

# Fixed Ladder Construction Safety Checklist

<p><input type="checkbox"/> Fixed ladders must be capable of supporting at least two loads of 250 pounds (114 kg) each, concentrated between any two consecutive attachments (the number and position of additional concentrated loads of 250 pounds (114 kg) each, determined from anticipated usage of the ladder, should also be included), plus anticipated loads caused by ice buildup, winds, rigging, and impact loads resulting from the use of ladder safety devices. Each step or rung should be capable of supporting a single concentrated load of at least 250 pounds (114 kg) applied in the middle of the step or rung.</p>	<p><input type="checkbox"/> The minimum perpendicular clearance between fixed ladder rungs, cleats, and steps, and any obstruction behind the ladder should be 7 inches (18 cm), except in the case of an elevator pit ladder, for which a minimum perpendicular clearance of 4½ inches (11 cm) is required.</p>
<p><input type="checkbox"/> Ensure rungs and steps are spaced not less than 10 inches (25 cm) apart, nor more than 14 inches (36 cm) apart, as measured between center lines of the rungs, cleats, and steps.</p>	<p><input type="checkbox"/> Ensure the minimum perpendicular clearance between the center line of fixed ladder rungs and steps, and any obstruction on the climbing side of the ladder is 30 inches (76 cm).</p>
<p><input type="checkbox"/> Rungs and steps of fixed metal ladders should be corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize slipping.</p>	<p><input type="checkbox"/> When unavoidable obstructions are encountered, the minimum perpendicular clearance between the centerline of fixed ladder rungs, cleats, and steps, and the obstruction on the climbing side of the ladder may be reduced to 24 inches (61 cm), provided that a deflection device is installed to guide employees around the obstruction.</p>
<p><input type="checkbox"/> Do not tie or fasten ladders together to provide longer sections unless they are specifically designed for such use.</p>	<p><input type="checkbox"/> Through fixed ladders at their point of access/egress shall have a step-across distance of not less than 7 inches (18 cm) nor more than 12 inches (30 cm) as measured from the centerline of the steps or rungs to the nearest edge of the landing area. If the normal step-across distance exceeds 12 inches (30 cm), a landing platform should be provided to reduce the distance to the specified limit.</p>
<p><input type="checkbox"/> When splicing is required to obtain a given length of side rail, the resulting side rail should be at least equivalent in strength to a one-piece side rail made of the same material.</p>	<p><input type="checkbox"/> Ensure fixed ladders without cages or wells have a clear width to the nearest permanent object of at least 15 inches (38 cm) on each side of the centerline of the ladder.</p>
<p><input type="checkbox"/> Except when portable ladders are used to gain access to fixed ladders (such as those on utility towers, billboards, and other structures where the bottom of the fixed ladder is elevated to limit access), when two or more separate ladders are used to reach an elevated work area, the ladders should offset with a platform or landing between the ladders.</p>	<p><input type="checkbox"/> Equip fixed ladders with cages, wells, ladder safety devices, or self-retracting lifelines where the length of climb is less than 24 feet (7.3 m) but the top of the ladder is at a distance greater than 24 feet (7.3 m) above lower levels.</p>
<p><input type="checkbox"/> Ensure ladder components are surfaced so as to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.</p>	<p><input type="checkbox"/> Do not coat wood ladders with any opaque covering, except for identification or warning labels which may be placed on one face only of a side rail.</p>

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- Where the total length of a climb equals or exceeds 24 feet (7.3 m), equip fixed ladders with one of the following:
  - Ladder safety devices; or
  - Self-retracting lifelines, and rest platforms at intervals not to exceed 150 feet (45.7 m); or
  - A cage or well, and multiple ladder sections, each ladder section not to exceed 50 feet (15.2 m) in length. Ensure ladder sections are offset from adjacent sections, and landing platforms are provided at maximum intervals of 50 feet (15.2 m).
- Ensure cages for fixed ladders conform to all the following:
  - Horizontal bands are fastened to the side rails of rail ladders, or directly to the structure, building, or equipment for individual-rung ladders;
  - Vertical bars are on the inside of the horizontal bands and fastened to them;
  - Cages extend not less than 27 inches (68 cm), or more than 30 inches (76 cm) from the centerline of the step or rung (excluding the flare at the bottom of the cage), and not be less than 27 inches (68 cm) in width;
  - The inside of the cage is clear of projections;
  - Horizontal bands are spaced not more than 4 feet (1.2 m) on center vertically;
  - Vertical bars are spaced at intervals not more than 9½ inches (24 cm) on center horizontally;
  - The bottom of the cage is at a level not less than 7 feet (2.1 m) nor more than 8 feet (2.4 m) above the point of access to the bottom of the ladder. The bottom of the cage is flared not less than 4 inches (10 cm) all around within the distance between the bottom horizontal band and the next higher band;
  - The top of the cage is a minimum of 42 inches (1.1 m) above the top of the platform, or the point of access at the top of the ladder, with provision for access to the platform or other point of access.
- Ensure wells for fixed ladders conform to all of the following:
  - They completely encircle the ladder;
  - They are free of projections;
  - Their inside face on the climbing side of the ladder extend not less than 27 inches (68 cm) nor more than 30 inches (76 cm) from the centerline of the step or rung;
  - The inside clear width is at least 30 inches (76 cm);
  - Ensure the bottom of the wall on the access side starts at a level not less than 7 feet (2.1 m) nor more than 8 feet (2.4 m) above the point of access to the bottom of the ladder.
- Ensure ladder safety devices, and related support systems, for fixed ladders conform to all of the following:
  - They are capable of withstanding without failure a drop test consisting of an 18-inch (41 cm) drop of a 500-pound (226 kg) weight;
  - They permit the employee using the device to ascend or descend without continually having to hold, push or pull any part of the device, leaving both hands free for climbing;
  - They are activated within 2 feet (.61 m) after a fall occurs, and limit the descending velocity of an employee to 7 feet/sec. (2.1 m/sec.) or less;
  - The connection between the carrier or lifeline and the point of attachment to the body belt or harness does not exceed 9 inches (23 cm) in length.
- Ensure the mounting of ladder safety devices for fixed ladders conforms to the following:
  - Mountings for rigid carriers are attached at each end of the carrier, with intermediate mountings, as necessary, spaced along the entire length of the carrier, to provide the strength necessary to stop employees' falls.
  - Mountings for flexible carriers are attached at each end of the carrier. When the system is exposed to wind, cable guides for flexible carriers should be installed at a minimum spacing of 25 feet (7.6 m) and maximum spacing of 40 feet (12.2 m) along the entire length of the carrier, to prevent wind damage to the system.
  - The design and installation of mountings and cable guides should not reduce the design strength of the ladder.

