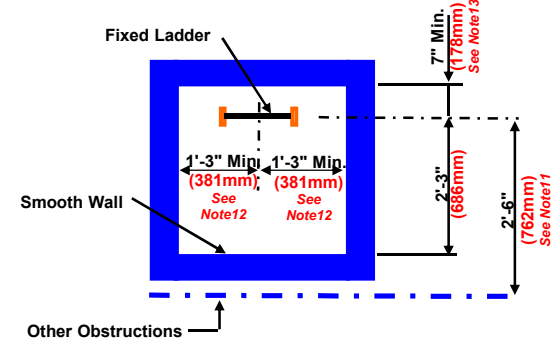
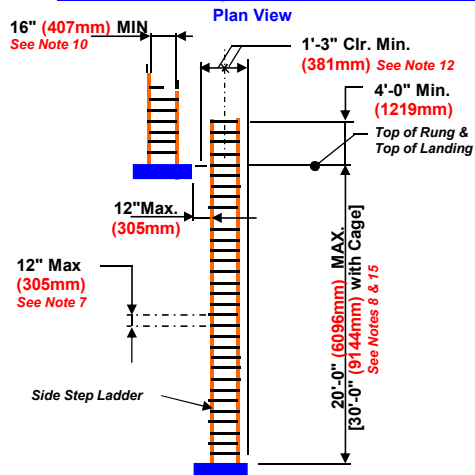


Fixed Ladder Design Notes:

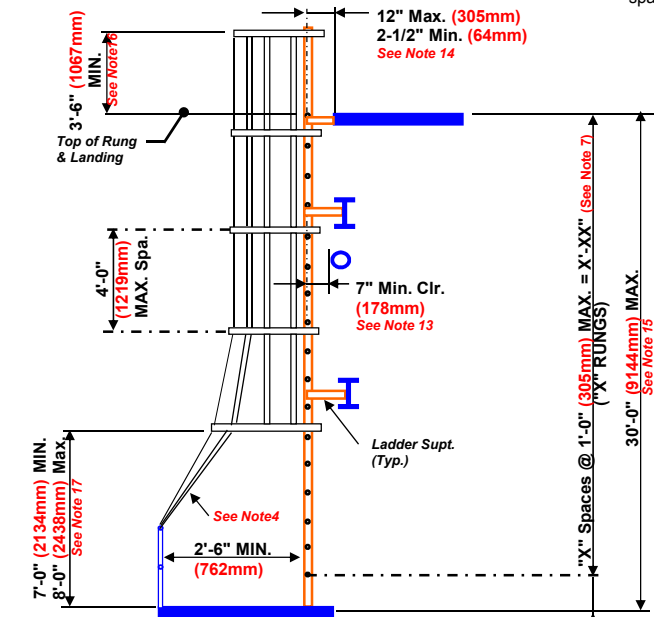
*Note: Use Client Standards if project required
See Standards for member sizes & additional details*



Clearance Diagram for Fixed Ladder in Well



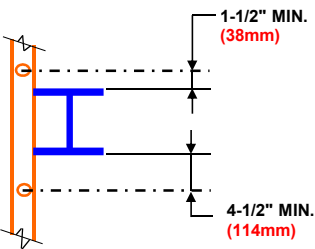
Offset Fixed Ladder Sections



Cages for Ladders More Than 20'-0" (6096mm)

1. The minimum design live load shall be a single concentrated load of **200 pounds (91Kg)**.
2. The number and position of additional concentrated live-load units of **200 pounds (91 Kg)** each as determined from anticipated usage of ladder shall be considered in the design.
3. All ladders **20 Feet (6096mm)** or more in length shall be equipped with safety cage. Cages shall also be required where the ladder face is within **4'-0" (1219mm)** of an elevated platform edge.
4. Where ladder face is within **4'-0" (1219mm)** of platform edge extend vertical cage bars to platform handrail.
5. The side access ladder is the preferred to the step through (Front) access style.
6. All fixed ladders serving elevations **2'-6" (762mm)** or more above ground, platform or floor level shall be equipped with drop bar or safety gate attached as follows:
 - * Side access ladders hinged at ladder side with drop bar.
 - * Side access ladders opens at ladder side with safety gate.
7. The distance between rungs shall not exceed **12 inches (305mm)** and shall be uniformed throughout the length of the ladder. Any Spacing adjustments to be at bottom rung to landing.
8. The maximum distance between landings shall not exceed **30'-0" (9144mm)**.
9. All rungs shall have a minimum diameter of **3/4" (20mm)** except ladders formed by individual metal rungs imbedded in concrete use **1" (25mm)** diameter bar minimum.
10. The minimum clear length of rungs shall be **16 inches (406mm)**.
11. On fixed ladders, the perpendicular distance from the center line of rungs to the nearest permanent object on the climbing side of the ladder shall be **36 inches (914mm)** for a pitch of 76 degrees and **30 inches (762mm)** for a pitch of 90 degrees.
12. A clear width of at least **15 inches (381mm)** shall be provided each way from the center line of the ladder in the climbing space.
13. The distance from the center line of rungs to the nearest permanent object in back of the ladder shall not be less than **7 inches (178mm)** except that when unavoidable obstructions are encountered - See Detail **Clearance for Unavoidable Obstruction at rear of ladder** (Below).
14. The step-across distance from the nearest edge of ladder to the nearest edge of landing shall not be more than **12 inches (305mm)** or less than **2-1/2 Inches (64mm)** for front access ladders.
15. When ladders are used to ascend to heights exceeding **20 Feet (6096mm)** landings platforms shall be provided for each **30 Feet (9144mm)** or fraction thereof, except that, where no cage or ladder safety device is provided, landing platforms shall be provided for each **20 Feet (6096mm)** of height or fraction thereof.
16. Cages shall extend a minimum of **3'-6" (1067mm)** above the top of landing, unless other acceptable protection is provided.
17. Bottom Cages shall extend down the ladder to a point not less than **7 Feet (2134mm)** nor more than **8 Feet (2438mm)** above the base of the ladder or landing.
18. Set top of rung flush with top of landing walking surface
19. Cages shall not extend less than **27" (686mm)** nor more than **28" (711mm)** from the centerline of rungs of the ladder. Vertical bar spacing shall be located at a maximum spacing of 40 degrees around the circumference of the cage - aprox. **9-1/2" (241mm)** c/c

2-1/2 inches (64mm)



Clearance for Unavoidable Obstruction at Rear of Ladder

See Note 13

Odd Spacing Should Always Occur at Bottom