



# ORION™

LIMITED USE / LIMITED APPLICATION ELEVATOR

## **Planning Guide**

Limited Use / Limited Application Elevator

### **Applicable Codes:**

ASME A17.1, Section 5.2  
CAN/CSA B44, Section 5.2

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# GENERAL

This planning guide is designed to assist architects, contractors and lift professionals in planning for a Orion Elevator to meet the requirements of the following codes and standards:

ASME A17.1/CSA B44 2000, Section 5.2

ASME A17.1/CSA B44 2004, Section 5.2

ASME A17.1 2004, Addendum 2005, Section 5.2

ASME A17.1/CSA B44 2007, Section 5.2

ASME A17.1/CSA B44 2004, Addendum 2008, Section 5.2

ASME A17.1/CSA B44 2010, Section 5.2

ASME A17.1/CSA B44 2013, Section 5.2

This unique elevator is designed to help solve accessibility problems in commercial buildings, and meets state and national codes covering the Limited Use/Limited Application (LULA) elevators.

We strongly recommend you contact the Authority Having Jurisdiction (AHJ) in the region where the equipment will be installed. Become familiar with all requirements governing the installation and use of elevators in public and private buildings. It is extremely important for you to know and adhere to all regulations concerning installation and use of elevators.

## DOCUMENT REVISION HISTORY

Initial Release - September 1, 2006

Revised - May 22, 2008

Revised - December 4, 2009

Revised - March 12, 2010

Revised - November 3, 2010

Revised - December 7, 2011

Revised - November 14, 2012

Revised - July 9, 2013

Revised - August 19, 2013

Revised - October 21, 2013

Revised - November 29, 2013

Revised - March 12, 2014

Revised - October 21, 2014

Revised - November 5, 2014

Revised - January 13, 2015

Revised - January 29, 2015

Revised - February 4, 2015

Revised - February 19, 2015

Revised - March 10, 2015

## IMPORTANT NOTICE

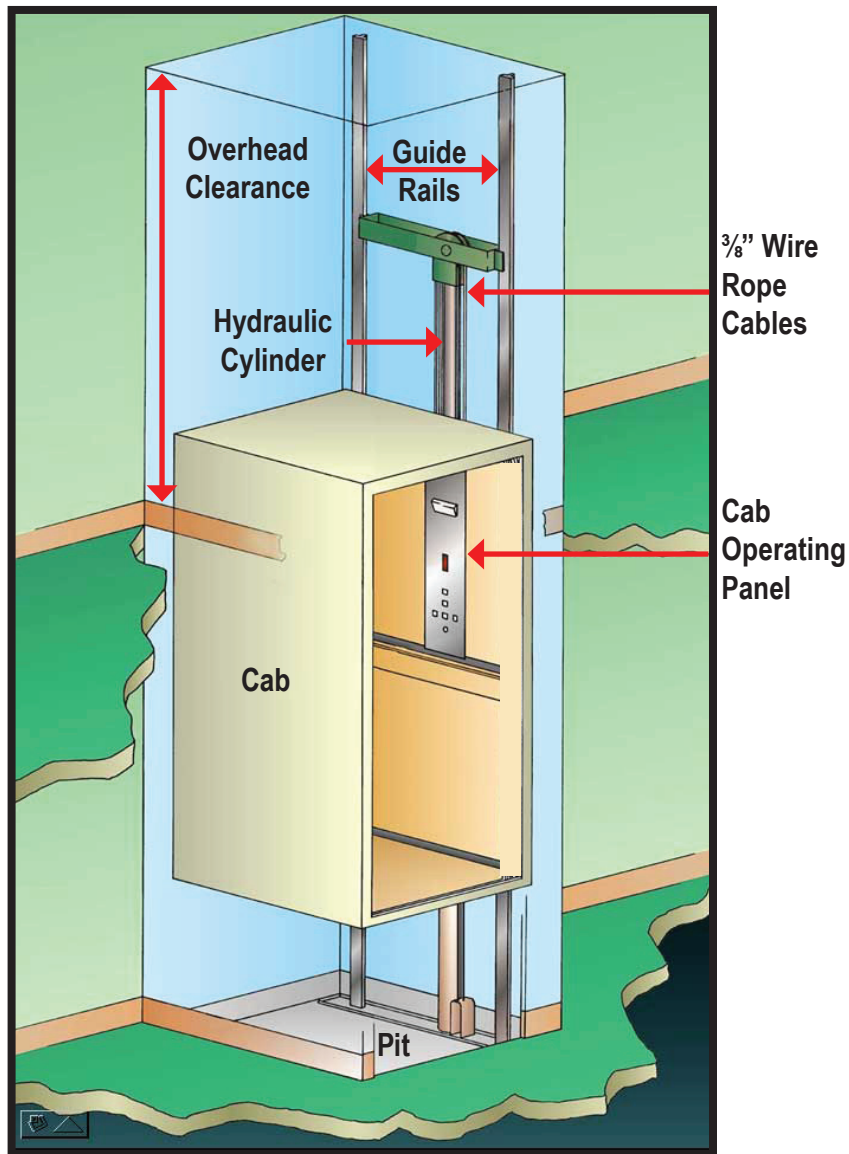
This Planning Guide provides nominal dimensions and specifications useful for the INITIAL planning of an elevator project. BEFORE beginning actual construction, be sure to receive application drawings customized with specifications and dimensions for your specific project.

Lift configurations and dimensions are in accordance with our interpretation of the standards set forth by AASME A17.1 - 2004 Section 5.2 and CAN/CSA B44 - 04. Please consult Savaria or the authorized Savaria dealer in your area for more specific information pertaining to your project, including any discrepancy between referenced standards and those of any local codes or laws (AHJ).

The dimensions and specifications in this Planning Guide are subject to change (without notice) due to product enhancements and continually evolving codes and product applications.

- Determine customer's intention for use.
- Determine code requirements of site.
- Determine installation parameters of site.
- Use page 6 to determine the car type and hoistway size requirements.
- Use pages 7, 8 and 25 to plan for machine room and electrical requirements.

# PRODUCT DESCRIPTION



Orion in Hoistway

## Meets (ADA) Americans with Disabilities Act Requirements

The Orion meets the requirements of the ADA Accessibility Guidelines as a means to provide public building access.

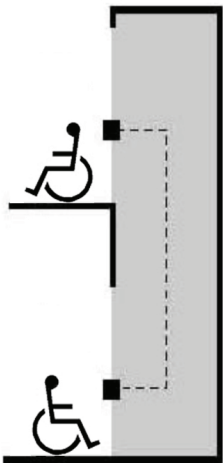
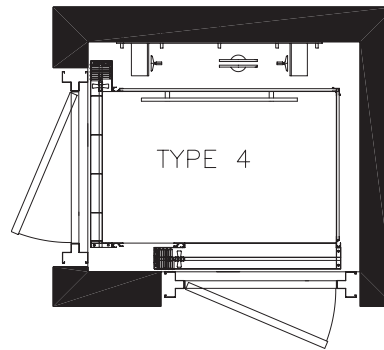
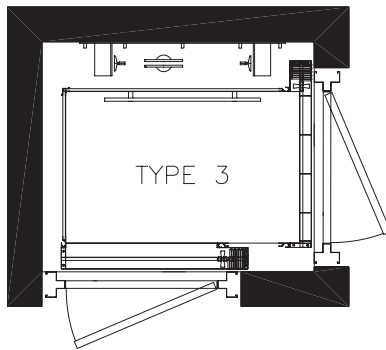
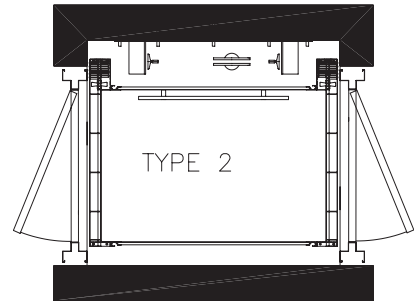
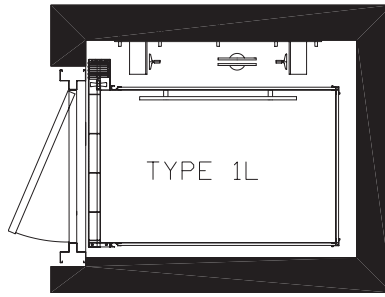
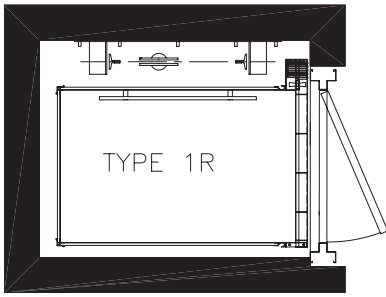
## Design Assistance

With over 30 years of experience, Savaria has the expertise to provide solutions to practically every design challenge you face. Please call our Customer Service Department for professional advice at (800)661-5112 or (905)791-5555.

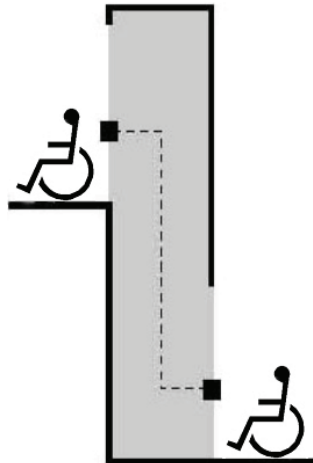
# ORION LU/LA ELEVATOR SPECIFICATIONS

|                                       |   |
|---------------------------------------|---|
| Load Capacity                         | 1400 lb (635 kg)  |
| Rated Speed                           | 30 fpm (0.15 mps)   |
| Power Supply (circuit by others)      | 208 Volt, three-phase, 30 Amps, 60 Hz or 240 Volt, single-phase, 40 Amps, 60 Hz   |
| Lighting Supply (circuit by others)   | 115 Volt, 15 Amps, 60 Hz  |
| Drive System                          | 1:2 cable hydraulic with slack cable safety device<br>5 hp submersed motor<br>Two 3/8" diameter steel aircraft cables<br>Rope wedge sockets   |
| Cab Size                              | W48" x 54" x H84" (1219 mm x 1371 mm x 2134 mm), Type 1, 2, 3, 4<br>W42" x L60" x H84" (1067 mm x 1524 mm x 2134 mm), Type 1, 2, 3, 4<br>W51" x L51" x H84" (1295 mm x 1295 mm x 2134 mm), Type 3, 4  |
| Cab Panel Finish                      | Steel panel cab with optional laminates   |
| Maximum Travel                        | 18 inches (457 mm) to 25 feet (7.6 m) ANSI, up to 40 feet residential and CSA   |
| Control System                        | Automatic user interface; Programmable Logic Controller (PLC)   |
| Noise level (typical installation)    | 73.2 dBA; measured at a height of 1m, distance of 1m, in front of tank, in closed machine room  |
| Maximum machine room temperature      | 120 degrees F (49 degrees C); tank generating ~ 3200 BTU/HR to 6400 BTU/HR  |
| Levels and Openings                   | Up to 6 stops (maximum 6 landing doors on all cab types)  |
| Pit Depth Required                    | 14 inches (355 mm) minimum up to 96 inches (2438 mm)  |
| Minimum Overhead Clearance            | 120 inches (3048 mm) for existing construction, 134 inches (3404 mm) for new construction   |
| Hall Station and Control Panel Finish | Rectangular stainless steel (standard) or brass (optional)  |
| Standard Features                     | 8 lb/ ft or 16 lb/ft T-rail system<br>Anti-creep device<br>Architectural white ceiling<br>Automatic cab ON/OFF lighting<br>Car top stop switch and car top prop (where required)<br>Data plates, capacity tags and rope tags<br>Digital floor and directional indicator<br>Emergency manual lowering, stop key switch and alarm buttons<br>Emergency battery back-up for lighting, alarm and emergency lowering<br>Floor specific battery lowering<br>Illuminated cab operating buttons<br>Limited warranty covers the repair or replacement of any defective parts for a period of 36 months from date of shipment<br>Magnetic floor selection, stopping and re-levelling<br>Manual reset slack rope safety switch<br>Maintenance pit props<br>Pit switch<br>Pit clearance switch<br>Presentation drawings<br>Pump run timer<br>Rail sections (8 ft standard or 16 ft optional)<br>Recessed incandescent down lights in stainless steel or brass color<br>Recessed plywood floor<br>Two 12 V, 4 AH, sealed no maintenance batteries with 24 V, 4 Amp Smart Charge™ battery charge<br>Variable speed pressure compensated valve with manual lowering<br>Upper and lower terminal limits |
| Options                               | 2 speed sliding doors for drywall or Masonry hoistway finish<br>2 speed steel doors with infrared closing sensors in black, architectural white or stainless steel<br>Steel panels with plastic laminate in a variety of colors<br>15 ft, 20 ft, or 25 ft hose with flow control<br>90 degree entry/exit cab<br>Automatic cab gate operator and automatic hoistway door operator<br>Automatic home landing to pre-selected floor<br>Brass COP, hall call stations, handrail and recessed down lights<br>Buffer springs, 15" (381 mm) minimum pit depth required<br>Conductor cable for hoistway to pump wiring, 40 ft (12.19 m), 60 ft (18.29 m) or 80ft (24.38 m)<br>Fire rated manual or automatic swing doors with automatic or manual accordion style cab gates (dependable on applicable code year)<br>firefighter service - phase 1 and 2 (dependable on applicable code year)<br>Flow control, overspeed valve and pipe rupture valve<br>Hands-free telephone<br>Overspeed governor<br>Fire recall service<br>Raised plastic laminated panels in a choice of 7 colors<br>Recessed stainless steel or brass telephone cabinet   |

