

NEW SECTION

**WAC 296-829-099 Definitions.**

**Aviation gasoline.** Gasoline fuel for reciprocating piston engine helicopters, also known as avgas.

**Cargo hook.** A device attached to a helicopter that is used to hold suspended loads.

**Competent person.** One who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

**Deadman controls.** A control, switch or device that will automatically shut off whenever the operator releases it.

**Deposit area.** An area that is designated for dropping off and picking up suspended loads.

**Downwash.** The wind created by the rotating blades of a helicopter.

**Ground device.** A device used to dissipate the static electricity charge that has built up on a suspended load.

**Helicopter crane.** A helicopter that carries cargo or equipment suspended underneath it.

**Jet A type fuel.** A kerosene grade fuel suitable for helicopters with turbine engines.

**Jet B type fuel.** A blend of gasoline and kerosene fuel.

**Powered hoist.** A powered device designed to lift and lower equipment and cargo.

**Tag line.** A line or rope used to control suspended loads that can swing freely.

AMENDATORY SECTION (Amending WSR 04-09-099, filed 4/20/04, effective 9/1/04)

**WAC 296-829-100 Scope.** Chapter 296-829 WAC applies to helicopters when used to carry loads, suspended with a cargo sling, powered hoist, or other attaching methods.

**((Exemption))** This chapter does **not** apply to the use of helicopters:

**EXEMPTION:**

- (\*) 1. In the logging industry.
- (\*) 2. For rescue operations when a winch or hoist is used.

AMENDATORY SECTION (Amending WSR 04-09-099, filed 4/20/04, effective 9/1/04)

**WAC 296-829-200 Design and installation requirements for helicopters.**

**Summary:**

**Your responsibility:** To make sure your helicopters meet design specifications and are equipped properly.

~~((You must:~~

~~Follow Federal Aviation Administration (FAA) requirements  
WAC 296-829-20005.~~

~~Install and test hooks on helicopters correctly  
WAC 296-829-20010.)~~

<u>You must meet the requirements...</u>	<u>in this section:</u>
<u>Follow Federal Aviation Administration (FAA) requirements</u>	<u>WAC 296-829-20005</u>
<u>Install and test hooks on helicopters correctly</u>	<u>WAC 296-829-20010</u>

AMENDATORY SECTION (Amending WSR 04-09-099, filed 4/20/04, effective 9/1/04)

**WAC 296-829-20005 Follow Federal Aviation Administration (FAA) requirements.** You must ((~~+~~  
•)) make sure helicopter cranes and their use meet the applicable requirements of the Federal Aviation Administration (FAA).

AMENDATORY SECTION (Amending WSR 04-09-099, filed 4/20/04, effective 9/1/04)

**WAC 296-829-20010 Install and test hooks on helicopters correctly.** ((~~You must:~~  
• ~~Make sure electrically operated cargo hooks are:~~  
~~— Designed and installed to prevent accidental operation.~~  
~~— Equipped with an emergency mechanical control to release the load.~~  
• ~~Make sure a competent person tests all hooks before each day's operation to make sure both the electrical and mechanical releases work properly.~~)) (1) You must make sure electrically operated cargo hooks are:  
(a) Designed and installed to prevent accidental operation.  
(b) Equipped with an emergency mechanical control to release the load.  
(2) You must make sure a competent person tests all hooks before each day's operation to make sure both the electrical and mechanical releases work properly.

AMENDATORY SECTION (Amending WSR 04-09-099, filed 4/20/04, effective 9/1/04)

**WAC 296-829-300 Maintenance.**  
**Summary:**  
**Your responsibility:** To keep helicopters in safe operating condition.  
((~~You must:~~  
~~Keep landing and deposit areas safe~~

WAC 296-829-30005.  
 Follow safe refueling procedures  
 WAC 296-829-30010.)

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Keep landing and deposit areas safe</u>	<u>WAC 296-829-30005</u>
<u>Follow safe refueling procedures</u>	<u>WAC 296-829-30010</u>

AMENDATORY SECTION (Amending WSR 04-09-099, filed 4/20/04, effective 9/1/04)

**WAC 296-829-30005 Keep landing and deposit areas safe. ((You must:**

- ~~(1) Make sure precautions are taken to prevent loose objects from being caught in the downwash and flying around.~~
  - ~~• Secure or remove all loose gear:~~
    - ~~— Within one hundred feet of lift and deposit areas.~~
    - ~~— In all other areas affected by rotor downwash.~~
- ~~(2) Make sure employees do not work under hovering craft, except where necessary to hook or unhook loads.~~
- ~~(3) Make sure safe access and exit, including an emergency escape route, is provided for employees who hook or unhook loads.~~
- ~~(4) Prohibit open fires in any area that could be affected by the rotor downwash.~~
- ~~(5) Make sure unauthorized people do not go within fifty feet of the helicopter when the rotor blades are turning.~~
- ~~(6) Make sure all employees:~~
  - ~~• Stay in full view of the pilot, in a crouched position, when approaching or leaving a helicopter with rotating blades.~~
  - ~~• Stay away from the area behind the cockpit or cabin unless the operator authorizes them to work there.~~
- ~~(7) Take precautions to eliminate reduced visibility.~~
- ~~(8) Make sure ground personnel take special care to stay clear of rotors when visibility is reduced by dust or other conditions.))~~ (1) You must make sure precautions are taken to prevent loose objects from being caught in the downwash and flying around. Secure or remove all loose gear:
  - (a) Within one hundred feet of lift and deposit areas.
  - (b) In all other areas affected by rotor downwash.
- (2) You must make sure employees do not work under hovering craft, except where necessary to hook or unhook loads.
- (3) You must make sure safe access and exit, including an emergency escape route, is provided for employees who hook or unhook loads.
- (4) You must prohibit open fires in any area that could be affected by the rotor downwash.
- (5) You must make sure unauthorized people do not go within fifty feet of the helicopter when the rotor blades are turning.
- (6) You must make sure all employees:
  - (a) Stay in full view of the pilot, in a crouched position, when approaching or leaving a helicopter with rotating blades.

(b) Stay away from the area behind the cockpit or cabin unless the operator authorizes them to work there.

(7) You must take precautions to eliminate reduced visibility.

(8) You must make sure ground personnel take special care to stay clear of rotors when visibility is reduced by dust or other conditions.

AMENDATORY SECTION (Amending WSR 04-09-099, filed 4/20/04, effective 9/1/04)

**WAC 296-829-30010 Follow safe refueling procedures. ((You must:**

~~• Make sure refueling areas are safe.~~

~~— Post "NO SMOKING" signs at all entrances to the refueling area.~~

~~— Provide at least one thirty pound fire extinguisher, or a combination totaling thirty pounds, good for class A, B, and C fires, within one hundred feet on the upwind side of the refueling operation.~~

**Reference:** For additional requirements relating to portable fire extinguishers, see WAC 296-800-300 in the safety and health core rules.

**You must:**

~~• Make sure workers involved in refueling are trained in both:~~

~~— The refueling operation;~~

**AND**

~~— The use of fire extinguishing equipment they may need.~~

~~• Make sure the following precautions are taken before and during refueling:~~

~~— Keep unauthorized people at least fifty feet away from the refueling operation or equipment.~~

~~— Prohibit smoking and open flames within fifty feet of the refueling area or fueling equipment.~~

~~— Make sure helicopter engines are shut down before refueling, if using aviation gasoline or jet B type fuel.~~

~~— Pump fuel, either by hand or power.~~

~~— Use self closing nozzles or deadman controls:~~

~~■ Do not allow these to be blocked open.~~

~~— Make sure nozzles are not dragged along the ground.~~

~~— Make sure the helicopter and the fueling equipment are grounded.~~

~~— Electrically bond the fueling nozzle to the helicopter:~~

~~■ Do not use conductive hose for this bonding.~~

~~— Make sure all grounding and bonding connections are:~~

~~■ Electrically and mechanically firm.~~

~~■ On clean unpainted metal parts.~~

~~• Stop fueling **immediately** if there is a spill:~~

~~— Do not continue operation until the person in charge has determined it is safe.)) (1) You must make sure refueling areas are safe.~~

(a) Post "NO SMOKING" signs at all entrances to the refueling area.

(b) Provide at least one thirty-pound fire extinguisher, or a combination totaling thirty pounds, good for class A, B, and C fires, within one hundred feet on the upwind side of the refueling operation.

**Reference:** For additional requirements relating to portable fire extinguishers, see WAC 296-800-300 in the safety and health core rules.

(2) You must make sure workers involved in refueling are trained in both:

(a) The refueling operation; and

(b) The use of fire extinguishing equipment they may need.

(3) You must make sure the following precautions are taken before and during refueling:

(a) Keep unauthorized people at least fifty feet away from the refueling operation or equipment.

(b) Prohibit smoking and open flames within fifty feet of the refueling area or fueling equipment.

(c) Make sure helicopter engines are shut down before refueling, if using aviation gasoline or jet B type fuel.

(d) Pump fuel, either by hand or power.

(e) Use self-closing nozzles or deadman controls:

(i) Do not allow these to be blocked open.

(ii) Make sure nozzles are not dragged along the ground.

(iii) Make sure the helicopter and the fueling equipment are grounded.

(iv) Electrically bond the fueling nozzle to the helicopter.

(v) Do not use conductive hose for this bonding.

(f) Make sure all grounding and bonding connections are:

(i) Electrically and mechanically firm.

(ii) On clean unpainted metal parts.

(4) Stop fueling **immediately** if there is a spill. Do not continue operation until the person in charge has determined it is safe.

AMENDATORY SECTION (Amending WSR 04-09-099, filed 4/20/04, effective 9/1/04)

**WAC 296-829-400 Operating the helicopter.**

**Summary:**

**Your responsibility:** To make sure helicopters are operated safely.

~~(( You must:~~

~~Hold daily briefings~~

~~WAC 296-829-40005.~~

~~Make sure employees are dressed correctly~~

~~WAC 296-829-40010.~~

~~Make sure loads are attached correctly~~

~~WAC 296-829-40015.~~

~~Make sure the load is handled correctly~~

~~WAC 296-829-40020.)~~)

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Hold daily briefings</u>	<u>WAC 296-829-40005</u>
<u>Make sure employees are dressed correctly</u>	<u>WAC 296-829-40010</u>
<u>Make sure loads are attached correctly</u>	<u>WAC 296-829-40015</u>
<u>Make sure the load is handled correctly</u>	<u>WAC 296-829-40020</u>

AMENDATORY SECTION (Amending WSR 04-09-099, filed 4/20/04, effective 9/1/04)

**WAC 296-829-40005 Hold daily briefings.** You must(~~+~~  
~~•~~)) make sure the helicopter pilot and ground personnel hold a briefing before each day's operation to discuss cargo-handling plans.

AMENDATORY SECTION (Amending WSR 04-09-099, filed 4/20/04, effective 9/1/04)

**WAC 296-829-40010 Make sure employees are dressed correctly.** (~~(You must:~~

~~• Make sure employees receiving the load:~~  
~~— Do NOT wear loose fitting clothes that could snag on the hoist line.~~

~~— Wear personal protective equipment (PPE), including complete eye protection and hard hats that are secured by chin straps.))~~ You must make sure employees receiving the load:

(1) Do **not** wear loose-fitting clothes that could snag on the hoist line.

(2) Wear personal protective equipment (PPE), including complete eye protection and hard hats that are secured by chin straps.