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<input type="checkbox"/> Ensure the side rails of through or side-step fixed ladders do not extend 42 inches (1.1 m) above the top of the access level or landing platform served by the ladder. For a parapet ladder, the access level should be the roof if the parapet is cut to permit passage through the parapet; if the parapet is continuous, the access level should be the top of the parapet.	<input type="checkbox"/> Maintain ladders free of oil, grease, and other slipping hazards.
<input type="checkbox"/> For through-fixed-ladder extensions, omit the steps or rungs from the extension and the extension of the side rails should be flared to provide not less than 24 inches (61 cm) nor more than 30 inches (76 cm) clearance between side rails. Where ladder safety devices are provided, the maximum clearance between side rails of the extensions should not exceed 36 inches (91 cm).	<input type="checkbox"/> Never load ladders beyond the maximum intended load for which they were built, nor beyond their manufacturer's rated capacity.
<input type="checkbox"/> Only use ladders for the purpose for which they were designed.	<input type="checkbox"/> Keep the area around the top and bottom of ladders clear.
<input type="checkbox"/> Ensure fixed ladders are used at a pitch no greater than 90 degrees from the horizontal, as measured to the back side of the ladder.	<input type="checkbox"/> Ensure ladders have nonconductive siderails if they are used where the employee or the ladder could contact exposed energized electrical equipment, except as provided in § 1926.955(b) and (c) of this part.
<input type="checkbox"/> Ensure ladders placed in any location where they can be displaced by workplace activities or traffic, such as in passageways, doorways, or driveways, are secured to prevent accidental displacement, or a barricade is used to keep the activities or traffic away from the ladder.	<input type="checkbox"/> Ensure ladders are inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use. Keep records of these inspections.
<input type="checkbox"/> For side-step fixed ladders, the side rails and the steps or rungs should be continuous in the extension.	
<input type="checkbox"/> Ensure fixed ladders with structural defects, such as, but not limited to, broken or missing rungs, cleats, or steps, broken or split rails, or corroded components, are withdrawn from service until repaired. The requirement to withdraw a defective ladder from service is satisfied if the ladder is either: <ul style="list-style-type: none"> <li>• Immediately tagged with "Do Not Use" or similar language,</li> <li>• Marked in a manner that readily identifies it as defective;</li> <li>• Or blocked (such as with a plywood attachment that spans several rungs).</li> </ul>	
<input type="checkbox"/> Ensure that ladder repairs restore the ladder to a condition meeting its original design criteria before the ladder is returned to use.	<input type="checkbox"/> Employees should use at least one hand to grasp the ladder when progressing up and/or down the ladder.
<input type="checkbox"/> When ascending or descending a ladder, the user should face the ladder.	<input type="checkbox"/> Employees should not carry any object or load that could cause the employee to lose balance and fall.

Access [OSHA 1926.1053 - Ladders](#) for additional safety guidance on use of fixed and portable ladders.

The information presented in this publication is intended to provide guidance and is not intended as a legal interpretation of any federal, state or local laws, rules or regulations applicable to your business. The loss prevention information provided is intended only to assist policyholders in the management of potential loss producing conditions involving their premises and/or operations based on generally accepted safe practices. In providing such information, Great American does not warrant that all potential hazards or conditions have been evaluated or can be controlled. It is not intended as an offer to write insurance for such conditions or exposures. The liability of Great American Insurance Company and its affiliated insurers is limited to the terms, limits and conditions of the insurance policies underwritten by any of them. 0162-LC (02/24).