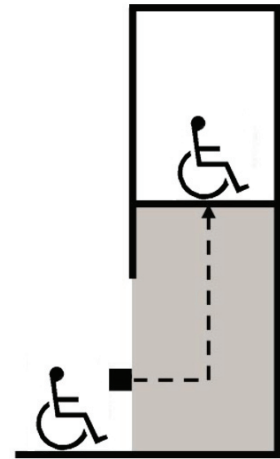
# CAB TYPE SELECTION SHEET



Type 1



Type 2

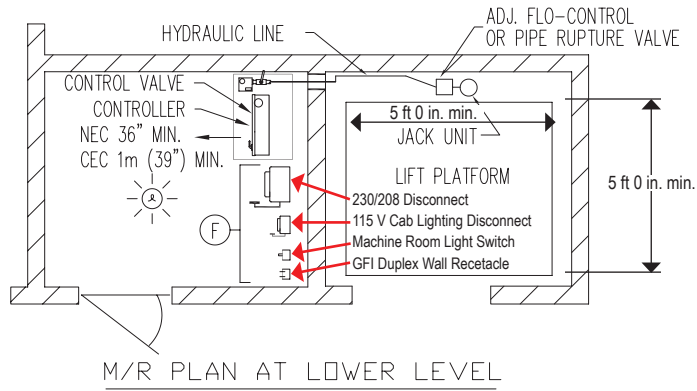


Type 3 and 4

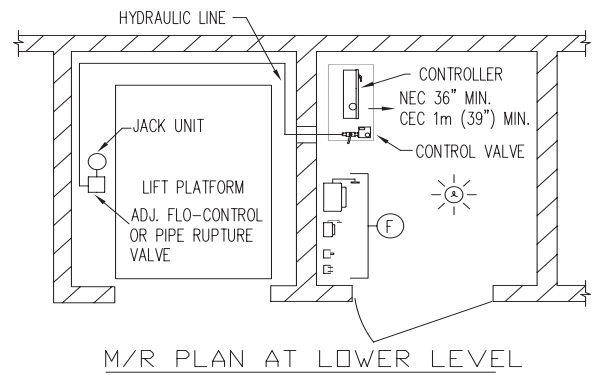
## IMPORTANT

Finished hoistway dimensions must include the drywall. Determine the fire rating of the hoistway, the type and layers of sheet rock and build only off the final shop drawings specific to your project.

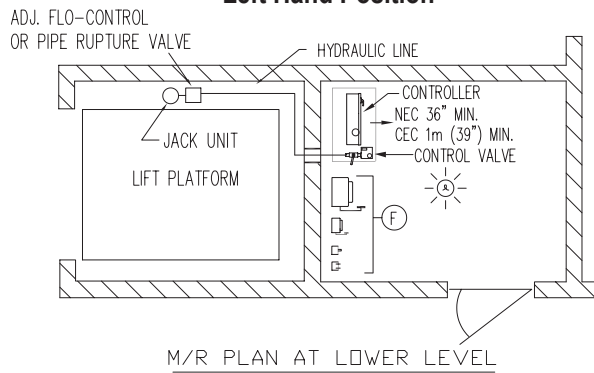
# MACHINE ROOM OPTIONS



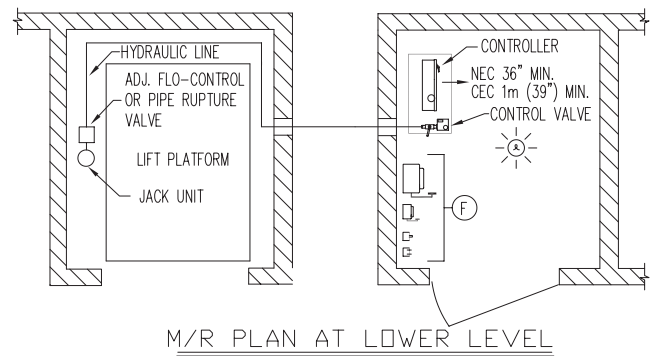
**Left Hand Position**



**Right Hand Position**



**Back Position**

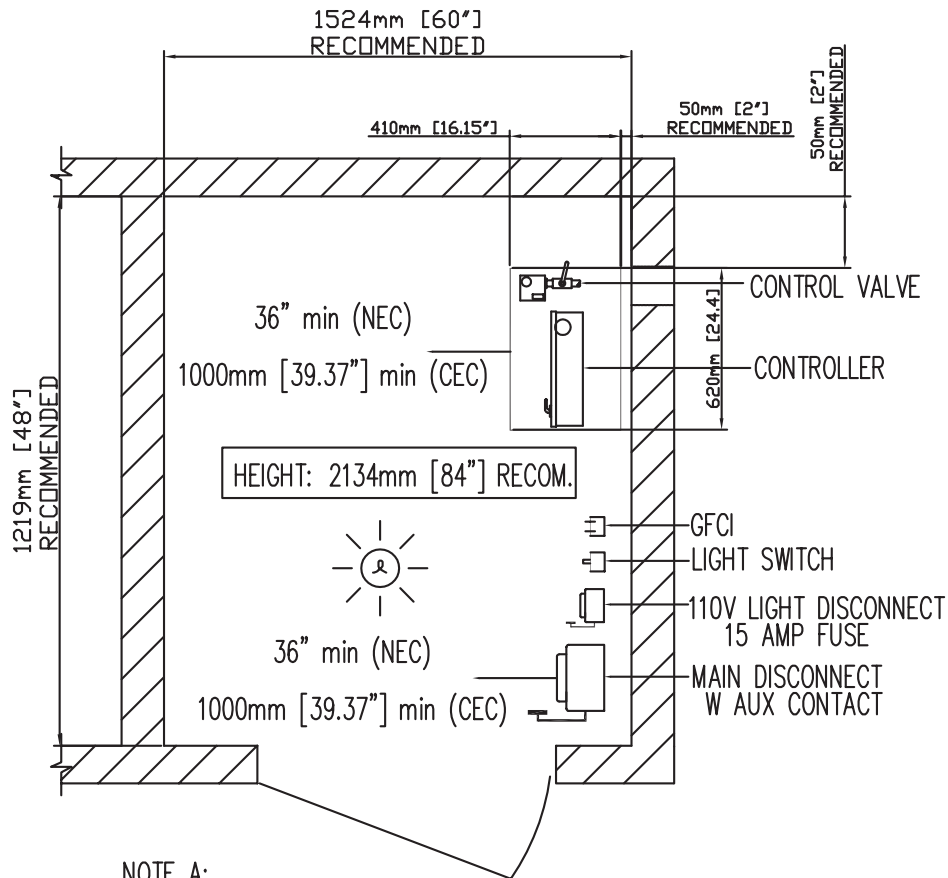


**Remote Position**

- Machine room must be built in accordance with elevator manufacturer and applicable building codes and regulations. Adequate ventilation is required to maintain a temperature of 50° to 120°F for output of 3600 BTU per hour.
- A convenience outlet of 115 VAC 15 Amp single-phase with G.F.I. shall be located next to the light switch in the machine room (provided and installed by others).
- Provide lockable, in open position, fused disconnect switches located adjacent to the elevator controller. Fusing must be selectively coordinated. Fuse either 208V three-phase w/30 Amp or 240V single-phase w/40 Amp service; fuse 115V for 15 Amp service for cab lighting. (Must comply with applicable codes.)
- The electrical circuit provided shall be either 30 Amp 208V three-phase or 40 Amp 240V single-phase, dedicated circuit with equipment ground. The circuit shall terminate on the line side terminal lugs of the disconnect. The electrical circuit is provided and installed by others.
- Disconnect switch to have auxiliary normally open interlock switch. Interlock equal to Square D EK-300-Z.
- 30" wide x 36" deep work space required in front of the disconnects and the elevator controller.
- Machine room lighting shall be a minimum of 19 foot-candles (204 lux) at working surfaces. The switch for the light must be within 18" of the strike side of the machine room door. The light must be guarded to prevent accidental breakage or contact with the hot bulb. The switch, light, wiring, and guard are provided and installed by others.
- A telephone line circuit is to be provided and installed by others. This circuit shall be brought to the machine room controller in conduit. This circuit must be connected to a dedicated outside line or a 24 hour central exchange.
- The elevator controller/pump unit dimensions - 27.5" wide x 62.8" high x 16.15" deep with 39" clear space in front.
- Machine room access door must be self closing, self locking, key locked and have a spring return latch.
- Consult local building codes for door construction. The door and hardware are both provided and installed by others.
- Machine room is required to be free of all pipes, wiring and obstructions not related to the operation of the elevator. Provide a 4 inch conduit from the lift shaft to the remote machine room.

# MACHINE ROOM DIMENSIONS

IMPORTANT NOTE:  
CONFIRM REQUIREMENTS WITH LOCAL CODE



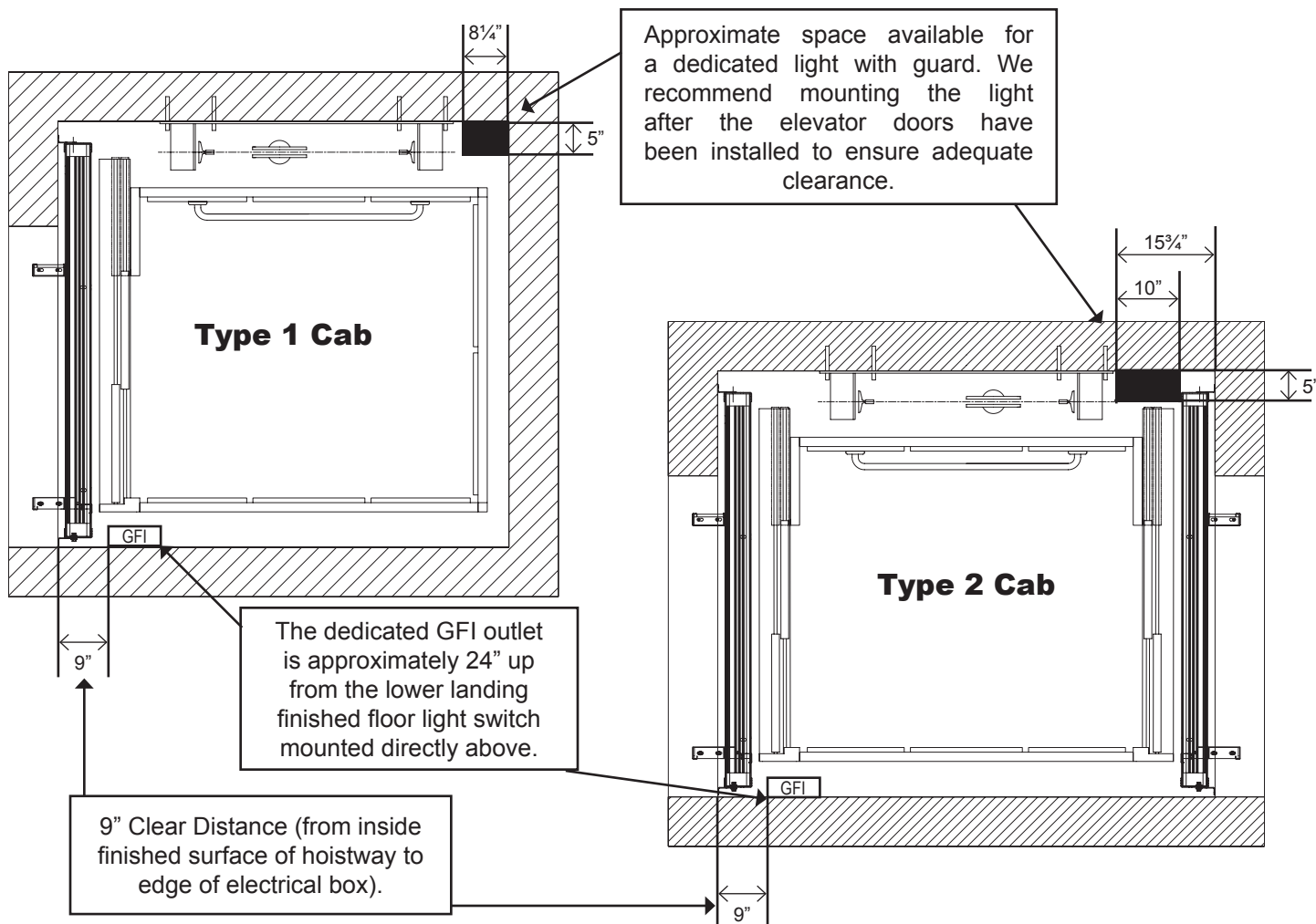
NOTE A:  
POSITION OF DOORS AND COMPONENTS CAN VARY  
AS LONG AS THE MINIMUM DISTANCE IN FRONT OF COMPONENTS IS RESPECTED

