



Phone: 877-770-5862

[www.PrecisionLiftIndustries.com](http://www.PrecisionLiftIndustries.com)

## Planning Guide for Home Elevators WD9500

**This planning guide contains general information on the most popular and standard elevator configurations; and NOT all elevator configurations are shown. This guide has been created to assist in the planning and design of a home elevator for a private residence. This guide is not intended to provide specific information, be used as an owner's manual, or as the only source of preparation for a future elevator installation. Specific questions or concerns should be addressed with a Precision Lift Industries factory sales representative or local authorized dealer.**

### **Overview:**

Precision Lift Industries builds high quality residential elevators that are designed with the perfect blend of performance and simplicity. Our residential elevators are the perfect solution for new construction and retro fit projects. The winding drum machine provides an energy efficient, smooth and reliable ride quality, without using any hydraulics.

**Space saving design:** The machine-room-less or M.R.L. design simply saves valuable space when compared to traditional hydraulic elevators that require a machine room to locate the pumping equipment.

**Technologically Advanced:** Our elevators use only laser cut and CNC folded interlocking sling components. When combined with a high quality motor / gearbox with the latest VVVF drive microprocessor controls, it provides years of reliable service.

**Flood zones / Coastal environments:** Our facility is located along the Florida Gulf Coast, and we have seen firsthand the damages that flooding and major storms can cause. The WD9500 is designed for coastal areas by utilizing high grade aluminum components within the elevator design. It is important to understand, that unlike most elevators on the market, these elevators have essentially only the rails at the bottom landing when parked at the top floor. There is no pumping unit, chains or counter weights to rust or become damaged over time.



