savaria®

Eclipse Gearless

RESIDENTIAL ELEVATOR

Planning Guide

Applicable Codes:
ASME A17.1/CSA-B44
Safety Code for Elevators and Escalators
Section 5.3 – Private Residential Elevators

Part No. 000876
14-m03-2018

Purpose of this guide

This guide assists architects, contractors, and lift professionals to incorporate the Eclipse Gearless Residential Elevator into a residential building design. The design and manufacture of the Eclipse Gearless Residential Elevator meets the requirements of the following codes and standards:

- ASME A17.1/CSA B44 2000, Section 5.3
- ASME A17.1/CSA B44 2004, Section 5.3
- ASME A17.1 2004, Addendum 2005, Section 5.3
- ASME A17.1/CSA B44 2007, Section 5.3
- ASME A17.1/CSA B44, Addendum 2008, Section 5.3
- ASME A17.1/CSA B44 2010, Section 5.3
- ASME A17.1/CSA B44 2013, Section 5.3
- ASME A17.1/CSA B44 2016, Section 5.3
- ASME A17.1 1996, Part 5

We recommend that you contact your local authority having jurisdiction to ensure that you adhere to all local rules and regulations pertaining to residential elevators.

How to use this guide

1 Determine your client's intended use of the lift.
2 Determine the local code requirements.
3 Determine the site installation parameters.
4 Determine the cab type and hoistway size requirements.
5 Plan for electrical requirements.

History

May 4, 2012 – Initial release
May 11, 2012 – Added Acceptance Test/Inspection procedure, pages 38-43
August 28, 2012 – Revised drawings for auto slim doors on pages 18-29
October 9, 2012 – Revised drawings on pages 14 and 16
October 15, 2012 – Changed pit depth requirement from 6" minimum to 8" minimum in specifications table on page 4
February 21, 2013 – Changed pot lights from incandescent to halogen in specifications table on page 4
March 21, 2013 – Added controller box dimensions on page 36
April 19, 2013 – Changed motor spec in specifications table on page 4
April 26, 2013 – Changed various specs in specifications table on pages 4 and 5
April 29, 2013 – Added UPS drawing on page 37
July 9, 2013 – Added Noise Level to specifications table on page 4
July 11, 2013 – Added note to illustration on page 39
September 27, 2013 – Various updates throughout
February 3, 2014 – Added NOTE below specifications table on page 5; revised access door information in drawings on pages 6 through 29
March 21, 2014 – Added NOTE to Minimum Overhead Clearance in Specifications table on page 4; Revised drawings on pages 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28
April 30, 2014 – Revised "rough opening" dimension in drawings on pages 18, 20, 22, 24, 26, and 28
May 15, 2014 – Revised "overhead" dimension to 108" in drawing on page 23
March 3, 2015 – Added Warning regarding hoistway temperature to table on page 4 and on page 31
June 23, 2015 – Corrected capacity on pages 4 and 5
September 24, 2015 – Added Daily Cycle to specifications table on page 4
September 29, 2015 – Revised specifications table on page 4
March 2, 2016 – Removed copyright from cover page; Savaria Corporation back to Savaria Concord Lifts, Inc.
March 14, 2016 – Added NOTE at bottom of all cab plan view drawings
May 30, 2016 – Revised speed in specs table on page 4
August 22, 2016 – Added 2500 BTU to temperature spec in table on page 4
January 25, 2017 – Added new code on page 13; Revised specs table on pages 4 and 5; Added new 3/4 & 4 rule and moved safety rules to pages 6 to 9
February 9, 2017 – Added spec for distance between landings to specs table on page 4
March 1, 2017 – Revised overhead in drawings on pages 23, 25, 27, 29, 31 and 33
March 27, 2017 – Revised drawing on page 34 to refer to Specifications table for overhead clearance
February 26, 2018 – Removed blank pages at end
March 14, 2018 – Revised pit depth on pages 4 and 35

IMPORTANT NOTICE

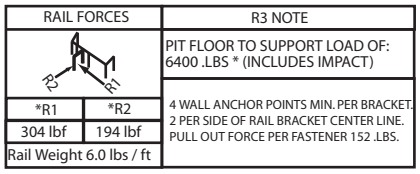
This Planning Guide provides nominal dimensions and specifications useful for the initial planning of a project. Before beginning actual construction, make sure you have the installation (shop) drawings customized with specifications and dimensions for your specific project.

Lift configurations and dimensions are in accordance with our interpretation of the standards set forth by the codes listed on the front cover of this Planning Guide. 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.

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.

Visit our website **www.savaria.com** for the most current Eclipse gearless drawings and dimensions.

