepted engineering practice” means a specification, standard, guideline or procedure in the field of plumbing or related thereto, generally recognized and accepted as authoritative documented through national standards or specifications.

(2) “Accessible” when applied to a fixture, appliance, pipe, fitting, valve or equipment, means having access for maintenance, but which first may require the removal of an access panel or similar obstruction.

(2m) “Accessory building” means a detached building, not used as a dwelling unit but is incidental to that of the dwelling.

(2r) “Adult day care center” or “ADCC” has the meaning given in s. DHS 105.14 (1) (b) 5.

(3) “Aerobic treatment component” means a unit for the treatment of wastewater that utilizes the principle of oxidation for biological decomposition.

(4) “Agent” means an individual or agency recognized by the department to act on the department’s behalf relative to a specific activity or function.

(4m) “Air admittance valve” or “AAV” means a device designed to allow air to enter the drainage system to balance the pressure and prevent siphonage of the water trap when negative pressure develops in the system.

(5) “Air-break” means a piping arrangement for a drain system where the wastes from a fixture, appliance, appurtenance or device discharge by means of indirect or local waste piping terminating in a receptor at a point below the flood level rim of the receptor and above the outlet of the trap serving the receptor.

(6) “Air-gap, drain system” means the unobstructed vertical distance through the free atmosphere between the outlet of indirect or local waste piping and the flood level rim of the receptor into which it discharges.

(7) “Air-gap, water supply system” means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank or plumbing fixture and the flood level rim or spill level of the receptacle.

(7e) “Alternate plumbing system” means a type of plumbing system designed in such a manner that valid and reliable data shall demonstrate to the department that the plumbing system is in compliance with the intent of chs. SPS 381 to 384.

(7m) “Ambulatory surgery center” means a health care facility that accepts federal funding in accordance with 42 CFR 416 of the federal register for health care finance and where 4 or more individuals that undergo a surgical procedure for which federal reimbursement is based.

(8) “Anaerobic treatment component” means a unit for the treatment of wastewater which utilizes molecular oxygen in the absence of free oxygen for biological respiration and decomposition.

(9) “Approved” means acceptance documented in writing by the department.

(10) “Appurtenance” means a manufactured device or pre-fabricated assembly of component parts which is an adjunct to a plumbing product or plumbing system.

(11) “Area drain” means a receptor designed to collect storm waters from an open area.

(12) “Areawide water quality management plan” means those plans prepared by the department of natural resources, including those plans prepared by agencies designated by the governor under the authority of ss. 281.11, 281.12 (1), 281.15, and 283.83, Stats., for the purpose of managing, protecting and enhancing groundwater and surface water of the state.

Note: See ch. SPS 382 Appendix for a list of water quality management agencies and their addresses.

(13) “Aspirator” means a fitting or device supplied with water or other fluid under positive pressure which passes through an integral orifice or constriction causing a vacuum.

(13e) “Atmospheric type vacuum breaker” means a type of cross connection control device where the flow of water into the device causes a float to close an air inlet port and when the flow of water stops the float falls and forms a check valve against back siphonage and at the same time opens the air inlet port to allow air to enter and satisfy the vacuum.

(13m) “At-risk” means a POWTS serving a new public or commercial facility that may produce influent to a POWTS treatment or dispersal component, consisting in part of in situ soil in excess of the quantities specified in s. SPS 383.44 (2). This definition does not include existing facilities where the influent has been tested and determined to produce influent below the quantities specified in s. SPS 383.44 (2) or facilities that are known to produce influent exceeding the influent quantities.

(14) “Autopsy table” means a fixture or table used for post-mortem examination.

(15) “Automatic fire sprinkler system” has the meaning specified under s. 145.01 (2), Stats.

Note: Section 145.01 (2), Stats., reads:

“Automatic fire sprinkler system”, for fire protection purposes, means an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The system includes a suitable water supply, such as a gravity tank, fire pump, reservoir or pressure tank or connection beginning at the supply side of an approved gate valve located at or near the property line where the pipe or piping system provides water used exclusively for fire protection and related appurtenances and to standpipes connected to automatic sprinkler systems. The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, structure or area, generally overhead, and to which sprinklers are connected in a systematic pattern. The system includes a controlling valve and a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area.

(16) “Backflow” means the unwanted reverse flow of liquids, solids or gases.

(17) “Back pressure” means a pressure greater than the supply pressure that may cause backflow.

(17e) “Backflow preventer” means any generic backflow prevention method, device, or assembly.

(18) “Backflow preventer with an intermediate atmospheric vent” means a cross connection control device having 2 independently operating check valves separated by an intermediate chamber with a means for automatically venting it to the atmosphere. This can be installed in the horizontal, vertical up, or vertical down orientations. The check valves are force-loaded to a normally closed position and the venting means is force-loaded to a normally open position.

(19) “Back siphonage” means the creation of a backflow as a result of negative pressure.

(21) “Backwater valve” means a device designed to prevent the reverse flow of wastewater in a drain system.

(22) “Ballcock” means a water supply valve opened or closed by means of a float or similar device used to supply water to a tank.

(22m) “Barometric loop” means a continuous section of supply piping that abruptly rises to a height of approximately 35 feet before returning to the originating level. Barometric loop is used to protect against back-siphonage but not against back pressure.

(23) “Bathroom group” means a water closet, lavatory and a bathtub or shower located together on the same floor level.

(24) “Battery of fixtures” means any group of 2 or more fixtures that discharge into the same horizontal branch drain.

(25) “Bedpan sterilizer” means a fixture used for sterilizing bedpans or urinals by direct application of steam, boiling water or chemicals.

(26) “Bedpan washer and sanitizer” means a fixture designed to wash bedpans and to flush the contents into the sanitary drain system and which may also provide for disinfecting utensils by scalding with steam or hot water.

(27) “Bedpan washer hose” means a device supplied with hot or cold water, or both, and located adjacent to a water closet or clinical sink to be used for cleansing bedpans.

(28) “Bedrock” means rock that is exposed at the earth’s surface or underlies soil material and includes:

(a) Weathered in-place consolidated material, larger than 2 mm in size and greater than 50% by volume; and

(b) Weakly consolidated sandstone at the point of increased resistance to penetration of a knife blade.

(29) “Bell” means the portion of a pipe that is enlarged to receive the end of another pipe of the same diameter for the purpose of making a joint.

(30) “Bench mark” or “BM” means a permanently established point, the elevation of which is assumed or known, which serves as a vertical reference point, and which may also serve as a horizontal reference point.

(30m) “Bidet sprayer” means a component of a personal hygiene device intended for genital and perineal cleanliness and intended for installation in water closets and water closet seats.

(31) “Blackwater” means wastewater contaminated by human body waste, toilet paper and any other material intended to be deposited in a receptor designed to receive urine or feces.

(32) “BOD₅” or “biochemical oxygen demand 5 day” means a measure of the amount of biodegradable organic matter in water.

(33) “Boiler blow-off basin” means a vessel designed to receive the discharge from a boiler blow-off outlet and to cool the discharge to a temperature that permits safe entry into the drain system.

(34) “Branch” means a part of a piping system other than a riser, main or stack.

(35) “Branch interval” means a vertical measurement of dis-

tance, 8 feet or more in length, between the connections of horizontal branches to a drainage stack.

Note: See ch. SPS 382 Appendix for explanatory material.

(35m) “Branch tailpiece” means a fitting or combination of fittings consisting of a combination tail piece and a wye.

(36) “Branch vent” means a vent serving more than one fixture drain.

(37) “B.T.U.” means British Thermal Units.

(38) “Building” means a structure for support, shelter or enclosure of persons or property.

(39) “Building drain” means horizontal piping within or under the fully enclosed portion of a building, installed below the lowest fixture or the lowest floor level from which fixtures can drain by gravity to the building sewer.

(40) “Building drain branch” means a fixture drain which is individually connected to a building drain and is vented by means of a combination drain and vent system.

(41) “Building drain, sanitary” means a building drain which conveys wastewater consisting in part of domestic wastewater.

(42) “Building drain, storm” means a building drain which conveys storm water, clear water, or both.

(43) “Building permit” means any written permission from a municipality that allows construction to commence on a structure.

(44) “Building sewer” means that part of the drain system not within or under the fully enclosed portion of a building which conveys its discharge to a public sewer, private interceptor main sewer, private onsite wastewater treatment system, or other point of discharge or dispersal.

(45) “Building sewer, sanitary” means a building sewer which conveys wastewater consisting in part of domestic wastewater.

(46) “Building sewer, storm” means a building sewer which conveys storm water, clear water, or both.

(47) “Building subdrain” means the horizontal portion of a drain system which does not flow by gravity to the building sewer.

(48) “Building subdrain branch” means a fixture drain which is individually connected to a building subdrain and is vented by means of a combination drain and vent system.

(49) “Burr” means a roughness or metal protruding from the walls of a pipe usually as the result of cutting the pipe.

(50) “Business establishment” means any industrial or commercial organization or enterprise operated for profit, including but not limited to a proprietorship, partnership, firm, business trust, joint venture, syndicate, corporation or association.

(50c) “Campground or recreational vehicle park drain system, sanitary” means all piping or any portion thereof, within public or private premises, that conveys domestic wastewater from a campground or recreational vehicle park.

(50e) “Campground or recreational vehicle park drain system, storm” means all plumbing or any portion thereof, within public or private premises, that conveys any of the following:

(a) Storm water from a campground or recreational vehicle park.

(b) Groundwater from a campground or recreational vehicle park.

(c) Clear water from a campground or recreational vehicle park.

(50h) “Campground or recreational vehicle park water supply system” means the piping through which potable water is

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conveyed to points of usages intended to serve sites in a campground or recreational vehicle park.

(50L) “Camping trailer” has the definition under s. 340.01 (6m), Stats.

(50m) “Camping unit” has the meaning given in s. SPS 327.08 (9).

(50r) “Camping unit transfer tank” means a type of portable container used to collect and hold wastewater discharges generated by an individual camping unit.

(51) “Campsite receptor” means the vertical drain piping and trap combination that receives wastewater from recreational vehicles.

(52) “Catch basin” means a watertight receptacle built to arrest sediment of surface, subsoil or other waste drainage, and to retain oily or greasy wastes, so as to prevent their entrance into the building drain or building sewer.

(53) “Cesspool” means an excavation which receives domestic wastewater by means of a drain system without pretreatment of the wastewater and retains the organic matter and solids permitting the liquids to seep from the excavation.

(54) “Circuit vent” means a method of venting 2 to 8 traps or trapped fixtures without providing an individual vent for each trap or fixture.

(55) “Cleanout” means an accessible opening in a drain system used for the removal of obstructions.

(56) “Clear water” means wastewater other than storm water, having no impurities or where impurities are below a minimum concentration considered harmful by the department, including but not limited to noncontact cooling water and condensate drainage from refrigeration compressors and air conditioning equipment, drainage of water used for equipment chilling purposes and cooled condensate from steam heating systems or other equipment.

(56e) “Clinic sink” means a fixture having an integral trap and a flushing rim so that water cleanses the interior surface.

Note: This fixture has flushing and cleansing characteristics similar to a water closet. A clinic sink may also be referred to as a clinic service sink, a bedpan washing sink or a flushing rim sink.

(57) “Cold water” means water at a temperature less than 85°F.

(58) “Combination fixture” means a fixture combining one sink and laundry tray or a 2- or 3-compartment sink or laundry tray in one unit.

(59) “Combination drain and vent system” means a specially designed system of drain piping embodying the wet venting of one or more fixtures by means of a common drain and vent pipe adequately sized to provide free movement of air in the piping.

(59m) “Combination private water main” means a private water main that serves a fire protection system and any number of plumbing fixtures.

(59s) “Combination water service” means a water service that serves a fire protection system and any number of plumbing fixtures.

(60) “Common vent” means a branch vent connecting at or downstream from the junction of 2 fixture drains and serving as a vent for those fixture drains.

(60e) “Community-based residential facility” has the meaning specified under s. 50.01 (1g), Stats.

Note: Section 50.01 (1g), Stats., reads:
“Community-based residential facility” means a place where 5 or more adults who are not related to the operator or administrator and who do not require care above intermediate level nursing care reside and receive care, treatment or services that are above the level of room and board but that include no more than 3 hours of

nursing care per week per resident. “Community-based residential facility” does not include any of the following:

(a) A convent or facility owned or operated by members of a religious order exclusively for the reception and care or treatment of members of that order.

(b) A facility or private home that provides care, treatment, and services only for victims of domestic abuse, as defined in s. 49.165 (1) (a), Stats., and their children.

(c) A shelter facility as defined under s. 16.308 (1) (d), Stats.

(d) A place that provides lodging for individuals and in which all of the following conditions are met:

1. Each lodged individual is able to exit the place under emergency conditions without the assistance of another individual.

2. No lodged individual receives from the owner, manager or operator of the place or the owner's, manager's or operator's agent or employee any of the following:

a. Personal care, supervision or treatment, or management, control or supervision of prescription medications.

b. Care or services other than board, information, referral, advocacy or job guidance; location and coordination of social services by an agency that is not affiliated with the owner, manager or operator, for which arrangements were made for an individual before he or she lodged in the place; or, in the case of an emergency, arrangement for the provision of health care or social services by an agency that is not affiliated with the owner, manager or operator.

(e) An adult family home.

(f) A residential care apartment complex.

(g) A residential facility in the village of Union Grove that was authorized to operate without a license under a final judgment entered by a court before January 1, 1982, and that continues to comply with the judgment notwithstanding the expiration of the judgment.

(61) “Conductor” means a drain pipe inside the building which conveys storm water from a roof to the storm drain or storm sewer.

(61m) “Containment” means the installation of a cross connection control method, device or assembly to prohibit the flow of contamination from a building or facility into a water supply system.

(62) “Contaminant load” means the concentrations of substances in a wastewater stream.

(62e) “Containment tank” means a device with a valved outlet designed to temporarily hold potentially hazardous wastewater for evaluation before discharging to a POWTS or municipal sewer.

(62m) “Continuous pressure” means a pressure greater than atmospheric and exerted for a period of more than 12 continuous hours.

(62s) “Conveyance system” means that portion of a drain system that consists of a series of pipes that transport water from one area to another without providing detention.

(63) “Corporation cock” means a valve:

(a) Installed in a private water main or a water service at or near the connection to a public water main; or

(b) Installed in the side of a forced main sewer to which a forced building sewer is connected.

(64) “Critical level” means the reference point on a vacuum breaker that must be submerged before backflow can occur. When the critical level is not indicated on the vacuum breaker, the bottom of the vacuum breaker shall be considered the critical level.

(65) “Cross connection” means a connection or potential connection between any part of a water supply system and another environment containing substances in a manner that, under any circumstances, would allow the substances to enter the water supply system by means of back siphonage or back pressure.

(65m) “Cross connection control assembly” means a mechanical backflow preventer used to prevent backflow into a water supply system that requires shut-off valves and a test cock or test cocks to meet any specific standard, such as a reduced pressure principle backflow preventer, a double check backflow preventer, a pressure vacuum breaker, or a spill resistant vacuum breaker.

(66) “Cross connection control device” means a mechanical backflow preventer used to prevent backflow into a water supply system that does not require a shut-off valve or test cock to meet any specific standard, such as an atmospheric type vacuum breaker, a hose connection vacuum breaker, or a backflow preventer with an atmospheric vent.

(66m) “Cross connection control method” means a mechanism used to prevent backflow into a water supply system other than a backflow prevention device or backflow prevention assembly, such as an air gap, vacuum breaker tee, or barometric loop.

(67) “Curb stop” means a valve placed in a water service or a private water main, usually near the lot line.

(68) “Dead end” means a branch leading from a drain pipe, vent pipe, building drain or building sewer and terminating at a developed length of 2 feet or more by means of a plug, cap or other closed fitting.

(69) “Department” means the department of safety and professional services.

(70) “Design wastewater flow” means 150% of the estimated wastewater flow generated by a dwelling, building or facility.

(70m) “Detention” means the collection and temporary storage of water for subsequent gradual discharge.

(71) “Determination of failure” has the meaning specified under s. 145.245 (1) (a), Stats.

(72) “Developed length” means the length of pipe line measured along the centerline of the pipe and fittings.

(72e) “Dfu” means drainage fixture unit.

(73) “Diameter” means in reference to a pipe the nominal inside diameter of the pipe.

(73e) “Dishwasher, commercial-type” or “dishwashing machine, commercial-type” means a machine or appliance that is manufactured and marketed for a use other than residential that mechanically washes, rinses, and sanitizes dishes or utensils and discharges to the plumbing drainage system.

(73m) “Dishwasher, residential-type” or “Dishwashing machine, residential-type” means a machine or appliance manufactured and marketed for residential use that mechanically washes, rinses, and sanitizes dishes or utensils and discharges to the plumbing drainage system.

(73s) “Disinfection” means the process of killing or inactivating microorganisms, particularly pathogens.

(74) “Disinfection unit” means a type of POWTS treatment component, excluding a soil-based POWTS treatment component, that utilizes a chemical or photoelectric process to reduce the wastewater fecal coliform contaminant load.

(75) “Dispersal zone” means a dimensional volume of in situ soil that receives wastewater for treatment or distributes final effluent for dispersal.

(76) “Distribution cell” means a dimensional zone that is part of a POWTS treatment or dispersal component where wastewater is disseminated into in situ soil or engineered soil.

(77) “Documented data” means data which is developed in accordance with scientifically valid analytical protocols including field trials where appropriate, is subjected to peer review, results from more than one study, and consistent with other credible research.

(78) “Domestic wastewater” means the type of wastewater, not including storm water, normally discharged from or similar to that discharged from plumbing fixtures, appliances and devices including, but not limited to sanitary, bath, laundry, dishwashing, garbage disposal and cleaning wastewaters.

(79) “Double check backflow prevention assembly” means a cross connection control assembly consisting of 2 independently acting check valves, internally force-loaded to a normally closed position, 2 tightly closing shut-off valves that are properly located, and test cocks that are properly located.

(80) “Double check detector fire protection backflow preventer-assembly” means an assembly serving a fire protection system and consisting of 2 independently acting check valves, internally forced loaded to a normally closed position, 2 tightly closing shut-off valves, and properly located test cocks which also includes a parallel flow meter to indicate leakage or unauthorized use of water downstream of the assembly.

(80m) “Double check fire protection backflow prevention assembly” means an assembly serving a fire protection system and consisting of 2 independently acting check valves, internally forced loaded to a normally closed position, 2 tightly closing shut-off valves, and properly located test cocks. The term “double check valve backflow preventer for fire protection systems” has the same meaning as double check fire protection backflow prevention assembly.

(81) “Drain” means any pipe that carries wastewater or water-borne wastes.

(82) “Drain system” includes all the piping or any portion of the piping within public or private premises which conveys wastewater to a legal point of disposal, but does not include the mains of public sewer systems or a private onsite wastewater treatment system or public sewage treatment or disposal plant.

(82e) “Dual check backflow preventer wall hydrant-freeze resistant type” means a type of hose bibb that provides protection of the potable water supply from contamination due to back-siphonage or backpressure without damage to the device due to freezing, and is field testable to verify protection under the high hazard conditions present at a hose threaded outlet.

(82m) “Dual check valve type with atmospheric port backflow preventer” has the same meaning as specified in sub. (18).

(83) “Dwelling” means a structure, or that part of a structure, which is used or intended to be used as a home, residence or sleeping place by one person or by 2 or more persons maintaining a common household, to the exclusion of all others.

(84) “Effluent” means liquid discharged from a process, device, appurtenance or piping system.

(85) “Ejector” means an automatically operated device to elevate wastewater by the use of air under higher than atmospheric pressure.

(86) “Elevation” or “EL” means the vertical distance from the datum to a point under investigation.

(87) “Enforcement standard” or “ES” has the meaning specified under s. 160.01 (2), Stats.

Note: Section 160.01 (2), Stats., reads:

“Enforcement standard” means a numerical value expressing the concentration of a substance in groundwater which is adopted under ss. 160.07 and 160.09.

(88) “Engineered soil” means a mineral product that is equivalent to in situ soil for which treatment capability has been credited under Table 383.44-3, or superior to in situ soil in its ability to treat or disperse domestic wastewater from a POWTS.

(89) “Engineered system” means a system designed to meet the intent of the code but not the enumerated specifications of the state plumbing code.

(90) “Estimated wastewater flow” means the typical quantity of domestic wastewater generated daily by a dwelling, building or facility.

(90e) “Experimental plumbing system” has the same meaning as experimental system as specified in sub. (91).

(90m) “Exam sink” means a plumbing fixture used for hand washing in health care and related facilities.

Note: An exam sink may also be referred to as a treatment sink.

(91) “Experimental system” means a type of plumbing system from which valid and reliable data are being sought to demonstrate compliance with the intent of chs. SPS 382 to 384.

(92) “Failing private onsite wastewater treatment system” has the meaning specified under s. 145.01 (4m), Stats.

(93) “Farm” means a parcel of 35 or more acres of contiguous land that is devoted primarily to agricultural use, as defined under s. 91.01 (2), Stats.

Note: Section 91.01 (2), Stats., reads:

(a) Any of the following activities conducted for the purpose of producing an income or livelihood:

1. Crop or forage production.
2. Keeping livestock.
3. Beekeeping.
4. Nursery, sod, or Christmas tree production.
- 4m. Floriculture.
5. Aquaculture.
6. Fur farming.
7. Forest management.

8. Enrolling land in a federal agricultural commodity payment program or a federal or state agricultural land conservation payment program.

(b) Any other use that the department, by rule, identifies as an agricultural use.

(93m) “Fats, oil, and grease” and “FOG” mean organic polar compounds derived from vegetable, plant, or animal sources that are composed of long chain triglycerides that are insoluble in water. Fats are generally solid particles, oils are usually liquid at room temperature, and grease is usually solid at room temperature.

(94) “Faucet” means a valve end of a water pipe by means of which water can be drawn from or held within the pipe.

(95) “Final effluent” means the effluent from the last POWTS treatment component.

(96) “Fixture drain” means the drain from a fixture to a junction with another drain pipe.

(97) “Fixture supply” means that portion of a water distribution system serving one plumbing fixture, appliance or piece of equipment.

(98) “Fixture supply connector” means that portion of water supply piping which connects a plumbing fixture, appliance or a piece of equipment to the water distribution system.

(99) “Fixture unit, drainage” or “dfu” means a measure of the probable discharge into the drain system by various types of plumbing fixtures. The drainage fixture unit value for a particular fixture depends on its volume rate of drainage discharge, on the time duration of a single drainage operation, and on the average time between successive operations.

(100) “Fixture unit, supply” or “sfu” means a measure of the probable hydraulic demand on the water supply by various types of plumbing fixtures.

Note: The supply fixture unit value for a particular fixture depends on its volume rate of supply, on the time duration of a single supply operation, and on the average time between successive operations.

(101) “Floodfringe” has the meaning specified under s. NR 116.03 (14).

Note: Section NR 116.03 (14) reads:

“Floodfringe” means that portion of a floodplain which is outside of the floodway, which is covered by flood water during the regional flood. The term “floodfringe” is generally associated with standing water rather than flowing water.

(102) “Flood level rim” means the edge of the receptacle from which water overflows.

(103) “Floodplain” has the meaning specified under s. NR 116.03 (16).

Note: Section NR 116.03 (16) reads:

“Floodplain” means that land which has been or may be covered by flood water

during the regional flood. The floodplain includes the floodway, floodfringe, shallow depth flooding, flood storage and coastal floodplain areas.

(104) “Floodway” has the meaning specified under s. NR 116.03 (22).

Note: Section NR 116.03 (22) reads:

“Floodway” means the channel of a river or stream, and those portions of the floodplain adjoining the channel required to carry the regional flood discharge.

(105) “Floor sink” means a receptor for the discharge from indirect or local waste piping installed with its flood level rim even with the surrounding floor.

(106) “Flow” means the volumetric measure of a liquid stream in a specified time.

(107) “Flushometer valve” means a device which discharges a predetermined quantity of water to fixtures for flushing purposes and is closed by direct water pressure.

(108) “Flush valve” means a device located at the bottom of a tank for flushing water closets and similar fixtures.

(108m) “Foundation drain” means a subsoil drain that serves the area of the foundation of a building.

(108s) “Freeze resistant sanitary yard hydrant with backflow protection” means a device, typically installed with a portion below ground surface, to supply potable water without danger of damage to the device due to freezing and to provide protection of the potable water supply and groundwater from contamination due to back-siphonage or back-pressure.

(109) “Garage, private” means a building or part of a building used for the storage of vehicles or other purposes, by a family or less than 3 persons not of the same family and which is not available for public use.

(110) “Garage, public” means a building or part of a building which accommodates or houses self-propelled land, air or water vehicles for 3 or more persons not of the same family.

(111) “Governmental unit” has the meaning specified under s. 145.01 (5), Stats.

(112) “Graywater” means wastewater contaminated by waste materials, exclusive of urine, feces or industrial waste, deposited into plumbing drain systems.

(113) “Grease interceptor” means a receptacle designed to intercept and retain or remove grease or fatty substances.

(114) “Groundwater” has the meaning specified under s. 160.01 (4), Stats.

(115) “Hand-held shower” means a hose and a hand-held discharge piece such as a shower head or spray connecting to a fixture fitting.

(116) “Health care facility” means a hospital, nursing home, community-based residential facility, or ambulatory surgery center.

(117) “Health care plumbing appliance” means a plumbing appliance used in health care facilities and health care related facilities, the function of which involves a potential for exposure to infectious wastes. Examples of health care plumbing appliances include autoclaves, dialysis units, endoscope reprocessors, sterilizers, surgical suction systems, therapeutic tubs, and washer or disinfectant units. Examples of appliances or fixtures that are not regarded as health care plumbing appliances are auto-analyzers, bathtubs, high-purity water systems, and wheelchair washers.

(117m) “Health care related facility” means an assisted living, residential care apartment complex, memory care, infirmary, inpatient mental health center, inpatient hospice, adult day care center, renal dialysis center, facility for the developmentally disabled, institute for mental disease, urgent care center, medical clinic or office, dental clinic or office, residential care center for children and youth, or school of medicine, surgery, or dentistry.

(118) “High groundwater” means zones of soil saturation which include perched water tables, shallow regional groundwater tables or aquifers, or zones that are seasonally, periodically or permanently saturated.

(119) “High groundwater elevation” means the higher of either the elevation to which the soil is saturated when observed as a free water surface, or the elevation to which the soil has been seasonally or periodically saturated as indicated by the highest elevation of redoximorphic features in the soil profile.

(120) “High hazard” means a situation where the water supply system could be contaminated with a toxic substance or solution so as to make the water unsuitable for the designated use.

(121) “Holding tank” means a watertight receptacle for the collection and holding of wastewater.

(122) “Horizontal pipe” means any pipe or fitting which makes an angle of less than 45° with the horizontal.

(123) “Horizontal reference point” means a stationary, identifiable point to which horizontal dimensions can be related.

(124) “Hose connection backflow preventer” means a type of cross connection control device which consists of 2 independent checks, force-loaded or biased to a closed position, with an atmospheric vent located between the 2 check valves, which is force-loaded or biased to an open position, and a means for attaching a hose.

(125) “Hose connection vacuum breaker” means a type of cross connection control device which consists of a check valve member force-loaded or biased to a closed position and an atmospheric vent valve or means force-loaded or biased to an open position when the device is not under pressure.

(126) “Hot water” means water at a temperature of 110° F. or more.

(127) “Hot water storage tank” means a tank used to store water that is heated indirectly by a circulating water heater or by steam or hot water circulating through coils or by other heat exchange methods internal or external to the tank.

(128) “Human health hazard” has the meaning specified under s. 254.01 (2), Stats.

Note: Section 254.01 (2), Stats., reads:

“Human health hazard” means a substance, activity or condition that is known to have the potential to cause acute or chronic illness, to endanger life, to generate or spread infectious diseases, or otherwise injuriously to affect the health of the public.

(129) “Hydrostatic test” means a test performed on a plumbing system or portion thereof in which the system is filled with a liquid, normally water, and raised to a designated pressure.

(129m) “Imminent health hazard” means a significant threat or danger to health that is considered to exist when there is evidence sufficient to show that a product, practice, circumstance, or event creates a situation that requires immediate correction or cessation of operation to prevent injury or illness based on any of the following:

- (a) The number of potential injuries or illnesses.
- (b) The nature, severity, or duration of the potential injury or illness.

(130) “Indian lands” means lands owned by the United States and held for the use or benefit of Indian tribes or bands or individual Indians, and lands within the boundaries of a federally recognized reservation that are owned by Indian tribes or bands or individual Indians.

(131) “Indirect waste piping” means drain piping which does not connect directly with the drain system, but which discharges into the drain system by means of an air break or air gap into a receptor.

(132) “Individual vent” means a pipe installed to vent a fixture trap.

(133) “Industrial wastewater” means the liquid wastes that result from industrial processes.

(133s) “Infiltration component” means any device or method that is intended to promote the assimilation of water into in situ soil.

(134) “Infiltrative surface” means the plane within a treatment or dispersal component at which effluent is applied to in situ soil or engineered soil.

(135) “In situ soil” means soil naturally formed or deposited in its present location or position and includes soil material that has been plowed using normal tillage implements and depositional material resulting from erosion or flooding.

(136) “Interceptor” or “separator” means a device designed and installed so as to separate and retain deleterious, hazardous or undesirable matter from wastes flowing through it.

(136s) “Irrigation” means the application of water to the root zone of plants or plantings.

(137) “Laboratory faucet backflow preventer” means a type of cross connection control device which consists of 2 independently acting check valves force-loaded or biased to a closed position and, between the check valves, a means for automatically venting to atmosphere which is force-loaded or biased to an open position.

(138) “Laboratory plumbing appliance” means a plumbing appliance, the function of which is unique to scientific experimentation or research activities.

(138m) “Lavatory” means a sink or washbasin designed for washing of the hands and face.

(139) “Leaching chamber” means a product designed to support soil and create a cavity for the temporary storage of effluent and to provide an infiltrative surface for the distribution cell POWTS dispersal or treatment component.

(140) “Leader” means a pipe or channel outside a building which conveys storm water from the roof or gutter drains to a storm drain, storm sewer or to grade.

(141) “Lead-free” means:

(a) When used with respect to solders and flux, containing not more than 0.2 percent lead.

(b) When used with respect to pipe and pipe fittings and fixtures, containing not more than 8.0 percent lead.

(c) When used with respect to the wetted surface material of pipe and pipe fittings and fixtures, containing a weighted average of not more than 0.25 percent lead.

Note: Calculation procedures for determining the weighted average lead concentration in a product that consists of several components are listed in NSF/ANSI Standard 61, annex G, including how to comply with amended sec. 1417(d)(2) of the federal Safe Drinking Water Act (SDWA) of 2011.

(142) “Linear loading rate” means the amount of effluent applied daily along the landscape contour expressed in gallons per day per linear foot along a site contour.

(143) “Load factor” means the percentage of the total connected fixture unit flow rate which is likely to occur at any point in a drain system.

(144) “Local station” means a National Weather Service (NWS) precipitation station or other station accepted by the department as collecting precipitation data in accordance with NWS methods.

(145) “Local waste piping” means a portion of drain piping which receives the wastes discharged from indirect waste piping and which discharges those wastes by means of an air break or air gap into a receptor.

(146) “Local vent” means a pipe connecting to a fixture and extending to outside air through which vapor or foul air is removed from the fixture.

(147) “Low hazard” means a situation where the water supply system could be contaminated with a nontoxic substance or solution so as to make the water unsuitable for the designated use.

(148) “Main” means the principal pipe artery to which branches may be connected.

(149) “Manhole” means an opening constructed to permit access by a person to a sewer or any underground portion of a plumbing system.

(151) “Manufactured home” has the meaning specified under s. 101.91 (2), Stats.

Note: Section 101.91 (2), Stats., reads:

“Manufactured home” means any of the following:

(am) A structure that is designed to be used as a dwelling with or without a permanent foundation and that is certified by the federal department of housing and urban development as complying with the standards established under 42 USC 5401 to 5425.

(c). A mobile home, unless a mobile home is specifically excluded under the applicable statute.

(152) “Manufactured home drain connector” means the pipe that joins the drain piping for a manufactured home to the building sewer.

(153) “Manufactured home community” has the meaning specified under s. 101.91 (5m), Stats.

Note: Section 101.91 (5m), Stats., reads:

“Manufactured home community” means any plot or plots of ground upon which 3 or more manufactured homes that are occupied for dwelling or sleeping purposes are located. “Manufactured home community” does not include a farm where the occupants of the manufactured homes are the father, mother, son, daughter, brother or sister of the farm owner or operator or where the occupants of the manufactured homes work on the farm.

(153e) “Manufactured home community drain system, sanitary” means all piping or any portion thereof, within public or private premises, which conveys domestic wastewater from a manufactured home in a manufactured home community.

(153m) “Manufactured home community drain system, storm” means all piping or any portion thereof, within public or private premises, that conveys any of the following:

- (a) Storm water from a manufactured home community.
- (b) Groundwater from a manufactured home community.
- (c) Clear water from a manufactured home community.

(153s) “Manufactured home community water supply system” means the piping through which potable water is conveyed to points of connection to a manufactured home or homes in a manufactured home community.

(154) “Mechanical joint” means a connection between pipes, fittings or pipes and fittings by means of a device, coupling, fitting or adapter where compression is applied around the center line of the pieces being joined, but which is not caulked, threaded, soldered, solvent cemented, brazed or welded.

(154g) “Medical or high purity water” means water that has uncommon stringent specifications with specific resistance measured in microsiemens per centimeter ($\mu\text{S}/\text{cm}$) or megohm-centimeters ($\text{Mohm}\cdot\text{cm}$).

(154m) “Mixed wastewater” means a combination of domestic and non-domestic wastewater.

(155) “Multiple dwelling” means a building containing more than 2 dwelling units.

(156) “Multipurpose piping system” means a water distribution system conveying water to plumbing fixtures and appliances and automatic fire sprinklers with the intention of serving both domestic and fire protection needs.

(157) “Municipality” means any city, village, town or county in this state.

(158) “Munsell soil color” means a color classification that specifies the relative degrees of the color variables in terms of hue, value and chroma.

(159) “Navigable waters” has the meaning specified under s. NR 115.03 (5).

Note: Section NR 115.03 (5) reads:

“Navigable waters” means Lake Superior, Lake Michigan, all natural inland lakes within Wisconsin and all streams, ponds, sloughs, flowages and other waters within the territorial limits of this state, including the Wisconsin portion of boundary waters, which are navigable under the laws of this state. Under s. 281.31 (2) (d), Stats., notwithstanding any other provision of law or administrative rule promulgated thereunder, shoreland ordinances required under s. 59.692, Stats., and this chapter do not apply to lands adjacent to farm drainage ditches if:

(a) Such lands are not adjacent to a natural navigable stream or river;

(b) Those parts of such drainage ditches adjacent to such lands were nonnavigable streams before ditching or had no previous stream history; and

(c) Such lands are maintained in nonstructural agricultural use.

(160) “Negative pressure” means a pressure less than atmospheric.

(160e) “Noncontinuous pressure” means a pressure greater than atmospheric and exerted for a period of no more than 12 continuous hours.

(160m) “Non-domestic wastewater” means any wastewater that is not domestic wastewater or storm water.

(161) “Nonpotable water” means water not safe for drinking, personal or culinary use.

(162) “Nonpublic” means, in the classification of plumbing fixtures, those fixtures in residences, apartments, living units of hotels and motels, and other places where the fixtures are intended for the use by a family or an individual to the exclusion of all others.

(163) “Nontoxic” means a substance in the diluted form that meets one of the following requirements:

(a) Is listed by the National Sanitation Foundation (NSF) as meeting the NSF evaluation criteria for nonfood compounds.

(b) Is acceptable to the United States Food and Drug Administration (FDA) Title 21 section 175.300 of the Federal Regulation on Food Additives.

(c) Is acceptable for contact with potable water or is deemed non-toxic by a third party certification that is acceptable to the department.

(d) Is deemed non-toxic by the department.

(163e) “Nursing home” has the meaning specified under s. 50.01 (3), Stats.

Note: Section 50.01 (3), Stats., reads:

“Nursing home” means a place where 5 or more persons who are not related to the operator or administrator reside, receive care or treatment and, because of their mental or physical condition require access to 24-hour nursing services, including limited nursing care, intermediate level nursing care and skilled nursing services. “Nursing home” does not include any of the following:

(c) A convent or facility owned or operated exclusively by and for members of a religious order that provides reception and care or treatment of an individual.

(d) A hospice, as defined in s. 50.90 (1), Stats., that directly provides inpatient care.

(e) A residential care apartment complex.

(163s) “Occasional occupancy” means occupying a building that is served by a POWTS for less than 120 calendar days per year.

(164) “Occupancy” means the purpose for which a building, structure, equipment, materials, or premises, or part thereof, is used or intended to be used.

(165) “Oil interceptor” means a device designed to intercept and retain oil, lubricating grease or other similar materials.

(166) “Offset” means a combination of fittings or bends that

makes two changes in direction bringing one section of the pipe out of line but into a line parallel with the other section.

(167) “One or 2-family dwelling” means a building containing not more than 2 dwelling units.

(168) “Open air” means outside the building.

(168m) “Open bodies of water” means those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, watercourses, drainage systems and other surface water, natural or artificial, public or private within the state or under its jurisdiction.

(169) “Ordinary high-water mark” has the meaning specified under s. NR 115.03 (6).

Note: Section NR 115.03 (6), reads:

“Ordinary high-water mark” means the point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic. Where the bank or shore at any particular place is of such character that it is difficult or impossible to ascertain where the point of ordinary high-water mark is, recourse may be had to the opposite bank of a stream or to other places on the shore of a lake or flowage to determine whether a given stage of water is above or below the ordinary high-water mark.

(170) “Participating governmental unit” means a governmental unit which applies to the department for financial assistance under ss. SPS 387.04 and 387.05, and which meets the conditions specified under s. 145.245 (9), Stats.

(170e) “Patient area plumbing fixture” means a plumbing fixture that is accessible to patients in a health care facility and is intended to be used for culinary, hygienic or domestic purposes.

(171) “Peak flow” means the largest anticipated recurrent wastewater discharge to a private onsite wastewater treatment system.

(171e) “Peak flow, stormwater” means the largest anticipated flow from a given storm event.

(173) “Pit privy” means an enclosed nonportable toilet into which nonwater-carried human wastes are deposited to a subsurface storage chamber that is not watertight.

(174) “Pitch” means the gradient or slope of a line of pipe in reference to a horizontal plane.

(175) “Place of employment” has the meaning specified under s. 101.01 (11), Stats.

Note: Section 101.01 (11), Stats., reads:

“Place of employment” includes every place, whether indoors or out or underground and the premises appurtenant thereto where either temporarily or permanently any industry, trade or business is carried on, or where any process or operation, directly or indirectly related to any industry, trade or business, is carried on, and where any person is, directly or indirectly, employed by another for direct or indirect gain or profit, but does not include any place where persons are employed in private domestic service which does not involve the use of mechanical power or in farming. “Farming” includes those activities specified in s. 102.04 (3), and also includes the transportation of farm products, supplies or equipment directly to the farm by the operator of said farm or employees for the use thereon, if such activities are directly or indirectly for the purpose of producing commodities for market, or as an accessory to such production. When used with relation to building codes, “place of employment” does not include an adult family home, as defined in s. 50.01 (1), or, except for the purposes of s. 101.11, a previously constructed building used as a community-based residential facility, as defined in s. 50.01 (1g), which serves 20 or fewer unrelated residents.

(176) “Plumbing” has the meaning specified under s. 145.01 (10), Stats.

Note: Section 145.01 (10), Stats., reads:

“Plumbing” means:

(a) 1. All piping, fixtures, appliances, equipment, devices, and appurtenances in connection with water supply systems, water distribution systems, wastewater drainage systems, reclaimed water systems, and stormwater use systems, including hot water storage tanks, water treatment devices, and water heaters connected with these systems and also includes the installation thereof.

2. The construction, connection, installation, service, or repair of any drain or wastewater piping system that connects to the mains or other terminal within the bounds of, or beneath an area subject to easement for highway purposes, including

private sewage systems and stormwater treatment and dispersal systems, and the alteration of any such systems, drains or wastewater piping.

3. The construction, connection, installation, service, or repair of water service piping that connects to the main or other water utility service terminal within the bounds of, or beneath an area subject to easement for highway purposes and its connections.

4. The water pressure system other than municipal systems as provided in ch. 281.

5. A plumbing and drainage system so designed and vent piping so installed as to keep the air within the system in free circulation and movement; to prevent with a margin of safety unequal air pressures of such force as might blow, siphon or affect trap seals, or retard the discharge from plumbing fixtures, or permit sewer air to escape into the building; to prohibit cross-connection, contamination or pollution of the water supply and distribution systems, and to provide an adequate supply of water to properly serve, cleanse and operate all fixtures, equipment, appurtenances and appliances served by the plumbing system.

(br) “Plumbing” does not include any of the following:

1. A rainwater gutter or downspout down to the point that it discharges into a plumbing system, a subsoil drain, or a foundation drain.

2g. A process water reuse system if the process water reuse system is not connected to any plumbing fixture or appliance.

2m. A stormwater culvert under a roadway or walkway that is placed there only to equalize the water level from one end of the culvert to the other end.

3. The practical installation of process piping within a sewage disposal plant.

(177) “Plumbing appliance” means any one of a special class of plumbing devices which is intended to perform a special function. The operation or control of the appliance may be dependent upon one or more energized components, such as motors, controls, heating elements, or pressure or temperature sensing elements. The devices may be manually adjusted or controlled by the user or operator, or may operate automatically through one or more of the following actions: a time cycle, a temperature range, a pressure range, or a measured volume or weight.

(178) “Plumbing fixture” means a receptacle or device which meets at least one of the following:

(a) Is either permanently or temporarily connected to the water supply system of the premises, and demands a supply of water from the system;

(b) Discharges wastewater or waste materials either directly or indirectly to the drain system of the premises.

(c) Requires both a water supply connection and a discharge to the drain system of the premises.

(179) “Plumbing system” includes the water supply system, the drain system, the vent system, plumbing fixtures, plumbing appliances and plumbing appurtenances that serve a building, structure or premises.

(180) “Point of standards application” has the meaning specified under s. 160.01 (5), Stats.

Note: Section 160.01 (5) Stats., reads:

“Point of standards application” means the specific location, depth or distance from a facility, activity or practice at which the concentration of a substance in groundwater is measured for purposes of determining whether a preventive action limit or an enforcement standard has been attained or exceeded.

(181) “Potable water” means water that is both:

(a) Safe for drinking, personal or culinary use.

(b) Free from impurities present in amounts sufficient to cause disease or harmful physiological effects.

(182) “POWTS” means a private onsite wastewater treatment system.

(183) “POWTS component” means any subsystem, subassembly or other system designed for use in or as part of a private onsite wastewater treatment system which may include treatment, dispersal or holding and related piping.

(183m) “POWTS component manual” means a document that contains detailed design, installation, and operation and maintenance procedures for POWTS components. A component manual that is approved under s. SPS 384.10 (3) (c) is an acceptable method under s. SPS 383.61.

(184) “POWTS dispersal component” means a device or

method that is intended to promote the assimilation of treated wastewater by the environment.

(185) “POWTS holding component” means any receptacle intended to collect wastewater for a period of time, including holding and dosing tanks.

(186) “POWTS treatment component” means a device or method that is intended to reduce the contaminant load of wastewater.

(186s) “Pre-development” means the condition of the topography of vegetation, including that resulting from human activities that existed prior to land disturbance for construction.

(187) “Prefabricated plumbing” means concealed drain piping, vent piping or water supply or a combination of these types of piping, contained in a modular building component, which will not be visible for inspection when delivered to the final site of installation.

(187e) “Prefabricated sump and pump system” means a simplex or duplex pump and sump designed as a combined unit.

(188) “Pressure relief valve” means a pressure actuated valve held closed by a spring or other means and designed to automatically relieve pressure at a designated pressure.

(189) “Pressure vacuum breaker assembly” means a type of cross connection control assembly which consists of an independently acting check valve force-loaded to the closed position and an independently acting air inlet valve located downstream of the check valve that is force-loaded to the open position. The assembly also includes two tightly closing shutoffs, one at the inlet of the assembly and one at the outlet of the assembly, and two tightly closing test cocks, one immediately upstream and one immediately downstream of the check valve.

(190) “Pressurized flushing device” means a device that uses the water supply to create a pressurized discharge to flush a fixture exclusive of gravity type flushing systems.

(191) “Preventive action limit” or “PAL” has the meaning as specified under s. 160.01 (6), Stats.

Note: Section 160.01 (6), Stats., reads:

“Prevention action limits” means a numerical value expressing the concentration of a substance in groundwater which is adopted under s. 160.15, Stats.

(192) “Principal residence” means a residence that is occupied at least 51% of the year by the owner. Principal residence includes a residence owned by a trust or estate of an individual, if the residence is occupied at least 51% of the year by a person who has an ownership interest in the residence as a beneficiary of the trust or estate.

(193) “Private interceptor main sewer” means a sewer serving 2 or more buildings and not part of the municipal sewer system.

(194) “Private onsite wastewater treatment system” has the meaning given under s. 145.01 (12), Stats.

(195) “Private water main” means a water main serving 2 or more buildings and not part of the municipal water system.

(195m) “Process piping” means that piping which is separated from a water supply system or drain system by the acceptable methods or means specified under ch. SPS 382 and is part of a system used exclusively for refining, manufacturing, industrial, or shipping purposes of every character and description.

(196) “Public” means, in the classification of plumbing fixtures, those fixtures which are available for use by the public or employees.

(197) “Public building” has the meaning specified under s. 101.01 (12), Stats.

Note: Section 101.01 (12), Stats., reads:

“Public building” means any structure, including exterior parts of such building, such as a porch, exterior platform or steps providing means of ingress or egress, used

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in whole or in part as a place of resort, assemblage, lodging, trade, traffic, occupancy, or use by the public or by 3 or more tenants. When used in relation to building codes, “public building” does not include a previously constructed building used as a community-based residential facility as defined in s. 50.01 (1g) which serves 20 or fewer unrelated residents or an adult family home, as defined in s. 50.01 (1).

(197m) “Public lavatory” means a lavatory located in a public restroom or located outside of a public restroom. Hand wash sinks required by Department of Agriculture, Trade and Consumer Protection (DATCP), Department of Health Services (DHS), National Institutes of Health (NIH), or United States Department of Agriculture (USDA) are considered public lavatory fixtures.

(198) “Public sewer” means a sewer owned and controlled by a public authority.

(199) “Public water main” means a water supply pipe for public use owned and controlled by a public authority.

(199m) “Push-fit fitting” means a mechanical fitting that joins pipes or tubes and achieves a seal by pushing the mating pipe or tube into the fitting.

(200) “Quick closing valve” means a valve or faucet that closes automatically when released manually or controlled by mechanical means for fast action closing.

(201) “Receptor” means a fixture or device that receives the discharge from indirect or local waste piping.

(202) “Redoximorphic feature” means a feature formed in the soil matrix by the processes of reduction, translocation and oxidation of iron and manganese compounds in seasonally saturated soil.

(203) “Reduced pressure detector fire protection backflow prevention assembly” means a type of reduced pressure principle type backflow preventer serving a fire protection system and which includes a parallel flow meter to indicate leakage or unauthorized use of water downstream of the assembly.

(203m) “Reduced pressure fire protection principle backflow preventer” means an assembly serving a fire protection system and consisting of 2 independently-acting check valves, internally force loaded to a normally closed position, and separated by an intermediate chamber or zone in which there is a hydraulically operated relief means of venting to atmosphere, internally forced loaded to a normally open position. The term “reduced pressure principle backflow preventer for fire protection systems” has the same meaning as reduced pressure fire protection principle backflow preventer.

(204) “Reduced pressure principle backflow preventer” means a cross connection control assembly consisting of 2 independently-acting check valves, internally force-loaded to a normally closed position and separated by an intermediate chamber or zone in which there is a hydraulically operated relief means for venting to atmosphere, internally force-loaded to a normally open position. These assemblies are designed to operate under continuous pressure conditions. The assembly shall include 2 properly located, tightly closing shut-off valves and properly located test cocks.

(205) “Relief vent” means a vent which permits additional circulation of air in or between drain and vent systems.

(206) “Riser” means a water supply pipe that extends vertically one full story or more.

(207) “Roof drain” means a drain installed to receive water collecting on the surface of a roof and to discharge it into a conductor.

(208) “Roughing in” means the installation of all parts of the plumbing system which can be completed prior to the installation of fixtures including drain, water supply and vent piping and the necessary fixture supports.

(209) “Rowhouse” means a building which is not more than 3 stories in height and which contains only 3 or more attached, vertically separated, side-by-side or back-to-back dwelling units, with each dwelling unit served by an individual exterior exit within 6 feet of the exit discharge grade.

(209m) “RV transfer tank” means a type of stationary container used to collect and hold wastewater discharges generated by an individual camping trailer or recreational vehicle.

(210) “Safing” means a membrane or material installed beneath a fixture to prevent leakage from escaping to the floor, ceiling or walls.

(211) “Sand interceptor” means a receptacle designed to intercept and retain sand, grit, earth and other similar solids.

(212) “Sanitary sewer” means a pipe that carries wastewater consisting in part of domestic wastewater.

(212e) “Scrub sink” means a plumbing fixture used for hand and arm washing prior to surgery or other medical procedures.

Note: A scrub sink may also be referred to as a surgeon washup sink.

(213) “Scum” means the accumulated floating solids generated during the biological, physical or chemical treatment, coagulation or sedimentation of wastewater.

(214) “Secretary” means the secretary of the department of safety and professional services or designee.

(214m) “Service sink” means a fixture designed to be used for building or facility maintenance.

Note: A service sink may also be referred to as a mop sink, mop basin or janitor’s sink.

(215) “Servicing” has the meaning as specified under s. [NR 113.03 \(57\)](#).

(216) “Sewage” means wastewater containing fecal coliform bacteria exceeding 200 CFU, colony forming units, per 100 ml.

(217) “Sewage grinder pump” means a type of sewage pump which macerates wastewater consisting in part of sewage.

(218) “Sewage pump” means an automatic pump for the removal of wastewater from a sanitary sump.

(218m) “Siphonic roof drain system” means a drainage system designed to receive water collecting on a roof surface via negative pressure conditions created by roof drains that allow water to enter the stormwater piping system while minimizing the ingress of air, generating a negative differential fluid pressure within the piping system thereby inducing full-bore flow without pipe gradient.

(219) “Slip-joint” means a connection in which one pipe slips into another, the joint of which is made tight with a compression type fitting.

(220) “Sludge” means the accumulated solids generated during the biological, physical or chemical treatment, coagulation or sedimentation of water or wastewater.

(221) “Small commercial establishment” means a commercial establishment or business place with a maximum daily wastewater flow rate of less than 5,000 gallons per day as determined from the design criteria of the state plumbing code. Small commercial establishment includes a farm, including a residence on a farm, if the residence is occupied by a person who is an operator of the farm and if the maximum daily wastewater flow rate of the farm and the residence on the farm is less than 5,000 gallons-per-day as determined from the design criteria of the state plumbing code.

(222) “Soil” means the naturally occurring pedogenically developed and undeveloped regolith overlying bedrock.

(223) “Soil consistence” means the resistance of soil material to deformation or rupture as related to the degree of adhesion and cohesion of a soil mass.

(224) “Soil horizon” means a layer of soil material approximately parallel to the land surface and differing from adjacent genetically related layers in physical, chemical, or biologic characteristics.

(225) “Soil morphology” means the physical or structural characteristics of a soil profile particularly as related to the arrangement of soil horizons based on color, texture, structure, consistence, and porosity.

(226) “Soil profile” means a vertical section of soil containing one or more soil horizons.

(227) “Soil profile evaluation” means a determination of soil properties or characteristics as they relate to wastewater or non-water-carried human waste treatment or dispersal.

(228) “Soil structure” means the combination or arrangement of individual soil particles into definable aggregates or peds, which are characterized and classified on the basis of size, shape, and degree of distinctness.

(229) “Soil texture” means the relative proportions of sand, silt and clay (soil separates) in a soil.

(229m) “Special wastewater” means any wastewater containing deleterious waste material as defined in s. [SPS 382.34 \(3\) \(b\)](#).

(230) “Spigot” means the end of a pipe which fits into a bell or hub.

(231) “Spill level” means the horizontal plane to which water will rise to overflow through channels or connections which are not directly connected to any drainage system, when water is flowing into a fixture, vessel or receptacle at the maximum rate of flow.

(231m) “Spill resistant vacuum breaker” means a cross connection control assembly consisting of one check valve force-loaded closed and an air inlet force loaded open to atmosphere located downstream of the check valve. The assembly also includes 2 tightly closing shut-off valves and 2 test cocks or a no. 1 test cock and a bleed valve.

(232) “Spring line, pipe” means the line or place from which the arch of a pipe or conduit rises.

Note: See ch. [SPS 382 Appendix](#) for an illustration depicting the spring line of a pipe.

(233) “Stack” means a drain or vent pipe that extends vertically one full story or more.

(234) “Stack vent” means a vent extending from the highest horizontal drain connected to a stack.

(235) “Standpipe” means a drain pipe serving as a receptor for the discharge wastes from indirect or local waste piping.

(236) “State” means the state of Wisconsin, its agencies and institutions.

(237) “State plumbing code” means chs. [SPS 381](#) to [387](#).

(238) “Sterilizer, boiling type” means a device of nonpressure type, used for boiling instruments, utensils, or other equipment for disinfecting.

(239) “Sterilizer, instrument” means a device for the sterilization of various instruments.

(240) “Sterilizer, pressure” means a pressure vessel fixture designed to use steam under pressure for sterilizing.

Note: A pressure sterilizer is also referred to as an autoclave.

(241) “Sterilizer, pressure instrument washer” means a pressure vessel designed to both wash and sterilize instruments during the operating cycle of the device.

(242) “Sterilizer, utensil” means a device for the sterilization of utensils.

(243) “Sterilizer vent” means a separate pipe or stack, indirectly connected to the drain system at the lower terminal, which

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receives the vapors from nonpressure sterilizers, or the exhaust vapors from pressure sterilizers, and conducts the vapors directly to the outer air.

(244) “Sterilizer, water” means a device for sterilizing water and storing sterile water.

(245) “Storm sewer” means a pipe, other than a pipe located inside a building, that carries any of the following: storm water, groundwater or clear water.

(246) “Storm water” means wastewater from a precipitation event.

(247) “Subsoil drain” means that part of a drain system that conveys groundwater to a point of discharge or dispersal.

(248) “Sump” means a tank or pit that receives wastewater that must be emptied by mechanical means.

(249) “Sump pump” means an automatic device located in a sump, pit or low point that is designed to elevate storm water, groundwater or clear water.

(250) “Sump vent” means a vent pipe from a nonpressurized sump.

(251) “Supports” means hangers, anchors and other devices for supporting and securing pipes or fixtures to structural members of a building.

(252) “Surface water” means those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, all lakes, bays, rivers, streams, springs, ponds, impounding reservoirs, marshes, water courses, drainage systems, and other surface water, natural or artificial, public or private within the state or under its jurisdiction, except those waters which are entirely confined and completely retained upon the property of a facility.

(253) “Swimming pool” means a structure, basin, chamber or tank containing an artificial body of water for swimming, diving or recreational bathing.

(254) “Temperature and pressure relief valve” means a combination relief valve designed to function as both a temperature relief and pressure relief valve.

(255) “Temperature relief valve” means a temperature actuated valve designed to automatically discharge at a designated temperature.

(256) “Tempered water” means water ranging in temperature from 85°F. to less than 110°F.

(256e) “Ten-year, 24-hour storm” or “10-year, 24-hour storm” means a discrete rain storm event characterized by a specific duration, temporal distribution, rainfall intensity, return frequency and total depth of rainfall.

Note: The frequency, intensity, and duration of rainfall varies considerably during a storm by geographic location. Precipitation frequency atlases, NOAA Atlas 2, have been prepared by the National Oceanic and Atmospheric Administration (NOAA), National Weather Service. In chapter SPS 382, this value may be expressed as a specific “design storm”. The calculated volume of rainfall, or stormwater, may be determined from this value and used to calculate peak discharge.

(256m) “Thermal disinfection” means a method of providing bacterial control within a water distribution system using water that is heated and initially circulated to a minimum temperature of 140°F and with a minimum temperature of 124°F at the point of return to the heat source.

(257) “Total suspended solids” or “TSS” means solids in wastewater that can be removed readily by standard filtering procedures in a laboratory and reported as milligrams per liter (mg/L).

(259) “Trap” means a fitting, device or arrangement of piping so designed and constructed as to provide, when properly vented, a liquid seal which prevents emission of sewer gases without materially affecting the flow of wastewater through it.

(260) “Trap seal” means the vertical distance between the top of the trap weir and the top of the dip separating the inlet and outlet of the trap.

(260m) “Trap seal primer, drainage and electric types” means a device designed to supply water to a drain trap to provide and maintain its water seal by using a supply fixture drain line, an anti-siphon fill valve for water closet tanks, flushometer valve tailpiece, or an electric trap seal primer.

(261) “Trap seal primer, water supply fed” means a type of valve designed to supply water to the trap in order to provide and maintain the water seal of the trap.

(262) “Trap weir” means that part of a trap that forms a dam over which wastes must flow to enter the drain piping.

(263) “Turf sprinkler system” means a system of piping, appurtenances and devices installed underground to distribute water for lawn or other similar irrigation purposes.

(264) “Unsaturated soil” means soil in which the pore spaces contain water at less than atmospheric pressure, as well as air and other gases.

(265) “Vacuum” means any pressure less than that exerted by the atmosphere.

(265e) “Vacuum breaker tee” means an assembly of fittings designed to eliminate the possibility of back siphonage in a system by allowing air to enter through a tee fitting.

(266) “Vacuum relief valve” means a device that admits air into the water distribution system to prevent excessive vacuum in a water storage tank or heater.

(266m) “Vector control” means any method to limit or eradicate the mammals, birds, insects or other arthropods, collectively called “vectors,” which transmit disease pathogens.

(267) “Vent” means a part of the plumbing system used to equalize pressures and ventilate the system.

(268) “Vent header” means a branch vent which connects 2 or more stack vents or vent stacks or both and extends to the outside air.

(269) “Vent stack” means a vertical vent pipe that provides air for a drain stack of 5 or more branch intervals.

(270) “Vent system” means a pipe or pipes installed to provide a flow of air to or from a drain system, or to provide a circulation of air within the system to protect trap seals from siphonage and back pressure.

(271) “Vertical pipe” means any pipe or fitting which makes an angle of 45° or less with the vertical.

(272) “Wall hydrant, freeze resistant automatic draining type vacuum breaker” means a type of device which is designed and constructed with anti-siphon and back pressure preventive capabilities and with means for automatic post shut-off draining to prevent freezing.

(273) “Wall mounted water closet” means a water closet attached to a wall in such a way that it does not touch the floor.

(273e) “Washer sanitizer” means a plumbing appliance used for washing and disinfecting equipment.

(274) “Waste” means the discharge from any fixture, appliance, area or appurtenance.

(275) “Waste sink” means a receptor for the discharge from indirect or local waste piping installed with its flood level rim above the surrounding floor.

(276) “Wastewater” means clear water, storm water, domestic wastewater, industrial wastewater, sewage or any combination of these.

(277) “Wastewater, treated” means the effluent conveyed

through one or more POWTS treatment components to a POWTS dispersal component.

(277e) “Wastewater treatment device” means a device or method that is intended to beneficially alter the characteristics of wastewater.

(278) “Water closet” means a water-flushed plumbing fixture designed to receive human excrement directly from the user of the fixture.

(279) “Water conditioner” means an appliance, appurtenance or device used for the purpose of ion exchange, demineralizing water or other methods of water treatment.

(280) “Water distribution system” means that portion of a water supply system from the outlet of the building control valve to the connection of a fixture supply connector, plumbing fixture, plumbing appliance, water-using equipment, or other piping systems to be served.

(281) “Water heater” means any heating device with piping connections to the water supply system that is intended to supply hot water for domestic or commercial purposes other than space heating.

(281m) “Water operator-in-charge” means the person designated by the owner of the building waterworks to be directly responsible for the day-to-day operations of the waterworks.

Note: Per s. NR 114.03(15), “waterworks” means a community water system owned by, or a private utility serving, a county, city, village, town, town sanitary district, utility district or a county-owned or state-owned public institution for congregate care or correction, which includes but is not limited to correctional institutions, correctional camp systems, county jails or houses of correction, mental health institutes, schools for the handicapped, hospitals, infirmaries and asylums.

(282) “Water service” means that portion of a water supply system from the water main or private water supply up to and including the building control valve.