NOTE B:  
A RACEWAY BETWEEN THE MACHINE ROOM AND HOISTWAY WILL NEED TO BE PROVIDED.  
CONSULT YOUR INSTALLATION COMPANY FOR SIZE AND LOCATION



# HOISTWAY AND PIT ELECTRICAL NOTES

- A load bearing wall is required to sustain rail reactions. See page 18 for rail reactions.
- Suggested hoistway pit floor construction consists of an 8" (203 mm) concrete slab poured on a natural or compacted soil with a minimum allowable bearing pressure of 1.0 KSF.
- The minimum compressive strength of the concrete at 28 days must be no less than 3000 PSI. #5 reinforcing steel (grade 60) must be placed at the bottom of the slab in 2 traverse directions and at a spacing of 12" (305 mm).
- Hoistway pit floor to support a load of 10 kips (10,000 lbs)/44.48KN (includes impact).
- **120"(3048 mm) overhead clearance** required above the top landing floor with top prop (**existing construction**).
- **134" (3404 mm) overhead clearance** required above the top landing floor without top prop (**new construction**).
- 14" (356 mm) minimum pit. (A clearance device is provided to attain required 36" (914 mm) refuge space).
- Hoistway sizes reflect running and access clearances only. Consult your local AHJ to assure compliance with local codes.
- Hoistway is required to be free of all pipes, wiring and obstructions not related to the operation of the elevator.
- If a dedicated pit light is required by your local AHJ, please follow the guidelines below for accommodating this in your hoistway

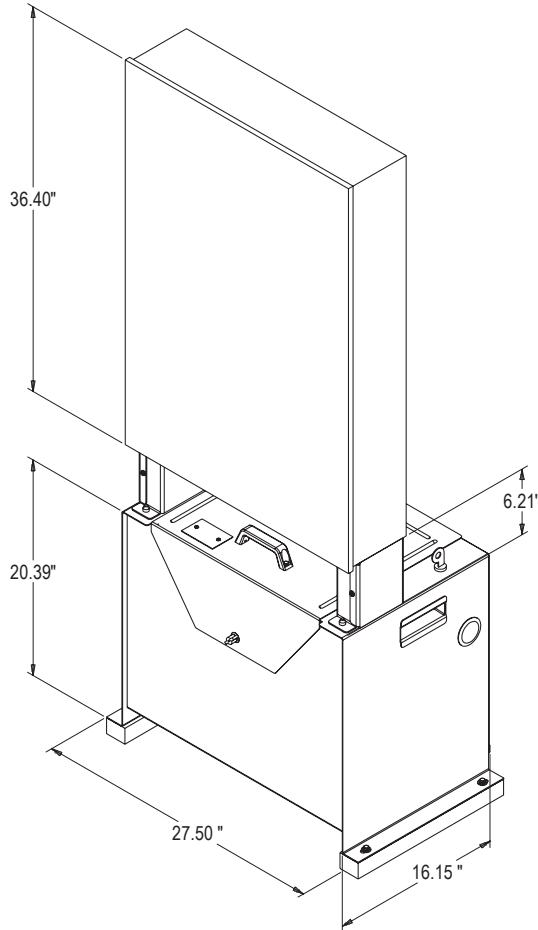


# CONTROLLER TANK SPECIFICATIONS

|  |                                      |
|--|--------------------------------------|
| Dimensions (inches)                          | H 57" x W 28" x D 17" (approx.)      |
| Minimum Required Clearance in Front (inches) | 39"                                  |
| Valve and Manual Lowering Handle Location    | Inside tank                          |
| Rupture Valve Test                           | T-fitting factory installed          |
| Tank to Controller Wiring                    | Quick connect valve and motor wiring |
| Controller Layout                            | PLC                                  |
| Keyed Lock to Tank                           | Yes                                  |
| Machine Room Required                        | Yes                                  |
| Tank Capacity (gal/ltr)                      | 15-16.5 gal/57-63 ltr                |
| Max. Dry Weight (lbs/kgs)                    | 147 lbs/55 kg                        |
| Max. Filled Weight (lbs/kgs)                 | 312 lbs/117 kg                       |
| Operating Environment                        | 50°F - 80°F /10°C - 27°C             |
| Operating Volume                             | 57 dBA                               |

## Controller Tank Features

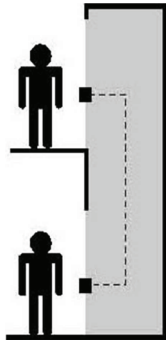
- Hydraulic hose connection ports on either side of the tank
- Built in handles on either side of the tank
- Isolation mounting of pump motor valve assembly minimizes operating noise



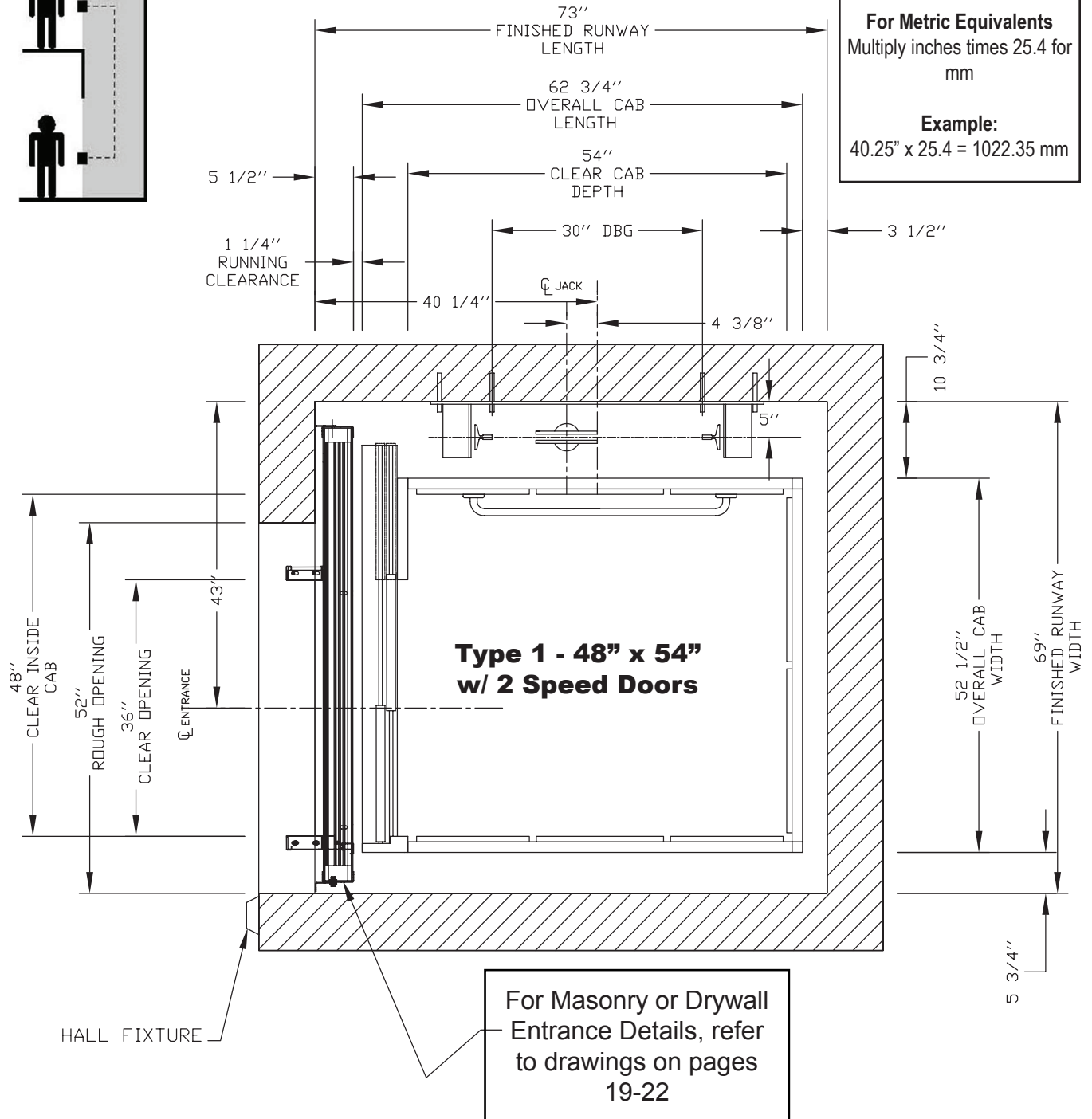
**PLC Controller Tank**

# ORION 48" X 54" TYPE 1 WITH 2 SPEED DOORS

Type 1



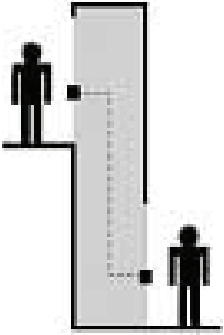
Finished hoistway dimensions must include the drywall (where applicable). Determine the fire rating of the hoistway, the type and layers of sheet rock. Build only from shop drawings specific to your project.



**NOTE**  
**Plan view drawing can be reversed for Right Hand applications.**

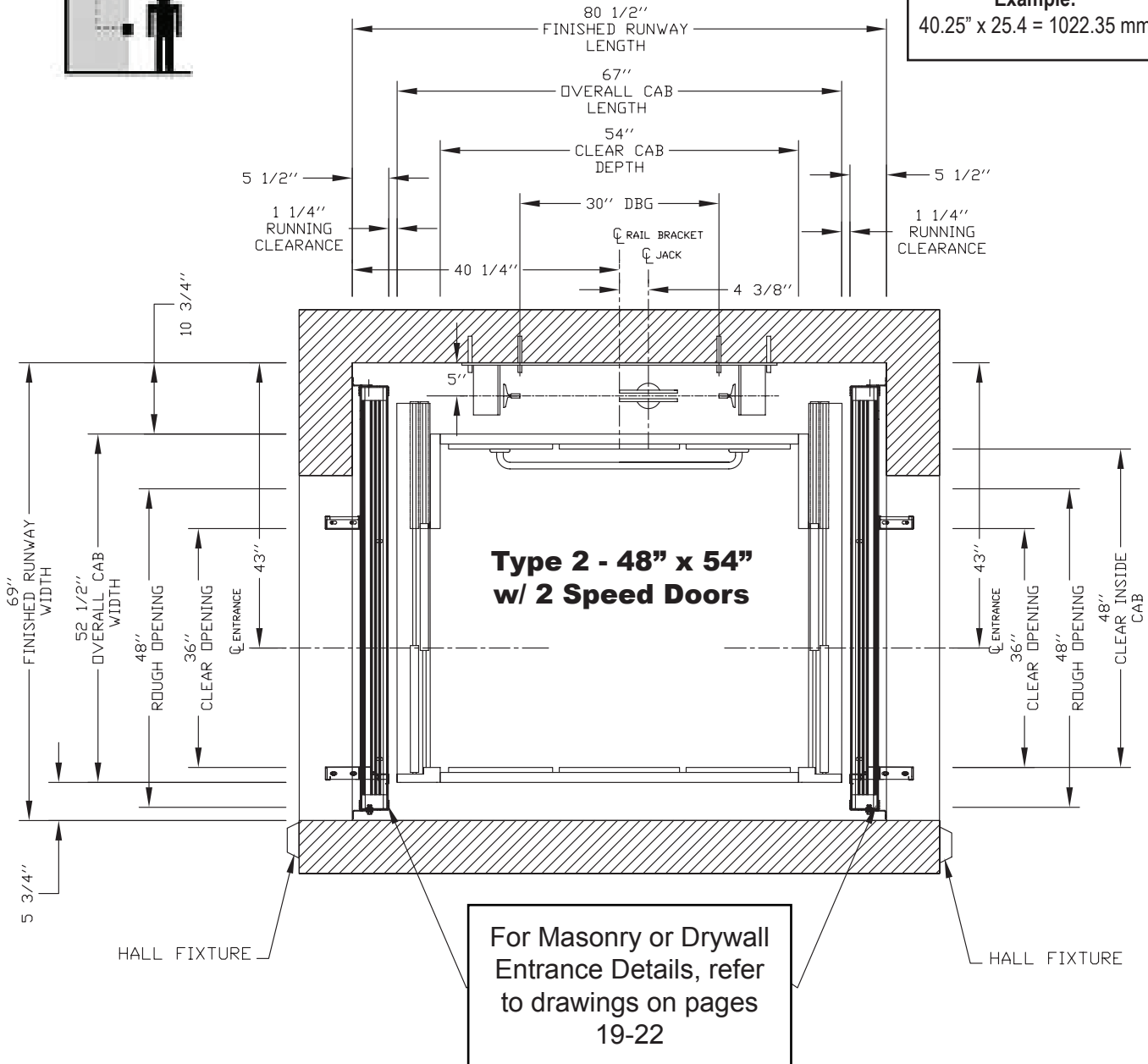
# ORION 48" X 54" TYPE 2 WITH 2 SPEED DOORS

Type 2



Finished hoistway dimensions must include the drywall (where applicable). Determine the fire rating of the hoistway, the type and layers of sheet rock. Build only from shop drawings specific to your project.