Eclipse gearless specifications

Specification type	Specification data
Load capacity	750 lbs. (340 kg)
Component weights	367 lbs. - sling and base rail section 170 lbs. - middle rail Variable weight - top rail/bed plate 600 lbs. - control wall stack (variable) 440 to 660 lbs. cab (+ 263 lbs. speedy sling) 175 lbs. motor drive 75 lbs. controller 100 lbs. UPS
Rail forces	
Rated speed	Up to 40 fpm (0.20 mps)
Power supply (circuit by others)	230 volt, single phase, 60 Hz, 20 amps (consumption) Note: if not stable at 230V minimum, a buck-boost transformer is required to bring the voltage up to 230V.
Lighting supply (circuit by others)	120 volt, 60 Hz, 2 amps (consumption)
Drive system	Automatic 1 HP gearless 2:1 roped variable frequency drive, complete with counterweight
Distance between two landings	14" (356 mm) minimum
Temperature operating range	- 10°C to + 40°C (14°F to 104°F) for motor output of 2500 BTU per hour **WARNING: For a consistent ride, the hoistway temperature must be maintained between 10°C and 30°C (50°F and 86°F).**
Noise level (for typical installation)	57.8 dBA (up direction); 57.2 dBA (down direction) Measured at a height equal to motor, distance of 1m, in front of motor, no hoistway
Daily cycle	Normal: 20 Heavy: 30 Excessive: 40 Maximum starts in 1 hour on standard installation: 4 NOTE: Please consult your Sales Representative if there a chance you may exceed these amounts.
Cab size	• W36'' x L48'' x H80'' (914 mm x 1219 mm x 2032 mm), Type 1, 2, 3, 4, 5 • W36'' x L54'' x H80'' (914 mm x 1371 mm x 2032 mm), Type 1, 2, 3, 4, 5 • W36'' x L60'' x H80'' (914 mm x 1524 mm x 2032 mm), Type 1, 2, 3, 4, 5 • W40'' x L54'' x H80'' (1067mm x 1371 mm x2032 mm), Type 1, 2, 3, 4, 5
Cab panel and finish	Solid melamine or MDF panels (standard), unfinished oak veneer panels (optional), finished recessed veneer panels (optional), solid hardwood raised panels (optional)
Maximum travel	50 feet (12.24 m) - 60 feet (18.29 m) available where code permits
Control system	Relay logic controller complete with diagnostic LEDs
Levels and openings	Up to 6 stops / up to 2 cab openings
Pit depth requirement	8" (203 mm) minimum 11'' (279 mm) minimum with buffer springs,
Minimum overhead clearance	112" (2845 mm) for standard 80" cab, 120" (3048 mm) for 96" cab Units with auto slim doors: Minimum overhead is 116" (2946 mm) for doors with clear opening of 82-3/4" (2100 mm)
Hall station and control panel finish	• Clear or bronze anodized aluminum (standard), or stainless steel (optional), or brass (optional), or architect white (optional) • Rectangular (standard) or oval (optional) hall stations, keyless (standard) or keyed (optional)

Eclipse specifications (continued)

Specification type	Specification data
Standard features	• Automatic cab on/off lighting • Recessed gate pocket • Digital display in car operating panel • Clear or bronze or black anodized aluminum cab entrance trim and handrail • Data plates, capacity tags • Proximity floor selection, stopping and two-way levelling • Motor access cover (locked and switched) • Home landing feature • Plan drawings • Modular rail sections • Unfinished plywood sub-floor • White ceiling with four halogen pot lights • MDF cab with or without finish, melamine cab in choice of finishes • Stainless steel, clear or bronze anodized aluminum cab operating panel and hall call stations
Safety features	• Cab gate safety switch • Pit run/stop switch and car top run/stop switch • Emergency stop and alarm buttons • Upper and lower terminal limits • Final limit switch • Mechanical rail shoring blocks • Sling: factory pre-assembled speedy sling c/w pre-set slack rope safety brake and switch • Overspeed governor
Options	• Custom cab size • 96" high cab • 84" high cab • Rated speed - (60 ft/min (0.3 m/s) available where code permits) • Accordion car gate (choice of style) • Bifold doors • Automatic gate operator • Automatic swing landing door operator • Buffer springs (11" pit depth minimum) • Interlocks for doors by others and Savaria landing doors (fire rated door or wood door) • Keyed on/off control panel and hall stations • Optional flooring: hardwood • Optional cab finishes: recessed hardwood, raised hardwood, finished or unfinished veneer • Optional fixture finishes: brass #4 finish or blackened stainless steel (handrail, cab operating panel, hall call stations); hall call stations available in rectangular or oval • Telephone cabinet to match trim • Automatic slim doors • Digital position indicator (PI) in halls calls

NOTE

With large cabs and high capacity jobs of 750 lbs. (340 kg), the motor may build up heat during repeated operation. We recommend a duty cycle of 25% for a full load of 750 lbs. (340 kg) or an empty cab.

For example, a 40-foot travel elevator should take 1 minute for full travel in which case we recommend 1 minute running up or down then let it cool off for 3 minutes.

Typical loads of 150 to 400 lbs. (68 to 181 kg) on the cab will generate less heat so the cab can be run more frequently.

Safety first – 3 & 5 rule (code prior to 2016)

The ASME A17.1/CSA-B44–Safety Code for Elevators and Escalators **(PRIOR TO 2016)** mandates the following maximum hoistway door clearances (see drawing on next page).

- Clearance between the hoistway side of the landing door and the edge of the landing sill shall not exceed 3″ (76 mm).