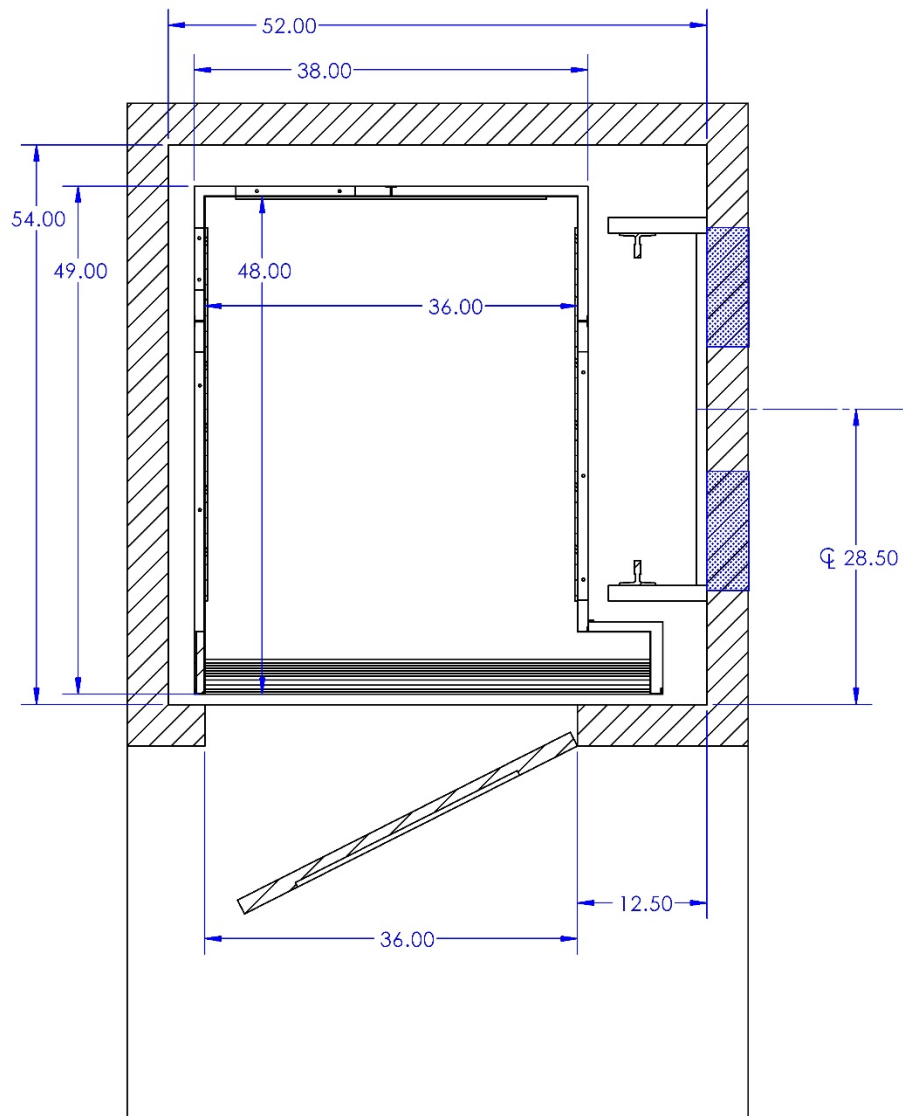


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### Typical Elevator Shaft Layout:



Standard Right hand elevator layout with 12" pit (minimum dimensions shown)  
(Doors shown are considered LH swing)