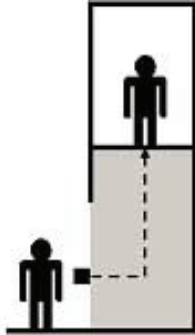
**For Metric Equivalents**  
 Multiply inches times 25.4 for mm  
**Example:**  
 40.25" x 25.4 = 1022.35 mm



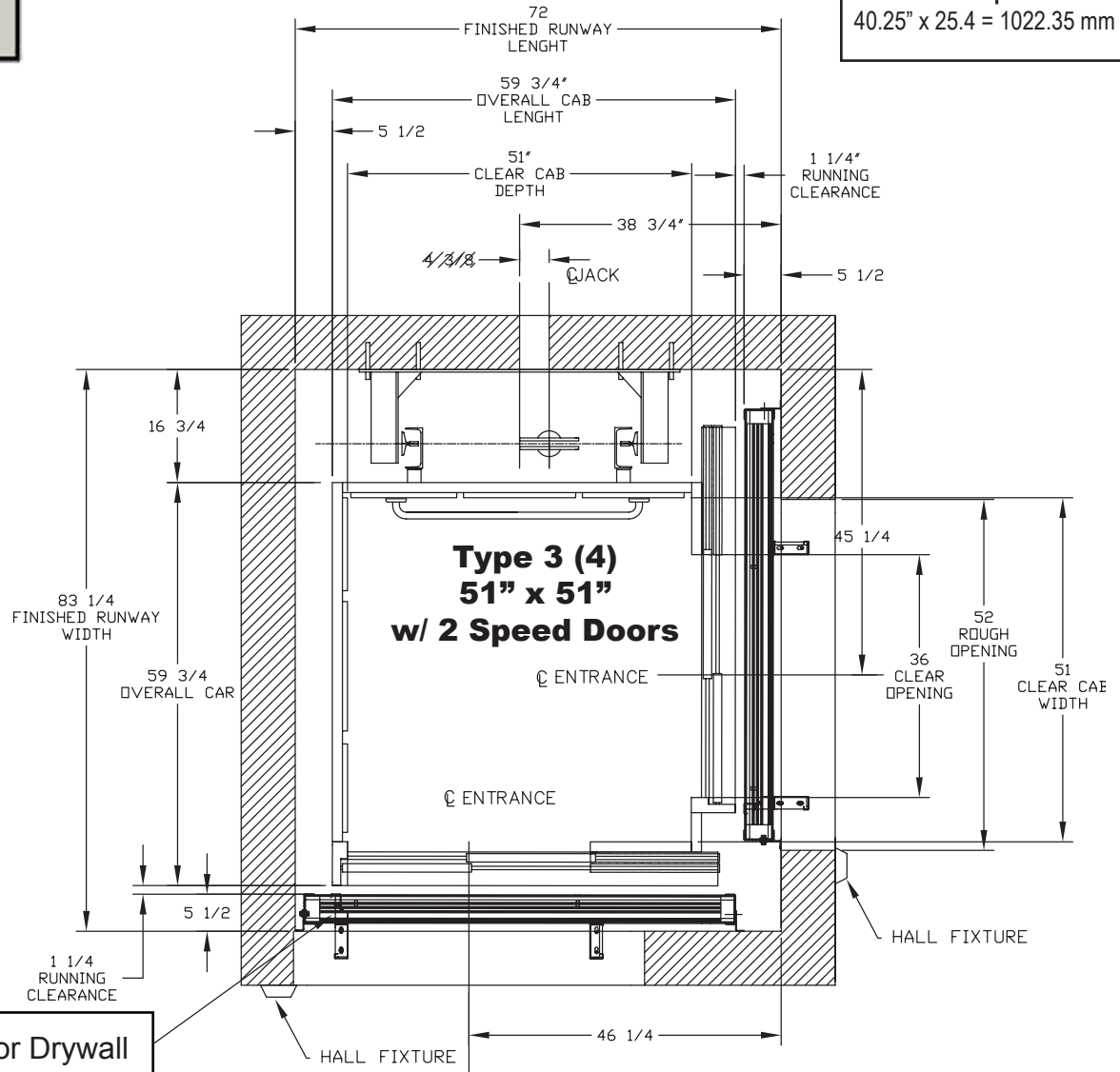
# ORION 51" X 51" TYPE 3 (4) WITH 2 SPEED DOORS

Type 3 or 4

Finished hoistway dimensions must include the drywall (where applicable). Determine the fire rating of the hoistway, the type and layers of sheet rock. Build only from shop drawings specific to your project.



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 Multiply inches times 25.4 for mm  
  
**Example:**  
 40.25" x 25.4 = 1022.35 mm



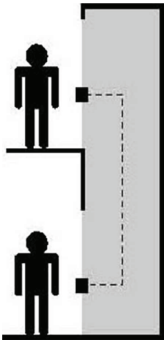
For Masonry or Drywall Entrance Details, refer to drawings on pages 19-22

**NOTE**

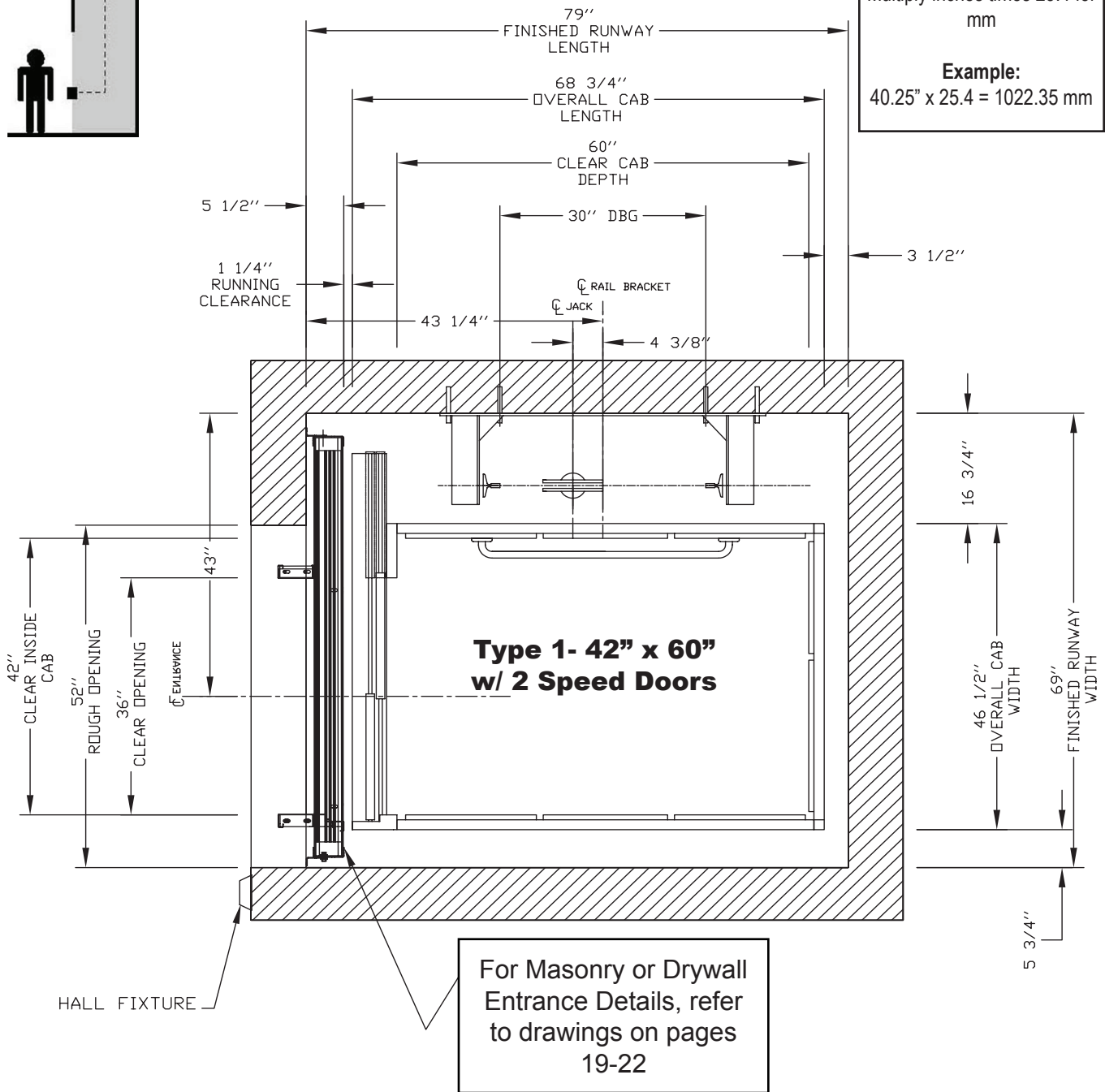
**Plan view drawing can be reversed for Type 4 applications.**

# ORION 42" X 60" TYPE 1 WITH 2 SPEED DOORS

Type 1



Finished hoistway dimensions must include the drywall (where applicable). Determine the fire rating of the hoistway, the type and layers of sheet rock. Build only from shop drawings specific to your project.

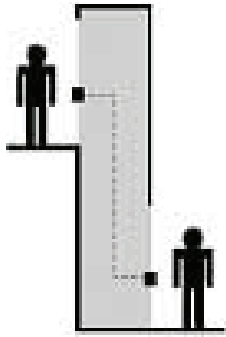


## NOTE

**Plan view drawing can be reversed for Right Hand applications.**

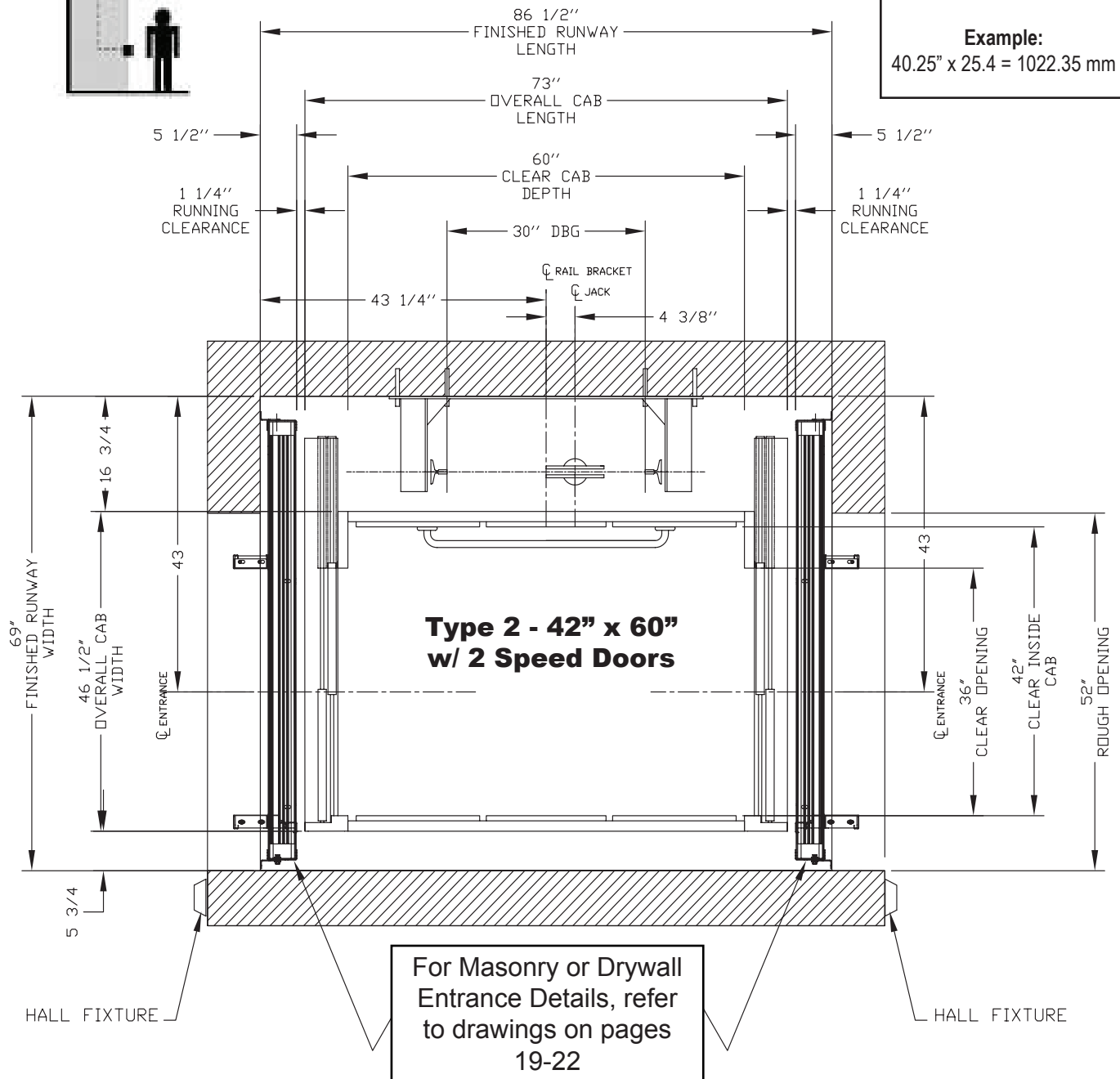
# ORION 42" X 60" TYPE 2 WITH 2 SPEED DOORS

Type 2



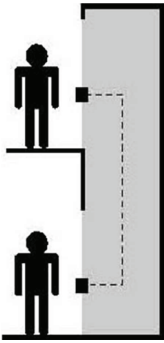
Finished hoistway dimensions must include the drywall (where applicable). Determine the fire rating of the hoistway, the type and layers of sheet rock. Build only from shop drawings specific to your project.

