

FIXED LADDERS SAFETY CHECKLIST

(*Fixed ladders are those permanently attached to a structure, building or equipment.)

Equipment Standards for Fixed Ladders			
	YES	NO	N/A
Fixed ladders, appurtenances and fastenings must be designed to meet the following load requirements:			
Minimum design live load of a single concentrated load of 200 pounds, based on following considerations: <ul style="list-style-type: none"> <input type="checkbox"/> The number and position of additional concentrated live-load units of 200 pounds each as determined from anticipated usage of the ladder. <input type="checkbox"/> Live loads imposed by persons occupying the ladder must be considered as concentrated at points causing the maximum stress in the structural member being considered. <input type="checkbox"/> In evaluating the design or rails and fastening, consider the weight of the ladder and attached appurtenances together with the live load. 			
Wood components of fixed ladders are subject to the requirements for wood parts of portable ladders set out in the Portable Wood Ladder standard (1910.25), All wood parts of fixed ladders shall meet the requirements of 1910.25(b).			
All rungs must have a minimum diameter of 3/4 inch for metal ladders and a minimum diameter of 1 1/8 inches for wood ladders. (*Exception: Metal ladders formed by individual metal rungs imbedded in concrete in corrosive atmospheres must have a minimum diameter of 1 inch—or be painted or treated to resist corrosion.)			
Distance between rungs, cleats and steps can't exceed 12 inches and must be uniform throughout the ladder's length.			
The minimum clear length of rungs or cleats is 16 inches.			
Rungs, cleats and steps must be free of splinters, sharp edges, burrs or other hazardous projections.			
Rungs of an individual-rung ladder must be designed so that the foot can't slide off the end. (Figure D-1 of the standard shows a suggested design.)			
Cross sections of side rails that can be used as a climbing aid must afford an adequate gripping surface without sharp edges, splinters, or burrs.			
Fastenings must be an integral part of the fixed ladder's design.			
All splices and connections must have smooth transition with original members and no sharp or extensive projections.			
"Adequate means" must be used to protect dissimilar metals from electrolytic action when the metals are joined.			
All welding must comply with the "Code for Welding in Building			

Construction" (AWSD1.0-1966).			
Comments:			
Protection from Deterioration			
	YES	NO	N/A
Metal fixed ladders formed by individual metal rungs imbedded in concrete in corrosive atmospheres must have a minimum diameter of 1 inch—or be painted or treated to resist corrosion.			
Wood fixed ladders subject to conditions that can cause decay must be treated with a nonirritating preservative in a way as to prevent or minimize the accumulation of water on wood parts.			
Fixed ladders constructed of different types of materials must be treated so that maintenance of one material doesn't harm any of the other materials and cause a deleterious effect upon the other.			
Comments:			
Clearance Distances			
	YES	NO	N/A
Perpendicular distance from the centerline of the rungs of a fixed ladder to the nearest permanent object on the climbing side must be 36 inches for a pitch of 76 degrees, and 30 inches for a pitch of 90 degrees (see Fig. D-2 of the Standard), with minimum clearances for intermediate pitches varying between the 2 limits in proportion to the slope.			
Ladders without cages or wells must have a clear width of at least 15 inches each way from the centerline of the ladder in the climbing space.			

The distance from the centerline of rungs, cleats or steps to the nearest permanent object in back of the ladder must be no less than 7 inches. (<i>*Exception: When there are “unavoidable obstructions,” minimum clearances must meet the requirements set out in figure D-3 of the standard.</i>)			
The distance from the centerline of the grab bar to the nearest permanent object in back of the grab bars must be no less than 4 inches, and grab bars may not protrude on the climbing side beyond the rungs of the ladder they serve.			
The step-across distance from the nearest edge of ladder to the nearest edge of equipment or structure can be no more than 12 inches, or less than 2 1/2 inches (see fig. D-4 of the standard).			
Counterweighted hatch covers:			
<ul style="list-style-type: none"> • Must open a minimum of 60 degrees from the horizontal. 			
<ul style="list-style-type: none"> • The distance from the centerline of rungs or cleats to the edge of the hatch opening on the climbing side can be no less than 24 inches for offset wells, 30 inches for straight wells. 			
<ul style="list-style-type: none"> • There must be no protruding potential hazards within 24 inches of the centerline of rungs or cleats; any such hazards within 30 inches of the centerline of the rungs or cleats shall be fitted with deflector plates placed at an angle of 60 degrees from the horizontal (as indicated in fig. D-5). (The relationship of a fixed ladder to an acceptable counterweighted hatch cover is illustrated in fig. D-6.) 			
Comments:			
Cages or Wells			
	YES	NO	N/A
Cages or wells (except on chimney ladders) must be built, as shown on the applicable figs. D-7 , D-8 and D-9 , or be of equivalent construction.			
Cages or wells meeting the dimensions specifications shown in figs. D-7 , D-8 and D-9 , must be provided on ladders of more than 20 feet to a maximum unbroken length of 30 feet.			