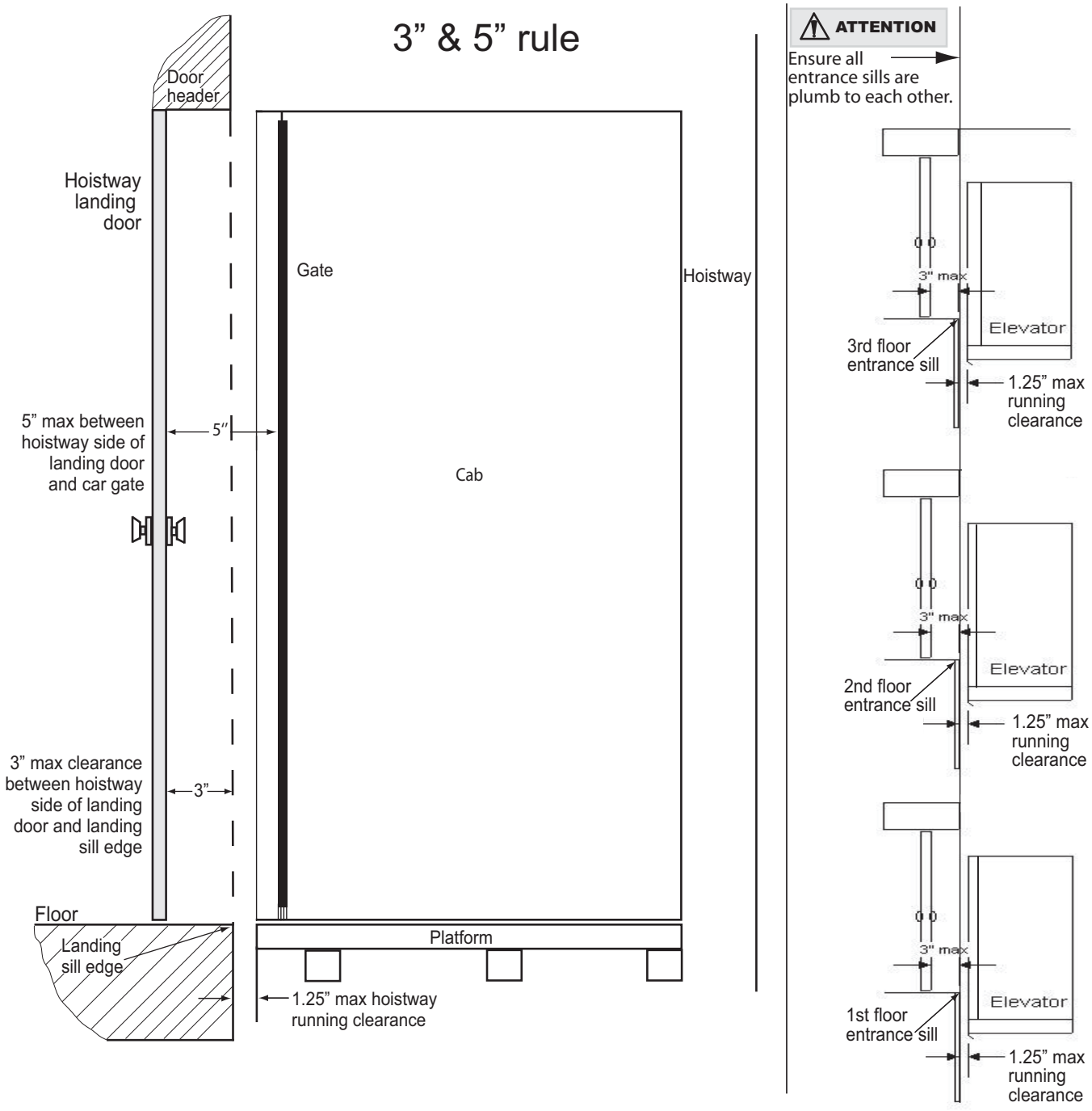
IMPORTANT
We recommend a maximum clearance of 2.5″ (64 mm) instead of 3″ (76 mm).

- Distance between the hoistway face of the landing door or gate and the car door or gate shall not exceed 5″ (127 mm).
- Eclipse Residential Elevator design is with a maximum 1.25″ (32 mm) running clearance.

NOTE: Concrete block/masonry shafts and some commercial metal door frames often create 3 & 5 rule violations.

Recommendation: We recommend installation of a solid door as hollow doors do not respect the pull-out force required by code for the door locks.

3 & 5 rule (code prior to 2016)



Safety first – 3/4 & 4 rule (code 2016 and after)

The ASME A17.1-2016/CSA B44-16 Safety Code for Elevators and Escalators **(2016 AND AFTER)** mandates the following maximum hoistway door clearances (see drawing on next page):

- Clearance between the hoistway side of the landing door and the edge of the landing sill shall not exceed 0.75" (19 mm) for swing doors (shown below) and 2.25" (57 mm) for sliding doors.
- Distance between the hoistway side of the landing door or gate and the car door or gate shall not exceed 4" (102 mm). *A measuring tool for this is shown below.*
- Eclipse Residential Elevator design is with a maximum 1.25" (32 mm) running clearance.

NOTE: Concrete block/masonry shafts and some commercial metal door frames often create 3/4 & 4 rule violations.

Recommendation: We recommend installation of a solid door as hollow doors do not respect the pull-out force required by code for the door locks.