**For Metric Equivalents**  
 Multiply inches times 25.4 for mm  
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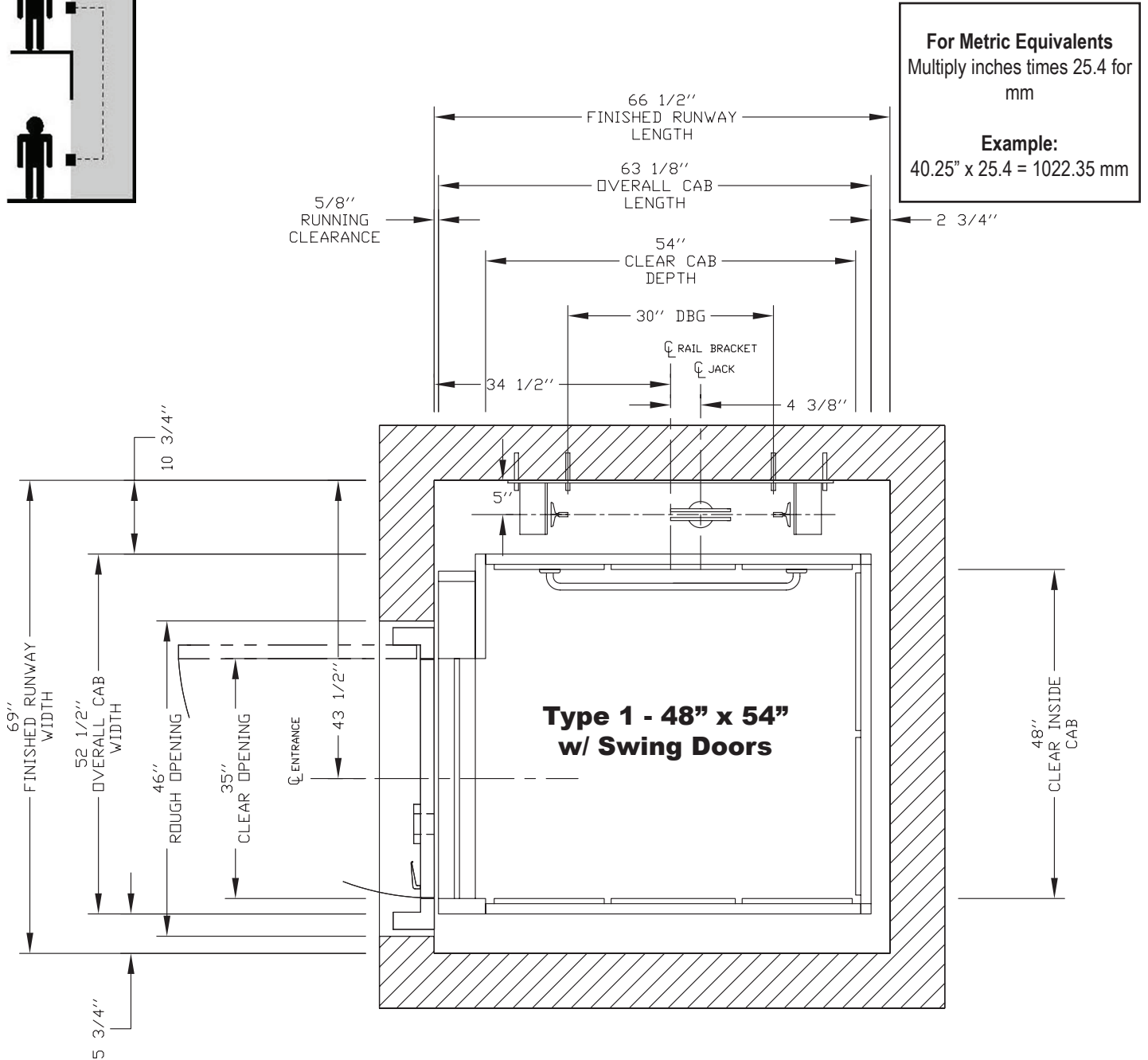


# ORION 48" X 54" TYPE 1 WITH SWING DOORS

Type 1



Finished hoistway dimensions must include the drywall (where applicable). Determine the fire rating of the hoistway, the type and layers of sheet rock. Build only from shop drawings specific to your project.



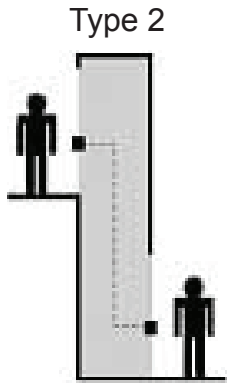
**For Metric Equivalents**  
 Multiply inches times 25.4 for mm  
**Example:**  
 40.25" x 25.4 = 1022.35 mm

## NOTE

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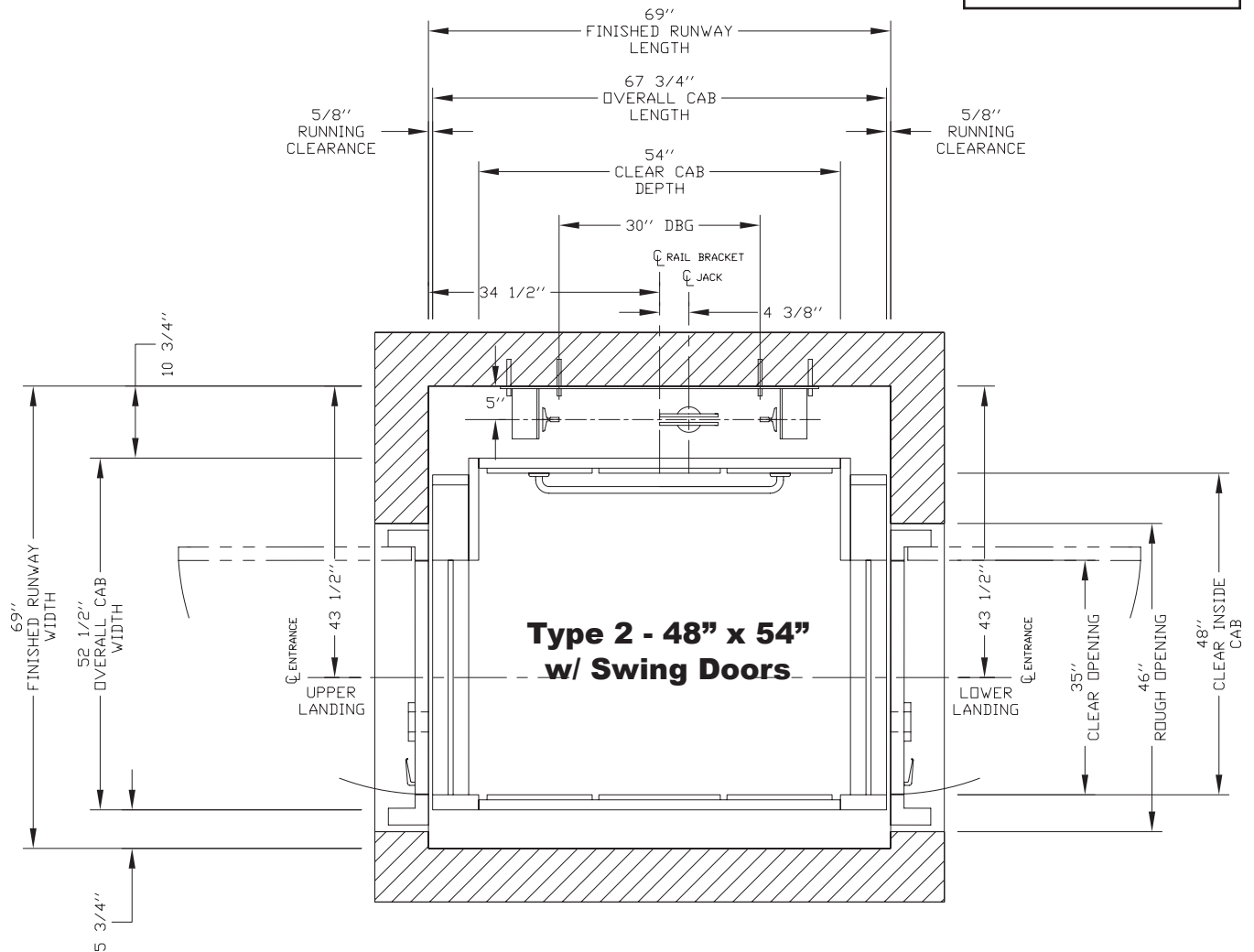


# ORION 48" X 54" TYPE 2 WITH SWING DOORS

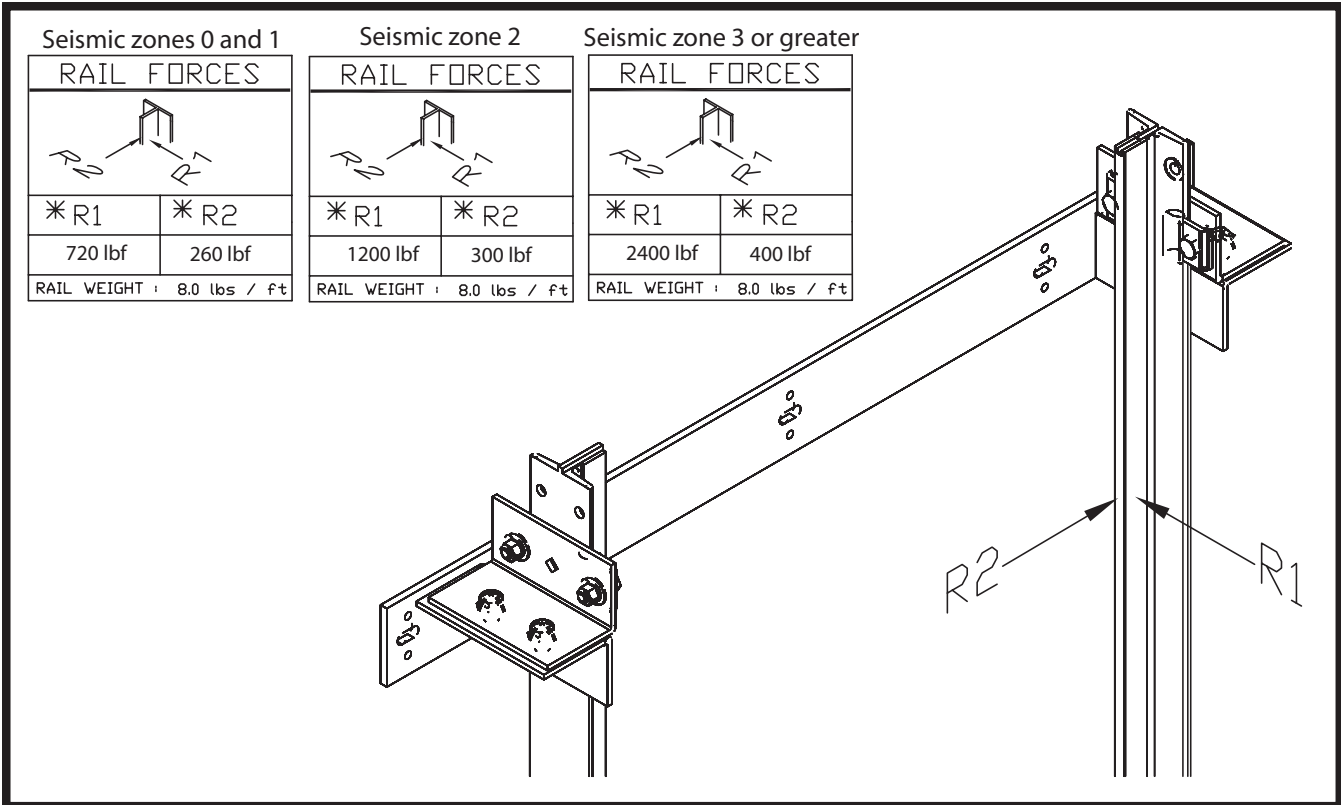


Finished hoistway dimensions must include the drywall (where applicable). Determine the fire rating of the hoistway, the type and layers of sheet rock. Build only from shop drawings specific to your project.