**Reference:** For other requirements relating to PPE, see WAC 296-800-160 in the safety and health core rules.

AMENDATORY SECTION (Amending WSR 04-09-099, filed 4/20/04, effective 9/1/04)

**WAC 296-829-40015 Make sure loads are attached correctly.** (~~(You must:~~

~~• Make sure loads are properly slung so tag lines cannot be drawn up into rotors.~~

~~• Make sure precautions are taken on all freely suspended loads to keep hand splices from spinning open or cable clamps from loosening, such as using pressed sleeves or swedged eyes.~~

~~• Make sure the weight of the load does not exceed the manufacturer's load ratings.~~

~~• Make sure hoist wires and other gear are **not** attached to or allowed to catch on any fixed structure.))~~ (1) You must make sure loads are properly slung so tag lines cannot be drawn up into rotors.

(2) You must make sure precautions are taken on all freely suspended loads to keep hand splices from spinning open or cable clamps from loosening, such as using pressed sleeves or swedged eyes.

(3) You must make sure the weight of the load does not exceed the manufacturer's load ratings.

(4) You must make sure hoist wires and other gear are **not** attached to or allowed to catch on any fixed structure.

~~((Exemption))~~ **EXEMPTION:** This requirement does not apply to pulling lines or conductors that "pay out" from a container or reel.

**WAC 296-829-40020 Make sure the load is handled correctly.**

~~((You must:~~

- ~~• Make sure signal systems, whether radio or hand signals, are checked before hoisting the load:
  - ~~— When using hand signals, use those shown in Figure 1.~~~~
- ~~• Make sure workers on the ground do **either** of the following before touching the suspended load:
  - ~~— Use a ground device to safely discharge any static charge;~~
  - ~~OR~~
  - ~~— Put on and wear rubber gloves.~~~~
- ~~• Make sure there are enough employees for safe loading and unloading operations.~~
- ~~• Make sure constant communications are maintained between the pilot and signal person:~~

~~The signal person must be distinctly recognizable from other ground personnel.)) (1) You must make sure signal systems, whether radio or hand signals, are checked before hoisting the load. When using hand signals, use those shown in Figure 1.~~

~~(2) You must make sure workers on the ground do **either** of the following before touching the suspended load:~~

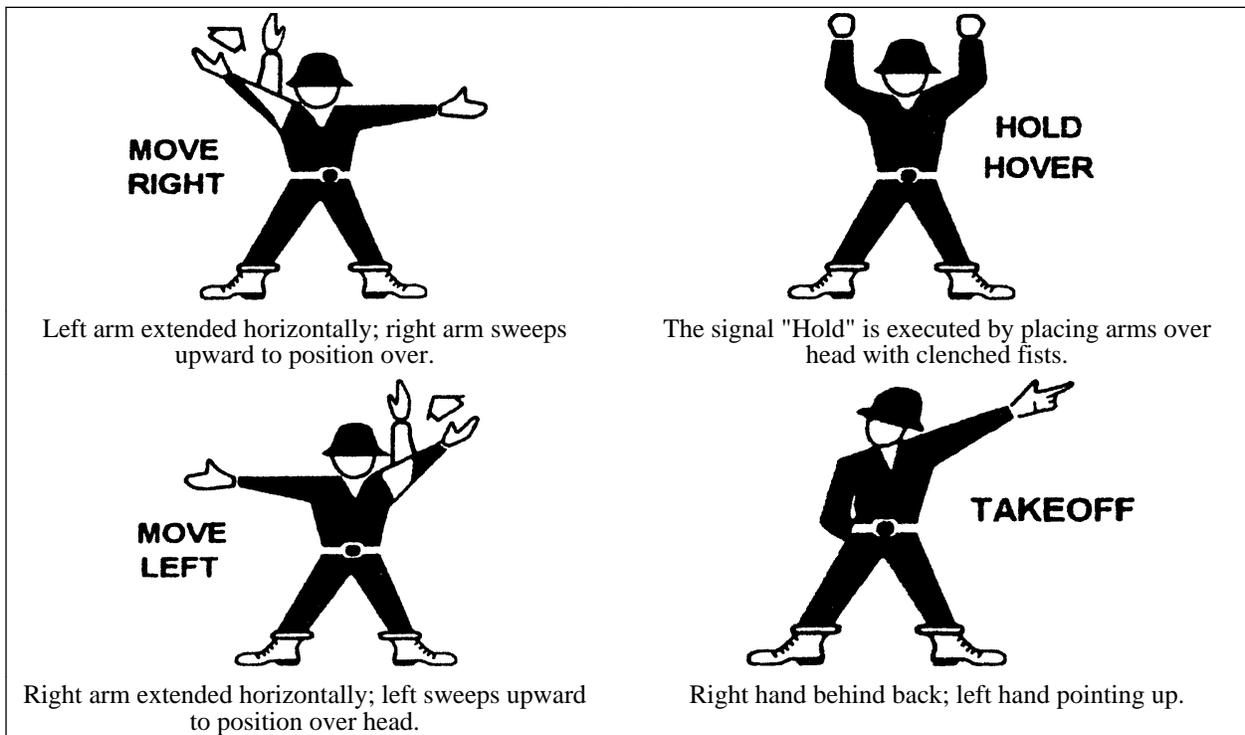
- ~~(a) Use a ground device to safely discharge any static charge; or~~
- ~~(b) Put on and wear rubber gloves.~~

~~(3) You must make sure there are enough employees for safe loading and unloading operations.~~

~~(4) You must make sure constant communications are maintained between the pilot and signal person.~~

~~(5) You must make sure the signal person is distinctly recognizable from other ground personnel.~~

**HELICOPTER HAND SIGNALS**

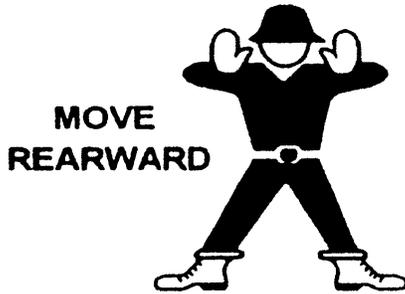




Combination of arm and hand movement in a collecting motion pulling toward head.



Arms crossed in front of body and pointing downward.



Hands above arm, palms out using a noticeable showing motion.



Arms extended, palms up; arms sweeping up.



Left arm held down away from body. Right arm cuts across left arm in a slashing movement from above.



Arms extended, palms down; arms sweeping down.

**REPEALER**

The following section of the Washington Administrative Code is repealed:

WAC 296-829-500 Definitions.

AMENDATORY SECTION (Amending WSR 02-16-087, filed 8/7/02, effective 10/1/02)

**WAC 296-832-200 Training.**

**SUMMARY**

**Your responsibility:** To make sure all employees receive crime prevention training as part of your accident prevention program.

~~((You must:~~

~~Provide crime prevention training to your employees  
WAC 296-832-20005~~

~~Provide crime prevention retraining to your employees annually  
WAC 296-832-20010.)~~

<u><b>You must meet the requirements...</b></u>	<u><b>in this section:</b></u>
<u>Provide crime prevention training to your employees</u>	<u>WAC 296-832-20005</u>
<u>Provide crime prevention retraining to your employees annually</u>	<u>WAC 296-832-20010</u>

AMENDATORY SECTION (Amending WSR 02-16-087, filed 8/7/02, effective 10/1/02)

**WAC 296-832-20005 Provide crime prevention training to your employees.**

**Note:** These training requirements apply only to employees working any time during the hours of 11:00 p.m. to 6:00 a.m. This training must be conducted prior to the employee working this time period.

~~((You must:~~

~~• Provide crime prevention training as part of your accident prevention program.~~

~~— Make sure you have instructed your employees on the purpose and function of robbery and violence prevention to provide them with the knowledge and skills required to maintain their personal safety.~~

~~• Provide training and training materials that outline your company's:~~

~~— Security policies~~

~~— Safety and security procedures~~

~~— Personal safety and crime prevention techniques.~~

~~• Provide formal instruction about crime prevention through a training seminar or training video presentation that includes these topics:~~

~~— How keeping the store clean, neat and uncluttered discourages potential robbers~~

~~— Why the cash register should be kept in plain view from outside the store, if your store layout allows~~

~~— Reasons for operating your business with only a minimum number of cash registers at night~~

~~— Reasons for keeping cash register funds to a minimum~~

~~— How to take extra precautions after dark such as ways to keep alert, making sure appropriate lights are on, inspecting dark corners, and identifying possible hiding places for robbers~~

~~— Violence prevention procedures in case of a robbery.~~

~~• Have employees sign a statement indicating the date, time, and place they received their crime prevention training.~~

~~• Keep a record of this information readily available for review when requested by the department of labor and industries.))~~ (1) You must provide crime prevention training as part of your accident prevention program. Make sure you have instructed your employees on the purpose and function of robbery and violence prevention to provide them with the knowledge and skills required to maintain their personal safety.

(2) You must provide training and training materials that outline your company's:

(a) Security policies;

(b) Safety and security procedures;

(c) Personal safety and crime prevention techniques.

(3) You must provide formal instruction about crime prevention through a training seminar or training video presentation that includes these topics:

(a) How keeping the store clean, neat, and uncluttered discourages potential robbers;

(b) Why the cash register should be kept in plain view from outside the store, if your store layout allows;

(c) Reasons for operating your business with only a minimum number of cash registers at night;

(d) Reasons for keeping cash register funds to a minimum;

(e) How to take extra precautions after dark such as ways to keep alert, making sure appropriate lights are on, inspecting dark corners, and identifying possible hiding places for robbers;

(f) Violence prevention procedures in case of a robbery.

(4) You must have employees sign a statement indicating the date, time, and place they received their crime prevention training.

(5) You must keep a record of this information readily available for review when requested by the department of labor and industries.

**Note:** Employers may keep electronic records of employee training and verification.

~~((• Have a videotape or other materials about crime prevention available to all employees at their request.))~~ (6) You must have a videotape or other materials about crime prevention available to all employees at their request.

AMENDATORY SECTION (Amending WSR 02-16-087, filed 8/7/02, effective 10/1/02)

**WAC 296-832-20010 Provide crime prevention retraining to your employees annually.** You must((÷

•)) provide a refresher course in crime prevention training annually.

AMENDATORY SECTION (Amending WSR 02-16-087, filed 8/7/02, effective 10/1/02)

**WAC 296-832-300 Store safety.**

**SUMMARY**

**Your responsibility:** To take certain safety measures to discourage crime in your store.

~~((You must:~~

~~Have a safe in your store~~

~~WAC 296-832-30005~~

~~Post a notice about your store's safe and cash register~~

~~WAC 296-832-30010~~

~~Provide outside lighting~~

~~WAC 296-832-30015.))~~

<u>You must meet the requirements...</u>	<u>in this section:</u>
<u>Have a safe in your store</u>	<u>WAC 296-832-30005</u>
<u>Post a notice about your store's safe and cash register</u>	<u>WAC 296-832-30010</u>
<u>Provide outside lighting</u>	<u>WAC 296-832-30015</u>

AMENDATORY SECTION (Amending WSR 02-16-087, filed 8/7/02, effective 10/1/02)

**WAC 296-832-30005 Have a safe in your store.** You must((+  
+)) have a drop-safe, limited access safe, or comparable device in your store.

AMENDATORY SECTION (Amending WSR 02-16-087, filed 8/7/02, effective 10/1/02)

**WAC 296-832-30010 Post a notice about your store's safe and cash register.** ~~((You must:~~

~~• Post a notice in an obvious place on a window or door stating:~~

~~— There is a safe in the store~~

~~— Employees have no access to the safe~~

~~— The cash register contains only enough cash to do business.))~~

You must post a notice in an obvious place on a window or door stating:

(1) There is a safe in the store.

(2) Employees have no access to the safe.

(3) The cash register contains only enough cash to do business.

**Notes:**

((\*) 1. You will not be cited by ((WISHA)) DOSH for having money in the cash register over the minimal amount needed to do business.