(283) “Waters of the state” has the meaning specified under s. 281.01 (18), Stats.

Note: Section 281.01 (18), Stats., reads:

“Waters of the state” means those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, watercourses, drainage systems and other surface water or groundwater, natural or artificial, public or private within the state or under its jurisdiction.

(284) “Water supply system” means the piping of a private water main, water service and water distribution system, fixture supply connectors, fittings, valves, and appurtenances through which water is conveyed to points of usage such as plumbing fixtures, plumbing appliances, water using equipment or other piping systems to be served.

(285) “Water treatment device” means a device which:

(a) Renders inactive or removes microbiological, particulate, inorganic, organic or radioactive contaminants from water which passes through the device or the water supply system downstream of the device; or

(b) Injects into the water supply system gaseous, liquid or solid additives other than water, to render inactive microbiological, particulate, inorganic, organic or radioactive contaminants.

(286) “Wetland” has the meaning given in s. 23.32 (1), Stats.

(287) “Wetland, constructed” means a man-made design complex of saturated substrates, emergent and submergent vegetation, and water that simulate natural wetlands for human use and benefits.

(288) “Wet vent” means that portion of a vent pipe that receives the discharge from other fixtures.

(288e) “Whirlpool” has the meaning as specified under s. SPS 390.03 (23) (j).

Note: Section SPS 390.03 (23) (j) reads:

“Whirlpool” means a relatively small public swimming pool that uses high tem-

perature water (greater than 93°F) and that may include a water agitation system. A whirlpool may also be referred to as a spa.

Note: A fill and dump bathtub is not a whirlpool.

(288m) “Whirlpool bath tub” means a plumbing appliance consisting of a bathtub fixture that is equipped and fitted with a circulation piping system designed to accept, circulate and discharge bathtub water upon each use.

(288s) “Yard hydrant” means a device with a water supply outlet, or faucet, that has a valve control and outlet above ground and a connection to the water supply system below ground.

(289) “Yoke vent” means a vent connected to a drain stack for the purpose of preventing pressure changes in the drain stack.

History: Cr. Register, April, 2000, No. 532, eff. 7-1-00; cr. (7e), (17e), (60e), (67e), (67m), (82m), (90e), (163e), (170e), (199e), (209e), (209m), (252e), (288e) and (288m), am. (18), (20), (79), (80), (189), (203) and (204), r. and recr. (116), Register, December, 2000, No. 540, eff. 1-1-01; CR 01-139: am. (209) Register June 2002 No. 558, eff. 7-1-02; corrections in (152) and (154) made under s. 13.93 (2m) (b) 7., Stats., Register June 2002 No. 558; CR 02-002: am. (7e), (42), (44), (46), (56), (80), (84), (90e), (120), (134), (147), (178), (181), (193), (195), (210), (245), (246), (247), and (276), cr. (7m), (35m), (51m), (56e), (61m), (62m), (65m), (72e), (90m), (108m), (160m), (187e), (212e), (214m), (265e), (273e), and (277e), r. and recr. (249) Register April 2003 No. 568, eff. 5-1-03; CR 02-129: cr. (2m) and (168m) Register January 2004 No. 577, eff. 2-1-04; CR 04-035: cr. (59m), (59s), (62s), (70m), (129s), (133s), (136s), (171e), (186s) and (256e), am. (234) and (269) Register November 2004 No. 587, eff. 12-1-04; CR 07-100: cr. (163s) Register September 2008 No. 633, eff. 10-1-08; correction in (288e) made under s. 13.92 (4) (b) 7., Stats., Register September 2008 No. 633; CR 08-055: am. (5), (79), (115), (120), (147), (156), (189), (204), (234), (269) and (288), r. (20), (67e), (67m), (199e), (209e), (209m), (252e) and (258), cr. (80m), (82e), (108s), (203m) and (231m), r. and recr. (80), (151) to (154), (163) and (203) Register February 2009 No. 638, eff. 3-1-09; corrections in (286) and (288e) made under s. 13.92 (4) (b) 7., Stats., and corrections to numbering of (80m), (108s) and (203m) made under s. 13.92 (4) (b) 1., Stats., Register February 2009 No. 638; CR 10-064: r. and recr. (35), am. (116), (166), renum. (160m) to be (160e), cr. (62e), (154m), (160m) Register December 2010 No. 660, eff. 1-1-11; correction in (intro.), (7e), (69), (88), (91), (170), (214), (237), (288e) made under s. 13.92 (4) (b) 6., 7., Stats., Register December 2011 No. 672; CR 11-031: r. (51), renum. (51m) to (51), cr. (209m) Register June 2013 No. 690, eff. 7-1-13; CR 13-062: renum. (141) to (141) (intro.) and am., cr. (141) (a) to (c) Register February 2014 No. 698, eff. 3-1-14; EmR1703: emerg. cr. (50g), (50r), eff. 2-6-17; CR 17-017: cr. (50g), (50r) Register March 2018 No. 747, eff. 4-1-18; CR 17-065: cr. (13m), am. (92), cr. (93m), (183m), am. (194) Register June 2018 No. 750, eff. 7-1-18; correction in numbering (183m) under s. 13.92 (4) (b) 1., Stats., Register June 2018 No. 750; CR 23-006: cr. (2r), (4m), am. (17e), (18), cr. (22m), (30m), am. (35m), (39), (44), cr. (50c), (50e), renum. (50g) to (50t), cr. (50h), (50L), am. (65m), (66), cr. (66m), (73e), (73m), (73s), am. (79), (108s), (116), (117), cr. (117m), (129m), (138m), r. (150), cr. (153e), (153m), (153s), (154g), renum. (172) to (13e) and am., am. (189), cr. (195m), (197m), (199m), am. (204), cr. (218m), (229m), am. (231m), cr. (256m), (260m), (266m), am. (280), cr. (281m), am. (282), cr. (288s) Register September 2023 No. 813, eff. 10-1-23; renum. (50t) to (50m) under s. 13.92 (4) (b) 1., Stats., and correction in (18), (50m), (108s), (116), (117), (189), (204), (231m) made under 35.17, Stats., Register September 2023 No. 813.

SPS 381.20 Incorporation of standards by reference. (1) CONSENT. (a) Pursuant to s. 227.21 (2), Stats., the attorney general has consented to the incorporation by reference of the standards listed in sub. (3).

(b) The codes and standards that are referenced in this chapter, and any additional codes and standards that are subsequently referenced in those codes and standards, shall apply to the prescribed extent of each such reference, except as modified by this chapter.

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 through the respective organizations listed in Tables 381.20-1 to 381.20-13.

(2) ALTERNATE STANDARDS. (a) Alternate standards that are equivalent to or more stringent than the standards referenced in chs. SPS 381 to 387 may be used in lieu of the referenced standards when approved by the department or if written approval is issued by the department in accordance with par. (b).

1. Upon receipt of a fee and a written request, the department may issue an approval for the use of the alternate standard.

2. The department shall review and make a determination on an application for approval within 40 business days of receipt of all forms, fees and documents required to complete the review.

Note: Review fees for standards under this paragraph are listed in ch. SPS 302.

(b) Determination of approval shall be based on an analysis of the alternate standard and the standard referenced in chs. SPS 381

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to 387, prepared by a qualified independent third party or the organization that published the standard contained in chs. SPS 381 to 387.

(c) The department may include specific conditions in issuing an approval, including an expiration date for the approval. Violations of the conditions under which an approval is issued shall constitute a violation of chs. SPS 381 to 387.

(d) If the department determines that the alternate standard is not equivalent to or more stringent than the referenced standard, the request for approval shall be denied in writing.

(e) The department may revoke an approval for any false statements or misrepresentations of facts on which the approval was based.

(f) The department may reexamine an approved alternate standard and issue a revised approval at any time.

(3) ADOPTION OF STANDARDS. The standards referenced in Tables 381.20-1 to 381.20-13 are incorporated by reference into chs. SPS 381 to 387.

Note: The tables in this section provide a comprehensive listing of all of the standards adopted by reference in chs. SPS 381 to 387. For requirements or limitations in how these standards are to be applied, refer to the code section that requires compliance with the standard.

(4) DEPARTMENT AUTHORITY. A department interpretation of an adopted standard under this chapter shall supersede any differing interpretation by either a lower level jurisdiction or an issuer of the adopted standard.

Table 381.20-1

Association of Home Appliance Manufacturers 1111 19th Street, NW Suite 402 Washington, DC 20036 Phone: 202-872-5955 Web page: www.aham.org		
AHAM		
Standard Reference		Title
Number		
DW-2-2020		Household Electric Dishwashers

Table 381.20-3e

American Society of Mechanical Engineers Two Park Avenue New York, New York 10016-5990 Phone: 800-843-2763 Website: www.asme.org		
ASME		
Standard Reference		Title
Number		
1. A112.1.2-2012 (R2017)		Air Gaps in Plumbing Systems (For Plumbing Fixtures and Water-Connected Receptors)
2. A112.1.3-2000 (R2015)		Air-gap Fittings for Use with Plumbing Fixtures, Appliances, and Appurtenances
3. A112.3.1-2007 (R2017)		Stainless Steel Drainage Systems for Sanitary DWV, Storm and Vacuum Applications Above and Below Ground
4. A112.3.4-2018/CSA B45.9-18		Macerating Toilet Systems and Waste Pumping Systems for Plumbing Fixtures
5. A112.4.1-2009 (R2019)		Water Heater Relief Valve Drain Tubes
6. A112.4.2-2015/CSA B45.16-15 (R2020)		Personal Hygiene Devices for Water Closets
7. A112.6.1M-97 (R2017)		Supports for Off-the-Floor Plumbing Fixtures for Public Use
8. A112.6.2-2017		Framing-Affixed Supports (Carriers) for Off-the-Floor Plumbing Fixtures
9. A112.6.3-2019		Floor and Trench Drains
10. A112.6.4-2003 (R2012)		Roof, Deck and Balcony Drains
11. A112.6.9-2005 (R2015)		Siphonic Roof Drains
12. A112.14.1-2003 (R2017)		Backwater Valves
13. A112.14.3-2018		Hydromechanical Grease Interceptors
14. A112.14.4-2001 (R2012)		Grease Removal Devices
15. A112.14.6-2010		FOG (Fats, Oils and Greases) Disposal Systems
16. A112.18.1-2018 / CSA B125.1-18		Plumbing Supply Fittings
17. A112.18.3-2002 (R2017)		Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings
18. A112.18.6-2017 / CSA B125.6-17		Flexible Water Connectors
19. A112.19.1-2018 / CSA B45.2-18		Enameled Cast Iron and Enameled Steel Plumbing Fixtures

Table 381.20-3e (Continued)

ASME		American Society of Mechanical Engineers Two Park Avenue New York, New York 10016-5990 Phone: 800-843-2763 Website: www.asme.org
Standard Reference Number	Title	
20. A112.19.2-2018 / CSA B45.1-18	Vitreous China Plumbing Fixtures and Hydraulic Requirements for Water Closets and Urinals	
21. A112.19.3-2017 / CSA B45.4-17	Stainless Steel Plumbing Fixtures (Designed for Residential Use)	
22. A112.19.4M-1994 (R2009)	Porcelain Enameled Formed Steel Plumbing Fixtures	
23. A112.19.5-2017 / CSA B45.15-17	Flush Valves and Spuds for Water-Closets, Urinals, and Tanks	
24. B1.20.1-2013 (R2018)	Pipe Threads, General Purpose, (Inch)	
25. B16.1-2020	Gray Iron Pipe Flanges and Flanged Fittings (Classes 25, 125, and 250)	
26. B16.3-2016	Malleable Iron Threaded Fittings (Classes 150 and 300)	
27. B16.4-2016	Gray Iron Threaded Fitting (Classes 125 and 250)	
28. B16.5-2020	Pipe Flanges and Flanged Fittings: NPS 1/2 through NPS 24 Metric/Inch Standard	
29. B16.9-2018	Factory-Made Wrought Buttwelding Fittings	
30. B16.11-2016	Forged Fittings, Socket-Welding and Threaded	
31. B16.12-2019	Cast Iron Threaded Drainage Fittings	
32. B16.15-2018	Cast Bronze Threaded Fittings (Classes 125 and 250)	
33. B16.18-2018	Cast Copper Alloy Solder Joint Pressure Fittings	
34. B16.22-2018	Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings	
35. B16.23-2016	Cast Copper Alloy Solder Joint Drainage Fittings: DWV	
36. B16.24-2016	Cast Copper Alloy Pipe Flanges, Flanged Fittings, and Valves: Classes 150, 300, 600, 900, 1500, and 2500	
37. B16.26-2018	Cast Copper Alloy Fittings for Flared Copper Tubes	
38. B16.29-2017	Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV	
39. B16.42-2016	Ductile Iron Pipe Flanges and Flanged Fittings, (Classes 150 and 300)	
40. B16.45-1998 (R2006)	Cast Iron Fittings for Sovent® Drainage Systems	
41. B36.19M-2018	Stainless Steel Pipe	

Table 381.20-3p

ASPE		American Society of Plumbing Engineers (ASPE) 6400 Shafer Ct, Ste 350, Rosemont, Illinois 60018-4914 Phone: (847) 296-0002 Website: www.aspe.org
Standard Reference Number	Title	
1. 45-2018	Siphonic Roof Drainage	

Table 381.20-4

ASSE/IAMPO		American Society of Sanitary Engineering 18927 Hickory Creek Drive, Suite 220 Mokena, Illinois 60448 Phone: 708-995-3019 Website: www.asse-plumbing.org
Standard Reference Number	Title	
1. 1001-2021	Atmospheric Type Vacuum Breakers	
2. ASSE 1002-2020/ASME A112.1002-2020/CSA B125.12.20	Anti-siphon Fill Valves for Water Closet Tanks	
3. 1003-2020 e1	Water Pressure Reducing Valves for Potable Water Distribution Systems	
4. 1004-2017	Commercial Dishwashing Machines	
5. 1006-1989	Residential Use (Household) Dishwashers	
6. 1007-1992	Home Laundry Equipment	

Table 381.20-4 (Continued)

ASSE/IAMPO		American Society of Sanitary Engineering 18927 Hickory Creek Drive, Suite 220 Mokena, Illinois 60448 Phone: 708-995-3019 Website: www.asse-plumbing.org
Standard Reference Number	Title	
7. 1008-2020	Plumbing Aspects of Residential Food Waste Disposer Units	
8. 1009-1990	Commercial Food Waste Grinder Units	
9. 1010-2004	Water Hammer Arresters	
10. 1011-2017	Hose Connection Vacuum Breakers	
11. 1012-2021	Backflow Preventer with Intermediate Atmospheric Vent	
12. 1013-2021	Reduced Pressure Principle Backflow Preventers and Reduced Pressure Principle Fire Protection Backflow Preventers	
13. 1014-2020	Backflow Prevention Devices for Hand-Held Showers	
14. 1015-2021	Double Check Backflow Prevention Assemblies and Double Check Fire Protection Backflow Prevention Assemblies	
15. ASSE 1016-2017/ASME A112.1016-2017/CSA B125.16-17	Automatic Compensating Valves for Individual Showers and Tub/Shower Combinations	
16. 1017-2009	Temperature Actuated Mixing Valves for Hot Water Distribution Systems	
17. 1018-2001 (R2021)	Trap Seal Primer Valves - Potable Water Supplied	
18. 1019-2011 (R2016)	Wall Hydrant with Backflow Protection and Freeze Resistance	
19. 1020-2020 e1	Pressure Vacuum Breaker Assembly	
20. 1022-2021	Backflow Preventer for Beverage Dispensing Equipment	
21. 1023-2020	Hot Water Dispensers, Household Storage Type, Electrical	
22. 1024-2017 (R2021)	Dual Check Backflow Preventers	
23. 1032-2004 (R2021)	Dual Check Valve Type Backflow Preventers for Carbonated Beverage Dispensers, Post-Mix Type	
24. 1035-2020	Laboratory Faucet Backflow Preventers	
25. 1037-2015/ASME A112.1037-2015/CSA B125.37-15 (R2020)	Pressurized Flushing Devices for Plumbing Fixtures	
26. 1044-2015	Trap Seal Primer – Drainage Types and Electric Design Types	
27. 1047-2021	Reduced Pressure Detector Fire Protection Backflow Prevention Assemblies, Performance Requirements for	
28. 1048-2021	Double Check Detector Fire Protection Backflow Prevention Assemblies, Performance Requirements for	
29. 1050-2021	Stack Air Admittance Valves for Sanitary Drainage Systems	
30. 1051-2021	Individual and Branch Type Air Admittance Valves for Sanitary Drainage Systems	
31. 1052-2016	Hose Connection Backflow Preventers, Performance Requirements for	
32. 1053-2019	Dual Check Backflow Preventer Wall Hydrants - Freeze Resistant Type, Performance Requirements for	
33. ANSI/CAN/ASSE/IAPMO 1055-2020	Chemical Dispensing Systems with Integral Backflow Protection, Performance Requirements for	
34. 1056-2013 (R2021)	Spill Resistant Vacuum Breaker Assemblies, Performance Requirements for	
35. 1057-2012	Freeze Resistant Sanitary Yard Hydrants with Backflow Protection, Performance Requirements for	
36. 1061-2020	Performance Requirements for Push-Fit Fittings	
37. 1066-1997	Individual Pressure Balancing In-Line Valves for Individual Fixture Fittings	
38. 1072-2020	Performance Requirements for Barrier Type Trap Seal Protection for Floor Drains	
39. 1079-2012 (R2021)	Performance Requirements for Dielectric Pipe Unions	
40. 1081-2014 (R2020)	Performance Requirements for Backflow Preventers with Integral Pressure Reducing Boiler Feed Valve and Intermediate Atmospheric Vent Style for Domestic and Light Commercial Water Distribution Systems	
41. ASSE/IAPMO/ANSI SE-RIES 5000-2022e1	Cross Connection Control Professional Qualifications	
42. IAPMO/ANSI Z1001-2016	(Prefabricated Gravity Grease Interceptors)	

Table 381.20-5

ASTM		ASTM International 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428-2959 Phone: (610) 832-9500 Website: www.astm.org
Standard Reference Number	Title	
1. A53/A53M-20	Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless, Specification for	
2. A74-21	Cast Iron Soil Pipe and Fittings, Specification for	
3. A123/A123M-17	Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products, Standard Specification for	
4. A269/A269M Rev. A-15 (R2019)	Seamless and Welded Austenitic Stainless-Steel Tubing for General Service	
5. A270/A270M-15 (R2019)	Seamless and Welded Austenitic and Ferritic/Austenitic Stainless Steel Sanitary Tubing, Standard Specification for	
6. A312/A312M-2019	Seamless, Welded and Heavily Cold Worked Austenitic Stainless-Steel Pipes	
7. A358/A358M-2019	Electro-Fusion-Welded Austenitic Chromium-Nickel Stainless Steel Pipe for High-Temperature Service and General Applications	
8. A403/A403M-20	Wrought Austenitic Stainless Steel Piping Fittings, Standard Specification for	
9. A450/A450M-18a	Carbon, Ferritic Alloy, and Austenitic Alloy Steel Tubes	
10. A554-21	Welded Stainless Steel Mechanical Tubing	
11. A774/A774M-14 (R2019)	Welded Wrought Austenitic Stainless Steel Fittings for General Corrosive Service at Low and Moderate Temperatures	
12. A778/A778M-2016 (R2021)	Welded, Unannealed Austenitic Stainless Steel Tubular Products	
13. A888-21	Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Pipe Applications, Specifications for	
14. B32-20	Solder Metal,	
15. B42-20	Seamless Copper Pipe, Standard Sizes	
16. B43-20	Seamless Red Brass Pipe, Standard Sizes, Specification for	
17. B75/B75M-20	Standard Specification for Seamless Copper Tube	
18. B88-20	Seamless Copper Water Tube, Standard Specification for	
19. B88M-20	Seamless Copper Water Tube (Metric), Standard Specification for	
20. B135/B135M-17	Standard Specification for Seamless Brass Tube	
21. B152/B152M-19	Copper Sheet, Strip, Plate, and Rolled Bar, Standard Specification for	
22. B251/B251M-17	Wrought Seamless Copper and Copper-Alloy Tube, Standard Specification for	
23. B302-17	Threadless Copper Pipe, Standard Sizes, Standard Specification for	
24. B306-20	Copper Drainage Tube (DWV), Standard Specification for	
25. B447-12a (R2021)	Standard Specification for Welded Copper Tube	
26. B828-16	Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings, Standard Practice for	
27. C4-04 (R2018)	Clay Drain Tile and Perforated Clay Drain Tile	
28. C14-20	Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe, Specification for	
29. C14M-20	Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe (Metric), Specification for	
30. C33/C33M-18	Concrete Aggregates, Specification for	
31. C76-20	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe, Specification for	
32. C76M-20	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe, (Metric) Specifications for	
33. C425-04 (R2018)	Compression Joints for Vitrified Clay Pipe and Fittings, Standard Specification for	
34. C443-20	Joints for Circular Concrete Pipe and Manholes, Using Rubber Gaskets, Standard Specification for	
35. C443M-20	Joints for Circular Concrete Pipe and Manholes, Using Rubber Gaskets (Metric), Standard Specification for	
36. C507-20	Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe, Standard Specification for	
37. C507M-20	Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe (Metric)	
38. C564-20a	Rubber Gaskets for Cast Iron Soil Pipe and Fittings, Standard Specification for	

Table 381.20-5 (Continued)

ASTM		ASTM International 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428-2959 Phone: (610) 832-9500 Website: www.astm.org
Standard Reference Number	Title	
39. C700-18	Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated, Standard Specification for	
40. C877-21	External Sealing Bands for Concrete Pipe, Manholes, and Precast Box Sections, Standard Specifications for	
41. C877M-21	External Sealing Bands for Concrete Pipe, Manholes, and Precast Box Sections, (Metric)	
42. C887-20	Standard Specification for Packaged, Dry, Combined Materials for Surface Bonding Mortar	
43. C923/C923M-20	Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals, Standard Specification for	
44. C990-09 (R2019)	Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants, Standard Specification for	
45. C990M-09 (R2019)	Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants (Metric)	
46. C1227-20	Precast Concrete Septic Tanks	
47. C1306/C1306M-08 (R2016)	Hydrostatic Pressure Resistance of a Liquid-Applied Waterproofing Membrane, Standard Test Method for	
48. C1478-20	Standard Specification for Storm Drain Resilient Connectors Between Reinforced Concrete Storm Sewer Structures, Pipes and Laterals	
49. C1613-17	Precast Concrete Grease Interceptor Tanks	
50. C1628-19	Standard Specification for Joints for Concrete Gravity Flow Sewer Pipe Using Rubber Gaskets	
51. C1644-06 (R2017)	Standard Specification for Resilient Connectors Between Reinforced Concrete On-Site Wastewater Tanks and Pipes	
52. C1745/C1745M-18	Standard Test Method for Measurement of Hydraulic Characteristics of Hydrodynamic Stormwater Separators and Underground Settling Devices	
53. D1785-15	Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120, Standard Specification for	
54. D2235-04 (R2016)	Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings, Standard Specification for	
55. D2239-12a (R2020)	Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter, Standard Specification for	
56. D2241-20	Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR-Series), Standard Specification for	
57. D2321-20	Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications, Standard Practice for	
58. D2464-15	Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80, Standard Specification for	
59. D2466-17	Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40, Standard Specification for	
60. D2467-20	Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80, Standard Specification for	
61. D2564-20	Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Systems, Standard Specification for	
62. D2609-15	Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe, Standard Specification for	
63. D2657-07 (R2015)	Heat Fusion Joining of Polyolefin Pipe and Fittings, Standard Practice for	
64. D2661-14	Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings, Standard Specification for	
65. D2665-20	Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings, Standard Specification for	
66. D2680-20	Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Composite Sewer Piping, Specification for	

Table 381.20-5 (Continued)

ASTM		ASTM International 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428-2959 Phone: (610) 832-9500 Website: www.astm.org
Standard Reference Number	Title	
67. D2683-20	Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing, Standard Specification for	
68. D2729-17	Polyvinyl Chloride (PVC) Sewer Pipe and Fittings, Standard Specification for	
69. D2737-12a (R2020)	Polyethylene (PE) Plastic Tubing, Standard Specification for	
70. D2774-21	Underground Installation of Thermoplastic Pressure Piping, Standard Practice for	
71. D2846/D2846M-19a	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems, Standard Specification for	
72. D2852-16	Styrene-Rubber (SR) Plastic Drain Pipe and Fittings, Standard Specification for	
73. D2855-20	Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings, Standard Practice for	
74. D3034-16	Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, Standard Specification for	
75. D3035-15	Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Controlled Outside Diameter, Standard Specification for	
76. D3138-04 (R2016)	Solvent Cements for Transition Joints Between Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Non-Pressure Piping Components, Standard Specification for	
77. D3212-20	Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals, Standard Specification for	
78. D3261-16	Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing, Standard Specification for	
79. D3311-17	Drain, Waste, and Vent (DWV) Plastic Fittings Patterns, Standard Specification for	
80. D4068-17	Standard Specification for Chlorinated Polyethylene (CPE) Sheeting for Concealed Water-Containment Membrane	
81. D4491/D4491M-20	Water Permeability of Geotextile by Permittivity, Standard Specification for	
82. D4533/D4533M-15	Trapezoid Tearing Strength of Geotextiles, Standard Test Method for	
83. D4632/D4632M-15a	Grab Breaking Load and Elongation of Geotextiles, Standard Test Method for	
84. D4751-20b	Determining Apparent Opening Size of a Geotextile, Standard Test Method for	
85. D4833/D4833M-07 (R2020)	Index Puncture Resistance of Geomembranes; and Related Products, Standard Test Method for	
86. F402-18	Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings, Standard Practice for	
87. F409-17	Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings, Standard Specification for	
88. F437-15	Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80, Standard Specification for	
89. F438-17	Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40, Standard Specification for	
90. F439-19	Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80, Standard Specification for	
91. F441/F441M-20	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80, Standard Specification for	
92. F442/F442M-20	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR), Standard Specification for	
93. F477-14	Elastomeric Seals (Gaskets) for Joining Plastic Pipe, Standard Specification for	
94. F481-97 (R2019)	Standard Practice for Installation of Thermoplastic Pipe and Corrugated Pipe in Septic Tank Leach Fields	
95. F493-20	Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings, Standard Specification for	
96. F585-16 (R2021)	Standard Guide for Insertion of Flexible PE Pipe into Existing Sewers	
97. F628-12	Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core, Standard Specification for	

Table 381.20-5 (Continued)

ASTM		ASTM International 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428-2959 Phone: (610) 832-9500 Website: www.astm.org
Standard Reference Number	Title	
98. F656-15	Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings, Standard Specification for	
99. F667/F667M-16	3 through 24 in. Corrugated Polyethylene Pipe and Fittings, Standard Specification for	
100. F679-16	Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings, Standard Specification for	
101. F714-21a	Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter	
102. F794-03 (R2014)	Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter, Standard Specification for	
103. F810-12 (R2018)	Smoothwall Polyethylene (PE) Pipe for Use in Drainage and Waste Disposal Absorption Fields, Standard Specification for	
104. F876-20b	Crosslinked Polyethylene (PEX) Tubing, Standard Specification for	
105. F877-20	Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems, Standard Specification for	
106. F891-16	Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe With a Cellular Core, Standard Specification for	
107. F894-19	PE Large Diameter Profile Wall Sewer and Drain Pipe	
108. F949-20	Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe With a Smooth Interior and Fittings, Standard Specification for	
109. F1055-16a	Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene and PEX Pipe and Tubing	
110. F1281-17	Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe, Standard Specification for	
111. F1282-17	Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe, Standard Specification for	
112. F1336-20	Poly (Vinyl Chloride) (PVC) Gasketed Sewer Fittings, Specification for	
113. F1412-16	Standard Specification for Polyolefin Pipe and Fittings for Corrosive Waste Drainage Systems	
114. F1673-10 (R2016)	Standard Specification for Polyvinylidene Fluoride (PVDF) Waste Drainage Systems	
115. F1732-12 (R2018)	Standard Specification for PVC Sewer and Drain Pipe Containing Recycled PVC Material Standard Specification for PVC Sewer and Drain Pipe Containing Recycled PVC Material	
116. F1760-16 (R2020)	Standard Specification for Coextruded PVC Non-Pressure Plastic Pipe Having Reprocessed-Recycled Content	
117. F1807-19b	Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing, Standard Specification for	
118. F1866-18	Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings, Specifications for	
119. F1901-16	Standard Specification for PE Pipe and Fittings for Roof Drain Systems	
120. F1960-21	Standard Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) and Polyethylene of Raised Temperature (PE-RT) Tubing	
121. F1962-20	Standard Guide for Use of Maxim-Horizontal Directional Drilling for Placement of Polyethylene Pipe or Conduit Under Obstacles, Including River Crossings	
122. F1970-19	Standard Specification for Special Engineered Fittings, Appurtenances or Valves for use in Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Systems	
123. F1974-09 (R2020)	Standard Specification for Metal Insert Fittings for PE-AL-PE and Crosslinked PEX-AL-PEX Composite Pressure Pipe	
124. F2021-17	Design & Installation of Plastic Siphonic Roof Drain Systems	

Table 381.20-5 (Continued)

ASTM		ASTM International 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428-2959 Phone: (610) 832-9500 Website: www.astm.org
Standard Reference Number		Title
125.	F2080-19	Standard Specification for Cold-Expansion Fittings with Metal Compression-Sleeves for Crosslinked Polyethylene (PEX) Pipe and SDR9 Polyethylene of Raised Temperature (PE-RT) Pipe
126.	F2098-18	Standard Specification for Stainless Steel Clamps for Securing SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) to Metal Insert and Plastic Insert Fittings
127.	F2159-21	Standard Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring, or Alternate Stainless Steel Clamps for SDR9 Crosslinked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing
128.	F2165-19	Standard Specification for Flexible Pre-Insulated Plastic Piping
129.	F2389-21	Standard Specification for Pressure Rated Polypropylene (PP) Piping Systems
130.	F2390-21	Standard Specification for PVC Plastic Drain, Waste and Vent (DWV) Pipe and Fittings Having Post-Industrial Recycle Content
131.	F2418-19	Standard Specification for Polypropylene (PP) Corrugated Wall Stormwater Collection Chambers
132.	F2434-19	Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 PEX and SDR9 PEX-AL-PEX Tubing
133.	F2510/2510M-17	Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures and Corrugated Dual- and Triple-Wall PE and PP Pipes
134.	F2618-21	Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems
135.	F2620-20	Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings
136.	F2649-14 (R2019)	Standard Specification for Corrugated HDPE Grease Interceptor Tanks
137.	F2735-21	Standard Specification for Plastic Insert Fittings for SDR9 PEX and PE-RT Tubing
138.	F2737-11 (R2021)	Standard Specification for Corrugated HDPE Water Quality Units
139.	F2763/F2763M-16 (R2021)	Standard Specification for 12 to 60 in. Dual- and Triple Profile Wall PE Pipe and Fittings for Sanitary Sewer Applications
140.	F2764/F2764M-19	Standard Specification for 6 to 60 in. PP Corrugated Double- and Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications
141.	F2769-18	Standard Specification for Polyethylene of Raised Temperature (PE-RT) Plastic Hot and Cold-Water Tubing and Distribution Systems
142.	F2787-13 (R2018)	Standard Practice for Structural Design of Thermoplastic Corrugated Wall Stormwater Collection Chambers
143.	F2829/F2829M-21	Standard Specification for Metric- and Inch-Sized Fittings for PEX Pipe
144.	F2854-21	Standard Specification for Push-Fit PEX Mechanical Fittings for PEX Tubing
145.	F2855-19	Standard Specification for CPVC-AL-CPVC Composite Pressure Tubing
146.	F2881/2881M-21	Standard Specification for 12 to 60 in. PP Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications
147.	F2922-13 (R2018)	Standard Specification for Polyethylene (PE) Corrugated Stormwater Collection Chambers
148.	F3190-21	Standard Practice for Heat Fusion Equipment (HFE) Operator Qualification on PE and Polyamide Pipe and Fittings
149.	F3328-18	Standard Practice for the One-Step (Solvent Cement Only) Method of Joining Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Piping Components with Tapered Sockets
150.	F3346-19	Standard Specification for PE-RT-AL-PE-RT Composite Pressure Pipe
151.	F3347-20a	Standard Specification for Metal Press Insert Fittings with Factory Assembled Stainless Steel Press Sleeve for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing
152.	F3348-21	Standard Specification for Plastic Press Insert Fittings with Factory Assembled Stainless Steel Press Sleeve for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing

Table 381.20-6

AWS	American Welding Society 8669 NW 36 Street, #130 Miami, Florida 33166-6672 Phone: 800-443-9353 Website: www.aws.org
Standard Reference Number	Title
1. AWS A5.8M/A5.8:2019	Filler Metals for Brazing and Braze Welding, Specification for

Table 381.20-7

AWW	American Water Works Association (AWWA) 6666 West Quincy Avenue Denver, Colorado 80235 Phone: 303-794-7711 or 800-926-7337 Website: www.awwa.org
Standard Reference Number	Title
1. ANSI/AWWA C110/A21.10-12	American National Standard for Ductile-Iron and Gray-Iron Fittings
2. ANSI/AWWA C111/A21.11-17	American National Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
3. ANSI/AWWA C115/A21.15-20	American National Standard for Flanged Ductile-Iron Pipe with Ductile-Type Iron or Gray-Iron Pipe Threaded Flanges
4. ANSI/AWWA C151/A21.51-17	Ductile-Iron Pipe, Centrifugally Cast, for Water
5. ANSI/AWWA C153/A21.53-19	American National Standard for Ductile-Iron Compact Fittings, 3 in. through 16 in., for Water and Other Liquids
6. ANSI/AWWA C220-17	Stainless-Steel Pipe, 1/2 in. (13mm) and Larger
7. ANSI/AWWA C651-14	Water Mains, Disinfecting
8. ANSI/AWWA C700-20	Cold-Water Meters — Displacement Type with Bronze Metal Main Case (w/ 1991 Addendum)
9. ANSI/AWWA C701-15	Cold-Water Meters — Turbine Type, for Customer Service
10. ANSI/AWWA C702-19	Cold-Water Meters — Compound Type
11. ANSI/AWWA C704-19	Cold-Water Meters — Propeller Type for Main Line Applications
12. ANSI/AWWA C707-10 (R2016)	Cold-Water Meters, Encoder-Type, Remote-Registration Systems
13. ANSI/AWWA C708-19	Cold-Water Meters — Multi-Jet Type
14. ANSI/AWWA C710-20	Cold-Water Meters, Displacement Type — Plastic Main
15. ANSI/AWWA C900-16	Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings 4-inch to 12-inch (100mm Through 300 mm) for Water Transmission and Distribution
16. ANSI/AWWA C901-20	Polyethylene (PE) Pressure Pipe and Tubing, 1/2 in. (13mm) Through 3 in. (76mm) for Water Service
17. ANSI/AWWA C904-16	Cross-Linked PEX Pressure Tubing 1/2-3 in. for Water Service
18. ANSI/AWWA C906-15	Polyethylene Pressure Pipe and Fittings, 4 in. through 63 in., for Water Distribution

Table 381.20-7e

CSA	Canadian Standards Association 178 Rexdale Boulevard Toronto, Ontario, Canada M9W 1R3 Phone: 800-463-6727 Website: www.csagroup.org
Standard Reference Number	Title
1. 4.1:19/Z21.10.1:19	Gas water heaters, volume I, storage water heaters with input ratings of 75,000 Btu per hour or less
2. 4.3:19/Z21.10.3:19	Gas-fired water heaters, volume III, storage water heaters with input ratings above 75,000 Btu per hour, circulating and instantaneous
3. 4.4-2015 (R2020) / ANSI Z21.22-2015 (R2020)	Relief Valves for Hot Water Supply Systems
4. B45.5-17/IAPMO Z124-2017	Plastic Plumbing Fixtures
5. B45.13:19/IAPMO Z1700-2019	Vacuum Waste Collection Systems
6. B64 SERIES-11 (R2016)	Backflow preventers and vacuum breakers
7. B66-16	Design, Material and Manufacturing Requirements for Prefabricated Septic Tanks and Sewage Holding Tanks

8.	B125.3-18	Plumbing Fittings
9.	B137:20	Thermoplastic Pressure Piping Standards Package - Consists of All the CSA B137:20 Standards
10.	B481 Series 12 (R2017)	Grease Interceptors
11.	B1800:21	Thermoplastic Non-pressure Piping Compendium (Numbers 17 and 18 are superseded by CSA B1800.)

Table 381.20-8

CISPI	Cast Iron Soil Pipe Institute 2401 Fieldcrest Dr. Mundelein, Illinois 60060 Phone: 212-864-2910 Website: www.cispi.org	
Standard Reference Number	Title	
1. 301-18	Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications, Standard Specification for	
2. 310-20	Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications, Specification for	

Table 381.20-9

FMRC	FM Global (FMRC) 270 Central Avenue Johnston, Rhode Island 02919-4949 Phone: 401-275-3000 Website: www.fmglobal.com	
Standard Reference Number	Title	
1. 1680-89	Couplings Used in Hubless Cast Iron Systems for Drain, Waste or Vent, Sewer, Rainwater or Storm Drain Systems Above and Below Ground, Industrial/Commercial and Residential, January 1989	

Table 381.20-10

NFPA	National Fire Protection Association 1 Batterymarch Park Quincy, Massachusetts 02169-7471 Phone: 800-344-3555 Website: www.nfpa.org	
Standard Reference Number	Title	
1. NFPA 13D-2019	Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, Standard for the	
2. NFPA 24-2019	Installation of Private Fire Service Mains and Their Appurtenances, Standard for the	

Table 381.20-11

NSF	NSF International (NSF) 789 N. Dixboro Road P.O. Box 130140 Ann Arbor, Michigan 48105 Phone: (800) 673-6275 Website: www.nsf.org	
Standard Reference Number	Title	
1. NSF/ANSI 3-2019	Commercial Warewashing Equipment	
2. NSF/ANSI 12-2018	Automatic Ice Making Equipment	
3. P157-2000	Electrical Incinerating Toilets – Health and Sanitization	
4. NSF/ANSI 14-2020	Plastic Piping System Components and Related Materials	
5. NSF/ANSI 40-2019	Residential Wastewater Treatment Systems	
6. NSF/ANSI 41-2018	Non-liquid Saturated Treatment Systems	
7. NSF/ANSI 42-2020	Drinking Water Treatment Units – Aesthetic Effects	
8. NSF/ANSI 44-2018	Residential Cation Exchange Water Softeners	
9. NSF/ANSI 46-2021	Evaluation of Components and Devices Used in Wastewater Treatment Systems	
10. NSF/ANSI/CAN 50-2019	Equipment and Chemicals for Swimming Pools, Spas, Hot Tubs, and Other Recreational Water Facilities	
11. NSF/ANSI 51-2019	Food Equipment Materials	
12. NSF/ANSI 53-2020	Drinking Water Treatment Units – Health Effects	
13. NSF/ANSI 55-2019	Ultraviolet Microbiological Water Treatment Systems	
14. NSF/ANSI 58-2020	Reverse Osmosis Drinking Water Systems	
15. NSF/ANSI/CAN 60-2020	Drinking Water Treatment Chemicals – Health Effects	
16. NSF/ANSI/CAN 61-2020	Drinking Water System Components — Health Effects	
17. NSF/ANSI 62-2020	Drinking Water Distillation Systems	
18. NSF/ANSI 184-2019	Residential Dishwashers	
19. NSF/ANSI 240-2017	Drainfield Trench Product Sizing for Gravity Dispersal Onsite Wastewater Treatment and Dispersal Systems	
20. NSF/ANSI 245-2019	Residential Wastewater Treatment Systems - Nitrogen Reduction	
21. NSF/ANSI 350-2020	Onsite Residential and Commercial Water Reuse Treatment Systems	
22. NSF/ANSI 350-1-2017	Onsite Residential and Commercial Greywater Treatment Systems for Subsurface Discharge	
23. NSF/ANSI 359-2018	Valves for PEX Water Distribution Tubing Systems	
24. NSF/ANSI 372-2020	Drinking Water System Components — Lead Content	

Table 381.20-11m

PDI	The Plumbing and Drainage Institute (PDI) 800 Turnpike Street, Suite 300 North Andover, Massachusetts 01845 USA 800-589-8956 Website: www.pdionline.org	
Standard Reference Number	Title	
1. PDI-G 101 (R2017)	Testing and Rating Procedure for Hydro Mechanical Grease Interceptors with Appendix of Installation and Maintenance	
2. PDI-G 102 (2009)	Testing and Certification for Grease Interceptors with FOG Sensing and Alarm Devices	

Table 381.20-12

STI/SPFA	Steel Tank Institute/Steel Plate Fabricators Association 944 Donata Court Lake Zurich, Illinois 60047 Phone: 847-438-8265 Website: www.steeltank.com	
Standard Reference Number	Title	
STI-P STI/SPFA STI-P3-2018	External Corrosion Protection of Underground Steel Storage Tanks, Specifications and Manual for	

Table 381.20-13

UL	Underwriters Laboratories Inc. 333 Pfingsten Road Northbrook, Illinois 60062 Phone: 847-272-8800 Website: www.ul.com	
Standard Reference Number	Title	
1. Standard 58-2018	Steel Underground Tanks for Flammable and Combustible Liquids — Tenth Edition	
2. Standard 174-2021	Standard for Safety Household Elec. Storage Tank Water Heaters	
3. Standard 732-2018	Standard for Safety Oil-Fired Storage Tank Water Heaters	
4. Standard 1261-2017	Standard for Safety Elec. Water Heaters for Pools and Spas	
5. Standard 1431-2020	Standard for Safety Personal Hygiene and Health Care Appliances	
6. Standard 1453-2018	Standard for Safety Electric Booster and Commercial Storage Tank Water Heaters	
7. Standard 1746-2018	External Corrosion Protection Systems for Steel Underground Storage Tanks — Third Edition	
8. Standard 2523-2022	Standard for Safety Solid Fuel-Fired Hydronic Heating Appliances, Water Heaters, And Boilers	

History: Cr. [Register, April, 2000, No. 532](#), eff. 7-1-00; r. (2), renum. (3) to be (2) and am., r. and recr. Table 81.20-2, cr. Tables 81.20-3e, 81.20-7e and 81.20-10m, am. Tables 81.20-4 to 81.20-8 and 81.20-11, r. Table 81.20-14, [Register, December, 2000, No. 540](#), eff. 1-1-01; correction in (1) made under s. 13.93 (2m) (b) 7., Stats., [Register, December, 2000, No. 540](#); [CR 02-002](#): r. and recr. [Register April 2003 No. 568](#), eff. 5-1-03; [CR 02-129](#): am. Table 81.20-8 [Register January 2004 No. 577](#), eff. 2-1-04; [CR 04-035](#): am. Table 81.20-4 and 81.20-10m [Register November 2004 No. 587](#), eff. 12-1-04; [CR 07-100](#): cr. (4) [Register September 2008 No. 633](#), eff. 10-1-08; [CR 08-055](#): am. (1), Tables 81.20-1 to 81.20-9 and Tables 81.20-11 to 81.20-13, r. Table 81.20-10, renum. Table 81.20-10m to be Table 81.20-10 and am. [Register February 2009 No. 638](#), eff. 3-1-09; [CR 10-064](#): am. Tables 81.20-2, 81.20-3e, 81.20-4, 81.20-7 [Register December 2010 No. 660](#), eff. 1-1-11; correction in (3) made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#); [CR 13-062](#): am. Table 381.20-11 [Register February 2014 No. 698](#), eff. 3-1-14; [CR 17-065](#): am. (2) (a) (intro.), (b), (c), (3), Table 81.20-11 [Register June 2018 No. 750](#), eff. 7-1-18; correction in numbering in Table 381.20-11 under s. 13.92 (4) (b) 1., Stats., [Register June 2018 No. 750](#); [CR 23-006](#): am. (3), Table 381.20-1, r. Table 381.20-2, Table 381.20-3, r. and recr. Table 381.20-3e, cr. Table 381.20-3p, r. and recr. Table 381.20-4 to Table 381.20-11, cr. Table 381.20-11m, am. Table 381.20-12, r. and recr. Table 381.20-13 [Register September 2023 No. 813](#), eff. 10-1-23.

Chapter SPS 382

DESIGN, CONSTRUCTION, INSTALLATION, SUPERVISION, MAINTENANCE AND INSPECTION OF PLUMBING

SPS 382.01 Scope.
SPS 382.015 Purpose.
SPS 382.03 Application.

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SPS 382.10 Basic plumbing principles.

Subchapter II — Administration and Enforcement

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SPS 382.21 Testing and inspection.
SPS 382.22 Maintenance and repairs.

Subchapter III — Drain and Vent Systems

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SPS 382.33 Indirect and local waste piping.
SPS 382.34 Wastewater treatment and holding devices.
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Subchapter V — Special Plumbing Installations

SPS 382.50 Health care and related facilities.
SPS 382.51 Manufactured homes and manufactured home communities.

Subchapter VI — Installation

SPS 382.60 Pipe hangers and supports.

Subchapter VII — Plumbing Treatment Standards

SPS 382.70 Plumbing treatment standards.

Note: Sections ILHR 82.01 to 82.25, 82.15 and 82.17 to 82.25 as they existed on February 28, 1985 were repealed and new sections ILHR 82.01 to 82.36 and 82.51 and 82.60 were created effective March 1, 1985. Chapter ILHR 82 was renumbered chapter Comm 82 under s. 13.93 (2m) (b) 1., Stats. and corrections made under s. 13.93 (2m) (b) 7., Stats., [Register, February, 1997, No. 494](#). Chapter Comm 82 was renumbered chapter SPS 382 under s. 13.92 (4) (b) 1., Stats., [Register December 2011 No. 672](#).

SPS 382.01 Scope. The provisions of this chapter apply uniformly to the design, construction, installation, supervision, maintenance and inspection of plumbing, including but not limited to sanitary and storm drainage, water supplies, wastewater treatment, and dispersal or discharge for buildings, except for POWTS systems as regulated by ch. [SPS 383](#).

History: Cr. [Register, February, 1985, No. 350](#), eff. 3-1-85; CR 02-002: am. [Register April 2003 No. 568](#), eff. 5-1-03; CR 02-129: am. [Register January 2004 No. 576](#), eff. 2-1-04; correction made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#).

SPS 382.015 Purpose. Pursuant to s. [145.02](#), Stats., the purpose of this chapter is to provide that all plumbing in connection with buildings and facilities in the state, including buildings owned by the state or any political subdivision thereof, shall be safe, sanitary and such as to safeguard the public health and the waters of the state.

History: CR 02-002: cr. [Register April 2003 No. 568](#), eff. 5-1-03.

SPS 382.03 Application. (1) The provisions of this chapter are not retroactive, unless specifically stated otherwise in the rule.

(2) Pursuant to s. [145.02 \(2\)](#), Stats., this chapter is uniform in application and a municipality may not enact an ordinance for the design, construction, installation, supervision, maintenance and inspection of plumbing which is more stringent than this chapter, except as specifically permitted by rule.

(3) A department interpretation of the requirements in this chapter shall supersede any differing interpretation by a lower level jurisdiction. A department decision on the application of the requirements in this chapter shall supersede any differing decision by a lower level jurisdiction.

Note: A decision of the department may be appealed. Section [101.02 \(6\) \(e\)](#), Stats., outlines the procedure for submitting requests to the department for appeal hearings and the department procedures for hearing appeals.

History: Cr. [Register, February, 1985, No. 350](#), eff. 3-1-85; CR 02-002: renum. to be (1), cr. (2) [Register April 2003 No. 568](#), eff. 5-1-03; CR 07-100: cr. (3) [Register](#)

[September 2008 No. 633](#), eff. 10-1-08; CR 23-006: am. (2) [Register September 2023 No. 813](#), eff. 10-1-23.

Subchapter I — Intent and Basic Requirements

SPS 382.10 Basic plumbing principles. This chapter is founded upon basic principles of environmental sanitation and safety through properly designed, installed and maintained plumbing systems. Some of the details of plumbing construction may vary, but the basic sanitary and safety principles desirable and necessary to protect the health of people are the same. As interpretations may be required and as unforeseen situations arise which are not specifically addressed, the following intent statements and basic requirements shall be used to evaluate equivalency where applicable:

(1) **INTENT.** (a) Plumbing in connection with all buildings, public and private, intended for human occupancy, shall be installed and maintained in such a manner so as to protect the health, safety and welfare of the public or occupants and the waters of the state.

(b) Plumbing fixtures, appliances and appurtenances, whether existing or to be installed, shall be supplied with water in sufficient volume and at pressures adequate to enable the fixtures, appliances and appurtenances to function properly and efficiently at all times and without undue noise under normal conditions of use. Plumbing systems shall be designed and adjusted to use the minimum quantity of water consistent with proper performance and cleaning.

(c) Devices for heating and storing water in pressure vessels or tanks shall be so designed and installed as to prevent dangers of explosion or overheating.

(d) Drain systems shall be designed, constructed and maintained so as to conduct the wastewater or sewage efficiently and shall have adequate cleanouts.

(e) The drain systems shall be so designed as to provide an adequate circulation of air in all pipes and no danger of siphonage, aspiration or forcing of trap seals under conditions of ordinary use.

(f) A plumbing system shall be of durable material, free from defective workmanship, and designed and constructed so as to provide satisfactory service for its reasonable expected life.

(g) Proper protection shall be provided to prevent contamination of food, water, sterile goods and similar materials by backflow of wastewater.

(h) All plumbing fixtures shall be installed so as to provide adequate spacing and accessibility for the intended use and cleaning.

(2) **BASIC REQUIREMENTS.** (a) Every building intended for human occupancy shall be provided with an adequate, safe and potable water supply.

(b) To fulfill the basic needs of sanitation and personal hygiene, each dwelling, with the exception of camping units, connected to a POWTS or public sewer shall be provided with at least the following plumbing fixtures: one water closet, one wash basin, one kitchen sink and one bathtub or shower, except a system or device recognized under ch. SPS 391 may be substituted for the water closet. All other structures for human occupancy shall be equipped with sanitary facilities in sufficient numbers as specified in chs. SPS 361 to 366.

(c) Hot or tempered water shall be supplied to all plumbing fixtures that normally require hot or tempered water for proper use and function.

(d) Where plumbing fixtures exist in a building that is not connected to a public sewer system, suitable provision shall be made for treating, recycling, dispersing or holding the wastewater.

(e) Plumbing fixtures shall be made of durable, smooth, non-absorbent and corrosion resistant material, and shall be free from concealed fouling surfaces.

History: Cr. Register, February, 1985, No. 350, eff. 3-1-85; correction in (3) made under s. 13.93 (2m) (b) 7., Stats; am. (2), Register, August, 1991, No. 428, eff. 9-1-91; am. (3), Register, March, 1992, No. 435, eff. 4-1-92; r. (7) and renum. (8) to (15) to be (7) to (14), Register, February, 2000, No. 530, eff. 3-1-00; am. (2), (7) and (12), r. and recr. (3) and r. (14), Register, April, 2000, No. 532, eff. 7-1-00; CR 01-139; am. (3) Register June 2002 No. 558, eff. 7-1-02; CR 02-002: r. and recr. Register April 2003 No. 568, eff. 5-1-03; correction in (2) (b) made under s. 13.92 (4) (b) 7., Stats., Register February 2008 No. 626; correction in (2) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: am. (2) (b) Register September 2023 No. 813, eff. 10-1-23.

Subchapter II — Administration and Enforcement

SPS 382.20 Plan review and cross connection control assembly registration. (1) **GENERAL.** Plans and specifications shall be submitted to the department or to an approved agent municipality for review in accordance with pars. (a) and (b).

Note: The Department forms required in this chapter are available from the Division of Industry Services at P.O. Box 7162, Madison, WI 53707-7162; or at telephone (608) 266-2112 or (877) 617-1565 or 711 (Telecommunications Relay); or at the Division's Web site at <http://dps.wi.gov/programs/industry-services>.

(a) *Department review.* Plumbing plans and specifications for the types of plumbing installations listed in Table 382.20-1, except direct plumbing fixture replacements, shall be submitted to the department for review, regardless of where the installation is to be located. A municipality shall be designated as an agent municipality in accordance with sub. (2). Written approval for the plumbing plans shall be obtained prior to installation of the plumbing.

(am) *Direct plumbing fixture replacement.* In this subsection “direct plumbing fixture replacement” means a fixture installed in the place of equipment previously approved by the department that does not increase the fixture load requirements and does not require alteration or modification of piping configuration.

(b) *Department or agent municipality review.* 1. Plumbing plans and specifications for the types of plumbing installations, except direct plumbing fixture replacements, listed in Table 382.20-2, shall be submitted for review to an agent municipality, if the installation is to be located within the agent municipality or to the department, if the installation is not to be located within an agent municipality. A municipality shall be designated as an agent municipality in accordance with sub. (2). Written approval for the plumbing plans shall be obtained prior to installation of the plumbing.

Note: For a listing of agent municipalities, see ch. SPS 382 Appendix A-382.20 (2).

Note: The number of plumbing fixtures to be submitted and reviewed by an agent municipality is a subject of local ordinances.

2. Plan review and approval of one- and 2-family dwellings. Review and approval of plumbing plans for one- and 2-family dwellings shall be in accordance with the provisions specified in s. SPS 320.09.

(c) *Cross connection control assembly registration.* The installation of each reduced pressure principle backflow preventer, spill resistant vacuum breaker, double check backflow prevention assembly, or pressure vacuum breaker shall be registered with the department no later than 7 days after installation of the assembly.

Table 382.20-1

Submittals To Department

Type of Plumbing Installation	
1.	All plumbing, new installations, additions and alterations, regardless of the number of plumbing fixtures involved, serving hospitals, nursing homes, ambulatory surgery centers, renal dialysis centers, community-based residential facilities (CBRF), and inpatient hospice. ^{a,c}
2.	Plumbing, new installations, additions and alterations involving 16 or more plumbing fixtures, serving buildings owned by a metropolitan or sanitary sewer district. ^b
3.	Plumbing, new installations, additions and alterations involving 16 or more plumbing fixtures, serving buildings owned by the state. ^b
4.	Alternate and experimental plumbing systems.
5.	Reduced pressure principle backflow preventers, double check backflow prevention assemblies, pressure vacuum breaker assemblies, and spill resistant vacuum breakers serving health care facilities.
6.	Stormwater and clearwater detention, treatment, and infiltration plumbing systems serving a public building or facility. ^c
7.	Onsite residential and commercial water reuse treatment systems, designed to treat water for compliance with Table 382.70-1. ^c
8.	Potable water storage systems.
9.	Potable water treatment by use of injection of a solution into the water supply system. ^d
10.	Medical or high purity water.
11.	Mixed wastewater holding device. ^c
12.	Multipurpose piping systems (MPP). ^d

^a The registration of cross connection control assemblies as required under s. SPS 382.20 (1) (c) is included as a part of plan review and approval.

^b For the purpose of plan review submittal, water heaters, floor drains, storm inlets, roof drains, multi-purpose piping (mpp) fire sprinklers and hose bibbs are to be included in the count.

^c Agent municipalities may perform this review when so authorized by the department.

^d Excludes one- and 2-family dwellings.

Table 382.20-2
Submittals To Department Or Agent Municipality

	Type of Plumbing Installation
1.	New installations, additions and alterations to drain systems, vent systems, water service systems, and water distribution systems involving 16 or more plumbing fixtures to be installed in connection with public buildings. ^{a,b}
2.	Grease interceptors to be installed for public buildings.
3.	Garage catch basins, carwash interceptors and oil interceptors to be installed for public buildings and facilities.
4.	Sanitary dump stations.
5.	Piping designed to serve as private water mains.
6.	Water supply systems and drain systems to be installed for manufactured home communities and campgrounds. ^c
7.	Piping designed to serve as private interceptor main sewers greater than 4 inches in diameter when sized for gravity flow.
8.	Chemical waste systems regardless of the number of plumbing fixtures. ^c
9.	Stormwater systems, not including infiltration plumbing systems, serving a public building or facility where the drainage area is one acre or more. ^d
10.	Mixed wastewater holding device.

^aFor the purposes of plan review submittal, water heaters, floor drains, storm inlets, roof drains, multi-purpose piping (MPP) fire sprinklers and hose bibbs are to be included in the count. For a phased project such as a mall or office complex fixture count includes all proposed fixtures connected to a common building sanitary sewer, a common water service and all storm sewers serving the building.

^bFor the purpose of plan submittal, public buildings do not include zero-lot-line row houses where each living unit is served by an individual water service and an individual building sewer.

^cOnly agent municipalities which are cities of the first class may review these types of installations.

^dPlan review involving 16 or more plumbing fixtures also applies.

(2) AGENT MUNICIPALITIES. The department may designate to an approved municipality the authority to review and approve plumbing plans and specifications for those plumbing installations to be located within the municipality's boundary limits and which require approval under sub. (1) (b).

(a) An agent municipality shall utilize a plumbing inspector qualified by the department to conduct plumbing inspection and plan review at a staffing level based on local need.

1. The primary duties of the plumbing inspectors shall include plumbing plan review.

2. The plumbing inspectors shall be Wisconsin licensed master or journeyman plumbers.

Note: See Appendix A-382.20 (2) or the department's website at <https://dps.wi.gov/>.

(b) An agent municipality may waive its jurisdiction for plan review and approval for any project, in which case plans shall be submitted to the department for review and approval.

(c) Agent municipalities may set by ordinance the fees for plan review services.

(d) An agent municipality appointment shall be renewed every five years.

(3) PRIORITY PLAN REVIEW. An appointment may be made with the department to facilitate the examination of plans in less than the normal processing time. Complete plans along with the fee specified in s. SPS 302.09, shall be submitted to the department. The plans shall comply with all of the provisions of this section.

(4) PLANS AND SPECIFICATIONS. (a) One complete set of plans and one copy of specifications which are clear, legible and permanent copies shall be submitted for examination and approval.

(b) 1m. All plans submitted for approval shall be accompanied by sufficient data and information for the department to determine if the installation and its performance will meet the requirements of chs. SPS 381 to 384.

2m. Information to accompany the plans shall include the location or address of the installation and the name of the owner.

Note: For plans proposing the installation, creation or extension of a private interceptor main sewer which is to discharge to a municipal treatment facility, see also ch. NR 121.

(c) Plumbing plans, index sheets and specifications for a plumbing system submitted for review and approval shall be signed in accordance with any of the following methods:

1. A Wisconsin registered architect, engineer or plumbing designer shall sign and seal or stamp all plans and accompanying specifications in accordance with ch. A-E 2.

2. A master plumber, master plumber-restricted service, master plumber-restricted appliance or a utility contractor shall sign and date all plumbing plans and accompanying specifications as provided under s. 145.06, Stats. Each sheet of plans and specifications submitted shall be signed and dated and shall include the valid Wisconsin license number of the individual responsible for the installation. Where more than one sheet is bound together into one volume, only the title sheet or index sheet shall be signed and dated by the individual responsible for the installation. The signed title or index sheet shall clearly identify all of the other sheets in the volume.

3. A pump installer shall sign and date all plumbing plans and accompanying specifications for which the individual is responsible for the installation. Each sheet of plans and specifications submitted shall be signed and dated and shall include the valid Wisconsin license number of the individual responsible for the installation. Where more than one sheet is bound together into one volume, only the title sheet or index sheet shall be signed and dated by the individual responsible for the installation. The signed title or index sheet shall clearly identify all of the other sheets in the volume.

(d) 1. When requesting approval of an experimental plumbing system, all of the following shall be submitted:

a. At least 2 sets of plans signed in accordance with par. (d) and detailing the system installation for each site.

b. A letter of consent from the site or system owner of the installation. The letter shall acknowledge that the owner has received and read a copy of the experimental plumbing system submittal and is in agreement with all requirements listed within this subdivision.

c. Any additional information as requested by the department.

2. The registered architect, engineer, designer or master plumber responsible for the design of the experimental plumbing system shall, upon completion, certify in writing to the department that the installation is in compliance with the approved plans, specifications and data.

3. Onsite inspections shall be performed by the department at time intervals as specified by the department, but not less than once a year. Time intervals shall be included as conditions of approval. An inspection report shall be written. The department may assess a fee for each inspection.

Note: Refer to ch. SPS 302 for applicable fees.

4. No later than five years after the date of the completed installation the department may perform one of the following:

a. Order the removal of the experimental plumbing system.

b. Issue an alternate approval as specified in sub. (12) (a).

c. Provide an extension of the experiment with conditions.

5. If an experimental plumbing system is subsequently codified in chs. SPS 382 and 384, or ch. 145, Stats., the requirements as specified in subds. 3. and 4. do not apply.

(5) **PLAN REVIEW.** Except as provided in sub. (12), and pursuant to s. SPS 302.07 (3), the department shall review and make a determination on an application for plan review within 15 business days.

