



Frequently Asked Questions Regarding Conveyances Serving Individual Residential Dwellings

Revision dates: 1-14-2016, 10-5-2021:

10-5-2021 revision: Added important information regarding door clearances for existing residential elevators. Updated code references. Due to code change, remove allowances for space guards and light curtains that were previously described in Questions 16 and 17 to meet residential elevator door clearance requirements.

1). Question: Is an elevator or dumbwaiter serving an individual residential dwelling unit required to be regulated?

Answer: Yes, effective January 1, 2009, new installations serving individual residential dwelling units are required to be regulated by the Department of Safety and Professional Services (DPS) as included in the statutory definition of "Conveyance". See [stat. 101.981\(1\)\(c\)](#). Installation must be performed by a licensed elevator contractor utilizing properly licensed personnel. Installed products must be accepted by the department as meeting minimum design requirements for safety. The applicable code for an installation is the code in effect on the date of the contract between the owner (or builder) and the licensed elevator contractor. See [stat. 101.983](#) and [Wisconsin Administrative Code SPS 318](#).

2). Question: Do these regulations affect existing elevators and dumbwaiters serving individual residential dwelling units?

Answer: An elevator or dumbwaiter serving an individual residential dwelling and installed, or contracted to be installed, *prior to* January 1, 2009, is not subject to regulation by the department or its agents. If such an elevator or dumbwaiter is replaced, regulations apply to the new elevator or dumbwaiter.

3). Question: Are inspections required for a regulated elevator or dumbwaiter?

Answer: A new elevator or dumbwaiter must pass an acceptance inspection by a licensed elevator inspector of the department or its agent prior to use.

Elevators and dumbwaiters serving individual dwellings are not required to have annual operating permits therefore are not subject to annual inspection requirements after passing the initial inspection. See [stat. 101.983\(2\)\(e\)](#).

At the time of sale of a dwelling unit, the owner and prospective buyer may enter into a contract that includes an inspection of the elevator or dumbwaiter by a licensed elevator contractor. See [stat. 101.981\(3\)](#).

4). Question: Is a new elevator or dumbwaiter required to be regulated if it is hand powered?

Answer: Yes, regulations apply to hand-powered equipment per ASME A17.1, sections 4.3 and 7.1.

5). Question: What codes govern the design and installation of a residential elevator or a residential inclined elevator?

Answer: The adopted national Safety Code for Elevators and Escalators, ASME A17.1, Section 5.3 covers residential (vertical) elevators and Section 5.4 covers residential inclined elevators. [Wisconsin Administrative Code SPS 318](#) modifies these sections and provides plan review and inspection requirements.

[Wisconsin Administrative Code SPS 305](#) covers licensing of contractors and individuals performing the installation, testing and inspection of such elevators and dumbwaiters. National Electrical Code (NEC) covers electrical requirements. Local municipalities may have additional requirements for installations, permitting and inspections.

For inclined elevators at lake, river or other properties, Wisconsin Department of Natural Resources, municipalities and lake or river districts may have additional requirements.

6). Question: May a company or a homeowner design an elevator or dumbwaiter?

Answer: Yes, however the design must be verified in writing as meeting all applicable design requirements of the applicable codes including factors of safety. See [Wisconsin Administrative Code SPS 318](#), SPS 318.1010. Verification must be provided by a Wisconsin-licensed architect or professional engineer or by a recognized test laboratory, and found to be acceptable to this department. Please see this document for additional information: [New Product Approval Requirements](#)

The elevator or dumbwaiter must be installed by a licensed elevator contractor applying for permission to perform the installation. The elevator or dumbwaiter must be installed and using properly licensed personnel.

7). Question: Is the licensed elevator contractor submitting residential elevator or dumbwaiter plans for review for an installation serving an individual dwelling unit required to have the plans reviewed by a project supervising professional (architect or engineer), similar to plans for a commercial installation?

Answer: For an installation serving a typical single family residence, no, once the elevator or dumbwaiter model has been found to be acceptable by the department as meeting minimum design requirements for safety, each individual plan submittal is not required to include review by a licensed architect or engineer.

Where the elevator or dumbwaiter is to be installed to serve a single residential dwelling unit within a larger commercial building (such as a condominium, apartment or mixed-use building) and the building is altered to

accommodate the installation of the conveyance, yes, the installation plans must be reviewed and approved by the supervising architect or engineer prior to submittal by the installing licensed elevator contractor for plan review.

8). Question: Is the licensed elevator contractor submitting residential elevator or dumbwaiter plans for review required to have evidence that the dwelling has a building permit or other building plan approval, similar to a commercial installation?

Answer: For an elevator or dumbwaiter within a typical single family residence, No, evidence the building plans have been approved is not required with plan submittal.

Where the elevator or dumbwaiter is to be installed to serve a single residential dwelling unit within a larger commercial building (such as a condominium, apartment or mixed-use building) and the building is constructed or altered for installation of the conveyance, Yes, commercial building review is required per [Wisconsin Administrative Code SPS 361](#), SPS 361.30.

9). Question: May a limited use/limited application (LULA) elevator or a larger commercial type elevator be installed in an individual residential dwelling unit?

Answer: Yes. Regulations in [Wisconsin Administrative Code SPS 318](#), 318.1702(2) through (4) and (10) include some unique requirements for such installations.

10). Question: May two individual dwelling units share a single private residence-type elevator?

Answer: No, ASME A17.1, Section 5.3 scope limits the use of a residential type elevator to a (one) private residence. An elevator shared by two residences must be a limited use/limited application (LULA) or larger commercial type elevator.