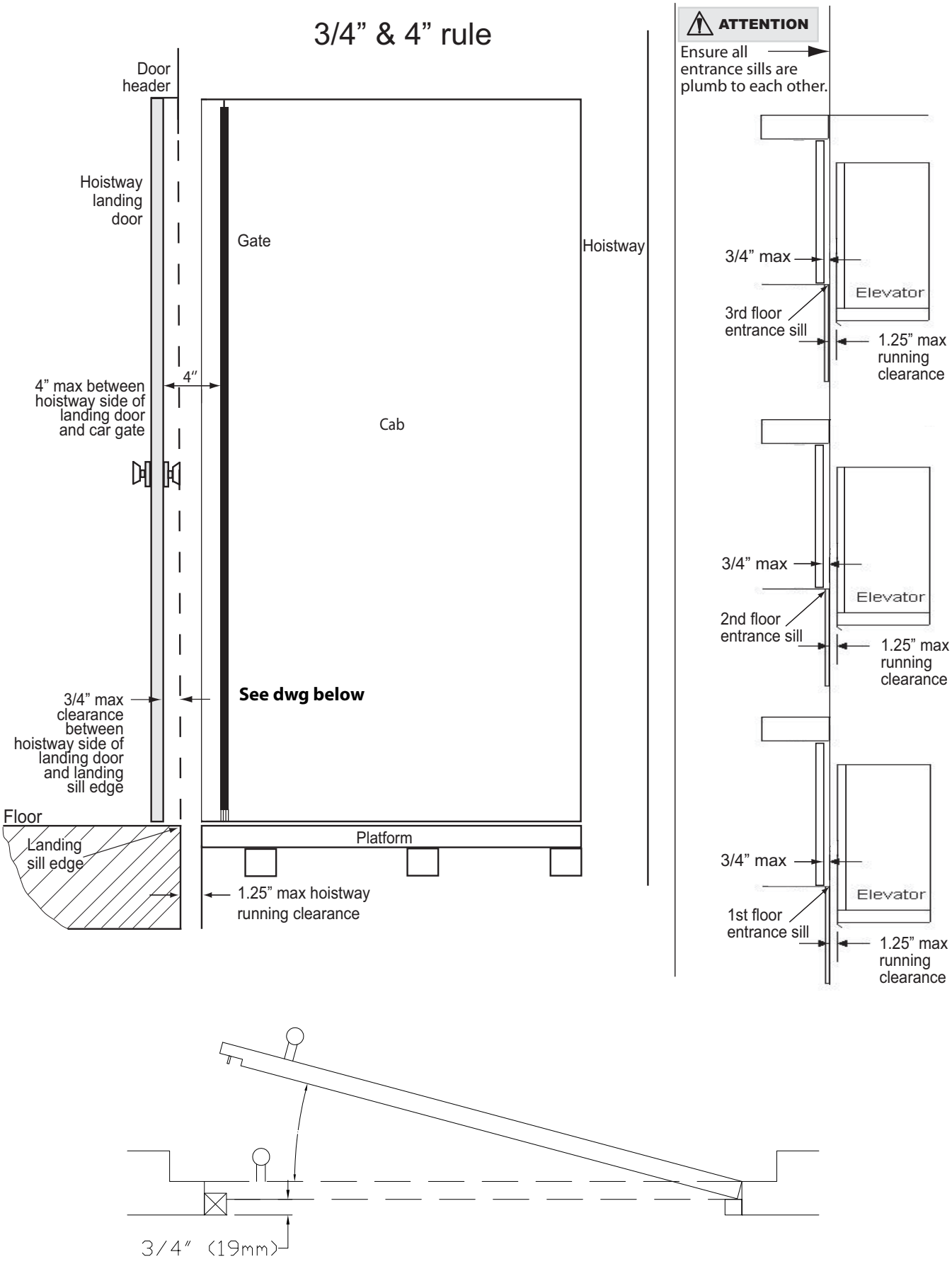
IMPORTANT

- If the landing door has a pattern on the hoistway side, measure the 3/4" setback from the deeper part of the door to the landing sill.
- For accordion (panel fold) gates, you MUST have flush doors (not the 3/4" setback).
- 3/4" setback is possible only when the car doors are bifold or slim doors.

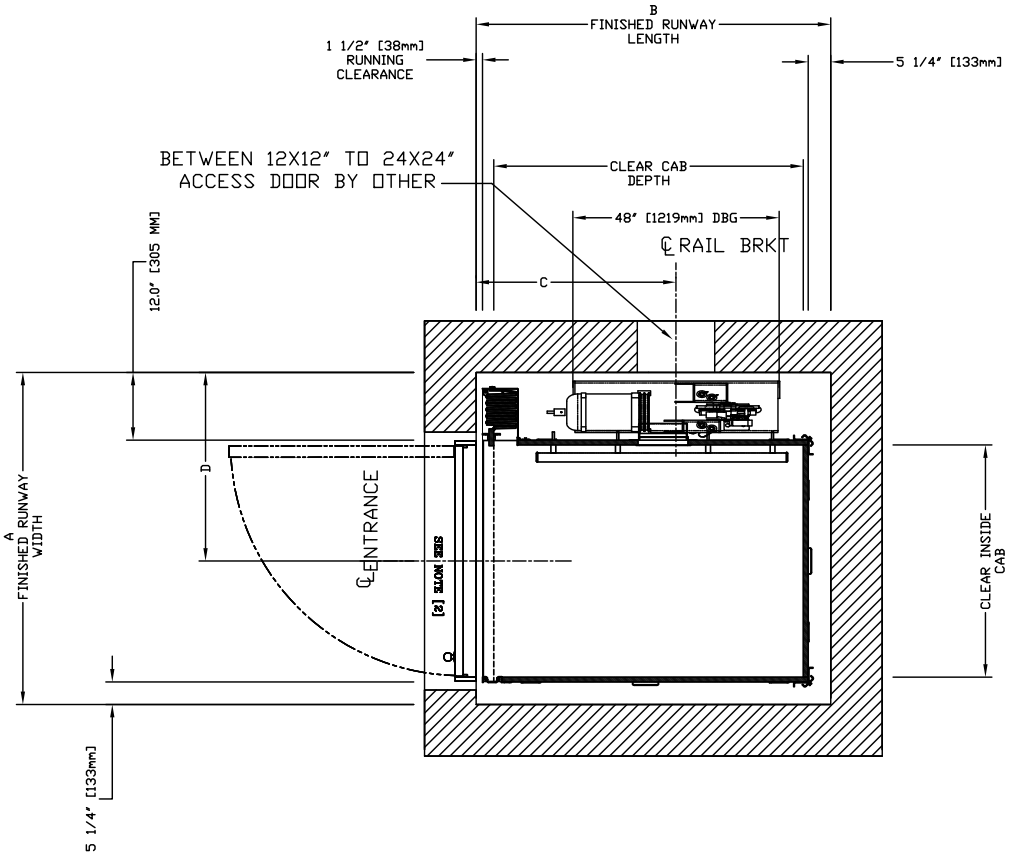
Measuring tool for accordion car gate and landing door (3/4 & 4 rule)

With the measuring tool pressed into the "V" of the accordion car gate, the hoistway side of the landing door must not be more than 4" (102 mm) as shown.

3/4 & 4 rule (code 2016 and after)