(a) *Conditional approval.* If, upon review, the department determines that the plans substantially conform to the provisions of chs. SPS 382 to 384, a conditional approval, in writing, shall be granted. All noncode complying conditions stated in the conditional approval shall be corrected before or during installation.

(b) *Denial of approval.* If, upon review, the department determines that the plans do not substantially conform to the provisions of chs. SPS 382 to 384, the request of conditional approval shall be denied in writing.

(6) **EVIDENCE OF APPROVAL.** The plumber responsible for the installation of the plumbing shall keep at the construction site at least one set of plans bearing the department's or the agent municipality's stamp of approval and at least one copy of specifications. The plans and specifications shall be open to inspection by an authorized representative of the department.

(7) **FEES.** Fees for plumbing plan review and petition for variance shall be submitted in accordance with ss. SPS 302.64 and 302.52.

(8) **REVISIONS.** All changes or modifications, which involve the provisions of chs. SPS 382 to 384, made to plumbing plans and specifications, which have been granted approval under sub. (1), shall be submitted to the department or agent municipality for examination. All changes and modifications shall be approved in writing by the department or agent municipality prior to installation of the plumbing.

(9) **REVOCATION OF APPROVAL.** The department may revoke any approval, issued under the provisions of this chapter, for any false statements or misrepresentation of facts on which the approval was based.

(10) **DEPARTMENT LIMITATION AND EXPIRATION OF APPROVAL.** (a) A conditional approval of a plan by the department shall not be construed as an assumption by the department of any responsibility for the design; and the department does not hold itself liable for any defects in construction, nor for any damages that may result from the specific installation.

(b) Plan approval by the department or its authorized representative shall expire 2 years after the date indicated on the approval letter, if construction has not commenced within that 2 year period.

(11) **PETITION FOR VARIANCE.** (a) *Procedure.* The department shall consider and may grant a variance to a provision of this chapter in accordance with ch. SPS 303.

Note: Chapter SPS 303 requires the submittal of a petition for variance form (SBD-9890) and a fee, and that an equivalency is established in the petition for variance that meets the intent of the rule being petitioned. Chapter SPS 303 also requires the department to process regular petitions within 30 business days and priority petitions within 10 business days.

Note: Form SBD-9890 is available from the Department's Division of Industry Services at P.O. Box 7162, Madison, WI 53707-7162; or at telephone (608) 266-2112 or (877) 617-1565 or 711 (Telecommunications Relay); or at the Division's Web site at <http://dsps.wi.gov/programs/industry-services>.

(b) *Petition processing time.* Except for priority petitions, the department shall review and make a determination on a petition for variance within 30 business days of receipt of all calculations, documents and fees required to complete the review. The department shall process priority petitions within 10 business days.

Note: Form SBD-9890 is available from the Department's Division of Industry Services at P.O. Box 7162, Madison, WI 53707-7162; or at telephone (608) 266-2112 or (877) 617-1565 or 711 (Telecommunications Relay); or at the Division's Web site at <http://dsps.wi.gov/programs/industry-services>.

(12) **ALTERNATE AND EXPERIMENTAL PLUMBING SYSTEM REVIEW AND APPROVAL.** The provisions of this chapter, ch. SPS 384 or ch. 145, Stats., are not intended to prevent the design and use of approved innovative plumbing systems.

(a) *Alternate plumbing systems.* The department may issue an approval of an alternate plumbing system if the system complies with the intent of chs. SPS 382 and 384, or ch. 145, Stats.

1. For an alternate plumbing system, before availability for statewide installation and use, an alternate plumbing system approval shall be issued. Concepts, plans, specifications and the documentation to support the system design shall be submitted to the department for review.

2. The department may require the submission of any information deemed necessary for review. Sufficient evidence shall be submitted to substantiate at least the following:

a. Assertions of function and performance.

b. Compliance with the intent of chs. SPS 382 and 384, or ch. 145, Stats.

3. Pursuant to s. SPS 302.07 (3), the department shall review and make a determination on an application for an alternate plumbing system within 3 months. Approval for an alternate plumbing system shall be issued by the department in writing.

4. The department may include specific conditions in issuing an approval for an alternate plumbing system, including an expiration date for the approval. A violation of any of the conditions under which an approval is issued shall constitute a violation of this chapter.

5. If upon review the department determines that an alternate plumbing system does not comply with the intent of chs. SPS 382 and 384, or ch. 145, Stats., the request for approval shall be denied in writing.

(b) *Experimental plumbing systems.* The department may issue an approval of an experimental plumbing system for the purpose of proving compliance with the intent of chs. SPS 382 and 384 and ch. 145, Stats.

1. For an experimental plumbing system, a separate approval shall be obtained for each system or project to be installed for the purpose of proving compliance with the intent of chs. SPS 382 and 384 and ch. 145, Stats. Approval for an experimental plumbing system shall be issued by the department in writing.

2. The department may require the submission of additional information deemed necessary for determining that the design meets the intent of chs. SPS 382 and 384 and ch. 145, Stats.

3. Pursuant to s. SPS 302.07 (3), the department shall review and make a determination on an application for an experimental plumbing system within 6 months.

4. The department may include specific conditions in issuing an approval for an experimental plumbing system, including an expiration date for the approval. A violation of any of the conditions under which an approval is issued shall constitute a violation of this chapter.

5. Denial of an experimental plumbing system or project by the department shall be made in writing.

6. The department may establish parameters to limit the number of applications for review it will accept for experimental plumbing systems.

(c) *Modification.* If an approved alternate or experimental plumbing system is modified or additional assertions of function or performance are made, the approval shall be void, unless the system is resubmitted to the department for review and approval is granted.

(d) *Revocation of approval.* The department may revoke an approval issued under this section for any false statements or mis-

representations of facts or data on which the approval was based, or as a result of system failure.

(e) *Limitations.* An approval issued by the department for an alternate or experimental plumbing system may not be construed as an assumption of any responsibility for defects in design, construction or performance of any system nor for any damages that may result.

(f) *Fees.* Fees for the review of an alternate or experimental plumbing system under this section and any onsite inspections shall be submitted in accordance with ch. SPS 302.

(13) CROSS CONNECTION CONTROL ASSEMBLY REGISTRATION. (a) Registration, as specified in sub. (1) (c), shall be submitted in a format acceptable to the department.

Note: The Department forms required in this chapter are available from the Division of Industry Services at P.O. Box 7162, Madison, WI 53707-7162; or at telephone (608) 266-2112 or (877) 617-1565 or 711 (Telecommunications Relay); or at the Division's Web site at <http://dsps.wi.gov/programs/industry-services>.

(b) The form for registering cross connection control assemblies with the department shall include at least all of the following information:

1. The building or facility name and address where the assembly is or will be installed.
2. The location of the cross connection control assembly within the building or facility.
3. A description of the cross connection control assembly including the size, model number, serial number, and manufacturer.
4. The name of the owner or owner's agent submitting the registration form and contact information.

(c) Each registration form submitted shall be accompanied by the appropriate fee in accordance with s. SPS 302.645.

(d) Upon receipt of a completed registration form, the department shall issue written confirmation of registration including a department-assigned identification number for each cross connection control assembly.

(e) Upon permanent removal or replacement of any reduced pressure principle backflow preventer, double check backflow prevention assembly, spill resistant vacuum breaker or pressure vacuum breaker, the owner shall notify the department in writing using a format acceptable to the department.

(f) Test equipment shall be tested and calibrated according to ASSE/IAPMO/ANSI SERIES 5000 standard.

(14) PENALTIES. Penalties for violations of this chapter shall be assessed in accordance with s. 145.12, Stats.

History: Cr. Register, February, 1985, No. 350, eff. 3-1-85; am. (1) (intro.), r. and recr. Tables 82.20-1 and 82.20-2, r. (5), renun. (6) to (12) to be (5) to (11), cr. (5) (intro.) and (12), Register, May, 1988, No. 389, eff. 6-1-88; correction in (1) (b) 1, made under s. 13.93 (2m) (b) 7., Stats., Register, May, 1988, No. 389; am. (4) (c) 2, intro. and 4. a. and b., Register, February, 1991, No. 422, eff. 3-1-91; am. (4) (c) 3.a., Register, August, 1991, No. 428, eff. 9-1-91; am. (1) (intro.), (a), (4) (a) to (c) 1., (5) (a), (b) and Tables 82.20-1 and 82.20-2, renun. (4) (d) and (e) to be (4) (d) 1. a. and b. and am. (4) (d) 1. a., cr. (4) (d) 2., Register, February, 1994, No. 458, eff. 3-1-94; correction in (7) made under s. 13.93 (2m) (b) 7., Stats., Register, February, 1994, No. 458; corrections made under s. 13.93 (2m) (b) 7., Stats., Register, October, 1996, No. 490; am. Tables 82.20-1, 2, (1) (b) 2., Register, February, 1997, No. 494, eff. 3-1-97; correction in (13) made under s. 13.93 (2m) (b) 7., Stats., Register, February, 2000, No. 530; am. Tables 82.20-1 and 82.20-2, r. (4) (b), Register, July, 2000, No. 535, eff. 9-1-00; cr. (4) (e), r. and recr. (11) and (12), am. Table 82.20-1, Register, December, 2000, No. 540, eff. 1-1-01; CR 02-002: am. (1) (intro.) and Tables 82.20-1 and 82.20-2, r. and recr. (1) (a), r. (1) (b) 2. and (4) (d), renun. (1) (b) (intro.), and 1., (4) (c), (e) and (13) to be (1) (b) 1. and 2., (4) (b), (d) and (14) and am. (4) (b) (intro.) and 2. (intro.), cr. (1) (c), (4) (c) and (13) Register April 2003 No. 568, eff. 5-1-03; CR 02-129: am. (title), (1) (intro.) and (c), and (13) (e) Register January 2004 No. 577, eff. 2-1-04; CR 04-035: am. Tables 82.20-1 and 82.20-2 Register November 2004 No. 587, eff. 12-1-04; CR 06-119: am. (5) (intro.), (12) (a) 3. and (b) 3. Register July 2007 No. 619, eff. 8-1-07; CR 08-055: am. (1) (c) (intro.), (4) (b) 2. (intro.), (13) (e), Tables 82.20-1 and 82.20-2 Register February 2009 No. 638, eff. 3-1-09; correction in (3) made under s. 13.92 (4) (b) 7., Stats., Register February 2009 No. 638; CR 09-050: am. (1) (intro.), (b) 1. and Table 82.20-2, r. and recr. (1) (a), (c) and Table 82.20-1 Register December 2009 No. 648, eff. 1-1-10; CR 10-064: am. Tables 82.20-1 and 82.20-2 Register December 2010 No. 660, eff. 1-1-11; correction in (1) (a), (b) 1., 2., (3), (4) (b), (d) 5., (5) (intro.), (a), (b), (7), (8), (11) (a), (12) (intro.), (a) (intro.), 2. b., 3., 5., (b) (intro.), 1., 2., 3., (f), (13) (c), Table 382.20-1 made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672;

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CR 13-046: am. (2) (a) (intro.) Register December 2013 No. 696, eff. 1-1-14; CR 23-006: am. (1) (a), cr. (1) (am), am. (1) (b) 1., (c), Table 382.20-1, cr. Table 382.20-1 footnote d, (2) (d), am. (4) (a), r. (4) (b) 2. to 4., am. (13) (title), (b) (intro.), 1. to 3., (d), (e), cr. (13) (f) Register September 2023 No. 813, eff. 10-1-23; renun. (4) (b) (intro.), 1. to (4) (b) 1m., 2m. under s. 13.92 (4) (b) 1., Stats., Register September 2023 No. 813; correction in (1) (c), Table 382.20-1 footnote d, made under s. 35.17, Stats., Register September 2023 No. 813.

SPS 382.21 Testing and inspection. (1) TESTING OF PLUMBING SYSTEMS. Except as provided in par. (a), all new plumbing and all parts of existing systems which have been altered, extended, or repaired shall be tested and inspected as specified in sub. (2) to disclose leaks and defects before the plumbing is put into operation.

(a) *Waiver of testing.* 1. The testing of the plumbing shall not be required where the installation does not include the addition, replacement, alteration or relocation of any water distribution, drain or vent piping.

2. a. Field testing the installation of a storm building sewer and a storm private interceptor main sewer is not required.

b. The joints and connections to be employed for storm building sewer piping shall conform with s. SPS 384.40 (1) (a).

(b) *Local inspection.* Where the plumbing is installed in a municipality having a local inspector, the testing of the plumbing shall be done in the presence of a plumbing inspector, except as provided in subd. 1. b.

1. 'Notice of inspection.' a. The plumber responsible for the installation shall notify the plumbing inspector in person, by telephone or in writing when the work is ready for inspection.

b. Except as permitted in par. (c), if the inspection is not made by the end of the normal business day following the day of notification, not including Saturday, Sunday or legal holidays, the plumber may proceed with the testing and the installation.

c. Testing may be done without the presence of the inspector, if the master plumber responsible for the installation obtains the inspector's permission to provide a written test report in a format acceptable to the inspector.

Note: See ch. SPS 382 Appendix for a sample affidavit form.

2. 'Preparations for inspection.' When the installation is ready for inspection, the plumber shall make such arrangements as will enable the plumbing inspector to inspect all parts of the plumbing system. The plumber shall have present the proper apparatus and appliances for making the tests, and shall furnish such assistance as may be necessary in making the inspection.

3. 'Rough-in inspection.' A rough-in inspection shall be made when the plumbing system is roughed-in and before fixtures are set. Except as provided in subd. 1., plumbing work shall not be closed in, concealed, or covered until it has been inspected and approved by the plumbing inspector and permission is granted to do so.

4. 'Final inspection.' a. Upon completion of the plumbing installation and before final approval is given, the plumbing inspector shall inspect the work.

b. Municipalities may require that a final test be conducted in accordance with sub. (2) (h) and that the final test, when required by the municipality, shall be observed by the plumbing inspector.

5. 'Reinspections.' Whenever the plumbing official finds that the work or installation does not pass any initial test or inspection, the necessary corrections shall be made to comply with this chapter. The work or installation shall then be resubmitted for inspection to the plumbing inspector.

(c) *Inspection of one- and 2-family dwellings.* The inspection of plumbing installations for one- and 2-family dwellings shall be in accordance with ss. SPS 320.08 to 320.11.

(d) The initial testing of cross connection control assemblies shall comply with s. SPS 382.22 (8).

(2) **TESTING PROVISIONS.** (a) *General.* The testing of plumbing installations shall be conducted in accordance with this paragraph.

1. 'Equipment, material and labor for tests.' All equipment, material and labor required for testing a plumbing system or part thereof shall be furnished by the plumber responsible for the installation.

2. 'Exposure of work.' Except as provided in pars. (b) and (c), all new, altered, extended or replaced plumbing shall be left uncovered and unconcealed until it has been tested. Where the work has been covered or concealed before it is tested, it shall be exposed for testing.

(b) *Sanitary building sewer and sanitary private interceptor main sewer.* A sanitary building sewer and a sanitary private interceptor main sewer shall be tested for leaks and defects with water or air before or after being covered in accordance with either subd. 1. or 2. The test for leaks and defects may be applied to the entire building sewer or private interceptor main sewer or in sections. For the purposes of this subdivision, the testing of a building sewer or private interceptor main sewer is not required to include the manholes serving the sewer.

1. The building sewer or private interceptor main sewer shall be tested by insertion of a test plug at the point of connection with the public sewer. The sewer shall then be filled with water under a head of not less than 10 feet. The water level at the top of the test head of water shall not drop for at least 15 minutes.

2. The air test shall be made by attaching an air compressor testing apparatus to any suitable opening, and, after closing all other inlets and outlets to the system, forcing air into the system until there is a uniform gauge pressure of 3 pounds per square inch. This pressure shall be held without introduction of additional air for a period of at least 15 minutes.

(c) *Building drain.* The entire building drain with all its branches, receptacles and connections shall be brought so far as practical to the surface or grade of the basement floor and shall be tested with water or air in accordance with par. (g).

(d) *Drain and vent systems.* The piping of a drain and vent systems, including conductors, shall be tested upon completion of the rough piping installation with water or air in accordance with par. (g).

(e) *Private water mains and water services.* Private water mains and water services shall be inspected before being covered. The private water mains and water services shall be tested and proven water tight under water pressure not less than the working pressure under which it is to be used. The water used for testing shall be obtained from a potable source of supply.

Note: Standard NFPA 24 for combination water services and combination private water mains may include more stringent requirements for testing.

(f) *Water distribution system.* The piping of a water distribution system shall be tested and proved water tight under a water pressure not less than the working pressure under which it is to be used. The water used for tests shall be obtained from a potable source of supply.

(g) *Test methods for drain and vent systems.* A test for watertightness shall be applied to the entire drain and vent system at one time or to the entire system in sections after the rough piping has been installed in accordance with either subd. 1. or 2.

1. If applied to the entire system, all openings in the piping shall be tightly closed, except the highest opening, and the system shall be filled with water to the point of overflow. If the system is tested in sections, each opening shall be tightly plugged except the highest opening of the section under test, and each section shall be filled with water, but a section shall not be tested with less than a 10 foot head of water. In testing successive sections, at

least the upper 10 feet of the next preceding section shall be tested, so that no joint or pipe in the building, except the uppermost 10 feet of the system, is subjected to a test of less than a 10 foot head of water. The water shall be kept in the system or in the portion under test for at least 15 minutes before inspection starts. The system shall then be tight at all points.

2. The air test shall be made by attaching an air compressor testing apparatus to any suitable opening, and, after closing all other inlets and outlets to the system, forcing air into the system until there is a uniform gauge pressure of 5 pounds per square inch or sufficient to balance a column of mercury 10" in height. This pressure shall be held without introduction of additional air for a period of at least 15 minutes.

(h) *Final test.* Where required by the local plumbing inspector, after the plumbing fixtures have been installed and the traps filled with water, the connections shall be tested and proved gas and watertight by either one of the methods specified in subd. 1. or 2.

1. The smoke test shall be made by introducing a pungent, thick smoke, produced by one or more smoke machines, into the completed system. When the smoke appears at stack openings on the roof, the openings shall be closed and a pressure equivalent to a one inch water column shall be built and maintained for the period of the inspection.

2. The air test shall be made by attaching a gauge to any suitable opening and, after closing all other inlets and outlets in the system, adding air into the system until a pressure equivalent to a one inch water column exists. The pressure shall remain constant for at least a 5-minute test period without the introduction of additional air.

History: Cr. Register, February, 1985, No. 350, eff. 3-1-85; r. and recr. (1) (d) 5., am. (1) (d) 7. intro., Register, May, 1988, No. 389, eff. 6-1-88; correction in (1) (c) made under s. 13.93 (2m) (b) 7., Stats., Register, May, 1988, No. 389; renum. (1) (a) and (2) (b) to (i) to be (1) (a) 1. and (2) (a) to (h), r. (2) (a), cr. (1) (a) 2. and (3), r. and recr. (1) (d) 1. (intro.), am. (1) (d) 2. (intro.), Register, February, 1994, No. 458, eff. 3-1-94; am. (3) (b) 3., Register, October, 1996, No. 490, eff. 11-1-96; am. (3), Register, February, 1997, No. 494, eff. 3-1-97; r. and recr. (2) (a) and (3), cr. Table 82.21-1, Register, December, 2000, No. 540, eff. 1-1-01; CR 02-002: r. and recr. (1) (b) 4. b. and (2) (d), am. (1) (d) 8. b. Register April 2003 No. 568, eff. 5-1-03; CR 04-035: am. Table 82.21-1 Register November 2004 No. 587, eff. 12-1-04; CR 08-055: am. (title) and (1) (intro.), r. and recr. (1) (b) 1. b., r. (2) and Table 82.21-1, renum. (1) (d) and (3) to be (2) and Comm 82.22 (9) Register February 2009 No. 638, eff. 3-1-09; corrections in (1) (b) 4. b., (2) (a) 2., (b) (intro.), (c), (d), (g) (intro.) and (h) (intro.) made under s. 13.92 (4) (b) 7., Stats., Register February 2009 No. 638; CR 10-064: renum. (1) (b) 1. b. to be (1) (b) 1. c., cr. (1) (b) 1. b., (d) Register December 2010 No. 660, eff. 1-1-11; correction in (1) (a) 2. b., (c), (d) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: am. (1) Register September 2023 No. 813, eff. 10-1-23.

SPS 382.22 Maintenance and repairs. (1) GENERAL.

(a) All plumbing systems, both existing and new, and all parts thereof, shall be maintained in a safe and sanitary condition.

(b) All devices or safeguards that are required by this chapter shall be maintained in good working order.

(c) The owner shall maintain plumbing systems.

(2) **EXISTING SYSTEMS.** (a) Except as specified in par. (b), any existing plumbing system may remain and maintenance continue if the maintenance is in accordance with the original system design and any of the following:

1. The plumbing system was installed in accordance with the code in effect at the time of installation.

2. The plumbing system conforms to the present code.

(b) When a hazard to life, health or property exists or is created by an existing system, that system shall be repaired or replaced.

Note: A cross connection is considered a health hazard by the department.

(c) Existing sewers and water services may only be connected to new buildings when determined by examination and test to conform to the requirements of this chapter.

(3) FIXTURES REPLACED. (a) When a fixture, appliance or section of pipe is replaced, the replacement fixture, appliance or pipe shall conform to the provisions of this chapter.

(b) Where the existing drain or vent piping does not conform to the current provisions of this chapter, the department may require the new fixtures to be provided with deep seal traps.

(4) PLUMBING REUSED. (a) 1. Except as provided in par. (b) plumbing materials, fixtures or devices removed and found to be in good condition may be reused if such reuse is approved by the department or a local plumbing inspector.

2. The owner of the building or facility in which the reused materials are to be installed shall provide written consent.

(b) Water supply piping materials may only be reused when the intended use involves an equal or higher degree of hazard than the previous use as specified in Table 382.70–1.

(5) REPAIRS. All repairs to fixtures, devices or piping shall be completed in conformance with the provisions of this chapter, except repair clamps or bands may be used for emergency situations.

(6) DEMOLITION OF STRUCTURES. When a structure is demolished or removed, all sanitary sewer, storm sewer and water supply connections shall be sealed and plugged in a safe manner.

(7) DEAD ENDS. If a dead end is created in the removal of any part of a drain system, all openings in the drain system shall be properly sealed in accordance with s. [SPS 384.40](#).

(8) TESTING OF CROSS CONNECTION CONTROL ASSEMBLIES. (a) The performance testing requirements of this subsection ap-

ply to all cross connection control assemblies regardless of date of installation.

Note: For further clarification see Table 382.22–1.

(b) 1. A performance test shall be conducted for the assemblies listed in Table 382.22–1 at all of the following intervals:

a. At the time of installation.

b. Immediately after repairs or alterations to the assembly have occurred.

c. At least annually.

2. The performance test shall be conducted using the appropriate test standard for the assembly as specified in Table 382.22–1.

3. A cross connection assembly performance test shall be conducted by an individual registered by the department in accordance with s. [SPS 305.99](#).

4. a. The results of the cross connection control assembly performance test shall be submitted as specified in Table 382.22–1 in a format prescribed by the department accompanied by a filing fee as specified in s. [SPS 302.645 \(2\)](#).

b. As specified in Table 382.22–1, the results of the cross connection assembly performance test shall be submitted to the department and purveyor within 60 days of completion of the test.

5. The results of performance tests for the assemblies listed in Table 382.22–1 shall be made available upon request to the department, its agent or the local government unit.

Table 382.22-1
Testing and Submitting Requirements for Cross Connection Control Assemblies

ASSE Standard Name and Number	CAN/CSA Standard Name and Number	ASSE Test Standard Number and Test Required	Test Results to be Submitted to Department
Double Check Backflow Prevention Assemblies ASSE 1015	Double Check Valve Backflow Preventers CAN/CSA B64.5	5015	Yes
Double Check Fire Protection Backflow Prevention Assemblies ASSE 1015	Double Check Valve Backflow Preventers For Fire Protection Systems CAN/CSA-B64.5.1	5015	No
Double Check Detector Fire Protection Backflow Prevention Assemblies ASSE 1048	-----	5048	No
Pressure Vacuum Breaker Assembly ASSE 1020	Pressure Vacuum Breakers CAN/CSA-B64.1.2	5020	Yes
Reduced Pressure Principle Backflow Preventers ASSE 1013	Reduced Pressure Principle Backflow Preventers CAN/CSA B64.4	5013	Yes
Reduced Pressure Principle Fire Protection Backflow Preventers ASSE 1013	Reduced Pressure Principle Backflow Preventers for Fire Protection Systems CAN/CSA-B64.4.1	5013	No
Reduced Pressure Detector Fire Protection Backflow Prevention Assemblies ASSE 1047	-----	5047	No
Spill Resistant Vacuum Breaker Assemblies ASSE 1056	Spill Resistant Vacuum Breakers CAN/CSA B64.1.3	5056	Yes

History: CR 08-055: cr. (1) to (8) and Table 82.22-1, (9) renum. from Comm 82.21 (3) [Register February 2009 No. 638](#), eff. 3-1-09; correction to numbering in (3) made under s. [13.92 \(4\) \(b\) 1.](#), Stats., [Register February 2009 No. 638](#); CR 09-050: am. (8) (b) 4. a. and Table 82.22-1, r. (9) [Register December 2009 No. 648](#), eff. 1-1-10; correction in (4) (b), (8) (b) 1. (intro.), 2., 3., 4. a., b., 5. made under s. [13.92 \(4\) \(b\) 7.](#), Stats., [Register December 2011 No. 672](#); CR 23-006: am. (7), Table 382.22-1 [Register September 2023 No. 813](#), eff. 10-1-23.

Subchapter III — Drain and Vent Systems

SPS 382.30 Sanitary drain systems. (1) **SCOPE.** The provisions of this section set forth the requirements for the design and installation of sanitary drain systems, including building drains and building sewers.

Note: The provisions for storm and clear water drain systems are specified in s. SPS 382.36.

(2) **MATERIALS.** All sanitary drain systems shall be constructed of approved materials in accordance with ch. SPS 384.

(3) **LOAD ON DRAIN PIPING.** (a) *Intermittent flow.* 1. 'Fixture.' The load factor on drain piping shall be computed in terms of drainage fixture unit values specified in Table 382.30-1 for the corresponding listed fixture.

2. 'Devices.' Drainage fixture unit values for intermittent flow devices not listed in Table 382.30-1 shall be computed on the basis of one fixture unit equalling one gallon per minute of flow.

Note: Equipment with a timed discharge cycle(s) of 2 minutes or less may be considered as an intermittent flow device.

(b) *Continuous flow devices.* Drainage fixtures unit values for continuous flow devices such as pumps, ejectors, air conditioning equipment or similar devices that discharge continuously shall be computed on the basis of 2 fixture units for each one gallon per minute of flow.

(4) **SIZE OF DRAIN PIPING.** (a) *Maximum loading.* 1. The total drainage load in any portion of drain piping may not exceed the limits specified in Tables 382.30-2 and 382.30-3, but may be less than the limits specified in Tables 382.30-2 and 382.30-3 based on an approved alternate standard consistent with s. SPS 381.20 (2) or an analysis provided by a Wisconsin registered architect, registered professional engineer, or permitted designer of engineering systems – plumbing.

2. The drainage fixture unit values assigned to a receptor may be less than the limits specified in Tables 382.30-2 and 382.30-3 based on an approved alternate standard consistent with s. SPS 381.20 (2) or an analysis provided by a Wisconsin registered architect, registered professional engineer, or permitted designer of engineering systems – plumbing.

Note: See s. SPS 382.31 (17) for sizing requirements of combination drain and vent systems.

Note: See ch. SPS 382 Appendix for further explanatory material.

(b) *Minimum size of building sewers.* 1. 'Gravity flow sewers.' The minimum size of a gravity flow sanitary building sewer shall be 4" in diameter. A municipality or sanitary district by ordinance may require that portion of the building sewer between the lot line and the public sewer to be larger than 4" in diameter.

2. 'Pressurized sewers.' a. Sewers pressurized through the use of sewage ejectors, sewage pumps or sewage grinder pumps shall be sized to maintain a minimum flow velocity of 2 feet per second and shall be in accordance with the ejector or pump manufacturer's recommendations.

b. Pressurized building sewers shall be sized not less than 2" in diameter for sewage ejectors and sewage pumps, and 1¼" in diameter for all sewage grinder pumps.

(c) *Minimum size of private interceptor main sewers.* 1. Except as provided in subd. 3., the minimum size of a gravity flow private interceptor main sewer shall be 4" in diameter.

2. Except as provided in subd. 3., the minimum size of pressurized private interceptor main sewer shall be such so as to maintain a minimum flow velocity of 2 feet per second.

3. A municipality or a sanitary district may by ordinance, require the minimum size of a private interceptor main sewer to be larger than 4" in diameter.

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4. Private interceptor main sewers 6" or less in diameter may not exceed the drainage fixture limits in Table 382.30-3.

5. Private interceptor main sewers 8" or larger in diameter shall conform with the design criteria specified in s. NR 110.13.

Note: See ch. SPS 382 Appendix A-382.30 (4) for further explanatory material.

(d) *Future fixtures.* Where provisions are made for the future installation of fixtures, the drainage fixture unit values of such fixtures shall be considered in determining the required sizes of drain and vent pipes. Construction to provide for future installations shall be terminated with a plugged fitting or fittings.

Table 382.30-1 Drainage Fixture Unit Values By Fixture Type		
Type of Fixture ^a	Drainage Fixture Unit- Value (dfu)	Trap Size Minimum Diameter (inches)
Automatic Clothes Washers:		
Commercial type, individual.....	4	2
Commercial type, large capacity.....	a	a
Residential type.....	4	2
Autopsy Table.....	h	h
Bathroom Group, includes: water closet, lavatory, bathtub or shower.....	6	
Bathtubs, all types ^b	2	1½
Bedpan Washer.....	6	2
Beer Tap.....	½	1¼
Bidet.....	2	1½
Bottle Cooler.....	½	1¼
Campsite Receptor.....	6	4
Coffee Maker.....	½	1¼
Cuspidor, fountain or dental.....	1	1¼
Dipper Well.....	1	1¼
Dishwasher, commercial type.....	c	c
Dishwasher, residential type.....	2	1½
Drinking Fountain.....	½	1¼
Elevator Threshold Drain.....	a	4
Exhaust Hood Washer.....	4	2
Floor Drain:		
2 inch.....	2	2
3 inch.....	3	3
4 inch.....	4	4
Larger than 4 inch.....	4	d
Glass Filler.....	½	1¼
Glass Washer.....	2	1½
Health Care Fixtures:		
Clinic sink.....	6	NA
Exam/treatment sink.....	1	1¼
Sitz bath.....	2	1½
Ice Chest.....	½	1½
Laundry Tray, 1 or 2 compartment.....	2	1½
Lavatory.....	1	1¼
Lavatory, combination per trap.....	1	1½
Manufactured Home.....	11	NA
Refrigerated Food Display Case.....	1	1
Shower Stall:		
Residential.....	2	2
Public, individual.....	2	2
Public, group.....	2 per shower head	2
Sinks: ⁱ		
Bar, residential.....	1	1¼
Breakroom (single compartment).....	1	1½
Cup.....	½	1¼
Factory, wash, per set of faucets.....	1	1½
Fountain wash up.....	1	1½
Fountain or Bar, 4 compartments or less	3	1½
Food Waste Grinder, commercial 2 HP or less.....	2	f

Type of Fixture ^a	Drainage Fixture Unit- Value (dfu)	Trap Size Minimum Diameter (inches)
Food Waste Grinder, commercial 3 HP or more	3	f
Laboratory	2	1½
Laboratory, school	2	1½
Classroom	1	1¼
Pack or plaster	3	2
Residential, with or without food waste grinder	2	1½
Restaurant, Scullery, pots and pans — 4 compartments or less	3	f
Food, rinsing, cleaning or thawing	3	2
Service Sink, Flushing Rim	6	3
Service Sink, 2 inch diameter, wall outlet	2	2
Service Sink, 3 inch diameter, wall outlet	3	3
Service Sink, 2 inch diameter, floor outlet	2	2
Service Sink, 3 inch diameter, floor outlet	3	3
Shampoo Sink, barber or beauty parlor	2	1½
Surgeons, wash up	3	1½
Wash Fountain, circular and semi-circular	2	1½
Receptors of Indirect Wastes, gravity flow discharge:		

Type of Fixture ^a	Drainage Fixture Unit- Value (dfu)	Trap Size Minimum Diameter (inches)
1¼ inch receptor outlet diameter	1	1¼
1½ inch receptor outlet diameter	2	1½
2 inch receptor outlet diameter	3	2
3 inch receptor outlet diameter	4	3
4 inch receptor outlet diameter	6	4
Larger than 4 inch receptor outlet diameter	8	f
Soda Dispenser	½	1¼
Sterilizers:		
Bedpan	4	2
Garbage can washer	3	3
Instrument or water	1	
Urinal	2	g
Water Closet, nonpublic	4	g
Water Closet, public	6	g
NA = not applicable		
^a Based on discharge rate of the fixture.		
^b Includes foot, sitz and infant baths and regular bathtubs with or without showers or whirlpool circulation piping.		
^c Based on discharge rates and number of outlets; a 4" diameter trap and drain pipe minimum recommended.		
^d Trap size corresponds to the size of the floor drain.		
^e Trap size corresponds to the size of the drain outlet.		
^f Trap size specified in referenced standards of s. SPS 384.20.		
^g Trap size corresponds to the size of the drain outlet. Use the dfu value of the receptor serving the autopsy table.		
ⁱ Sinks not specified in this table shall be assigned 1 dfu for 1¼" tailpiece, 2 dfu for 1½" tailpiece and 3 dfu for 2" tailpiece.		

Table 382.30-2
Stacks And Drain Piping

Pipe Diameter (inches)	Maximum Number of Drainage Fixture Units That May Drain Through Any Portion of Drain Piping ^a			
	Drain Piping Other Than Stacks ^b	Stacks ^c		
		Total Discharge from Side Connections into One Branch Interval ^{d,e}	Stacks of 3 Branch Intervals or Less	Stacks of More Than 3 Branch Intervals
1 ¼	1	1	2	2
1 ½	3	2	4	8
2	6	6	10	24
3	20	20	48	72
4	160	90	240	500
5	360	200	540	1,100
6	620	350	960	1,900
8	1,400	600	2,200	3,600
10	2,500	1,000	3,800	5,600
12	3,900	1,500	6,000	8,400
15	7,000	f	f	f

^a Through any portion of a stack includes all of the flow at the design point.

^b Does not include building drains and subdrains, building sewers, private interceptor main sewers and forced discharge piping.

^c Drain stacks may be reduced in size as the drainage load decreases to a minimum diameter of one half of the diameter required at the base of the stack, but not smaller than that required for a stack vent under s. SPS 382.31 (14) (a).

^d Into one branch interval includes the discharge from the top fitting of the branch interval and does not include the discharge from the bottom most fitting creating the branch interval.

^e Reduction in diameter may occur within a branch interval.

^f Sizing based on design criteria.

Table 382.30-3
Building Drains, Building Subdrains, Building Sewers and Private Interceptor Main Sewers^a

Pipe Diameter (inches)	Maximum Number of Drainage Fixture Units Which May Drain Through Any Portion of a Building Drain, Building Subdrain, Building Sewer or Private Interceptor Main Sewer			
	Pitch (inch per foot)			
	1/16	1/8	1/4	1/2
1 ¼	NP ^b	NP	1	1
1 ½	NP	NP	3	3
2	NP	NP	6	9
3	NP	36	42	50
4	NP	180	216	250
5	NP	390	480	575
6	NP	700	840	1,000
8	1,400	1,600	1,920	2,300
10	2,500	2,900	3,500	4,200
12	3,900	4,600	5,600	6,700
15	7,000	8,300	10,000	12,000

^a Private interceptor main sewers 6 inches or less in diameter, see s. NR 110.13 for private interceptor main sewers 8 inches or larger in diameter.

^b NP means Not Permitted.

Note: For further explanatory material see ch. SPS 382 Appendix A-382.30 (4).

(5) PITCH OF HORIZONTAL DRAIN PIPING. All horizontal drain piping 4" or larger in diameter shall be installed at a pitch which produces a computed velocity of at least 2 feet per second when flowing half full.

(a) *Horizontal branch drains.* 1. The minimum pitch of horizontal branch drains 2" or less in diameter shall be 1/4" per foot.

2. The minimum pitch of horizontal branch drains larger than 2" in diameter shall be 1/8" per foot.

(b) *Building drains and building sewers.* 1. The minimum pitch of building drains shall be in accordance with Table 382.30-3.

2. a. The minimum pitch of building sewers 10" or less in diameter shall be in accordance with Table 382.30-3.

b. The minimum pitch of building sewers 12" or larger in diameter shall conform with the minimum pitch specified for municipal sewers in s. NR 110.13.

Note: See also s. SPS 382.30 (4) (c) 5. for further explanatory material.

(c) *Private interceptor main sewers.* 1. The minimum pitch of private interceptor main sewers 6" or less in diameter shall be in accordance with Table 382.30-3.

2. The minimum pitch of private interceptor main sewers 8" or larger in diameter shall conform with the minimum pitch specified for municipal sewers in s. NR 110.13.

Note: See ch. SPS 382 Appendix for further explanatory material.

(6) OFFSETS IN VERTICAL DRAINS. Offsets in vertical drain piping shall be in accordance with this subsection.

(a) *Offsets of 45° or less.* 1. An offset in a vertical drain, with a change in direction of 45° or less from the vertical, shall be sized as a vertical drain piping in accordance with sub. (4).

2. Except as provided in par. (c), where a horizontal branch connects to a drain stack within 2 feet above or below an offset with a change of direction of 30° to 45° from the vertical and the offset is located 5 or more branch intervals below the top of the stack, the offset shall be vented in accordance with s. SPS 382.31 (5) (a).

(b) *Offsets of more than 45°.* Except as provided in par. (c), a drain stack with an offset of more than 45° from the vertical shall be installed in accordance with subds. 1. to 5.

1. That portion of the drain stack above the highest offset shall be sized as for vertical drain piping in accordance with sub. (4).

2. That portion of the offset between and including the offset fittings shall be sized as building drain piping in accordance with sub. (4).

3. That portion of stack below the offset shall be not less than the size of the offset.

4. Where an offset of more than 45° is located more than four branch intervals below the top of the drain stack, a horizontal branch may not connect within the offset or within 2 feet above or below such offset.

5. a. Except as exempted in subd. 5. b., or par. (c), where an offset in a drain stack with a change of more than 45° from vertical is located below 5 or more branch intervals, the offset shall be vented in accordance with s. SPS 382.31 (5) (b).

b. The vent required in subd. 5. a. shall not be required where the drain stack, including the offset, is sized one pipe size larger than required for a building drain designed to serve as per sub. (4) and the entire stack and offset are not less in cross sectional area than that required for a stack plus the area of a vent as required in s. SPS 382.31 (5) (b).

Note: See ch. SPS 382 Appendix for further explanatory material.

(c) *Exception.* Where an offset is located two or more feet below the lowest branch drain connection to the stack, the venting specified in this subsection and s. SPS 382.31 (5) (b) is not required.

(7) HORIZONTAL BRANCH DRAIN CONNECTION AT BASE OF A STACK. (a) A horizontal branch drain may not connect downstream from the base fitting of a drain stack 2" or larger in diameter within the distance equal to 10 pipe diameters of the drain to which the horizontal branch drain connects.

(b) A building drain branch or building subdrain branch may not connect to a building drain or building subdrain downstream from the base fitting of a drain stack 2" or larger in diameter within the distance equal to 20 pipe diameters of the building drain or building subdrain.

Note: See ch. SPS 382 Appendix for further explanatory material.

(8) PIPING CHANGES IN DIRECTION. Changes in the direction of drain piping shall be accomplished in accordance with the requirements of this subsection.

(a) *Fittings.* All changes in direction of flow in drain piping shall be made by the appropriate use of 45 degree wyes, long or short sweep quarter bends, sixth, eighth, or sixteenth bends, or by a combination of these or other equivalent fittings. Except as provided in subds. 1. to 3., fittings which change the direction of

flow for drain piping 8" or less in diameter shall conform to the minimum radii specified in Table 382.30-4.

Note: See ch. SPS 382 Appendix for further explanatory material.

1. The minimum radius for the first 90° fitting downstream from a trap serving a lavatory or sink shall be 1-3/4" for drain piping 1-1/2" in diameter. The fitting shall be a tee or quarter bend.

2. The minimum radius for the first 90° bend or elbow downstream from a water closet shall be 2-1/2" for drain piping 3" in diameter.

3. The minimum radius for the first 90° bend or elbow downstream from a water closet shall be 3" for drain piping 4" in diameter.

Table 382.30-4
Minimum Radii of Fittings (in inches)

Diameter of pipe (inches)	Changes in Direction of Flow	
	Horizontal to Vertical	Vertical to Horizontal and Horizontal to Horizontal
1-1/4	1-1/8	2-1/4
1-1/2	1-3/8	2-3/4
2	1-7/8	3-1/4
3	2-7/8	4-1/16
4	3-3/4	4-7/8
5	4-1/2	6-1/2
6	5	7
8	6	8

(b) *Blowout type fixtures.* Where blowout type fixtures are installed back to back, appropriate fittings shall be installed to prevent the passage of wastes from one fixture to the other.

(9) DRAIN FITTINGS AND CONNECTIONS. Drain fittings, connections, devices and methods of installation shall not obstruct or retard the flow of water, wastes, sewage or air in the drain system or venting system in an amount greater than the normal frictional resistance to flow, unless as otherwise permitted in this chapter or unless approved by the department.

(a) *Closet bend.* The reduction of a 4 x 3 inch closet bend or collar fitting from 4" to 3" shall not be considered an obstruction.

(b) *Side inlet tees or bends.* The side inlet of a low pattern or high pattern tee or bend shall not be used as a vent connection when the side inlet is placed in a horizontal position or when any arrangement of piping or fittings produces a similar effect.

(c) *Prohibited fittings and connections.* The types of fittings and connections specified in subds. 1. to 4. shall not be used for drain piping:

1. A heel inlet bend when the heel inlet is in the horizontal position;

2. A fitting or connection which has an enlargement chamber or recess with a ledge or shoulder, or reduction in pipe area in the direction of flow;

3. A fitting which has running threads; and

4. A connection by means of drilling and tapping of a drain or vent pipe, unless as otherwise approved by the department.

(d) *Saddles.* If a pipe saddle is used to connect drain piping together, the saddle shall be installed in accordance with s. SPS 384.30 (5) (d).

(10) SUMPS, EJECTORS AND PUMPS. (a) *Sumps.* 1. 'General.' All sanitary building subdrains shall discharge into an approved, vented sump with an airtight cover. The sump shall be so located as to receive the wastewater by gravity flow, and shall be located at least 25 feet from any water well or as otherwise approved by the department of natural resources.

2. 'Capacity.' Except as provided in pars. (c) and (d), the minimum capacity of the sump shall be determined in accordance with s. 35.93, Stats. Updated on the first day of each month.

Entire code is always current. The Register date on each page is the date the chapter was last published.

dance with the provisions of subd. 2. a. to e. Capacity shall be based on one pump only.

a. The water supply fixture unit method shall be used to determine peak input flow in gallons per minute; only the fixtures that drain to the sump shall be included.

Note: When converting water fixture units to gallons per minute it is permissible to calculate the load as a supply system with predominantly flush tanks.

b. The capacity of the sump shall be such that the pump when actuated by the lowest "pump on" switch runs at least 20 seconds.

c. Between the highest "pump on" switch level and the sump inlet, the sump shall hold the amount of input that exceeds the discharge of the pumping equipment in a 5 minute peak input period. In no case shall the vertical distance between the switch and the inlet be less than 3 inches.

d. The low water level shall be maintained in accordance with the pump manufacturer's requirements, but shall not be less than 4" above the sump bottom.

e. Sumps containing one pump shall have an inside diameter of at least 24". Sumps containing 2 pumps shall have an inside diameter of at least 30".

Note: See ch. SPS 382 Appendix for further explanatory material.

3. 'Vents.' All sumps and all drains leading to a sump shall be vented in accordance with s. SPS 382.31.

4. 'Materials.' All sumps shall be constructed in a watertight manner of approved materials in accordance with ch. SPS 384.

5. 'Removable covers.' Penetrations through the top of removable sump covers shall be limited to those for the electrical supply, the vent piping and the discharge piping for the pump or pumps.

(b) *Ejectors and pumps.* 1. 'Where required.' The liquid from all sanitary building sumps shall be lifted and discharged into the building sanitary drain system by automatic ejectors, pumps or any other equally efficient method approved by the department.

2. 'Duplex equipment.' a. Duplex ejector or pumping equipment shall be installed in a public building where 3 or more water closets or more than 20 drainage fixture units discharge into a sump.

b. Duplex ejector or pumping equipment shall be installed where the sanitary wastes of 2 or more one- or 2-family dwellings discharge into a sump.

c. Where duplex ejector or pumping equipment is installed, appropriate devices shall be installed to automatically alternate operation of the pumps or ejectors and to operate both pumps or ejectors when one unit cannot handle the load.

d. Where duplex pumping equipment is installed, an audible or visual alarm system with a manual control reset shall be installed to indicate pump failure.

3. 'Size.' The size and design of an ejector or pump shall be determined by the capacity of the sump to be served, the discharge head and discharge frequency. All ejectors and pumps shall provide a minimum flow velocity of 2 feet per second in the forced discharge piping.

Note: See ch. SPS 382 Appendix for velocity in relation to flow rate by various pipe sizes.

Note: Ejectors or pumps discharging to septic tanks may disturb the normal settling properties of the tank environment; contact the Division of Industry Services for more information.

a. All sewage grinder pumps shall have a minimum 1 1/4" diameter discharge opening and discharge piping.

b. All nongrinder-type sewage pumps serving water closets shall be capable of passing a 2" diameter solid ball and shall have a minimum 2" diameter discharge opening and discharge piping. All other pumps handling sanitary wastes shall be rated by the

manufacturer as an effluent pump, shall be capable of passing a $\frac{1}{2}$ " diameter solid ball and shall have a minimum $1\frac{1}{4}$ " diameter discharge opening and discharge piping.

4. 'Discharge connections.' a. The discharge pipe from the ejector or pump shall be connected to the gravity drain by means of a wye pattern fitting. Where the fitting connects to a horizontal drain, the bottom of the wye branch of the fitting shall be located above the horizontal center line.

b. With the exception of exterior sumps, a full flow check valve shall be installed in the discharge piping from each ejector or pump.

c. Where duplicate ejector or pumping equipment is installed, each discharge pipe from an ejector or pump shall be provided with a gate or ball type valve installed downstream of each full flow check valve.

5. 'Discharge pipe air relief.' Air relief valves shall be provided at all high points in the discharge piping of an ejector or pump where the piping arrangement creates an air trap.

6. 'Prohibited connections.' No fixtures may be connected to the discharge pipe between the ejector or pump and the point where it enters the gravity drain.

7. 'Maintenance.' All ejectors, pumps and like appliances shall receive care as needed to keep them in a satisfactory operating condition.

(c) *Prefabricated pump and sump systems.* Macerating toilet systems and waste pumping systems for plumbing fixtures shall conform to ASME A112.3.4-2018/CSA B45.9-18. If unspecified by the manufacturer, the minimum capacity of a pump and sump system shall be determined in accordance with all of the following:

1. The water supply fixture unit, wsfu, method shall be used to determine peak input flow in gallons per minute. The peak input shall include all the fixtures that drain to the sump.

2. Unless storage is provided as specified in par. (a) 2., the capacity of the prefabricated pump and sump system shall accommodate the peak input flow.

3. The low water level shall be maintained in accordance with the pump manufacturer's requirements.

(d) *Exterior sumps.* Exterior sumps shall comply with s. SPS 384.25. The minimum capacity of exterior sumps shall be determined in accordance with all of the following:

1. Peak input flow in gallons per minute shall be determined in accordance with either of the following:

a. The water supply fixture unit, wsfu, method of all the fixtures that drain to the sump.

b. The provisions as specified in s. SPS 383.43 (2) through (6).

2. In lieu of providing the duplex pumping equipment as specified in par. (b) 2., a one-day holding capacity may be provided above a high level alarm when installed on a simplex system.

(11) **BUILDING DRAINS AND BUILDING SEWERS.** (a) *Limitations.* No building sewer may pass through or under a building to serve another building, unless:

1. The building sewer serves farm buildings or farm houses, or both, which are all located on one property; or

2. The building sewer or private interceptor main sewer serves buildings located on the same property and a document, which indicates the piping and distribution arrangement for the property and buildings, shall be recorded with the register of deeds no later than 90 days after installation.

(b) *Building drains.* 1. 'Elevation.' a. All building drains shall be installed below the lowest floor levels on which fixtures

may be installed if the public sewer, POWTs or private interceptor main sewer elevation permits.

b. Where any portion of an above-ground building drain discharges to a vertical pipe, the building drain shall connect to the building sewer at an elevation at least 30" above the basement floor.

Note: See ch. SPS 382 Appendix for further explanatory material.

2. 'Backwater protection.' A building drain subject to backflow or backwater shall be protected with a backwater valve or with a sump with pumping equipment in accordance with sub. (10).

a. Backwater valves, when fully open, shall have a capacity not less than that of the pipes in which installed.

b. Backwater valves shall be so located as to be readily accessible for cleaning.

3. 'Floor drain required.' a. Where a plumbing fixture or appliance is located on a floor which is entirely below grade, a floor drain shall be installed to serve that floor.

b. In any room containing the recessed or concealed portions of sterilizers located in health care or related facilities, at least one floor drain connecting to the drainage system shall be installed in a manner to adequately drain the entire floor area.

Note: See the pool code, s. SPS 390.19 (2) for drain requirements for swimming pool toilet or locker rooms. "SPS 390.19 (2) DRAINAGE OF COVERED AREAS.

(a) Floor drains shall be installed in toilet rooms and locker rooms where sanitary fixtures are located and where the room door is adjacent to the deck or adjacent to the impervious walkway draining to the deck.

(b) Floor drain openings shall be $\frac{1}{4}$ inch or less in width or diameter.

(c) Floors shall be pitched to drain."

(c) *Building sewers.* 1. 'Minimum depth.' a. The top of a building sewer shall be located at a depth of not less than 42" below finished grade, except as provided in subd. 1. b. or subd. 2.

b. The top of a building sewer which discharges to a septic tank, holding tank or grease interceptor shall be located at a depth of not less than 18" below finished grade.

2. 'Protection from frost.' a. Except as provided in subd. 2. c. to e., a building sewer or private interceptor main sewer shall be protected from frost in accordance with subd. 3. in areas where the top of the building sewer or private interceptor main sewer is located less than 60" below a surface area from which snow will be cleared.

b. Except as provided in subd. 2. c. to e., a building sewer or private interceptor main sewer shall be protected from frost in accordance with subd. 3. in areas where the top of the building sewer or private interceptor main sewer is located less than 42" below a surface area which snow will not be cleared.

c. Where a building sewer or private interceptor main sewer discharges to a holding tank, POWTs treatment tank or grease interceptor, the portion of a building sewer or private interceptor main sewer which is within 30 feet from the connecting building drain and which is under a surface area from which snow will not be cleared shall not be required to be protected from frost.

d. Frost protection for a building sewer shall not be required where the predicted depth of frost as determined from Figure 382.30-1 and Table 382.30-6 does not extend below the top of the building sewer.

e. Where a building sewer or private interceptor main sewer is installed to serve public facilities that are not open during the period from November 15 to March 15 and which are not places of employment, frost protection requirements shall not apply.

Note: This exemption applies to frost sleeves as provided in s. SPS 382.35 (5) (a) 2.

3. 'Insulation for building sewers.' Where required by subd. 2. a. or b., building sewer or private interceptor main sewer insulation for frost protection shall be provided in accordance with one of the methods specified in subd. 3. a. to d.

a. Extruded polystyrene foam insulation shall be installed at a depth of at least 18" below finished grade and at least 6" above the top of the sewer pipe. The minimum thickness and width of the foam insulation shall be determined from Figure 382.30-1 and Tables 382.30-5 to 382.30-7. If the insulation is to be installed more than 6" above the top of the sewer, the number of inches exceeding 6" shall be added to the width of insulation determined from Table 382.30-7.

b. Extruded polystyrene foam insulation shall be installed using a box method. The 3-sided box shall be formed with 3 lengths of polystyrene foam insulation where the top of the box extends horizontally to the farthest edge of both vertical sides. The insulation shall be installed at or below a depth of at least 12"

below finished grade and 6" above the top and 6" from each side of the building sewer or private interceptor main sewer. The minimum thickness of the foam insulation shall be determined from Figure 382.30-1 and Table 382.30-5.

Note: See ch. SPS 382 Appendix for further explanatory material.

c. Lightweight insulating concrete shall be installed to the depth of the spring line of the sewer and shall extend laterally at least 6" on both sides of the sewer. The minimum thickness of the insulating concrete shall be determined from Figure 382.30-1 and Table 382.30-5. The thickness shall be measured from the top of the sewer. The top of the insulation shall be installed at least 12" below finished grade.

d. Alternative methods of frost protection shall be approved by the department.

Figure 382.30-1. Frost protection zones.

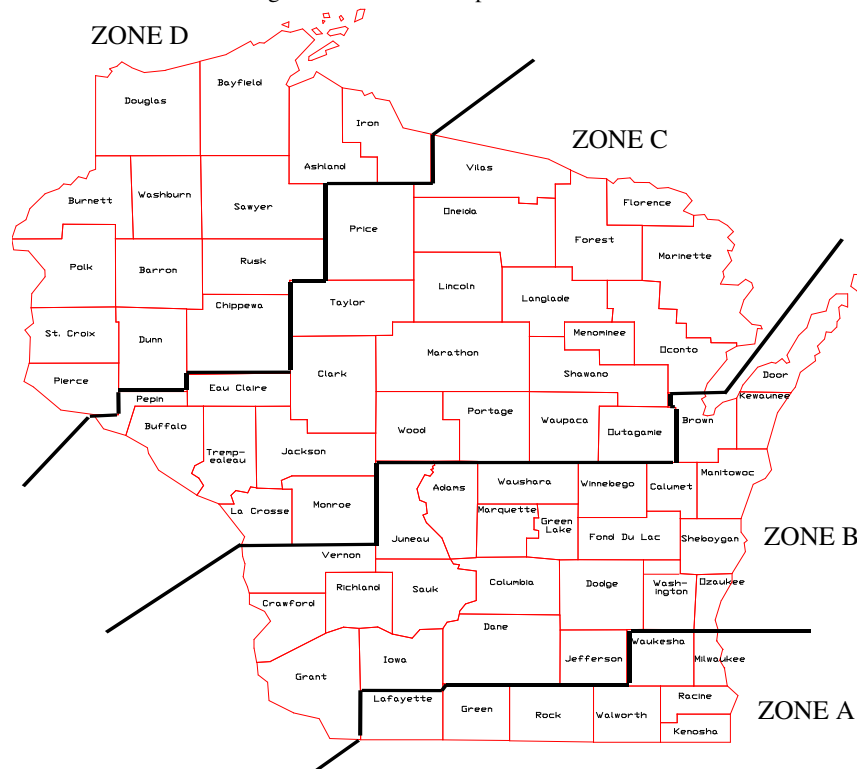


Table 382.30-5
Minimum Thickness of Insulation

Frost Protection Zone	Extruded Polystyrene Foam (in inches)	Insulating Concrete (in inches)
A	1.0	6
B	1.5	9
C	2.0	12
D	2.5	15

Table 382.30-6
Predicted Depth of Frost in Various Types of Backfill Soil (in feet)

Soil Type	Frost Protection Zone			
	A	B	C	D
Clay, Clay Loam	2.5	3.0	3.5	4.0
Silt Loam, Silty Clay Loam	3.5	4.0	4.5	5.5
Sandy Clay Loam	4.0	4.5	5.5	6.0
Sandy Loam, Loamy Sand	4.5	5.0	6.0	6.5
Sand	5.0	5.5	6.5	7.5
Gravelly Sand	6.0	7.5	9.0	10.0

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Table 382.30-7
Minimum Width of Extruded Polystyrene Foam Insulation (in feet)

Predicted Depth of Frost (feet)	Depth of Sewer (in feet)					
	2.0	2.5	3.0	3.5	4.0	4.5
2.5	2	NR				
3.0	3	2	NR			
3.5	4	3	2	NR		
4.0	5	4	3	2	NR	
4.5	6	5	4	3	2	NR
5.0	7	6	5	4	3	2
5.5	8	7	6	5	4	3
6.0	9	8	7	6	5	4
6.5	10	9	8	7	6	5
7.0	10	10	9	8	7	6
7.5	10	10	10	9	8	7
8.0	10	10	10	10	9	8
8.5	10	10	10	10	10	9
9.0	10	10	10	10	10	10
10.0	10	10	10	10	10	10

NR means Not Required.

(d) *Location limitations.* Building drains, building sewers or private interceptor main sewers shall be separated from water wells by the applicable separation distances contained in chs. [NR 811](#) and [812](#) or as otherwise approved by the department of natural resources.

Note: See s. [SPS 382.40](#) for provisions regarding the separation of water supply piping, building sewers and private interceptor main sewers.

Note: See ch. [SPS 382 Appendix](#) for further explanatory material. Section [NR 812.08](#) may require additional setbacks.

(e) *Installation of building drains and building sewers.* 1. 'Trenching.' All excavations for building drains and building sewers shall be open trench work, unless otherwise permitted by local ordinance or accepted by the local inspector.

2. 'Stable bottom.' Where the bottom of the trench can be maintained in a stable condition and free of water during the time of installation the building drain and the building sewer shall be bedded and initially backfilled to comply with all the following requirements:

a. Where the trench bottom does not contain stone larger than one inch in size or where bedrock is not encountered, the trench may be excavated to grade.

b. Where stone larger than one inch size or when bedrock is encountered, the trench shall be excavated to a depth at least 3 inches below the grade elevation and shall be brought back to grade with a bedding of sand, gravel or crushed stone that shall be of a size that all the material shall pass a ¾-inch sieve.

c. Bedding shall be sufficiently dry and hand or mechanically compacted to a minimum of 90 percent standard proctor density.

d. Initial backfill to a depth of 12 inches over the pipe shall be sand, crushed stone or excavated material which is neither corrosive nor organic in nature.

e. Initial backfill shall be of a size that passes a one-inch sieve.

f. A concrete floor may be placed over a building drain having less than 12 inches of initial backfill.

g. Initial backfill shall be placed in increments not to exceed 6 inches in depth.

h. Initial backfill shall be well tamped for the full width of the trench and length of the sewer.

3. 'Unstable bottom.' Where a mucky or unstable bottom is encountered in the trench, the required dry and stable foundation conditions shall be provided by providing one of the following options:

a. Sheathing shall be driven and left in place to a depth of 48 inches below the trench bottom or to solid foundation to a lesser depth.

b. Removal of wet and yielding material to a depth of 24 inches or to solid material and replacement of the unstable material with limestone screenings, pea gravel or equivalent material.

c. Install a longitudinally reinforced concrete cradle the width of the trench and at least 3 inches thick.

d. Install a longitudinally reinforced concrete slab the width of the trench and at least 3 inches thick.

e. Backfill and bedding shall comply with subd. [2. d.](#) to [h.](#)

4. 'Backfill completion.' Care shall be exercised in placing the balance of the backfill to prevent breakage of the pipe. Large boulders or rock, concrete slabs, or frozen masses shall not be used in the backfill. At least 36" of backfill cover shall be provided over the top of the pipe before the pipe trench is wheel-loaded.

5. 'Pipe openings protected.' The ends of all pipes not immediately connected shall be closed so as to prevent the introduction of earth or drainage from an excavation.

(f) *Connection to public sewer.* The connections of building sewers to public sewers shall be in accordance with conditions of approval for the public sewer granted by the department of natural resources under s. [281.41](#), Stats.

1. 'Gravity public sewer.' When a building sewer connection to the public sewer is not found within 3 feet of the point designated by the local governing body or its authorized representative, the connection shall be made in accordance with one of the provisions specified in subd. [1. a.](#) to [d.](#)

a. A saddle fitting approved by the department and acceptable to the municipality or sanitary district shall be installed.

b. Where acceptable to the municipality or sanitary district a portion of the main sewer may be removed and a tee or wye fitting approved by the department may be inserted with compression joints in the public sewer acceptable to the municipality or the sanitary district. The insertion shall be made under the supervision of the authorized representative of the municipality or the sanitary district.

c. When the public sewer is concrete or clay, the end of the connecting sewer may be set upon or in an opening cut into the top half of the public sewer, but shall not protrude into the public sewer. The connection shall be secured by encasing the main sewer pipe and the connection in concrete at least 3" thick so as to

assure permanency of the connection and adequate backing of the public sewer pipe.

d. In lieu of the use of a fitting and in the event that an opening cannot be located in the top half of the public sewer, a length of concrete or clay public sewer pipe may be removed and a section with a wye fitting shall be inserted in its place. The joints at the ends of the section shall be encased in concrete at least 3" thick. The connection or insertion shall be made under the supervision of the authorized representative of the municipality or the sanitary district.