((\*) 2. All displays and other materials posted in the window(s) or door(s) should be arranged to provide an unobstructed view of the cash register if it is visible from the street.

AMENDATORY SECTION (Amending WSR 02-16-087, filed 8/7/02, effective 10/1/02)

**WAC 296-832-30015 Provide outside lighting.** You must((+  
+))

→)) light the store's approach area and parking lot during all night hours your business is open.

**Note:**

You can do this by:

((-)) 1. Providing surveillance lighting to observe pedestrian and vehicle entrances.

((-)) 2. Providing lighting of a minimum of one foot candle to comply with ANSI/IES RP7-1983. Lighting levels can be measured with a light meter; for comparison purposes 1 foot-candle = 1 lumen incident per square foot = 10.76 lux.

NEW SECTION

**WAC 296-876-099 Definitions.**

**Cage.** An enclosure that encircles the climbing space of a fixed ladder. It is fastened to the ladder side rails or to the structure and may also be called a cage or basket guard.

**Cleat.** A ladder crosspiece used in climbing or descending. Also called a step or rung.

**Equivalent.** Alternative design, material, or method to protect against a hazard. You have to demonstrate it provides an equal or greater degree of safety for employees than the method, material, or design specified in the rule.

**Extension ladder.** A nonself-supporting portable ladder consisting of two or more sections. The sections travel in guides or brackets that allow the length of the ladder to be changed. The size is designated by the sum of the lengths of each section, measured along the side rails.

**Failure.** The ladder or ladder component loses the ability to carry the load, breaks, or separates into component parts.

**Fastenings.** Devices to attach a ladder to a structure, building, or equipment.

**Fixed ladder.** A ladder permanently attached to a structure, building, or equipment.

**Grab bars.** Handholds placed adjacent to or as an extension above ladders for the purpose of providing access beyond the limits of the ladder.

**Job-made ladder.** A ladder that is made, not commercially manufactured, to fit a specific job situation. They are for temporary use until a particular phase of construction is completed or until permanent stairways or fixed ladders are ready to use.

**Individual-rung/step ladder.** A fixed ladder consisting of individual steps or rungs mounted directly to the side or wall of the structure, building, or equipment.

**Ladder.** A device having steps, rungs, or cleats that can be used to climb or descend.

**Ladder safety device.** Any device, other than a cage or well, designed to arrest the fall of a person using a fixed ladder.

**Ladder type.** The designation that identifies the maximum intended load (working load) of the ladder. Ladder types are as follows:

Duty Rating	Ladder Type	Use	Maximum Intended Load (pounds)
Extra Heavy-Duty	IA	Industry, utilities, contractors	300
Heavy-Duty	I	Industry, utilities, contractors	250
Medium-Duty	II	Painters, offices, light maintenance	225
Light-Duty	III	General household use	200

**Landing.** Any area such as the ground, roof, or platform that provides access or egress to a ladder.

**Maximum intended load.** The total load of all persons, equipment, tools, materials, transmitted loads, and other loads reasonably anticipated to be applied to a ladder or ladder component at any one time. Sometimes referred to as working load.

**Pitch.** The included angle between the horizontal and the ladder, measured on the opposite side of the ladder from the climbing side.

**Portable ladder.** A ladder that can be readily moved or carried.

**Reinforced plastic.** A plastic that has high-strength fillers embedded in the base resin to increase strength.

**Reinforced plastic ladder.** A ladder whose side rails are reinforced plastic. The crosspieces, hardware, and fasteners may be made of metal or other suitable material.

**Rung.** A ladder crosspiece used in climbing or descending. Also called a cleat or step.

**Side-step ladder.** A fixed ladder that requires a person to step to the side of the ladder side rails to reach the landing.

**Single ladder.** A nonself-supporting portable ladder, nonadjustable in length, consisting of one section. The size is designated by the overall length of the side rail.

**Single-rail ladder.** A portable ladder with crosspieces mounted on a single rail. Single-rail ladders are prohibited from use.

**Special-purpose ladder.** A portable ladder that is made by modifying or combining design or construction features of the general-purpose types of ladders in order to adapt the ladder to special or specific uses.

**Step.** A ladder crosspiece used in climbing or descending. Also called a cleat or rung.

**Stepladder.** A self-supporting portable ladder, nonadjustable in length, with flat steps and hinged at the top. The size is designated by the overall length of the ladder measured along the front edge of the side rails.

**Through ladder.** A fixed ladder that requires a person to step between the side rails of the ladder to reach the landing.

**Trestle ladder.** A self-supporting portable ladder, nonadjustable in length, consisting of two sections hinged at the top to form equal angles with the base. The size is designated by the length of the side rails measured along the front edge.

**Well.** A walled enclosure around a fixed ladder that provides a person climbing the ladder with the same protection as a cage.

**Working length.** The length of a nonself-supporting ladder, measured along the rails, from the base support point of the ladder to the point of bearing at the top.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-100 Scope.** This chapter applies to portable and fixed ladders, including job-made wooden ladders.

**((Exemption:))** This chapter does not apply to:

**EXEMPTION:**

((•)) 1. Portable ladders used by the fire services for fire combat that are covered by safety standards for firefighters, chapter 296-305 WAC;

((•)) 2. Agriculture activities covered by safety standards for agriculture, chapter 296-307 WAC.

AMENDATORY SECTION (Amending WSR 06-22-024, filed 10/24/06, effective 12/1/06)

**WAC 296-876-150 Training(~~(-Section contents)~~).**

**Your responsibility:** To train employees who use ladders.

~~((Training-~~

~~WAC 296-876-15005.))~~

<u>You must meet the requirements...</u>	<u>in this section:</u>
Training	WAC 296-876-15005

AMENDATORY SECTION (Amending WSR 06-22-024, filed 10/24/06, effective 12/1/06)

**WAC 296-876-15005 Training.** (1) You must ~~((+~~  
~~→))~~ train employees to recognize ladder hazards and the procedures to minimize these hazards.

~~((+))~~ (2) You must have a competent person train employees that use ladders in at least the following topics:

~~((-))~~ (a) The proper construction, use, placement, and care in handling ladders.

~~((-))~~ (b) The maximum intended load capacities of ladders that are used.

~~((-))~~ (c) The requirements of this chapter.

~~((+))~~ (3) You must retrain employees as necessary to make sure they know and understand the content of the original training.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-200 Design and construction(~~(-Section contents)~~).**

**Summary**

**Your responsibility:** To make sure portable ladders meet design and construction requirements.

~~((Design and construction~~

~~WAC 296-876-20005.))~~

<u>You must meet the requirements...</u>	<u>in this section:</u>
Design and construction	WAC 296-876-20005

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-20005 Design and construction.**

~~((IMPORTANT+))~~ **Important:**

Design and construction requirements of this section do not apply to special purpose ladders.

~~((Definition:~~

~~A **special purpose ladder** is a portable ladder that is made by modifying or combining design or construction features of the general purpose types of ladders in order to adapt the ladder to special or specific uses.))~~

~~(1) You must~~((

~~→)) make sure portable ladders and job-made wooden ladders manufactured **on or after January 1, 2006**, meet the design and construction requirements and specifications of the appropriate American National Standards Institute (ANSI) standard:~~

~~((-) (a) ANSI A14.1-2000, American National Standard for Ladders-Portable Wood-Safety Requirements.~~

~~((-) (b) ANSI A14.2-2000, American National Standard for Ladders-Portable Metal-Safety Requirements.~~

~~((-) (c) ANSI A14.5-2000, American National Standard for Ladders-Portable Reinforced Plastic-Safety Requirements.~~

~~((-) (d) ANSI A14.4-2002, American National Standard Safety Requirements for Job-Made Wooden Ladders.~~

~~((→)) (2) You must make sure portable ladders manufactured **before January 1, 2006**, meet the design and construction requirements and specifications of the appropriate ANSI standard in effect on the date of manufacture:~~

~~((-) (a) ANSI A14.1, American National Standard for Ladders-Portable Wood-Safety Requirements.~~

~~((-) (b) ANSI A14.2, American National Standard for Ladders-Portable Metal-Safety Requirements.~~

~~((-) (c) ANSI A14.5, American National Standard for Ladders-Portable Reinforced Plastic-Safety Requirements.~~

Note: A commercially manufactured portable ladder should have a label indicating it meets the requirements of the ANSI standard. If in doubt, check with the manufacturer.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-300 Ladder care**~~((Section contents)).~~

Summary

**Your responsibility:** To make sure portable ladders are inspected, maintained, stored, and transported properly.

~~((Condition and inspection~~

~~WAC 296-876-30005.~~

~~Repair~~

~~WAC 296-876-30010.~~

~~Storage~~

~~WAC 296-876-30015.~~

~~Transport~~

~~WAC 296-876-30020.))~~

<u>You must meet the requirements...</u>	<u>in this section:</u>
<u>Condition and inspection</u>	<u>WAC 296-876-30005</u>
<u>Repair</u>	<u>WAC 296-876-30010</u>
<u>Storage</u>	<u>WAC 296-876-30015</u>

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Transport</u>	<u>WAC 296-876-30020</u>

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-30005 Condition and inspection.** (1) You must ~~((+))~~ ~~(\*)~~ keep portable ladders in good, usable condition. Good, usable condition includes, but is not limited to:

- ~~((-))~~ (a) Joints between the steps or rungs and the side rails are tight.
- ~~((-))~~ (b) Rungs, cleats, or steps are not bent, broken, or missing.
- ~~((-))~~ (c) Side rails are not bent, broken, or split.
- ~~((-))~~ (d) All bolts and rivets are in place and secure.
- ~~((-))~~ (e) Hardware, fittings, and accessories are securely attached and working properly.
- ~~((-))~~ (f) Ropes are not frayed or badly worn.
- ~~((-))~~ (g) Moveable parts operate freely without binding or excessive play.
- ~~((-))~~ (h) Safety feet and other auxiliary equipment are not excessively worn.
- ~~((-))~~ (i) Metal components are not corroded.
- ~~((-))~~ (j) There are no other faulty or defective components.

~~((+))~~ (2) You must make sure wood ladders are not coated with an opaque covering except for the minimum amount necessary for identification and warning information which may be placed on one face only of a side rail.

- ~~((+))~~ (3) You must have a competent person inspect a ladder:
  - ~~((-))~~ (a) When required by Table 1, Ladder Inspection Criteria;
  - ~~((AND))~~ and
  - ~~((-))~~ (b) After any other occurrence that could affect safe use.
- ~~((+))~~ (4) You must make sure any ladder with structural damage or other hazardous defect is:
  - ~~((-))~~ (a) Marked to identify it as defective or tagged with "do not use" or similar language; ~~((AND))~~ and
  - ~~((-))~~ (b) Removed from service.

Note: Ladders subjected to certain acids or alkali materials may experience chemical corrosion and a reduction in strength. Consult the manufacturer or a qualified person prior to use.

**Table 1**  
**Ladder Inspection Criteria**

<b>When the ladder is:</b>	<b>Do the following:</b>
First placed into service and periodically while in service	<del>((+))</del> Inspect the ladder for visible defects, including, but not limited to:
	<del>((-))</del> <u>1.</u> Working parts; <del>((AND))</del> <u>and</u>
	<del>((-))</del> <u>2.</u> Rung or step connections to the side rails.