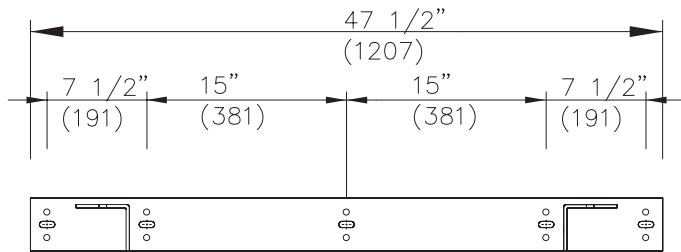
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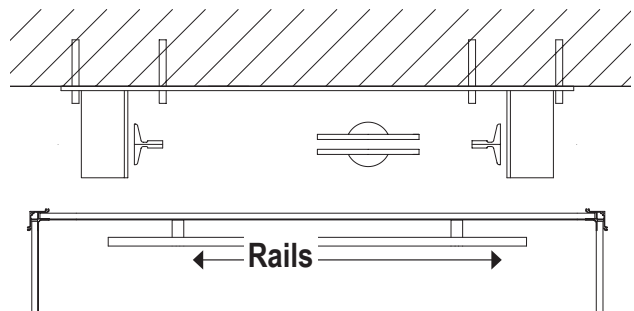
# LOADS ON BUILDING AND PIT LOADING



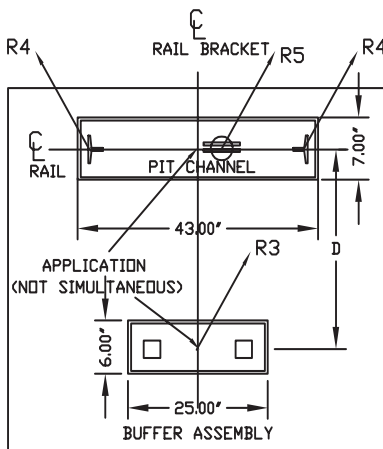
Rail reactions do not include safety factors. Applicable safety factors must be considered in hoistway design.



**Rail Bracket Dimensions**



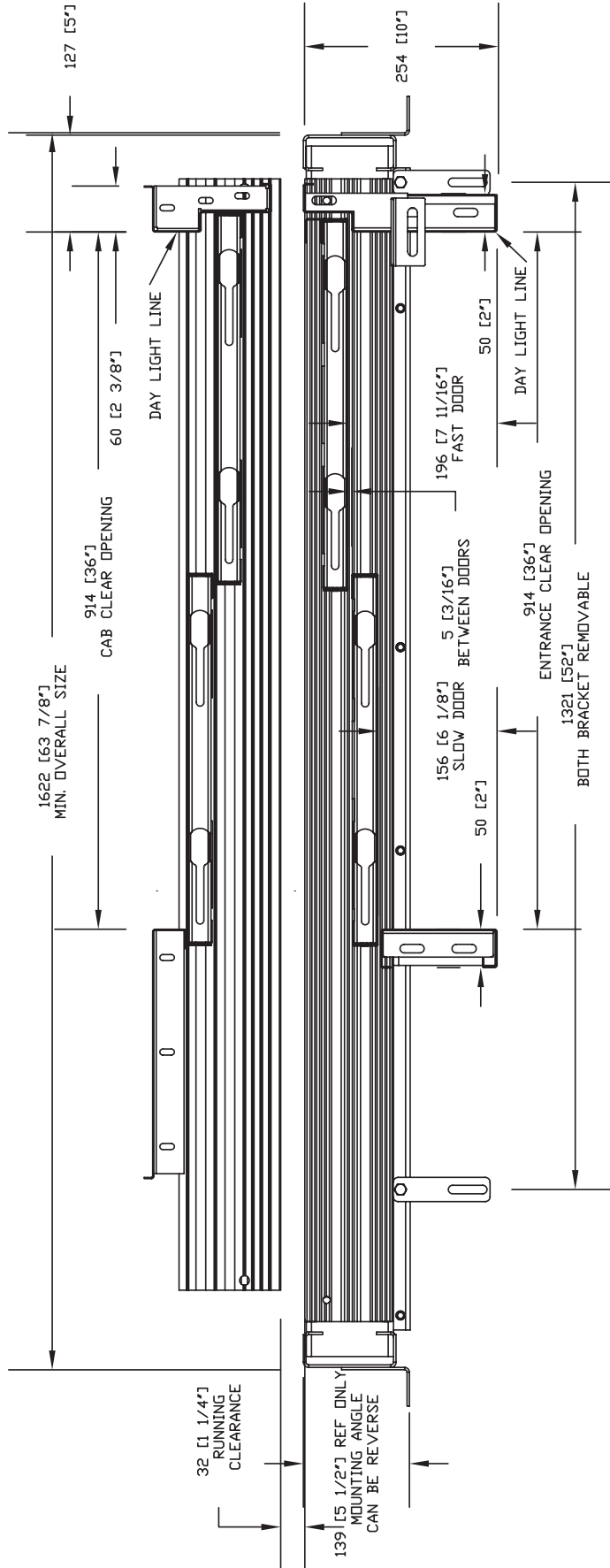
**Support Wall Orientation**



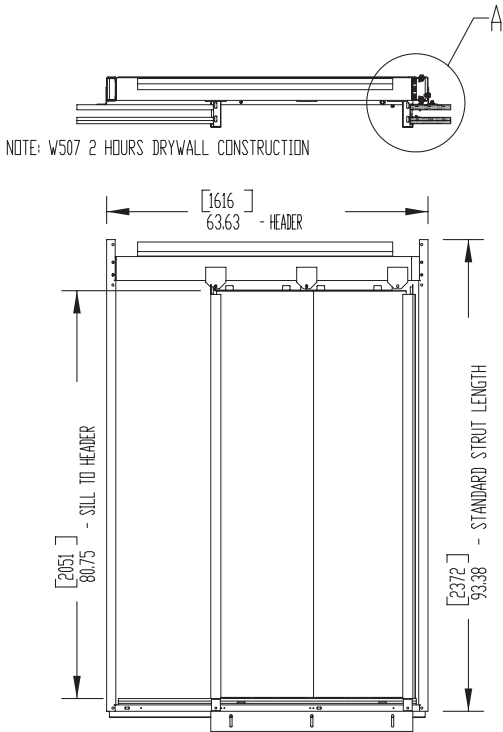
| PIT PRE-ACTION FORCE |          |
|----------------------|----------|
| R3                   | 8000 LBS |
| R4                   | 3000 LBS |
| R5                   | 9000 LBS |

R3- Condition I: when fully loaded car hits buffer (bumper)  
 R4 - Condition II: when safeties engage on rails with 110% loaded car at governor tripping speed  
 R5 - Condition III: normal running with 1.2 times impact for starting and stopping jerks

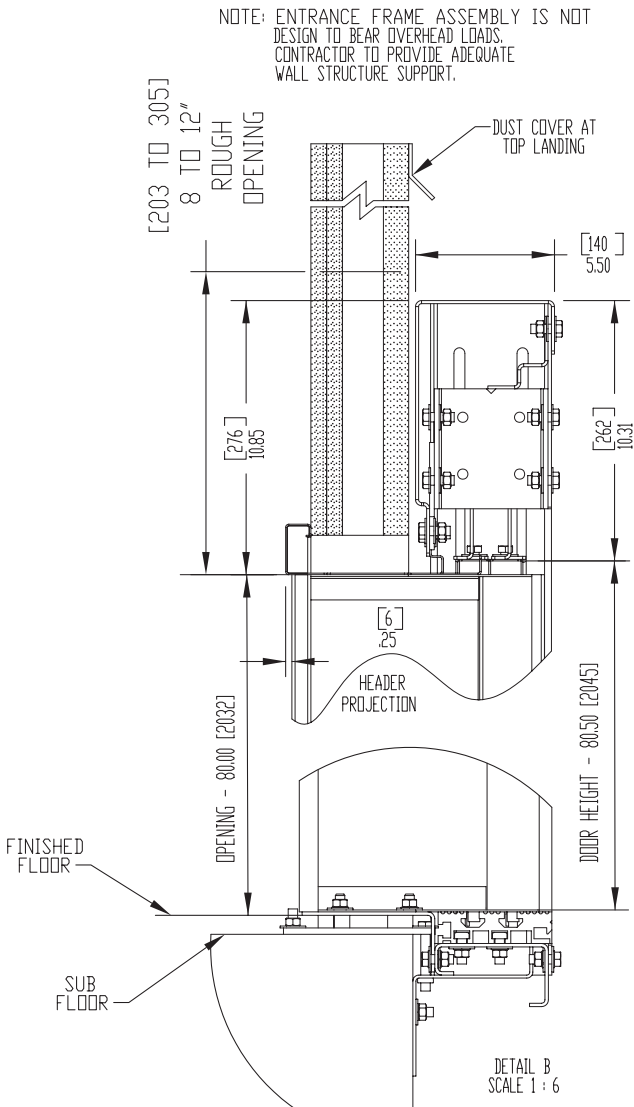
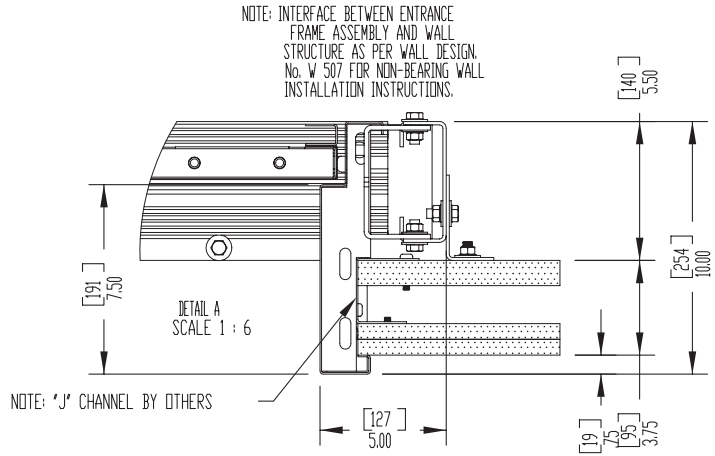
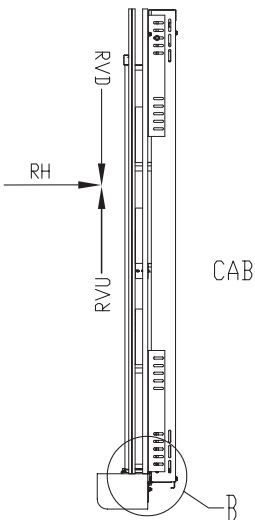
# ENTRANCE MOUNTING DETAILS FOR 2 SPEED DOORS WITH DRYWALL CONSTRUCTION



# ENTRANCE MOUNTING DETAILS FOR 2 SPEED DOORS WITH DRYWALL CONSTRUCTION

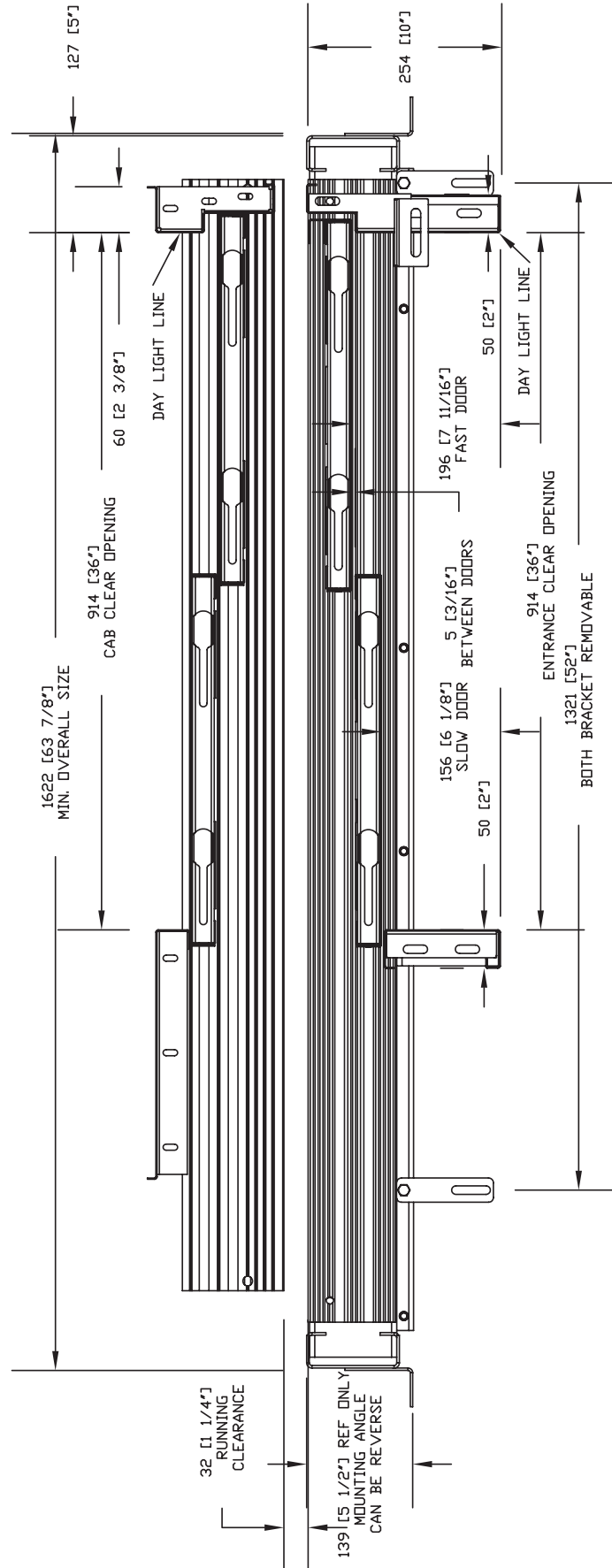


ENTRANCE LOADS ON BUILDING  
 RH = 5000 N (1125 lbf)  
 RVD = 1550 N (350 lbf)  
 RVU = 1000 N (225 lbf)  
 PER SECTION 2.11.11.8.