2. 'Pressurized public sewer.' Where a forced building sewer discharges to a pressurized public sewer all of the following requirements shall apply:

a. A curb stop shall be installed on the same property as close as possible to the connection to the common forced main sewer.

b. A check valve shall be installed in the pressurized building drain or building sewer.

c. An accessible quick disconnect shall be installed upstream of the check valve.

Note: See ch. SPS 382 Appendix for further explanatory material.

(g) *Prohibited installations.* 1. 'Harmful discharge.' No person may connect to a public sewer any building drain or building sewer through which is discharged any substance likely to cause undue corrosion, obstruction, nuisance, explosion or interference with sewage treatment processes.

2. 'Storm water and clear water connections.' Except as provided in s. SPS 382.36 (3), storm drain piping and clear water drain piping may not discharge to a sanitary building drain which connects to a publicly-owned treatment works.

Note: See s. SPS 382.36 for provisions relative to storm sewers.

(h) *Locating requirements.* A means to locate buried non-metallic sewers and private interceptor main sewers discharging to municipal mains shall be accomplished in accordance with one of the following options:

Note: See ch. SPS 382 Appendix for further information.

1. A tracer wire shall be installed in accordance with all of the following:

a. Tracer wire shall be installed along the length of the non-metallic pipe.

b. Tracer wire shall be a minimum of 18 gauge, insulated, single-conductor copper wire or equivalent.

c. Tracer wire shall be located directly above and within 6 inches of the non-metallic pipe.

d. Tracer wire shall be accessible and locatable within the owner's property at 400-foot intervals or increments thereof.

e. Exterior access locations shall include a means of protecting the tracer wire.

f. In-ground sleeves shall be installed as provided in s. SPS 382.35 (5) (a) 2. c. and d.

g. Where tracer wire is more than 6 inches from the pipe, tracer wire insulation color shall comply with subd. 1. h.

h. Tracer wire insulation color for non-metallic sewer pipe shall be green.

i. Tracer wire conductivity shall be tested prior to use.

j. Conductive warning tape may not be utilized in lieu of tracer wire.

2. Global positioning system data shall be recorded with the municipality where the non-metallic pipe is installed.

3. Another equally-effective means acceptable to the department shall be employed to mark the location of the non-metallic pipe.

(12) PRIVATE INTERCEPTOR MAIN SEWERS. (a) The connection of a private interceptor main sewer to a public sewer shall be in accordance with the conditions of approval for the public sewer granted by the department of natural resources under s. 281.41, Stats. *Published under s. 35.93, Stats. Updated on the first day of each month. Entire code is always current. The Register date on each page is the date the chapter was last published.*

(b) Private interceptor main sewers which discharge to a municipal treatment facility shall be designed in accordance with the appropriate water quality management plan.

(c) All private interceptor main sewers shall be tested in accordance with s. SPS 382.21.

(d) Private interceptor main sewers 6" or less in diameter shall be installed in accordance with the criteria for building sewers specified in sub. (11) (b) and (c) and (d) and (e).

(e) Private interceptor main sewers 8" or larger in diameter shall be:

1. Provided with frost protection in accordance with sub. (11) (c); and

2. Installed in accordance with the municipal sewer criteria specified in s. NR 110.13.

(f) No private interceptor main sewer may pass through or under a building to serve another building, unless one of the following conditions are met:

1. The private interceptor main sewer serves farm buildings, farm houses, or both which are located on one property.

2. The private interceptor main sewer serves buildings that are located on one property and a document, which indicates the piping and distribution arrangement for the property and buildings, shall be recorded with the register of deeds no later than 90 days after installation.

3. An easement and agreement for maintenance and repairs shall be recorded with the register of deeds no later than 90 days after installation.

(13) LOCATION OF DRAIN PIPING. (a) Drain piping located below the ceilings of areas where food, ice or potable liquids are prepared, handled, stored or displayed shall be installed with the least number of joints and shall be installed in accordance with subds. 1. to 5.

1. All pipe openings through floors shall be provided with sleeves bonded to the floor construction and protruding not less than one inch above the top of the finish floor with the space between sleeve and the piping sealed.

2. Plumbing fixtures, except bathtubs and showers, shall be of the wall mounted type. Bathtubs shall have waste and overflow connections made above the floor and piped to a trap below the floor.

3. Floor and shower drains installed shall be equipped with integral seepage pans.

4. Cleanouts for piping shall be extended through the floor construction above.

5. Piping subject to operation at temperatures that will form condensation on the exterior of the pipe shall be thermally insulated.

(b) Where drain piping is located in ceilings of areas where food, ice or potable liquids are prepared, handled stored or displayed, the ceilings shall be of the removable type, or shall be provided with access panels in order to provide an access for inspection of the piping.

(c) Exposed drain piping shall not be located over a pool, surge tank or an open filter for a pool except where a trough is installed below exposed drain piping to divert the flow of seepage to a discharge point consistent with Table 382.38-1.

Note: See ch. SPS 382 Appendix for examples of exposed piping considerations.

(14) VACUUM WASTE COLLECTION SYSTEMS. (a) Vacuum waste collection systems shall do all of the following:

1. Conform to CSA b45.13:19/IAPMO z1700-2019.

2. Be installed in accordance with the criteria for building sewers specified in sub. (11) (b) and (c) and (d) and (e).

3. All private interceptor main sewers shall be tested in accordance with s. SPS 382.21.

4. Private interceptor main sewers 6" or less in diameter shall be installed in accordance with the criteria for building sewers specified in sub. (11) (b) and (c) and (d) and (e).

5. Private interceptor main sewers 8" or larger in diameter shall be:

1. Provided with frost protection in accordance with sub. (11) (c); and

2. Installed in accordance with the municipal sewer criteria specified in s. NR 110.13.

(f) No private interceptor main sewer may pass through or under a building to serve another building, unless one of the following conditions are met:

1. The private interceptor main sewer serves farm buildings, farm houses, or both which are located on one property.

2. The private interceptor main sewer serves buildings that are located on one property and a document, which indicates the piping and distribution arrangement for the property and buildings, shall be recorded with the register of deeds no later than 90 days after installation.

3. An easement and agreement for maintenance and repairs shall be recorded with the register of deeds no later than 90 days after installation.

2. Be designed and installed in accordance with the manufacturer's instructions.

3. Include a vacuum generating system, waste collection center, piping network, vacuum valve and control components used to isolate the vacuum piping network from atmospheric pressure and collect waste at the point of origin. If a vacuum system provides the only means of sanitation, then a contingency system set to operate automatically shall be installed.

(b) Vacuum generating systems shall do all of the following:

1. Include vacuum pumps adequate to create a constant vacuum in the piping network and storage tanks.

2. Have automated controls for the operating of pumps, collection tanks and alarms.

3. Include demand activated vacuum pumps.

4. Be provided with a vacuum pump exhaust vent capable of handling the total air volume of the vacuum pump.

(c) Waste collection centers or storage tanks shall do all of the following:

1. Be adequately sized to prevent fouling of the system.

2. Be designed to withstand 150% of the rated vacuum created by the vacuum generating system without leakage or collapse.

3. Be accessible for inspection, repair, and replacement.

(d) Vacuum piping networks shall do all of the following:

1. Be designed to withstand 150% of the rated vacuum created by the vacuum generating system without leakage or collapse.

2. Be under continuous vacuum.

3. Be constructed of materials specified by the manufacturer.

4. Be sized in accordance with the manufacturer's instructions.

5. Connect to water closets with at least 1 ½ inch. i.d. piping.

(e) Vacuum interface valves shall do all of the following:

1. Be installed to isolate the vacuum piping network from atmospheric pressure.

2. Open automatically when a waste removal cycle is initiated for the fixture.

(f) Control components shall include levels indicator switches that automatically control the discharge pumps and provide all of the following warnings of malfunction or blockage:

1. Start discharge.

2. Stop discharge.

3. Audible alarm for abnormally high effluent levels.

4. Full tank shutdown warning.

(g) Gravity type fixtures shall conform to s. [SPS 384.20](#).

(h) Vacuum water closets shall do all of the following:

1. Have s. [SPS 382.41](#) listed vacuum breakers installed in fixture supply piping.

2. Have a WSFU value of 1.

(i) Piping hangers and supports used in vacuum waste collection systems shall conform to s. [SPS 382.60](#).

History: Cr. [Register, February, 1985, No. 350](#), eff. 3-1-85; am. Table 82.30-1, (8) (a), (9) (c) (intro.) and 3., and (10) (b) 3. b., r. and recr. (4) (d) 2., Table 82.30-4, (10) (a) 2. b., (11) (intro.) and (f) 2., cr. (8) (a) 1. to 3. and (9) (d), r. (9) (c) 4., renum. (9) (c) 5. to be 4. and am., [Register, May, 1988, No. 389](#), eff. 6-1-88; r. and recr. (4) (d), am. Table 82.30-3 and 82.30-7, r. (11) (intro.), renum. (11) (a) to (f) to be (b) to (g), cr. (11) (a) and (12) (f), [Register, August, 1991, No. 428](#), eff. 9-1-91; am. Table 82.30-1, [Register, April, 1992, No. 436](#), eff. 5-1-92; am. (7) (a) and (b), (11) (c) 1. a., (12) (e) 1. and Table 82.30-1, cr. (10) (a) 5., r. (11) (b) 1. b., renum. (11) (b) 1. c. to be (11) (b) 1. b., [Register, February, 1994, No. 458](#), eff. 3-1-94; reprinted to restore dropped copy in (10) (b) 3. b., [Register, July, 1994, No. 463](#); corrections in (11) (f) and (12) (g) made under s. 13.93 (2m) (b) 7., Stats., [Register, April, 1998, No. 508](#); am. (11) (g) 2., [Register, April, 2000, No. 532](#), eff. 7-1-00; [CR 02-002](#): am. (4) (d) 5., (5) (b) 2. b., (c) 2., (10) (a) 2., (b) 4. b., (11) (b) 1. a., (c) 2. a. to c., 3. (intro.), (g) 2., (12) (f) (intro.) and 1., and Tables 82.30-1, 2, 3, 5 and 6, cr. (10) (b) 2. d., (c), (d),

(11) (b) 3. b. and (c) 2. e., r. and recr. (11) (a) 2., (d), and (12) (f) 2., renum. (11) (b) 3., (c) 3. b. and c. to be (11) (b) 3. a., (c) 3. c. and d., [Register April 2003 No. 568](#), eff. 5-1-03; [CR 04-035](#): r. (3) (b) 32. a., am. Table 82.30-1 [Register November 2004 No. 587](#), eff. 12-1-04; [CR 07-069](#): cr. (11) (h) [Register February 2008 No. 626](#), eff. 3-1-08; [CR 08-055](#): am. (3), (6) (a) 2., (b) 1. to 3., (10) (a) 1., Tables 82.30-1 and 82.30-3, r. (4) (b), renum. (4) (c) to (e) and (11) (h) 1. g. to i. to be (4) (b) to (d), and (11) (h) 1. h. to j., r. and recr. (6) (b) 4., 5., (11) (e) 2., 3., (f) 2. and Table 82.30-2, cr. (11) (h) 1. g. [Register February 2009 No. 638](#), eff. 3-1-09; correction in (6) (a) made under s. 13.92 (4) (b) 1., Stats., [Register February 2009 No. 638](#); [CR 10-064](#): am. (6) (a) 2., (b) (intro.), 5. a., Table 82.30-2, cr. (6) (c) [Register December 2010 No. 660](#), eff. 1-1-11; correction in (2), (3) (a) 1., 2., (4) (a) 1., (c) 4., (5) (b) 1., 2. a., (c) 1., (6) (a) 2., (b) 5. a., b., (c), (8) (a), (9) (d), (10) (a) 3., 4., (d) 1. b., (11) (c) 2. d., 3. a., b., c., (g) 2., (h) 1. f., (12) (c), Table 328.30-1, Table 328.30-2 made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#); [CR 23-006](#): am. (4) (a), Table 382.30-1, (10) (a) 2. (intro.), c., (c) (intro.), (d) (intro.), (11) (c) 2. e., cr. (12) (f) 3., am. (13) (c), (14) [Register September 2023 No. 813](#), eff. 10-1-23; correction in (4) (a) 1., (16) (e) made under s. 35.17, Stats., [Register September 2023 No. 813](#).

SPS 382.31 Vents and venting systems. (1) SCOPE.

The provisions of this section set forth the requirements for the design and the installation of vents and venting systems.

(2) MATERIALS. All vents and venting systems shall be constructed of approved materials in accordance with ch. [SPS 384](#).

(3) GENERAL. (a) *Vents*. Every trap and trapped plumbing fixture shall be provided with an individual vent, except as otherwise permitted in this chapter. Vents and venting systems shall be designed and installed so that the water seal of a trap shall be subject to a maximum pneumatic pressure differential equal to one inch of water column.

(b) *Main stack*. Each gravity-flow sanitary building sewer shall be served by at least one stack which extends from a building drain to a vent terminal or vent header. The stack shall be not less than 3" in diameter from the building drain to the vent terminal or vent header.

(4) VENT STACKS AND STACK VENTS. (a) *Where required*. A vent stack and a stack vent shall be installed to serve any drain stacks of 5 or more branch intervals.

(b) *Installation*. 1. The connection of the vent stack to a drain stack shall be at or below the lowest branch drain connection to the drain stack. The connection to the drain stack shall be by means of a wye pattern fitting installed in a vertical portion of the stack.

2. A vent stack and a stack vent shall:

a. Extend to a vent terminal in accordance with sub. (16);

b. Connect to a vent stack which extends to a vent terminal; or

c. Connect to a stack vent at least 6" above the flood level rim of the highest fixture discharging into a drain stack.

3. Vent stacks and stack vents may connect into a common vent header and then shall extend to a vent terminal.

4. The connection of a vent stack with another vent may not be less than 38" above the next higher floor level where the plumbing fixtures are vented, but in no case lower than 2" above the elevation of the highest flood level rim of any fixture served by the vent.

Note: See ch. [SPS 382 Appendix](#) for further explanatory material.

(5) RELIEF AND YOKE VENTS FOR STACK OFFSETS. (a) *Vents serving offsets of 30 to 45° in drain stacks*. 1. Except as permitted in subd. 2., where a horizontal branch connects to a drain stack within 2 feet above or below an offset with a change of direction of 30 to 45° from the vertical and the offset is located below 5 or more branch intervals, the offset shall be vented in accordance with par. (b) 1. to 3.

2. Where the drain stack and offset are sized as building drain as per Table 382.30-3, the vents serving the offset of 30 to 45° in a drain stack are not required.

(b) *Vents serving offsets of more than 45° in drain stacks*. Offsets of more than 45° in drain stacks shall be vented where 5

or more branch intervals are located above the offset. The offset shall be vented by venting the upper and lower section of the stack.

1. 'Upper section.' The upper section of the stack shall be vented as a separate stack with a vent stack connection installed in accordance with sub. (4). The offset shall be considered the base of the stack.

2. 'Vent connection above offset.' The vent stack shall connect with a wye pattern fitting above the stack offset and at or below the lowest drain branch above the offset.

3. 'Lower section.' The lower section of the stack shall be vented by a yoke vent connecting below the offset above or at the next lower horizontal branch.

a. Except as provided in subd. 3. b., the connection of the yoke vent to the drain stack shall be by means of a wye pattern fitting.

b. The yoke vent connection may be a vertical extension of the stack.

c. The connection of the yoke vent to another vent shall not be less than 38 inches above the next higher floor level where plumbing fixtures are installed that discharge into the drain stack.

(6) RELIEF VENTS FOR STACKS OF MORE THAN 10 BRANCH INTERVALS. (a) Drain stacks of more than 10 branch intervals shall be provided with a relief vent at each tenth interval installed.

(b) The lower end of the relief vent required in par. (a) shall connect to the stack by use of a wye pattern fitting below the horizontal branch serving that floor.

(c) The upper end of the relief vent required in par. (a) shall connect to the vent stack not less than 38 inches above the next higher floor level where plumbing fixtures are installed that discharge into the drain stack.

(7) RELIEF VENTS FOR BUILDING DRAINS. A building drain with a change in elevation of 12 feet or more and at an angle of

45° or more from the horizontal shall be provided with a relief vent.

(a) The connection of the relief vent to the building drain shall be by means of a wye pattern fitting installed within 2 feet upstream of the top of the change in elevation.

(b) The connection of the relief vent to another vent shall be not less than 38" above the next higher floor level where plumbing fixtures are installed that discharge through the building drain.

Note: See ch. SPS 382 Appendix for further explanatory material.

(8) VENTS FOR SANITARY SUMPS. (a) *Interior sanitary sumps.* Sanitary sumps shall be provided with a vent connecting either to the sump above the drain inlet or to the drain inlet within 12" of the sump.

(b) *Exterior sanitary sumps.* Sanitary sumps shall be provided with a vent that terminates in accordance with sub. (16) (h).

(9) FIXTURE VENTS. (a) *Developed length between vent and trap.* Each fixture trap shall be protected with a vent located in accordance with the provisions of subds. 1. and 2.

1. Each fixture trap which is not an integral part of the fixture shall be protected with a vent so located that the developed length of the fixture drain piping from the trap weir to the vent connection is within the limits set forth in Table 382.31-1.

2. Each fixture trap which is an integral part of the fixture shall be protected with a vent so located that the developed length of the fixture drain piping from fixture outlet to the vent connection is within the limits set forth in Table 382.31-1. For a floor outlet water closet or similar fixture, the point where the fixture drain piping turns horizontal shall be considered as the fixture outlet.

(b) *Minimum distance.* A vent shall not connect to a fixture drain within the distance equal to 2 diameters of the drain piping from the weir of a trap.

Note: See ch. SPS 382 Appendix for further explanatory material.

Table 382.31-1
Maximum Developed Length Between Vent and Trap (in feet)

Diameter of Fixture Drain ^a (inches)	Vent Connecting to Horizontal Drain Piping			Vent Connecting to Vertical Drain Piping					
				by means of a Sanitary Tee Fitting			by means of a Wye Pattern Fitting ^b		
	Pitch of Fixture Drain (inch per foot)			Pitch of Fixture Drain (inch per foot)			Pitch of Fixture Drain (inch per foot)		
	1/8	1/4	1/2	1/8	1/4	1/2	1/8	1/4	1/2
1 1/4	NP ^c	5.0	2.5	NP	3.5	2.0	NP	1.5	1.0
1 1/2	NP	6.0	3.0	NP	5.0	3.0	NP	4.0	2.0
2	NP	8.0	4.0	NP	6.0	4.0	NP	4.5	4.0
3	24	12.0	6.0	10.0	8.0	6.0	8.0	6.0	6.0
4 ^d	32	16.0	8.0	12.0	10.0	8.0	10.0	8.0	8.0

^a Diameters to be selected on the basis of the smallest drain pipe installed downstream from the trap serving a particular fixture.

^b The wye pattern fitting refers to a tee-wye fitting, a combination wye and eighth bend fitting or a wye and eighth bend combination of fittings with no more than one inch between the wye fitting and eighth bend fitting.

^c NP means Not Permitted.

^d The maximum developed length for fixture drains larger than 4 inches in diameter shall be approved by the department.

(10) CIRCUIT VENTING. In lieu of providing individual vents, a horizontal drain to which at least 2 but not more than 8 wall outlet fixtures or at least 2 but not more than 8 floor outlet fixtures, other than blowout type fixtures and wall-outlet carrier type water closets, are connected to the same horizontal branch drain, may be vented by a circuit vent in accordance with pars. (a) to (e).

(a) The circuit vent shall connect to the horizontal drain at a point between the 2 most upstream fixtures.

(b) 1. A circuit vented horizontal drain into which 4 or more fixtures discharge shall be provided with a relief vent. The relief vent shall connect to the circuit vented horizontal drain down-

stream of the most downstream fixture drain which is vented by the circuit vent and upstream of any other drain connections.

2. Two circuit vented horizontal drains serving a total of 8 fixtures, 4 on each branch, shall be provided with at least one relief vent, unless the horizontal drains connect to a drain stack with no other drain connections located above the circuit vented horizontal drains. One relief vent may serve both horizontal drains, if installed downstream of the point where the 2 horizontal drains are joined.

Note: See ch. SPS 382 Appendix for further explanatory material.

(c) A horizontal drain served by a circuit vent may not diminish in size from the most downstream fixture drain connection

vented by the circuit vented drain to the circuit vent connection. Where a relief vent is installed, the horizontal drain served by the circuit vent shall not diminish in size from the relief vent connection to the circuit vent connection.

(d) Fixture drains served by a circuit vent shall conform to the provisions of sub. (9). The connection of the fixture drain to the branch drain served by the circuit vent shall be considered as the vent connection.

(e) Additional wall outlet fixtures with a drainage fixture unit value of one or less which are served by individual vents or common vents may discharge into a horizontal drain served by a circuit vent.

(11) COMMON VENTS. In lieu of providing individual vents, fixtures may be common vented in accordance with pars. (a) and (b).

(a) *Vertical drains.* A common vent may serve a maximum of 2 fixtures where both fixture drains connect to a vertical drain at the same elevation.

1. Where this connection is by means of a sanitary tee fitting with a side inlet, the centerline of the side inlet opening may not be below the centerline of the larger opening.

2. The drain connection of a blowout type fixture, kitchen sink where an appliance with pump discharge or a food waste grinder are installed, or a clothes washer served by a common vent may not be by means of a double sanitary tee fitting.

(b) *Horizontal branches.* The fixture drains from 2 wall-outlet fixtures, each with a drainage fixture unit value of one or less, or the fixture drains from 2 traps serving a kitchen sink with or without a dishwasher may connect to a horizontal branch without individual vents provided a common vent connects to the branch drain downstream of both fixture drains. Both fixture drains shall be of the same diameter. The developed length of the drain from the vent to the farthest trap shall conform to sub. (9).

Note: See ch. SPS 382 Appendix for further explanatory material.

(12) RETURN VENTS. Plumbing fixtures may be vented in accordance with pars. (a) to (d).

(a) Wall outlet fixtures may be vented by extending an individual vent, vertical wet vent or a common vent as high as possible under the fixture enclosure and returning the vent vertically downward and connecting the vent to the fixture drain or branch drain by means of a wye pattern fitting.

(b) Horizontal vent piping shall connect to the vertical section of the fixture vent and extend to a point where it can extend vertically to a vent terminal in accordance with sub. (16) or connect to another vent in accordance with sub. (15).

(c) Drainage fittings shall be used on all sections of the vent pipe below the floor level and a minimum slope of $\frac{1}{4}$ " per foot to the drainage point shall be provided.

(d) Cleanouts shall be provided on the vent piping in accordance with s. SPS 382.35.

Note: See ch. SPS 382 Appendix for further explanatory material.

(13) WET VENTING. In lieu of providing individual vents, fixtures may be wet vented in accordance with pars. (a) to (c).

(a) *Vertical wet vents.* 1. Where 2 wall outlet fixtures are located on the same floor level with their fixture drains connecting to the same vertical drain pipe at different elevations, the lower fixture drain may be wet vented in accordance with subd. 1. a. to e.

a. No other fixtures may discharge into the vertical drain pipe above or between the 2 wall outlet fixtures. Additional fixtures may discharge into the vertical drain pipe below the 2 wall outlet fixtures.

b. A branch vent shall connect to the vertical drain pipe immediately above the higher fixture drain connection.

c. The drain between the 2 fixtures shall be at least one pipe size larger than the upper fixture drain, but not smaller than 2" in diameter.

d. Both fixture drains shall conform to sub. (9). The connection of the lower fixture drain to the vertical drain shall be considered as the vent connection.

e. The higher fixture drain may not serve a water closet.

Note: See ch. SPS 382 Appendix for further explanatory material.

(b) *Horizontal wet vents.* A drain from a lavatory or lavatories which are either provided with individual vents or a common vent may serve as the wet vent for not more than 2 bathtubs or showers and not more than 2 water closets in accordance with subds. 1. to 7. No other fixtures may discharge into or be served by the wet vent.

1. All of the fixtures shall be located in nonpublic bathroom groups.

2. The lavatories and bathtubs or showers shall have a common horizontal drain with the drain for the lavatories serving as a wet vent for the bathtubs or showers.

3. Where 2 bathtubs or showers are served by the same wet vent, their fixture drains shall connect independently to the common horizontal drain downstream of the vertical drain serving the lavatory or lavatories.

4. Where 2 bathtubs or showers and 2 water closets are served by the same wet vent a relief vent shall be provided, unless the wet vented horizontal drain connects to a drain stack with no other drain connections located above the wet-vented horizontal drain. The relief vent shall connect to the horizontal drain at a point downstream of the fixture drains for the water closets and upstream of any other fixture drain connections.

5. One or 2 water closets may connect to the common horizontal drain with the drain from the lavatories and bathtubs or showers also serving as a wet vent for the water closets. Where 2 water closets are served by the same wet vent, their fixture drains shall connect independently to the common horizontal drain at the same point.

6. The wet vent shall be at least 2" in diameter. No more than 4 drainage fixture units may discharge into a 2" diameter wet vent.

7. A branch vent shall connect immediately above the highest fixture drain connection and shall be sized in accordance with sub. (14).

(c) *Other types of wet vents.* An individual vent serving a floor outlet fixture, a common vent serving floor outlet fixtures, a circuit vent, a relief vent serving a circuit vented drain or a relief vent serving a wet vented horizontal drain may serve as a wet vent in accordance with subds. 1. to 4.

1. No more than 2 wall outlet fixtures, each fixture with a drainage fixture unit value of one or less, may have their fixture drains connected into the individual vent, common vent, circuit vent or relief vent.

2. The wet vent shall be at least 2" in diameter.

3. The branch vent to which the wet vent connects shall be sized in accordance with sub. (14). The branch vent may serve the wall outlet fixtures in lieu of individual vents or a common vent.

4. The fixtures discharging into the wet vent shall be located on the same floor level as the fixtures served by the wet vent.

Note: For explanatory material refer to ch. SPS 382 Appendix A-382.31 (13).

(14) VENT SIZE. (a) *Stack vents and vent stacks.* Stack vent and vent stack pipe sizes shall be determined in accordance with

Table 382.31-2 on the basis of developed length and the diameter of the drain stack at its base.

1. The developed length of the stack vent shall be measured along the vent pipe, from the highest drain branch connection to the vent terminal or to the connection to a vent header.

2. The developed length of the vent stack shall be measured along the vent pipe from the vent stack base connection to the vent terminal or to the connection to a vent header.

Note: See ch. SPS 382 Appendix for further explanatory material.

(b) *Vent headers.* 1. Vent header pipe sizes shall be determined in accordance with Table 382.31-3 with the number of drainage fixture units being the sum of the fixture unit loads of the stacks vented through that portion of the header. The diameter of a vent header shall not be less than any vent connecting to it.

2. The developed length of the vent header shall be measured along the pipe from the most distant vent stack or stack vent base connection to the vent terminal.

Note: See ch. SPS 382 Appendix for further explanatory material.

(c) *Branch vents.* Branch vent pipe sizes shall be determined in accordance with Table 382.31-3. The developed length of the branch vent shall be measured along the pipe from the furthest fixture drain served by the branch vent to the point where it connects to a vent pipe of a larger diameter or to a vent terminal.

Note: See ch. SPS 382 Appendix for further explanatory material.

(d) *Individual vents.* Individual vent pipe sizes shall be determined in accordance with Table 382.31-3. The developed length of an individual vent shall be measured along the vent pipe from the fixture drain served by the vent to the point where it connects to a vent pipe of a larger diameter or to a vent terminal.

Note: See ch. SPS 382 Appendix for further explanatory material.

(e) *Common vents.* Common vent pipe sizes shall be determined in accordance with Table 382.31-3. The developed length of a common vent shall be measured along the vent pipe from the drain served by the vent to the point where it connects to a vent pipe of a larger diameter or to the vent terminal.

Table 382.31-2
Size and Length of Vent Stacks and Stack Vents

Diameter of Drain Stack at Base (inches)	Maximum Developed Length of Vent (feet)									
	Diameter of Vent (inches)									
	1 ¹ / ₄	1 ¹ / ₂ ^a	2	3	4	5	6	8	10	12
1 ¹ / ₂	50	150	NL ^b							
2	NP ^c	50	150	NL						
3		NP	50	400	NL					
4		NP	20	180	700	NL				
5			NP	50	200	700	NL			
6			NP	20	70	200	700	NL		
8				NP	25	60	250	800	NL	
10					NP	25	60	250	800	NL
12						NP	25	100	300	900

^a Not more than 2 water closets or similar flush action type fixtures of 4 or more drainage fixture units.

^b NL means No Limit.

^c NP means Not Permitted.

Table 382.31-3
Minimum Diameters And Maximum Length Of Individual, Common, Branch And Circuit Vents And Vent Headers

Drainage Fixture Units (dfu)	Maximum Developed Length of Vent (feet)								
	Diameter of Vent (inches)								
	1 ¹ / ₄ ^a	1 ¹ / ₂ ^b	2	3	4	5	6	8	10
2	50	NL ^c							
4	40	200	NL						
8	NP ^d	150	250	NL					
10	NP	100	200	NL					
24	NP	50	150	NL					
42	NP	30	100	500	NL				
72		NP	50	400	NL				
240		NP	40	250	NL				
500		NP	20	180	700	NL			
1100			NP	50	200	700	NL		
1900			NP	20	70	200	700	NL	
3600				NP	25	60	250	800	NL
5600					NP	25	60	250	800

^a No water closets permitted.

^b Not more than 2 water closets or similar flush action type fixtures of 4 or more drainage fixture units.

^c NL means No Limit.

^d NP means Not Permitted.

(f) *Circuit vents.* Circuit vent pipe sizes shall be determined in accordance with Table 382.31-3. The developed length of the circuit vent shall be measured along the vent from the connection with the branch drain served by the vent to the point where it connects to a vent pipe of a larger diameter or to a vent terminal.

(g) *Relief vents.* Relief vents shall be sized in accordance with the provisions of subs. 1. to 3. The developed length of a relief vent shall be measured along the vent from the connection with the branch drain served by the vent to the point where it connects to a vent pipe of a larger diameter or to a vent terminal.

1. 'Circuit vented branch drain.' The diameter of a relief vent for a branch drain served by a circuit vent shall be at least one half the diameter of the branch drain. The maximum developed length shall be determined from Table 382.31-3 based on the number of drainage fixture units served by the vent.

2. 'Building drain.' The diameter of a relief vent serving a building drain, as required in sub. (7), shall be at least one half the diameter of the building drain. The maximum developed length shall be determined from Table 382.31-3 based on the number of drainage fixture units served by the vent.

3. 'Horizontal wet vent.' The diameter of a relief vent serving a horizontal wet vent shall be at least 1½". The maximum developed length shall be determined from Table 382.31-3 based on the number of drainage fixture units served by the vent.

(h) *Yoke vents.* A yoke vent serving a drain stack shall be sized as a vent stack in accordance with par. (a).

(i) *Vents for sumps.* 1. a. Except as provided in subd. 1. b., the size of a vent for a sanitary pump with other than a pneumatic ejector, shall be determined in accordance with Table 382.31-4.

b. The size of a vent for a sanitary sump located outside with other than a pneumatic ejector shall be determined in accordance with Table 382.31-4, but shall not be less than 2" in diameter.

2. The air pressure relief pipe from a pneumatic ejector shall not be connected to vent or vent system serving a sanitary drain system, storm drain system or chemical waste system.

a. The relief pipe shall be of a size to relieve the air pressure inside the ejector to atmospheric pressure, but shall not be less than 2" in diameter where the ejector is located outside and 1¼" in diameter for all other ejector locations.

b. The vent shall terminate in accordance with the provisions of sub. (16).

Table 382.31-4
Size and Length of Vents for Sanitary Sumps

Discharge Capacity of Ejector (gpm)	Maximum Developed Length of Vent ^a (feet)				
	Diameter of Vent (inches)				
	1¼ ^d	1½ ^d	2	3	4
10	NL ^b				
20	270	NL			
40	72	160	NL		
60	31	75	270	NL	
80	16	41	150	NL	
100	10	25	97	NL	
150	NP ^c	10	44	370	NL
200		NP	20	210	NL
250		NP	10	132	NL
300		NP	10	88	380
400			NP	44	210
500			NP	24	130

^a The developed length of the vent is measured along the pipe from the connection to the sump, to the point where it connects to a vent pipe of a larger diameter.

^b NL means No Limit.

^c NP means Not Permitted.

^d Diameter not permitted for exterior sumps.

(j) *Vents for chemical basins.* The size of vents serving chemical dilution or neutralizing basins shall be determined in accordance with Table 382.31-3 and based upon the number of drainage fixture units discharging into the basins.

(15) VENT GRADES AND CONNECTIONS. (a) *Vent grade.* All vent and branch vent pipes shall be graded and connected so as to drain back to a drain pipe by means of gravity.

(b) *Installation.* Vents shall be installed in accordance with subds. 1. to 3.

1. Except for wet vent piping, the connection of a vent to horizontal drain piping shall be at a point above the horizontal center line of the drain piping.

2. Except as provided in subs. (12) and (17), vent piping serving a wall-outlet fixture may not offset horizontally less than 36" above the floor, but in no case lower than the elevation of the highest flood level rim of any fixture served by the vent.

3. Vent piping may not connect to a branch vent less than 38" above the floor, but in no case lower than 2" above the elevation of the highest flood level rim of any fixture served by the vent.

Note: See ch. SPS 382 Appendix for further explanatory material.

(16) VENT TERMINALS. All vents and vent systems shall terminate in the open air in accordance with this subsection.

(a) *Extension above roofs.* Extensions of vents through a roof shall terminate at least 8" above the roof. Where the roof is to be used for any purpose other than weather protection, the vents shall extend at least 7 feet above the roof.

(b) *Waterproof flashings.* The penetration of a roof system by a vent shall be made watertight with an approved flashing.

(c) *Prohibited uses.* Vent terminals shall not be used as flag poles, support for antennas or other similar purposes.

(d) *Location of vent terminals.* 1. Location of vent terminals shall be all of the following:

a. At least 10 feet from an air intake.

b. At least 5 feet from a power exhaust vent.

c. At least 10 feet horizontally from or 2 feet above roof scuttles, doors, and openable windows.

d. At least 5 feet from or 2 inches above parapet walls.

e. At least 5 feet below any overhang.

2. Where a structure has an earth covered roof extending from surrounding grade, the vent extension shall run at least 7 feet above grade and terminate with an approved vent cap. The portion of vent pipe outside the structure shall be without joints, except one fitting may be installed where the pipe leaves the top or side of the structure.

(e) *Extension through wall.* A vent shall terminate at least 10 feet horizontally from any lot line. Extension of vents through wall shall terminate beyond the soffit. The vent shall terminate downward and be screened. The vent shall comply with par. (d).

(f) *Extensions outside buildings.* Drain or vent pipe extensions shall not be located or placed on the outside of an exterior wall of any new building, but shall be located inside the building.

(g) *Frost closure.* For protection against frost closure, each vent terminal shall be at least 2" in diameter. Where it is necessary to increase the diameter of the vent, the change in diameter shall be made at least 6" inside the building.

Note: See ch. SPS 382 Appendix for further explanatory material.

(h) *Penetrations through grade.* Except when installation is in accordance with par. (d) 2., penetrations through grade shall terminate at least 12" above finished grade and terminate with a vent cap or return bend.

(17) COMBINATION DRAIN AND VENT SYSTEMS. In lieu of providing individual vents, fixtures may be vented in accordance with pars. (a) to (d).

(a) *Stacks.* 1. A drain stack may serve as a combination drain and vent system for fixtures in accordance with subd. 1. a. to e.

a. The drain stack shall not serve more than 3 fixtures. Each fixture shall be located on a separate floor level.

b. The drain stack shall be limited to serving fixtures with a drainage fixture unit value of no greater than 2.0. A urinal may not discharge into the combination drain and vent portion of the stack. The largest drainage fixture unit value served by the stack shall determine the stack size as specified in Table 382.31-5.

c. The drain stack shall not be offset horizontally above the lowest fixture drain connection.

d. The developed length of any fixture drain from the trap weir to the drain stack shall not exceed the limits specified in Table 382.31-1.

e. The drain stack and its attendant vent shall be sized in accordance with Table 382.31-5.

Note: See ch. SPS 382 Appendix for further explanatory material.

Table 382.31-5
Stack Sizing by DFU Value

Drainage Fixture Unit (dfu) Value	Size of Stack (inches)
0.5	1½
1.0	2
2.0	3

2. A drain stack may serve as a combination drain and vent system for a kitchen sink and a wall outlet fixture with a drainage fixture unit value of 2 or less in accordance with subd. 2. a. to d.

a. One kitchen sink within a dwelling unit, with or without a food waste grinder or dishwasher connection, shall connect to the drain stack above the wall outlet fixture with a drainage fixture unit value of 2 or less. No other fixtures may connect to the drain stack.

b. The drain stack shall be at least 2 inches in diameter below the kitchen sink connection and it shall be at least 4 inches in diameter below the connection to the lower fixture.

c. In lieu of the minimum sizes as required in subd. 2. b., the entire stack below the kitchen sink connection may be 3 inches in diameter.

d. The drain stack shall not offset horizontally above the fixture drain connection for the lower fixture.

(b) *Building drains.* A building drain or a building subdrain may serve as a combination drain and vent system for floor drains and floor outlet fixtures in accordance with subds. 1. to 6.

1. A vent or drain at least 2 inches in diameter shall be connected upstream of any building drain branch or building subdrain branch.

2. No more than 2 water closets may connect to the building drain or building subdrain by means of building drain branches or building subdrain branches.

3. a. That portion of the building drain or building subdrain between the connection of the building drain branch or building subdrain branch and the vent or drain required in subd. 1. shall be at least one pipe size larger than the minimum size permitted in Table 382.30-3 based on the total drainage fixture unit load, but not less than 3 inches.

b. The vent or drain required in subd. 1. shall be at least one-half the diameter of that portion of the building drain or building subdrain which is vented by the vent or drain, but may not be less than 2 inches in diameter.

c. A vent serving a drain required in subd. 1., shall be at least one half the diameter of that portion of the building drain or building subdrain which is vented by the system, but may not be less than 2 inches in diameter.

4. The trap of a floor drain or a floor outlet fixture, except a water closet, connected to a building drain branch or building subdrain branch shall be at least 3" in diameter.

5. A building drain branch or building subdrain branch may not connect to a building drain or building subdrain downstream from the base fitting of a drain stack 2" or larger in diameter within the distance equal to 20 pipe diameters of the building drain or building subdrain.

6. The pitch and the developed length of the building drain branch or building subdrain branch may not exceed the limits specified in Table 382.31-1.

Note: See ch. SPS 382 Appendix for further explanatory material.

(c) *Laboratory sink venting.* A horizontal drain may serve as a combination drain and vent system for island laboratory sinks in accordance with subds. 1. to 7.

1. A vent stack or a drain stack at least 2" in diameter shall be connected upstream of any fixture drain vented by the combination drain and vent system.

2. a. That portion of the horizontal drain between the connection of fixture drain and the vent stack or drain stack required in subd. 1. shall be at least one pipe size larger than the minimum size permitted in Table 382.30-2 based on total drainage fixture unit load.

b. The vent stack or drain stack required in subd. 1. shall be at least one-half the diameter of that portion of the horizontal drain which is vented by the stack, but may not be less than 2" in diameter.

c. A stack vent serving a drain stack required in subd. 1. shall be at least one half the diameter of that portion of the horizontal drain which is vented by the stack, but may not be less than 2" in diameter.

3. All fixture drains vented by the horizontal drain shall be at least 3" in diameter.

4. Fixture drains to be vented by the horizontal drain shall connect individually to the horizontal drain.

5. An individual vent or common vent shall be extended as high as possible under the sink enclosure and then returned vertically downward and connected to the horizontal drain. A cleanout shall be provided on the vent piping.

6. In lieu of connecting the vent to the horizontal drain which forms the combination drain and vent system, the vent may connect to a horizontal fixture drain vented by the combination drain and vent system. The pitch and developed length of the horizontal fixture drain shall not exceed the limits specified in Table 382.31-1.

7. Fixture drains to be vented by the horizontal drain shall not connect to a horizontal drain downstream from the base fitting of a drain stack 2" or larger in diameter within the distance equal to 20 pipe diameters of the horizontal drain serving the stack.

Note: See ch. SPS 382 Appendix for further explanatory material.

(d) *Elevator threshold drain vent stacks.* 1. The minimum size of an elevator threshold stack shall be 6 inches.

2. The minimum size of an elevator drain trap shall be 4 inches.

3. The drain stack may not offset horizontally above the lowest threshold drain connection.

4. Elevator threshold drains, provided with individual traps that utilize other means of venting, are permitted to discharge into the stack.

5. The drain stack shall be limited to serving elevators threshold drains serving elevator door areas.

6. The developed length of any trap weir vented by the stack to the drain stack may not exceed the limits specified in Table 382.31-1.

7. A vent, at least 3 inches in diameter and not less than ½ the diameter of the largest portion of the drain stack, shall extend from immediately above the highest branch connection to a vent terminal in accordance with sub. (16).

Note: See ch. SPS 382 appendix for further explanatory material.

(17m) AIR ADMITTANCE VALVES. The use of air admittance valves in lieu of traditional venting shall comply with all of the following:

(a) The AAV may only serve as a termination point for a branch vent, circuit vent, common vent, individual vent, wet vent or combination drain and vent system. The AAV may serve a pumped-discharge type clothes washer standpipe when the fixture drain downstream of the point of vent is at least 3 inches in diameter.

(b) Branches that have fixtures served by the AAV, and when connected to a stack that has 4 or more branch intervals above the branch connection, must be provided with a relief vent located between the most downstream fixture and the stack.

(c) The AAV may not serve as a vent termination point for any of the following:

1. Areas of negative pressure such as parking garages, laboratories, and research facilities.
2. A commercial parking structure.
3. Vents installed to relieve positive pressures.
4. A fixture serving a chemical waste system.
5. POWTS components such as a holding tank or treatment tank.
6. A stack vent serving two or more branch intervals.
7. A vent stack that is required in accordance with s. [SPS 382.31 \(4\) \(a\)](#).
8. A vent serving a sump.
9. An enclosed stairwell.
10. An area utilized as supply or return air plenum.
11. A pit, vault, or depression which is below the adjacent grade or floor level.
12. Plumbing wastewater and treatment devices used to treat fats, oils & grease (FOG).
13. An area that subjects the valve to grease or other materials which could cause fouling of the valve's seal.
14. Clean rooms such as FDA or DATCP regulated food and beverage production areas, bio safety labs, pharmaceutical production, and pharmaceutical processing facilities.

Note: For specific applications not listed, please contact DSPS Division of Industry Services at P.O. Box 7162, Madison, WI 53707-7162; or at telephone (608) 266-2112 or (877) 617-1565 or 711 (Telecommunications Relay); or at the Division's Website at <http://dps.wi.gov/programs/industry-services>.

15. A health care facility as defined in s. [SPS 381.01 \(116\)](#).
16. A restaurant kitchen licensed by the state or local department of health.
17. A residential bedroom.

Note: Does not include closets or bathrooms with solid doors in accordance with Standard International Building Code s. 508.2.3.

18. A daycare.

(d) The size and developed length for a vent using an AAV shall conform with Table 382.31-6.

Table 382.31-6			
Maximum Developed Distance			
of Vent to Connection of AAV in Feet			
Maximum DFUs	Diameter in Inches		
	1-1/4 ^a	1-1/2	2
1	35	NL ^b	NL ^b
3	28	140	NL ^b
6	NP ^c	100	200
20	NP ^c	60 ^d	110
160	NP ^c	NP ^c	25

^a Drainage Fixture Units based on ch. [SPS 382](#).

^b NL means no limit.

^c NP means not permitted.

^d Not more than two water closets or similar type fixtures of four or more drainage fixture units.

(e) The installation of the AAV shall conform with all of the following:

1. The AAV must be installed in the vertical position, plus or minus 15 degrees from plumb.
2. The vent system being served by the AAV may have horizontal offsets located less than 36 inches above the floor on which the fixtures are installed provided the vent does not connect to another vent.
3. The installation location of the AAV shall conform with all of the following:
 - a. A minimum of 4 inches above the top of the horizontal pipe being served (See Note).
 - b. No more than 20 inches below the flood rim of any fixture served by this product (See Note).
 - c. At least 6 inches above insulation materials (See Note).
 - d. In an accessible area.
 - e. Within a space that allows air to enter the product and has an opening equivalent to requirements in sub. (14).
 - f. With at least one 3-inch or larger diameter vent, serving the same building drain on which the AAV is installed, which extends to the atmosphere outside of the building.

Note: The distance is measured from termination of the vent pipe to the point specified in the rule.

(f) AAVs shall be tested. The AAV shall be tested prior to or after installation. The AAV shall be subjected to a pressure equal to 1 inch of water column. After observing for 1 minute, if the pressure falls .5 of an inch or less, it will be considered a passing AAV.

(g) When an AAV is installed in a building, the contractor shall provide the owner with a copy of the manufacturer's written AAV description.

(18) PROHIBITED USES. A vent or vent system shall not be used for purposes other than the venting of the plumbing system.

(a) *Boiler blowoff basin vents.* Vent piping from boiler blowoff basins shall not be connected to a vent or vent system serving a sanitary drain system, storm drain system or chemical waste system.

(b) *Chemical waste vents.* Vent piping for chemical waste systems shall not be connected to a vent system serving a sanitary drain system or storm drain system.

(c) *Steam vents.* Vents serving steam operated sterilizers, cleansing or degreasing equipment, pressing machines or any other apparatus which normally discharges steam into the vent shall not be connected to a vent or a vent system serving a sanitary drain system, storm drain system or chemical waste system.

History: Cr. Register, February, 1985, No. 350, eff. 3-1-85; am. (11) (a), (17) (b) 3. b. and (c) 2. b., r. and recr. (11) (b), r. (13) (a) 2., cr. (17) (b) 3. c. and (c) 2. c., Register, May, 1988, No. 389, eff. 6-1-88; reprinted to correct (17) (c) 4., Register, February, 1991, No. 422; cr. (4) (b) 4. and (17) (a) 1. f., r. and recr. (5) (c) 1. c. and (17) (c) 4., am. (5) (c) 2. c., (10) (intro.), (b) 1., (11) (b), (17) (a) 1. e. and (17) (b), Register, August, 1991, No. 428, eff. 9-1-91; am. (6) (c), (7) (b), (10) (intro.), (a), (b) 1., (e), (13) (a) 1. c., (c) (intro.), 1. and 4., r. (16) (h), Register, February, 1994, No. 458, eff. 3-1-94; CR 02-002: renum. (8) to be (8) (a) and am., cr. (8) (b), (14) (j) and (16) (h), am. (11) (a), (12) (intro.), (a), (13) (c) 1. (17) (a) 1. (intro.) to b., and Table 82.31-4, r. and recr. Table 82.31-5, Register April 2003 No. 568, eff. 5-1-03; CR 08-055: am. (4) (a), (10) (c), (13) (a) 1. e., (14) (g) 2., (17) (a) 1. e., (b) 1. and 3., r. and recr. (5) and (6), r. (17) (a) 1. f. Register February 2009 No. 638, eff. 3-1-09; correction in (17) (a) 1. (intro.) made under s. 13.92 (4) (b) 7., Stats., Register February 2009 No. 638; CR 10-064: am. (5) (a) 2., (6) (c), (17) (a) 2., r. (14) (g) 2., renum. (14) (g) 3. and 4. to be (14) (g) 2. and 3. Register December 2010 No. 660, eff. 1-1-11; correction in (14) (g) (intro.) made under s. 13.92 (4) (b) 7., Stats., Register December 2010 No. 660; correction in (2), (5) (a) 2., (9) (a) 1., 2., (12) (d), (14) (a) (intro.), (b) 1., (c), (d), (e), (f), (g) 1., 2., 3., (i) 1. a., b., (j), (17) (a) 1. b., d., e., (b) 3. a., 6., (c) 2. a., 6. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: r. and recr. (11) (a), (16) (d), (e), am. (17) (intro.), cr. (17) (d), (17m) Register September 2023 No. 813, eff. 10-1-23; correction in (16) (h), made

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under 13.92 (4) (b) 7., Stats., and correction in (16) (e), (17m) (e) 3. e., f., (f) made under s. 35.17, Stats., Register September 2023 No. 813.

SPS 382.32 Traps and direct fixture connections.

(1) **SCOPE.** The provisions of this section set forth the requirements for the types and installation of traps and direct fixture connections.

(2) **MATERIALS.** All traps and fixture connections shall be of approved materials in accordance with ch. SPS 384.

(3) **GENERAL.** Each plumbing fixture, each compartment of a plumbing fixture and each floor drain shall be separately trapped by a water seal trap, except as provided in par. (a) or as otherwise permitted by this chapter. A fixture shall not be double trapped.

(a) *Trap exceptions.* The plumbing fixtures listed in subds. 1. to 3. shall not be required to be separately trapped:

1. Fixtures having integral traps;
2. Compartments of a combination plumbing fixture installed on one trap, provided:
 - a. No compartment is more than 6" deeper than any other;
 - b. The distance between the compartments' waste outlets farthest apart does not exceed 30"; and
 - c. No compartment waste outlet is equipped with a food waste grinder.
3. Storm drains as provided in s. SPS 382.36 (12) (a).

Note: Residential exclusion see s. SPS 325.01 (4) (a).

(b) *Trap seals.* Each trap shall provide a liquid seal depth of not less than 2" and not more than 4", except as otherwise specified in this chapter.

(c) *Loss of trap seal.* A trap seal primer valve may be installed on a trap subject to high rates of evaporation.

1. A trap seal primer valve or other means of trap seal protection acceptable to the department shall be provided for a trap subject to seal loss due to evaporation.

Note: Liquids acceptable to use for reducing trap seal evaporation include mineral oil, vegetable oil, propylene glycol and glycerin.

2. Trap seal primer valves shall conform to ASSE 1018 or ASSE 1044.

Note: A list of referenced standards is contained in ch. SPS 381.

3. Barrier type trap seal protectors for floor drains shall conform to ASSE 1072.

(d) *Design.* Traps shall be self-scouring and shall not have interior partitions, except where such traps are integral with the fixture. Uniform diameter P-traps shall be considered self-scouring.

(e) *Size.* 1. Except as provided in subd. 2., traps shall be of diameters not less than those specified in Table 382.30-1.

2. The minimum trap diameter for a trap serving a shower replacing a non-public residential-type bathtub is 1.5 inches provided each of the following apply:

- a. The shower shall have no more than one control valve and not allow for the operation of more than one showerhead simultaneously.
- b. It shall be permissible under this approval to use a diverter valve that feeds up to 2 showerheads provided the showerheads cannot be used simultaneously.
- c. The showerhead shall have a maximum flow rate of 2.5 gallons per minute.

(f) *Prohibited traps.* The installation of the types of traps listed in subds. 1. to 6. shall be prohibited:

1. Bell traps;
2. Drum traps, except where specifically approved by the department;
3. S-traps which are not integral parts of fixtures;
4. Separate fixture traps which depend on interior partitions for the trap seal;

5. Traps which depend upon moving parts to maintain the trap seal; and

6. Traps which in case of defect would allow the passage of sewer air.

(4) **INSTALLATION.** (a) *Setting of traps.* All traps shall be rigidly supported and set true with respect to the water level and so located as to protect the water seals, and shall be protected from freezing and evaporation.

(b) *Distance from fixture drain outlets.* 1. 'Vertical distance.' Except as provided in subd. 1. a. to c., the vertical distance between the top of the fixture drain outlet and the horizontal center line of the trap outlet shall not exceed 15".

a. The vertical distance between the top of the strainer of a floor drain or the opening of a standpipe receptor and the horizontal center line of the trap outlet shall not exceed 36".

b. The vertical distance between the top of the fixture drain outlet of a pedestal fixture or a cuspidor and the horizontal center line of the trap outlet shall not exceed 60".

c. The vertical distance between the water level in the bowl of a floor outlet water closet or floor outlet clinic sink and the center line of the horizontal portion of the fixture drain may not exceed 36 inches.

d. The vertical distance from the inlet to the horizontal centerline of the fixture drain for a campsite receptor, exterior storm drain inlet, or a receptor for a sanitary dump station may exceed 3 feet so as to permit the trap to be installed below the predicted depth of frost.

e. The vertical distance of a floor outlet fixture between the top of the fixture drain outlet and the horizontal center line of the trap outlet may not exceed 18 inches.

2. 'Horizontal distance.' Except as provided in subd. 2. a. and b., the horizontal distance between the vertical centerline of a fixture drain outlet and the vertical centerline of the trap inlet shall not exceed 15".

a. The horizontal distance for a pedestal drinking fountain shall not exceed 24".

b. The horizontal distance for an exterior sanitary area drain or a residential garage floor drain discharging through an interior trap shall not exceed 25 feet.

c. The minimum horizontal distance between the vertical centerline of the outlet from a floor-mounted water closet and a 3-inch double tee shall be 30 inches.

Note: See ch. SPS 382 Appendix for further explanatory material.

(5) **DIRECT FIXTURE DRAIN CONNECTION.** Except as provided in s. SPS 382.33, all plumbing fixtures and appliances discharging wastes shall connect directly to a drain system.

(a) *Floor drains.* 1. Floor drains shall be so located as to be accessible for cleaning purposes.

2. A floor drain receiving the wash from garbage cans shall be at least 3" in diameter.

(b) *Kitchen sinks.* Horizontal drain piping serving a kitchen sink trap shall not connect to vertical drain piping by means of a double sanitary tee where an appliance with pump discharge or a food waste grinder are installed.

(c) *Water closets.* A water closet shall discharge through a drain pipe or fitting with a minimum diameter of 3".

1. A floor mounted wall outlet water closet shall connect to a 4 inch or 4 × 3 inch closet collar fitting or to a horizontal or vertical carrier type fitting.

2. A floor outlet water closet shall connect to a 4 inch or 4 × 3 inch closet collar fitting.

3. A wall mounted wall outlet water closet shall connect to a horizontal or vertical carrier type fitting.

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4. Two water closets discharging to a vertical drain from opposite sides by means of the same fitting shall be installed in accordance with subd. 4. a. and b.

a. Where the vertical drain is 3" in diameter, the fitting for floor outlet water closets shall be a 3 inch double wye pattern fitting.

b. Where the water closets are wall outlet types the fitting shall be a double wye pattern fitting or a carrier-type fitting.

(d) *Blowout-type fixtures.* Blowout-type plumbing fixtures shall be installed in accordance with the approval of the department.

History: Cr. Register, February, 1985, No. 350, eff. 3-1-85; am. (4) (a), cr. (5) (intro.) and (d), Register, May, 1988, No. 389, eff. 6-1-88; am. (4) (b) 1. b., Register, April, 2000, No. 532, eff. 7-1-00; CR 02-002: r. and recr. (3) (c) 1. and (4) (b) 2., am. (4) (b) 1. b., cr. (4) (b) 1. d., Register April 2003 No. 568, eff. 5-1-03; CR 02-129: am. (3) (intro.) Register January 2004 No. 577, eff. 2-1-04; CR 04-035: am. (3) (a) 3. Register November 2004 No. 587, eff. 12-1-04; CR 08-055: cr. (4) (b) 2. c. Register February 2009 No. 638, eff. 3-1-09; correction in (2), (3) (a) 3., (e), (5) (intro.) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: am. (3) (c) 2., cr. (3) (c) 3., renum. (3) (e) to (3) (e) 1. and am., cr. (3) (e) 2., am. (4) (b) 1., c., cr. (4) (b) 1. e., am. (5) (b), (c) 2. Register September 2023 No. 813, eff. 10-1-23.

SPS 382.33 Indirect and local waste piping. (1) SCOPE. (a) The provisions of this section set forth the requirements for the installation of indirect waste piping and local waste piping.

(b) Indirect waste piping and local waste piping draining the fixtures, appliances and devices having a public health concern, including but not limited to those listed in Table 382.33-1, shall be considered as plumbing and shall comply with the provisions of this section.

(2) MATERIALS. Indirect waste piping more than 30" in length and all local waste piping shall be of approved materials in accordance with ch. SPS 384.

(3) SIZE. Except as provided in pars. (a) and (b), indirect waste piping more than 30" in length and all local waste piping shall be sized in accordance with s. SPS 382.30.

(a) Indirect or local waste piping not exceeding 20 feet in length for refrigerated food display cases may not be less than one inch in diameter.

(b) Indirect waste piping, attached to an appliance, appurtenance or equipment through which pressurized waste is discharged, shall be sized in accordance with specifications of the manufacturer of the appliance, appurtenance or equipment.

Table 382.33-1

**Types of Fixtures, Appliances, and Devices
of a Public Health Concern**

Baptismal fountains
Bar and soda fountains
Boiler blowoff basin outlet drains
Clothes washers and extractors
Coffee makers and urns
Dishwashers
Egg boilers
Food preparation sinks
Food processing equipment
Ice compartments and ice makers
Potato peelers
Refrigerated food display cases
Refrigerated food storage rooms and compartments
Steam tables, kettles, and related equipment
Sterilizers
Still

Vending machines

Other devices, fixtures, and appliances as approved by the department

(4) INSTALLATION. Indirect waste piping and local waste piping shall be so installed as to permit access for flushing and cleaning.

(5) TRAPS. (a) *Indirect waste piping.* 1. Gravity flow indirect waste piping more than 30" in length shall be provided with a trap in accordance with s. SPS 382.32 (4), except indirect waste piping draining a sterilizer shall not be trapped.

2. All indirect waste piping draining a refrigerated food storage room, compartment or display case shall be provided with a trap in accordance with s. SPS 382.32 (4).

(b) *Local waste piping.* Local waste piping handling sanitary wastes and more than 30" in length shall be provided with a trap in accordance with s. SPS 382.32 (4).

Note: Residential exclusion see s. SPS 325.01 (3).

(6) MAXIMUM LENGTH. Indirect waste piping and local waste piping handling sanitary wastes may not exceed 30 feet in length horizontally nor 15 feet in length vertically.

Note: See ch. SPS 382 Appendix for further explanatory material.

(7) AIR-GAPS AND AIR-BREAKS. All indirect waste piping and all local waste piping shall discharge by means of an air-gap or air-break into a receptor.

(a) *Air-gap installation.* The installation of an air gap shall conform to any of the following requirements:

1. The distance of an air gap shall comply with one of the following:

a. The distance of an air gap serving indirect waste piping one inch or less in diameter and a receptor shall be at least twice the diameter of the indirect waste piping.

b. The distance of an air gap between indirect waste piping larger than one inch in diameter and a receptor shall not be less than 2 inches.

2. The installation of all air-gap fittings shall comply with ASME A112.1.3.

3. The installation of a residential dishwashing machine manufactured air gap shall comply with ASSE 1021.

(b) *Air-break installation.* The air-break between indirect waste piping or local waste piping and the receptor shall be accomplished by extending the indirect waste piping or local waste piping below the flood level rim of the receptor and terminating at an elevation above the trap outlet.

Note: See ch. SPS 382 Appendix for further explanatory material.

(8) RECEPTORS. A receptor receiving the discharge from indirect waste piping or local waste piping shall be of a shape and capacity as to prevent splashing or flooding. Receptors shall be installed in accordance with this subsection and shall be accessible.

(a) *Waste sinks and standpipes.* A waste sink or a standpipe serving as a receptor shall have its rim at least one inch above the floor.

(b) *Floor sinks.* A floor sink serving as a receptor shall be equipped with a removable metal basket over which the indirect waste piping or local waste piping is to discharge, or the floor sink shall be equipped with a dome strainer. Indirect waste piping or local waste piping shall not discharge through a traffic grate, but shall terminate over an ungrated portion of the floor sink.

(c) *Local waste piping.* Local waste piping may not receive discharge from another local waste pipe.

(d) *Other receptors.* A plumbing fixture may not be used as a receptor for indirect or local waste piping, except as provided in subds. 1. to 9.

1. The indirect waste piping of a portable dishwasher or water treatment device serving one or 2 outlets may discharge into a kitchen sink of a dwelling unit or to a branch tail piece serving a kitchen sink.

2. The indirect waste piping of a residential-type automatic clothes washer or water treatment device may discharge into a laundry tray.

3. The indirect or local waste piping serving a cross connection control device or assembly, water treatment device, air conditioner, humidifier or furnace condensate may discharge into a branch tailpiece serving a laundry tray.