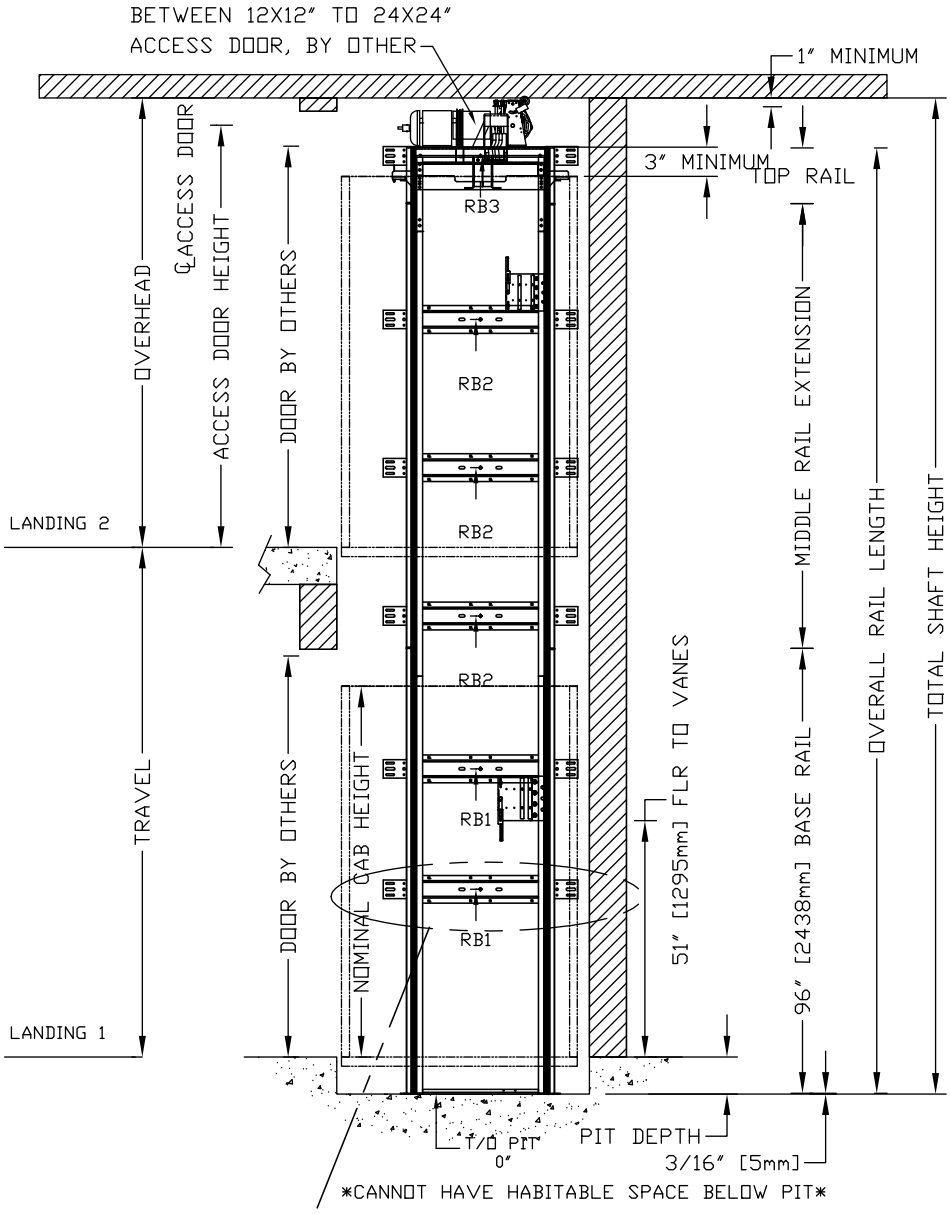
Plan view - gearless type 1L cab



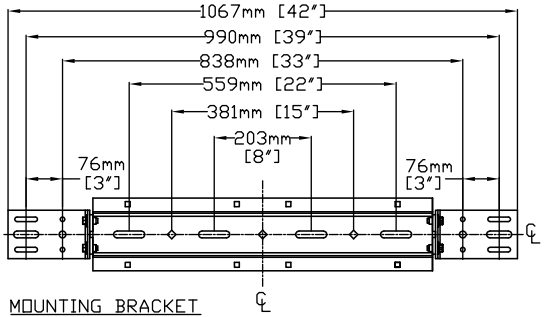
CLEAR INSIDE CAB WIDTH		CLEAR INSIDE CAB LENGTH		A FINISHED RUNWAY WIDTH		B FINISHED RUNWAY LENGTH		C RAIL CENTER LINE		D DOOR CENTER LINE	
mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches
914	36	1219	48	1346	53	1397	55	787	31	781	30 3/4
914	36	1372	54	1346	53	1549	61	838	33	781	30 3/4
914	36	1524	60	1346	53	1702	67	914	36	781	30 3/4
1016	40	1372	54	1448	57	1549	61	838	33	883	34 3/4

NOTE: For a platform size over 12 ft^2, a variance is required to accommodate a rated load of only 750 lb (341 kg). Please contact your local code official for details.