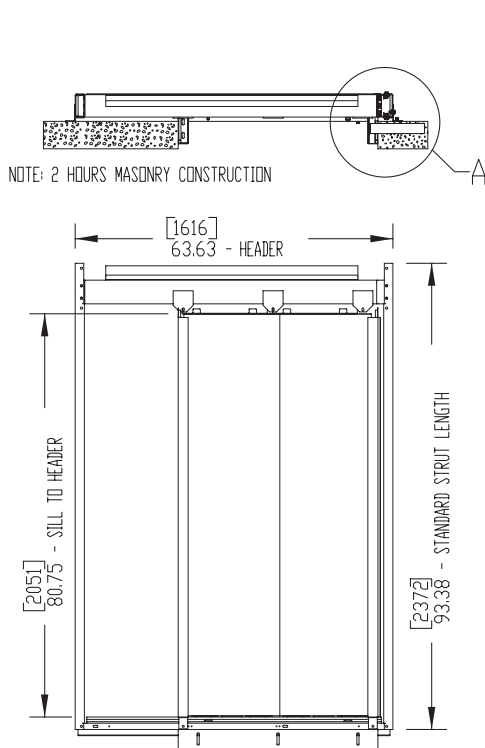


**Contractor please note:**  
**Grouting at the sill may be required after the door frames are set.**

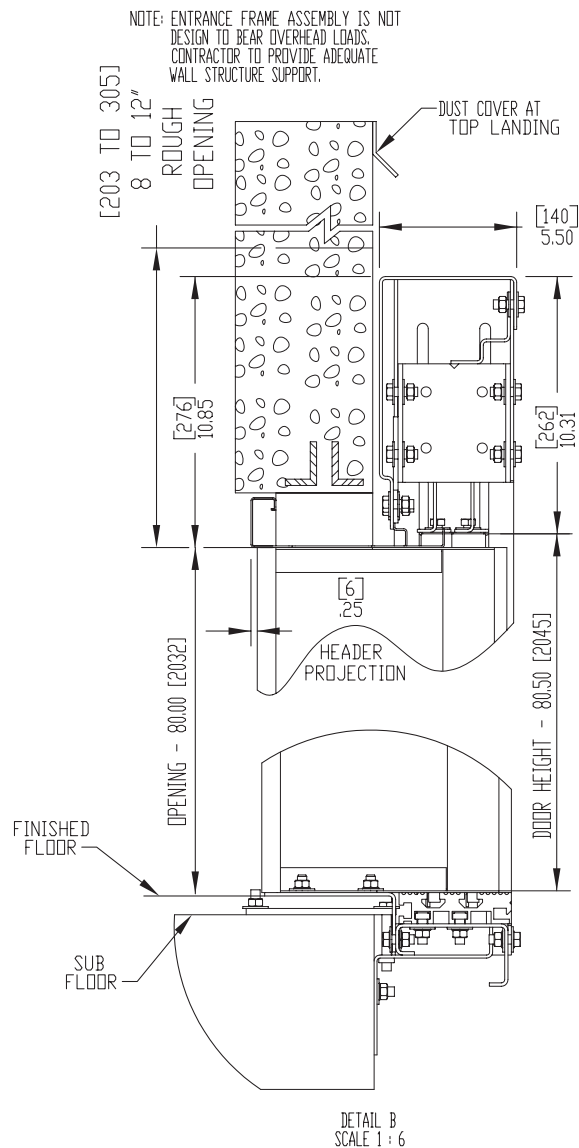
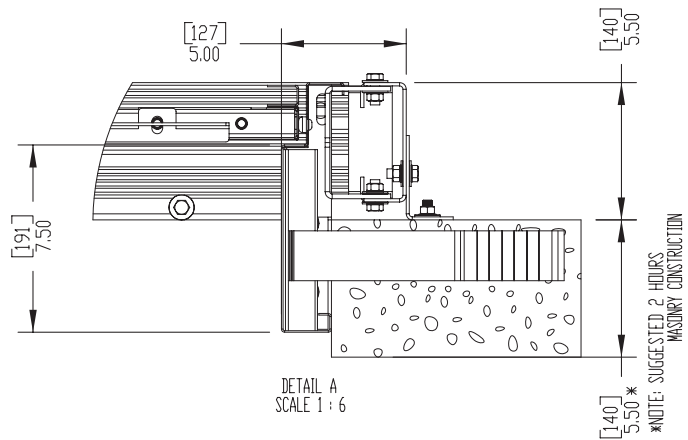
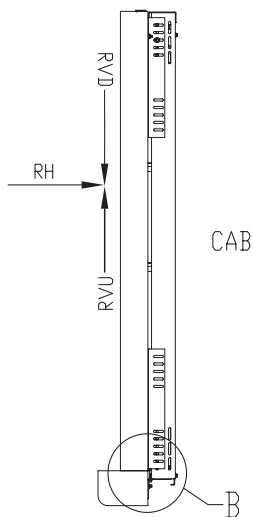
# ENTRANCE MOUNTING DETAILS FOR 2 SPEED DOORS WITH MASONRY CONSTRUCTION



# ENTRANCE MOUNTING DETAILS FOR 2 SPEED DOORS WITH MASONRY CONSTRUCTION

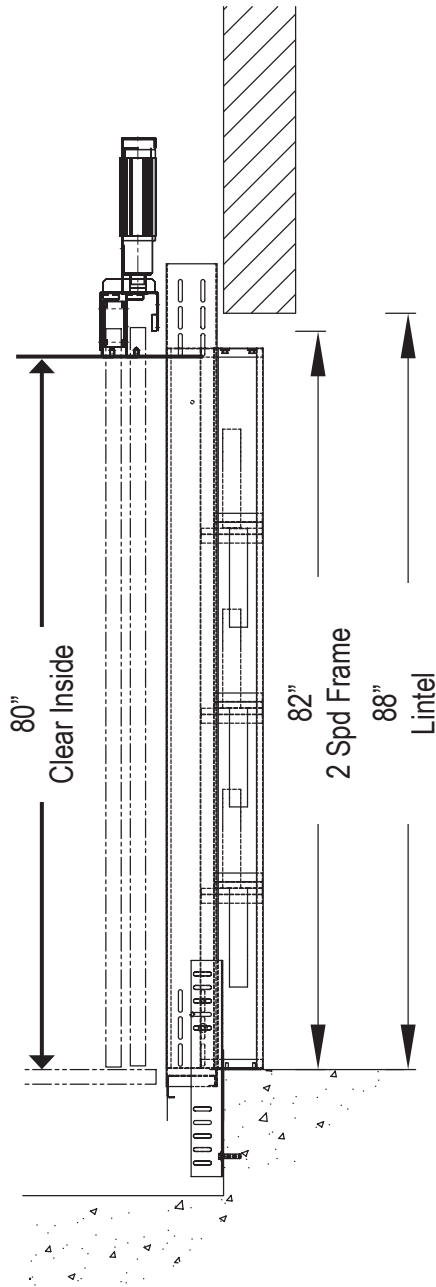


ENTRANCE LOADS ON BUILDING  
 RH = 5000 N (1125 lbf)  
 RVD = 1550 N (350 lbf)  
 RVU = 1000 N (225 lbf)  
 PER SECTION 2.11.1.8.