When the ladder is:	Do the following:
Damaged by impact or tips over	((*) <u>1.</u> Visually inspect the ladder for( →) dents, bends, cracks or splits ((*) <u>2.</u> Check: ((-) <u>a.</u> Rung or step connections to the side rails. ((-) <u>b.</u> Hardware connections. ((-) <u>c.</u> Rivets for shear damage. ((-) <u>d.</u> All other components.
Exposed to excessive heat such as a fire	((*) <u>1.</u> Visually inspect the ladder for damage. ((*) <u>2.</u> Test for deflection and strength characteristics using the "in-service use tests" contained in the appropriate ANSI. <b>((Exemption)) EXEMPTION:</b> Job-made wooden ladders are not to be subjected to load or impact tests. Those tests may weaken lumber components or fasteners, causing hidden damage that could result in sudden failure during use.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-30010 Repair.** (1) You must(→) make sure repairs restore the ladder to a condition meeting its original design criteria.  
 ((→)) (2) You must prohibit repairs to a defective side rail.

Note: A commercially manufactured ladder with a defective side rail cannot be repaired by the user. Side rail repair can only be done by the manufacturer.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-30015 Storage.** You must(→) make sure material is not put on ladders in storage.

Note: ((\*) Store portable ladders on racks designed to protect them when not in use. The racks should have enough supporting points to prevent the ladder from sagging. ((\*) Do not store wood ladders near sources of heat, moisture, or dampness.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-30020 Transport.** (1) You must(→) properly support ladders while transporting them on vehicles.  
 ((→)) (2) You must make sure ladders transported in a truck rack are positively secured in a fixed position that prevents chafing or abrasion.

Note: Securing the ladder to each support point will greatly reduce damage due to road shock.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-400 ((Use-Section contents)) Portable ladder use.**

**Summary**

**Your responsibility:** To use portable ladders safely.

- ((Designed use
- ~~WAC 296-876-40005.~~
- ~~Workplace activities or traffic~~
- ~~WAC 296-876-40010.~~
- Support
- ~~WAC 296-876-40015.~~
- Set-up
- ~~WAC 296-876-40020.~~
- Climbing and descending
- ~~WAC 296-876-40025.~~
- Getting on and off ladders at upper levels
- ~~WAC 296-876-40030.~~
- Exposed electrical hazards
- ~~WAC 296-876-40035.~~
- Persons on ladders
- ~~WAC 296-876-40040.~~
- Multisection ladders
- ~~WAC 296-876-40045.~~
- Self-supporting ladders
- ~~WAC 296-876-40050.)~~)

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Designed use</u>	<u>WAC 296-876-40005</u>
<u>Workplace activities or traffic</u>	<u>WAC 296-876-40010</u>
<u>Support</u>	<u>WAC 296-876-40015</u>
<u>Set-up</u>	<u>WAC 296-876-40020</u>
<u>Climbing and descending</u>	<u>WAC 296-876-40025</u>
<u>Getting on and off ladders at upper levels</u>	<u>WAC 296-876-40030</u>
<u>Exposed electrical hazards</u>	<u>WAC 296-876-40035</u>
<u>Persons on ladders</u>	<u>WAC 296-876-40040</u>
<u>Multisection ladders</u>	<u>WAC 296-876-40045</u>
<u>Self-supporting ladders</u>	<u>WAC 296-876-40050</u>

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-40005 Designed use.** (1) You must((÷  
 →)) use ladders only for their intended purpose.

- Note: Unless specifically recommended by the manufacturer, do not use a ladder as a:
- ((•)) 1. Brace.
  - ((•)) 2. Skid.
  - ((•)) 3. Lever.
  - ((•)) 4. Guy or gin pole.
  - ((•)) 5. Gangway.

- (\*) 6. Platform.
- (\*) 7. Scaffold plank.
- (\*) 8. Material hoist.

(2) You must( (+

- )) make sure not to overload ladders. Do not exceed either the:
  - ((-)) (a) Maximum intended load; ((or)) or
  - ((-)) (b) Manufacturer's rated capacity.

((Definitions:

~~The **maximum intended load** is the total load of all persons, equipment, tools, materials, transmitted loads, and other loads reasonably anticipated to be applied to a ladder or ladder component at any one time.~~

~~**Ladder type.** The designation that identifies the maximum intended load (working load) of the ladder. Ladder types are as follows:~~

Duty Rating	Ladder Type	Use	Maximum Intended Load (Pounds)
Extra Heavy-Duty	IA	Industry, utilities, contractors	300
Heavy-Duty	I	Industry, utilities, contractors	250
Medium-Duty	II	Painters, offices, light maintenance	225
Light-Duty	III	General household use	200))

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-40010 Workplace activities or traffic.** (1) You

must( (+

- )) protect ladders that are ((set-up)) set up in a location where they could be displaced by workplace activities or traffic by either:

- ((-)) (a) Securing the ladder to prevent accidental displacement;
- ((or)) or
- ((-)) (b) Using a barricade to keep the activities or traffic away from the ladder.

((•)) (2) You must protect ladders that are set-up in front of doors that open towards the ladder by doing at least one of the following:

- ((-)) (a) Block the door open.
- ((-)) (b) Lock the door.
- ((-)) (c) Guard the door to keep it from opening into the ladder.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-40015 Support.** (1) You must((+)

+)) place the ladder either:

((-)) (a) With a secure footing on a firm, level support surface;

((or)) or

((-)) (b) Secure the ladder to prevent accidental displacement.

((+)) (2) You must make sure a ladder is not placed on ice, snow, or other slippery surface unless the ladder is prevented from accidental displacement by either:

((-)) (a) Securing it; ((or)) or

((-)) (b) Providing the ladder with slip-resistant feet.

Note: Slip-resistant feet are not a substitute for care in placing, lashing, or holding a ladder that is used on a slippery surface.

(3) You must((+)

+)) make sure ladders are not placed on boxes, barrels, or other unstable bases to obtain additional height.

((+)) (4) You must place a straight ladder so the side rails are equally supported by the top support, unless the ladder is equipped with a single support attachment.

((+)) (5) You must make sure the top support of the ladder is reasonably rigid and able to support the load.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-40020 Set-up.** (1) You must((+)

+)) set up nonself-supporting ladders at a safe angle. The ladder is set at the proper angle when the horizontal distance from the top support to the foot of the ladder is approximately one-quarter the working length of the ladder.

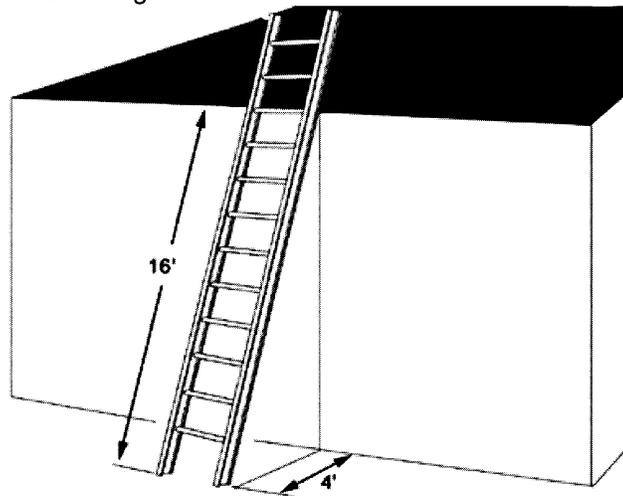
((+)) (2) You must set up job-made ladders with spliced side rails so that the horizontal distance from the top support to the foot of the ladder is not greater than one-eighth the working length of the ladder.

((**Definition:**

The ~~working length~~ of a nonself-supporting ladder is the length, measured along the rails, from the base support point of the ladder to the point of bearing at the top.

~~Safe Ladder Angle~~))

**Note:**  
Safe ladder angle.



AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-40025 Climbing and descending.** (1) You must ((÷  
→)) have both hands free to hold on to the ladder.

((→)) (2) You must face the ladder when climbing or descending.

((→)) (3) You must keep ladders free of oil, grease, or other slippery materials.

((→)) (4) You must keep the area around the top and bottom of ladders clear.

((→)) (5) You must make sure single-rail ladders are not used.

((**Definition:**

~~A **single-rail ladder** is a portable ladder with crosspieces mounted on a single rail.))~~

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-40030 Getting on and off ladders at upper levels.**

(1) You must ((÷

→)) make sure a ladder used to access an upper level has the side rails extended at least three feet ((→9)) 0.9 m) above the landing surface if the ladder length permits.

((→)) (2) You must do the following if a ladder used to access an upper level is not long enough to obtain a three-foot side rail extension above the landing surface:

((-) (a) Secure the ladder at the top to a rigid support that will not deflect.

((-) (b) Provide a grasping device, such as a grabrail, to assist in mounting and dismounting the ladder.

((-)) (c) Make sure the ladder deflection under a load would not, by itself, cause it to slip off its support.

((+)) (3) You must make sure, if two or more separate ladders are used to reach an elevated work area, that the ladders are offset with a platform or landing between them.

**(Exemption:)** A platform or landing is not required when a portable ladder is used to reach a fixed ladder on structures such as utility towers and  
**EXEMPTION:** billboards where the bottom of the fixed ladder is elevated to limit access.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-40035 Exposed electrical hazards.** You must((+  
+)) use ladders with nonconductive side rails where the ladder could contact uninsulated, energized electric lines or equipment. ((-)) Metal ladders or other ladders specifically designed to permit grounding or dissipation of static electricity may be used around high-static electrical fields if all of the following are met:

((+)) (1) Using nonconductive ladders would present a greater hazard than using conductive ladders.

((+)) (2) Ladders are prominently marked and identified as being conductive.

((+)) (3) Ladders are grounded when used near energized lines or equipment.

Note: Examples of ladders with conductive side rails are metal ladders, and wood or reinforced plastic ladders with metal side rail reinforcement.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-40040 Persons on ladders.** (1) You must((+  
+)) make sure a ladder is not moved, shifted, or adjusted while anyone is on it.

((+)) (2) You must secure the ladder at the top and bottom when working from it.

((+)) (3) You must use a safety belt with a lanyard that is secured to the ladder when doing any work that:

((-)) (a) Requires the use of both hands; (~~and~~) and

((-)) (b) Is done from a ladder more than twenty-five feet above the ground or floor.

((+)) (4) You must prohibit work being done from a ladder more than twenty-five feet above the ground or floor if the work requires wearing eye protection or a respirator.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-40045 Multisection ladders.** (1) You must((+  
+)) make sure not to tie or fasten ladder sections together to make longer ladders unless:

((-)) (a) The ladder manufacturer endorses this type of use;  
 ((AND)) and  
 ((-)) (b) You have hardware fittings specifically designed for this purpose.  
 ((+)) (2) You must make sure each section of a multisection ladder, when fully extended and locked in position to be used, overlaps the adjacent section as indicated in Table 2, Minimum Required Overlap for Extension Ladders.

**Table 2**  
**Minimum Required Overlap for Extension Ladders**

<b>If the ladder size (feet) is:</b>	<b>Minimum required overlap (feet) for a two-section ladder is ((feet)):</b>
Up to and including 36	3
Over 36 up to and including 48	4
Over 48 up to and including 60	5

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-40050 Self-supporting ladders.** (1) You must((+ +)) make sure self-supporting ladders are not used as single ladders or in the partially closed position.

((+)) (2) You must make sure stepladders are fully opened with the spreaders locked.

((+)) (3) You must make sure not to climb on the rear braces of a self-supporting ladder unless they are designed and recommended for that purpose by the manufacturer.

((+)) (4) You must prohibit standing or stepping on the:

((-)) (a) Top cap and top step of a step or trestle ladder.

((-)) (b) Bucket or pail shelf of a self-supporting ladder.

**((Exemption:))** The restriction against using the top step is not applicable if it is eighteen inches or more below the top cap.  
**EXEMPTION:**

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-500 Fixed ladder design and construction((Section contents)) installed on or after December 1, 2006.**

**Summary**

**Your responsibility:** To make sure fixed ladders installed on or after December 1, 2006, meet design and construction requirements.