4. The local waste piping serving a water heater temperature and pressure relief valve, water treatment device, cross connection control device or assembly, humidifier, sterilizer, or a furnace or air conditioner may discharge into the riser of a floor drain when installed in accordance with sub. (7) (b).

5. The indirect or local waste piping serving a water heater temperature and pressure relief valve, water treatment device, cross connection control device or assembly, or a furnace or air conditioner may discharge to a floor served by a floor drain so as not to create a health or safety hazard.

6. The indirect or local waste piping in a one- or 2-family dwelling serving a water heater temperature and pressure relief valve or water treatment device may discharge through the cover of a clear water sump so as not to adversely affect floats by means of a fixed air gap installed in accordance with subs. (7) (a) 2. and (8).

7. The indirect waste piping serving a dental mold grinder may discharge into the tailpiece of a trap serving a sink that is provided with a plaster trap and is installed within 3 feet of the mold grinder.

8. A water closet, clinic sink, or urinal may receive the discharge from a mortuary or autopsy table.

9. The indirect waste piping serving a dialysis machine may discharge to a water closet or lavatory under all the following conditions:

a. The water closet or lavatory is in a patient toilet room of a single occupancy in a healthcare facility.

b. The discharge to the plumbing fixture shall be made by either a temporary or permanent fixed 1-inch air-gap that will not impede normal operation of the fixture when not in dialysis mode.

c. The discharge to the fixtures shall be limited to a department-approved portable healthcare dialysis appliance and a portable water treatment device specifically for dialysis use.

Note: See ch. SPS 382 Appendix A-382.33 (8) (a) to (d) for further explanatory material.

(9) INDIRECT WASTE PIPING REQUIRED. Indirect waste shall discharge to an approved receptor in accordance with all of the following:

(a) *Boilers, pressure tanks and relief valves.* Boilers, pressure tanks, relief valves and similar equipment discharging to a drain system shall be by means of an air-gap.

1. Steam pipes shall not connect or discharge to any part of a plumbing system.

2. a. Except as provided in subd. 2. b., wastewater more than 160° F in temperature shall be discharged by means of indirect waste to the plumbing system.

b. Steam condensate blow down shall be cooled to 160°F in temperature prior to discharging to a plumbing system.

(b) *Clear water.* When discharging to a plumbing system, all clear water shall discharge by means of an air-gap.

(bm) *Clothes dryers.* A single residential ventless dryer with a maximum discharge of less than 1 gallon per minute may discharge into a 2-inch automatic clothes washer box or standpipe within a dwelling unit. Both the residential automatic clothes washer drain hose and the residential ventless dryer drain hose shall physically fit within the receptor without distortion to either hose.

(c) *Clothes washers.* 1. 'Residential types.' Residential-type clothes washers shall discharge into the sanitary drain system by means of an air-break.

a. A standpipe receptor may not extend more than 36 inches nor less than 18 inches above the centerline of the trap outlet.

b. A standpipe receptor shall terminate at least 26 inches but not more than 48 inches above the floor on which the clothes washer is located.

c. The maximum number of washers which may discharge to a trap shall be in accordance with Table 382.33-2.

d. Washer wastes shall not be discharged to gutters, troughs, local waste piping, indirect waste manifolds or other similar connections.

2. 'Laundries.' Pumped-discharge automatic clothes washing equipment, including residential-type clothes washers, in laundrettes, laundromats, and self-service laundry establishments shall have the wastes discharge to a drain system by means of standpipes. The standpipes shall be installed in accordance with subd. 1.

3. 'Commercial-type.' Gravity discharge clothes washing equipment shall discharge by means of an air-break or by other approved methods into a floor receptor, trench, or trough.

a. The receptor shall be sized to hold one full simultaneous discharge load from every machine draining into the receptor.

b. The size of the receptor drain shall be determined by the manufacturer's discharge flow rate and the frequency of discharge.

Note: See ch. SPS 382 Appendix for further explanatory information.

c. All wastes from the washers shall flow through an interceptor as specified in s. SPS 382.34 (7).

Table 382.33-2
Clothes Washer Discharge

Trap Diameter	Maximum Number of Washers
2 inches	1 machine
3 inches	3 machines
4 inches	4 machines

(d) *Dishwashing machines.* All dishwashing machines shall discharge to the sanitary drain system.

1. 'Residential type.' The indirect waste piping from a residential-type dishwashing machine shall not exceed a developed length of 10 feet. The indirect waste piping from a residential-type dishwashing machine shall be installed in accordance with one of the following methods:

a. Where an air-gap or air-break is located below the counter-top, the indirect waste piping from the dishwashing machine shall discharge to a standpipe. The standpipe shall be at least 1 ½ inches in diameter and shall extend at least 15 inches above the trap weir.

b. Where an air-gap or air-break is located above the counter-top, the indirect waste piping from the dishwashing machine shall discharge to local waste piping. The local waste piping shall connect to the kitchen sink branch tailpiece above the trap inlet, the standpipe or to the dishwashing machine connection of a food waste grinder. When the local waste piping discharges to a stand-

pipe, the standpipe shall be at least 1 ½ inches in diameter and shall extend at least 15 inches above the trap weir. Where a hose is used for local waste piping, the developed length shall not exceed 18 inches.

2. ‘Commercial.’ Commercial dishwashing machines shall discharge into a sanitary drain system by means of an air-gap or air-break into a trapped and vented receptor. The indirect waste piping may not be more than 30 inches in length.

(e) *Drips and drain outlets.* Appliances, devices and apparatus not defined as plumbing fixtures which have drip or drain outlets, which discharge to the plumbing system, shall discharge into an approved receptor by means of an approved air-gap or air-break.

(f) *Elevator pit drains.* 1. All drains serving elevator pits shall discharge to the storm drain system as specified in s. SPS 382.36 (4).

2. Drains serving elevator pits shall not connect directly with the storm drain system by means of gravity flow piping.

3. A sump may not be located in an elevator machine room.

4. A drain serving an elevator pit that discharges to a sump shall have a submerged inlet constructed to maintain a minimum 6" trap seal.

5. A sump located in an elevator pit may only receive storm or clear water waste from the elevator pit or the elevator machine room, or both.

Note: See ch. SPS 382 Appendix for further explanatory material.

(fm) *Elevator threshold drains.* Elevator emergency threshold drains provided to meet the requirements of International Building Code s. 3007.3 or 3008.3, as adopted and modified by chs. SPS 361 to 366, may be used only to minimize infiltration of water from fire sprinklers into elevator hoistways. Such drains may not receive other water including wastewater. Elevator threshold drains shall comply with all of the following:

1. In lieu of individual traps, a single trap may serve multiple threshold drains on a single floor serving a single hoistway.

2. Where multiple elevator threshold drains are served by one trap, an untrapped threshold drain may serve the cleanout requirements under s. SPS 382.35 (3) (a) and is exempt from s. SPS 382.35 (3) (g).

3. Discharge shall be as specified in Table 382.38-1, line 4m.

4. A drain stack serving only threshold drains serving elevator door areas may utilize a combination drain and vent system under s. SPS 382.31 (17) (d).

5. Elevator threshold drains are exempt from safing requirements under s. SPS 384.20 (4) (b) 9.

6. The elevator threshold drain stack utilizing a combination drain and vent as permitted by s. SPS 382.31 (17) (d) may not be combined with other plumbing prior to discharging to the building drain or other discharge points.

7. Elevator threshold drain traps shall comply with s. SPS 382.32 (3) (c) 1.

8. The drain stack shall be sized to accommodate the anticipated design discharge loads of the automatic fire sprinkler system.

(g) *Food handling establishments.* Plumbing fixtures, devices, appliances, and appurtenances installed in food handling establishments engaged in the storage, preparation, selling, serving, or processing of food shall be installed in accordance with this paragraph.

1. ‘Bar and soda fountain sinks.’ A bar sink, whether installed for hand washing or other use, or a soda fountain sink may discharge to the sanitary drain system through indirect waste piping.

a. Where the indirect waste piping is not trapped, the wastes shall be discharged by means of an air-gap.

b. Where the indirect waste piping is trapped, the wastes shall be discharged by means of an air-gap or air-break.

2. ‘Beer taps, coffee makers, glass fillers and soda dispensers.’ The drip pan from a beer tap, coffee maker, glass filler, soda dispenser or similar equipment shall discharge to the sanitary drain system through indirect waste piping by means of an air-break or air-gap.

3. ‘Novelty boxes, ice compartments and ice cream dipper wells.’ Novelty boxes, ice compartments and ice cream dipper wells shall discharge to the sanitary drain system through indirect waste piping by means of an air-gap.

a. The indirect waste piping shall not exceed 30" in length.

b. The indirect waste piping draining a novelty box or ice compartment may not discharge or connect to the indirect waste piping or local waste piping of any other fixture, appliance or device other than a novelty box or ice compartment.

4. ‘Refrigerated food storage rooms, compartments and display cases.’ Drains serving refrigerated food storage rooms, compartments or display cases shall discharge to the sanitary drain system through indirect waste piping. The indirect waste piping shall drain by gravity to a receptor by means of an air-gap or air-break. Where an air-break is installed, the flood level rim of the receptor shall be at least 2" below the top of the fixture strainer or drain opening in the refrigerated room, compartment or display case.

5. ‘Enclosed food processing equipment.’ Coffee urns, egg boilers, potato peelers, steam kettles, steam tables, vending machines and similar types of enclosed food processing equipment shall be discharged to the sanitary drain system through indirect waste piping by means of an air-gap.

6. ‘Food preparation.’ Open culinary sink compartments for thawing or washing food shall discharge to the sanitary drain system through an independent connection by means of an air-gap. The fixture drain upstream of the air-gap shall not exceed a length of 30".

Note: See ch. SPS 382 Appendix for further explanatory material.

(h) *Sterilizers.* Appliances, devices or apparatus, such as stills, sterilizers and similar equipment requiring waste connections and used for sterile materials, shall discharge through indirect waste piping to the sanitary drain system by means of an air-gap.

Note: See s. SPS 382.50 regarding sterilizer wastes.

(i) *Cross connection control devices or assemblies.* Where a receptor is provided, the vent port discharge from cross connection control devices or assemblies shall discharge to the receptor by means of an air-gap.

(j) *Vacuum systems—central units.* Central vacuum units shall discharge by means of an air-gap or air break.

(k) *Swimming pools.* 1. The backwash and drain wastewater from a swimming pool, wading pool or whirlpool shall discharge in accordance with Table 382.38-1.

2. The discharge from deck drains serving indoor pools shall be directed to the sanitary sewer via an air-gap.

3. The discharge from deck drains serving outdoor pools shall be directed to the storm sewer by way of an air-gap, air-break, or to grade. The distance from the top of the air-break to the pool deck shall be a minimum of 6 inches, terminating at a point above the top of the receptor receiving the deck drain discharge.

4. The requirements for sewer connections as specified in ch. SPS 390 applies to all public swimming pools.

(10) **WATER TREATMENT DEVICES.** (a) The waste discharge of a water treatment device to the drain system shall be protected in accordance with s. SPS 382.41 with respect to cross connection control.

(b) The indirect waste piping or tubing from a water treatment device shall be of a material conforming to one or more of the standards listed in Tables 384.30-8 or 384.30-11.

Note: For appliances, devices and equipment not included in this section or other sections contact the department for information and proposed installation review.

History: Cr. Register, February, 1985, No. 350, eff. 3-1-85; r. and recr. Table 82.33-1 and (g) 5., cr. (8) (c) 3., (9) (g) 6. and (k), Register, May, 1988, No. 389, eff. 6-1-88; r. and recr., (3), am. (9) (c) 1. a., (d) 2. and (g) 4., Register, August, 1991, No. 428, eff. 9-1-91; am. (8) (d) 1., 2. and (9) (g) 3. b., r. (9) (k), cr. (10), Register, February, 1994, No. 458, eff. 3-1-94; correction in (9) (i) 5., made under s. 13.93 (2m) (b) 7., Stats., Register, February, 1994, No. 458; r. and recr. (9) (f), Register, April, 1998, No. 508, eff. 5-1-98; correction in (9) (i) 5. made under s. 13.93 (2m) (b) 7., Stats., Register, April, 1998, No. 508; r. and recr. (9) (i), cr. Table 82.33-3, Register, December, 2000, No. 540, eff. 1-1-01; CR 02-002: am. (5) (a) 2., (7) (b), (9) (c) 1. b., (e), (g) 6., renum. (8) (a) 1., (9) (a) 2. and (10) to be (8) (a), (9) (a) 2. a. and (10) (a) and am. (9) (a) 2. a., r. (8) (a) 2., r. and recr. (8) (c), (d), (9) (b), (d) 1. and (i), cr. (9) (a) 2. b., (c) 1. c., and (10) (b) Register April 2003 No. 568, eff. 5-1-03; CR 02-129: am. (9) (c) 1. b., r. (9) (d) 3. and table 82.33-3, cr. (9) (k) Register January 2004 No. 577, eff. 2-1-04; CR 08-055: r. and recr. (7) (a), cr. (8) (d) 6. and 7., am. (9) (c) 1. a., b. and (f) 1., r. (9) (c) 1. c. Register February 2009 No. 638, eff. 3-1-09; correction in (8) (d) (intro.) made under s. 13.92 (4) (b) 7., Stats., Register February 2009 No. 638; CR 10-064: am. Table 82.33-2 Register December 2010 No. 660, eff. 1-1-11; correction in (1) (b), (2), (3) (intro.), (5) (a) 1., 2., (b), (9) (c) 2. a., 3. c., (f) 1., (g) 1., (k) 1., 4., (10) (a), (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: r. and recr. Table 382.33-1, am. (6), (8) (d) (intro.), 2., 6., 7., cr. (8) (d) 8., 9., (9) (intro.), (bm), renum. (9) (c) 2. (intro.), a., b. to (9) (c) 2., 1. c., d., and am., am. (9) (c) 3. (intro.), c., Table 382.33-2 (title), (f) (title), cr. (9) (fm), am. (9) (g) (intro.), 1., (k) 3. Register September 2023 No. 813, eff. 10-1-23; correction in (8) (d) (intro.), 6., 8., 9. b., (9) (bm), (c) 2., (fm) made under s. 35.17, Stats., Register September 2023 No. 813.

SPS 382.34 Wastewater treatment and holding devices. (1) **SCOPE.** The provisions of this section set forth the requirements for design and installation of plumbing wastewater treatment and holding devices, appurtenances and systems, including but not limited to interceptors, catch basins, decontamination tanks and dilution and neutralizing basins.

(2) **MATERIALS.** All piping, devices and appliances for wastewater treatment and holding devices, appurtenances and systems shall be of approved materials in accordance with ch. SPS 384.

(3) **GENERAL.** Any deleterious waste material which is discharged into a plumbing system shall be directed to a wastewater treatment or holding device. The wastewater treatment or holding device shall be capable of separating, diluting or neutralizing the deleterious waste material to a degree that the wastewater is no longer deleterious. Wastewater treatment or holding devices that retain any waste materials shall be designed and installed to facilitate periodic removal or treatment, or both.

(a) *Treatment for reuse.* 1. Except as limited in subd. 2., graywater, storm water, clear water, blackwater and other wastewaters as approved by the department may be reused in conformance with s. SPS 382.70.

2. Except as provided in subd. 3., wastewater discharged from water closets or urinals shall not be reused for drinking water.

3. All treatment works permitted by the department of natural resources, or a POWTS which includes an in situ soil dispersal or treatment component may treat wastewater discharged from water closets or urinals for reuse.

(b) *Deleterious waste materials.* For the purpose of this subsection, deleterious waste materials include any waste material, other than that from dwelling units, which may:

1. Congeal, coagulate or accumulate in drains and sewers, thereby, creating stoppages or retarding the discharge flow;

2. Retard or interfere with municipal sewage treatment processes;

3. Pass through a treatment process and pollute the watercourse receiving the treatment effluent;

4. Create explosive, flammable, noxious, toxic or other hazardous mixtures of materials; or

5. Damage, destroy or deteriorate sewers or piping materials or structures.

Note: See ch. ATCP 93 as to flammable, combustible, and hazardous liquids.

(c) *Private systems.* The special or industrial wastes from any plumbing system shall be treated, held or dispersed in compliance with the rules of the state agency having jurisdiction. The treatment, holding or dispersal system shall be installed so as not to endanger any water supply which is or may be used or which may create a nuisance, unsanitary conditions or water pollution.

(d) *Velocity control.* Interceptors, catch basins and other similar devices shall be designed, sized and installed so that flow rates shall be developed and maintained in a manner that solid and floating materials of a harmful, hazardous or deleterious nature will be collected in the interceptor for disposal.

(e) *Maintenance.* All devices installed for the purpose of intercepting, separating, collecting, holding or treating harmful, hazardous or deleterious materials in liquid or liquid-borne wastes shall be operated and cleaned of intercepted or collected materials or of any residual from treatment at such intervals which may be required to prevent their passage through the interceptor. Grease interceptors shall be maintained on a cycle not to exceed 90 days or per manufacturer's instructions.

(f) *Service reassembly.* Any fixed orifice, vent or trap of an interceptor, catch basin or other similar device shall remain intact and shall not be removed or tampered with except for cleaning purposes. After service, all parts of the interceptor, collector or treatment device, such as baffles, weirs, orifice plates, channels, vents, traps, tops, and fastening bolts or screws shall be replaced in proper working position.

(g) *Location.* 1. Wastewater holding devices, interceptors, catch basins and other similar devices shall be accessible for service, maintenance, repair and inspection.

a. No wastewater holding device, interceptor, catch basin or similar device may be surrounded or covered as to render it inaccessible for service or inspection.

b. No wastewater holding device, interceptor, catch basin or similar device may have its top located more than 6 feet above the surrounding floor.

c. Enough space shall be provided to enable the removal of any interior parts of the wastewater holding device, interceptor, catch basin or similar device.

d. At least 18 inches of clear space shall be provided above the top of the wastewater holding device, interceptor, catch basin or similar device.

2. An exterior wastewater holding device, interceptor, catch basin or similar device shall not be located within 5 feet of a building or any portion of a building or swimming pool; 10 feet of water service; 2 feet of a lot line and 10 feet of a clearwater cistern.

3. An exterior wastewater holding device, interceptor, catch basin, or similar device shall not be located within 10 feet of the high water mark of a lake, stream, pond or flowage.

4. An exterior subsurface treatment tank holding component, or reservoir to be installed in an area subject to saturated conditions, shall be installed to effectively prevent flotation of the tank or component.

Note: The department of natural resources under chs. NR 811 and 812 may require additional setbacks. See ch. SPS 382 Appendix for further explanatory material.

(h) *Disposition of retained materials.* Deleterious waste materials retained by a wastewater holding device, interceptor, catch basin or similar device shall not be introduced into any drain, sewer or natural body of water without approval of the state agency having jurisdiction.

(4) GARAGE FLOOR AREA WASTEWATER. (a) *Garages for public buildings and facilities.* 1. Where a drain will be installed to receive the wastewater from floor areas of public buildings and facilities on which self-propelled land, air or water vehicles can be driven, the wastewater shall discharge using one of the following methods:

a. In areas where vehicles will be serviced, the wastewater shall discharge through a garage catch basin or oil interceptor connected to a municipal sewer or holding tank approved to receive industrial wastewater.

b. In areas where vehicles will be driven or stored, the wastewater shall discharge through a floor drain equipped with a solid bottom sediment bucket, garage catch basin or oil interceptor.

2. Garage catch basins design shall conform to all of the following:

a. The holding area of the catch basin shall be watertight.

b. The catch basin shall have a minimum inside diameter of 36".

c. The minimum depth of the basin shall be 24" measured from the lowest portion of the trap on the outlet of the basin.

d. The outlet of the basin shall be at least 4" in diameter and trapped with a water seal of at least 6" and constructed on the interior or exterior of the basin. Where an external trap is provided, the trap shall be within 36" of the basin.

e. Except as provided in subd. 5., the water line in the basin shall be at least 2" below all horizontal drains discharging into the basin. Where an external trap is provided, the measurement point on the horizontal drain shall be upstream of the trap.

f. The basin shall be provided with a cover at least 23 inches square or 23 inches in diameter.

g. Gravity drains from fixtures serving garage floor areas located on different floors from the basin may discharge into the basin if the drain stack carrying the wastewater is located at a distance equal to at least 20 times the inside diameter of the horizontal piping upstream of the basin.

h. Catch basins with solid covers shall be vented in accordance with sub. (8) (c).

3. Drains with traps may connect to the garage catch basin under all of the following conditions:

a. The trap shall be a minimum of 3" in diameter.

b. Except as provided in subd. 3. c., the developed length from all trap outlets to the basin shall not exceed the distance as specified in Table 382.31-1.

c. Where the maximum distance exceeds that as specified in Table 382.31-1, the trap shall be vented in accordance with s. SPS 382.31 (3) and the connection to the basin shall form a 6-inch trap seal. The trap seal may be constructed on either the interior or exterior of the basin, but within 36" of the basin.

4. Drains without traps may discharge into a garage catch basin under all of the following conditions:

a. The fixture drain shall have a minimum 4-inch inside diameter.

b. The fixture drain shall be piped with a 6-inch water seal constructed either on the interior or exterior of the basin.

c. An exterior trap shall be constructed within 36" of the basin.

d. The developed length of the fixture drain shall not exceed the distance equal to 24 times the diameter of the fixture drain.

e. Fixture drains shall individually discharge into a garage catch basin.

5. Pressurized drains from garage floor areas discharging to a garage catch basin shall conform to all of the following conditions:

a. The pressurized drain piping shall terminate inside the basin with a 6-inch submerged inlet. The termination shall be at least 12" above the floor of the basin.

b. The pressurized equipment, devices and piping shall be designed and installed to produce a maximum velocity of 2 feet per second at the point of connection to the basin.

Note: Plans for garage floor discharge-holding tanks may require plan approval by the department of natural resources.

(b) *Garages for one- and 2-family dwellings.* 1. Floor drains serving garages for one- and 2-family dwellings shall be provided with a removable solid bottom sediment basket.

Note: See ch. SPS 382 Appendix for further explanatory material.

2. a. Except as permitted in subd. 2. b., catch basins serving garages for one- and 2-family dwellings shall be designed and installed in accordance with par. (a) 2.

b. The minimum inside diameter of catch basins serving garages for one- and 2-family dwellings shall be 18 inches.

(c) *Grates for garage catch basins, floor drains and trenches.* A garage catch basin, floor drain, and trench drain shall be provided with an approved, removable grate of sufficient strength for the anticipated loads. The grate shall have an available inlet area equal to at least the outlet drain for the catch basin, floor drain or trench drain.

Note: Residential exclusion see s. SPS 325.01 (4) (c).

(5) GREASE AND OIL TREATMENT. (a) All plumbing installations for occupancies, other than dwelling units, where grease, fats, oils or similar waste products of cooking or food are introduced into the drain system shall be provided with grease and oil treatment in accordance with this subsection.

(b) *General.* 1. 'Public sewers.' All new, altered or remodeled plumbing systems which discharge to public sewers shall be provided with one or more grease interceptors.

a. Where one or more exterior grease interceptors are provided all, and only, kitchen wastes shall be discharged to an exterior interceptor.

b. Except as required in subd. 1. c. or d., where one or more interior grease interceptors are provided the wastes from a food waste grinder, a sanitizing compartment of a sink or a rinse compartment of a sink, may bypass the interceptor or interceptors.

c. The wash compartment of a scullery sink shall discharge through a grease interceptor.

d. The pre-wash compartment not discharging through a garbage disposal shall discharge through a grease interceptor.

2. 'Private onsite wastewater treatment systems.' All new, altered, or remodeled plumbing systems which discharge to private onsite wastewater treatment systems shall be provided with grease interceptors of sufficient capacity to ensure compliance with s. SPS 383.44 (2).

a. Except as provided in subd. 2. b., only kitchen and food wastes shall be discharged to an exterior grease interceptor.

b. For remodeling, when it is not practicable to separate kitchen and toilet wastes, combined kitchen wastes and toilet wastes may be discharged directly to a private onsite wastewater treatment component tank or tanks which conform to par. (c). The required capacity of a grease interceptor shall be added to the required septic tank capacity as specified in ch. SPS 383.

c. For holding tank installations, the combined kitchen and toilet wastes may discharge directly to a holding tank where the

location accepting the pumpage from the tank provides written acceptance of the combined waste to the department.

3. 'Existing installations.' The department or authority having jurisdiction may require the installation of any treatment device deemed necessary by the department or authority having jurisdiction for existing plumbing installations where the waterway of a drain system, sewer system, or private onsite wastewater treatment system is reduced or filled due to grease.

(c) *Exterior grease interceptors.* Exterior grease interceptors shall receive the entire greasy waste discharge from kitchens or food processing areas. All exterior interceptors shall be designed and constructed in accordance with this paragraph, so as to constitute an individual structure.

1. 'Design.' a. The liquid depth of the interceptor shall not be less than 42" nor more than an average of 72".

b. A rectangular interceptor tank shall have a minimum width of 36" and a minimum length of 72". The longest dimension of the tank shall be parallel to the direction of waste flow.

c. A horizontal-cylindrical interceptor tank shall have a minimum inside diameter of 52" and a minimum length of 72". The longest dimension of the tank shall be parallel to the direction of waste flow.

d. Vertical-cylindrical interceptor tanks shall have a minimum inside diameter of 72".

e. Each prefabricated interceptor tank shall be clearly marked to indicate liquid capacity and the name and address or registered trademark of the manufacturer. The markings shall be impressed into or embossed onto the outside wall of the tank immediately above the outlet opening. Each site-constructed concrete tank shall be clearly marked at the outlet opening to indicate the liquid capacity. The marking shall be impressed into or embossed onto the outside wall of the tank immediately above the outlet opening.

f. The inlet and outlet openings of interceptor tanks or tank compartments shall be provided with, open-end sanitary tee fittings or baffles, so designed and constructed as to distribute the flow and retain the grease in the tank or tank compartments. The sanitary tee fittings or baffles shall extend at least 6" above the liquid level. At least 2" of clear space shall be provided above the top of the sanitary tee fittings or baffles. The sanitary tee fitting or baffle at the inlet opening shall extend below the liquid level of the tank a distance equal to $\frac{1}{4}$ of the total liquid depth. The sanitary tee fitting or baffle at the outlet opening shall extend below the liquid level of the tank a distance equal to $\frac{2}{3}$ of the total liquid depth. The waterline in the interceptor shall be at least 2" below the horizontal drain discharging to the interceptor.

g. Any new or replacement exterior grease interceptor shall have at least two compartments. Each compartment of an interceptor tank shall be provided with at least one manhole opening located over either the inlet or outlet opening. Additional manhole openings shall be provided such that no interior compartment wall of a tank is more than 4 feet from the edge of the manhole opening. The distance between manhole openings serving the same compartment may not exceed 8 feet. Manhole openings shall be not less than 23 inches in the least dimension. Manholes shall terminate at or above ground surface and be of approved materials. Steel tanks shall have a minimum 2-inch collar for the manhole extensions permanently welded to the tank. The manhole extension on fiberglass tanks shall be of the same material as the tank and an integral part of the tank. The collar shall have a minimum height of 2 inches.

h. Manhole risers for interceptor tanks shall be provided with a substantial, fitted, watertight cover of concrete, steel, cast iron or other approved material. Manhole covers shall terminate at or above grade and shall have an approved locking device.

i. A minimum 4 × 6 inch permanent label shall be affixed to the manhole cover, identifying the interceptor tank with the words GREASE INTERCEPTOR. Where the tank acts as the septic tank and grease interceptor the label shall identify it as such. The wording used on the warning label shall be approved by the department, as part of the materials approval for the tank under ch. SPS 384.

j. An inlet or outlet opening which does not have a manhole opening as specified in subd. 1. g. shall be provided with an airtight inspection opening located over the inlet or outlet. The inspection opening shall be at least 4" in diameter. The inspection opening shall terminate at or above grade.

Note: See ch. SPS 382 Appendix for further explanatory material.

2. 'Capacity and sizing.' The minimum liquid capacity of a grease interceptor shall be determined in accordance with the provisions of this subdivision, except no grease interceptor may have a capacity of less than 1000 gallons if the interceptor is to discharge to a private onsite wastewater treatment system or less than 750 gallons if the interceptor is to discharge to a municipal sewer system and treatment facility.

a. The minimum capacity of a grease interceptor serving a restaurant with seating shall be equal to C, where

$$C = S \times H \times A$$

where, S = Number of seats, with each drive-in car service space counting as 3 seats and each drive-up service window counting as 60 seats.

H = Hours per day that meals are served, at least 6 hours but not more than 12 hours.

A = Appliance factor:

0.75 for a kitchen with no dishwashing machine and no food waste grinder.

1.0 for a kitchen with either a dishwashing machine or a food waste grinder.

1.25 for a kitchen with both a dishwashing machine and a food waste grinder.

b. The minimum capacity of a grease interceptor serving a dining hall, hospital, nursing home, school kitchen, church kitchen or a kitchen for carryout or delivery service shall be equal to C, where:

$$C = \frac{M \times G \times H}{2 \times P}$$

where, M = Meals served per day.

G = 3 gallons per meal served.

H = Hours per day that meals are served, at least 6 hours but not more than 12 hours.

P = Meal periods per day; 1, 2 or 3.

c. The minimum capacity of a grease interceptor as determined in subd. 2. a. or b. may be halved for establishments with all paper service, but may not be less than 1000 gallons if the interceptor is to discharge to a private sewage system or less than 750 gallons if the interceptor is to discharge to a municipal sewer system and treatment facility.

3. 'Installation.' a. Grease interceptor tanks may not be located within 5 feet of a building or any portion of the building or swimming pool; 10 feet of a water service; 2 feet of a lot line; 10 feet of a cistern or 10 feet of a reservoir or high water mark of a lake, stream, pond or flowage.

Note: The department of natural resources under chs. NR 811 and 812 may require additional setbacks. See ch. SPS 382 Appendix for further explanatory material.

b. Where a grease interceptor tank is installed in groundwater, the tank shall be adequately anchored.

c. Grease interceptor tanks shall be installed on a bedding of at least 3" in depth. The bedding material shall be sand, gravel, granite, limerock or other noncorrosive materials of a size that all will pass through a $\frac{3}{4}$ " sieve.

d. The backfill material for steel and fiberglass grease interceptor tanks shall be as specified in subd. 3. c. for bedding and shall be tamped into place. The backfill material for concrete grease interceptor tanks shall be soil material, of a size that will pass through a 4 inch screen and shall be tamped into place.

e. All joints on concrete risers and manhole covers for a grease interceptor shall be tongue and groove or shiplap type and sealed watertight using neat cement, mortar or bituminous compound. All joints on steel risers for a grease interceptor shall be welded or flanged and bolted and be watertight. All steel manhole extensions from a grease interceptor shall be bituminous coated inside and outside. All methods of attaching fiberglass risers for a grease interceptor shall be watertight and approved by the department.

Note: See ch. SPS 382 Appendix A-382.30 (11) (d) for material reprinted from s. NR 812.08. Section NR 812.08 may have additional setback requirements to wells.

(d) *Interior grease interceptors.* 1. 'Flow rating.' An interior grease interceptor shall be capable of accommodating a flow of at least 15 gallons per minute, but not less than the manufacturer's specifications.

2. 'Flow rate related to connected capacity.' Three-fourths of the total holding capacity in gallons of all fixtures and devices discharging to an interior grease interceptor, shall not exceed the value of the maximum flow rate which the interceptor can accommodate.

3. 'Grease holding capacity as related to flow rate.' The grease holding capacity in pounds shall not be less than double the value of the maximum flow rate which the interceptor can accommodate.

4. 'Flow controls.' Where required by the manufacturer, devices which control the rate of flow through an interior grease intercept shall be installed.

a. The flow control devices shall be accessible for inspection, service and cleaning.

b. Flow controls shall be installed in the drain branch leading to each fixture and shall be so rated that the combined flow from all combinations of discharge will not develop either sufficient static or velocity head so the established flow rate of the interceptor can be exceeded.

Note: See ch. SPS 382 Appendix for further explanatory material.

5. 'Flow control vents.' Orifice type flow controls for an interior grease interceptor shall be vented in accordance with s. SPS 382.31.

6. 'Prohibited locations and types.' No water-cooled grease interceptor may be installed. No grease interceptor may be located where the surrounding temperatures, under operating conditions, are less than 40° F.

7. 'Horizontal inlet requirements.' A maximum of 12 inches of horizontal inlet pipe may be submerged.

8. 'Sizing calculations for greasy wok waste.' For calculating greasy waste for a wok, the following formula may be used:

$$\frac{\text{diameter} \times \text{diameter} \times .7854 \times \text{depth} \times .65 \times .75}{231}$$

(e) *Prohibited treatment.* The introduction of grease or fat emulsifiers into a grease interceptor shall be prohibited.

(6) **AUTOMATIC CAR WASHES.** The wastes of floor drains and drain inlets of automatic car washes shall discharge through an approved car wash interceptor.

(a) *Design.* Except as provided in subds. 1. and 2. and par. (b), car wash interceptors shall be constructed and installed in accordance with sub. (4) (a) 2.

1. The interceptor's outlet shall be submerged to form a trap with a water seal of at least 15".

2. The bottom of the trap's water seal shall be at least 30" above the bottom of the interceptor.

(b) *Capacity.* The minimum liquid capacity of the interceptor shall be based on the maximum flow rate of water through the interceptor in gallons per minute.

1. Between the waterline and the bottom of the trap seal of the outlet, the interceptor shall have a capacity value equal to at least 5 times the maximum flow rate.

2. Below the bottom of the trap seal of the outlet, the interceptor shall have a capacity value equal to at least 15 times the maximum flow rate.

Note: See ch. SPS 382 Appendix for further explanatory material.

(c) *Hand-held car washing wands.* The wastes of floor drains and drain inlets serving 2 or more hand-held car washing wands shall discharge through an approved car wash interceptor. The wastes of one hand-held car washing wand may discharge to a garage catch basin.

(7) **COMMERCIAL LAUNDRIES.** Wastes from gravity dump-type clothes washing equipment shall be discharged through an approved laundry interceptor in accordance with this subsection.

(a) *Screening apparatus.* A laundry interceptor shall be equipped with a wire basket or other device which will prevent the passage of solids, $\frac{1}{2}$ " or larger in diameter, string, buttons and other detrimental materials into the drain system.

(b) *Trench type interceptors.* A floor receptor, trench or trough as specified in s. SPS 382.33 (9) (c) 3., may serve as a laundry interceptor, if no oils or quantities of sand are discharged into it.

Note: See ch. SPS 382 Appendix for further explanatory material.

(c) *In-line interceptor.* 1. In-line interceptors shall have a minimum inside diameter or horizontal dimension of 24".

2. An in-line interceptor shall be provided with an air-tight cover.

3. An in-line interceptor shall be provided with a vent.

a. The vent shall extend from above the flow line to a vent terminal in accordance with s. SPS 382.31 (16) or shall be connected to the venting system serving the sanitary drain system.

b. The diameter of the vent shall be at least one-half of the diameter of the interceptor's outlet, but not less than 2".

4. The outlet for an in-line interceptor shall be at least 4" in diameter. The outlet shall be submerged to form a trap with a water seal of at least 12". The bottom of the trap's water seal shall be at least 12" above the bottom of the interceptor.

5. The waterline in an in-line interceptor shall be at least 2" below the bottom of the inlet opening for the interceptor.

(8) **OIL AND FLAMMABLE LIQUIDS.** Oily and flammable wastewater that discharges to a building sewer shall be intercepted or treated by a means acceptable to the department.

(a) *Site-constructed interceptors.* Site-constructed interceptors shall be designed in accordance with the requirements in sub. (4) (a) 2.

(b) *Prefabricated oil interceptors and separators.* Prefabricated oil interceptors and separators shall be manufactured with adequate capacity for the anticipated load.

(c) *Venting.* Oil and flammable interceptors and separators shall be so designed to prevent the accumulation of explosive gases.

1. A covered interceptor or separator shall be provided with an individual vent of at least 3 inches in diameter. The vent shall extend from the top of the interceptor or separator or as high as possible, from the side of the interceptor or separator to a point at least 12 feet above grade.

2. The drain pipe to the interceptor or separator shall be provided with a fresh air inlet connected within 2 feet of the inlet of the interceptor or separator. The fresh air inlet shall terminate at least one foot above grade, but not less than 6 feet below the terminating elevation of the vent serving the interceptor or separator. The fresh air inlet shall be at least 3 inches in diameter.

Note: See ch. SPS 382 Appendix for further explanatory material.

(9) BOTTLING ESTABLISHMENTS. Wastes containing glass of bottling establishments shall be discharged through an interceptor.

(10) DAIRY PRODUCT PROCESSING PLANTS. Dairy wastes from dairy product processing plants shall be discharged through an interceptor.

(11) MEAT PROCESSING PLANTS AND SLAUGHTERHOUSES. The wastes from meat processing areas, slaughtering rooms and meat dressing rooms shall be discharged through an approved interceptor to prevent the discharge of feathers, entrails, blood and other materials.

(12) SAND INTERCEPTORS. Sand interceptors and other similar interceptors for heavy solids shall be so designed and located as to be accessible for cleaning. The outlet for the interceptor shall be submerged to form a trap with a water seal of at least 12".

(13) PLASTER AND HEAVY SOLIDS TRAP TYPE INTERCEPTORS. Plaster sinks shall be provided with plaster and heavy solids trap type interceptors.

(a) The interceptor shall be installed as the fixture trap.

(b) The drain piping between the sink and the interceptor shall not exceed a length of 36".

Note: See ch. SPS 382 Appendix for further explanatory material.

(14) CHEMICAL WASTE PIPING SYSTEMS. All chemical wastes having a pH level of less than 5.5 or more than 10.0 shall discharge to a holding tank for proper disposal or to a drain system in accordance with this subsection.

(a) *Chemical dilution and neutralizing basins.* 1. All chemical wastes discharging into a drain system shall be diluted, neutralized or treated to a pH level of 5.5 to 10.0 by passing through an approved dilution or neutralizing basin before discharging to a building sewer.

2. Dilution and neutralizing basins shall have the minimum retention capacities in accordance with one of the following requirements:

a. The minimum retention capacity shall be as specified in Table 382.34.

b. The minimum retention capacity shall be as per the manufacturer's specifications.

c. The minimum retention capacity for a quantity exceeding 150 sinks or for special uses or installations shall be approved by the department.

3. Where a sufficient supply of diluting water cannot be provided to a dilution or neutralizing basin, the basin shall be filled with marble or limestone chips of not less than one inch nor more than 3" in diameter to the level of the basin's outlet.

4. Either the inlet or outlet of a dilution or neutralizing basin shall be submerged to form a trap with a water seal of at least 4".

Table 382.34
Minimum Capacities for Dilution and Neutralizing Basins

Maximum Number of Sinks	Minimum Retention Capacity in Gallons
1	5
4	15
8	30
16	55
25	100
40	150
60	200
75	250
100	350
150	500

(b) *Vents.* Vents for chemical waste systems shall be sized and installed in accordance with all of the following:

1. Dilution and neutralizing basins with submerged inlets shall have a sanitary vent connected to the basin and a chemical waste vent connected to the inlet pipe. The pitch and the developed length of the drain between the submerged basin inlet and the chemical waste vent shall be in accordance with Table 382.31-1.

2. Dilution and neutralizing basins with submerged outlets shall have a chemical waste vent connected to the basin and a sanitary vent connected to the outlet pipe. The pitch and the developed length of the drain between the submerged basin outlet and the sanitary vent shall be in accordance with Table 382.31-1.

Note: See ch. SPS 382 Appendix for further explanatory material.

3. The vents for a chemical waste basin shall be sized based on the number of drainage fixture units discharging into the basin and installed in accordance with s. SPS 382.31.

(15) SPECIAL WASTEWATER OR MIXED WASTEWATER TREATMENT OR CONTAINMENT DEVICES. Mixed wastewater treatment and containment devices, decontamination tanks or other special wastewater treatment devices shall discharge to a dispersal or treatment system in accordance with this section or as approved by the department.

Note: A sanitary permit may be required. See ch. SPS 383 for requirements relating to containment tank installation with no valved discharge.

(a) *Installation.* 1. Exterior containment devices or treatment systems for mixed wastewater, decontamination tanks and other special wastewater treatment devices shall not be located within 5 feet of a building or any portion of the building or swimming pool; 10 feet of a water service; 2 feet of a lot line; 10 feet of a clearwater cistern or 10 feet of the high water mark of a lake, stream, pond or flowage.

Note: The department of natural resources under chs. NR 811 and 812 may require additional setbacks. See ch. SPS 382 Appendix for further explanatory material.

2. Containment devices or treatment systems for mixed wastewater, decontamination tanks, or other special wastewater treatment devices shall be constructed in accordance with s. SPS 384.25 or as approved by the department.

(b) *Vents.* Vents for mixed wastewater, decontamination tanks and other special wastewater treatment systems shall be sized and installed in accordance with s. SPS 382.31.

(c) *Alarm system.* Containment devices or treatment systems for mixed wastewater, decontamination tanks and other special wastewater treatment devices shall be equipped with an alarm.

(d) *Sampling provision.* Containment devices or treatment systems for mixed wastewater, decontamination tanks and other special wastewater treatment devices shall be equipped to allow the collection of a representative sample.

(e) *Pump requirements.* 1. A discharge line serving a containment tank for servicing purposes shall comply with all of the following:

- a. A pipe serving as the discharge line shall be of an acceptable type in accordance with ch. SPS 384.
- b. A discharge line shall terminate with a service port consisting of a quick disconnect fitting with a removable plug.
- c. The service port of a discharge line shall terminate at least 2 feet above final grade.
- d. The service port of a discharge line shall be identified as such with a permanent sign with lettering at least 1/2 inch in height.
- e. The service port of a discharge line shall be secured to a permanent support that is capable of withstanding the loads and forces placed on the port.
- f. A discharge line shall be at least 3 inches in diameter.

Note: The requirements in s. SPS 382.34 (15) (e) 1. apply to all discharge lines whether gravity or pump discharge. See ch. SPS 382 Appendix for further information.

2. Where a lift station is employed for servicing a containment tank, the pump discharge line shall conform with subd. 1., except as provided in subd. 2. a. and b.

a. A discharge line from the lift station shall be at least 2 inches in diameter.

b. The lift station pump shall be activated by means of a keyed-switch at the service port.

(f) *Sizing.* The volume of the mixed wastewater treatment or containment device shall be based on anticipated use.

(g) *Vacuum relief.* A vacuum relief valve shall be installed in each water treatment appliance and installed more than 20 feet above any faucet or outlet served by the appliance when measured from the bottom of the tank.

(h) *Wastewater retention.* Where a containment tank has an outlet that is connected to a drain system, the outlet shall include a means to contain the wastewater from entering the drain system until proven to be safe for discharge.

History: Cr. Register, February, 1985, No. 350, eff. 3-1-85; am. (4) (a) 2. b., (5) (b) 2. intro., c. and (c) 4. b., Register, August, 1991, No. 428, eff. 9-1-91; am. (4) (a) 2. c. and g., 3. a., (5) (b) 1. f. and j., 3. a., (c) 1., (8) (a) 2. c., r. and recr. (5) (a) 1., r. (5) (b) 3. e. and (c) (intro.), renum. (5) (b) 3. f. to be (5) (b) 3. e., Register, February, 1994, No. 458, eff. 3-1-94; am. (5) (a) 2. (intro.), 3. and (b) 2. (intro.), Register, April, 2000, No. 532, eff. 7-1-00; am. (4) (b) 2., Register, December, 2000, No. 540, eff. 1-1-01; CR 02-002: r. and recr. (1), (2), (4) (a), (8) (a) and (b), am. (3) (intro.), (6) (a) (intro.) and (14) (b) (intro.), renum. (3) (a) to (f) to be (3) (b) to (g), cr. (3) (a) and (14) (b) 3., r. (3) (g), Register April 2003 No. 568, eff. 5-1-03; CR 02-129: am. (4) (a) 2. b. and (5) (b) 1. g., Register January 2004 No. 577, eff. 2-1-04; CR 08-055: am. (3) (a) 1., r. and recr. (4) (b) 2. and (14) (a) 2., renum. (5) (intro.) to (d) to be (5) (a) to (e) and am. (5) (a) and (b), cr. (5) (c) 7. Register February 2009 No. 638, eff. 3-1-08; CR 10-064: am. (title), (1), (2), (3) (intro.), (a), (c), (e), (g), (h), (4) (a) 2. f., (5) (c) 3. a., r. (6) (d), cr. (15) Register December 2010 No. 660, eff. 1-1-11; correction in (15) (e) 2. (intro.) made under s. 13.92 (4) (b) 7., Stats., Register December 2010 No. 660; correction in (2), (3) (a) 1., (4) (a) 3. b., c., (5) (b) 2. b., (c) 1. i., (d) 5., (7) (b), (c) 3. a., (14) (a) 2. a., (b) 1., 2., 3., (15) (a) 2., (b) (e) 1. a. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: am. (3) (e), cr. (3) (g) 4., am. (4) (b) 1., (c), (5) (b) 2., 3., (c) (intro.), 1. g., (d) 7., cr. (5) (d) 8., am. (15) (a) 2., cr. (15) (g), (h) Register September 2023 No. 813, eff. 10-1-23; correction in (5) (c) 1. g. made under s. 35.17, Stats., Register September 2023 No. 813.

SPS 382.35 Cleanouts. (1) **SCOPE.** The provisions of this section set forth the requirements for the installation of cleanouts and manholes for all drain piping.

(2) **MATERIALS.** Cleanouts shall be constructed of approved materials in accordance with ch. SPS 384.

(3) **WHERE REQUIRED.** (a) *Horizontal drains.* Except as permitted under s. SPS 382.33 (9) (fm), all gravity horizontal drains within or under a building shall be accessible through a cleanout in accordance with one of the following requirements:

1. The developed length of drain piping between cleanouts for above-ground piping may not exceed 75 feet.

2. The developed length of drain piping between cleanouts for below ground piping 2 inches or less in diameter may not exceed 40 feet.

3. The developed length of drain piping between cleanouts for below ground piping greater than 2 inches in diameter may not exceed 75 feet.

Note: See ch. SPS 382 Appendix for further explanatory material.

(b) *Sanitary building sewers.* 1. Sanitary building sewers 6" or less in diameter shall be provided with cleanouts or manholes such that:

- a. Cleanouts are located not more than 100 feet apart;
- b. Manholes are located not more than 400 feet apart;
- c. The distance from a cleanout to a manhole located upstream is not more than 200 feet; or
- d. The distance from a manhole to a cleanout located upstream is not more than 300 feet.

2. Sanitary building sewers 8" or larger in diameter shall be provided with manholes at:

- a. Every horizontal change in direction of more than 45 degrees where the change in direction is created within a distance of less than 10 feet;
- b. Every change in pipe diameters where both connections are 8 inches or larger; and
- c. Intervals of not more than 400 feet.

(c) *Storm building sewers.* 1. Storm building sewers 10" or less in diameter shall be provided with cleanouts or manholes such that:

- a. Cleanouts are located not more than 100 feet apart;
- b. Manholes are located not more than 400 feet apart;
- c. The distance from a cleanout to a manhole located upstream is not more than 200 feet; or
- d. The distance from a manhole to a cleanout located upstream is not more than 300 feet.

2. Storm building sewers 12" or larger in diameter shall be provided with manholes or storm drain inlets with an inside diameter of at least 36" at:

- a. Every horizontal change in direction of more than 45 degrees where the change in direction is created within a distance of less than 10 feet,
- b. Every change in pipe diameter where both connections are 12 inches or larger; and
- c. Intervals of not more than 400 feet.

(d) *Private interceptor main sewers.* 1. Private interceptor main sewers 5" or less in diameter shall be provided with an exterior cleanout or manhole upstream of the point of the creation of the private interceptor main sewer and such that:

- a. Cleanouts are located not more than 100 feet apart;
- b. Manholes are located not more than 400 feet apart;
- c. The distance from a cleanout to a manhole located upstream is not more than 200 feet; or
- d. The distance from a manhole to a cleanout located upstream is not more than 300 feet.

2. Private interceptor main sewers 6" or larger in diameter shall be provided with a manhole at:

- a. The most upstream point of the private interceptor main sewer;
- b. Every horizontal change in direction of more than 45 degrees where the change in direction is created within a distance of less than 10 feet,
- c. Every change in pipe diameter where both connections are 6 inches or larger; and
- d. Intervals of not more than 400 feet.

(e) *Junction of building drain and building sewer.* A cleanout shall be provided near the junction of a building drain and a building sewer.

1. The cleanout shall be located within 5 feet of where the building drain and the building sewer connect. The cleanout may be located either inside or outside the building.

2. A cleanout in a drain stack may serve as the cleanout at the junction of the building drain and building sewer, if the stack is within 5 feet of where the building drain and building sewer connect.

(f) *Stacks.* Where a cleanout is provided in a drain stack, the cleanout shall be located not more than 60 inches above the lowest floor penetrated by the stack.

(g) *Branches.* 1. Except as provided in subd. 2., cleanouts shall be provided in connection with batteries of fixtures at such points that all parts of the branch drain may be accessible for cleaning or removal of stoppages. For the purposes of this requirement, removable fixture traps may serve as cleanout openings.

2. A cleanout shall not be required for a branch drain when the fixtures on the branch include one floor outlet fixture and any fixtures discharging into an accompanying wet vent.

(h) *Greasy wastes.* Drain pipes carrying greasy wastes shall be provided with cleanouts located not more than 40 feet apart and at all changes in direction of more than 45°.

(i) *Double sanitary tees.* A cleanout shall be provided immediately above or below a double sanitary tee drain fitting which is installed in a vertical drain pipe of less than 3" in diameter, unless a stack cleanout is provided in accordance with par. (f).

(j) *Traps and fixture drains.* 1. All traps shall be constructed or installed so that stoppages may be removed from the traps and the horizontal portions of fixture drains.

2. If a trap is not accessible for removal or does not contain a removable dip, a cleanout or a removable inlet shall be installed to enable cleaning of the trap passageway and the horizontal portions of the fixture drain.

(k) *Conductors.* Where a cleanout is provided in a conductor, the cleanout shall be located 28 to 60" above the lowest floor penetrated by the conductor.

(L) *Sampling manholes.* Municipalities or sanitary sewage districts by ordinance or rule may require the installation of sampling manholes for periodic sewage monitoring.

Note: The installation of sampling manholes may be needed for the monitoring of industrial wastes under chs. NR 200 to 299. See ch. SPS 382 Appendix for further explanatory material.

(m) *Catch basins and interceptors.* The fixture drain from all interceptors designed in accordance with s. SPS 382.34 (4) (a) 2. shall be provided with an accessible cleanout located outside of the basin and not more than 15 inches from the weir of the trap.

(4) **DIRECTION OF FLOW.** Every cleanout shall be installed so as to open in the direction of the waste flow or at a right angle thereto.

(5) **ACCESSIBILITY.** Cleanout plugs shall not be covered with cement, plaster, or any other similar permanent finishing material.

(a) *Underground piping.* Cleanouts installed in underground drain piping shall be extended vertically to or above the finish grade.

1. All interior and exterior cleanouts where the vertical distance between the horizontal drain pipe being served and the top of the cleanout opening exceeds 18 inches in length, shall connect to the drain piping through a fitting as specified in Table 382.30-4.

2. A cleanout located outside of a building shall be provided with a frost sleeve.

a. The frost sleeve shall be of a material approved for building sewers in accordance with s. SPS 384.30 (2) (c).

b. Where a cleanout is located in an area subject to vehicular traffic the top of the frost sleeve shall terminate in a concrete pad at least 4" thick and extending at least 9" from the sleeve on all sides, sloping away from the sleeve.

c. The bottom of the frost sleeve shall terminate 6" to 12" above the top of the drain piping or at least 6" below the predicted frost depth in accordance with s. SPS 382.30 Table 382.30-6.

d. The frost sleeve shall have a removable watertight top of sufficient thickness and strength to sustain the weight of anticipated traffic.

Note: See ch. SPS 382 Appendix for further explanatory material.

(b) *Concealed piping.* Cleanout access for drain piping located in concealed spaces shall be provided by either extending the cleanout to at least the surface of a wall or floor or by providing access panels of a sufficient size to permit removal of the cleanout plug and proper cleaning of the pipe.

(6) **CLEANOUT SIZE.** (a) Cleanouts and cleanout extensions shall be sized in accordance with Table 382.35, except as provided in par. (b).

(b) The replacement or repair of a non-public 6-inch sanitary sewer may be served by an existing 4-inch extension within the building.

Table 382.35
Cleanout Sizes

Diameter of Pipe Served by Cleanout (inches)	Minimum Diameter of Cleanout Extension (inches)	Minimum Diameter of Cleanout Opening (inches)
1 ¹ / ₄	1 ¹ / ₄	1 ¹ / ₄
1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₄
2	1 ¹ / ₂	1 ¹ / ₂
3	3	2 ¹ / ₂
4	4	3 ¹ / ₂
5	5	4
6	6	5
8 and larger	6	6

(7) **PROHIBITED USE OF CLEANOUT OPENINGS.** Cleanout openings shall not be used for the installation of fixtures or floor drains, except where another cleanout of equal access and capacity is provided.

(8) **MANHOLES.** (a) *Diameter.* The minimum diameter of manholes shall be 42 inches. A manhole shall have a minimum access opening of 23 inches.

(b) *Materials.* Manholes shall be constructed of approved materials in accordance with ch. SPS 384 and in accordance with the design provisions of s. NR 110.13.

Note: The provisions of s. NR 110.13 regarding the manhole's flow channel, watertightness, and drop pipe indicate the following specifications:

—The flow channel through manholes shall be made to conform to the shape and slope of the sewer.

—Solid watertight manhole covers are to be used wherever the manhole tops may be flooded by street runoff or high water. Where groundwater conditions are unfavorable, manholes of brick or block shall be waterproofed on the exterior with plastic coatings supplemented by a bituminous waterproof coating or other approved coatings. Inlet and outlet pipes are to be joined to the manhole with a gasketed flexible watertight connection or any watertight connection arrangement that allows differential settlement of the pipe and manhole wall to take place.

—An outside drop pipe is to be provided for a sewer entering a manhole where the invert elevation of the entering sewer is 2 feet or more above the spring line of the outgoing sewer. The entire drop connection shall be encased in the concrete. Inside drop connection may be approved on a case-by-case basis.

Note: See ch. SPS 382 Appendix for further explanatory material.

History: Cr. Register, February, 1985, No. 350, eff. 3-1-85; am. (3) (i), r. and recr. (3) (j), Register, May, 1988, No. 389, eff. 6-1-88; am. (5) (a) 2. a., Register, Au-

gust, 1991, No. 428, eff. 9-1-91; r. and recr. (3) (j) and (5) (a) 2. c., Register, February, 1994, No. 458, eff. 3-1-94; CR 02-002: am. (3) (a) and (d) 1. (intro.), renum. (3) (g) to be (3) (g) 1. and am., cr. (3) (g) 2. and (m), r. and recr. (5) (a) 1. Register April 2003 No. 568, eff. 5-1-03; CR 08-055: r. and recr. (3) (a), am. (3) (b) 2. a., b., (c) 2. a., b., (d) 2. b., c., (5) (a) 1. and Table 82.35 Register February 2009 No. 638, eff. 3-1-09; correction in (2), (3) (m), (5) (a) 1., 2. a., c., (6), (8) (b) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: am. (3) (a) (intro.), (f), r. and recr. (6), am. (8) (a) Register September 2023 No. 813, eff. 10-1-23.; correction in (6) (b) made under s. 35.17, Stats, Register September 2023 No. 813.

SPS 382.36 Stormwater and clearwater plumbing systems. (1) SCOPE. The provisions of this section set forth the requirements for the design, installation and maintenance of piping, conveyance, venting, detention and treatment of stormwater and clearwater in plumbing systems.

Note: Refer to ch. NR 151 for stormwater management requirements.

(2) MATERIALS. All stormwater and clearwater plumbing systems shall be constructed of approved materials in accordance with s. SPS 384.30 (3).

(3) DESIGN OF STORMWATER PLUMBING SYSTEMS. (a) Plumbing systems upstream of detention shall be designed, at a minimum, based on the 10-year, 24-hour storm event.

(b) Plumbing detention systems and plumbing systems located downstream of detention shall be designed based on anticipated flows and volumes.

(c) Stormwater and clearwater infiltration systems shall comply with s. SPS 382.365.

(d) Tank access shall comply with all the following:

1. Each compartment of a detention tank used for the reduction of total suspended solids shall be provided with a manhole opening. For compartments with multiple inlets or outlets a manhole or a cleanout, as determined under s. SPS 382.35 (6) Table 382.35, shall be provided at all additional inlets and outlets.

2. The distance between manhole openings serving the same compartment may not exceed 50 feet.

3. A manhole opening shall be not less than 23 inches in the least dimension.

4. A manhole shall terminate at or above ground surface and be of approved materials. Steel tanks shall have a minimum 2-inch collar for the manhole extensions permanently welded to the tank. The manhole extension on fiberglass tanks shall be of the same material as the tank and an integral part of the tank. The collar shall have a minimum height of 2 inches.

5. Manhole risers shall be provided with a substantial, fitted, watertight cover of concrete, steel, cast iron, or other approved material.

6. Manhole covers shall terminate at or above grade and shall have an approved locking device.

7. Tanks shall conform to provisions of s. SPS 384.25.

(e) Tank labeling shall comply with all the following:

1. Covers for all tank openings larger than 8 inches in diameter shall be provided with a permanent warning label indicating the dangers of entering the tank, in accordance with this paragraph.

2. The warning label shall be securely attached and made of a noncorrosive metal or plastic bearing the legend "DO NOT ENTER WITHOUT PROPER EQUIPMENT" or "DANGEROUS GASES EXIST IN TANK" or similar language.

3. The label shall be rectangular in shape with minimum dimensions of 4 by 5 inches.

4. The wording on the label shall be a minimum of 1/2 inch in height and be either indented or raised.

Note: For a listing of best management practices (BMPs) refer to ch. SPS 382 Appendix A-382.36 (3)-1.

Note: Where local discharge requirements are more stringent, stormwater plumbing systems may provide detention and treatment to comply with the local stormwater management plan.

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(4) DISCHARGE AND CONNECTIONS. (a) *Discharge points.* The discharge points for stormwater and clearwater shall be as specified in Table 382.38-1.

(b) *Segregation of wastewater.* 1. Except as provided in subd. 2., stormwater or clearwater piping may not connect to a sanitary drain system.

2. Where a combined sanitary-storm sewer system is available, stormwater, clearwater and sanitary wastewater may be combined in the building sewer.

3. Stormwater gravity drains shall not be combined with clearwater drains prior to discharging to the storm building drain except where approved by the department.

Note: See also Table SPS 382.38-1 which limits clearwater discharges to sanitary sewer at 50 gpd.

Note: For the use of stormwater or reuse of clearwater, refer to the appropriate requirements in ss. SPS 382.30, 382.34, 382.40, 382.41, 382.70 and this section.

Note: For further explanatory material regarding the rational method, other methods and runoff co-efficients, see ch. SPS 382 Appendix A-382.36 (4).

(5) INPUT CALCULATIONS. (a) *Peak flow.* The peak flow of stormwater influent to a plumbing system shall be calculated using any of the following methods:

1. 'Area method.' For sizing of conveyance piping, when calculating stormwater peak flow based on the tributary area, the area in square feet shall be divided by the following applicable divisors:

a. For roofs the divisor is 26 square feet/gpm.

b. For paved or graveled ground surfaces the divisor is 32.5 square feet/gpm.

c. For lawns, parks and similar land surfaces the divisor is 104 square feet/gpm.

Note: For example, 10,000 square feet of roof area/26 square feet/gpm = 385 gpm or 0.85 cubic feet/second.

2. 'Rational method.' For calculating peak flow, the intensity shall be determined using the time of concentration for the tributary area.

Note: For the equation procedure for runoff coefficients for use with the rational method, refer to ch. SPS 382 Appendix A-382.36 (5)-1.

3. 'Engineering analysis method.' An engineering analysis shall be based on an analysis provided by a Wisconsin registered architect, registered professional engineer, or permitted designer of engineering systems - plumbing, or an approved alternate standard per s. SPS 381.20 (2) based on the peak flow calculated in accordance with sub. (3) (a).

Note: A model that calculates peak flow such as SWMM, TR-20, TR-55, P8 or an equivalent methodology may be used.

(b) *Volume.* The volume of stormwater influent to a plumbing system shall be based on an analysis provided by a Wisconsin registered architect, registered professional engineer, or permitted designer of engineering systems - plumbing, or an approved alternate standard per s. SPS 381.20 (2) and a minimum of a two-year, 24-hour storm event and designed so that no property damage occurs at 100-year, 24-hour storm event with a Type II distribution.

Note: For runoff coefficients and use of other methods or models, refer to ch. SPS 382 Appendix A-382.36 (5)-2 and A-382.36 (5)-3.