Cages:			
<ul style="list-style-type: none"> • Must extend at least 42 inches above the top of the landing, unless other acceptable protection is provided. 			
<ul style="list-style-type: none"> • Must extend down the ladder to a point no less than 7 feet nor more than 8 feet above the base of the ladder, with bottom flared no less than 4 inches, or portion of cage opposite ladder must be carried to the base. 			
<ul style="list-style-type: none"> • May not extend less than 27 nor more than 28 inches from the centerline of the rungs of the ladder. 			
<ul style="list-style-type: none"> • Must not be less than 27 inches wide. 			
<ul style="list-style-type: none"> • Must have insides that are clear of projections. 			
<ul style="list-style-type: none"> • Must have vertical bars located at a maximum spacing of 40 degrees around the circumference of the cage—thus providing a maximum spacing of approximately 9 1/2 inches, center to center. 			
Ladder wells must have a clear width of at least 15 inches measured each way from the centerline of the ladder.			
Smooth-walled wells must be a minimum of 27 inches from the centerline of rungs to the well wall on the climbing side of the ladder.			
Where other obstructions on the climbing side of the ladder exist, there must be a minimum of 30 inches from the centerline of the rungs.			
Comments:			
Landing Platforms			
	YES	NO	N/A
Landing platforms must be provided for each 30 feet of height or fraction when ladders are used to ascend to heights over 20 feet (except on chimneys). (<i>*Exception: Where no cage, well, or ladder safety device is provided, landing platforms must be provided for each 20 feet of height or fraction.</i>)			
Each ladder section must be offset from adjacent sections. Where installation conditions (even for a short, unbroken length) require that adjacent sections be offset, landing platforms must be provided			

at each offset.			
A landing platform must also be provided where a person must step a distance greater than 12 inches from the centerline of the rung of a ladder to the nearest edge of structure or equipment with a minimum step-across distance of 2 1/2 inches.			
All landing platforms must be equipped with standard railings and toe-boards arranged so as to give safe access to the ladder.			
Platforms must be at least 24 inches wide and 30 inches long.			
One rung of any section of ladder must be located at the level of the landing laterally served by the ladder. Where access to the landing is through the ladder, the same rung spacing as used on the ladder shall be used from the landing platform to the first rung below the landing.			

Comments:

Ladder Extensions

	YES	NO	N/A
The side rails of through or side-step ladder extensions must extend 3 1/2 feet above parapets and landings.			
For through ladder extensions, the rungs must be omitted from the extension and have no less than 18 nor more than 24 inches clearance between rails.			
For side-step or offset fixed ladder sections, at landings, side rails and rungs shall be carried to the next regular rung beyond or above the 3 1/2 feet minimum.			

Comments:

Grab Bars & Ladder Safety Devices			
	YES	NO	N/A
Grab bars must be spaced by a continuation of the rung spacing when they're located in the horizontal position.			
Vertical grab bars must have the same spacing as the ladder side rails.			
Grab-bar diameters must be equivalent to the round-rung diameters.			
Ladder safety devices may be used instead of cage protection on tower, water tank, and chimney ladders over 20 feet in unbroken length. No landing platform is required in these cases.			
All ladder safety devices such as those that incorporate lifebelts, friction brakes, and sliding attachments must meet the design requirements of the ladders which they serve.			
Comments:			
Pitch Requirements			
	YES	NO	N/A
"Pitch" means the included angle between the horizontal and the ladder, measured on the opposite side of the ladder from the climbing side.			
The preferred pitch of fixed ladders is in the range of 75 degrees and 90 degrees with the horizontal.			
Fixed ladders are considered substandard if they're installed within the substandard pitch range of 60 and 75 degrees with the horizontal, and are allowed only where it's found necessary to meet conditions of installation. This substandard pitch range must be considered as a critical range to be avoided, if possible.			
Ladders with a pitch over 90 degrees with the horizontal are not allowed.			
Comments:			

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Maintenance			
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	YES	NO	N/A
All ladders must be maintained in a safe condition and inspected regularly based on use and exposure.			

Comments:

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