~~((Design and construction Fixed ladders installed on or after December 1, 2006.~~

~~WAC 296-876-50010))~~

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Design and construction— Fixed ladders installed on or after December 1, 2006</u>	<u>WAC 296-876-50010</u>

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-50010 Design and construction—Fixed ladders installed on or after December 1, 2006.** You must( (+  
→)) make sure fixed ladders installed on or after December 1, 2006, meet the design and construction requirements of ANSI A14.3-2002, American National Standard for Ladders-Fixed-Safety Requirements.

Note: Ladders will be considered to have met the requirements of this section if they meet the design and construction requirements of ANSI A14.3, American National Standard for Ladders-Fixed-Safety Requirements, in effect at the time they are installed.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-600 Fixed ladder design and construction(~~(—Section contents)~~) installed before December 1, 2006.**

**Summary**

**Your responsibility:** To make sure fixed ladders installed before December 1, 2006, meet design and construction requirements.

~~((Design and construction Fixed ladders installed before December 1, 2006.~~

- ~~WAC 296-876-60005  
Design loads.~~
- ~~WAC 296-876-60010  
Pitch.~~
- ~~WAC 296-876-60015  
Welding.~~
- ~~WAC 296-876-60020  
Ladder surfaces.~~
- ~~WAC 296-876-60025  
Rungs, cleats and steps.~~
- ~~WAC 296-876-60030  
Side rails.~~
- ~~WAC 296-876-60035  
Clearances.~~
- ~~WAC 296-876-60040  
Step-across distance.~~
- ~~WAC 296-876-60045  
Extensions and grab bars.~~
- ~~WAC 296-876-60050  
Hatches.~~
- ~~WAC 296-876-60055  
Platforms.~~
- ~~WAC 296-876-60060~~

~~Protective structures and equipment.~~

~~WAC 296-876-60065~~

~~Cages.~~

~~WAC 296-876-60070~~

~~Wells.~~

~~WAC 296-876-60075~~

~~Ladder safety devices.~~

~~WAC 296-876-60080))~~

<u>You must meet the requirements...</u>	<u>in this section:</u>
<u>Design and construction— Fixed ladders installed before December 1, 2006.</u>	<u>WAC 296-876-60005</u>
<u>Design loads</u>	<u>WAC 296-876-60010</u>
<u>Pitch</u>	<u>WAC 296-876-60015</u>
<u>Welding</u>	<u>WAC 296-876-60020</u>
<u>Ladder surfaces</u>	<u>WAC 296-876-60025</u>
<u>Rungs, cleats and steps</u>	<u>WAC 296-876-60030</u>
<u>Side rails</u>	<u>WAC 296-876-60035</u>
<u>Clearances</u>	<u>WAC 296-876-60040</u>
<u>Step-across distance</u>	<u>WAC 296-876-60045</u>
<u>Extensions and grab bars</u>	<u>WAC 296-876-60050</u>
<u>Hatches</u>	<u>WAC 296-876-60055</u>
<u>Platforms</u>	<u>WAC 296-876-60060</u>
<u>Protective structures and equipment</u>	<u>WAC 296-876-60065</u>
<u>Cages</u>	<u>WAC 296-876-60070</u>
<u>Wells</u>	<u>WAC 296-876-60075</u>
<u>Ladder safety devices</u>	<u>WAC 296-876-60080</u>

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60005 Design and construction—Fixed ladders installed before December 1, 2006.** You must((+  
+)) make sure fixed ladders installed **before** December 1, 2006, meet the requirements of WAC 296-876-60010 through 296-876-60080.

Note: Ladders will be considered to have met the requirements of this section if they meet the design and construction requirements of ANSI A14.3, American National Standard for Ladders-Fixed-Safety Requirements, in effect at the time they are installed.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60010 Design loads.** (1) You must((+  
+)) make sure each ladder is able to support, without failure, the total of the following loads:  
((-)) (a) At least two loads of two hundred and fifty pounds each, concentrated between any two consecutive attachments.

((-)) (b) Any additional concentrated loads of two hundred and fifty pounds each determined from the anticipated use of the ladder.

((-)) (c) Anticipated loads caused by all of the following that apply:

((■)) (i) Ice buildup.

((■)) (ii) Winds.

((■)) (iii) Rigging attached to the ladder, including the load to be lifted.

((■)) (iv) Impact loads resulting from the use of ladder safety devices.

((+)) (2) You must make sure the design of rails, supports, and fastenings includes:

((-)) (a) Live loads to be supported by the ladder; and

((-)) (b) The weight of the ladder and everything attached to it.

((+)) (3) You must consider all live loads to be concentrated at the point or points that will cause the maximum stress on the ladder or structural member.

((+)) (4) You must make sure each step or rung is capable of supporting a single concentrated load of at least two hundred fifty pounds applied in the middle of the step or rung.

((+)) (5) You must make sure the design stresses for wood components of ladders meet the requirements and specifications of ANSI A14.1, American National Standard for Ladders-Portable Wood-Safety Requirements, in effect when the ladder was installed.

((+)) (6) You must make sure fastenings are designed to meet the ladder load requirements.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60015 Pitch.** You must((+)

+)) make sure the pitch of the ladder is no greater than ninety degrees from the horizontal.

Notes: ((\*) 1. The preferred pitch of fixed ladders is within the range of seventy-five to ninety degrees from the horizontal. Ladders with a pitch range of sixty to seventy-five degrees from the horizontal are considered substandard and are only permitted if necessary to meet the installation requirements.

((\*) 2. Fixed stairs are an alternative for installations where a pitch angle of less than sixty degrees is necessary. See Fixed industrial stairs, WAC 296-24-765, in the General Safety and Health Standards, chapter 296-24 WAC.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60020 Welding.** You must((+)

+)) make sure welding meets the requirements of the ANSI A14.3, American National Standard for Ladders-Fixed-Safety Requirements, in effect at the time the ladder was installed.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60025 Ladder surfaces.** You must((+  
+)) make sure all parts and surfaces of the ladder are free of splinters, sharp edges, burrs, or projections that may be hazardous to persons using the ladder.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60030 Rungs, cleats and steps.** (1) You must((+  
+)) make sure rungs have a minimum diameter as follows:  
((-)) (a) Rungs of wood ladders are at least one and one-eighth inches.  
((-)) (b) Rungs of metal ladders subject to unusually corrosive exposures, such as individual metal rungs imbedded in concrete which serve as access to pits and to other areas under floors, are at least one inch.  
((-)) (c) Rungs of all other metal ladders are at least three-quarters inch.  
((+)) (2) You must make sure rungs, cleats, and steps are all of the following:  
((-)) (a) Parallel.  
((-)) (b) Level.  
((-)) (c) Uniformly spaced throughout the length of the ladder.  
((-)) (d) Spaced so the distance from the centerline of one rung to the centerline of the next rung does not exceed twelve inches.

**Exception:** The vertical distance from the ground, floor, or roof at the access level to the first rung may be adjusted within a range of fourteen inches.

(3) You must((+  
+)) make sure the minimum inside clear width of the stepping surface of rungs, steps, or cleats is sixteen inches.  
((+)) (4) You must make sure individual rung or step-type ladders have rungs or steps that are shaped so that a person's foot cannot slide off the end.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60035 Side rails.** (1) You must((+  
+)) make sure the shape of the side rail:  
((-)) (a) Provides an adequate gripping surface; and  
((-)) (b) Is uniform throughout the length of climb.  
((+)) (2) You must make sure a side rail that has been spliced to obtain a longer length is at least equivalent in strength to a one-piece side rail made of the same material.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60040 Clearances.** (1) You must((+)

+)) make sure ladders without wells or cages are at least thirty inches from the nearest permanent object on the climbing side, measured perpendicular to the ladder from the centerline of the rungs, cleats, or steps.

**(Exemption:)** When unavoidable obstructions are encountered, the minimum perpendicular clearance between the centerline of the rungs, cleats, or steps and an obstruction on the climbing side may be reduced to twenty-four inches if a deflection device is installed to guide persons around the obstruction.  
**EXEMPTION:**

(2) You must((+)

+)) make sure ladders without wells or cages have a clear width from the nearest permanent object on each side of the ladder of at least fifteen inches, measured from the center of the rungs, cleats, or steps.

((+)) (3) You must make sure the distance from the centerline of the rungs, cleats, or steps to the nearest permanent object in back of the ladder is at least seven inches.

**(Exemption:)** Fixed ladders in elevator pits may reduce the minimum clearance from the ladder to the nearest permanent object in back of the ladder to four and one-half inches.  
**EXEMPTION:**

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60045 Step-across distance.** (1) You must((+)

+)) make sure a through ladder at the point of access or egress has a step-across distance, measured from the centerline of the steps or rungs to the nearest edge of the landing area, that is:

((-) (a) Not less than seven inches; or

((-) (b) Greater than twelve inches.

((+) (2) You must make sure a side-step ladder at the point of access or egress has a step-across distance, measured from the side rail of the ladder to the nearest edge of the landing area, that is:

((-) (a) Not less than seven inches; or

((-) (b) Greater than twelve inches.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60050 Extensions and grab bars.** (1) You must((+)

+)) make sure the side rails of through or side-step ladders extend forty-two inches above the top of the access level or landing platform.

Note: For a parapet ladder, the access level is:  
((-) 1. The roof if the parapet is cut to permit passage through it; or  
((-) 2. The top of the parapet if it is continuous and uncut.

(2) You must((+)

+)) make sure the extension of a through ladder above the access level or landing platform has:

- ((-)) (a) Steps or rungs omitted from the extension; and
- ((-)) (b) Clearance between the side rails that is:
  - ((■)) (i) Not less than twenty-four inches; or
  - ((■)) (ii) Greater than thirty inches.

**(Exemption):** The maximum clearance between side rails of the extension may be increased to thirty-six inches if the ladder has a ladder safety device.  
**EXEMPTION:**

(3) You must ((÷  
 →)) make sure the side rails of through or side-step ladders extend forty-two inches above the top of the access level or landing platform.

((→)) (4) You must make sure side-step ladders have the steps or rungs and the side rails continuous in the extension.

((→)) (5) You must make sure individual rung-step ladders are extended at least forty-two inches above the access level or landing platform by:

((-) (a) Continuing the rung spacings as horizontal grab bars; or

((-) (b) Providing vertical grab bars that have the same lateral spacing as the vertical legs of the rungs.

**(Exemption):** Extensions are not required for individual rung-step ladders with access openings through a manhole or hatch.  
**EXEMPTION:**

(6) You must ((÷

→)) make sure grab bars:

((-) (a) Are at least four inches from the nearest permanent object in back of the grab bar, measured from the centerline of the grab bar; and

((-) (b) Do not extend beyond the rungs on the climbing side of the ladder.

**AMENDATORY SECTION** (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60055 Hatches.** (1) You must ((÷

→)) make sure counterbalanced hatch covers open at least seventy degrees from the horizontal.

((→)) (2) You must make sure the inside clear width of the hatch is a nominal thirty inches.

((→)) (3) You must make sure the distance from the centerline of the rungs or cleats to the edge of the hatch opening on the climbing side, measured perpendicular to the ladder, is:

((-) (a) Not less than twenty-four inches; or

((-) (b) Greater than thirty inches.

((→)) (4) You must make sure hatches with clearance on the climbing side of the ladder that is between twenty-four and twenty-seven inches are fitted with a deflector plate mounted at an angle of sixty degrees from the horizontal.

Note: The springs or other counterbalance mechanisms for the hatch may project into the hatch opening provided they do not reduce clearance to less than twenty-four inches and a deflector plate is installed to guide persons around the obstruction.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60060 Platforms.** (1) You must( (+  
→)) make sure landing platforms for side-step ladders extend at least thirty inches on the climbing side of the ladder.  
((+)) (2) You must make sure landing platforms are:  
((-)) (a) At least thirty inches wide; and  
((-)) (b) Equipped with standard railings and toeboards placed to allow safe access to the ladder.