Note: The intensity of rainfall varies considerably during a storm as well as geographic regions. To represent various regions of the United States, the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) developed four synthetic 24-hour rainfall distribution types from available National Weather Service (NWS) duration-frequency data (Hershfield 1961; Frederick et al., 1977) or local storm data. Type IA is the least intense and type II is the most intense short duration rainfall. Types I and IA represent the Pacific maritime climate with wet winters and dry summers. Type III represents Gulf of Mexico and Atlantic coastal areas where tropical storms bring large 24-hour rainfall amounts. Type II represents the rest of the country, including Wisconsin. For more information, see the USDA-NRCS webpage: <http://www.nrcs.usda.gov/>.

(c) *Additional inputs to stormwater systems.* Additional inputs to stormwater systems shall be estimated based on anticipated flows and volumes.

(6) CONVEYANCE AND DETENTION SYSTEMS. (a) *Design.* The design of stormwater and clearwater conveyance systems shall conform to all of the following:

1. Horizontal stormwater conveyance piping shall be sized using either of the following:

a. An engineering analysis, based on full flow capacity, acceptable to the department.

b. Tables 382.36-1 to 382.36-5 based on pipe type, diameter and pitch.

2. a. A vertical conductor for stormwater may not be smaller than the largest horizontal branch discharging into the conductor.

b. Vertical conductors shall be sized in accordance with Tables 382.36-1 and 382.36-3 or by an engineering analysis acceptable to the department.

Note: For the use of Baird's equation, refer to ch. SPS 382 Appendix A-382.36 (6)-1.

3. Clearwater conveyance systems shall be sized in accordance with s. SPS 382.30 (3) and (4).

4. Underground, gravity-flow storm building sewers shall have a minimum 3-inch inside diameter.

(b) *Velocity in stormwater conveyance system piping.* The pitch of stormwater conveyance system piping shall be designed to create a minimum velocity of one foot per second when flowing full.

(c) *Fittings and connections.* 1. Except as provided in subd. 2., fittings and connections for stormwater and clearwater conveyance systems shall comply with s. SPS 382.30 (8) and (9).

2. The minimum radius for the first 90° fitting located downstream of a roof drain shall comply with the horizontal to vertical requirements in Table 382.30-4.

(d) *Stack offsets.* Stack offsets for piping of a clearwater conveyance system piping shall comply with s. SPS 382.30 (6).

(e) *Pitch of clearwater gravity conveyance system piping.* 1. The minimum pitch of gravity conveyance system piping having a 2-inch inside diameter or less shall be 1/8 inch per foot.

2. The minimum pitch of clearwater gravity conveyance system piping having at least a 3-inch inside diameter or more shall be 1/16 inch per foot.

(f) *Branch connections near base of stack.* Branch drains from interior clearwater inlets may not connect downstream from the base fitting or fittings of a drain stack within a distance equal to 20 pipe diameters of the building drain.

(g) *Detention systems.* 1. The storage volume of a dry detention system shall be designed and installed with a drain time of 72 hours after a storm event.

2. Paved surfaces or parking lots serving as detention areas shall be limited to a design depth of 6 inches, unless otherwise limited by local ordinance.

3. By design, ground surface ponding shall drain within 24 hours after a storm event.

4. A subsurface stormwater detention system that has a permanent pool of water shall be designed and installed in a manner that accomplishes vector control.

Table 382.36-1
Maximum Capacity of Stormwater Conveyance Piping for
PVC, ASTM D1785, D2665, F891 and ABS, ASTM D1527, D2661, F628

Nominal Pipe Size (in inches)	Maximum Capacities in gallons per minute (gpm)					
	Pitch of Piping Per Foot					
	1/32 inch (0.26% slope)	1/16 inch (0.52% slope)	1/8 inch (1.04% slope)	¼ inch (2.08% slope)	½ inch (4.16% slope)	Vertical
2	11	15	22	31	44	34
3	30	40	60	80	110	89
4	60	80	120	160	230	183
5	110	150	210	300	420	334
6	170	240	340	480	690	545
8	360	510	710	1,010	1,430	1,133
10	660	930	1,310	1,850	2,620	2,079
12	1,050	1,480	2,090	2,960	4,180	3,316
14	1,350	1,900	2,690	3,810	5,390	4,271
16	1,920	2,720	3,840	5,440	7,690	6,097
18	2,630	3,720	5,270	7,440	10,520	8,348
20	3,520	4,970	7,030	9,956	14,060	11,155
24	5,750	8,140	11,490	16,260	22,990	18,244

Note: To convert to cubic feet per second (cfs) divide gpm by 448.8.

Table 382.36-2
Maximum Capacity of Stormwater Horizontal Conveyance Piping for PVC, ASTM D3034

Nominal Pipe Size (in inches)	Maximum Capacities in gallons per minute (gpm)				
	Pitch of Piping Per Foot				
	1/32 inch (0.26% slope)	1/16 inch (0.52% slope)	1/8 inch (1.04% slope)	¼ inch (2.08% slope)	½ inch (4.16% slope)
4	60	80	110	160	220
6	160	230	320	450	640
8	350	490	700	990	1,400
10	630	900	1,270	1,790	2,540
12	1,010	1,430	2,020	2,850	4,040
15	1,730	2,450	3,460	4,900	6,920

Note: To convert to cubic feet per second (cfs) divide gpm by 448.8.

Table 382.36-3
Maximum Capacity of Stormwater Conveyance Piping for Cast Iron, ASTM A74 and ASTM A888

Nominal Pipe Size (in inches)	Maximum Capacities in Gallons Per Minute (gpm)					
	Pitch of Piping Per Foot					
	1/32 inch (0.26% slope)	1/16 inch (0.52% slope)	1/8 inch (1.04% slope)	¼ inch (2.08% slope)	½ inch (4.16% slope)	Vertical
2	NA	NA	NA	NA	NA	26 ^a
3	20	30	40	60	80	80
4	50	60	90	130	180	173
5	80	120	170	230	330	315
6	140	190	270	380	540	516
8	290	420	590	830	1,170	1,118
10	540	770	1,090	1,540	2,170	2,068
12	870	1,230	1,740	2,490	3,490	3,318
15	1,630	2,310	3,270	4,620	6,530	6,217

a. Sizing per manufacturer's specifications.

Note: To convert to cubic feet per second (cfs) divide gpm by 448.8.

Table 382.36-4
**Maximum Capacity of Stormwater Horizontal Conveyance Piping for
Concrete, ASTM C76 and ASTM C14**

Nominal Pipe Size (in inches)	Maximum Capacities in gallons per minute (gpm)				
	Pitch of Piping Per Foot				
	1/32 inch (0.26% slope)	1/16 inch (0.52% slope)	1/8 inch (1.04% slope)	¼ inch (2.08% slope)	½ inch (4.16% slope)
4	40	60	90	120	170
6	130	180	260	360	510
8	280	390	550	780	1,110
10	500	710	1,000	1,420	2,010
12	820	1,150	1,630	2,310	3,260
15	1,480	2,090	2,960	4,180	5,910
18	2,400	3,400	4,810	6,800	9,620
21	3,630	5,130	7,250	10,260	14,500
24	5,180	7,320	10,350	14,640	20,710
27	7,090	10,020	14,170	20,050	28,350
30	9,390	13,270	18,770	26,550	37,550
33	12,100	17,120	24,210	34,230	48,410

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Table 382.36-4

**Maximum Capacity of Stormwater Horizontal Conveyance Piping for
Concrete, ASTM C76 and ASTM C14 (Continued)**

Nominal Pipe Size (in inches)	Maximum Capacities in gallons per minute (gpm)				
	Pitch of Piping Per Foot				
	1/32 inch (0.26% slope)	1/16 inch (0.52% slope)	1/8 inch (1.04% slope)	¼ inch (2.08% slope)	½ inch (4.16% slope)
36	15,260	21,590	30,530	43,170	61,060
39	18,900	26,720	37,790	53,440	75,580
42	23,020	32,560	46,050	65,120	92,100
48	32,870	46,490	65,740	92,980	131,490
54	45,000	63,640	90,010	127,290	180,010
60	59,600	84,290	119,200	168,580	238,410

Note: To convert to cubic feet per second (cfs) divide gpm by 448.8.

Table 382.36-5

Maximum Capacity Of Stormwater Horizontal Conveyance Piping For Elliptical Reinforced Concrete Pipe

Pipe Diameters in inches (circular pipe equivalent)	Maximum Capacities in gallons per minute (gpm)			
	Pitch of Piping Per Foot			
	1/16 inch (0.52% slope)	1/8 inch (1.04% slope)	¼ inch (2.08% slope)	½ inch (4.16% slope)
14 X 23 (18)	3,300	4,675	6,700	9,500
19 X 30 (24)	7,200	10,060	14,700	21,000
24 X 38 (30)	13,250	18,740	26,500	37,475
29 X 45 (36)	21,545	30,475	43,095	60,940
34 X 53 (42)	32,500	45,965	65,000	91,925
38 X 60 (48)	46,405	65,625	92,800	131,245
43 X 68 (54)	63,525	89,840	127,050	179,800
48 X 76 (60)	84,135	118,985	168,270	237,965

(7) OTHER DESIGN REQUIREMENTS. (a) *Subsoil drains.* 1. A subsoil drain discharging to a plumbing system shall discharge into an area drain, manhole or storm sewer, trapped receptor or a sump with a pump.

2. Where a foundation drain is subject to backwater, the drain shall be protected by a backwater valve or a sump with a pump.

(b) *Backwater valve.* All backwater valves shall be accessible for maintenance.

(c) *Sewer location.* 1. No storm building sewer or private interceptor main storm sewer may pass through or under a building to serve another building, unless one of the following conditions is met:

a. The storm building sewer or private interceptor main storm sewer serves farm buildings or farm houses, or both, that are located on one property.

b. Where a storm building sewer or private interceptor main storm sewer serves buildings that are located on one property, a document that indicates the piping and distribution arrangement for the property and buildings is recorded with the register of deeds no later than 90 days after installation.

2. The location of storm building drains and building sewers shall comply with ss. SPS 382.30 (11) (d) and 382.40 (8) (b) 7.

(d) *Installation requirements.* 1. The connection of a stormwater leader discharging to a storm building sewer shall be made at or above the finished grade.

Note: For more information regarding joints and connections, refer to s. SPS 384.40.

1m. If in direct connection and at finished grade, a removable strainer shall protect the inlet. The capacity of the strainer shall be provided in accordance with sub. (9) (b).

2. The elevation of a storm building drain shall comply with s. SPS 382.30 (11) (b) 1.

3. Interior inlets and drains subject to backflow or backwater shall be protected with a check valve or backwater valve.

4. Storm building drains and building sewers shall be installed to comply with s. SPS 382.30 (11) (e).

5. Storm building sewer connections to public sewers shall be in accordance with s. SPS 382.30 (11) (f).

6. Cleanouts for conveyance system piping shall be installed in accordance with s. SPS 382.35.

7. Storm building sewers that receive clearwater and that may be subject to freezing shall be installed in accordance with s. SPS 382.30 (11) (c) 2.

8. Storm building drains, clearwater building drains, and building storm sewers and appurtenances shall be separated from

water wells by the applicable separation distances contained in chs. NR 811 and 812, or as otherwise permitted by the department of natural resources.

9. All underground stormwater storage tanks for water reuse shall be separated from sanitary sewers by a minimum of 8 feet.

10. a. A means to locate buried non-metallic storm building sewers and private interceptor main sewers that discharge to municipal mains shall be provided in accordance with the options under s. SPS 382.30 (11) (h), except as provided in subd. 10. b.

b. Tracer wire insulation color for non-metallic storm pipe shall be brown.

11. Subsoil drain connections to the storm sewer shall be installed at a point above the horizontal center line of the storm sewer in such a manner that the subsoil drain is entirely above the top of the building sewer; or be provided with a backwater valve.

(e) *Hydrodynamic stormwater separators.* Hydrodynamic stormwater separators shall conform to ASTM F1745/F1745m.

(8) **SUMPS AND PUMPS.** (a) *Sumps.* 1. 'General.' All storm building subdrains shall discharge into a sump, the contents of which shall be automatically lifted and discharged, dispersed or used in accordance with sub. (4).

2. 'Construction and installation.' a. Except as provided in subd. 2. c. and d., an interior sump shall have a rim extending at least one inch above the floor immediately adjacent to the sump.

b. A sump shall have a removable cover of sufficient strength for anticipated loads.

c. Where a sump is installed in an exterior meter pit or elevator pit, the rim may be level with the floor.

d. When a sump is provided with an airtight, solid cover.

3. 'Location.' All sumps installed for the purpose of receiving clearwater, groundwater or stormwater shall be separated from water wells by the applicable separation distances contained in chs. NR 811 and 812, or as otherwise permitted by the department of natural resources.

Note: See ch. SPS 382 Appendix A-382.30 (11) (d) for material reprinted from s. NR 812.08.

4. 'Size.' a. Except as permitted under subd. 4. b. or c. the size of each sump shall be no smaller than 16 inches in diameter at the top, 14 inches in diameter at the bottom, and 22 inches in depth, but in no case smaller than the manufacturer requirements to ensure sufficient pump run time.

b. The minimum sump diameter may be smaller than 16 inches when specified by the manufacturer for a combination sump and pump.

c. A sump located in an elevator pit may have a width or diameter of not less than 12 inches and a depth of not less than 12 inches.

5. 'Solid covered sumps.' A storm or clearwater sump with a solid cover shall be vented. The vent shall terminate a minimum of 1 inch above finished floor and be sized per Table 382.31-4. In lieu of a separate vent, a sealed sump may incorporate a radon vent connected to the subsoil drain or sump cover.

(b) *Pumps.* 1. 'Size.' The pump shall be of a capacity appropriate for the anticipated use.

2. 'Discharge piping.' a. Where a pump discharges into a storm drain system, a check valve shall be installed.

b. The minimum diameter discharge piping shall be based on the design flow rate of the pump and a minimum velocity of one foot/second.

3. 'Clearwater discharge.' Clearwater may not discharge into a stormwater sump, except for one- and 2-family dwellings.

(9) **INLET REQUIREMENTS.** (a) *Interior clearwater drain inlets.* Interior clearwater drain inlets shall terminate at least one inch above the finished floor.

(b) *Exterior stormwater inlets.* 1. 'Construction.' a. All exterior stormwater inlets shall be constructed of material in accordance with s. SPS 384.30.

Note: For additional information on approved materials, refer to s. SPS 384.30 (3) (f).

b. All exterior stormwater inlets subject to vehicular traffic shall be set on a suitable base capable of sustaining the anticipated load.

2. 'Design.' All exterior stormwater inlets shall be designed for the anticipated flow.

Note: For manhole requirements, refer to s. SPS 382.35 (3).

3. 'Inlet grates.' a. General. All inlets shall be provided with a well-fitted, removable grate of a thickness and strength to sustain the anticipated loads.

Note: Sections SPS 362.1101 to 362.1110 specify that for floor or ground surface inlets when placed within an identifiable accessible route, openings in the floor or ground surface shall be of a size that does not permit the passage of a ½-inch sphere. Also, it states that grates having elongated openings be placed so that the longest dimension is perpendicular to the dominant direction of travel.

b. Floor or ground surface inlets. Openings in the floor or ground surface shall be of a size that prohibits the entrapment of wheeled vehicles, wheelchairs or pedestrians within the grate openings.

c. Grates on horizontal pipes. Grates shall be provided on horizontal inlets greater than 6 inches in diameter. The grates shall be placed so that the rods or bars are not more than 3 inches downstream of the inlet. Rods or bars shall be spaced so that the openings do not permit the passage of a 6-inch sphere.

Note: See ch. SPS 382 Appendix for further explanatory material.

(c) *Subsurface areas of 50 square feet or less.* Other than stairwells, all subsurface areas not exceeding 50 square feet and exposed to the weather, shall comply with one of the following:

1. Drain to foundation drains through a minimum 2-inch diameter pipe or a through a continuous layer of washed stone aggregate.

2. Drain to the storm building drain, storm subdrain or storm sewer through a minimum 3-inch diameter pipe.

(d) *Subsurface areas of more than 50 square feet and stairwells.* An area drain shall be provided in subsurface areas greater than 50 square feet and in all stairwells exposed to the weather. The area drain shall comply with all of the following:

1. Drain to the storm building drain, storm subdrain or storm sewer.

2. The fixture drain shall have a minimum 3-inch inside diameter and may not discharge into a subsoil or foundation drain.

(10) **ROOF DRAINS.** (a) *General roofs.* Conventional roof, deck, and balcony drains shall conform to ASME A112.6.4 and the following:

Note: Roof structure requirements are contained in chs. SPS 361-366.

1. Roof drains shall be equipped with strainers extending not less than 4 inches above the surface of the roof immediately adjacent to the roof drain. Strainers shall have an available inlet area above the roof not less than 1.5 times the area of the conductor to which the drain connects.

2. Roof strainers used on sun decks, open parking decks, and similar areas shall be of the flat surface type, shall be level with the deck, and shall have an available inlet area not less than 2 times the area of the conductor to which the drain connects.

(b) *Siphonic roof drains.* Siphonic roof drains shall conform to ASME A112.6.9 or ASTM F2021 and be indelibly marked with the following minimum information:

1. The dome, bodies, and baffle plates shall be marked with the manufacturer's name or trademark.

2. The baffle plate and drain body shall be marked with the baffle plate model number, resistance value, k, and words, "replace missing baffle with model ____."

3. The design of siphonic roof drainage systems shall conform to ASPE 45.

(c) *Controlled flow roof drains.* 1. 'Application.' In lieu of sizing the roof drain piping based on actual maximum horizontal roof areas as specified in sub. (5) (a) 1., the roof drain piping may be sized based on the equivalent adjusted maximum horizontal projected roof areas which result from controlled flow and storage of storm water on the roof.

2. 'Installation.' Control of storm water runoff shall be by control devices. Control devices shall be protected by strainers.

3. 'Sizing.' Two or more drains shall be installed on roof areas less than or equal to 10,000 square feet in area, 4 or more drains shall be installed on roof areas greater than 10,000 square feet in area.

4. 'Storms.' The water from a 10-year, 24-hour storm event may not be stored on the roof for greater than 24 hours.

(d) *Secondary roof drains.* 1. 'Sizing.' When secondary roof drain systems are installed the secondary system shall be sized and installed in accordance with the requirements in this section using the same calculations and methods as the primary system.

2. 'Prohibited connection.' Secondary roof drain systems may not be connected to primary roof drain systems.

3. 'Discharge.' All secondary roof drain systems shall discharge in accordance with Table 382.38-1.

4. 'Openings.' The opening for the secondary roof drainage shall be not less than 2 inches and not more than 4 inches above the bottom opening of the primary roof drain.

5. 'Overflow drains.' Secondary overflow drains and overflow standpipes rim elevations shall be not less than 2 inches and not more than four inches above the bottom elevation of the primary roof drains.

6. 'Overflow drains.' Secondary overflow drains and overflow standpipes rim elevations may not exceed 5 inches in height above the adjacent roof elevation served by the primary roof drains.

(12) TRAPS AND VENTS. (a) *Traps.* 1. Traps are required for interior drain inlets receiving clearwater.

2. Except for exterior loading dock drains, traps are required for exterior drain inlets located within 10 feet of an air inlet, door or openable window.

3. More than one drain inlet may discharge to the same trap.

4. A foundation drain that discharges by gravity to a storm sewer shall be trapped. The trap shall be provided with cleanouts.

(b) *Vents.* 1. A trap receiving clearwater shall be vented in accordance with s. SPS 382.31. Vent piping for a clearwater drain system may not be connected to a vent system serving a sanitary drain system or chemical waste system.

2. a. Vents serving a solid covered sump shall terminate a minimum of 1 inch above finished floor or in accordance with s. SPS 382.31 (16), except for s. SPS 382.31 (16) (d) 1. c. In lieu of a separate vent, a sealed sump may incorporate a radon vent connected to the subsoil drain or sump cover.

b. Sump vents shall be sized as per Table 382.31-4.

(13) OPERATION AND MAINTENANCE. (a) *Plan.* An operation and maintenance plan shall be implemented for all stormwa-

ter plumbing systems for drainage areas of one or more acres that are installed on or after December 1, 2004.

(b) *Plan information.* An operation and maintenance plan as required in par. (a) shall include at least all of the following information, applicable to the system:

1. Accumulated solids or byproduct removal requirements.
2. Identification of safety hazards.
3. Cleaning and inspection schedule.
4. Inspection and maintenance checklist, including at least the following items:
 - a. Filters.
 - b. Disinfection units.
 - c. Sedimentation chambers.
 - d. Detention devices.
 - e. Infiltration systems.
5. Start up and shutdown procedures.
6. Vector control requirements.
7. A contingency plan in the event of system failure.
8. Pre-construction runoff volume.
9. Post-construction runoff volume.
10. Infiltration volume.
11. Detention volume.

(c) *Plan location.* The operation and maintenance plan shall remain onsite and be available for inspection when requested by the department.

(d) *Record of maintenance.* When requested the owner shall make available for inspection all maintenance records to the department or agent for the life of the system.

History: Cr. Register, February, 1985, No. 350, eff. 3-1-85; r. and recr. (3) (a) and (b) 1., (c) 1. and (11) (a) 4., cr. (3) (c) 3., Register, May, 1988, No. 389, eff. 6-1-88; renum. (13) (a) and (b) to be (b) and (c) and am. (b) 1., cr. (3) (b) 3. and (13) (a), r. (3) (c) 3. and (13) (intro.), Register, August, 1991, No. 428, eff. 9-1-91; reprinted to correct error in (5) (e) 2., Register, October, 1991, No. 430; am. (3) (b) 1., (c) 1. a., (13) (b) 1. and (c), cr. (11) (a) 5., Register, February, 1994, No. 458, eff. 3-1-94; r. and recr. (11) (a) 2. and 5., Register, April, 1998, No. 508, eff. 5-1-98; renum. and am. (3) (b) 3. a. to be (3) (b) 3. and (3) (b) 3. b. to be (3) (b) 4., Register, April, 2000, No. 532, eff. 7-1-00; am. (3) (b) 3., (4) (a), (5) (a) and (6) (a), cr. (3) (b) 5. and Table 82.36-4a, Register, December, 2000, No. 540, eff. 1-1-01; CR 02-002: r. and recr. (3) (11) (a) 3., (13) (a) 2., (15) (a) and (b), am. (5) (e) (intro.), (10), (12), (14) and Table 82.36-4 Register April 2003 No. 568, eff. 5-1-03; CR 04-035: r. and recr. Register November 2004 No. 587, eff. 12-1-04; CR 07-069: cr. (7) (d) 10. Register February 2008 No. 626, eff. 3-1-08; CR 08-055: am. (4) (b) 3. and (8) (a) 4., r. and recr. (11) Register February 2009 No. 638, eff. 3-1-09; correction in (2), (3) (c), (4) (a), (6) (a) 1. b., 2. b., 3., (c) 1., 2., (d), (7) (c) 2., (d) 2., 4., 5., 6., 7., 10. a., (9) (b), (11), (c), (12) (b) 1., 2. b. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: cr. (3) (d), (e), am. (4) (title), (5) (a) 3., (b), cr. (6) (g) 4., am. Table 382.36-1, Table 382.36-3, (7) (d) 1., cr. (7) (d) 1m., 11., (e), am. (8) (a) 4. a., cr. (8) (a) 5., (b) 3., r. and recr. (10), r. (11), am. (12) (b) 2. a., cr. (13) (b) 1. a. to d. Register September 2023 No. 813, eff. 10-1-23; renum. (13) (b) 1. a. to d. to (13) (b) 8. to 11.; corrections in (12) (b) 2. a. made under s. 13.92 (4) (b) 7. and s. 35.17, Stats., and correction made in (3) (d) 4., (7) (d) 1m., (8) (a) 5. made under s. 35.17, Stats., Register September 2023 No. 813.

SPS 382.365 Stormwater and clearwater subsurface infiltration plumbing systems. (1) *SCOPE.* The provisions of this section set forth the requirements for the design, installation and maintenance of stormwater and clearwater subsurface infiltration plumbing systems serving building sites.

Note: The department of natural resources has registration requirements for class V injection wells. See ch. SPS 382 Appendix for further explanatory material.

(2) SITE AND SOIL EVALUATION. (a) *Site evaluation.* A site evaluation shall be conducted in accordance with the methods and standards as provided in s. SPS 385.40 (3) (a).

(b) *Soil evaluation.* 1. A soil evaluation shall be conducted in accordance with the methods and standards as provided in s. SPS 385.30 (1) (c).

2. Individuals qualified to conduct soil evaluation under this subsection shall be an individual that maintains either a registration as provided in s. SPS 305.33 or a license as provided in ch. GHSS 4.

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(3) **INFILTRATION SYSTEM DESIGN.** (a) *Influent quality.* For stormwater and clearwater infiltration plumbing systems, the influent quality shall comply with the requirements in Table 382.70-1 for subsurface infiltration and irrigation.

(am) *Site evaluation.* All infiltration systems must comply with the requirements of Wisconsin department of natural resources standards for site evaluation for stormwater infiltration and bioretention for infiltration.

(b) *In situ soil requirements.* 1. Except as provided in subd. 2., the minimum depth of suitable in situ soil for infiltration systems shall be as specified under subd. 1. a. or b. to separate the system from the highest groundwater elevation or bedrock. When groundwater mounding calculations affect the depth to seasonal groundwater, the depth of suitable soil shall be measured to the calculated elevation of mounded groundwater.

a. Five feet of suitable soil separation where the soil contains greater or equal to 10 percent and less than or equal to 20 percent fines.

b. Three feet of suitable soil separation where the soil contains greater than or equal to 20 percent fines.

Note: Wisconsin department of natural resources standards for site evaluation for stormwater infiltration are found in department of natural resources Conservation Technical Standard 1002.

Note: See ch. SPS 382 Appendix for explanatory information.

2. For roof runoff or where treatment has afforded an equivalent level of water quality, the depth of in situ soil shall be no less than one foot of materials finer than coarse sand.

Note: See ch. SPS 382 Appendix for representative water quality levels.

(bm) *Engineered soil requirements.* The installation of a stormwater infiltration system where engineered soil is incorporated in lieu of in situ soil shall comply with all the following:

1. The engineered filtering layer shall be located above any limiting factor identified within the soil report.

2. The engineered soil may not be less than 24 inches in depth, or 18 inches with supporting documentation and department approval.

Note: Wisconsin department of natural resources standards for bioretention for infiltration are found in department of natural resources Conservation Technical Standard 1004.

(d) *Groundwater mounding.* Groundwater mounding consideration shall be included in the design of any stormwater and clearwater subsurface infiltration plumbing system that has a width that exceeds 15 feet and a depth to the estimated highest groundwater elevation.

Note: An acceptable model is provided by the USGS, webpage: <http://water.usgs.gov/ogw/techniques.html>.

(e) *Drain down time.* 1. Stormwater and clearwater subsurface infiltration plumbing systems shall be designed to drain within 72 hours after a storm event.

2. By design, ground surface ponding shall drain within 24 hours after a storm event.

(f) *Setbacks.* 1. Stormwater and clearwater subsurface infiltration plumbing systems shall be located as provided in Table 382.365-4, except for irrigation systems.

Table 382.365-4

Horizontal Setback Parameters by Physical Feature

Physical Feature	Setback Parameters in feet
Building	10
Holding tank, stormwater collection tank	10
POWTS dispersal component	5
POWTS holding or treatment component	10
Property line	5
Swimming pool, in ground	15

2. All stormwater and clearwater subsurface infiltration plumbing systems shall be separated from water wells by the applicable separation distances contained in chs. NR 811 and 812 or as otherwise approved by the department of natural resources.

Note: See ch. SPS 382 Appendix A-382.30 (11) (d) for material reprinted from ss. NR 811.12 (5) (d) and 812.08. Section NR 811.12 (5) (d) or 812.08 may have additional setback requirements.

(4) **INSTALLATION.** (a) *Orientation.* Except for subsurface irrigation systems, all of the following shall apply:

1. The longest dimension of a stormwater or clearwater subsurface infiltration plumbing system consisting in part of in situ soil shall be oriented along the surface contour of the site location, unless otherwise approved by the department.

2. The infiltrative surface of a stormwater or clearwater subsurface infiltration plumbing system consisting in part of in situ soil and located below the surface of the original grade shall be level.

(b) *Other requirements.* 1. A stormwater or clearwater subsurface infiltration plumbing system consisting in part of in situ soil may not be installed if the soil is frozen at the infiltrative surface.

2. Snow cover shall be removed before excavating or installing a stormwater or clearwater system component consisting in part of in situ soil.

3. For a stormwater or clearwater subsurface infiltration plumbing system consisting in part of in situ soil, the soil moisture content shall be evaluated immediately prior to installation of the component. If the soil evaluation at the infiltrative surface results in the sample capable of being rolled into a ¼-inch wire, the installation may not proceed.

Note: To accomplish a field test for soil wetness, a soil sample the size of one's palm may be rolled to form at least a ¼-inch wire.

4. All vessels and pipes of a stormwater or clearwater subsurface infiltration plumbing system shall be bedded in accordance with a product approval under s. SPS 384.10 or a plan approval under s. SPS 382.20.

(5) **OPERATION AND MAINTENANCE.** (a) *General.* Operation and maintenance shall be performed in accordance with the operation and maintenance plan submitted with the stormwater and clearwater subsurface infiltration plumbing system design and s. SPS 382.36 (13), where applicable.

(b) *Prohibited substance.* 1. Except as provided in subd. 2., no substance shall be discharged into a stormwater or clearwater subsurface infiltration plumbing system that results in exceeding the enforcement standards and preventive action limits specified in ch. NR 140 Tables 1 and 2 at a point of standards application, pursuant to s. 160.21 (2), Stats.

Note: For groundwater standard limits on various substances, refer to ch. NR 140 Table 1.

2. Pursuant to s. 160.19 (2) (a), Stats., the department has determined that it is not technically or economically feasible to require that a stormwater or clearwater subsurface infiltration plumbing system treat wastewater to comply with the preventive action limit for chloride specified in ch. NR 140 Table 2, as existed on June 1, 1998.

Note: Section 160.19 (2) (a), Stats., reads: "Each regulatory agency shall promulgate rules which define design and management practice criteria for facilities, activities and practices affecting groundwater which are designed, to the extent technically and economically feasible, to minimize the level of substances in groundwater and to maintain compliance by these facilities, activities and practices with preventive action limits, unless compliance with the preventive action limits is not technically and economically feasible."

3. Pursuant to s. 160.21 (2), Stats., the point of standards application relative to the performance of stormwater and clearwater subsurface infiltration plumbing systems is any of the following:

a. Any point of present groundwater use for potable water supply.

b. Any point beyond the boundary of the property on which the facility, practice or activity is located.

(c) *Deleterious substance.* Substances deleterious to a stormwater or clearwater subsurface infiltration plumbing system shall be intercepted, diluted or treated in accordance with s. [SPS 382.34](#) prior to the substance discharging into a stormwater or clearwater infiltration system.

History: CR 04-035: cr. Register November 2004 No. 587, eff. 12-1-04; correction in (2) (a), (b) 1., 2., (3) (a), (b) 1., (c) 1., 2., (f) 1., (4) (b) 4., (5) (a), (c), Table 382.365-3 made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: cr. (3) (am), renum. (3) (b) 1. to (3) (b) 1. (intro.) and am., cr. (3) (b) 1. a., b., (bm), r. (3) (c), Table 382.365-1 to Table 382.65-3 Register September 2023 No. 813, eff. 10-1-23; correction in (3) (b) 1. (intro.) made under s. 35.17, Stats., Register September 2023 No. 813.

SPS 382.37 Sanitation facilities and campgrounds.

(1) **COMPOSTING SYSTEMS.** (a) Composting systems which employ water or other liquids as a transport medium for wastes shall conform with this subsection.

Note: Composting systems where water or other liquids are not employed as a transport medium are addressed under ch. [SPS 391](#).

(b) The materials, design, construction and performance of a composting system which employs water or other liquids as a transport medium for wastes shall conform to NSF Standard 41.

(c) All composting systems shall be listed by a testing agency acceptable to the department.

Note: For a listing of agencies acceptable to the department, see ch. [SPS 382 Appendix A-384.11](#).

(d) 1. Components for the storage or treatment of wastes shall be continuously ventilated.

2. Ventilation ducts or vents for the composting system shall conform to s. [SPS 382.31](#) (16).

(e) 1. The disposal of the end product from a composting system shall be in accordance with [40 CFR Part 503](#), Standards for the Use or Disposal of Sewage Sludge.

Note: EPA materials relating to EPA 503, including, "Domestic Septage Regulatory Guidance: A Guide to the EPA 503 Rule", are available from the Office of Water Resource, US EPA, 401 M Street SW, Washington D.C. 20460.

2. The disposal of any liquid from a composting system shall be either to a publicly owned treatment works or a POWTS conforming to ch. [SPS 383](#).

(f) The connection of potable water supplies to a composting system shall be protected in accordance with s. [SPS 382.41](#).

(g) The drainage systems for the composting system shall conform to the applicable requirements of ss. [SPS 382.30](#) to [382.36](#) and the manufacturer's specifications.

(2) **SANITARY DUMP STATIONS.** (a) Sanitary dump stations which are used to receive domestic wastes and domestic wastewater from camping unit transfer tanks, RV transfer tanks, the holding tanks of travel trailers, recreational vehicles or other similar mobile vehicles, and transfer containers shall conform with this subsection.

Note: See ch. [SPS 382 Appendix A-382.37](#) (2) for further explanatory material.

(b) The drain receptor for a sanitary dump station shall be at least 4" in diameter.

(c) 1. The drain receptor shall be provided with a self-closing cover.

2. The cover for the drain receptor shall be operable without touching the cover with one's hands.

(d) The drain receptor shall be surrounded by an impervious pad at least 6 feet in diameter. The pad shall be:

1. Pitched toward the drain receptor with a minimum slope of $\frac{1}{4}$ " per foot; and

2. Of sufficient strength to sustain anticipated loads.

(e) The drain receptor shall be trapped in accordance with s. [SPS 382.32](#).

(f) The drain receptor for a sanitary dump station that is installed within an enclosed structure shall be vented in accordance with s. [SPS 382.31](#).

(g) A permanent supply of water shall be provided to wash down the drain receptor and pad. The water supply shall be:

1. Provided with cross connection control in accordance with s. [SPS 382.41](#); and

2. Labeled indicating that the supply is not for drinking purposes.

3. The non-potable supply water for the wash down for the drain receptor must be located at least 50 feet from a potable water supply unless a variance is approved by the department under s. [SPS 382.20](#) (11).

(h) 1. Aboveground drains shall be constructed of approved materials in accordance with s. [SPS 384.30](#) (2) (a).

2. Aboveground water supply piping shall be constructed of approved materials in accordance with s. [SPS 384.30](#) (4) (e).

(3) **CAMPGROUNDS.** (a) *Drain systems.* Sewers serving campgrounds shall comply with the provisions in s. [SPS 382.30](#) and all of the following:

1. A drain line serving a recreational vehicle shall discharge to a minimum 4-inch diameter campsite receptor by means of an indirect waste pipe.

2. One campsite receptor shall be designed to serve no more than 4 recreational vehicles.

3. Where 2 or more drain lines are designed to discharge into the same campsite receptor, an increaser shall be installed in the vertical portion of the trap riser to accommodate the drains.

4. The rim of a campsite receptor shall terminate no less than 4 inches above the finished grade.

5. The rim of a campsite receptor shall not terminate at an elevation that is higher than the water supply termination serving the same site.

6. A vent is not required to serve the trap serving a campsite receptor.

7. When not in use, a campsite receptor shall be capped.

(b) *Water supply systems.* Water supply systems serving campgrounds shall comply with the provisions in s. [SPS 382.40](#) and all of the following:

1. An accessible control valve shall be installed at the most upstream point of the campground water supply distribution system and downstream of the municipal meter or pressure tank.

2. If water is provided to a campsite, individual approved backflow protection shall serve each hose connection in accordance with s. [SPS 382.41](#).

3. A campsite water supply riser shall terminate no less than 18 inches above finished grade.

4. If a water supply is provided for individual campsites, water distribution to each individual campsite must comply with the requirements of chs. [SPS 381](#) to [387](#) and the water supplied may be used for the served campsite only.

5. The water connection to a camping unit may be plumbed directly if the fixtures comply with provisions of chs. [SPS 382](#) and [384](#).

6. A water connection to a camping unit may be made by NSF/ANSI 51 or 61 compliant hose if each camping unit is individually protected by approved cross connection control.

Note: See ch. [SPS 382 Appendix](#) for further explanatory material.

History: Cr. Register, April, 2000, No. 532, eff. 7-1-00; CR 02-002: cr. (2) (h) and (3) Register April 2003 No. 568, eff. 5-1-03; CR 08-055: am. (3) (b) 3. Register February 2009 No. 638, eff. 3-1-09; correction in (1) (d) 2., (e) 2., (f), (g), (2) (e), (f), (g)

1., (h) 1., 2., (3) (a) (intro.), (b) (intro.), 2. made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006; am. (2) (a), (g) (intro.), cr. (2) (g) 3., (3) (b) 4. to 6. Register September 2023 No. 813, eff. 10-1-23; correction in (3) (b) 4. made under s. 35.17, Stats., Register September 2023 No. 813.

SPS 382.38 Discharge points. (1) PURPOSE. The purpose of this section is to establish allowable discharge points for wastewater discharging from plumbing systems.

(2) SCOPE. The provisions of this section set forth the requirements for the discharge points for wastewater based on the

use of the fixtures, appurtenances, appliances and devices discharging into the plumbing system.

(3) GENERAL REQUIREMENTS. (a) Wastewater from plumbing systems shall be discharged as specified in Table 382.38-1.

(b) Wastewater from uses other than those listed in Table 382.38-1, shall be discharged as specified by the department on a site-specific basis.

Table 382.38 – 1
Allowable Discharge Points by Fixture or Specific Uses

Use or Fixture	Allowable Discharge Points					
	POWTS ^a	Municipal Sanitary Sewer	Municipal Storm Sewer	Ground Surface	Combined Sanitary-Storm Sewer	Subsurface Dispersal ⁱ
1. Cross connection control device or assembly [see s. SPS 382.33 (9) (i)]	X	X		X ^{b, c, e}	X	
2. Domestic wastewater	X	X			X	
3. Condensate from high efficiency furnace or water heater	X	X			X	
4. Drinking fountain	X	X	X	X ^b	X	X
4m. Elevator threshold drains		X		X	X	
5. Elevator pit drain [see s. SPS 382.33 (9) (f)]			X	X ^b	X	X
6. Enclosed public parking levels	X	X		X ^b	X	X
7. Industrial wastewater ^h	X ^f	X			X	
8. Municipal well pump house floor drain and sink	X	X		X ^b	X	X
9. One- and 2-family garage floor area [see s. SPS 382.34 (4) (b)]	X	X		X ^b	X	
9g. Garage catch basins or oil interceptors in public buildings and facilities. [see s. SPS 382.34 (4) (a) 1.a.]	X ^{c, h, k}	X				
9r. Open public parking levels			X	X ^b	X	X
10. Residential living unit air conditioner condensate	X	X ^g	X ^c	X ^b	X	X
11. Storm water, groundwater, fire sprinkler test discharge and clear water	X	X ^g	X ^c	X ^b	X	X
12. Secondary roof drain systems				X ^j		
13. Swimming pool or wading pool — diatomaceous earth filter backwash	X	X			X	
14. Swimming pool or wading pool — drain wastewater	X	X ^b	X ^{b, c}	X ^{b, c}	X ^b	X
15. Swimming pool or wading pool — sand filter backwash	X	X ^b	X ^{b, c}	X ^{b, c}	X ^b	X
16. Water heater temperature and pressure relief valve [see s. SPS 382.40 (5)]	X	X	X	X ^b	X	X
17. Wastewater from water treatment device	X	X	X ^c	X ^{b, c}	X	X
18. Whirlpool backwash drain and wastewater	X	X	X ^c	X ^{b, c}	X	
19. Discharges not specifically listed above	Contact the department					

^a Allowed when the POWTS is designed to include designated wastewater.

^b Unless prohibited by local municipality and when no nuisance is created.

^c A discharge permit may be required by the department of natural resources.

^e Allowed for exterior installation and when no sanitary sewer is in the building.

^f Refer to the department of natural resources for discharge regulations.

^g Fifty gallons per day.

^h The department of natural resources may require WPDES permits for industrial discharges and may allow other options.

ⁱ Subsurface dispersal must comply with s. SPS 382.365.

^j Discharge separate from the primary system and where observable.

^k Discharge is required to be received by a holding tank, see s. SPS 382.34 (4) for additional requirements for garage floor area wastewater.

History: CR 02-002: cr. Register April 2003 No. 568, eff. 5-1-03; CR 02-129: am. Table 82.38-1 line 15 Register January 2004 No. 577, eff. 2-1-04; CR 04-035: am. Table 82.38-1 Register November 2004 No. 587, eff. 12-1-04; CR 08-055: am. Table 82.38-1 Register February 2009 No. 638, eff. 3-1-09; correction in (3) (a), (b), Table 382.38-1 made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: cr. Table 382.38-1 lines 4m, 9g., 9r., footnote k Register September 2023 No. 813, eff. 10-1-23.

Subchapter IV — Water Supply Systems

SPS 382.40 Water supply systems. (1) SCOPE. The provisions of this section set forth the requirements for the design and installation of water supply systems.

Note: Chapter NR 811 governs the design and construction of community water systems or waterworks.

(2) MATERIALS. All water supply systems shall be constructed of approved materials in accordance with ch. SPS 384.

(3) GENERAL. (a) *Water quality.* 1. Every outlet providing water shall be provided with water of the quality as specified under s. SPS 382.70 (3) for the intended use.

2. Nonpotable water may be supplied to water treatment devices or systems designed to treat water for compliance with Table 382.70-1.

(b) *Hot water required.* Except as provided in subds. 1. and 2., hot water shall be provided to all plumbing fixtures, appliances, and equipment used for personal washing, culinary purposes, or laundering, and sinks used for building maintenance in a public building.

1. Tempered water. a. Tempered water or hot water shall be provided to lavatories, wash fountains and shower heads which are not located in dwelling units or living units.

b. Tempered water supplied to serve multiple lavatories, wash fountains and shower heads shall be provided by means of temperature-actuated mixing valves that comply with ASSE 1017.

2. Lavatories located in park shelters and bath houses which are not open during the period from November 15 to March 15 and which are not places of employment shall not be required to be provided with hot water.

3. Lavatories located in waysides which are not places of employment shall not be required to be provided with hot water.

Note: The exception of providing hot water under subds. 1. to 3. does not supersede the requirements of other state agencies for providing hot water.

(c) *Protection.* 1. Pursuant to s. NR 811.07 the interconnection of 2 or more water supply systems, one system served by a public supply source and the other system served by another supply source is prohibited, unless approved in writing by the department of natural resources.

2. A water supply system shall be designed and installed in accordance with s. SPS 382.41 and maintained to prevent nonpotable liquids, solids or gases from being introduced into the potable water supply system through cross connections.

3. a. Except as provided in subd. 3. b., when a connection between 2 water supply systems exists, one system having a higher degree of hazard than the other system as specified in s. SPS 382.41, the water supply system with a lower degree of hazard shall be protected as specified in s. SPS 382.41.

b. When a water treatment device is provided to lower the concentration of a health-related contaminant, cross connection control shall not be required to protect the water supply system downstream of the treatment device from the upstream contaminated source.

4. The water supply system shall be protected from thermal expansion when a closed system is created.

(d) *Identification.* 1. Where buildings or facilities contain water supply systems where the water supply systems have differ-

ent degrees of hazard, then those water supply systems shall be labeled in accordance with this section.

a. Aboveground piping supplying water other than potable shall be labeled by tags or colored bands according to Table 382.40-1a.

Note: When identifying potable water piping or valves with tags or bands, label according to Table 382.40-1a.

b. Valves supplying other than potable water shall be identified by tags according to Table 382.40-1a.

c. The tags or colored bands shall be placed at intervals of not more than 25 feet. Where piping passes through a wall, floor or roof, the piping shall be so identified on each side of the wall and within each compartment.

d. The colored bands shall be at least 3 inches wide and shall bear text identifying the water or the specific use.

e. Tags used to identify water outlets, valves and piping shall be of metal or plastic in the shape specified in Table 382.40-1a.

f. The lettering on the triangular and circular tags shall be at least 1/2 inch in height.

g. A hose bibb intended to discharge water that does not meet drinking water quality as specified in s. SPS 382.70, shall be labeled as nonpotable or so identified for the specific use or uses, and shall be equipped with a removable handle.

2. Piping downstream of cross connection control assemblies as listed in Table 382.22-1 shall be labeled with bands or tags as specified in subd. 1. a. to f.

3. Where a building or a structure is served by 2 distribution systems, one system supplied by a public water supply and the other system supplied by a private well, each water distribution system shall be identified to indicate the supply source.

4. The installation of each reduced pressure principle backflow preventer, double check backflow prevention assembly, spill resistant vacuum breaker and pressure vacuum breaker shall display a department assigned identification number.

a. The method to display the department assigned identification number shall be a weather-resistant tag, securely attached to the cross connection control assembly.

b. The tag shall contain at least the following information.

Wisconsin Department of Safety and Professional Services Identification/Object Number _____ Cross Connection Control Assembly Do Not Remove This Tag
--

c. The department assigned identification number shall be printed in the blank area with a permanent, waterproof marker or similar indelible method.

Note: To obtain a Department-assigned identification number for a cross connection control assembly, contact the Department's Division of Industry Services at P.O. Box 7162, Madison, WI 53707-7162; or at telephone (608) 266-2112 or (877) 617-1565 or 711 (Telecommunications Relay); or at fax (608) 267-9723; or at the Division's Web site at <http://dsps.wi.gov/programs/industry-services>.

(e) *Multipurpose piping system.* 1. A multipurpose piping system shall be designed and installed in accordance with this section and NFPA 13D and materials must be acceptable under the NFPA 13D standard and s. SPS 384.30, with the following exceptions:

a. A partial or single sprinkler may be installed in a dwelling unit not required to be sprinklered under NFPA 13D.

b. Limited purpose or limited area sprinklers may be installed in areas not required to be sprinklered.

Note: See s. SPS 321.095 of the Dwelling Code and s. SPS 362.0903 (10) of the Commercial Building Code as to fire protection provisions for multipurpose piping systems.

2. Fire department connections are prohibited in a multipurpose piping system.

3. Materials for multipurpose piping systems shall be acceptable under NFPA 13D and s. SPS 384.30 (4) (e) and (5).

4. Five gpm shall be added onto the multipurpose calculations for each dwelling connected to a common water supply system.

5. A flow test shall be performed at the controlling sprinkler before the system is put into operation.

(4) CONTROL VALVES. (a) *Private water mains.* Private water mains shall be provided with control valves as specified in this subsection.

1. 'Corporation cocks.' a. If a private water main 2" or less in diameter connects to a public water main, a corporation cock shall be installed at the connection to the public water main.

b. If a private water main 2-1/2" or larger in diameter connects to a public water main, a corporation cock shall be installed not more than 8 feet from the connection to the public water main.

2. 'Curb stops.' a. Except as provided in subd. 2. b., if a private water main connects to public water main, a curb stop shall be installed in the private water main between the corporation cock and the property line.

b. If a private water main 2-1/2" or larger in diameter connects to a public water main, one control valve may serve as the corporation cock and the curb stop. The control valve shall be located not more than 8 feet from the connection to the public water main and shall be accessible for operation.

Note: See ch. SPS 382 Appendix A-382.40 (4) for further explanatory material.

(b) *Water services.* Water services shall be provided with control valves as specified in this subsection.

1. 'Corporation cocks.' a. If a water service 2" or less in diameter connects to a public water main, a corporation cock shall be installed at the connection to the public water main.

b. If a water service 2-1/2" or larger in diameter connects to a public water main, a corporation cock shall be installed not more than 8 feet from the connection to the public water main.

2. 'Curb stops.' a. Except for water services serving farm buildings and farm houses, a curb stop shall be installed in each water service which connects to a private water main. The curb stop shall be located outside the building served by the water service.

b. Except as provided in subd. 2. c., a curb stop shall be installed in each water service which connects to a public water main. The curb stop shall be located between the corporation cock and the property line.

c. If a water service 2-1/2" or larger in diameter connects to a public water main, one control valve may serve as the corporation cock and the curb stop. The control valve shall be located not more than 8 feet from the connection to a public water main and shall be accessible for operation.

3. 'Building control valves.' If a water service serves a building, a building control valve shall be provided in the water service as specified in this subsection.

a. If the water service connects to a public water supply or to a private water supply which has an external pressure tank, the building control valve shall be installed inside the building and located within 3 feet of developed length from the point where the water service first enters the building. If a water meter is pro-

vided, the building control valve shall be located upstream of the water meter.

b. If a private water supply includes an internal pressure tank, the building control valve shall be installed inside the building and located within 3 feet of developed length downstream from the internal pressure tank.

Note: See ch. SPS 382 Appendix for further explanatory material.

(c) *Water distribution systems.* 1. Control valves shall be installed in water distribution systems serving public buildings as specified in this subdivision.

a. If a water meter is provided, a control valve shall be installed within 3 feet of developed length downstream from the outlet of the water meter. If bypass piping is provided around a water meter, a control valve shall be installed in the bypass piping.

Note: See sub. (8) (d) 3. for the requirements relating to the bypassing of water meters.

b. A control valve shall be installed in the supply piping to each water heater and water treatment device and in the fixture supply to each plumbing fixture, plumbing appliance and piece of equipment. The control valve may be part of the bypass piping or an internal part of a water treatment device. When the valve is an internal part of the water treatment device, the device shall be removable for service.

c. If a hot water circulation system is provided, a control valve shall be installed on both the inlet and outlet piping to the circulation pump. If a hot water circulation system has 2 or more return pipe lines, a balancing control valve shall be installed in each return piping line.

d. The water distribution system for buildings with more than 4 dwelling units or living units shall be provided with control valves in such numbers and at such locations so that the water supplied to all the units within the building can be isolated into groups of 4 or less units.

Note: See sub. (8) (g) for the valve requirements for water temperature control.

2. Control valves shall be installed in water distribution systems serving one- and 2-family dwellings as specified in this subdivision.

a. If a water meter is provided, a control valve shall be installed within 3 feet of developed length downstream from the outlet of the water meter. If bypass piping is provided around a water meter, a control valve shall be installed in the bypass piping.

Note: See sub. (8) (d) 3. for the requirements relating to the bypassing of water meters.

b. A control valve shall be installed in the supply piping to each water heater and water treatment device and in the fixture supply to each water closet, exterior hose bibb, plumbing appliance and piece of equipment. When the valve is an internal part of the water treatment device, the device shall be removable for service.

c. If a hot water circulation system is provided, a control valve shall be installed on both the inlet and outlet piping to the circulation pump. If a hot water circulation system has 2 or more return pipe lines, a balancing control valve shall be installed in each return piping line.

(5) HOT WATER SUPPLY SYSTEMS. (a) *General.* Water heating systems shall be sized to provide sufficient hot water to supply peak demand, except for a tankless type water heater that meets the requirements of par. (am).

(am) *Tankless type water heaters.* All tankless type water heaters shall have minimum flow rate as specified in this paragraph.

1. The minimum flow rate of a tankless type water heater may be obtained by multiplying 0.65 by the calculated hot water

gallons per minute demand, as determined by Tables 382.40-1t and 382.40-3, provided the heater will achieve a water temperature of 110°F at the terminal fitting or faucet.

2. The sizing method in subd. 1. 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 1/2 inch.

3. For the purposes of subd. 2, “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.

(b) *Temperature maintenance.* Except as provided in par. (bm), the developed length of hot water distribution piping from the source of the hot water supply to a plumbing fixture or appliance exceeds 100 feet, a circulation system or self-regulating electric heating cable shall be provided to maintain the temperature of the hot water within the distribution piping.

1. If a circulation system is used to maintain the temperature, no uncirculated hot water distribution piping may exceed 25 feet in developed length.

2. If a self-regulating electric heating cable is used to maintain the temperature, the cable shall extend to within 25 feet of each fixture or the appliance.

3. Water distribution piping conveying circulated water or served by a self-regulating electric heating cable shall be insulated to limit the heat loss at the external surface of the pipe insulation to a maximum of 25 BTUs per hour per square foot for aboveground piping and 35 BTUs per hour per square foot for underground piping. The maximum heat loss shall be determined at a temperature differential, T, equal to the maximum water temperature minus a design ambient temperature no higher than 65°F.

4. Water distribution piping served by self-regulating electric heating cable shall be identified as being electrically traced in accordance with ch. SPS 316.

5. The installation of self-regulating electric heating cable may be subcontracted by a plumber to another trade.

6. All hot water circulation system connections shall be made downstream of the control valve serving the water heating device.

7. Hot water circulation piping and tubing may not exceed the maximum velocity requirements specified per the manufacturer.

Note: See A-382.40 (5) for pipe insulation requirements.

(bm) *Temperature maintenance; public buildings.* Except as required in par. (b) all public lavatories in public buildings shall comply with the provisions of sub. (5) (b), except that allowable hot water supply distances for any fixture shall be calculated from the nearest source of hot water using the method in subd. 1. For public lavatories the allowable supply distance shall comply with the method in either subd. 1 or 2. of this section. In this section hot water sources shall include water heaters, circulating water systems, and self-regulating heat trace temperature maintenance systems.

1. Maximum allowable pipe length method: Under this method the distance from a hot water supply to a fixture, public lavatory, or appliance may not exceed the distances in Table 382.40-1d. Fixture fittings, fixture supply connectors, and faucets may not be part of this calculation.

2. Maximum allowable volume method: Under this method the maximum allowable volume of water between a hot water source and a public lavatory may not exceed 8 ounces. The allowable volume shall be the sum of the internal volume of all pipe, but may not include volume contained within fixture shut-

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off valves, within flexible water supply connectors to a fixture fitting, or within a fixture fitting. Pipe volume shall be calculated using the values in Table 382.40-1h.

Note: Insulation requirements for these systems are found in s. SPS 322.44 (2) and chs. SPS 361 to 366.

(c) *Water heaters.* All water heaters and safety devices shall be designed and constructed in accordance with s. SPS 384.20 (5) (p).

Note: Water heaters are to be installed in accordance with the requirements specified in chs. SPS 361 to 366 and chs. SPS 320 to 325 with respect to energy efficiency, enclosures and venting.

(d) *Safety devices.* Water heaters shall be equipped with safety devices as specified in this paragraph.

1. All pressurized storage-type water heaters and unfired hot water storage tanks shall be equipped with one or more combination temperature and pressure relief valves. The temperature steam rating of a combination temperature and pressure relief valve or valves shall equal or exceed the energy input rating in BTU per hour of the water heater. No shut off valve or other restricting device may be installed between the water heater or storage tank and the combination temperature and pressure relief valve.

Note: The temperature steam rating of a combination temperature and pressure relief valve is commonly referred to as the AGA temperature steam rating.

2. All pressurized non-storage type water heaters shall be provided with a pressure relief valve installed at the hot water outlet with no shut off valve between the heater and the relief valve.

3. Temperature and pressure relief valves shall be installed so that the sensing element of the valve extends into the heater or tank and monitors the temperature in the top 6” of the heater or tank.

4. A vacuum relief valve shall be installed in each water heater and hot water storage tank which, when measured from the bottom of the heater or tank, is located more than 20 feet above any faucet or outlet served by the heater or tank.

5. Every relief valve which is designed to discharge water or steam shall be connected to a discharge pipe.

a. The discharge pipe and fittings shall be made of a material acceptable for water distribution piping in accordance with s. SPS 384.30 (4) (e) 1.

b. The discharge pipe and fittings shall have a diameter not less than the diameter of the relief valve outlet.

c. The discharge pipe may not be trapped.

d. No valve may be installed in the discharge pipe.

e. The discharge pipe shall be installed to drain by gravity flow to a floor served by a floor drain or to a receptor in accordance with s. SPS 382.33 (8). The outlet of the discharge pipe shall terminate within 6” over the floor or receptor, but not less than a distance equal to twice the diameter of the outlet pipe. The outlet of the discharge pipe may not be threaded.

f. The discharge pipe for a water heater shall terminate within the same room or enclosure within which the water heater or hot water storage tank is located.

(e) *Controls.* 1. All hot water supply systems shall be equipped with automatic temperature controls capable of adjustments from the lowest to the highest acceptable temperature settings for the intended use.

2. A separate means shall be provided to terminate the energy supplied to each water heater and each hot water circulation system.

(6) **LOAD FACTORS FOR WATER SUPPLY SYSTEMS.** (a) *Intermittent flow fixtures.* The load factor for intermittent flow fixtures on water supply piping shall be computed in terms of water supply fixture units as specified in Tables 382.40-1t and 382.40-2 for the corresponding fixture and use. Water supply fixture units

may be converted to gallons per minute in accordance with Table 382.40-3 or 382.40-3e.

(b) *Continuous flow devices.* The load factor for equipment which demands a continuous flow of water shall be computed on the basis of anticipated flow rate in terms of gallons per minute.

Table 382.40-1a Distribution and Service				
Supply	Tag and Band Color	Tag Shape	Tag Size	Tag Legend^a
Potable	Green	Round	3" diameter	Safe Water
Nonpotable	Yellow	Triangle	4" sides	Nonpotable Water or Not Safe for Drinking
Reuse (Nonpotable)	Purple	Triangle	4" sides	Nonpotable Water or Not Safe for Drinking or Specific Use ^b
Device Specific ^c	Gray	Triangle	4" sides	Specific Use ^b

^a All nonpotable water outlets shall be identified at the point of use for each outlet with the following legends or as otherwise approved by the department.

^b Tag should reflect the intended use.

^c Serving an individual or similar plumbing fixtures or appliances.

**Table 382.40-1b
Water Supply Fixture Units for Nonpublic Use Fixtures**

Type of Fixture^a	Water Supply Fixture Units (wsfu)		
	Hot	Cold	Total
Automatic Clothes Washer	1.0	1.0	1.5
Bar Sink	0.5	0.5	1.0
Bathtub, with or without Shower Head	1.5	1.5	2.0
Bidet	1.0	1.0	1.5
Dishwashing Machine	1.0		1.0
Glass Filler		0.5	0.5
Hose Bibb:			
¹ / ₂ " diameter		3.0	3.0
³ / ₄ " diameter		4.0	4.0
Kitchen Sink	1.0	1.0	1.5
Laundry Tray, 1 or 2 Compartment	1.0	1.0	1.5
Lavatory	0.5	0.5	1.0
Manufactured Home	--	15	15
Shower, Per Head	1.0	1.0	1.5
Water Closet, Flushometer Type		6.0	6.0
Water Closet, Gravity Type Flush Tank		2.0	2.0
Bathroom Groups:			
Bathtub, Lavatory and Water Closet-FM ^b	2.0	7.5	8.0
Bathtub, Lavatory and Water Closet-FT ^c	2.0	3.5	4.0
Shower Stall, Lavatory and Water Closet-FM	1.5	7.0	7.5
Shower Stall, Lavatory and Water Closet-FT	1.5	3.0	3.5

^a For fixtures not listed, factors may be assumed by comparing the fixture to a listed fixture which uses water in similar quantities and at similar rates.

^b FM means flushometer type.

^c FT means flush tank type.

Table 382.40-1d

Piping Volume and Maximum Piping Length

Nominal Pipe Size (in inches)	Volume (liquid ounces per foot length)	Maximum Pipe Length (in feet)	
		Public lavatory faucets	Other fixtures and appliances
1/4	0.33	24	25
5/16	0.5	16	25
3/8	0.75	12.5	25
1/2	1.5	6	25
5/8	2	4	25
3/4	3	2	25
7/8	4	0.5	25
1	5	0.5	25
1 ¼	8	0.5	25
1 ½	11	0.5	25
2 or larger	18	0.5	25

Table 382.40-1h

Ounces of Water per Foot of Tube

Nominal Size (inches)	Copper Type M	Copper Type L	Copper Type K	CPVC CTS SDR 11	CPVC SCH 40	CPVC SCH 80	PE-RT SDR 9	Composite ASTM F1281	PEX CTS SDR 9
3/8	1.06	0.97	0.84	N/A	1.17	—	0.64	0.63	0.64
1/2	1.69	1.55	1.45	1.25	1.89	1.46	1.18	1.31	1.18
3/4	3.43	3.22	2.90	2.67	3.38	2.74	2.35	3.39	2.35

(c) *Water heating sizing alternate approval.* The load factor for an individual water heater serving an individual residence, apartment, living unit of a hotel or motel, and similar places where plumbing fixtures are intended for use by an individual or family, to the exclusion of all others, may be calculated as follows:

1. The minimum flow rate of a water heater may be obtained by multiplying the hot water demand calculated in accordance with Table 382.40-1b by a factor of 0.65.