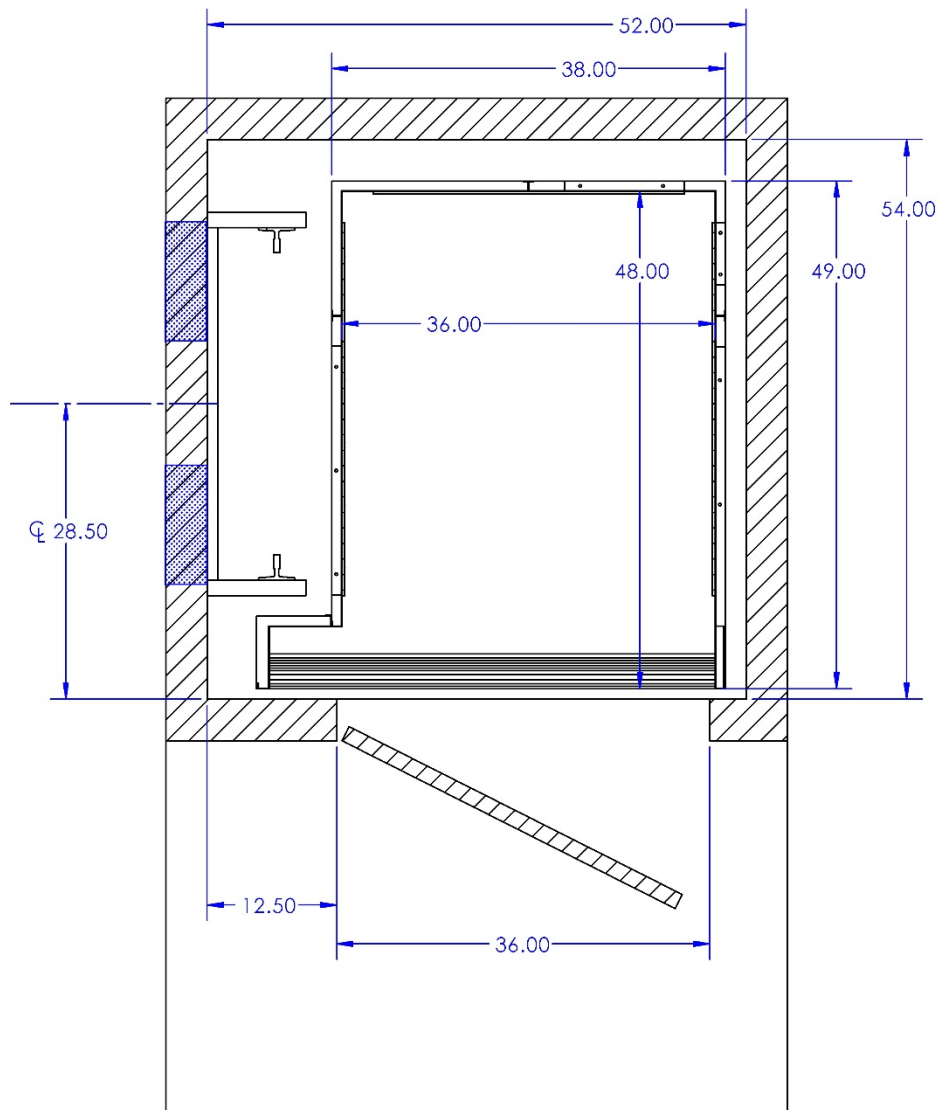


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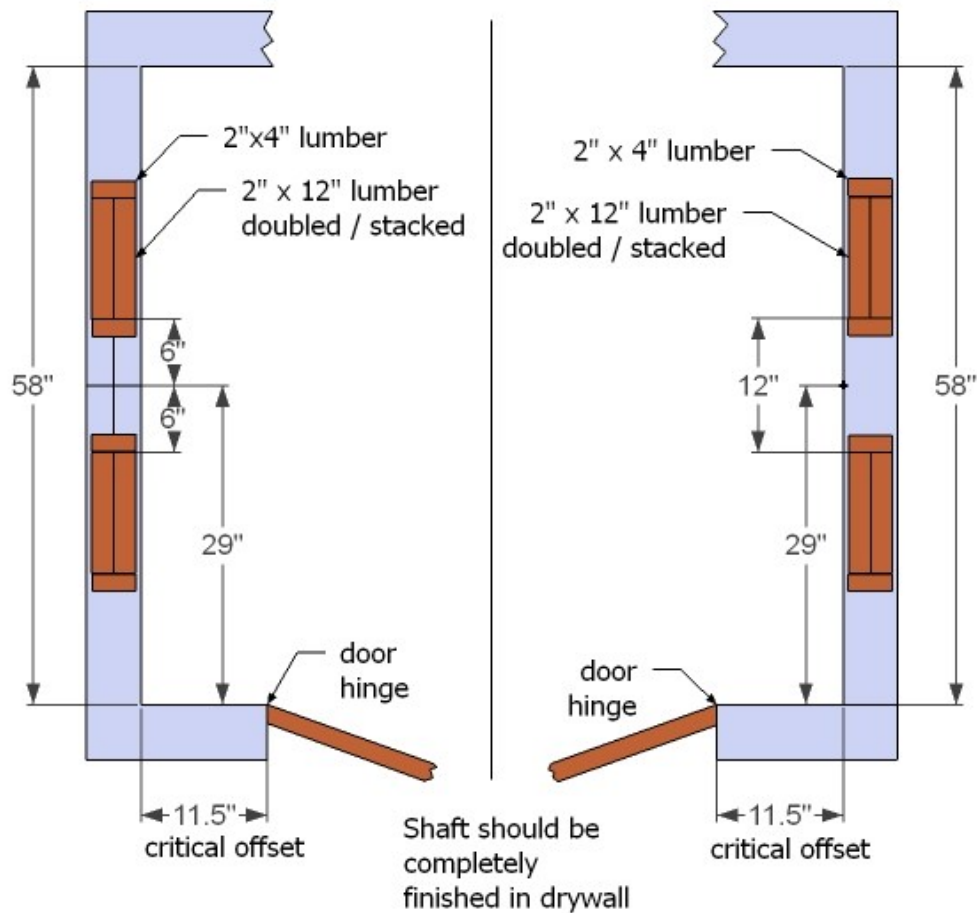
Standard Left hand elevator layout with 12" pit (minimum dimensions shown)  
(Doors shown are considered Right Hand swing)