Reference: Requirements for standard railings and toeboards are in Railing, toeboards, and cover specifications, WAC 296-24-75011, the General Safety and Health Standards, chapter 296-24 WAC.

(3) You must( (+  
→)) make sure the top rung or step of the ladder is level with the landing served by the ladder.  
((+)) (4) You must make sure the spacing from the landing platform to the first rung below the platform of a through ladder is the same as the rung spacing of the ladder.  
((+)) (5) You must make sure, if two or more separate ladders are used to reach an elevated work area, that the ladders are offset with a platform or landing between them.

**(Exemption:)** A platform or landing is not required when a portable ladder is used to reach a fixed ladder on structures such as utility towers and billboards where the bottom of the fixed ladder is elevated to limit access.  
**EXEMPTION:**

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60065 Protective structures and equipment.** (1) You must( (+  
→)) make sure a cage, well, or ladder safety system is provided if:  
((-)) (a) The length of climb is less than twenty-four feet; and  
((-)) (b) The top of the ladder is more than twenty-four feet above the ground, floor, or roof.  
((+)) (2) You must make sure a ladder with a single length of climb that is equal to or greater than twenty-four feet is either:  
((-)) (a) Equipped with a ladder safety device; or  
((-)) (b) Uses multiple ladder sections and meets all of the following:  
((■)) (i) Each section is provided with a cage or well.  
((■)) (ii) The length of climb of any ladder section is not greater than fifty feet.  
((■)) (iii) Each ladder section is offset from adjacent sections.  
((■)) (iv) Landing platforms are provided at maximum intervals of fifty feet.

**(Exemption:)** During construction activities, a self-retracting lifeline with landing platforms provided at maximum intervals of one hundred ((and)) fifty feet may be used instead of a ladder safety device or multiple ladder sections.  
**EXEMPTION:**

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60070 Cages.** (1) You must(+

→) make sure the cage meets all of the following:

((-) (a) Extends at least forty-two inches above the top of the platform or above the point of access and egress at the top of the ladder.

((-) (b) Has provisions for accessing and egressing the platform or the point of access or egress of the ladder.

((-) (c) There is at least twenty-seven inches, but not more than thirty inches, from the cage to the centerline of the step or rung at all points except where the cage flares at the bottom of the ladder.

((-) (d) The cage is at least twenty-seven inches wide.

((-) (e) There are no projections inside the cage.

((→) (2) You must make sure the bottom of the cage is:

((-) (a) At least seven feet but not more than eight feet above the point of access to the bottom of the ladder; and

((-) (b) Flared at least four inches all around within the distance between the bottom horizontal band and the next higher band.

((→) (3) You must make sure vertical bars are:

((-) (a) Spaced at intervals of nine and one-half inches or less on center around the circumference of the cage; and

((-) (b) Fastened to the inside of the horizontal bands.

((→) (4) You must make sure the horizontal bands meet all of the following:

((-) (a) The vertical intervals between horizontal bands (~~is~~) are not more than four feet on center.

((-) (b) The horizontal bands of ladders with side rails are fastened to the side rails.

((-) (c) The horizontal bands of individual-rung ladders are fastened directly to the structure, building, or equipment.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60075 Wells.** (1) You must(+

→) make sure there is at least twenty-seven inches, but not more than thirty inches, from the centerline of the step or rung to the inside face of the well on the climbing side of the ladder.

((→) (2) You must make sure the inside clear width is at least thirty inches.

((→) (3) You must make sure the well:

((-) (a) Completely encircles the ladder; and

((-) (b) Is free of projections.

((→) (4) You must make sure the bottom of the wall on the access side is at least seven feet, but not more than eight feet, above the point of access to the bottom of the ladder.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-60080 Ladder safety devices.** (1) You must(+) make sure ladder safety devices and related support systems meet all of the following:

((-) (a) Are capable of withstanding, without failure, the test drop of a five-hundred-pound weight for a free-fall distance of eight-inches.

((-) (b) The device does not require a person to continually hold, push, or pull any part of the device and allows them to have both hands free to grip the ladder.

((-) (c) In the event of a fall, the device:

((■) (i) Is activated within two feet; and

((■) (ii) Limits the fall velocity to seven feet per second or less.

((-) (d) Uses a connection between the carrier or lifeline and the point of attachment on the full body harness that is not longer than nine inches.

((+) (2) You must make sure ladder safety devices with rigid carriers have mountings that:

((-) (a) Are attached at each end of the carrier; and

((-) (b) Have intermediate mountings that are all of the following:

((■) (i) Spaced along the entire length of the carrier in accordance with the manufacturer's recommendations.

((■) (ii) Installed within one foot below each splice on the carrier.

((■) (iii) Have a maximum distance between mountings that is twenty-five feet or less.

((+) (3) You must make sure ladder safety devices with flexible carriers have:

((-) (a) Mountings that are attached at each end of the carrier; and

((-) (b) Cable guides that are spaced at least twenty-five feet, but no further than forty feet, apart along the entire length of the carrier.

((+) (4) You must make sure the design and installation of mountings and cable guides does not reduce the design strength of the ladder.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-700 Fixed ladders inspection and maintenance(~~-Section contents~~)).**

Summary

**Your responsibility:** To make sure fixed ladders are inspected and maintained properly.

~~((Protection against corrosion and deterioration.~~

~~WAC 296-876-70005~~

~~Inspection and repair.~~

~~WAC 296-876-70010))~~

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Protection against corrosion and deterioration</u>	<u>WAC 296-876-70005</u>
<u>Inspection and repair</u>	<u>WAC 296-876-70010</u>

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-70005 Protection against corrosion and deterioration.** (1) You must ((+  
 +)) paint or otherwise treat metal ladders or metal parts to resist rust and corrosion if they are:  
 ((-)) (a) Exposed to the elements; or  
 ((-)) (b) Located where rust or corrosion could be expected.  
 ((+)) (2) You must treat wood ladders used in conditions where decay may occur with a nonirritating preservative.  
 ((+)) (3) You must make sure wood ladders are not coated with an opaque covering except for the minimum amount necessary for identification and warning information which may be placed on one face only of a side rail.  
 ((+)) (4) You must treat the interface between different materials or use other means to prevent:  
 ((-)) (a) One material from damaging or having a harmful effect on another material; and  
 ((-)) (b) Electrolytic action between dissimilar metals.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-70010 Inspection and repair.** (1) You must ((+  
 +)) keep ladders in safe condition.  
 ((+)) (2) You must have a competent person inspect a ladder for visual defects:  
 ((-)) (a) Periodically; and  
 ((-)) (b) After any occurrence that could affect safe use.  
 ((+)) (3) You must make sure any ladder with structural damage or other hazardous defect is immediately removed from service.

Notes: ((\*) 1. Structural damage includes, but is not limited to, any of the following:  
 ((-)) a. Broken or missing rungs, cleats, or steps.  
 ((-)) b. Broken or split rails.  
 ((-)) c. Corroded components.  
 ((-)) d. Bolts and welds missing or not secure.  
 ((\*) 2. A ladder is considered to be removed from service if any of the following are done:  
 ((-)) a. It is marked to identify it as defective.  
 ((-)) b. It is tagged with "do not use" or similar language.  
 ((-)) c. It is blocked so that it cannot be used, for example, by using a plywood attachment that spans several rungs.

(4) You must ((+  
 +)) make sure repairs restore the ladder to a condition meeting its original design criteria.

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-800 Fixed ladder use(~~-Section contents~~)).**

**Summary**

**Your responsibility:** To use fixed ladders safely.

~~((Designed load.  
WAC 296-876-80005  
Climbing and descending.  
WAC 296-876-80010))~~

<u>You must meet the requirements...</u>	<u>in this section:</u>
<u>Design load</u>	<u>WAC 296-876-80005</u>
<u>Climbing and descending</u>	<u>WAC 296-876-80010</u>

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-80005 Designed load.** You must(~~(+~~  
~~•))~~ make sure not to overload ladders. Do not exceed either the:  
~~((-~~) (1) Maximum intended load; or  
~~((-~~) (2) Manufacturer's rated capacity.

**(Definition:**

~~The **maximum intended load** is the total load of all persons, equipment, tools, materials, transmitted loads, and other loads reasonably anticipated to be applied to a ladder or ladder component at any one time.)~~

AMENDATORY SECTION (Amending WSR 06-16-020, filed 7/24/06, effective 12/1/06)

**WAC 296-876-80010 Climbing and descending.** (1) You must(~~(+~~  
~~•))~~ have both hands free to hold on to the ladder.  
~~((•))~~ (2) You must face the ladder when climbing or descending.  
~~((•))~~ (3) You must keep ladders free of oil, grease, or other slippery materials.

REPEALER

The following section of the Washington Administrative Code is repealed:

WAC 296-876-900 Definitions.

NEW SECTION

**WAC 296-878-099 Definitions.**

**Anchor, window-cleaner's belt.** Fall-preventing attachment points for direct attachment of the terminal portion of a window-cleaner's belt.

**Belt terminal.** That part of the safety belt that is attached to the anchor during the window-cleaning operation.

**Block and tackle.** A lifting device consisting of one or more pulley blocks reeved with chains, wire ropes, or fiber ropes used solely for raising and lowering a load or moving a load horizontally.

**Boatswain's chair.** A single-point adjustable suspension scaffold consisting of a seat or sling designed to support one worker in a sitting position.

**Capstan device.** An upright, spool-shaped cylinder used for hoisting or lifting weights that is turned by a motor or by hand.

**Carabiner.** An oblong metal ring with an openable spring-hinged side, used to clip a rope to an anchoring device.

**Competent person.** One who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

**Drop (drop zone).** A vertical area or work zone accessed by the worker or piece of equipment during one descent.

**Drop line.** A vertical line from a fixed anchorage, independent of the work surface.

**Fixture.** Attachments, anchors, anchorages, tie backs or support equipment permanently dedicated to a given site.

**Grade.** Means the ground, floor, sidewalk, roof, or any level surface that is considered a safe place to work.

**Lanyard.** A flexible line to secure a wearer of a safety belt or harness to a drop line, lifeline or fixed anchorage.

**Mullion.** A slender, vertical dividing bar between windows, panels, etc.

**Primary support/suspension.** A working line or approved anchorage used for attachment of a working line.

**Qualified person.** A person is qualified if they have one of the following:

- (1) Extensive knowledge, training, and experience about the subject matter, work, or project;
- (2) A recognized degree, certificate, or professional standing;
- (3) Successful demonstration of problem solving skills in connection with the subject, work, or project.

**Rated capacity.** The combined weight of workers, tools, equipment, and other materials that the device is designed and installed to lift and support.

**Rope descent system (RDS).** An assembly of components that allows the operator to control the rate of descent at any time. A rope descent system includes the following components:

- (1) Suspension devices;
- (2) Certified roof anchorages;
- (3) Primary support ropes or lines;
- (4) The descent device;
- (5) Carabiners or shackles;
- (6) A seatboard or boatswain's chair.

**Terminal strap.** The strap or rope attached to the waist band on one end, and to the belt terminals on the other end.

**Window cleaning.** Cleaning, wiping, restoring or other methods of cleaning windows.

**Working line.** A rope suspended from an anchorage and used to access parts of a building.

AMENDATORY SECTION (Amending WSR 07-03-163, filed 1/24/07, effective 4/1/07)

**WAC 296-878-10005 Summary.**

**Your responsibility:** Make sure workers clean windows safely, and properly use and maintain their window-cleaning equipment.