Sectional view - gearless type 1L cab



2 MOUNTING POSITIONS
CENTER OR SIDE

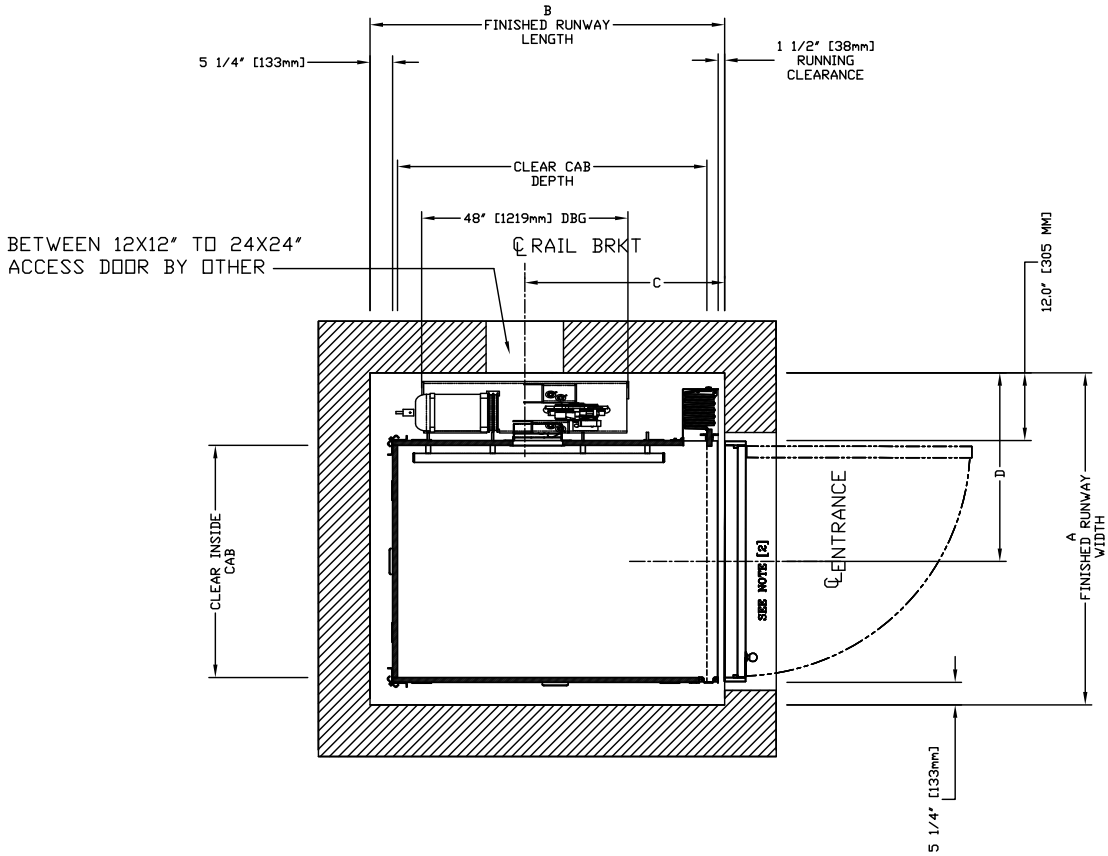


MOUNTING BRACKET

4 WALL ANCHOR POINTS MIN. PER BRACKET
2 PER SIDE OF RAIL BRACKET CENTER LINE
PULL OUT FORCE PER FASTENER 69 kg [152 LBS]

FINAL RAIL BRACKET RB3	BELOW THE MOTOR CONSULT YOUR CONCORD REPRESENTATIVE FOR EXACT LOCATION
INTERMEDIATE RAIL BRACKET RB2	32"[813mm] INTERVALS AFTER 2nd BOTTOM BRACKET
BOTTOM RAIL BRACKET RB1	44" [1118mm] & 71" [1804MM] ABOVE PIT FLOOR

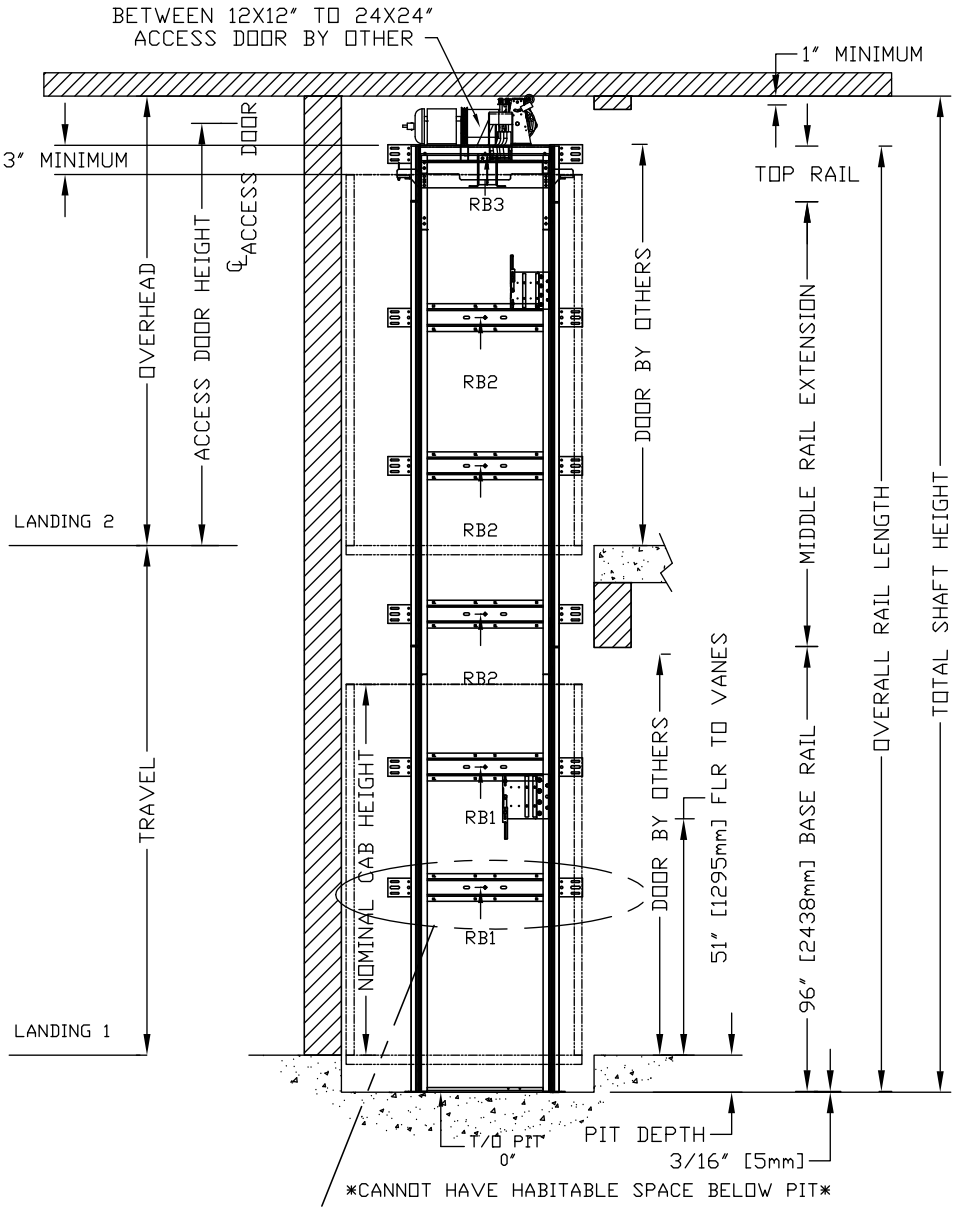
Plan view - gearless type 1R cab



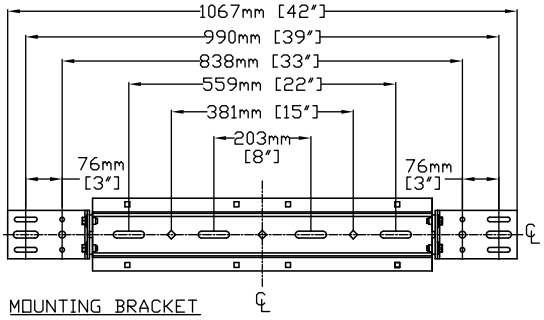
CLEAR INSIDE CAB WIDTH		CLEAR INSIDE CAB LENGTH		A FINISHED RUNWAY WIDTH		B FINISHED RUNWAY LENGTH		C RAIL CENTER LINE		D DOOR CENTER LINE	
mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches
914	36	1219	48	1346	53	1397	55	787	31	781	30 3/4
914	36	1372	54	1346	53	1549	61	838	33	781	30 3/4
914	36	1524	60	1346	53	1702	67	914	36	781	30 3/4
1016	40	1372	54	1448	57	1549	61	838	33	883	34 3/4

NOTE: For a platform size over 12 ft^2, a variance is required to accommodate a rated load of only 750 lb (341 kg). Please contact your local code official for details.