## Shaft Design

### Framing Guidelines:

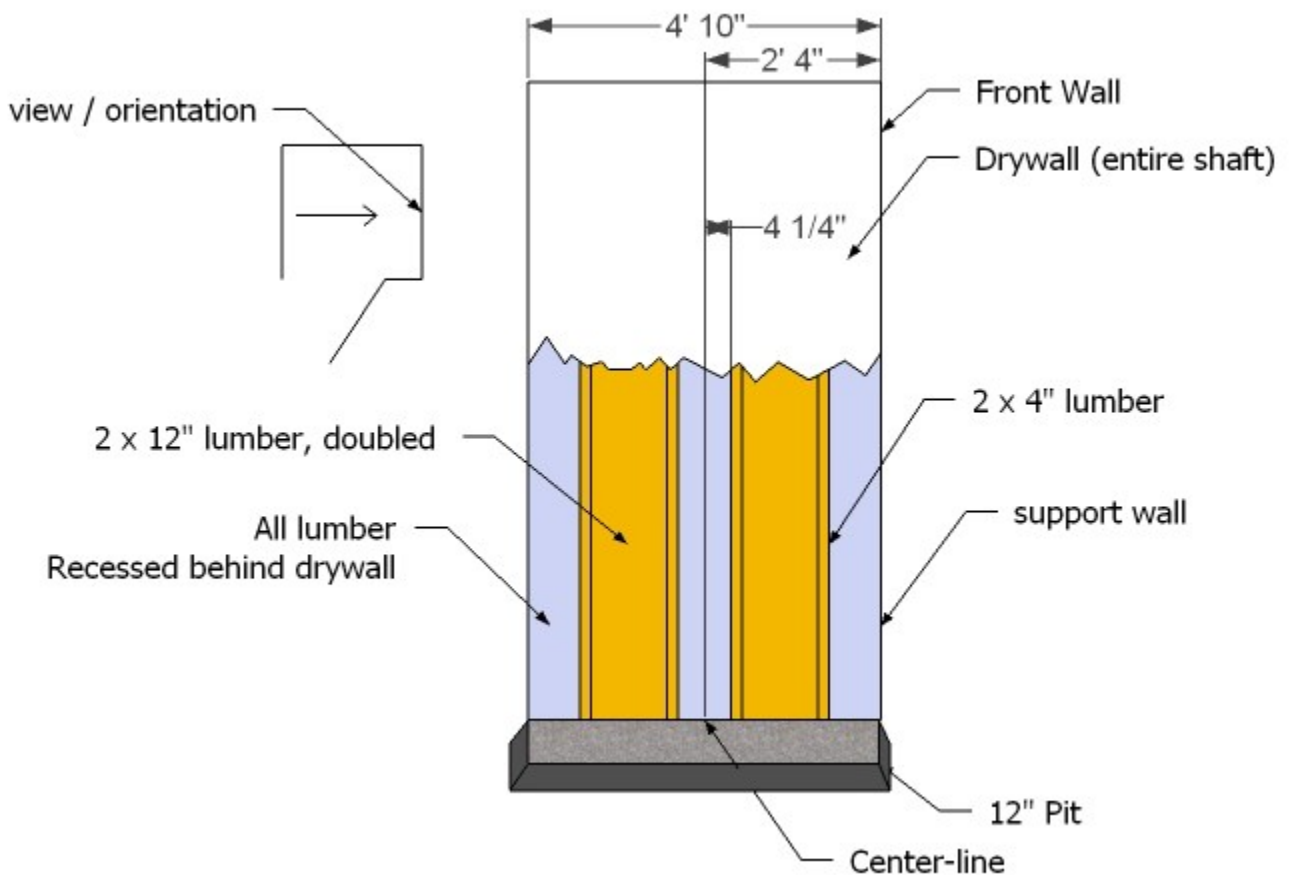
- One wall of the elevator shaft must be properly framed to support the elevator system. See attached drawing for detail.
- Typical support wall is the side wall perpendicular to the swing door hinges.
- Pay attention to the door jamb offset. Swing door jambs must be offset as shown in this planning guide and shop drawings.
- Must be able to support 300 lbs. of pullout force, with a maximum deflection on 1/8".



### Support wall:

Recommended method is doubled 2" x 12", with 2" x 4" caps on the ends running vertically from the pit to the very top of the elevator shaft. Boards must be recessed inside the wall (**not** surface mounted).