2. The flow rate for a storage tank type water heater may be calculated based on a 70% usable storage plus the recovery rate and a 10 minimum draw time.

3. The flow rate for tankless type water heaters shall be based on a temperature increase that will provide 110°F at the most remote terminus.

4. This alternate sizing method may not be applied to any of the following:

a. Water heaters serving high flow fixtures, hose bibs, hydrants or fixtures requiring 1/2 inch supply piping. High flow fixtures are fixtures with flow rates greater than 4 gpm at 80 psig and a water velocity less than or equal to 8 feet per second.

b. Sizing hot water distribution piping.

Note: See appendix for further explanatory information and examples.

Table 382.40-2
Water Supply Fixture Units for Public Use
Fixtures

Type of Fixture ^a	Water Supply Fixture Units (wsfu)		
	Hot	Cold	Total
Automatic Clothes Washer, Individual Commercial Type	2.0	2.0	3.0
Automatic Clothes Washer, Large Capacity Commercial Type	b	b	b
Automatic Clothes Washer, Individual Residential Type	1.0	1.0	1.5
Autopsy Table	2.0	2.0	3.0
Bathtub, With or Without Shower Head	2.0	2.0	3.0
Coffemaker		0.5	0.5
Dishwasher, Commercial	b	b	b
Drink Dispenser		0.5	0.5
Drinking Fountain		0.25	0.25
Glass Filler		0.5	0.5
Health Care Fixtures:			
Clinic sink	2.0	7.0	7.0
Exam/treatment sink	0.5	0.5	1.0
Sitz bath	1.5	1.5	2.0
Surgeon washup	1.5	1.5	2.0
Hose Bibb:			
1/2" diameter		3.0	3.0
3/4" diameter		4.0	4.0

Table 382.40-2
Water Supply Fixture Units for Public Use
Fixtures (Continued)

Type of Fixture ^a	Water Supply Fixture Units (wsfu)		
	Hot	Cold	Total
Icemaker		0.5	0.5
Lavatory	0.5	0.5	1.0
Shower, Per Head	2.0	2.0	3.0
Sinks:			
Bar and Fountain	1.5	1.5	2.0
Barber and Shampoo	1.5	1.5	2.0
Cup		0.5	0.5
Flushing Rim		7.0	7.0
Kitchen and Food Preparation per faucet	2.0	2.0	3.0
Laboratory	1.0	1.0	1.5
Service sink	2.0	2.0	3.0
Urinal:			
Syphon Jet		4.0	4.0
Washdown		2.0	2.0
Wall Hydrant, Hot and Cold Mix:			
$\frac{1}{2}$ " diameter	2.0	2.0	3.0
$\frac{3}{4}$ " diameter	3.0	3.0	4.0
Wash Fountain:			
Semicircular	1.5	1.5	2.0
Circular	2.0	2.0	3.0
Water Closet:			
Flushometer		6.5	6.5
Gravity Type Flush Tank		3.0	3.0

^a For fixtures not listed, factors may be assumed by comparing the fixture to a listed fixture which uses water in similar quantities and at similar rates.

^b Load factors in gallons per minute, gpm, based on manufacturer's requirements.

Table 382.40-3
Conversion of Water Supply Fixture Units
to Gallons Per Minute

Water Supply Fixture Units	Gallons per Minute	
	Predominately Flushometer Type Water Closets or Syphon Jet Urinals	Predominately Flush Tank Type Water Closets or Washdown Urinals
1	—	1
2	—	2
3	—	3
4	10	4
5	15	4.5
6	18	5
7	21	6
8	24	6.5
9	26	7
10	27	8
20	35	14
30	40	20
40	46	24
50	51	28
60	54	32
70	58	35
80	62	38
90	65	41
100	68	42
120	73	48
140	78	53
160	83	57
180	87	61
200	92	65
250	101	75

Table 382.40-3
Conversion of Water Supply Fixture Units
to Gallons Per Minute (Continued)

Water Supply Fixture Units	Gallons per Minute	
	Predominately Flushometer Type Water Closets or Syphon Jet Urinals	Predominately Flush Tank Type Water Closets or Washdown Urinals
300	110	85
400	126	105
500	142	125
600	157	143
700	170	161
800	183	178
900	197	195
1000	208	208
1250	240	240
1500	267	267
1750	294	294
2000	321	321
2250	348	348
2500	375	375
2750	402	402
3000	432	432
4000	525	525
5000	593	593

Note: Values not specified in the table may be calculated by interpolation.

Table 382.40-3e
Conversion of Water Supply Fixture Units to Gallons
Per Minute for Water Treatment Devices^a Serving
an Individual Dwelling^b

Water Supply Fixture Units (WSFUs)	Gallons Per Minute (GPM)
1	1
2	2
3	3
4	4
5	4.5
6	5
7	6
8	6.5
25	7
35	8
40	9

^a Treatment devices providing treatment for compliance with Table 382.70-1 shall use Table 382.40-3 for conversion.

^b Table shall not be used for converting hose bibb, high flow fixture or hydrant wsfu.

(7) SIZING OF WATER SUPPLY PIPING. The sizing of the water supply system shall be based on the empirical method and limitations outlined in this subsection, an approved alternate standard per s. **SPS 381.20 (2)**, or an analysis provided by a Wisconsin registered architect, registered professional engineer or permitted designer of engineering systems – plumbing.

Note: See appendix for details for alternative methods for sizing of the water supply piping of one- and 2-family and apartment buildings.

(a) *Methodology.* The determination of minimum pipe sizes shall take into account the pressure losses which occur throughout the entire water supply system and the flow velocities within the water distribution system. Calculations for sizing a water distribution system shall include:

1. The load factor in water supply fixture units or gallons per minute on the piping;
2. The minimum pressure available from the water main or pressure tank;

3. The pressure loss due to the differences in elevation from the:

a. Water main or pressure tank to the building control valve; and

b. Building control valve to the controlling plumbing fixture;

4. The pressure losses due to flow through water heaters, water treatment devices, water meters and backflow preventers;

5. The minimum flow pressure needed at the controlling plumbing fixture; and

6. The pressure losses due to flow friction through piping, fittings, valves and other plumbing appurtenances. This pressure loss may be calculated in terms of equivalent lengths of piping. The equivalent length of piping to a controlling plumbing fixture, including fittings, valves and other appurtenances, may be obtained by multiplying the developed length by 1.5.

Note: See ch. SPS 382 Appendix for further explanatory material.

(b) *Private water mains and water services.* Private water mains and water services shall be designed to supply water to the water distribution systems to maintain the minimum flow pressures specified in par. (d), but shall not be less than 3/4" in diameter.

Note: See ch. SPS 382 Appendix for further explanatory material.

(c) *Maximum loading.* The calculated load on any portion of the water distribution system may not exceed the limits specified in Tables 382.40-4 to 382.40-9.

(d) *Pressure.* 1. Except as provided in subd. 1. a. to c., water supply systems shall be designed to provide at least 8 psig of flow pressure at the outlets of all fixture supplies.

a. The flow pressure at the outlets of the fixture supplies serving siphonic type urinals, washdown type urinals and washdown type water closets, siphonic type flushometer water closets and campsite water supply hose connections shall be at least 15 psig.

b. The flow pressure at the outlets of the fixture supplies serving one piece tank type water closets, pressure balance mixing valves, manufactured homes, and thermostatic mixing valves shall be at least 20 psig.

c. The flow pressure at the outlets of the fixture supplies serving blowout type urinals and blowout type water closets shall be at least 25 psig.

d. The flow pressure at the outlets of the fixture supplies serving any other fixture shall be the minimum pressure required by the manufacturer for the fixture, appliance, or equipment to operate.

2. a. Except as provided in subd. 3., if the water pressure available from a water main or private water supply exceeds 80 psig, a pressure reducing valve and strainer, if a strainer is not a component of the valve, shall be installed in the water distribution system.

b. A pressure reducing valve required under subd. 2. a. shall be installed upstream from all plumbing fixtures and plumbing appliances and downstream from the water meter of an utility, if a meter is provided.

3. A pressure reducing valve shall not be required to be installed in a water distribution system which supplies water directly to a water pressure booster pump.

4. If the pressure or water supply volume available from the water main or private water supply is inadequate by calculation to provide the minimum pressures specified in subd. 1., a hydropneumatic pressure booster system or a water pressure booster pump shall be installed to increase the supply of water.

a. Each water pressure booster pump shall be provided with an automatic low pressure cut-off switch. The cut-off switch

shall be located on the inlet side of the pump and shall be set to terminate the energy supplied to the pump when a positive pressure of less than 10 psig occurs. Pressure gauges shall be installed on the influent and effluent piping.

b. A vacuum relief valve not less than one-half inch in diameter shall be installed in each water pressure tank, if the bottom of the pressure tank is more than 20 feet above any water supply outlet served by the pressure tank.

(e) *Maximum velocity.* A water distribution system shall be designed so that the flow velocity does not exceed 8 feet per second except for combination sprinkler distribution piping as designed in sub. (3) (e).

(f) *Minimum sizes.* 1. Water distribution piping 1/2" in diameter serving 2 or more plumbing fixtures may not have a load of more than 2 water supply fixture units.

2. Water distribution piping 1/2" in diameter serving a shower which is not individually pressure balanced or individually thermostatically blended may not serve any additional fixtures.

(g) *Minimum sizes for fixture supplies.* Except as provided in subds. 1. to 3., the fixture supplies serving all plumbing fixtures, appliances and pieces of equipment shall be at least 1/2" in diameter.

1. Fixture supplies serving syphon jet type urinals shall be at least 3/4" in diameter.

2. Fixture supplies serving flushometer type water closets shall be at least one inch in diameter.

3. Fixture supplies serving emergency eye wash or shower outlets shall be not less than recommended by the manufacturer.

4. Water distribution piping less than 1/2 inch diameter shall have a minimum 1/4 inch diameter, serve one plumbing fixture, the served fixture shall have a maximum load factor of .5 water supply fixture units, and the developed length shall be 25 feet or less.

(h) *Maximum lengths of fixture supply connectors.* 1. a. Except as provided in subd. 1. b. and c., fixture supply connectors may not exceed more than 24" in developed length upstream from a plumbing fixture or the body of a faucet.

b. A fixture supply connector located downstream of a water cooler, water treatment device or water heater which individually serves a faucet or outlet may not exceed more than 10 feet in developed length.

c. A fixture supply connector located upstream of a water treatment device serving no more than 2 fixtures or outlets may not exceed 10 feet in developed length.

2. Fixture supply connectors may not extend more than 10 feet in developed length upstream of a plumbing appliance.

(8) *INSTALLATION.* (a) *Frost protection.* 1. Adequate measures shall be taken to protect all portions of the water supply system from freezing. All private water mains and water services shall be installed below the predicted depths of frost specified in s. SPS 382.30 (11) (c) 2. d., Figure 382.30-1 and Table 382.30-6, unless other protective measures from freezing are taken.

2. A hose bibb or a hydrant that penetrates an exterior wall of a heated structure shall be a frost proof and self-draining type.

Note: See s. SPS 382.41 (4) (m) relative to cross connection control devices.

(b) *Location.* 1. Exterior water supply piping may not be located in, under or above sanitary sewer manholes, or POWTS treatment, holding or dispersal components.

2. If a private water main or a water service crosses a sanitary sewer, the water piping within 5 feet of the point of crossing shall be installed in accordance with any of the following requirements:

a. The water piping shall be installed at least 12 inches above the top of the sewer.

b. The water piping shall be installed at least 18 inches below the bottom of the sewer.

c. The water or sewer piping shall be installed within a waterproof sleeve made of materials as specified for sanitary building sewers in s. [SPS 384.30 \(2\)](#).

3. Except as permitted in subds. 4 and 5., private water mains and water services shall be installed at least 5 feet horizontally from any sanitary sewer.

Note: The Department of Natural Resources has limitations for the separation of water mains and sanitary sewers.

4. Private water mains and water services may be installed less than 5 feet horizontally from a pressurized sanitary sewer if all of the following conditions are met:

a. The bottom of the water piping is installed at least 18 inches above the pressurized sewer.

b. The water piping is installed at least 3 feet horizontally from the pressurized sewer.

5. Private water mains and water services may be installed less than 5 feet horizontally from a non-pressurized sanitary sewer if any of the following conditions are met:

a. The bottom of the water piping is installed at least 12 inches above the sewer.

b. The sewer is constructed of materials listed in Table 384.30-2.

c. The water service is 2 inches or less in diameter and is located more than 24 inches from the sewer.

6. The portion of a private water main or water service within 5 feet of developed length from the point where the water service first enters the building may be less than 12 inches above the sewer and within 24 inches of the sewer.

7. No private water main or water service may be installed within 6 inches of a storm sewer.

Note: See ch. [SPS 382 Appendix A-382.30 \(11\) \(d\)](#) for setback distance from yard hydrant to well.

Note: See ch. [SPS 383 Table 383.43-1](#) for setback distances to POWTS components.

9. No underground water supply storage tank shall be installed within 8 feet of a storage vessel containing a substance of a higher hazard than that contained in the water supply storage tank.

10. Private water mains shall be provided with provisions for flushing of the system at a minimum of 10 feet per second until clear.

Note: See ch. [SPS 382 appendix](#) for further explanatory information.

(c) *Limitations.* No private water main or water service may pass through or under a building to serve another building unless one of the following conditions are met:

1. The private water main or water service serves farm buildings or farm houses, or both that are all located on one property.

2. The private water main or water service serves buildings that are located on the same property and a document which indicates that the piping and distribution arrangement for the property and buildings will be recorded with the register of deeds no later than 90 days after installation.

(d) *Water distribution piping.* 1. Water distribution piping shall be supported in accordance with s. [SPS 382.60](#).

2. Provisions shall be made to evacuate all water out of the water distribution system.

3. a. Except where parallel water meters are installed, water distribution piping shall be provided to bypass a water meter 1½" or larger.

b. The minimum diameter of water distribution piping serving as a meter bypass shall be one nominal pipe size smaller than the meter. Water distribution piping serving as a meter bypass shall be of the same material and shall be equal to or one nominal pipe size smaller than the water distribution piping immediately downstream of the meter.

4. Except as provided in subds. 5. and 6., a bypass shall be provided to serve a water treatment device. The bypass piping may be an internal part of the water treatment device.

5. A bypass shall not be required when a water treatment device serves no more than 2 fixtures or outlets.

6. A bypass shall be prohibited for a water treatment device installed to reduce a contaminant in order to comply with the provisions in s. [SPS 382.70 \(3\)](#).

7. When water distribution piping larger than the code minimum is used the system shall be designed to allow effective flushing of the system at 8 feet per second.

8. Hygienic sampling valves shall be installed within 6 feet, upstream and downstream, of a chemical injection system or water treatment device installed to mitigate a contaminant regulated under ch. [NR 809](#) or [NR 140](#).

Note: For information on sample valve requirements see s. [NR 812.34 \(2\)](#).

9. A water treatment device that consists of 2 or more treatment tanks shall also have a hygienic sampling valve between each treatment tank.

10. Any portion of the water distribution system terminating by means of a plug, cap, or closed fitting and dry downstream with no outlet may not exceed 6 pipe diameters.

(e) *Valves.* 1. All control valves installed in a water service, except a valve serving only as a corporation cock, shall be accessible.

2. Stop- and waste-type control valves may not be installed underground except in the following situations:

a. Fire hydrants intended for fire fighting.

b. Two-inch and larger diameter hydrants serving municipal wastewater treatment plants.

c. Emergency fixtures.

3. All control valves and fixture stop valves installed in a water distribution system shall be accessible. Control valves for the individual plumbing fixtures and appliances within dwelling units shall be accessible from within the dwelling unit.

Note: The installation of two water services or a private water main may require the installation of a check valve. Refer to ch. [NR 811](#) for more information.

(f) *Water hammer arrestors.* All plumbing fixtures, appliances and appurtenances with 3/8" or larger inlet openings and with solenoid actuated quick closing valves shall be provided with water hammer arrestors. Water hammer arrestors shall be installed in the fixture supplies serving the fixtures, appliances or appurtenances. Water hammer arrestors shall be accessible.

(g) *Temperature control.* The water temperature to all show-ers in public buildings shall be controlled by thermostatic or combination thermostatic-pressure balanced mixing valves or by individually controlled pressure balanced mixing valves. A thermostatic or combination thermostatic-pressure balanced mixing valve may not be bypassed.

(h) *Fittings and connections.* The drilling and tapping of water supply piping shall be prohibited except for:

1. Corporation cocks for a water service or a private water main; and

2. Self-tapping valves which serve individual plumbing appliances.

(i) *Flushing and disinfection of potable water supply systems.*

1. a. Before a newly constructed water supply system is to be put

into use, the piping of the system shall be flushed with water and disinfected. Each water outlet shall be flushed beginning with the outlet closest to the building control valve and then each successive outlet in the system. The flushing at each water outlet shall continue for at least 1 minute and until the water appears clear and with no trace of disinfectant at the outlet.

b. Each portion of a water supply system which is altered or repaired shall be flushed for at least one minute and until the water appears clear.

2. New private water mains and extensions to private water mains shall be disinfected prior to use in accordance with AWWA C651 or the following method:

a. The pipe system shall be flushed with clean water until no dirty water appears at the points of outlet.

b. The system or part thereof shall be filled with a solution of water and chlorine containing at least 50 parts per million of chlorine and the system or part thereof shall be valved off and allowed to stand for 24 hours or the system or part thereof shall be filled with a solution of water and chlorine containing at least 200 parts per million of chlorine and allowed to stand for 3 hours.

c. Following the allowed standing time, the system shall be flushed with clean potable water.

d. The procedures shall be repeated if it is shown by a bacteriological examination that contamination still exists in the system.

3. The department may require a water quality analysis to be done for a new or repaired water supply system. The analysis shall be performed in accordance with acceptable nationally recognized laboratory practices. If the water supply system has been disinfected, water samples for the analysis may not be taken sooner than 24 hours after disinfection.

Note: See s. [SPS 384.30 \(1\)](#) regarding the bending of pipe and protection from puncture.

4. New or repaired combination water services or combination private water mains shall be flushed and disinfected prior to use in accordance with NFPA 24.

(j) *Water softeners.* Ion exchange water softeners used primarily for water hardness reduction that, during regeneration, discharge a brine solution shall be of a demand initiated regeneration type equipped with a water meter or a sensor unless a wastewater treatment system downstream of the water softener specifically documents the reduction of chlorides.

(jm) *Water tanks.* Water tanks for public, potable use shall meet all of the following criteria:

1. 'Pneumatic pressure tanks.' Pneumatic pressure tanks shall conform to all of the following:

- a. Tanks shall conform to ch. [SPS 384](#).
- b. Tanks shall be served by a pressure relief valve.
- c. Tanks shall be able to be isolated for maintenance, repair, or replacement and equipped with a drain valve by means of a control valve.

d. Water calculations incorporating the size of a pneumatic pressure tank may use a 5-minute peak flow in gallons per minute for the water supply system. The system shall be designed to minimize stagnation.

e. Tanks shall be stamped or labeled showing the manufacturer's name, model number, the tank volume, year manufactured, and the allowable working pressure.

2. 'Storage tanks.' a. Storage tanks shall conform to ch. [SPS 384](#).

b. All water storage tanks and structures shall be watertight and exclude water, rain, snow, birds, animals, insects, and dust.

c. Exterior translucent tanks shall be shielded from direct sunlight.

3. 'Separation.' Potable water may not be stored in a tank or compartment adjacent to non-potable water when the two compartments are separated by a single wall.

4. 'Locks.' Locks shall be provided on access manholes, inspection covers, fill pipe, fences, ladder cage bottoms, and any other locations deemed necessary to prevent trespassing, vandalism, and sabotage.

5. 'Drain piping.' Piping used to drain a storage tank or structure shall discharge to the ground surface through an air gap. The drain may discharge over a drainage inlet receptor, splash pad, or rip rap.

6. 'Overflow.' a. Tanks or reservoirs shall be provided with overflow piping. The pipe shall open downward between 6 and 12 inches over a drainage inlet, splash pad, or rip rap. Interior tanks within the building structure shall provide overflow piping discharging to an approved clearwater receptor or as approved by the department.

b. The overflow outlet pipe shall be provided with a 4-mesh non-corrodible screen.

c. The overflow outlet pipe shall be of approved material in accordance with Table 384.30-8.

d. The overflow outlet pipe shall be sized to permit discharge flow in excess of the maximum fill rate of the inlet pipe flow.

e. Overflow piping shall be visible at the discharge location.

f. For storage tanks or reservoirs with more than one compartment and where each compartment can be isolated from the other compartments each compartment shall be provided with its own overflow pipe.

7. 'Inlet and outlet piping.' a. Inlet and outlet piping from a tank or storage structure shall be sized in accordance with s. [SPS 382.40 \(7\)](#).

b. Piping shall be of approved material in accordance with Table 384.30-8 for locations within the building, above floor, Table 384.30-7 for locations below grade and outside of the building foundation parameters.

8. 'Access.' a. Water tanks or structures shall have convenient access for cleaning and maintenance.

b. Manhole openings shall be fitted with a solid watertight cover which overlaps the framed opening and extends down around the opening frame a minimum of 2 inches. A watertight gasket shall be attached to the bottom side of the manhole cover.

c. Manhole covers for buried tanks or structures shall be no less than 24 inches above a sloped finished grade.

d. Inspection covers shall be watertight and locked securely to prevent unauthorized access.

e. Interior paints or coatings shall conform to NSF/ANSI Standard 61.

9. 'Bypass piping.' Bypass piping shall be provided allowing the tank or reservoir to be taken out of service for maintenance and inspection purposes when directly connected to a well or municipal water supply.

10. 'Vents.' a. Storage tanks shall be vented to the atmosphere. The overflow pipe may not be considered a vent.

b. Vents shall be constructed of water distribution materials as per Table 384.30-8, or as approved by the department.

c. Vents shall terminate above the top of the tank in a U-bend or vent cap with the opening 24 to 36 inches above grade and covered with a 24-mesh stainless steel screen at a location that is secured.

d. Minimum vent size shall allow an air flow consistent with water inflow and outflow rates and shall be not less than 2 inches.

11. 'Location.' a. Exterior tanks may not be located within a flood plain or floodway or within 2 feet above the regional flood elevation.

b. The area surrounding a storage tank shall be graded to prevent standing surface water within 50 feet of the tank.

c. Storage tanks shall be located in an area that is accessible year-round.

d. Tanks shall be separated from potential contamination sources by the applicable separation distances contained in chs. NR 811 and 812 or as otherwise approved by the department of natural resources or as approved by the department.

Note: See ch. SPS 382 Appendix for further explanatory material. Section NR 812.08 may require additional setbacks.

e. The top roof of an exterior tank may not be less than 2 feet above grade level.

12. 'Controls.' a. Atmospheric pressure tanks shall have a means for maintaining pressure within the building water distribution system. A hydro-pneumatic tank, pump facilities, or other reliable methods shall be provided to maintain system pressure.

b. Manual valves shall be installed in the water distribution system to isolate tank and pump equipment from the water distribution system.

c. Valves designated for operation of the storage tank shall be visibly recognized as being open or closed. Solenoid valves shall have a control system panel that will have indicators showing visual valve open or closed status.

d. Drain valves shall be provided to allow access to the storage tank for maintenance purposes.

e. A high water fill valve or float valve shall maintain the storage tank levels to the minimum water storage required for use. A bypass to the fill valve shall be provided.

f. Tank water levels shall be observable by means of a sight level indicator.

g. A pressure gauge shall be installed downstream of the storage tank and booster pumps.

h. A thermometer or sensor shall be installed on the storage tank for water temperature monitoring purposes.

13. 'Water supply.' a. The influent water supply to the storage tank shall be from an approved source and controlled to maintain the minimum and maximum water levels.

b. The influent water supply shall terminate a minimum of 6 inches above the highwater level.

c. The influent water supply piping shall be provided with a control valve.

14. 'Pumps.' Pumps shall be installed according to the manufacturer specifications and s. SPS382.40 (7) (d) 4. Pump piping shall have required check valves, pressure gauge, isolation valves, and sampling faucet installed on the system.

15. 'Disinfection.' Continuous water treatment is required for all storage tanks through a constant water flow through the potable water storage tank. All of the water tank volume shall be turned over every 24 hours.

16. 'Labeling.' All piping and control valves serving the storage tank water system shall be labeled in accordance with Table 382.40-1a for specific use.

17. 'Storage tank inspections.' a. The interior and exterior of water storage facilities shall be regularly inspected and maintained in accordance with s. NR 810.14.

b. Inspections of storage facilities 10,000 gallons or greater shall be by a professional tank inspection firm or by a registered professional engineer.

c. Maintenance shall include removal of sedimentation and biofilm and repairs as necessary to maintain good working condition.

d. All storage facilities shall be inspected at least once every 5 years, unless otherwise approved by the department.

e. Inspections of vent and overflow screens and hatches shall be conducted at least once per year.

18. 'Records.' a. Records shall be kept of dates of cleaning, relining, and replacement of components or parts.

b. Department representatives shall be provided access to the water storage system records upon request.

(k) *Locating requirements.* 1. A means to locate buried non-metallic water services and private water mains connected to municipal supply systems shall be provided in accordance with the options under s. SPS 382.30 (11) (h), except as provided in subds. 2. and 3.

2. Tracer wire insulation color for non-metallic, potable water pipe shall be blue.

3. Tracer wire insulation color for non-metallic, non-potable water pipe shall be purple.

History: 1-2-56; r. and recr. Register, November, 1972, No. 203, eff. 12-1-72; r. and recr. Register, February, 1979, No. 278, eff. 3-1-79; renun. from H 62.13, Register, July, 1983, No. 331, eff. 8-1-83; renun. from ILHR 82.13 and r. and recr. (2) (b) and (4) (d) 1., am. (4) (c) 3. and (6) (a) (intro.), cr. (6) (b), Register, February, 1985, No. 350, eff. 3-1-85; r. and recr. Register, May, 1988, No. 389, eff. 6-1-88; am. (5) (d) 5. a., r. and recr. (7) (h) 1. and (8) (c), renun. (8) (c) 2. to 6. to be (8) (b) 4. to 8. and am. (8) (b) 4. c., Register, August, 1991, No. 428, eff. 9-1-91; am. (8) (b) 1. and 2., Register, April, 1992, No. 436, eff. 5-1-92; renun. (3) (c) and (8) (a) to be (3) (c) 2. and (8) (a) 1. and am. (8) (a) 1., cr. (3) (c) 1., (e), (8) 2. and Table 82.40-9, am. (7) (c), r. (3) (b) 1. b. and c., Register, February, 1994, No. 458, eff. 3-1-94; r. (5) (b) 3., renun. (5) (b) 4., 5. to be (5) (b) 3., 4., Register, December, 1996, No. 480, eff. 4-1-96; correction in (5) (b) 3., made under s. 13.93 (2m) (b) 7., Stats., Register, October, 1996, No. 490; r. and recr. (5) (b), Register, February, 1997, No. 494, eff. 4-1-97; reprinted to restore dropped copy, Register, April, 1997, No. 496; am. (3) (e) and (8) (b) 1. and 2., r. (8) (b) 3. and cr. (3) (f) and (8) (j), Register, April, 2000, No. 532, eff. 7-1-00; except (3) (f) eff. 5-1-00; cr. (3) (d) 3., am. (8) (g) and (i) 2., Register, December, 2000, No. 540, eff. 1-1-01; except (3) (d) 3., eff. 9-1-01; CR 02-002: r. and recr. (3) (a), (d) 1. (intro.) to b., (7) (h), (8) (c) and Tables 82.40-4 to 11, cr. (3) (2), (c) 3. and (d) 1. h., am. (3) (b) 1., (4) (c) 1. b. and 2. b., (7) (d) 1. a. and b., (8) (d) 4., (g), and Tables 82.40-1 and 2, r. (3) (e), renun. (3) (f) and (8) (b) 4. to 8. to be (3) (e) and (8) (b) 3. to 7., Register April 2003 No. 568, eff. 5-1-03; CR 02-129: am. (4) (c) 1. b. Register January 2004 No. 577, eff. 2-1-04, correction in (8) (b) 5. made under s. 13.93 (2m) b. 7., Stats., Register January 2004 No. 577; CR 04-035: r. (3) (e) 2. c., r. and recr. Table 82.40-9, cr. (8) (i) 4. Register November 2004 No. 587, eff. 12-1-04; CR 06-120: r. and recr. (3) (e) 2. b., cr. (3) (e) 2. c. Register February 2008 No. 626, eff. 3-1-08; CR 07-069: cr. (8) (k) Register February 2008 No. 626, eff. 3-1-08; CR 07-100: am. (8) (b) 2. Register September 2008 No. 633, eff. 10-1-08; CR 08-055: am. (3) (b) 1. b., (d) 3. (intro.), (5) (c), (6) (a), (7) (d) 1. b., (8) (b) 2., (j), Tables 82.40-1 and 82.40-2, r. and recr. (3) (e), (8) (e) 2., cr. (8) (b) 8., (d) 3. b. and Table 82.40-3e, renun. (8) (d) 3. to be (8) (d) 3. a. Register February 2009 No. 638, eff. 3-1-09; CR 10-064: am. (3) (a) (title), (c) 1., (5) (a), (6) (a), (8) (b) 3. to 6., Table 82.40-8 (title) and Table 82.40-10 (title), r. and recr. (3) (d) 1., renun. (3) (d) 2., 3. and Table 82.40-1 to be (3) (d) 3., 4. and Table 82.40-1b, cr. (3) (d) 2., (8) (b) 9., Table 82.40-1a, r. (9) Register December 2010 No. 660, eff. 1-1-11; CR 10-103: r. (3) (e) 2. b. to 2. d., renun. (3) (e) 2. a. to (3) (e) 2., Register August 2011 No. 668, eff. 9-1-11; correction in (2), (3) (a) 1., 2., (c) 2., 3. a., (d) 1. a., b., e., g., 2., 4. b., (5) (b) 4., (c), (d) 5. a., e., (6) (a), (7) (c), (8) (a) 1., (b) 3. c., 5. b., (d) 1., 6., (k) 1., Table 382.40-3e made under s. 13.92 (4) (b) 6., 7., Stats., Register December 2011 No. 672; CR 11-031: r. (8) (b) 2., 8., renun. (8) (b) 3., 4. to (8) (b) 2., 3., am. (8) (b) 3., cr. (8) (b) 4., am. (8) (b) 5. (intro.), 7. Register June 2013 No. 690, eff. 7-1-13; CR 13-046: am. (6) (a) Register December 2013 No. 696, eff. 1-1-14; CR 23-006: am. (3) (b) (intro.), cr. (3) (c) 4., am. (3) (d) 4., renun. (3) (e) 1. to (3) (e) 1. (intro.) and am., cr. (3) (e) 1. a., b., 3. to 5., am. (5) (a), cr. (5) (am), am. (5) (b) (intro.), cr. (5) (b) 6., 7., (bm), am. (6) (a), cr. Table 382.40-1d, 382.40-1h, (6) (c), am. Table 382.40-2, am. (7) (intro.), cr. (7) (d) 1. d., am. (7) (d) 4. (intro.), a., (e), cr. (7) (g) 4., (8) (b) 10., r. and recr. (8) (d) 3. b., cr. (8) (d) 7. to 10., am. (8) (i) 1. a., cr. (8) (jm), am. Tables 382.40-8 (title), 382.40-9 (title), cr. Tables 382.40-12 to 382.40-15 Register September 2023 No. 813, eff. 10-1-23; correction in (3) (b) (intro.), (3) (e), (5) (am) 2., (bm), (8) (d) 8., (i) 1. a. made under s. 35.17, Stats., Register September 2023 No. 813.

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Table 382.40-4
MAXIMUM ALLOWABLE LOAD FOR COPPER TUBING-TYPE K, ASTM B88; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in inches)																										
	1/2"			3/4"			1"			1 1/4"			1 1/2"			2"			2 1/2"			3"			4"		
	WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			WSFU		
	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT
0.5	0.5	-	0.5	1.5	-	1.5	3.5	-	3.5	6.5	-	8.0	10.5	4.0	14.0	22.0	7.0	35.0	39.0	28.0	83.0	62.0	80.0	185	132	437	538
1	1.0	-	1.0	2.5	-	2.5	5.0	-	6.0	9.5	-	12.5	15.5	5.0	22.5	32.0	16.0	60.0	57.0	67.0	160	91.0	196	330	192	864	882
2	1.0	-	1.0	3.5	-	3.5	7.5	-	9.5	14.0	4.5	20.0	22.0	7.0	35.0	47.0	42.0	116	83.0	160	290	132	437	538	279	1611	1611
3	1.5	-	1.5	4.5	-	5.0	9.5	-	12.5	17.5	5.5	25.5	28.0	11.0	50.0	58.0	70.0	165	103	261	390	165	661	723	291	1725	1725
4	2.0	-	2.0	5.0	-	6.0	11.5	4.0	15.5	20.5	6.5	31.0	32.0	16.0	60.0	68.0	100	215	116	338	455	165	665	726	NP		
5	2.0	-	2.0	6.0	-	7.0	13.0	4.5	18.0	23.0	7.5	37.0	36.0	22.0	73.0	75.0	128	250	NP			NP					
6	2.5	-	2.5	6.5	-	8.0	14.0	4.5	20.0	25.0	8.5	42.0	40.0	30.0	86.0	NP											
7	2.5	-	2.5	7.0	-	9.0	15.5	5.0	22.5	28.0	11.0	50.0	42.0	34.0	103												
8	3.0	-	3.0	7.5	-	9.5	16.5	5.5	24.0	30.0	13.5	55.0	NP														
9	3.0	-	3.0	8.0	-	10.0	17.5	5.5	25.5	NP																	
10	3.5	-	3.5	8.5	-	10.5	18.5	6.0	27.5																		
11	3.5	-	3.5	9.0	-	11.5	19.0	6.0	28.5																		
12	3.5	-	3.5	9.5	-	12.5	NP																				
13	4.0	-	4.0	10.0	4.0	13.0																					
14	4.0	-	4.0	10.5	4.0	14.0																					
15	4.0	-	4.0	10.5	4.0	14.5																					
16	4.5	-	5.0	NP																							
17	4.5	-	5.0																								
18	4.5	-	5.0																								
19	5.0	-	6.0																								
NP																											

Note:WSFU means water supply fixture units.

GPM means gallons per minute.

FM means predominately flushometer type water closets or syphon jet urinals.

FT means predominately flush tank type water closets or wash down urinals.

NP means not permitted, velocities exceed 8 feet per second.

For using this table, round the calculated pressure loss due to friction to the next higher number shown.

SPS 382.40 (7) (f) and (g) specifies minimum sizes for water distribution piping.

Table 382.40-5
MAXIMUM ALLOWABLE LOAD FOR COPPER TUBING-TYPE L, ASTM B88; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in inches)																										
	1/2"			3/4"			1"			1 1/4"			1 1/2"			2"			2 1/2"			3"			4"		
	WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			WSFU		
	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT
0.5	0.5	-	0.5	2.0	-	2.0	4.0	-	4.0	7.0	-	9.0	11.0	4.0	15.0	23.0	7.5	37.0	40.0	30.0	86.0	65.0	90.0	200	136	462	561
1	1.0	-	1.0	2.5	-	2.5	5.5	-	6.5	10.0	4.0	13.0	16.0	5.0	23.0	33.0	17.5	63.0	59.0	72.0	170	94.0	211	345	198	909	923
2	1.5	-	1.5	4.0	-	4.0	8.5	-	10.5	14.5	4.5	20.5	23.0	7.5	37.0	48.0	44.0	120	86.0	175	305	137	468	566	288	1694	1694
3	2.0	-	2.0	5.0	-	6.0	10.5	4.0	14.0	18.5	6.0	27.5	29.0	12.5	52.0	60.0	75.0	175	107	283	410	169	698	752	298	1792	1792
4	2.0	-	2.0	6.0	-	7.0	12.0	4.0	16.5	21.5	7.0	33.0	34.0	18.5	66.0	70.0	108	225	119	356	469	NP			NP		
5	2.5	-	2.5	6.5	-	8.0	14.0	4.5	20.0	24.0	8.0	40.0	38.0	26.0	80.0	77.0	136	260	NP								
6	2.5	-	2.5	7.5	-	9.5	15.5	5.0	22.5	26.0	9.0	45.0	42.0	33.0	100	NP											
7	3.0	-	3.0	8.0	-	10.0	16.5	5.5	24.0	29.0	12.5	52.0	44.0	37.0	107												
8	3.0	-	3.0	8.5	-	10.5	18.0	6.0	26.5	31.0	15.0	58.0	NP														
9	3.5	-	3.5	9.5	-	12.5	19.0	6.0	28.0	NP																	
10	3.5	-	3.5	10.0	4.0	13.0	20.0	6.5	30.0																		
11	4.0	-	4.0	10.5	4.0	14.0	20.5	6.5	31.0																		
12	4.0	-	4.0	11.0	4.0	15.0	NP																				
13	4.0	-	4.0	11.5	4.0	15.5																					
14	4.5	-	5.0	12.0	4.0	16.5																					
15	4.5	-	5.0	NP																							
16	5.0	-	6.0																								
17	5.0	-	6.0																								
18	5.0	-	6.0																								
19	5.0	-	6.0																								
20	5.5	-	6.5																								
	NP																										
Note:WSFU means water supply fixture units. GPM means gallons per minute. FM means predominately flushometer type water closets or syphon jet urinals. FT means predominately flush tank type water closets or wash down urinals. NP means not permitted, velocities exceed 8 feet per second. For using this table, round the calculated pressure loss due to friction to the next higher number shown. SPS 382.40 (7) (f) and (g) specifies minimum sizes for water distribution piping.																											

Table 382.40-6
MAXIMUM ALLOWABLE LOAD FOR COPPER TUBING-TYPE M, ASTM B88; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in inches)																											
	1/2"			3/4"			1"			1 1/4"			1 1/2"			2"			2 1/2"			3"			4"			
	WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			
	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	
0.5	0.5	-	0.5	2.0	-	2.0	4.0	-	4.0	7.0	-	9.0	11.5	4.0	15.5	23.0	7.5	37.0	42.0	33.0	100	67.0	96.0	210	139	481	577	
1	1.0	-	1.0	3.0	-	3.0	6.0	-	7.0	10.5	4.0	14.0	16.5	5.5	24.0	34.0	18.5	66.0	61.0	77.0	180	97.0	227	360	202	945	953	
2	1.5	-	1.5	4.5	-	5.0	9.0	-	11.5	15.5	5.0	22.5	24.0	8.0	40.0	50.0	48.0	128	88.0	184	315	141	493	588	294	1750	1750	
3	2.0	-	2.0	5.5	-	6.5	11.5	4.0	15.5	19.5	6.5	29.0	30.0	13.5	55.0	62.0	80.0	185	110	300	425	174	731	776	303	1835	1835	
4	2.5	-	2.5	6.5	-	8.0	13.0	4.5	18.0	22.0	7.0	35.0	35.0	20.0	70.0	73.0	120	240	121	374	484	NP			NP			
5	2.5	-	2.5	7.5	-	9.5	15.0	5.0	21.5	25.0	8.5	42.0	40.0	30.0	86.0	79.0	144	270	NP									
6	3.0	-	3.0	8.0	-	10.0	16.5	5.5	24.0	28.0	11.0	50.0	44.0	36.0	106	NP												
7	3.5	-	3.5	9.0	-	11.5	18.0	6.0	26.5	30.0	13.5	55.0	45.0	39.0	112													
8	3.5	-	3.5	9.5	-	12.5	19.5	6.5	29.0	32.0	17.0	62.0	NP															
9	4.0	-	4.0	10.0	4.0	13.0	20.5	6.5	31.0	NP																		
10	4.0	-	4.0	11.0	4.0	15.0	21.5	7.0	34.0																			
11	4.5	-	5.0	11.5	4.0	15.5	NP																					
12	4.5	-	5.0	12.0	4.0	16.5																						
13	5.0	-	6.0	12.5	4.5	17.5																						
14	5.0	-	6.0	12.5	4.5	18.0																						
15	5.0	-	6.0	NP																								
16	5.5	-	6.5																									
17	5.5	-	6.5																									
18	5.5	-	6.5																									
19	6.0	-	7.0																									
20	6.0	-	7.0																									
21	6.0	-	7.5																									
	NP																											

Note:WSFU means water supply fixture units.

GPM means gallons per minute.

FM means predominately flushometer type water closets or syphon jet urinals.

FT means predominately flush tank type water closets or wash down urinals.

NP means not permitted, velocities exceed 8 feet per second.

For using this table, round the calculated pressure loss due to friction to the next higher number shown.

SPS 382.40 (7) (f) and (g) specifies minimum sizes for water distribution piping.

Table 382.40-7
MAXIMUM ALLOWABLE LOAD FOR GALVANIZED STEEL PIPE, SCHEDULE 40, ASTM A53; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in inches)																										
	1/2"			3/4"			1"			1 1/4"			1 1/2"			2"			2 1/2"			3"			4"		
	WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			WSFU			WSFU		
	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT
0.5	0.5	-	0.5	1.5	-	1.5	3.5	-	3.5	7.0	-	9.0	11.0	4.0	15.0	21.0	7.0	32.0	34.0	18.5	66.0	60.0	75.0	175	123	381	490
1	1.0	-	1.0	2.5	-	2.5	5.0	-	6.0	10.5	4.0	14.0	16.0	5.0	23.0	31.0	15.0	57.0	49.0	46.0	124	87.0	180	310	179	769	805
2	1.5	-	1.5	4.0	-	4.0	7.5	-	9.5	15.5	5.0	22.5	23.0	7.5	37.0	45.0	38.0	110	72.0	116	235	127	406	511	260	1435	1435
3	2.0	-	2.0	5.0	-	6.0	9.0	-	11.5	19.0	6.0	28.0	29.0	12.5	52.0	56.0	65.0	155	89.0	188	320	158	607	683	317	1966	1966
4	2.5	-	2.5	5.5	-	6.5	11.0	4.0	15.0	22.0	7.0	35.0	34.0	18.5	66.0	65.0	90	200	104	266	395	184	809	837	NP		
5	3.0	-	3.0	6.5	-	8.0	12.0	4.0	16.5	25.0	8.5	42.0	38.0	26.0	80.0	74.0	124	245	118	350	465	NP					
6	3.0	-	3.0	7.0	-	9.0	13.5	4.5	19.0	28.0	11.0	50.0	42.0	33.0	100	81.0	152	280	119	358	471						
7	3.5	-	3.5	7.5	-	9.5	14.5	4.5	20.5	30.0	13.5	55.0	46.0	40.0	113	83.0	163	293	NP								
8	4.0	-	4.0	8.0	-	10.0	16.0	5.0	23.0	33.0	17.5	63.0	49.0	46.0	124	NP											
9	4.0	-	4.0	9.0	-	11.5	17.0	5.5	25.0	35.0	20.0	70.0	50.0	49.0	131												
10	4.5	-	5.0	9.5	-	12.5	18.0	6.0	26.5	37.0	24.0	76.0	NP														
11	4.5	-	5.0	10.0	4.0	13.0	19.0	6.0	28.0	37.0	24.0	77.0	NP														
12	5.0	-	6.0	10.5	4.0	14.0	19.5	6.5	29.0																		
13	5.0	-	6.0	11.0	4.0	15.0	20.5	6.5	31.0																		
14	5.0	-	6.0	11.0	4.0	15.0	21.5	7.0	33.0																		
15	5.5	-	6.5	11.5	4.0	15.5	NP																				
16	5.5	-	6.5	12.0	4.0	16.5																					
17	6.0	-	7.0	12.5	4.5	17.5																					
18	6.0	-	7.0	13.0	4.5	18.0																					
19	6.0	-	7.0	13.0	4.5	18.5																					
20	6.5	-	8.0	NP																							
21	6.5	-	8.0																								
22	7.0	-	9.0																								
23	7.0	-	9.0																								
24	7.0	-	9.0																								
25	7.5	-	9.5																								
	NP																										

Note:WSFU means water supply fixture units.

GPM means gallons per minute.

FM means predominately flushometer type water closets or syphon jet urinals.

FT means predominately flush tank type water closets or wash down urinals.

NP means not permitted, velocities exceed 8 feet per second.

For using this table, round the calculated pressure loss due to friction to the next higher number shown.

SPS 382.40 (7) (f) and (g) specifies minimum sizes for water distribution piping.

Note: WSFU means water supply fixture units.

GPM means gallons per minute.

FM means predominately flushometer type water closets or syphon jet urinals.

FT means predominately flush tank type water closets or wash down urinals.

NP means not permitted, velocities exceed 8 feet per second.

For using this table, round the calculated pressure loss due to friction to the next higher number shown.

SPS 382.40 (7) (f) and (g) specifies minimum sizes for water distribution piping.

Table 382.40-8
CHLORINATED POLYVINYL CHLORIDE TUBING, ASTM D2846, SDR 11; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in inches)																										
	1/2"			3/4"			1"			1 1/4"			1 1/2"			2"											
	GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU										
		FM	FT		FM	FT		FM	FT		FM	FT		FM	FT		FM	FT									
0.5	0.5	-	0.5	1.5	-	1.5	3.0	-	3.0	5.0	-	6.0	8.0	-	10.0	16.0	5.0	23.0									
1	0.5	-	0.5	2.0	-	2.0	4.0	-	4.0	7.5	-	9.5	11.5	4.0	15.5	23.0	7.5	37.0									
2	1.0	-	1.0	3.0	-	3.0	6.0	-	7.0	10.5	4.0	14.0	16.5	5.5	24.0	34.0	18.5	66.0									
3	1.5	-	1.5	4.0	-	4.0	8.0	-	10.0	13.5	4.5	19.0	21.0	7.0	32.0	42.0	33.0	100									
4	1.5	-	1.5	4.5	-	5.0	9.0	-	11.5	15.5	5.0	22.5	24.0	8.0	40.0	50.0	48.0	128									
5	2.0	-	2.0	5.0	-	6.0	10.5	4.0	14.0	17.5	5.5	25.5	27.0	10.0	47.0	56.0	65.0	155									
6	2.0	-	2.0	6.0	-	7.0	11.5	4.0	15.5	19.5	6.5	29.0	30.0	13.5	55.0	59.0	73.0	171									
7	2.0	-	2.0	6.5	-	8.0	12.5	4.5	17.5	21.5	7.0	33.0	33.0	17.5	63.0	NP											
8	2.5	-	2.5	7.0	-	9.0	13.5	4.5	19.0	23.0	7.5	37.0	34.0	19.0	68.0	NP											
9	2.5	-	2.5	7.0	-	9.0	14.5	4.5	20.5	24.0	8.0	40.0	NP														
10	2.5	-	2.5	7.5	-	9.5	15.0	5.0	21.5	24.0	8.0	41.0	NP														
11	3.0	-	3.0	8.0	-	10.0	16.0	5.0	23.0	NP																	
12	3.0	-	3.0	8.5	-	10.5	16.5	5.5	24.0	NP																	
13	3.0	-	3.0	9.0	-	11.5	NP																				
14	3.0	-	3.0	9.5	-	12.5	NP																				
15	3.5	-	3.5	9.5	-	12.5																					
16	3.5	-	3.5	10.0	4.0	13.0																					
17	3.5	-	3.5	NP			NP																				
18	4.0	-	4.0																								
19	4.0	-	4.0																								
20	4.0	-	4.0																								
21	4.0	-	4.0																								
22	4.0	-	4.0	NP																							
23	4.5	-	5.0																								
NP																											

Note: WSFU means water supply fixture units.

GPM means gallons per minute.

FM means predominately flushometer type water closets or syphon jet urinals.

FT means predominately flush tank type water closets or wash down urinals.

NP means not permitted, velocities exceed 8 feet per second.

For using this table, round the calculated pressure loss due to friction to the next higher number shown.

SPS 382.40 (7) (f) and (g) specifies minimum sizes for water distribution piping.

Note: WSFU means water supply fixture units.

GPM means gallons per minute.

FM means predominately flushometer type water closets or syphon jet urinals.

FT means predominately flush tank type water closets or wash down urinals.

NP means not permitted, velocities exceed 8 feet per second.

For using this table, round the calculated pressure loss due to friction to the next higher number shown.

SPS 382.40 (7) (f) and (g) specifies minimum sizes for water distribution piping.

Table 382.40-9
MAXIMUM ALLOWABLE LOAD FOR CROSSLINKED POLYETHYLENE (PEX) TUBING,
ASTM F876, F877, and F2769; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in inches)																				
	1/2"			5/8"			3/4"			1"			1 1/4"			1 1/2"			2"		
	GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU	
		FM	FT		FM	FT		FM	FT		FM	FT		FM	FT		FM	FT		FM	FT
0.5	0.5	-	0.5	0.5	-	0.5	1.0	-	1.0	2.5	-	2.5	4.0	-	4.0	6.5	-	8.0	13.5	4.5	19.0
1	0.5	-	0.5	1.0	-	1.0	1.5	-	1.5	3.5	-	3.5	6.0	-	7.0	9.5	-	12.5	19.5	6.5	29.0
2	1.0	-	1.0	1.5	-	1.5	2.5	-	2.5	5.0	-	6.0	9.0	-	11.5	14.0	4.5	20.0	28.0	11.0	50.0
3	1.0	-	1.0	2.0	-	2.0	3.0	-	3.0	6.5	-	8.0	11.0	4.0	15.0	17.5	5.5	25.5	36.0	22.0	73.0
4	1.5	-	1.5	2.5	-	2.5	4.0	-	4.0	7.5	-	9.5	13.0	4.5	18.0	20.5	6.5	31.0	42.0	33.0	100
5	1.5	-	1.5	3.0	-	3.0	4.5	-	5.0	8.5	-	10.5	15.0	5.0	21.5	23.0	7.5	37.0	47.0	42.0	116
6	2.0	-	2.0	3.0	-	3.0	5.0	-	6.0	9.5	-	12.5	16.5	5.5	24.0	25.0	8.5	42.0	51.0	53.0	135
7	2.0	-	2.0	3.5	-	3.5	5.5	-	6.5	10.5	4.0	14.0	18.0	6.0	26.5	28.0	11.0	50.0	NP		
8	2.0	-	2.0	3.5	-	3.5	5.5	-	6.5	11.0	4.0	15.0	19.0	6.0	28.0	30.0	13.5	55.0			
9	2.5	-	2.5	4.0	-	4.0	6.0	-	7.0	12.0	4.0	16.5	20.5	6.5	31.0	NP					
10	2.5	-	2.5	4.0	-	4.0	6.5	-	8.0	12.5	4.5	17.5	21.5	7.0	34.0						
11	2.5	-	2.5	4.5	-	5.0	7.0	-	9.0	13.5	4.5	19.0	NP								
12	2.5	-	2.5	4.5	-	5.0	7.0	-	9.0	14.0	4.5	20.0									
13	3.0	-	3.0	5.0	-	6.0	7.5	-	9.5	14.5	4.5	20.5									
14	3.0	-	3.0	5.0	-	6.0	8.0	-	10.0	NP											
15	3.0	-	3.0	5.5	-	6.5	8.0	-	10.0												
16	3.0	-	3.0	5.5	-	6.5	8.5	-	10.5												
17	3.5	-	3.5	5.5	-	6.5	8.5	-	11.0												
18	3.5	-	3.5	6.0	-	7.0	NP														
19	3.5	-	3.5	6.0	-	7.0															
20	3.5	-	3.5	6.0	-	7.5															
21	4.0	-	4.0	NP																	
	NP																				

Note: WSFU means water supply fixture units.

GPM means gallons per minute.

FM means predominately flushometer type water closets or syphon jet urinals.

FT means predominately flush tank type water closets or wash down urinals.

NP means - not permitted, velocities exceed 8 feet per second.

For using this table, round the calculated pressure loss due to friction to the next higher number shown.

SPS 382.40 (7) (f) and (g) specifies minimum sizes for water distribution piping.

Note: WSFU means water supply fixture units.

GPM means gallons per minute.

FM means predominately flushometer type water closets or syphon jet urinals.

FT means predominately flush tank type water closets or wash down urinals.

NP means - not permitted, velocities exceed 8 feet per second.

For using this table, round the calculated pressure loss due to friction
to the next higher number shown.

SPS 382.40 (7) (f) and (g) specifies minimum sizes for water distribution piping.

Table 382.40-10
MAXIMUM ALLOWABLE LOAD FOR CHLORINATED POLYVINYL CHLORIDE TUBING, ASTM F442, SDR 13.5; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in inches)																					
	3/4"			1"			1 1/4"			1 1/2"			2"			2 1/2"			3"			
	GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU		
		FM	FT		FM	FT		FM	FT		FM	FT		FM	FT		FM	FT		FM	FT	
0.5	2.5	-	2.5	4.5	-	5.0	9.0	-	11.5	13.0	4.5	18.0	23.0	7.5	37.0	38.0	26.0	80.0	65.0	90.0	200	
1	3.5	-	3.5	7.0	-	9.0	13.0	4.5	18.0	18.5	6.0	27.5	34.0	18.5	66.0	56.0	65.0	155	94.0	211	345	
2	5.5	-	6.5	10.0	4.0	13.0	19.0	6.0	28.0	27.0	10.0	47.0	49.0	46.0	124	82.0	156	285	138	475	572	
3	7.0	-	9.0	12.5	4.5	17.5	23.0	7.5	37.0	34.0	18.5	66.0	62.0	80.0	185	102	255	385	170	703	755	
4	8.0	-	10.0	15.0	5.0	21.5	27.0	10.0	47.0	40.0	30.0	86.0	72.0	116	235	114	331	449	NP			
5	9.0	-	11.5	16.5	5.5	24.0	31.0	15.0	57.0	45.0	38.0	110	78.0	142	267	NP						
6	10.0	4.0	13.0	18.5	6.0	27.5	34.0	18.5	66.0	49.0	46.0	124	NP									
7	11.0	4.0	15.0	20.0	6.5	30.0	37.0	24.0	76.0	50.0	48.0	128										
8	11.5	4.0	15.5	21.5	7.0	33.0	38.0	26.0	80.0	NP												
9	12.5	4.5	17.5	23.0	7.5	37.0	NP															
10	13.0	4.5	18.0	23.0	7.5	39.0																
11	14.0	4.5	20.0	NP																		
12	14.5	4.5	20.5																			
13	14.5	5.0	21.5																			
	NP																					

Note:

WSFU means water supply fixture units.
GPM means gallons per minute.
FM means predominately flushometer type water closets or syphon jet urinals.
FT means predominately flush tank type water closets or wash down urinals.
NP means not permitted, velocities exceed 8 feet per second.
For using this table, round the calculated pressure loss due to friction to the next higher number shown.
SPS 382.40 (7) (f) and (g) specifies minimum sizes for water distribution piping.
Approved for cold water use only.
Intended use is for MPP systems.

Table 382.40-11

MAXIMUM ALLOWABLE LOAD FOR POLYETHYLENE ALUMINUM POLYETHYLENE TUBING (PexAlPex), ASTM F1281; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in inches)											
	1/2"			5/8"			3/4"			1"		
	GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU	
		FM	FT		FM	FT		FM	FT		FM	FT
0.5	0.5	-	0.5	1.0	-	1.0	2.0	-	2.0	4.0	-	4.0
1	0.5	-	0.5	1.5	-	1.5	3.0	-	3.0	6.0	-	7.0
2	1.0	-	1.0	2.0	-	2.0	4.5	-	5.0	8.5	-	10.5
3	1.5	-	1.5	3.0	-	3.0	5.5	-	6.5	10.5	4.0	14.0
4	1.5	-	1.5	3.5	-	3.5	6.5	-	8.0	12.5	4.5	17.5
5	2.0	-	2.0	4.0	-	4.0	7.0	-	9.0	14.0	4.5	20.0
6	2.0	-	2.0	4.0	-	4.0	8.0	-	10.0	15.5	5.0	22.5
7	2.5	-	2.5	4.5	-	5.0	8.5	-	10.5	17.0	5.5	25.0
8	2.5	-	2.5	5.0	-	6.0	9.5	-	12.5	18.0	6.0	26.5
9	2.5	-	2.5	5.5	-	6.5	10.0	4.0	13.0	19.5	6.5	29.0
10	3.0	-	3.0	5.5	-	6.5	10.5	4.0	14.0	20.5	6.5	31.0
11	3.0	-	3.0	6.0	-	7.0	11.0	4.0	15.0	20.5	6.5	32.0
12	3.0	-	3.0	6.0	-	7.0	11.5	4.0	15.5	NP		
13	3.5	-	3.5	6.5	-	8.0	12.5	4.5	17.5	NP		
14	3.5	-	3.5	7.0	-	9.0	NP					
15	3.5	-	3.5	7.0	-	9.0						
16	3.5	-	3.5	7.5	-	9.5						
17	4.0	-	4.0	NP								
18	4.0	-	4.0	NP								
19	4.0	-	4.0									
20	4.0	-	4.0									
21	4.5	-	5.0									
	NP											

Note:

WSFU means water supply fixture units.

GPM means gallons per minute.

FM means predominately flushometer type water closets or syphon jet urinals.

FT means predominately flush tank type water closets or wash down urinals.

NP means not permitted, velocities exceed 8 feet per second.

For using this table, round the calculated pressure loss due to friction to the next higher number shown.

SPS 382.40 (7) (f) and (g) specifies minimum sizes for water distribution piping.

Table 382.40-12
Maximum Allowable Load for PVC Sched. 80, ASTM 1785, (1/2 to 2 inches)

Press. Loss due to friction A-value	½ inch				¾ inch				1 inch				1¼ inches				1½ inches				2 inches			
	GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU	
			FM	FT			FM	FT			FM	FT			FM	FT			FM	FT			FM	FT
0.5	0.77	1	---	0.5	1.7	1.2	---	1.5	3.5	1.5	---	3.5	7	1.7	---	9	11	2	4	16	21.6	2.3	7	33
1	1.1	1.5	---	1	2.5	1.8	---	2.5	5	2.2	---	6	10.5	2.6	4	14	16	2.9	5	23	32	3.4	17	60
2	1.6	2.2	---	1.5	3.7	2.7	---	3.5	7.1	3.1	---	9	15.5	3.8	5	21	23.5	4.2	7	39	46	5	40	87
3	2	2.7	---	2	4.6	3.4	---	4.5	9	4	---	12	19	4.7	6	29	29.4	5.3	12	55	57	6.2	69	160
4	2.4	3.2	---	2	5.3	3.9	---	6	10.5	4.6	4	14	22.3	5.5	7	31	34.2	6.2	19	60	67	7.3	97	210
5	2.7	3.6	---	2.5	6	4.4	---	7	11.8	5.2	4	16	25.3	6.3	8	40	38.4	6.9	25	80	75.4	8	134	251
6	2.9	3.9	---	2.5	6.6	4.9	---	8	13	5.7	4	18	27.7	6.9	10	49	42.1	7.6	32	100				
7	3.2	4.3	---	3	7.2	5.3	---	9	14.1	6.2	4	20	30.1	7.5	12	55	45.8	8	39	112				
8	3.4	4.6	---	3	7.7	5.7	---	9	15	6.6	5	21	32.3	8	16	60								
9	3.7	5	---	3.5	8.2	6	---	10	16	7.1	5	22												
10	3.9	5.3	---	3.5	8.7	6.4	---	10	17	7.6	5	23												
11	4.1	5.6	---	4	9.2	6.8	---	12	17.9	8	5	26												
12	4.3	5.8	---	4	9.6	7.1	---	13																
13	4.5	6.1	---	4.5	10.1	7.5	4	14																
14	4.7	6.4	---	4.5	10.5	7.8	4	14																
15	4.8	6.5	---	4.5	10.8	8	4	15																
16	5	6.8	---	6																				
17	5.2	7.1	---	6																				
18	5.3	7.2	---	6																				
19	5.5	7.5	---	6.5																				
20	5.7	7.8	---	6.5																				
21	5.8	7.9	---	6.5																				
22	5.9	8	---	6.5																				
Per 100 feet of length																								

Note: SPS Table 382.40-12 applies only to water services and private water mains.

Table 382.40-13
Maximum Allowable Load for PVC Sched. 80, ASTM 1785, (2 1/2 to 6 inches)

Press. Loss due to friction A-value	2½ inches				3 inches				3 ½ inches				4 inches				5 inches				6 inches			
	GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU	
			FM	FT			FM	FT			FM	FT			FM	FT			FM	FT			FM	FT
0.5	35	2.6	20	70	64	3.1	87	195	92	3.3	200	335	130	3.6	425	527	237	4	1,226	1,226	380	4.6	2,546	2,546
1	51	3.8	50	130	91	4.4	196	330	134	4.8	450	550	188	5.2	835	855	344	6	2,213	2,213	569	7	4,647	4,647
2	74	5.6	125	245	132	6.4	436	536	195	7	885	900	274	7.6	1,564	1,564								
3	92	6.9	200	330	164	8	654	717																
4	108	8	288	415																				
Per 100 feet of length																								

Note: SPS Table 382.40-13 applies only to water services and private water mains.