~~((IMPORTANT:))~~ **Important:**

Window-cleaning equipment includes window-cleaner's belts, boat-swains' chairs, rope descent systems, ladders, supported scaffolds, and the support equipment used to suspend employees cleaning windows.

~~((You must:~~

**Training**

~~Train workers to use window cleaning equipment~~

~~WAC 296-878-11005~~

**Building surfaces and fixtures**

~~Make sure building surfaces and fixtures are safe to use~~

~~WAC 296-878-12005~~

**Inspection procedures**

~~Inspect the area to be cleaned~~

~~WAC 296-878-13005~~

~~Inspect window cleaning equipment before use~~

~~WAC 296-878-13010~~

**Develop site-specific service and emergency plans**

~~Develop a site-specific service and emergency recovery plan for window cleaning operations~~

~~WAC 296-878-14005~~

**Equipment**

~~Select and use appropriate equipment~~

~~WAC 296-878-15005~~

~~Select appropriate rope for suspended equipment~~

~~WAC 296-878-15015~~

~~Select appropriate carabiners~~

~~WAC 296-878-15020~~

~~Use fall protection equipment~~

~~WAC 296-878-15025~~

**Warning signs and barricades**

~~Provide warning signs and barricades when suspended equipment is used~~

~~WAC 296-878-16005~~

**Power line clearances**

~~Maintain clearance between window cleaners and power lines~~

~~WAC 296-878-17005~~

**Window-cleaners' belts and anchors**

~~Select appropriate window cleaners' belts and anchors~~

~~WAC 296-878-18005~~

~~Inspect the anchors you plan to use for window cleaning~~

~~WAC 296-878-18010~~

~~Use window cleaners' belts safely~~

~~WAC 296-878-18015~~

~~Move safely on the outside of buildings~~

~~WAC 296-878-18020~~

**~~Boatswains' chairs~~**

~~Select appropriate boatswains' chairs~~

~~WAC 296-878-19005~~

~~Safely use boatswains' chairs rigged with a block and tackle~~

~~WAC 296-878-19010~~

**~~Rope descent systems~~**

~~Select appropriate rope descent systems~~

~~WAC 296-878-20005~~

~~Safely use rope descent systems~~

~~WAC 296-878-20010~~

~~Safely use rope descent devices~~

~~WAC 296-878-20015~~

**~~Equipment prohibited~~**

~~Prohibit equipment from use~~

~~WAC 296-878-21005~~

**~~Definitions~~**

~~WAC 296-878-220.) )~~

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-110 Training.**

**Summary**

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Train workers to use window-cleaning equipment</u>	<u>WAC 296-878-11005</u>

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-11005 Train workers to use window-cleaning equipment.** (1) You must (1)

•) provide the following training to workers before they use window-cleaning equipment on the job:

((-)) (a) Proper care and maintenance of the equipment;

((-)) (b) Review manufacturer's instructions for proper equipment use;

((-)) (c) Methods for inspection, assembly, and dismantling of components;

((-)) (d) Identify anchorages;

((-)) (e) A complete understanding of safe working conditions;

((-)) (f) How employees will be rescued.

((•)) (2) You must provide additional training to workers using window-cleaners' belts in all the following areas:

- ((-)) (a) How to select the proper-sized belt;
- ((-)) (b) How to use anchors and terminals;
- ((-)) (c) How to deal with obstructions and slippery/wet surfaces.

((+) (3) You must provide additional training to workers using boatswains' chairs and rope descent systems in all the following areas:

- ((-)) (a) Proper rigging practices;
- ((-)) (b) Fall arrest requirements;
- ((-)) (c) Proper methods of descending;
- ((-)) (d) The effects of wind on window-cleaning operations when a worker is suspended;
- ((-)) (e) Proper methods of hoisting for ascents.

((+) (4) You must document the training by recording all of the following:

- ((-)) (a) The name and signature of the trainer/educator;
- ((-)) (b) The name and signature of the student;
- ((-)) (c) The subjects in which the workers were trained;
- ((-)) (d) The date of the training;
- ((-)) (e) The location of the training.

Note: ((\*)) You do not need a specialized educator to provide training. You may use a qualified person to conduct the training. A qualified person is defined as a person who has:  
 ((-) 1. Extensive knowledge, training, and experience about the subject matter, work, or project;  
 ((-) 2. A recognized degree, certificate, or professional standing;  
 ((-) 3. Successful demonstration of problem solving skills in connection with the subject, work, or project.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-120 Building surfaces and fixtures.**  
**Summary**

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Make sure building surfaces and fixtures are safe to use</u>	<u>WAC 296-878-12005</u>

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-12005 Make sure building surfaces and fixtures are safe to use.** You must((+)

((+) make sure building surfaces and fixtures are safe to be used before you begin the window-cleaning operation. This includes:

- ((-)) (1) Guardrails, parapets, cornices and other building surfaces used to support suspended loads;
- ((-)) (2) Permanently installed fixtures used as anchorages and tiebacks;
- ((-)) (3) Window-cleaning equipment support systems permanently dedicated to the building.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-130 Inspection procedures.**

**Summary**

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Inspect the area to be cleaned</u>	<u>WAC 296-878-13005</u>
<u>Inspect window-cleaning equipment before use</u>	<u>WAC 296-878-13010</u>

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-13005 Inspect the area to be cleaned.** (1) You must((+)

+)) inspect the building before cleaning to make sure there are no areas that can damage worker fall protection equipment and window-cleaning equipment. Inspect:

- ((-)) (a) Sharp edges of parapets*;*
- ((-)) (b) Window frames*;*
- ((-)) (c) Open projected windows*;*
- ((-)) (d) Cornices*;*
- ((-)) (e) Overhangs*;*

((-)) (f) Any other areas that may abrade, sever, weaken, or damage the equipment.

((+)) (2) You must make sure all working surfaces are safe and free from hazards such as:

- ((-)) (a) Grease*;*
- ((-)) (b) Oil*;*
- ((-)) (c) Other slippery substances.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-13010 Inspect window-cleaning equipment before use.** (1) You must((+)

+)) store your window-cleaning equipment in a way that:

((+)) (a) Is easy to get to, inspect, and safely take out for use*;*

((+)) (b) Provides protection from moisture, sunlight, or corrosion.

(2) You must make sure a competent person inspects these items before each use:

- ((+)) (a) Window-cleaners' belts*;*
- ((+)) (b) Boatswains' chairs*;*
- ((+)) (c) All components of rope descent systems*;*
- ((+)) (d) Suspension devices*;*

- ((+)) (e) Certified roof anchorages;
- ((+)) (f) Primary support ropes or lines;
- ((+)) (g) The descent device;
- ((+)) (h) Carabiners or shackles;
- ((+)) (i) A seatboard or boatswain's chair;
- ((+)) (j) Wear points on rope descent system components exposed to constant friction.

(3) You must make sure you do not use any piece of window-cleaning equipment with defects.

((+)) (a) Prohibit makeshift repairs to any piece of window-cleaning equipment;

((+)) (b) Label any piece of window-cleaning equipment that is defective "dangerous, do not use."

(4) You must secure any padding or softeners so they do not come loose from:

((+)) (a) The surface of the building;

((+)) (b) The rope if not attached to the building.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-140     Develop site-specific service and emergency plans.**

**Summary**

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Develop a site-specific service and emergency recovery plan for window-cleaning operations</u>	<u>WAC 296-878-14005</u>

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-14005     Develop a site-specific service and emergency recovery plan for window-cleaning operations.**

(1) You must ((+)) make sure that a qualified person develops a written plan for each location to be cleaned that identifies:

((-)) (a) Hazardous areas;

((-)) (b) Drop zones;

((-)) (c) Safety features;

((-)) (d) Methods for emergency recovery of workers working from suspended equipment, or other types of installations, in the event of equipment failure or any other kind of disability.

((+)) (2) You must keep the plan at the work site during the entire cleaning operation.

Note: You may use an outside service for rescue and recovery (such as a fire department) if:

((+)) 1. The rescue personnel will be able to reach the victims without undue delay;

((+)) 2. They have the necessary equipment to retrieve the victims;

((+)) 3. They are trained and proficient in high angle rescue techniques.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-150 Equipment.**  
**Summary**

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Select and use appropriate equipment</u>	<u>WAC 296-878-15005</u>
<u>Select appropriate rope for suspended equipment</u>	<u>WAC 296-878-15015</u>
<u>Select appropriate carabiners</u>	<u>WAC 296-878-15020</u>
<u>Use fall protection equipment</u>	<u>WAC 296-878-15025</u>

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-15005 Select and use appropriate equipment.** (1) You must (~~(1)~~) make sure that all equipment provided to workers for window-cleaning operations is engineered, designed, and intended for use in commercial applications.

Note: Equipment that is designed or labeled for recreational use or rescue use only is prohibited for use in window-cleaning operations.

(2) You must (~~(2)~~) make sure that the window-cleaning equipment is not altered unless it is specifically approved in writing by the original manufacturer or a registered professional engineer.

(3) You must provide manufacturer's instructions to employees for all window-cleaning equipment they will use.

Reference: Use Table 1 for other window-cleaning equipment requirements.

**Table 1**  
**Other Window-Cleaning Equipment**

	<b><u>If you use:</u></b>	<b><u>Then follow all requirements in:</u></b>
<del>(1)</del>	Portable ladders	WAC ( <del>(296-800-290, Portable ladders)</del> ) <u>296-800-876, Ladders portable and fixed</u>
<del>(2)</del>	Supported scaffolds	Chapter 296-24 WAC, ( <del>(PART J-2,)</del> ) Scaffolds
<del>(3)</del>	Suspension ropes and lifelines Powered and manual hoists Suspended scaffold equipment	Chapter 296-24 WAC, ( <del>(PART J-2,)</del> ) Scaffolds
<del>(4)</del>	Single and multipoint adjustable suspension scaffolds	Chapter 296-24 WAC, ( <del>(PART J-2,)</del> ) Scaffolds
<del>(5)</del>	Powered platforms	Chapter 296-24 WAC, PART J-3, Powered platforms

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-15015 Select appropriate rope for suspended equipment.** You must(~~+~~  
~~+~~)) make sure all rope used for suspended equipment has a minimum breaking strength of five thousand pounds.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-15020 Select appropriate carabiners.** (1) You must(~~+~~  
~~+~~)) use carabiners for connecting hardware or attaching boat-swains' chairs, descent devices, and lifelines to anchors.  
~~((+))~~ (2) You must use carabiners with a minimum tensile load of five thousand pounds.  
~~((+))~~ (3) You must make sure carabiners are either manual or auto-locking.

Note: You may secure a rope to an anchor with a knot if normal daily use of the rope will not decrease its initial breaking strength below five thousand pounds.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-15025 Use fall protection equipment.** (1) You must(~~+~~  
~~+1~~)) make sure the fall arrest system meets the requirements of WAC 296-24-88050 mandatory Appendix C, Part I, Personal fall arrest systems.  
~~((+))~~ (2) You must use and inspect fall arrest equipment in accordance with the requirements of WAC 296-24-88050, mandatory Appendix C, Part I, Personal fall arrest systems.  
~~((+))~~ (3) You must make sure all workers suspended from a boat-swain's chair or rope descent system use an independent fall arrest system where the fall arrest anchorage is separate from the suspension system anchorage.  
~~((+))~~ (4) You must make sure workers operating powered platforms wear and use a fall arrest system.  
~~((+))~~ (5) You must make sure workers assemble and wear their personal fall arrest equipment before they approach the point of suspension.  
~~((+))~~ (6) You must make sure workers are connected at all times to the fall arrest system while they are suspended.  
~~((+2))~~ (7) You must make sure the boatswain's chair or rope descent system is connected at all times to the suspension line.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-160 Warning signs and barricades.**

**Summary**

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Provide warning signs and barricades when suspended equipment is used</u>	<u>WAC 296-878-16005</u>

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-16005 Provide warning signs and barricades when suspended equipment is used. (1) You must**

~~((+ (1)))~~ place warning signs below suspended equipment.