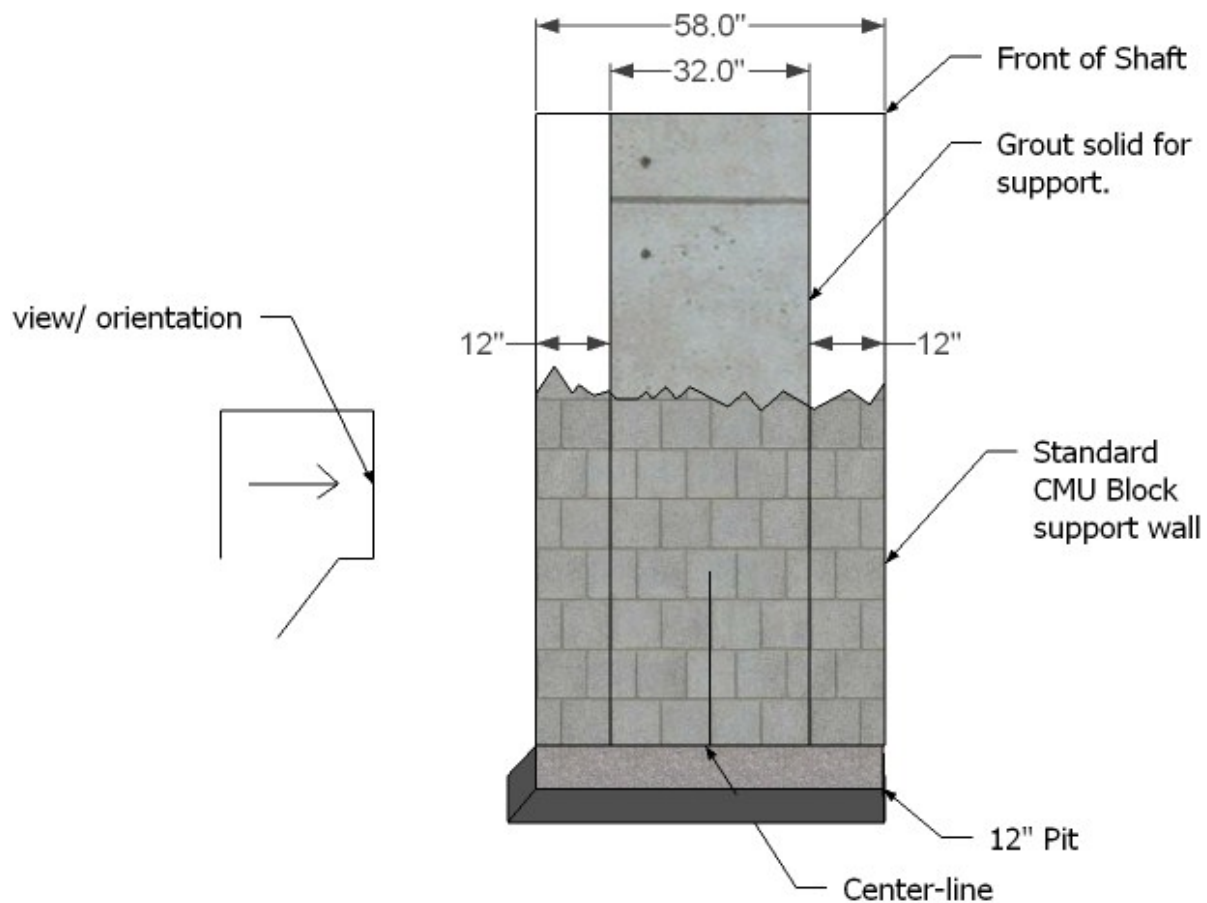
Location of these boards will be shown in drawings.



### Alternative Framing Options:

- Alternative method is doubled 2" x 12", running horizontally, recessed inside the wall (not surface mounted) placed every 5' from center to center, starting at the pit floor up to top of hoistway. Top 2" x 12" needs to be 18" down from ceiling to center of 2" x 12".

Alternative method is utilizing masonry shaft construction, and grouting specific cells solid. This will achieve the required pull out forces.



**Pit:**

A pit recessed 12" down (8" bare minimum) from the bottom landing finished floor must also be provided. The dimensions of the pit must match the inside clear dimensions of the elevator shaft.

The pit floor must be structurally adequate to hold approximately 3,800LBS as all forces from the lift are transferred down to the pit floor.