Sectional view - gearless type 1R cab



2 MOUNTING POSITIONS
CENTER OR SIDE

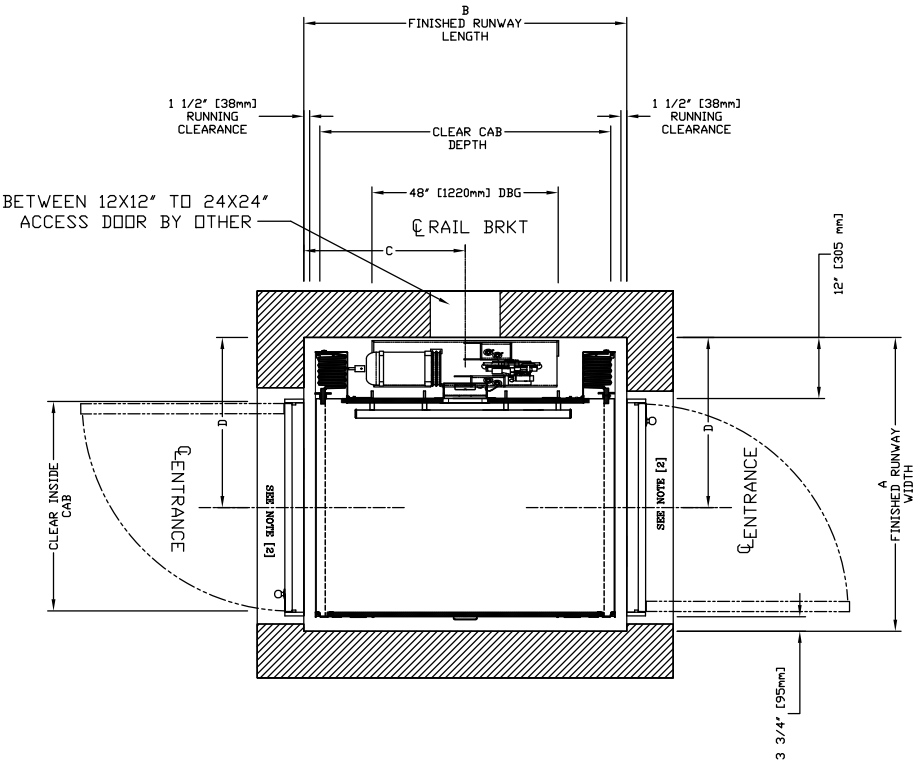


MOUNTING BRACKET

4 WALL ANCHOR POINTS MIN. PER BRACKET
2 PER SIDE OF RAIL BRACKET CENTER LINE
PULL OUT FORCE PER FASTENER 69 kg [152 LBS]

FINAL RAIL BRACKET RB3	BELOW THE MOTOR CONSULT YOUR CONCORD REPRESENTATIVE FOR EXACT LOCATION
INTERMEDIATE RAIL BRACKET RB2	32"[813mm] INTERVALS AFTER 2nd BOTTOM BRACKET
BOTTOM RAIL BRACKET RB1	44" [1118mm] & 71" [1804MM] ABOVE PIT FLOOR