Table 382.40-14

Maximum Allowable Load for Schedule 80 CPVC ASTM F 441 Pipe (¾ to 2 inches)																												
Press. Loss due to Friction A-Value	¾ inch				½ inch				¾ inch				1 inch				1¼ inch				1½ inches				2 inches			
	GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU	
			FM	FT			FM	FT			FM	FT			FM	FT			FM	FT			FM	FT			FM	FT
0.5	0.36	0.8	---	0.25	0.5	0.7	---	0.5	0.6	1.1	---	0.5	3.2	1.5	---	3	6.9	1.8	---	8	10.5	2	4	14	20.7	2.3	6	31
1	0.5	1.2	---	0.5	1	1.5	---	1	2.4	1.8	---	2	4.7	2.1	---	4.5	10	2.6	4	13	15.2	2.9	5	22	30.1	3.4	13	55
2	0.75	1.8	---	0.5	1.5	2.2	---	1.5	3.5	2.7	---	2.5	6.7	3.1	---	8	14.5	3.8	4	20	22.2	4.2	7	35	43.8	4.9	36	106
3	0.97	2.3	---	1	1.7	2.4	---	1.5	4.3	3.3	---	4	8.3	3.8	---	10	18.1	4.7	6	26	27.6	5.2	10	49	54.5	6.1	60	147
4	1.1	2.7	---	1	1.8	2.6	---	1.5	5	3.9	---	6	9.7	4.5	---	12	21.1	5.5	7	32	32.2	6	16	60	63.7	7.1	85	193
5	1.24	3	---	1	2.5	3.6	---	2.5	5.7	4.4	---	6.5	11	5.1	4	15	23.8	6.2	7	39	36.4	6.8	22	74	71.8	8	115	234
6	1.37	3.3	---	1	2.7	3.9	---	2.5	6.2	4.8	---	7	12.1	5.6	4	16	26.3	6.8	9	45	40.1	7.5	30	87				
7	1.5	3.7	---	1.5	2.95	4.3	---	3	6.7	5.2	---	8	13.1	6.1	4	18	28.5	7.4	11	51	42.7	8	34	102				
8	1.6	3.9	---	1.5	3.2	4.6	---	3	7.25	5.6	---	9	14.1	6.5	4.5	20	30.8	8	14	56								
9	1.7	4.1	---	1.5	3.4	4.9	---	3	7.75	6	---	9	15	7	5	21												
10	1.8	4.4	---	1.5	3.6	5.2	---	3.5	8.3	6.4	---	10	15.9	7.4	5	23												
11	1.9	4.6	---	1.5	3.7	5.4	---	3.5	8.7	6.7	---	11	16.8	7.8	5	24												
12	2	4.9	---	2	3.9	5.7	---	3.5	9	7	---	12	17.2	8	5	25												
13	2.08	5.1	---	2	4.1	6	---	4	9.4	7.3	---	12																
14	2.16	5.3	---	2	4.3	6.3	---	4	9.8	7.6	4	13																
15	2.24	5.5	---	2	4.4	6.4	---	4	10.2	8	4	13																
16	2.32	5.7	---	2	4.6	6.7	---	5																				
17	2.4	5.9	---	2	4.8	7	---	5																				
18	2.47	6	---	2	5	7.3	---	6																				
19	2.55	6.2	---	2.5	5.1	7.4	---	6																				
20	2.63	6.4	---	2.5	5.2	7.6	---	6																				
21	2.71	6.6	---	2.5	5.3	7.7	---	6																				
22	2.78	6.8	---	2.5	5.5	8	---	6.5																				
25	3	7.3	---	3																								
30	3.25	8	---	3																								
Per 100 feet of Length																												

Table 382.40-15
Maximum Allowable Load for Schedule 80 CPVC ASTM F 441 Pipe (2 1/2 to 10 inches)

Press. Loss due to Friction A-Value	2½ inches				3 inches				4 inches				6 inches				8 inches				10 inches			
	GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU		GPM	Vel. ft/sec	WSFU	
			FM	FT			FM	FT			FM	FT			FM	FT			FM	FT			FM	FT
0.5	33.2	2.6	17	64	59.8	3	74	174	125	3.5	393	500	366	4.6	2,416	2,416	768	5.5	7,134	7,134	1,393	6.3	14,756	14,756
1	48.3	3.8	44	121	87	4.3	180	310	181	5.2	784	817	533	6.7	4,117	4,117	1,116	8	11,378	11,378				
2	70.2	5.5	108	226	126	6.3	400	505	281	8	1,629	1,629												
3	87.4	6.8	181	312	157	7.8	600	677																
4	102	8	255	385																				
Per 100 feet of Length																								

Note: CPVC 3 inches and larger only approved for cold water.

SPS 382.41 Cross connection control. (1) SCOPE. The provisions of this section set forth the requirements for the protection of water within water supply systems when and where there is the possibility of contamination due to cross connections or backflow conditions.

Note: The Department of Natural Resources governs the operation and design of community water systems and under s. NR 810.15 (1) requires the supplier of water to develop and implement a comprehensive cross connection control program.

(2) MATERIALS. (a) All methods, devices, and assemblies intended to protect water supply systems from cross connections shall be of a type recognized and approved in accordance with ch. SPS 384 and as described in sub. (4).

(b) All methods including barometric loops and air gaps intended to protect water supplies relative to cross connection or backflow shall be constructed of materials suitable for water supply systems in accordance with ch. SPS 384.

(3) GENERAL REQUIREMENTS. Water supply systems and the connection of each plumbing fixture, piece of equipment, appliance or nonpotable water piping system shall be designed, installed and maintained in such a manner to prevent the contamination of water supplies by means of cross connections.

(a) *Types of cross connection control.* 1. Water supply systems shall be protected against contamination due to cross connections or backflow conditions by one of the methods or devices specified in Table 382.41-1 depending upon the situation or Table 382.41-2 depending upon the specific application or use, and the limitations specified in sub. (4).

2. For the situations described in par. (b) 3., cross connection control shall be provided as part of the fixture fitting outlet or in the water supply piping for the fixture fitting outlet.

(b) *Classifications.* For the purposes of this section:

1. The designation of a high hazard or low hazard situation shall be determined on the basis of how a toxic or nontoxic solution is intended or recommended by the manufacturer of the solution to interface with the potable water supply system.

2. a. A continuous pressure situation shall be considered to exist when a pressure greater than atmospheric within the water supply system exists for more than 12 continuous hours.

b. A noncontinuous pressure situation shall be considered to exist if the conditions in subd. 2. a. do not occur.

3. A high hazard cross connection situation shall be considered to exist for a connection of the water supply system to:

a. Any part of the drain system; and

b. Any other piping system conveying water from nonpotable sources, including but not limited to lakes, rivers, streams or creeks.

4. Except as provided in subd. 5., a high hazard cross connection situation shall be considered to exist at:

a. A water supply hose bibb, faucet, wall hydrant, sill cock or other outlet which terminates with hose threads allowing a hose to be attached;

b. A water supply faucet, wall hydrant or other outlet which terminates with a serrated nipple allowing a hose to be attached;

c. A water supply faucet, hydrant or outlet serving a sink used for building maintenance in a public building;

d. A chemical pot-feeder or automatic chemical feeder is installed to serve a boiler, cooling tower or chilled water system; and

e. In the water supply piping connecting to the outlet of a fire hydrant for any purpose other than fire fighting.

5. A cross connection may not be considered to exist at the hose threaded outlet installed for the sole purpose of any of the following:

a. Draining a water supply system or any portion thereof.

bm. Connecting individual portable dialysis machines when enclosed in a lockable box.

c. Connecting individual residential-type automatic clothes washers or dryers.

6. a. A high hazard situation shall be considered to exist for the connection of 2 water supply systems one supplied by a public water supply and the other system supplied by a private well.

Note: The interconnection of a public water supply system and another source of water is addressed in ss. NR 811.06 and 811.07 and must be approved by the Department of Natural Resources.

b. Cross connection control devices used in conjunction with automatic fire sprinkler systems shall be listed by an acceptable testing agency for such an application under the standards governing the design and installation of automatic fire sprinkler systems.

7. A cross connection situation shall not be considered to exist when a multipurpose piping system serves a one- or 2- family dwelling provided the sprinkler system is constructed of materials and joints suitable for water distribution systems as specified in ss. SPS 384.30 (4) (e) and 384.40, respectively.

(c) *Containment.* 1. For sewerage treatment facilities which are required to conform with ch. NR 110, in addition to the cross connection control required for each potable water usage or water outlet, a reduced pressure principle backflow preventer shall be installed:

a. In the water service to each building or structure within the complex;

b. In the private water main upstream of all water services serving the facility; or

c. In the water distribution system upstream of all water outlets and in the process piping network upstream of all points of use, if both a water distribution system and a process network is contained within the same building or structure.

2. For marinas, wharves and docks where potable water outlets are provided to serve boats or ships, in addition to the cross connection control required for each potable water outlet or usage, a reduced pressure principle backflow preventer shall be installed in the water supply system to limit backflow into the water supply source.

3. The installation of a cross connection control device in the water supply system for a building or structure shall not alleviate the requirement to provide cross connection control for the connection of each plumbing fixture, piece of equipment, appliance or other piping system.

(d) *Prohibitions.* 1. The use of a toxic solution as a heat transfer fluid in single-wall heat exchanger for potable water is prohibited.

2. A cross connection control method, device, or assembly may not be bypassed without a cross connection control method, device, or assembly of at least equal protection.

(e) *Existing automatic fire sprinkler systems.* An alteration, modification or addition to an existing automatic fire sprinkler shall necessitate conformance with this section, if the:

1. Existing water supply line to the existing sprinkler system is increased in diameter; or

2. Existing device or method which had been previously recognized to address cross connection concerns is to be removed or replaced.

Table 382.41-1								
Methods or Assemblies of Cross Connection Control (Standard)	Situations and Conditions							
	Backpressure				Back Siphonage			
	Low Hazard		High Hazard		Low Hazard		High Hazard	
	Continuous Pressure	Non-continuous Pressure	Continuous Pressure	Non-continuous Pressure	Continuous Pressure	Non-continuous Pressure	Continuous Pressure	Non-continuous Pressure
Air Gaps in Plumbing Systems (For Plumbing Fixtures and Water-Connected Receptors) (ASME A112.1.2)/Air Gap Fittings for Use with Plumbing Fixtures, Appliances, and Appurtenances (ASME A112.1.3)	X	X	X	X	X	X	X	X
Atmospheric Type Vacuum Breakers (ASSE 1001)/CSA B64.1.1						X		X
Anti-Siphon Fill Valves for Water Closet Tanks (ASSE 1002/ASME A112.1002/CSA B125.12)					X		X	
Hose Connection Vacuum Breakers (ASSE 1011)/Hose Connection Backflow Preventers (ASSE 1052)/CSA B64.2 & B64.2.2	X ^o	X	X ^o	X	X ^o	X	X ^o	X
Backflow Preventers with Intermediate Atmospheric Vent (ASSE 1012)/Dual Check Valve Backflow Preventers with Atmospheric Port (CSA B64.3)	X	X			X	X		
Reduced Pressure Principle Backflow Preventers and Reduced Pressure Principle Fire Protection Backflow Preventers (ASSE 1013)/Reduced Pressure Principle (RP) Backflow Preventers (CSA B64.4)	X	X	X	X	X	X	X	X

Table 382.41-1 (Continued)								
Methods or Assemblies of Cross Connection Control (Standard)	Situations and Conditions							
	Backpressure				Back Siphonage			
	Low Hazard		High Hazard		Low Hazard		High Hazard	
	Continuous Pressure	Non-continuous Pressure	Continuous Pressure	Non-continuous Pressure	Continuous Pressure	Non-continuous Pressure	Continuous Pressure	Non-continuous Pressure
Backflow Prevention Devices for Hand-Held Showers (ASSE 1014)		X		X		X		X
Double Check Backflow Prevention Assemblies and Double Check Fire Protection Backflow Prevention Assemblies (ASSE 1015)					X	X		
Trap Seal Primer Valves-Potable Water Supplied (ASSE 1018)					X		X	
Wall Hydrant with Backflow Protection and Freeze Resistance (ASSE 1019)		X		X		X		X
Pressure Vacuum Breaker Assemblies (ASSE 1020)/Pressure Vacuum Breakers (CSA B64.1.2)					X	X	X	X
Backflow Preventer for Beverage Dispensing Equipment (ASSE 1022)					X	X	X	X
Dual Check Backflow Preventers (ASSE 1024)					X	X		
Dual Check Valve Type Backflow Preventers for Carbonated Beverage Dispensers, Post-Mix Type (ASSE 1032)					X	X	X	X
Laboratory Faucet Backflow Preventers (ASSE 1035)		X		X		X		X
Pressurized Flushing Devices for Plumbing Fixtures (ASSE 1037/ASME A112.1037/CSA B125.37)					X		X	

Table 382.41-1 (Continued)								
Methods or Assemblies of Cross Connection Control (Standard)	Situations and Conditions							
	Backpressure				Back Siphonage			
	Low Hazard		High Hazard		Low Hazard		High Hazard	
	Continuous Pressure	Non-continuous Pressure	Continuous Pressure	Non-continuous Pressure	Continuous Pressure	Non-continuous Pressure	Continuous Pressure	Non-continuous Pressure
Reduced Pressure Detector Fire Protection Back-flow Prevention Assemblies (ASSE 1047)					X			
Double Check Detector Fire Protection Back-flow Prevention Assemblies (ASSE 1048)					X			
Dual Check Backflow Preventer Wall Hydrants-Freeze Resistant Type (ASSE 1053)		X		X		X		X
Chemical Dispensers with Integral Backflow Protection (ANSI/CAN/ASSE/IAPMO 1055)						X		X
Spill Resistant Vacuum Breakers (ASSE 1056)/Spill-Resistant Pressure Vacuum Breakers (CSA B64.1.3)					X	X	X	X
Freeze Resistant Sanitary Yard Hydrants with Backflow Protection (ASSE 1057)		X		X		X		X
Backflow Preventers with Integral Pressure Reducing Boiler Feed Valve and Intermediate Atmospheric Vent Style for Domestic and Light Commercial Water Distribution Systems (ASSE 1081) ¹	X	X			X	X		
Barometric Loop [s. SPS 382.41(5)(i)]					X	X	X	X
Vacuum Breaker Tee [s. SPS 382.41(5)(j)]					X	X	X	X

⁰ = The use of a hose connection backflow preventer, dual check backflow preventer wall hydrant-freeze resistant or a hose connection vacuum breaker in a continuous pressure situation shall be limited to campgrounds and marinas.

¹ = Closed loop boiler feed only, standard does not require NSF/ANSI 372 or NSF/ANSI/CAN-61 conformance.

(4) LIMITATIONS. (a) Cross connection control devices shall be limited in use in accordance with the respective standard, unless otherwise specifically permitted under this subsection.

(b) 1. Except as provided in pars. (b) 2. and (o), an atmospheric-type vacuum breaker shall be installed such that the bottom of the device or the critical level mark on the device is at least 6 inches above all of the following:

a. The flood level rim of the receptor serving the water supply port.

b. The highest point downstream from the device where backpressure would be created.

c. The highest point of an injection or aspiration port.

2. A deck-mounted atmospheric type vacuum breaker shall be installed such that the bottom of the device or the critical level mark on the device is at least 1 inch above all of the following:

a. The flood level rim of the receptor serving the water supply port.

b. The highest point downstream from the device where backpressure would be created.

c. The highest point of an injection or aspiration port.

(c) 1. a. The use of a hose connection backflow preventer, dual check backflow preventer wall hydrant-freeze resistant or a hose connection vacuum breaker in a continuous pressure situation shall be limited to campgrounds and marinas.

b. The use of a hose connection backflow preventer and a hose connection vacuum breaker shall be limited to the discharge side of a control valve such as a faucet or hose bibb.

2. A hose connection backflow preventer and a hose connection vacuum breaker may not be employed in backpressure situations of more than 10 feet of water column.

(d) A backflow preventer with intermediate atmospheric vent:

1. May not be employed in backpressure situations of more than 150 psig; and

2. May not serve boilers having a maximum steam pressure setting greater than 15 psig or a maximum water pressure setting greater than 30 psig.

(e) 1. A reduced pressure principle backflow preventer and a reduced pressure detector backflow preventer may not be subjected to a backpressure greater than twice the rated working pressure of the device.

2. A reduced pressure principle backflow preventer and a reduced pressure detector backflow preventer which serve a water-based fire protection system may have a test outlet located between the number 2 check valve and the number 2 listed indicating control valve.

3. A reduced pressure principle backflow preventer and a reduced pressure detector backflow preventer which are 2" or smaller in size and which serve a water-based fire protection system are not required to have a test cock on the number one listed indicating control valve.

(f) A hand-held shower may not be employed in backpressure situations of more than 5 feet of water column.

(g) 1. A double check backflow prevention assembly and a double check detector assembly backflow preventer may not be subjected to a backpressure greater than twice the rated working pressure of the device.

3. A double check backflow prevention assembly and a double check detector assembly backflow preventer which are 2" or smaller in size and which serve a water-based fire protection system are not required to have a test cock on the number one listed indicating control valve.

(h) A water supply fed trap seal primer valve shall be installed such that the bottom of the device or the critical level as marked on the device is at least 12" above:

1. The connection to the trap; and

2. The highest point downstream from the device where backpressure would be created.

(i) A vacuum breaker wall hydrant, freeze resistant automatic draining type or a freeze resistant sanitary yard hydrant, may not be employed in backpressure situations of more than 10 feet of water column.

(k) A pressure type vacuum breaker assembly shall be installed such that the bottom of the device or the critical level mark on the device is at least 12" above all of the following:

1m. The flood level rim of the receptor serving the water supply port.

2m. The highest point downstream from the device where backpressure would be created.

3m. The highest point of an injection or aspiration port.

(L) A laboratory faucet backflow preventer may not be employed in backpressure situations of more than 6 feet of water column.

(m) The cross connection control device to serve a hose bibb or hydrant that penetrates an exterior wall of a heated structure may not prevent a hose bibb or hydrant from being freeze resistant automatic draining as required under s. SPS 382.40 (8) (a).

(n) A spill resistant vacuum breaker shall be installed so that the bottom of the device or the critical level mark on the device is at least 12" above all of the following:

1. The flood level rim of the receptor serving the water supply port.

2. The highest point downstream from the device where backpressure would be created.

3. The highest point of an injection or aspiration port.

(o) A water-fed trap seal primer shall be provided with high hazard backflow protection compliant with this section and all the following:

1. Fixture trap or tailpiece trap seal primers shall consist of a 1 1/4 inch (32 mm) or larger tailpiece or trap assembly that is designed to connect to a supply tube that drains to the floor drain trap inlet.

2. Ballcock trap seal primer shall be used in conjunction with anti-siphon fill valves complying with ASSE 1002.

3. Flushometer tailpiece or trap seal primers shall only be used in conjunction with a flushometer complying with ASSE 1037 and shall be installed below the critical level of the vacuum breaker if a vacuum breaker is used.

(5) INSTALLATION. (a) An air gap for cross connection control shall conform to ASME A112.1.2.

Note: See ch. SPS 382 Appendix for further explanatory material.

(b) Cross connection control methods, devices and assemblies shall be installed in accordance with the manufacturer's written installation specifications and this chapter. The methods, devices and assemblies shall be accessible for inspection, testing, maintenance and replacement.

Note: See s. SPS 384.30 (5) (c).

(c) Cross connection control devices shall be protected from freezing.

(d) 1. Except as provided in subd. 1m., a cross connection control device or cross connection control assembly may not be located in uninhabitable spaces susceptible to flooding.

1m. A cross connection control device or cross connection control assembly that does not incorporate a vent port may be installed in an uninhabited location susceptible to flooding.

2. A cross connection control device which has one or more vent ports may not be located in a pit, vault or depression which is below the adjacent grade or floor level, even if the pit, vault or depression is provided with a drain at the bottom of the pit.

(e) 1. Vent ports of cross connection control devices shall be positioned:

- a. Away from areas where toxic gases and fumes may accumulate;
- b. Downward or protected to protect the ports from falling debris; and
- c. So as to drain dry.

2. Cross connection control devices or assemblies shall be so located that any vent ports are provided with an air gap so as to comply with s. [SPS 382.33](#) or ASME A112.1.3.

3. a. If a pressure vacuum breaker, reduced pressure principle backflow preventer, or a reduced pressure detector backflow preventer, is located within a building, a drain or receptor shall be provided to receive the discharge from the vent ports of the device. If a floor drain is to receive the discharge from the vent ports of a pressure vacuum breaker, reduced pressure principle backflow preventer or a reduced pressure detector backflow preventer, the flow or pathway of the discharge may not create a nuisance.

b. Where drain piping is provided for the discharge from a vent port, an air gap in accordance with par. (a) shall be provided between the vent port and the drain piping.

c. Where a receptor is provided for the discharge from a vent port, an air gap in accordance with par. (a) shall be provided between the vent port and the receptor.

(f) The installation of a reduced pressure principle backflow preventer, a reduced pressure principle fire protection backflow preventer, a reduced pressure detector fire protection backflow prevention assembly, a double check backflow prevention assembly, a double check fire protection backflow prevention assembly, a double check detector fire protection backflow prevention assembly, a pressure vacuum breaker assembly, and a spill resistant vacuum beaker shall conform to all of the following limitations:

1. The minimum distance between the floor, surface or platform which is to provide access and the lowest point of the assembly may not be less than 12”.

2. The maximum distance between the floor, surface or platform which is to provide access and the lowest point of the assembly may not be more than 7 feet.

3. The minimum distance between a ceiling or other obstruction and the highest point of the assembly may not be less than 18”.

4. The minimum distance between a wall or other obstruction and the back and ends of the assembly may not be less than 4”.

5. The minimum distance between a wall or other obstruction and the front of the assembly may not be less than 24”.

Note: See ch. [SPS 382 Appendix](#) for further explanatory material.

(g) The discharge outlet of local waste piping serving a cross connection control device shall be visible and not be located within a concealed space.

(h) No control valve may be placed downstream from an atmospheric-type vacuum breaker or a laboratory faucet backflow preventer.

(i) A barometric loop to provide cross connection control for backsiphonage shall be formed by creating a loop in the potable water supply piping upstream to the source of cross connection.

1. The loop shall extend at least 35 feet above:

a. The highest point downstream from the loop where back-pressure would be created; and

b. The point of discharge.

2. No outlets for potable water use shall be installed downstream of the peak of the loop.

(j) Vacuum breaker tees shall be assembled such that:

1. The bottom of the horizontal portion of the tee is installed at least one inch above the flood level rim of the receptor;

2. The inside diameter of the tee is equal to or greater than the inside diameter of the drain piping from the water treatment device;

3. The tee is installed in such a position that the discharge will not create a nuisance;

4. The piping upstream of the tee is of a type suitable for water distribution in accordance with s. [SPS 384.30 \(4\) \(e\)](#).

5. The vent portion of the tee is equal to or greater than the inside diameter of the drain piping from the water treatment device; and

6. The vent port of the tee is:

a. Positioned away from areas where toxic gases and fumes may accumulate; and

b. Constructed to protect the port from falling debris.

(k) A chemical dispensing system shall be connected to the water distribution system in either of the following manners:

1. The fixture supply shall be individually connected to the water distribution system.

2. The fixture supply shall be installed with a pressure bleeding device. The pressure bleeding device shall create a visually free flow of water through the atmosphere from the faucet connection into the fixture drain.

History: 1-2-56; r. (2) through (7), [Register](#), October, 1971, No. 190, eff. 11-1-71; r. and recr. [Register](#), November, 1972, No. 203, eff. 12-1-72; renum. from H 62.14, [Register](#), July, 1983, No. 331, eff. 8-1-83; renum. from ILHR 82.14 and am. (1) (h) 17., r. (2), [Register](#), February, 1985, No. 350, eff. 3-1-85; r. and recr. [Register](#), February, 1994, No. 458, eff. 3-1-94; am. (2) (a), Tables 82.41-1, 2, (4) (c), (e) to (i), (k) to (m), (5) (e) 3. a., (i), cr. (4) (n), r. and recr. (5) (b), (f), r. (5) (h), [Register](#), February, 1997, No. 494, eff. 3-1-97; correction in (4) (n) made under s. 13.93 (2m) (b) 1., Stats., [Register](#), February, 2000, No. 530; am. (3) (a) 2., (4) (k) 1. and (5) (a), r. and recr. (3) (b) and (n), and Tables 82.41-1 and 82.41-2, cr. (4) (k) 1. c. and (5) (L), [Register](#), December, 2000, No. 540, eff. 1-1-01; CR 02-002; am. (3) (intro.), (5) (a), Tables 82.41-1 and 2, renum. (5) (i) to (L) to be (5) (h) to (k) [Register April 2003 No. 568](#), eff. 5-1-03; CR 04-035; cr. (3) (b) 4. d., am. Tables 82.41-1 and -2, 82.41 (2), (3) (a) 1. and (b) 7. [Register November 2004 No. 587](#), eff. 12-1-04; CR 08-055; cr. (3) (b) 4. e., am. (4) (c) 1. a., (f), (i), (n), (5) (a), (e) 2., (f) (intro.), Tables 82.41-1 and 82.41-2 [Register February 2009 No. 638](#), eff. 3-1-09; corrections in (6) made under s. 13.92 (4) (b) 1. and 7., Stats., [Register February 2009 No. 638](#); CR 09-050; r. (6) [Register December 2009 No. 648](#), eff. 1-1-10; CR 10-064; am. (1), (5) (e) 2., Table 82.41-2 [Register December 2010 No. 660](#), eff. 1-1-11; correction in (2) (a), (b), (3) (a) 1., (b) 7., (4) (m), (5) (e) 2., (j) 4., Table 382.41-1, Table 382.41-2 made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#); CR 23-006; am. (2) (a), (3) (b) 4. e., 5. (intro.), a., r. (3) (b) 5. b., cr. (3) (b) 5. b.m., am. (3) (b) 5. c., r. and recr. (3) (b) 6. b., renum. (3) (d) to (3) (d) 1. and am., cr. (3) (d) 2., r. and recr. Table 382.41-1, r. Table 382.41-2, am. (4) (b) 1. (intro.), 2. (intro.), r. (4) (g) 2., (k) 2., cr. (4) (o), am. (5) (d) 1., cr. (5) (d) 1.m., am. (5) (e) 3. a., (f) (intro.), (h) [Register September 2023 No. 813](#), eff. 10-1-23; renum. (4) (k) 1. to (4) (k) under s. 13.92 (4) (b) 1., Stats., [Register September 2023 No. 813](#); correction in (4) (b) 1. made under s. 35.17, Stats., [Register September 2023 No. 813](#).

Subchapter V — Special Plumbing Installations

SPS 382.50 Health care and related facilities. (1)

GENERAL. The provisions of this section shall set forth the requirements for the design, installation and maintenance of devices, fixtures and equipment which are installed in health care and related facilities.

(2) FIXTURES AND EQUIPMENT. (a) *Special fixtures and equipment.* 1. ‘Requirements for ice manufacture and storage.’ Machines for manufacturing ice or any device for handling or storage of ice shall be located in an area not subject to contamination.

2. ‘Sterilizers and washer sanitizers.’ a. Sterilizers and washer sanitizers shall discharge by means of indirect waste.

b. The indirect waste piping shall discharge by means of air-gap.

3. 'Aspirators.' Aspirators which require the use of water shall be provided with approved cross connection control.

(b) *Spouts and actions.* Except in psychiatric-care facilities in areas where patient safety is at risk with standard gooseneck spouts and actions, the selection of spouts and actions on plumbing fixtures shall comply with this section and Table 382.50-1.

1. 'Spouts.' a. Lavatories and sinks accessible to patients shall have a fixed water supply spout mounted so that its discharge point is a minimum distance of 5 inches above the flood level rim of the fixture.

b. Spouts shall have laminar flow in facilities listed in par. (3) (b).

2. 'Actions.' All fixtures used by medical and nursing staff, patients, residents, and food handlers shall be equipped with valves that can be operated without the use of hands and shall comply with all of the following:

a. Where wrist blade handles are used for this purpose, the handles may not exceed 4 1/2 inches in length, except handles on scrub sinks and clinical sinks shall be no less than 6 inches long.

b. Single lever faucet handles may be used in lieu of wrist blades.

c. In lavatories with self-closing faucets accessible to patients, the flow of the hot water shall be calculated to evacuate the water distribution piping from the faucet to the recirculated hot water supply.

(c) *Floor drain prohibition.* 1. Except as provided in subd. 2., floor drains may not be installed in operating or delivery rooms.

2. Floor drains may be installed in cystoscopic rooms. The drain shall contain a non-splash, horizontal-flow flushing bowl beneath the drain plate.

(3) **WATER SUPPLY SYSTEMS.** (a) *Hospital water supply systems.* Water supply systems serving hospitals shall comply with all of the following:

1. All hospitals shall be provided with at least 2 water services. Whenever more than one water main is available, the connections shall be made to different water mains.

2. Each water service connection shall adequately serve the total building water supply demand as specified in s. SPS 382.40 (7), except for additional services supplying water to additions deemed non-essential as defined in a hospital water management plan.

Note: The installation of two water services or a private water main may require the installation of a check valve. Refer to ch. NR 811 for more information.

(ag) *Health care facilities.* Hot and cold water shall be provided to all sinks accessible to patients and comply with all of the following:

1. Hot water shall be initiated and stored at a minimum of 140°F.

2. The maximum temperature to fixture fitting outlets accessible to patients may not exceed 115°F.

(b) *Hospital, community-based residential facility, inpatient hospice and nursing home water supply systems.* 1. Water supply systems serving a hospital, community-based residential facility, inpatient hospice or nursing home shall comply with all of the following:

a. Except as provided in subd. 1. b., a single control valve may serve an area where 4 or fewer patient care units exist and where each unit contains not more than 2 persons.

b. A water supply serving an intensive care patient care unit shall be individually valved.

2. All water distribution piping shall be insulated in accordance with chs. SPS 361 to 366.

3. Cold water shall be supplied to lavatories or sinks located in patient rooms.

4. A hot water distribution system shall be under constant recirculation to provide continuous hot water at each hot water outlet, except that when using thermal disinfection, under subd. 6. a. uncirculated hot water distribution piping may not exceed 3 feet in developed length.

4m. Control valves shall automatically regulate the temperature of the water supply of the distribution system that exceeds 140°F to each fixture accessible to patients.

5. Water provided to patient showers, therapeutic equipment and all types of baths shall be installed with pressure balanced and thermostatically controlled control valves which automatically regulate the temperature of the water supply to the fixture fitting outlet within a temperature range of 110°F to 115°F. Such control valves shall automatically reduce flow to 0.5 gpm or less when the water supply to the fitting outlet exceeds 115°F or when loss of cold water pressure occurs.

Note: See ch. SPS 382 Appendix A-382.50 (3) (b) 5. for sketches showing various design options.

6. Hot water distribution systems may not include a heat recovery system, and shall be installed and maintained to provide disinfection by one of the following methods:

a. Water stored and circulation initiated at a minimum of 140°F and with a return of a minimum of 124°F.

be. .5 mg/L residual chlorine.

bm. Chloramine.

bs. Chlorine dioxide.

Note: Additional information may be contained in ASHRAE Guideline 12-2000, Minimizing the Risk of Legionellosis Associated with Building Water Systems. This standard is published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE); 1791 Tullie Circle, N.E., Atlanta, GA 30329, phone: (800) 5-ASHRAE or (404) 636-8400 ext. 507; fax: (404) 321-5478; e-mail: orders@ashrae.org; or online at www.ashrae.org.

c. Another disinfection method approved by the department or using disinfectant provided by the municipality with an approved minimum residual disinfectant concentration at all points and individual site approval by the department.

Note: See ch. SPS 382 Appendix for further information.

7. A water distribution system may not be designed, installed, or maintained so that the maximum water temperature to fixture fitting outlets accessible to patients exceeds 115°F.

Note: See s. SPS 382.40 (5) and ch. DHS 124 for additional requirements for circulation systems.

7m. The use of limit stops in faucets or shower or tub mixing valves to achieve a maximum temperature of 115°F is prohibited.

8. Except as provided in subd. 7., a water distribution system may not be designed, installed and maintained so that the maximum temperature to fixture fitting outlets exceeds 180°F.

9. Water outlets accessible to patients shall have laminar flow.

10. Any portion of the water distribution system terminating by means of a plug, cap, or closed fitting and dry downstream with no outlet within the water distribution system may not exceed 6 pipe diameters.

11. Where a dialysis box is installed in a patient room or a patient toilet room, all of the following shall apply:

a. The dialysis box shall be lockable.

b. Hose threads located within a lockable dialysis box used exclusively for the connection of portable dialysis equipment do not require a cross connection control device.

c. A receptor located within a dialysis box shall be sealed when not in use.

12. Hot water distribution piping shall be labeled with the disinfection method used. Labeling shall be within the water heater mechanical room on the hot water distribution piping at the point of injection, within 5 feet of the injection point, and every 25 feet thereafter within the mechanical room. The interior of all doors serving the mechanical room shall be labeled with the

disinfection method. All label lettering shall be at least 1/2 inch height in clearly readable letters.

13. Facilities with a population exceeding 250 occupants shall have a water management plan. The management plan shall include all of the following:

- a. An emergency water contingency plan program on the loss or contamination of the water supply.
- b. A pathogen control plan.
- c. The emergency and routine disinfection procedures.
- d. The identity of the individual responsible for the water quality.

e. The provisions for the periodic flushing of the water supply system.

f. Balancing valve report for the hot water distribution system.

14. Expansion tanks installed in the hot water distribution system shall be of the flow-through type.

(c) *Adult day care centers.* A water distribution system serving an adult day care center may not be designed, installed, or maintained so that the maximum water temperature to fixture fitting outlets accessible to participants exceeds 115°F.

Table 382.50-1
Spouts and Actions Required in Health Care and Related Facilities

Fixture Location	Type of Spout		Type of Action		
	Standard	Provide a 5-inch clearance	Hand	Wrist	Foot, Knee or Electronic Sensor
NURSING DEPARTMENT					
Patient toilet room		X		X	X
Patient toilet room, isolation		X			X
Utility room		X		X	X
Treatment room		X		X	X
Medicine room		X		X	X
Kitchen floor lavatory		X		X	X
Kitchen floor sink	X	X		X	X
Nurses toilet room	X	X	X	X	X
Floor laboratory		X	X	X	X
NURSERY					
Nursery		X		X	X
Exam/treatment room		X		X	X
Infant intensive care unit		X			X
Labor room		X		X	X
SURGICAL					
Scrub room		X ^a			X
Sub-sterile room	X	X		X	X
Clean-up room	X	X		X	X
Frozen sections room		X	X	X	X
Surgical supply room		X		X	X
Work room	X	X		X	X
Cystoscopic room		X ^a		X	X
Fracture room	X	X		X	X
Recovery room		X			X
CENTRAL SUPPLY					
Work room	X	X		X	X
Solutions room	X	X		X	X
Pharmacy		X	X	X	X
Manufacturing		X		X	X
EMERGENCY DEPARTMENT					
Observation bedroom		X		X	X
Utility room		X		X	X
Operating room		X ^a			X
Exam room		X		X	X
DIAGNOSTIC AND TREATMENT					
Occupational therapy room		X		X	X
Hydro-therapy room		X		X	X
Exam/treatment room		X		X	X
Radium treatment/exam room		X		X	X
Toilet room		X		X	X
Dark room		X		X	X
Autopsy room		X ^a			X
Lavatory in autopsy shower room		X	X	X	X
Laboratory		X	X	X	X

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Table 382.50-1
Spouts and Actions Required in Health Care and Related Facilities (Continued)

Fixture Location	Type of Spout		Type of Action		
	Standard	Provide a 5-inch clearance	Hand	Wrist	Foot, Knee or Electronic Sensor
CLINIC OR OUTPATIENT DEPARTMENT					
Exam/treatment room		X		X	X
Dental operating room		X			X
Dental laboratory		X	X	X	X
Dental recovery room		X		X	X
Surgical room		X ^a			X
Eye exam room		X			X
Ear, nose, and throat exam room		X			X
COMMON AREAS					
Day rooms		X		X	X
Hallways		X		X	X
Patient waiting area		X		X	X
Vestibule waiting area	X				
SERVICE DEPARTMENT					
Lavatory in kitchen	X	X		X	X

X = Spout and action meet required type.

^a Spout includes a spray head.

History: 1-2-56; am. (3) (4) and (5), [Register, August, 1961, No. 68](#), eff. 9-1-61; r. and recr. [Register, November, 1972, No. 203](#), eff. 12-1-72; r. and recr., [Register, February, 1979, No. 278](#), eff. 3-1-79; renum. from H 62.16, [Register, July, 1983, No. 331](#), eff. 8-1-83; renum. from ILHR 82.16 and am. (7) (b), (10) (a) 1. and 2., (b) 2., (f) (intro.) and (h), [Register, February, 1985, No. 350](#), eff. 3-1-85; r. (10) (f) and Table 25, [Register, February, 1994, No. 458](#), eff. 3-1-94; correction in (7) (b) made under s. 13.93 (2m) (b) 7., Stats., [Register, July, 2000, No. 535](#); am. (2) and (10) (g) Table 26, r. and recr. (10) (g) and (h), r. (10) (i), [Register, December, 2000, No. 540](#), eff. 1-1-01; [CR 02-002](#): r. and recr. [Register April 2003 No. 568](#), eff. 5-1-03; [CR 04-035](#): am. Table 82.50-1 and (3) (b) 5. [Register November 2004 No. 587](#), eff. 12-1-04; correction in (3) (b) 2. made under s. 13.92 (4) (b) 7., Stats., [Register February 2008 No. 626](#); [CR 08-055](#): am. (3) (b) 5. [Register February 2009 No. 638](#), eff. 3-1-09; correction in (2) (b) (intro.), (3) (a) 2., (b) 2. made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#); [CR 23-006](#): am. (2) (b) (intro.), renum. (2) (b) 1. to (2) (b) 1. a. and am., cr. (2) (b) 1. b., renum. (2) (b) 2. to (2) (b) 2. (intro.) and am., cr. (2) (b) 2. a. to c., am. (3) (a) 2., cr. (3) (a) (ag), am. (3) (b) 4., cr. (3) (b) 4m., am. (3) (b) 5., 6. (intro.), r. (3) (b) 6. b., cr. (3) (b) 6. be. to bs., am. (3) (b) 6. c., am. (3) (b) 7., cr. (3) (b) 7. 9. to 14., (c), am. Table 382.50-1; correction in (3) (b) 4. made under s. 35.17, Stats., and correction in numbering in (3) (ag) made under s. 13.92 (4) (b) 1., Stats., [Register September 2023 No. 813](#).

SPS 382.51 Manufactured homes and manufactured home communities. (1) DRAIN SYSTEMS. Except as provided in pars. (a) and (b), the building sewers and private interceptor main sewers serving a manufactured home or manufactured home community shall comply with s. [SPS 382.30](#).

(a) The minimum slope of the aboveground building sewer shall be 1/8 inch per foot.

(b) For manufactured homes, the most upstream point of the building sewer shall be determined at the connection with the building drain installed by the manufactured home manufacturer prior to delivery.

(c) The above ground building sewer shall be constructed of materials suitable for above ground drain and vent as specified in s. [SPS 384.30 \(2\) \(a\)](#).

(2) WATER SUPPLY SYSTEMS. (a) Except as provided in pars. (b) and (c), the water services and private water mains for a manufactured home or manufactured home community shall comply with s. [SPS 382.40](#).

(b) The above ground water service shall be constructed of materials approved for water distribution as specified in s. [SPS 384.30 \(4\) \(e\)](#).

(c) The curb stop serving an individual manufactured home shall terminate outside the perimeter of the manufactured home.

(d) For manufactured homes, the most downstream point of the water service shall be determined at the connection with the water distribution piping by the manufactured home manufacturer prior to delivery.

(e) The entire water supply system shall be designed for periodic flushing at a minimum velocity of 3 feet per second per ANSI/AWWA Standard C651, Table 3.

(3) MANUFACTURED HOME CONNECTIONS. (a) Frost sleeves for plumbing serving a manufactured home shall conform to all of the following:

1. Water service and building sewer connections shall be provided with frost sleeves extending to within 6 inches of the top of the below ground horizontal building sewer or water service, or to a depth at least 6 inches below the predicted depth of frost in accordance with Table 382.30-6.

2. The frost sleeve shall terminate at least 2 inches above grade.

3. The sleeve shall be constructed of material approved for building drain or building sewer material as specified in s. [SPS 384.30 \(2\)](#).

(b) Termination of the water service and building sewer shall conform to all of the following:

1. The manufactured home water service for connection to the manufactured home shall terminate a minimum of 6 inches above the surrounding finished grade.

2. The manufactured home building sewer for connection to the manufactured home shall terminate a minimum of 4 inches above the surrounding finished grade and may not terminate higher than the water service.

(c) The manufactured home water service and building sewer shall be capped or plugged when not connected to a manufactured home.

Note: See ch. [SPS 382 Appendix A-382.51 \(3\)](#) for further explanatory material.

History: Cr. [Register, February, 1985, No. 350](#), eff. 3-1-85; r. and recr. Table, [Register, August, 1991, No. 428](#), eff. 9-1-91; am. (2) (d), [Register, February, 1994, No. 458](#), eff. 3-1-94; [CR 02-002](#): r. and recr. [Register April 2003 No. 568](#), eff. 5-1-03; [CR 08-055](#): am. [Register February 2009 No. 638](#), eff. 3-1-09; correction in (1) (intro.), (c), (2) (a), (b), (3) (a) 1., 3. made under s. 13.92 (4) (b) 7., Stats., [Register December 2011 No. 672](#); [CR 23-006](#): cr. (2) (e) [Register September 2023 No. 813](#), eff. 10-1-23.

Subchapter VI — Installation

SPS 382.60 Pipe hangers and supports. The provisions of this section control the types, materials and installation of anchors, hangers and supports for plumbing piping.

(1) **MATERIAL.** (a) *Strength.* Hangers, anchors and supports for piping shall be of sufficient strength to support the piping and its contents. Drain piping shall be considered as being full of water. Underground piers for pipe support shall be of concrete, masonry, plastic or pressure treated wood.

(b) *Compatibility.* 1. Hangers and straps shall be of a compatible material that will reduce the potential for galvanic action with the piping.

2. Hangers and straps may not distort, cut or abrade piping.

(2) **INSTALLATION.** (a) Piping hangers and anchors shall be securely attached to the building's structure at intervals to support the piping and its contents, but not at intervals greater than those specified in Table 382.60, except PVC used for venting may have a maximum horizontal spacing of 5 feet. The connection of drain piping to a fixture or appliance shall be considered a point of support.

(b) Hubless pipe installed in the horizontal position shall be supported within 24" on each side of a joint, unless the joint has an alignment retaining shield.

(c) Hangers shall not be attached to a building's structure by means of wood plugs.

(d) Shower valves and piping from the shower valve to the shower head outlet shall be securely attached to the structure.

**Table 382.60
Support Spacing**

Material	Maximum Horizontal Spacing (feet)	Maximum Vertical Spacing (feet)
Acrylonitrile Butadiene Styrene (ABS)	4	10
Brass	10	10
Cast iron	5 ^a	15
Copper or Copper-Alloy Pipe	12	10
Copper or Copper-Alloy Tubing:		
≤ 1¼" diameter ^c	6	10
≥ 1½" diameter ^c	10	10
Chlorinated Polyvinyl Chloride (CPVC):		
≤ 1" diameter ^c	3	5 ^b
≥ 1¼" diameter ^c	4	6 ^b
Crosslinked Polyethylene (PEX)	2 2/3	4
Ductile Iron	5 ^a	15
Galvanized Steel	12	15
Lead	Continuous	4
Polybutylene (PB)	2 ft. 8 in.	4
Polyethylene (PE)	2	4
Polypropylene (PP)	2	4

**Table 382.60
Support Spacing (Continued)**

Material	Maximum Horizontal Spacing (feet)	Maximum Vertical Spacing (feet)
Polyvinylidene Fluoride (PVDF)	2	4
Polyvinyl Chloride, flexible (PVC)	2	4
Polyvinyl Chloride (PVC)	4	10
Stainless Steel	12	15

^a The maximum horizontal spacing for supports may be increased to 10 feet when 10-foot lengths of pipe are employed.

^b Mid-story guide is to be employed.

^c "≥" means greater than or equal to.

"≤" means less than or equal to.

History: Cr. Register, February, 1985, No. 350, eff. 3-1-85; r. and recr. Register, May, 1988, No. 389, eff. 6-1-88; r. and recr. Table 82.60, Register, February, 1994, No. 458, eff. 3-1-94; cr. (2) (d), Register, December, 2000, No. 540, eff. 1-1-01; CR 02-002: am. Table Register April 2003 No. 568, eff. 5-1-03; correction in (2) (a) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: am. (2) (a) Register September 2023 No. 813, eff. 10-1-23.

Subchapter VII — Plumbing Treatment Standards

SPS 382.70 Plumbing treatment standards. (1) **PURPOSE.** The purpose of this section is to establish plumbing treatment standards for plumbing systems that supply water to outlets based on the intended use.

(2) **SCOPE.** The provisions of this section apply to plumbing systems that supply water to outlets.

Note: For requirements and specifications for POWTS, refer to ch. SPS 383.

Note: The department of natural resources requires WPDES permits for point source discharges under ch. 283, Stats.

(3) **GENERAL REQUIREMENTS.** A plumbing system shall supply water that is of a quality that will protect public health and the waters of the state and be suitable for the intended use.

Note: Refer to s. SPS 382.34 for requirements for wastewater reuse.

(4) **MINIMUM REQUIREMENTS.** (a) Except as provided under par. (b), a plumbing system shall supply a quality of water at the outlet or at the termination of the plumbing system that meets or exceeds the minimum requirements as specified in Table 382.70-1.

(b) For an outlet other than a plumbing fixture, appliance or appurtenance, there may be more stringent requirements assigned by a municipality, governmental unit, state agency or the owner of the plumbing system.

**Table 382.70-1
Plumbing Treatment Standards**

Intended Use	Plumbing Treatment Standards ^f
1. Drinking, cooking, food processing, preparation and cleaning, pharmaceutical processing, and medical uses	NR 811 and 812 approved sources
2. Personal hygiene, bathing, and showering	NR 811 and 812 approved sources
3. Automatic fire protection systems	As acceptable by local authority
4. Swimming pool makeup water	NR 811 and 812 approved sources
5. Swimming pool fill water	DHS 172 requirements

Table 382.70-1
Plumbing Treatment Standards (Continued)

Intended Use	Plumbing Treatment Standards ^f
6. Cooling water ^b	pH 6 - 9 ^b ≤ 50 mg/L BOD ₅ ≤ 30 mg/L TSS Free chlorine residual 1.0 - 10.0 mg/L ^b
7. Subsurface infiltration and irrigation, using reuse as the source ^c	≤ 15 mg/L oil and grease ≤ 30 mg/L BOD ₅ ≤ 35 mg/L TSS < 200 fecal coliform cfu/100 mL ^d
8. Subsurface irrigation, using stormwater as the source ^c	< 15 mg/L oil and grease < 60 mg/L TSS
9. Surface or spray irrigation using stormwater and clearwater as the source ^c	≤ 10 mg/L BOD ₅ ≤ 5 mg/L TSS
10. Surface irrigation except food crops, vehicle washing, clothes washing, air conditioning, soil compaction, dust control, washing aggregate, and making concrete ^{a, c}	pH 6 - 9 ^b ≤ 10 mg/L BOD ₅ ≤ 5 mg/L TSS Free chlorine residual 1.0 - 10.0 mg/L ^b
11. Toilet and urinal flushing	pH 6 - 9 ^b 200 mg/L BOD ₅ ≤ 5 mg/L TSS Free chlorine residual .1 mg/L - 4.0 mg/L ^b
12. Uses not specifically listed above	Contact department for standards

^a Refer to the department of agriculture, trade and consumer protection for commercial use.

^b Applies only to wastewater treatment devices for reuse systems. Other equivalent disinfection methods may be approved by the department.

^c These requirements do not apply to the treatment of industrial wastewater or other wastewater discharges that are subject to a WPDES permit issued by the department of natural resources.

^d A 12-inch minimum separation of medium sand or finer material above high groundwater or bedrock.

^f For stormwater, the plumbing treatment standards are based on an annual average. Evaluation of research to prove compliance with this table is based on the geometric mean of the data acceptable to the department or an equivalent method.

(5) NONPOTABLE WATER TREATMENT DEVICES AND SYSTEMS. Devices or equipment used to treat nonpotable water for the uses specified in Table 382.70-1 shall be listed under NSF/ANSI 350 or NSF/ANSI 350-1 by an ANSI accredited, third-party, listing agency acceptable to the department; or be approved by the department in accordance with s. SPS 384.50.

(a) *Design and installation.* The design and installation of nonpotable water treatment devices and systems shall conform to s. SPS 382.34 (3) (a) and include:

1. 'Maintenance and inspection.' A maintenance log shall be created and kept by the system owner and remain onsite. The maintenance log shall be available for inspection upon request and contain the following minimum information:

Action	Service Interval
Inspect, clean, and replace filters	≤ 3 months
Inspect and verify treatment components and systems are operational and maintaining minimum treatment standards.	In accordance with the manufacturer's and department's instructions.
Inspect and verify pump operation	At start-up and ≤ 12 months thereafter
Inspect and verify valve operation	At start-up and ≤ 12 months thereafter
Inspect and verify pressure tank operation	At start-up and ≤ 12 months thereafter
Clean storage tanks, inspect and verify locking devices	At start-up and ≤ 12 months thereafter
Inspect precautionary labeling/markings	At start-up and ≤ 12 months thereafter
Inspect and verify integrity of mulch basins	As required to prevent ponding, runoff and maintain mulch depth
Cross connection control inspection and test	At start-up and ≤ 12 months thereafter

2. 'Manual.' An installation, operation, and maintenance manual shall be provided to the system owner and remain onsite. The manual shall contain the following minimum information:

a. A detailed diagram of the system showing the location of critical system components.

b. Complete operation and maintenance instructions.

c. Instructions on deactivating the system for maintenance or repair.

d. Complete manufacturer's contact information

e. Model number.

f. Representative sources of supply for expendable system components.

3. 'Labeling.' Non-potable water systems shall be indelibly labeled in accordance with NSF 350 or NSF 350-1. The labeling shall be plainly visible after installation.

History: CR 02-002: cr. Register April 2003 No. 568, eff. 5-1-03; CR 04-035: am. Table 82.70-1 Register November 2004 No. 587, eff. 12-1-04; CR 08-055: am. Table 82.70-1 Register February 2009 No. 638, eff. 3-1-09; CR 10-064: am. Table 82.70-1 Register December 2010 No. 660, eff. 1-1-11; correction in (4) (a) made under s. 13.92 (4) (b) 7., Stats., Register December 2011 No. 672; CR 23-006: am. Table 382.70-1, cr. (5) Register September 2023 No. 813, eff. 10-1-23; correction in (5) (a) 1. made under s. 35.17, Stats., Register September 2023 No. 813.

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
Locations of PTOs. Per statute PTO must be in or on the conveyance or can be in a machine room if there is a machine room. Elevators with ITP, VPL's and IPL's - in the conveyance. SCL's on a wall at a landing. Esc and Walks, inside one of the pits? DW's? Protected in a frame at eye level.		318	1011(5)	Add this	Brian R
Require residential elevators to have permanent phones		318	1702(10)(c)2. & 1705(3)(e)	Modify these	Mark Urban
Require permit for card reader or touchless call buttons		318	1007 tables	Add this	Mark Urban
Replacement of IPL platform and arms		318	1007 tables	Add this	Paul R.
Replacement of driving machine		318	1007 tables	Add this	Paul R.
Require premit for door operator replacement, citing codes that apply to them, not codes within door reopening device codes.		318	1007 table 1	Add this	Tom Garza
Correction to Emergency Rule for res door clearance.		318	1705(3)(c)3, 4, 5	Remove	Brian R

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
5.3.1.8.2 addresses collapsible car doors but they aren't addressed in (d) regarding deflection, or 5.3.1.8.3 for clearance.		318	1705	Add	Brian R.
5.4.8 is unclear, for example 5.4.8.2 allows a smaller suspension rope than 5.3.1.12.2. Why a difference		318	1705	Add	Bill MacLachlan, Ed Sabo
I believe we would need a code to state that a new Part V controller = space guards, but we don't have that now. I would really like to see a code or statute that not only requires space guards when a controller is being changed but requires space guards, just because. It would apply to one of these levels:		318	1705	Add	Brian Ed
	1). To all the old Part Vs in commercial buildings.				
	2). To all Residential elevators in the state database including those in 1). above, and in single residences that we regulated and that required space guards originally.				

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
	3). To all Residential elevators in 1). and 2). above in the state database even including those from before space guards became required.				
	4). To all Residential elevators in 1)., 2) and 3). above plus those we don't know about from before we started regulating them in residences.				
Door op replacement needing permit		318	1007	Add	Ed
Add directions for locating escalator emergency stop switches for older escalators where the switch can be hidden and take critical time to locate.		318	17086	Add	Mike Mehringer
Add rules to bring residential elevators into the some level of commercial-building type of code application when a single family dwelling is converted to an event venue, CBRF with >8 residents or a bed and breakfast		318	1003?	Add	Mark U

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
Add rules for replacement of a Part V or other residential elevator for the hoistway doors. At least require space guards.		318		Add	Mark U
Require permit for drive motor replacement, like-for-like		318	1007	Add	Mark U
Dumbwaiter need more permitting requirements for alterations like removing floor ans relocating machines and controllers		318	1007	Add	Doug S.
Clarify in SPS 318 The departments interpaton of A17.1 2.11.11.5.7, 2.11.11.6 & 2.11.11.8 (Bottom door guides & H/W door safety retainers)		318	??	Clarification	Ed
Door edge approvals should be needed for elevators that do not have FEO to ensure that the detector is not wired into the car light circuit.		318	1007		Doug S.
Change code to require review and inspection of "replacements" of FEO components, not just "alterations" and "additions" of the components.		318	1007		Mark U.

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
Change SPS 318.17086(2)(a) 2. to refer to (e) instead of (f)					Brian R.
Retroactive requirement for current-code-compliant clearances or spaceguards on all Part V and Residential elevators in commercial buildings.					Brian R.
Add requirement for reinspection to occur at not longer that 30 days for a conveyance that fails an inspection. If a state inspector performs an inspection to meet this deadline, the inspecting company will be changed for the inspection.					All
Require a landing platform at each stop for an inclined elevator.					
Prohibit remote elevator operation or reset					Brian R.

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
Where an existing elevator has sprinklers installed prior to the prohibition of sprinklers that began in January 1973, the elevator must have shunt trip disconnect system installed at the time of installation of a new controller or other alteration to FEO.					Brian R.
Require a landing platform at each stop for an inclined elevator.					
Require meeting 8.7.2 or 8.7.3 as applicable for LULA mods		A17.1	8.7.5.2		
Remote machine room, require m.r.'s to be adjacent or within a limit like 25' or require labeling of existing piping for remote m.r.'s					Ed
Make all the Cat 5 tests for traction elevators also apply to hydraulic elevators such as doors, terminal stopping devices, etc			8.6.4.20, 8.6.5.16		Brian Beauchamp
Add counterweight runby measurement to Cat 5 tests					Tom Frommel
Make it clear that Cat 3 tests aren't required, or make them required with reporting required			8.6.5.15		Brian

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
No current requirement for residential elevator entrances to cover the entire opening above the cab. Therefore there can be a large gap between the top of cab and the top of the landing door frame when the landing door is open.			A17.1, 5.3		Mark
Add jail/prison code for FEO and in-car controls considering the unique needs of these facilities, radio and intercom to security desk, inmates kicking exposed fixtures. Paul proposes cars have a COP that opens by solenoid when the car is on Phase II to reveal the floor buttons.			2.27.3		Paul
Separating construction spaces at elevator lobbies from public spaces					Ray Guillermo
Make 5.4.2.4 cover what it says it covers by referring not only to 5.3.1.7.2 but also 5.3.1.8.3.			5.4.2.4		Brian, Mark, Ed
Let's eliminate the allowance for a residential elevator to run while the car door is up to 2" open		A17.1	5.3.1.8.2		Mark

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
Periodic testing of ANSI 1.42 conveyances should refer to in-ground jack testing in A17.1 and other testing					Brian
Who should be responsible for software updates, especially when elevator co that wrote the original software no longer has the elevator on service?	See email from Tommy Petty 9-27-2022, with letter from Otis attached, stating the owner is responsible for software updates				
Is it ok to "restrict" egress from the interior of an elevator by placing smoke doors over the landing entrance that are smaller than the entrance is? Ie. 46" entrance, 42" or smaller smoke doors?		A17.1	2.11.6.3		Mark

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
Table SPS 318.1007-1, item 26 states only "Addition of emergency or standby power system" requires a permit. After a conversation with Kim and Brian about this and we all seem to be in agreement that any addition or change to the emergency standby power system warrants a permit and witnessing. Let's change the wording to "Addition or change to emergency or standby power system." Otherwise, full load testing of the new equipment will never be required, so no one knows if the elevators will work in an emergency. As things currently stand, it's as if a hoist motor can be replaced without witnessed testing under full load.		318			Mark
Elevator converted to a material lift or made inactive. These and accidents are going unreported to DSPS. Should we require an application and review for each?					Ed
Remove "and tests" from SPS 318.1810(4)		318			Mark, Brian

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
Test fire alarm systems when systems, panels or detectors are replaced or system reprogrammed. Systems are failing when tested sometimes years later. Also, how long can a FA system be down while waiting for components?					John Reis Schindler Elevator
Require quarterly checks of CSB's for exposed wires	See email with pics from Adam 5-30-23				Adam Smith
Not allow private residence inclined elevator to lower down onto a deck, rocks or other surface where someone could be trapped and crushed. Require a pit or no access to the space below the platform at the bottom landing.					Ed Sabo, Mark Urban

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
Currently, Information for owners document states: IN-GROUND HYDRAULIC JACKS - LEAKING, REMOVAL, ABANDONEMENT See the Department of Natural Resources (DNR) website for information regarding loss of oil from a leaking elevator hydraulic jack: DNR What To Do in Case of an Oil Spill. An in-ground hydraulic elevator jack that will no longer be used may not be abandoned in place. Seems we should place a limit on what we call "abandoned in place." Otherwise the oil can corrode through the jack and never be noted because the system is never being placed under pressure. Therefor , I suggest if a Hydraulic Elevator is taken OOS for an undetermined time, the oil should be removed from the system.		318	170811(5)		Mark Urban

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
Paul found an elevator with STM's where the trip counter had been reset without changing the STMs. Add requirement for quarterly check of STMs by the service contractor.					Paul
Require reduced clearance for outdoor inclined elevators between car and landing doors, similar to indoor residential					Brian
Safety nut switch on vpl's should be observed and tested at 5 year interval, both to verify the switch will disable the lift if the drive nut fails and to verify the lift is not running on the safety nut itself. If that was the case, the next thing to happen would be a free fall of the lift.					Mark Urban
A17.1, 8.6.4.19.7, Witnessing of Standby or Emergency Power Operation at 5 year interval as is required in other jurisdictions. A17.2.1					Brian and Mark

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
Require some type of review and approval for car interior changes to verify weight and finishes					Ed
Require "accident" report for when damage occurs to a conveyance, not just an injury					
Regulating questionable devices, those that might not meet a standard					Brian
Excessive gap between bottom of gate and platform on residential elevators (Stiltz)					Brian and Mark

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
Procedures and devices used for periodic tests provided by the manufacturer in the MCP must be the same procedures and devices that manufacturer uses.					DSPS
Add car lighting to stand-by power when elevator on SB power					Jeff Valentine, ATIS
Require elevator phones to reach a second company if the first company doesn't answer as required by 2.27.1.1.2(b)					Adam S.
Where field welding is required, make the welder certification part of the maintenance record					Kim?
Add to 2.27.1.1.4 requirements for a dedicated fire phone where rise is 60' or more.					
Do we require residentials to get approval and inspection for mods?					Brian
Adding "Robotics" to an elevator should require an alteration approval and inspection					Brian

2019 (Future) A17.1 and Corresponding SPS Code Change Requests

TOPIC		CODE	LIKELY SECTION	ACTION	REQUESTED BY
Require the car gates on private residence outdoor inclined elevators lock instead of just latch.					DSPS