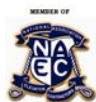
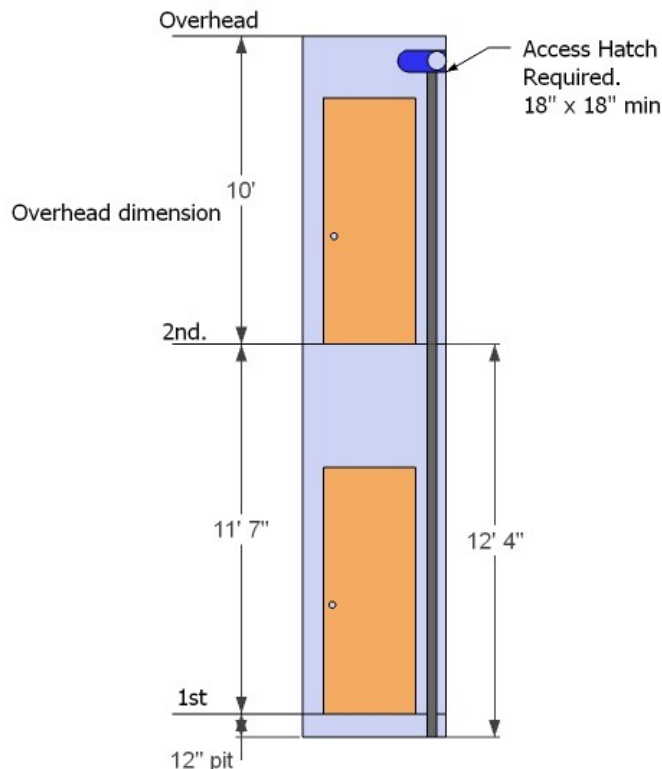
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**Shaft Lighting:** Shaft lighting may be installed at the very top of the elevator shaft and must be capable of adequately illuminating the entire shaft, first and second floors. (Note: Shaft lighting is not required)

**Overhead Requirements:** All Elevators must have adequate space above the cab for mechanical clearance. This space is referred to as the “overhead clearance”. This is a critical dimension that should be verified and incorporated into the design / building of an elevator shaft. The diagram below shows this requirement when a 96” cab height is chosen. The overhead dimension may be reduced to 102” when a standard 80” can height is used. Please consult the factory or local representative if you are unsure of the overhead dimension, or have a condition that will require special provisions to accommodate a lower overhead clearance.

**Access Hatch:** An access hatch will be required at the top of the shaft to provide maintenance related and emergency lowering access.







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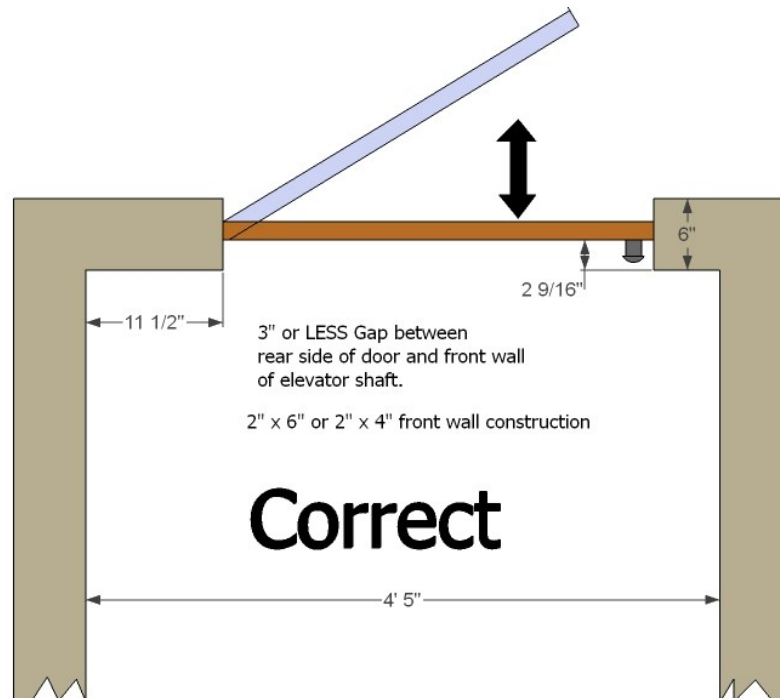
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**Electrical Requirements:** Lockable and fusible disconnects should be installed with (1) 230v single phase /30 amp circuit and (1) 110V /15 amp circuit. Disconnects should be located where controller will be installed.

**Machine Room:** A machine room is not required; however a closet or other suitable location will be required to install the controller to the lift. This should be in an easily accessible location for future maintenance and service. The controller may be located in the shaft where allowable by local code authorities.