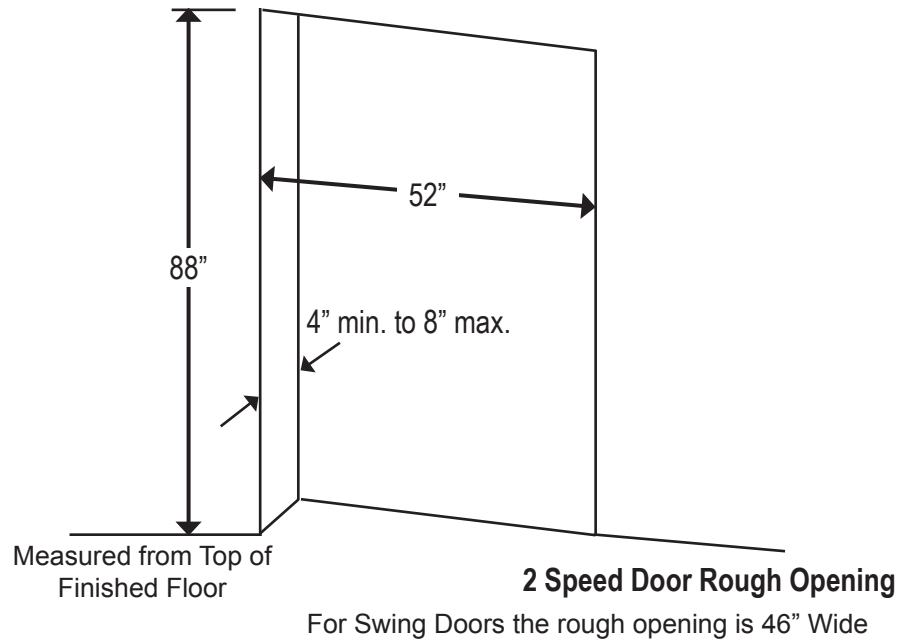


**Contractor please note:**  
**Grouting at the sill may be required after the door frames are set.**

# 2 SPEED AUTOMATIC DOOR AND GUIDE RAIL INFORMATION

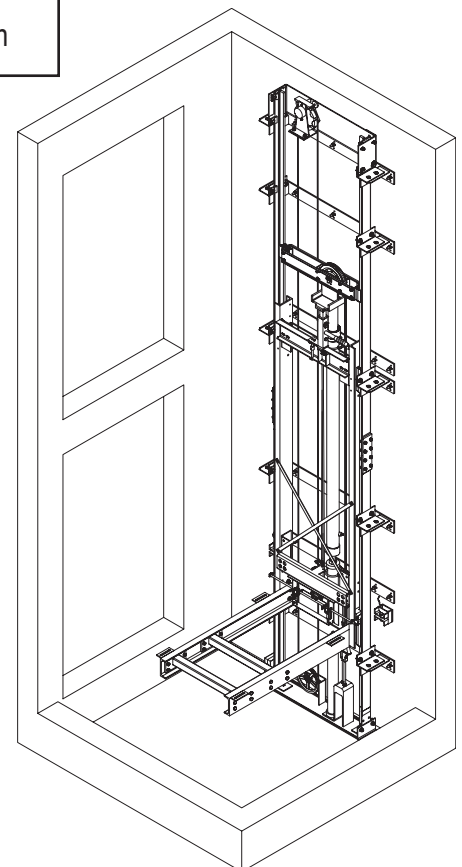


**Door Frame Elevation**



**For Metric Equivalents**  
 Multiply inches times 25.4 for mm

**Example:**  
 $40.25" \times 25.4 = 1022.35 \text{ mm}$

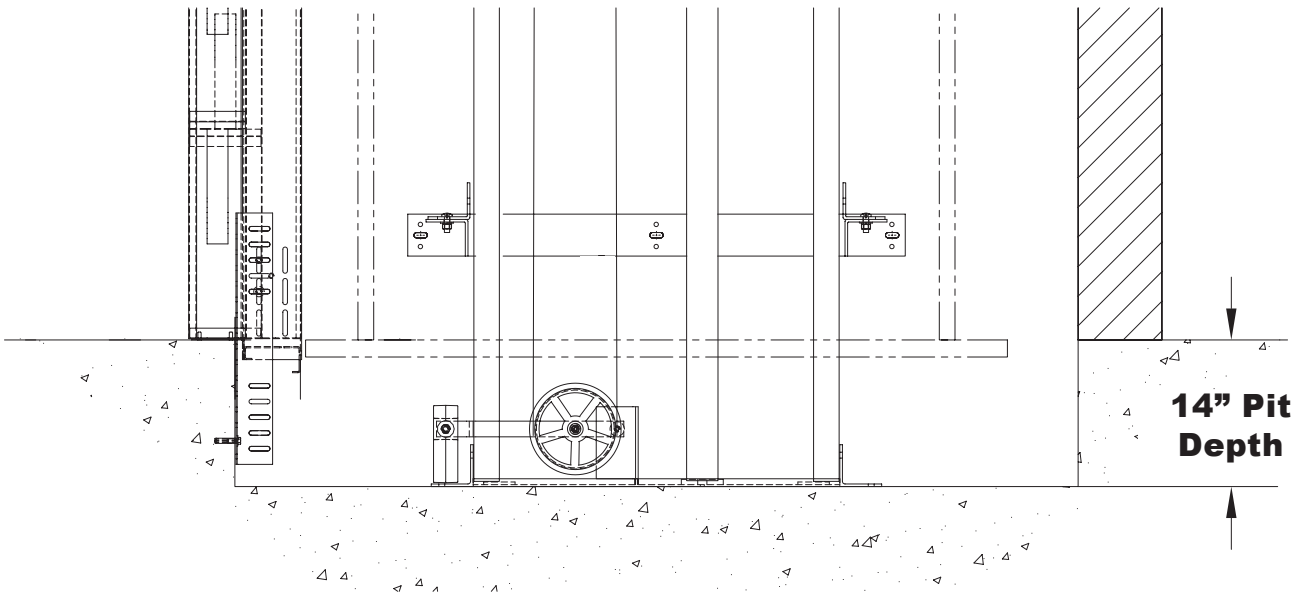


**RAILS AND SLING IN HOISTWAY**

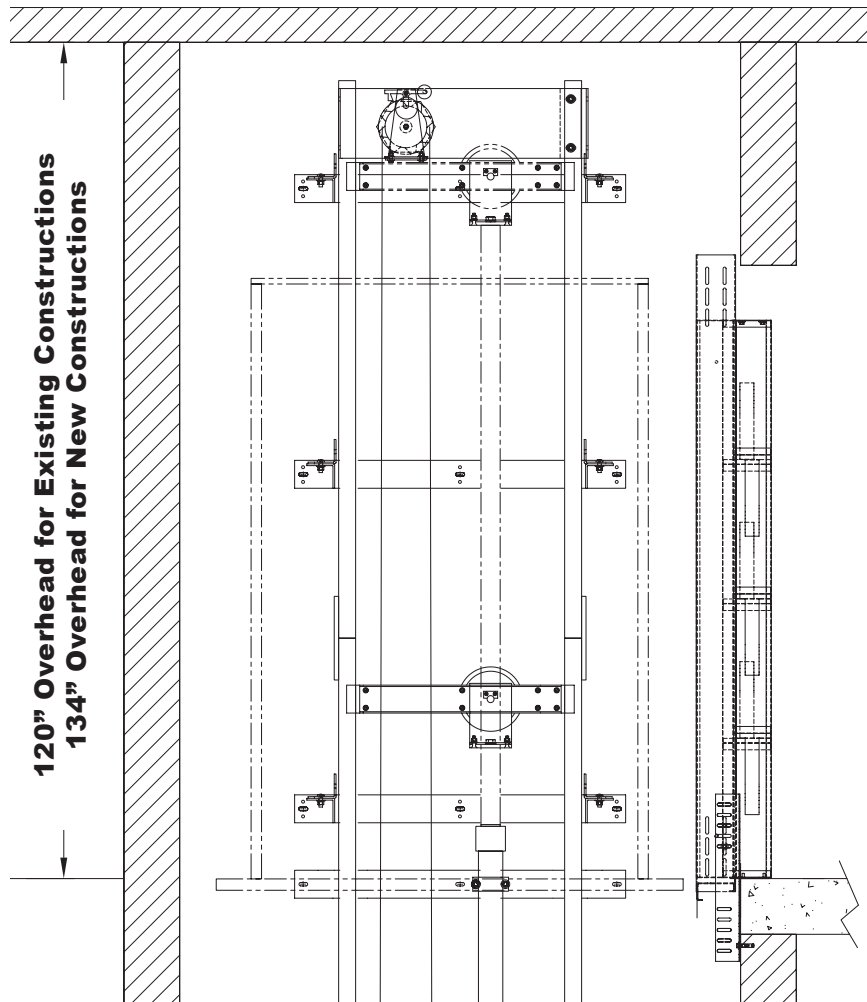
**Notes:**

1. See hoistway requirements for the location of the door centerline.
2. Door panels and frame are primed for painting.

# PIT AND OVERHEAD CLEARANCE DETAILS



A minimum pit depth of 14" is required.





# ORION STANDARD NOTES

## HOISTWAY

- The hoistway must be designed and built in accordance with the “Safety Code for Elevators and Escalators” (ASME A17.1) and all state and local codes.
- Due to close running clearances, the owner/agent must ensure that the hoistway and pit (where provided) are level, plumb and square and are in accordance with the dimensions on these drawings.

## MINIMUM OVERHEAD CLEARANCE

- Owner/agent must ensure the minimum overhead clearance is in compliance with codes.

## CONSTRUCTION SITE

- Owner/agent to provide all masonry, carpentry and drywall work as required and shall patch and make good (including finish painting) all areas where walls/floors may need to be cut, drilled or altered in any way to permit the proper installation of the lift.

## DIMENSIONS

- Contractor/customer to verify all dimensions and report any discrepancies to our office immediately.

## STRUCTURAL

- Structural engineer to assure that the building and shaft will safely support all loads imposed by the lift equipment. Refer to the tables on the installation drawings for loads imposed by the equipment.
- Suitable lintels must be provided by the owner/agent. Door frames are not designed to support overhead wall loads.

## ELECTRICAL

- Power supply with a lockable fused disconnect and auxiliary contact to brake the battery feed, or circuit breakers with a 3-pole breaker for battery feed required in compliance with electrical code (contact your Savaria dealer or refer to the table below for OEM part numbers).

| Disconnect Switch Types & Accessories                    | Cutler Hammer | Federal Pioneer | Siemens   |
|--|---------------|-----------------|-----------|
| <b>1 PHASE 5 H.P. Pump Unit</b>                          |               |                 |           |
| <b>2 Pole Solid Neutral 240V 1 PH</b>                    | 1HD222N       | 1622SN          | ID322     |
| <b>Required Auxiliary Contact</b>                        | DS16CP        | E1K-1AEV-W94    | MSSAK 116 |
| <b>Required Type “D” Fuse (Buss type “FRN” or equal)</b> | 2@40 amp      | 2@40 amp        | 2@40 amp  |
| <b>3 PHASE 5 H.P. Pump Unit</b>                          |               |                 |           |
| <b>3 Pole Solid Neutral 208V 3 PH</b>                    | 1HD321N       | 1332SN          | ID321     |
| <b>Required Auxiliary Contact</b>                        | DS16CP        | E1K-1AEV-W94    | MSSAK 116 |
| <b>Required Type “D” Fuse (Buss type “FRN” or equal)</b> | 3@30 amp      | 3@30 amp        | 3@30 amp  |
| <b>Cab Lighting</b>                                      |               |                 |           |
| <b>1 Pole Solid Neutral 120V 1 PH</b>                    | GP 111N       | 86211           | CFN 211   |
| <b>Required Type “D” Fuse (Buss type “T” or equal)</b>   | 1@15 amp      | 1@15 amp        | 1@15 amp  |

- Permanent power of 240V single-phase 40 Amp or 208V three-phase 30 Amp must be supplied by others before installation.
- Remote hall call (when supplied) to be installed by the owner/agent at 42” from the landing floor.

## ENTRANCES

- Entrance assemblies must be adjusted to align with the platform and interlock equipment. Others to allow an adequate rough opening.
- Entrance assembly must be securely fastened to walls by the elevator contractor.

# SPECIFICATIONS FOR PART 5.3 COMPLIANCE

## PART 1 GENERAL

### 1.01 SUMMARY

A. The product described herein, manufactured by Savaria is an elevator designed and dimensioned to provide Limited Use/Limited Application (LULA) elevator to suit individual building requirements for use by persons with disabilities.

### 1.2 REFERENCES

- A. Elevator shall be designed, manufactured and installed in accordance with the following standards:
1. American National Standards Institute (ANSI).
  2. American Society of Mechanical Engineers (ASME).
  3. National Electrical Code (NEC)  
Canadian Electrical Code (CEC)
  4. American Society for Testing Materials (ASTM).
  5. American Welding Society (AWS).  
Canadian Welding Bureau (CWB)

### 1.3 SYSTEM DESCRIPTION

- A. 5 hp submersed motor and pump with electronic proportional valve assembly; Programmable logic controller with collective operation; 1:2 roped hydraulic single stage cylinder with line rupture valve.
- B. Number of Stops: (specify:) Two to Four.
- C. Car Configuration: (specify:) straight-thru, 90° side exit or enter/exit same side.
- D. Maximum Travel: (specify:) Up to 25' (7.62 m)
- E. Rated Load: (specify:) 1400 lbs. (635 kg)
- F. Rated Speed: 30 fpm (.15m/s)
- G. Car Size:
1. 48" x 54" (1219 mm x 1372 mm) platform (standard)
  2. 84" (2134 mm) high ceiling
- H. Car Walls: (specify:) Steel panels (black or architectural white) with (optional) raised plastic laminate panels (contact Savaria for colors).
- I. Car Ceiling: White panel.
- J. Car Lighting: Four recessed lights.
- K. Operating Features:
1. Car Operating Panel: (specify:) Brushed stainless steel or brushed brass panel with illuminated automatic controls, keyed light switch, emergency stop switch and alarm button
  2. Hall Stations: (specify:) Brushed stainless steel or brushed brass panel with illuminated button and (specify option:) key lock provided at each landing.
  3. Car Door(s): Fully automatic, side opening, sliding car door with electromechanical interlocks, obstruction sensor, and automatic re-open system.
  4. Hoistway Doors: 1 ½ hour fire rated fully automatic side opening, sliding hoistway doors with two side opening panels in steel frame with electromechanical interlocks.
  5. Handrail: (specify:) Stainless steel or brass.
  6. Pit Switch

7. Car top inspection station with UP and DOWN test switches, emergency stop, light outlet
8. Automatic homing to the lowest floor (optional)
9. Slack rope safety.
10. Anti-creep device.
11. Overspeed governor (may not be required) – consult AHJ
12. Dual direction leveling.
  - Upper and lower terminal limit.
  - Pump run timer.
  - Pit clearance device (where required)
  - Automatic battery powered and manual emergency lowering control devices.
  - Minimum pressure switch.
  - Maintenance stop blocks.
  - (specify option:) Fire Fighters Service (available).
  - (specify option:) Hall lanterns with chime.
  - (specify option:) Recessed telephone cabinet (brushed stainless steel or brushed brass).
  - (specify option:) Buffer springs (requires 24" pit).

### 1.4 QUALITY ASSURANCE

- A. Manufacturer: Provide elevator manufactured by a firm with a minimum of 10 years experience in fabrication of elevators equivalent to those specified.
- B. All designs, clearances, workmanship and material, unless specifically accepted, shall be in accordance with all codes having legal jurisdiction.
- C. All load ratings and safety factors shall meet or exceed those specified by all governing agencies with jurisdiction and shall be certified by a professional engineer.
- D. Elevator shall be subject to applicable state, local and city approval prior to installation and subject to inspection after installation. Determination of and adherence to these regulations is the responsibility of the elevator contractor.
- E. Welders certified in accordance with requirements of AWS D1.1 or CWB shall perform all welding of all parts.
- F. Substitutions: No substitutions permitted.

### 1.5 WARRANTY

- A. Warranty: Manufacturer shall warrant component parts of the Orion elevator for a period of 36 months from shipping date. This warranty only applies to products installed and maintained by a Savaria Authorized Dealer in conformance with all applicable local and national codes. The warranty is void if regular inspection and maintenance of product is not being carried out by an Authorized Savaria Dealer in accordance with the recommendations contained in the Owner's Manual. It is the Owner's responsibility to keep records of all such service.

## **PART 2 PRODUCT**

### **2.1 MANUFACTURER**

Provide the Orion Commercial LU/LA Elevator manufactured by Savaria.  
Toll Free Number (800) 661-5112  
Phone (905) 791-5555  
Fax (905) 791-2222  
Web site: <http://www.savaria.com>

### **2.2 MATERIAL**

- Guide Rail: Dual 8 lbs./ft. machined steel T-rail system.
- Wire Rope: Two 3/8" diameter 7 x 19 ga. IWRC aircraft cables with rope wedge sockets.
- Sling: Structural and formed steel plates with guide shoes.
- Platform Floor: Unfinished plywood flooring.

### **2.3 FINISHES**

- A. Components shall be prepared with
- 1) pre-treatment,
  - 2) alkaline detergent wash,
  - 3) clear water rinse,
  - 4) iron phosphate coating,
  - 5) clear water rinse and finished with electrostatically applied and baked thermostatic powder coat finish. Standard color is architectural white.

### **2.4 ELECTRICAL SYSTEMS**

- A. The electrical contractors shall provide:
1. 208V three phase 30 AMP 60 Hz or 230 V single phase 40 AMP 60 Hz source in the machine area with manually operated fused line disconnect.
  2. 115 VAC, single phase, 15 amp, 60 Hz, single phase power source with manually operated fused line disconnect for car lighting and a light outlet inside the hoistway.
  3. Telephone circuit in the machine area.

## **PART 3 EXECUTION**

### **3.1 ACCEPTABLE INSTALLERS**

- A. Installers shall be experienced in performing work of this section who have specialized in work comparable to that required for this project.
- B. Installers shall be certified and trained by the manufacturer.

### **3.2 EXAMINATION**

- A. Use field dimensions and approved manufacturer's shop drawings to examine substrates, supports and other conditions under which this work is to be performed. Do not proceed with work until unsatisfactory conditions are corrected.

### **3.3 INSTALLATION**

- A. The Orion elevator shall be installed in accordance with manufacturer's instructions and as specified and approved by architect.

### **3.4 DEMONSTRATION**

- A. The elevator contractor shall make a final check of the elevator's operation with the Owner or Owner's representative present prior to turning the elevator over for use. The elevator contractor shall determine that operating and safety devices are functioning properly.

### **END OF SECTION**

Intent of specification is to broadly outline equipment required but does not cover details of design and construction. Dimensions and specifications are subject to constant change and continually evolving codes and product applications. For additional technical information, contact Savaria at (800) 661-5112 or [www.savaria.com](http://www.savaria.com).



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[www.savaria.com](http://www.savaria.com)**