(2) You must block the ground area with barricades directly under or next to the work zone.

(3) You must assign a competent person to decide if additional protection is necessary.

(4) You must make sure all tools used by the worker are attached to the worker, seatboard, or boatswain's chair.

Reference: Rules for protecting workers from overhead hazards are listed in WAC 296-800-16055(6). Make sure your employees use appropriate head protection.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-170 Power line clearances.**

**Summary**

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Maintain clearance between window cleaners and power lines</u>	<u>WAC 296-878-17005</u>

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-17005 Maintain clearance between window cleaners and power lines. (1) You must**

~~((+ (1)))~~ maintain clearances between window cleaners and power lines as indicated in Tables 2 and 3.

Table 2  
Minimum Clearances from Power Lines - Insulated Lines

Voltage	Minimum distance	Alternatives
Less than 300 volts	3 feet (0.9 m)	----
300 volts to 50 kv	10 feet (3.1 m)	----
More than 50 kv	10 feet (3.1 m) plus 0.4 inches (1.0 cm) for each 1 kv over 50 kv	2 times the length of the line insulator, but never less than 10 feet (3.1 m)

**Table 3**  
**Minimum Clearances from Power Lines - Uninsulated Lines**

Voltage	Minimum distance	Alternatives
Less than 50 kv	10 feet (3.1 m)	----
More than 50 kv	10 feet (3.1 m) plus 0.4 inches (1.0 cm) for each 1 kv over 50 kv	2 times the length of the line insulator, but never less than 10 feet (3.1 m)

(2) You must( (+  
→)) follow these procedures when window cleaners need to get closer to power lines than allowed in Tables 2 and 3:

((-)) (a) Notify the utility company or electrical system operator of the need to work closer than the minimum clearances to power lines before starting the work;

((-)) (b) Begin the work only when the utility company or electrical system operator has deenergized or relocated the lines, or installed protective coverings to prevent accidental contact with the lines.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-180 Window-cleaners' belts and anchors.**  
**Summary**

<u>You must meet the requirements...</u>	<u>in this section:</u>
<u>Select appropriate window-cleaners' belts and anchors</u>	<u>WAC 296-878-18005</u>
<u>Inspect the anchors you plan to use for window cleaning</u>	<u>WAC 296-878-18010</u>
<u>Use window-cleaners' belts safely</u>	<u>WAC 296-878-18015</u>
<u>Move safely on the outside of buildings</u>	<u>WAC 296-878-18020</u>

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-18005 Select appropriate window-cleaners' belts and anchors.** You must( (+  
→)) make sure window-cleaners' belts and anchors conform to the:

- ((-)) (1) Design, manufacture, and maintenance requirements of ANSI/IWCA 1-14.1-2001 (~~AND~~); and
- ((-)) (2) Manufacturer's specifications.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-18010 Inspect the anchors you plan to use for window cleaning.** (1) You must((+)

- (+) make sure you do not use anchors if they:
  - ((-)) (a) Appear to be damaged;
  - ((-)) (b) Appear deteriorated;
  - ((-)) (c) Appear to be worn;
  - ((-)) (d) Appear to be loose;
  - ((-)) (e) Appear to be unsecured to the building or window frame;
  - ((-)) (f) Will not allow the belt terminal to easily slip over the anchor head.
- ((+)) (2) You must use window-cleaner's belts only if:
  - ((-)) (a) The area to be cleaned is safe;
  - ((-)) (b) All anchors intended for use are safe.
- ((+)) (3) You must make sure window ledges and frames will not impair the safe use of the window-cleaner's belt.

Note: If unsafe anchors are found, report them to the building owner or manager and do not use them.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-18015 Use window-cleaners' belts safely.** (1) You must((+)

- (+) make sure workers do not extend more than one arm beyond the window sash when cleaning windows from inside a building.
- ((+)) (2) You must attach one belt terminal to an anchor before you put more than one arm outside the window.
- ((+)) (3) You must pull on the terminal strap and look for signs of damage to the anchor.
- ((+)) (4) You must attach both belt terminals to anchors before climbing out the window.
- ((+)) (5) You must keep all belt terminals attached during the entire cleaning operation.
- ((+)) (6) You must make sure the worker keeps one terminal attached to an anchor when reentering the window and until the worker is inside.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-18020 Move safely on the outside of buildings.** You must((+)

→)) make sure you travel on the outside of the building only when:

((-)) (1) You keep at least one window-cleaner's belt terminal attached at all times;

((-)) (2) The anchors are not more than forty-eight inches apart.

- Note:
- Anchors can be up to seventy-two inches apart if:
  - ((•)) 1. The sill or ledge is continuous;
  - ((•)) 2. The sill or ledge is at least twelve inches wide;
  - ((•)) 3. The sill or ledge has a slope less than five degrees;
  - ((•)) 4. There is at least six inches of window sill in front of the mullions.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-190 Boatswains' chairs.**  
Summary

<u>You must meet the requirements...</u>	<u>in this section:</u>
Select appropriate boatswains' chairs	<u>WAC 296-878-19005</u>
Safely use boatswains' chairs rigged with a block and tackle	<u>WAC 296-878-19010</u>

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-19005 Select appropriate boatswains' chairs. (1)**

You must ((→))  
 (→)) make sure that when you use a block and tackle, it is the correct size, including:

- ((→)) (a) Correctly((-))sized ball bearings or bushed blocks;
- ((→)) (b) Safety hooks;
- ((→)) (c) Eye-spliced rope;
- ((→)) (d) A minimum breaking strength of five thousand pounds.

(2) You must make sure all rope used with a boatswain's chair has a minimum breaking strength of five thousand pounds, including rope used for:

- ((→)) (a) Suspension;
- ((→)) (b) Block and tackle;
- ((→)) (c) Seat slings.

(3) You must make sure the ropes on boatswain's chair seat slings:

- ((→)) (a) Are reeved through the four corner holes in the seat;
- ((→)) (b) Cross each other on the underside of the seat;
- ((→)) (c) Are rigged so the chair cannot slip out of a level position.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-19010 Safely use boatswains' chairs rigged with a block and tackle.** (1) You must(~~(1)~~)

~~(1)~~) make sure the rated capacity or the maximum intended load, whichever is less, is not exceeded.

(2) You must make sure the suspension rope stays vertical between the boatswain's chair and suspension device unless all of these requirements are met:

((~~(1)~~)) (a) The rigging has been designed by a qualified person;

((~~(1)~~)) (b) The scaffold can be easily reached by rescuers;

((~~(1)~~)) (c) The suspension rope is protected from damage when a change in direction occurs;

((~~(1)~~)) (d) The scaffold will not swing and contact another surface.

(3) You must make sure a suspension height of seventy-five feet above grade or building setback is not exceeded.

**(Exemption):** Suspension height may be up to one hundred thirty feet above grade or building setback if the boatswain's chair block and tackle has all of the following:

((~~(1)~~)) 1. An automatic braking system;

((~~(1)~~)) 2. A design that minimizes the amount of force required to raise or lower the suspended worker;

((~~(1)~~)) 3. An automatic braking system that automatically maintains an elevation when no force is applied to the tackle;

((~~(1)~~)) 4. A system that does not slip.

(4) You must(~~(4)~~)

~~(4)~~) prohibit tying any kind of knot in a block and tackle system to maintain elevation.

(5) You must make sure another worker is stationed below any boatswain's chair rigged with a block and tackle who can assist the suspended employee.

(6) You must make sure workers do not attempt to increase the work area by swinging, swaying, or other maneuvers.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-200 Rope descent systems.**

**Summary**

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Select appropriate rope descent systems</u>	<u>WAC 296-878-20005</u>
<u>Safely use rope descent systems</u>	<u>WAC 296-878-20010</u>
<u>Safely use rope descent devices</u>	<u>WAC 296-878-20015</u>

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-20005 Select appropriate rope descent systems. (1)**  
You must((+)

(+) make sure the rope descent system is designed, used, and maintained according to:

((-) (a) ANSI/IWCA 1-14.1-2001;

((-) (b) The manufacturer's instructions.

((+) (2) You must make sure the rope descent system has been manufactured and is intended to be used for window cleaning.

Note: Equipment that is designed or labeled for recreational use or rescue use only is prohibited for use in window-cleaning operations.

(3) You must((+)

(+) make sure the rope descent system components are compatible and have a minimum tensile strength of five thousand pounds. ((-) This does not apply to the seatboard.

((+) (4) You must make sure the rope descent system has specific use instructions for each component.

AMENDATORY SECTION (Amending WSR 10-08-069, filed 4/6/10, effective 6/1/10)

**WAC 296-878-20010 Safely use rope descent systems. (1)** You must((+)

(1) make sure workers use extreme care when using rope descent equipment around electrical service, heat sources, and turbulent areas, such as air vents.

(2) You must connect the seatboard or boatswain's chair to the descent device with a manual\_ or auto\_locking carabiner.

(3) You must make sure workers are positioned in the seatboard or boatswain's chair before being suspended.

(4) You must make sure workers do not reach more than six feet in any direction as measured from a centerline straight down from where the suspension rope bears on the building.

(5) You must make sure workers do not descend rapidly, swing excessively, or stop suddenly.

(6) You must make sure that, in addition to the suspended worker, there is one other person at the ((jobsite)) job site who is skilled in using the rope descent system and rescue procedures.

(7) You must make sure you do not exceed a three hundred-foot height of descent as measured from grade or building setback unless the windows cannot be safely and practicably accessed by other means.

(8) You must make sure your site-specific service plan addresses the following hazards for descents over one hundred thirty feet as measured from grade or building setback:

((+) (a) Sudden weather changes, such as wind gusts, micro bursts, or tunneling wind currents;

((+) (b) Inability of the rope descent system to function without using excessive force;

((+) (c) Workers suspended for long periods of time;

((+) (d) Rerigging and movement of main suspension and safety lines.

(9) You must stabilize workers suspended from a rope descent system whenever the descent is higher than one hundred thirty feet, as measured from grade or building setback.

(10) You must prohibit workers from working when wind speed makes any stabilization equipment ineffective.

Note: Provisions for stabilizing workers may include:  
((•)) 1. Continuous stabilization, such as mullion tracks;  
((•)) 2. Intermittent stabilization, such as detent pins/buttons;  
((•)) 3. Work station stabilization, such as suction cups.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-20015 Safely use rope descent devices.** (1) You must make sure the rated capacity or the maximum intended load, whichever is less, is not exceeded.

(2) You must make sure the descent device manufacturer's specifications for rope diameter and construction are followed.

(3) You must make sure the rope is rigged through the descent device for a controlled rate of descent.

(4) You must make sure the attachment point on the descent device is one piece with no gates or openings.

(5) You must make sure the descent device will remain stationary when positive action is taken.

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-210 Equipment prohibited.**

**Summary**

<b><u>You must meet the requirements...</u></b>	<b><u>in this section:</u></b>
<u>Prohibit equipment from use</u>	<u>WAC 296-878-21005</u>

AMENDATORY SECTION (Amending WSR 02-22-027, filed 10/28/02, effective 1/1/03)

**WAC 296-878-21005 Prohibit equipment from use.** You must((+ →)) prohibit use of the following equipment for window-cleaning operations:

((-)) (1) Portable sills;

((-)) (2) Window jacks;

((-)) (3) Capstan devices to suspend workers;

((-)) (4) Suspension or fall-arrest ropes that are made entirely of polypropylene.

REPEALER

The following section of the Washington Administrative Code is repealed:

WAC 296-878-220        Definitions.