11). Question: Is a new inclined elevator installed on private property at a lake, river or other site required to be regulated?

Answer: Yes, the regulations apply to an outdoor inclined elevator per ASME A17.1, Section 5.4.

12). Question: Does the National Electrical Code (NEC) apply to an elevator or dumbwaiter serving a single dwelling?

Answer: Yes, NEC and [Wisconsin Administrative Code SPS 316](#) cover electrical requirements. In particular, see NEC 110.26 for working clearances at a disconnect that contains overcurrent protection and at the controller.

13). Question: Is a dedicated machine room required for residential elevator or dumbwaiter equipment?

Answer: No, main disconnects and controllers are subject to the requirements of National Electrical Code (NEC) for access to, and headroom about, electrical equipment. Also, elevator equipment that may be hot to the touch, rotating or moving may require an enclosure to safeguard occupants or property.

14). Question: Is a sump or drain required for the pit of an elevator serving an individual residential dwelling unit?

Answer: No, however permanent provisions must be made to prevent accumulation of ground water in the pit. This may be accomplished through pit construction without a sump or a drain. Contact the local plumbing inspector for any local requirements.

15). Question: Is a new inclined *platform lift* installed on private property at a lake, river or other site required to be regulated?

Answer: No, DSPS regulations do not apply to an inclined *platform lift* designed to the ASME A18.1 standard serving an individual residential dwelling unit. Please note: Inclined platform lifts are limited to smaller platforms, shorter travel and slower speeds than inclined *elevators* therefore are not as readily usable for many outdoor sites. An inclined platform lift installed outdoors must be designed and installed for outdoors.

16). Question: What are the requirements for space guards?

Answer: Space guards are no longer an acceptable means to achieve the required clearance between hoistway doors and the car door or gate for a newly-installed residential elevator. For newly-installed residential elevators, clearance requirements in A17.1, 5.3.1.7.2 and 5.3.1.8.3 are to be measured between each hoistway door and car door or gate surface without an intervening space guard.

Door clearances for existing residential elevators: Owners and users of any residential-type elevator should be aware that excessive clearance between hoistway doors and car doors or gates has resulted in serious injury and death, especially to children. The department strongly recommends that any existing elevator having more than $\frac{3}{4}$ " horizontal clearance between the hoistway side of a hoistway door and the edge of the hoistway sill or more than 4" clearance between the hoistway side of a hoistway door and the car door or gate have the hoistway doors relocated or space guards installed to eliminate the hazard. Where space guards are chosen to reduce the clearance for these existing elevators, the department recommends the space guards be designed as follows:

Vertical clearance between the bottom of the space guard and hoistway sill shall be only as necessary for the bottom of the space guard to clear the threshold and flooring. This clearance should not exceed $\frac{3}{4}$ inch to limit the ability of children to stand with their feet below the space guard.

The vertical portion of the space guard should extend to at least 42 inches above the hoistway sill to prevent a child from standing on the top of the space guard. A space guard that extends to less than 72 inches above the floor should have its top edge beveled or angled to the door at not less than 75 degrees to the horizontal to further discourage standing on the guard or attempting to pull up onto it.

The space guard should be continuous from the bottom edge to the top without openings that could be used as steps or handholds. The horizontal clearance between the sides of the space guard and the sides of the hoistway door frame should not exceed 1-1/4 inches to prevent a child from standing with a leg along the side of the space guard.

A cutout in the side edge of a space guard around a door handle or knob should have the top and bottom angled at not less than 75 degrees to the horizontal.

The bevel or angle at the top of the space guard and at the cutout around a door handle or knob may be omitted if the space guard projects not more than $\frac{3}{4}$ inch from any part of the hoistway side of the hoistway door.

17). Question: What are the requirements for light curtains?

Answer: A light curtain is no longer an acceptable means to guard the space between hoistway doors and the car door or gate for a newly-installed residential elevator. For newly-installed residential elevators, clearance requirements in A17.1, 5.3.1.7.2 and 5.3.1.8.3 are to be measured between each hoistway door and car door or gate surface without an intervening light curtain.

Door clearances for existing residential elevators: A properly installed light curtain may be used to mitigate the hazard caused by excessive door clearance for existing residential-type elevators only.

18). Question: May the hoistway for a residential elevator include glass?

Answer: Yes, elevator hoistway enclosures are permitted to include glass that is laminated conforming to ANSI Z97.1 or 16 CFR Part 1201. Markings as specified in the ANSI or CFR standard shall be on each separate piece of glass and shall remain visible after installation.

Windows in elevator hoistways shall be protected by metal grillwork that will reject a 3 inch diameter ball and shall be securely fastened from the inside of the hoistway per ASME A17.1, 5.3.1.1.

19). Question: May a residential elevator *car* include glass, plastics or acrylics?

Answer: Yes, consult with your elevator contractor for details.

20). Question: Is a vertical platform lift, inclined platform lift or stairway chairlift serving an individual residential dwelling unit required to be regulated?

Answer: No, a vertical platform lift, inclined platform lift or stairway chairlift serving an individual residential dwelling unit is not included in the definition of a "Conveyance". See [stat. 101.981\(1\)\(c\)](#).

21). Question: Is a vertical platform lift, inclined platform lift or stairway chairlift located where it could be shared by two or more single residences required to be regulated?

Answer: Yes, a vertical platform lift, inclined platform lift or stairway chairlift located where it can be shared by two or more single residences is considered to be in a commercial space and is required to be regulated as a commercial installation.