**Hoistway Doors:** Hoistway doors should be solid core construction and are provided by the General Contractor. **Hoistway doors must be installed in compliance with the 3-5 Rule as regulated by A17.1 National Elevator Code.** A standard hoistway door can be either 80" or 96" in height.

The diagram below shows the correct door installation by the general contractor.

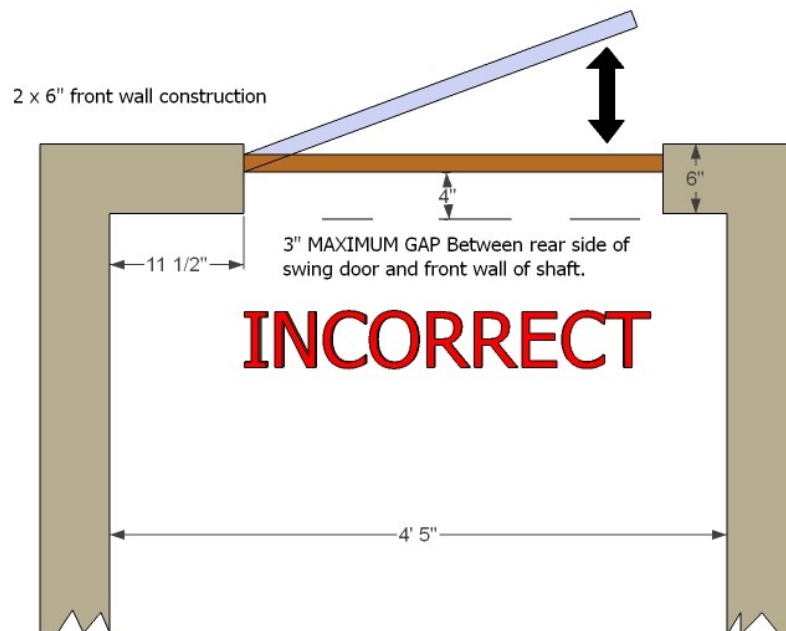


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The diagram below shows a common or assumed method of installing the hoistway doors. It is incorrect and will not meet code.



### IMPORTANT NOTE:

CERTAIN STATES, SUCH AS FLORIDA AND GEORGIA, HAVE MORE STRINGENT GUIDELINES FOR DOOR GAP CLEARANCES. FLORIDA, GEORGIA, AND OTHERS, REQUIRE HOISTWAY DOORS TO BE INSTALLED WITHIN  $\frac{3}{4}$ " OF THE ELEVATOR SHAFT WHEN IN THE CLOSED POSITION. THIS REQUIRES SPECIAL DOOR JAM, DOOR KNOB AND INTERLOCK PROVISIONS. CONSULT THE FACTORY FOR MORE DETAILS. SPECIAL FLUSH MOUNT DOOR JAMBS ARE AVAILABLE WHICH INCORPORATE THE INTERLOCK AND BUTTON INTO A UNIQUE JAMB. OWNER/BUILDER THEN PROVIDES A MATCHING DOOR PANEL OF THEIR CHOICE.



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### Technical Specifications:

**Model:** WD9500

**Capacity:** 950Lbs

**Cab size:** 36" w x 48" d approximate I.C.D. (standard)

**Fixture Finishes:** Stainless steel or powder coated bronze

**Handrail:** (1) polished aluminum handrail included.

**Cab:** Birch veneer, mahogany, cherry and shaker-style cab interiors available.

**Cab Height:** 80", 84", 96" available.

**Finished Flooring:** By others ¼" tolerance, we supply subfloor only.

**Power Requirement:** 230V with 30 amp circuit / 110v with 15amp circuit

**Travel:** Up to 45' 0"

**Drive System:** VVVF motor controls and geared winding drum machine.

**Type:** Machine-Room-Less.

**Nominal Speed:** 40FPM

**Control:** Automatic operation, Optical leveling, Industrial PLC controls

**Pit:** 12"

**Overhead Clearance Required:** 102" for 80" cab height or 120" for a 96" cab height.

**Safety:** Slack cable switch and wedge safeties, final limit switch, integrated interlocks and emergency stop switch.

**Work by others:** Plum and legal shaft / pit construction, electrical and phone service.

Call 1-877-770-5862 with any questions and we will be happy to answer any questions or concerns.