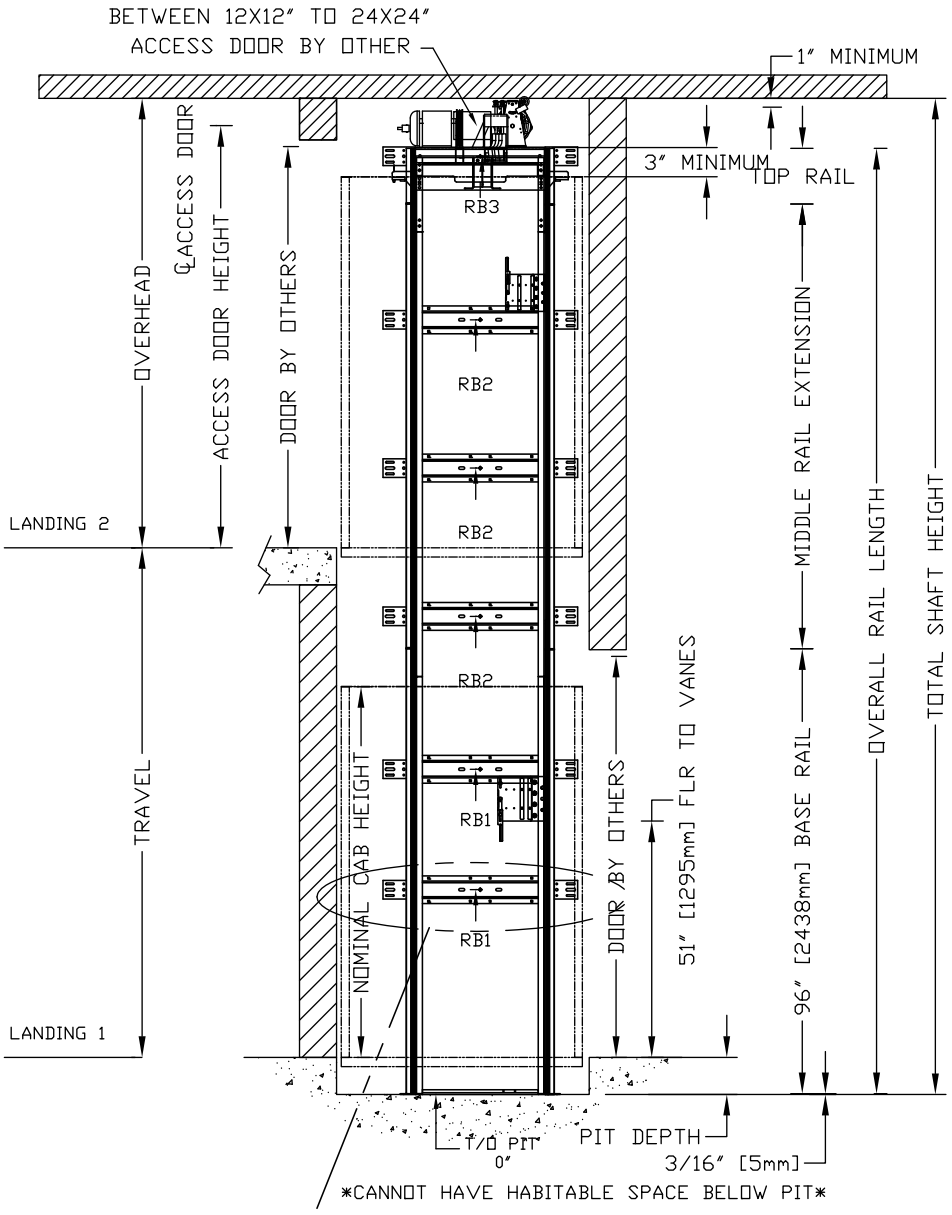
Plan view - gearless type 2 cab

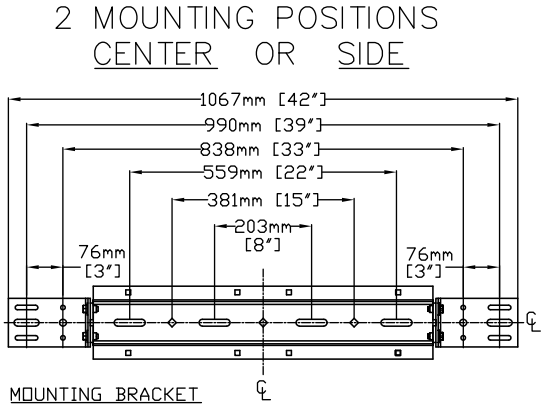


CLEAR INSIDE CAB WIDTH		CLEAR INSIDE CAB LENGTH		A FINISHED RUNWAY WIDTH		B FINISHED RUNWAY LENGTH		C RAIL CENTER LINE		D DOOR CENTER LINE	
mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches
914	36	1219	48	1346	53	1359	53 1/2	679	26 3/4	781	30 3/4
914	36	1372	54	1346	53	1511	59 1/2	756	29 3/4	781	30 3/4
914	36	1524	60	1346	53	1664	65 1/2	832	32 3/4	781	30 3/4
1016	40	1372	54	1448	57	1511	59 1/2	756	29 3/4	883	34 3/4

NOTE: For a platform size over 12 ft^2, a variance is required to accommodate a rated load of only 750 lb (341 kg). Please contact your local code official for details.

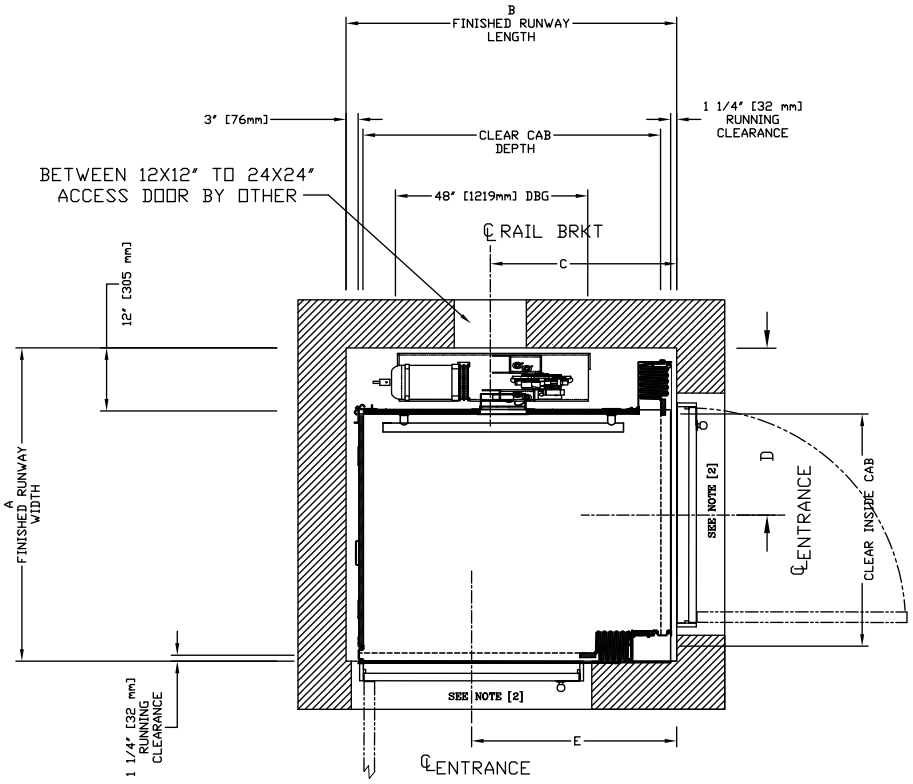
Sectional view - gearless type 2 cab





FINAL RAIL BRACKET RB3	BELOW THE MOTOR CONSULT YOUR CONCORD REPRESENTATIVE FOR EXACT LOCATION
INTERMEDIATE RAIL BRACKET RB2	32"[813mm] INTERVALS AFTER 2nd BOTTOM BRACKET
BOTTOM RAIL BRACKET RB1	44" [1118mm] & 71" [1804MM] ABOVE PIT FLOOR

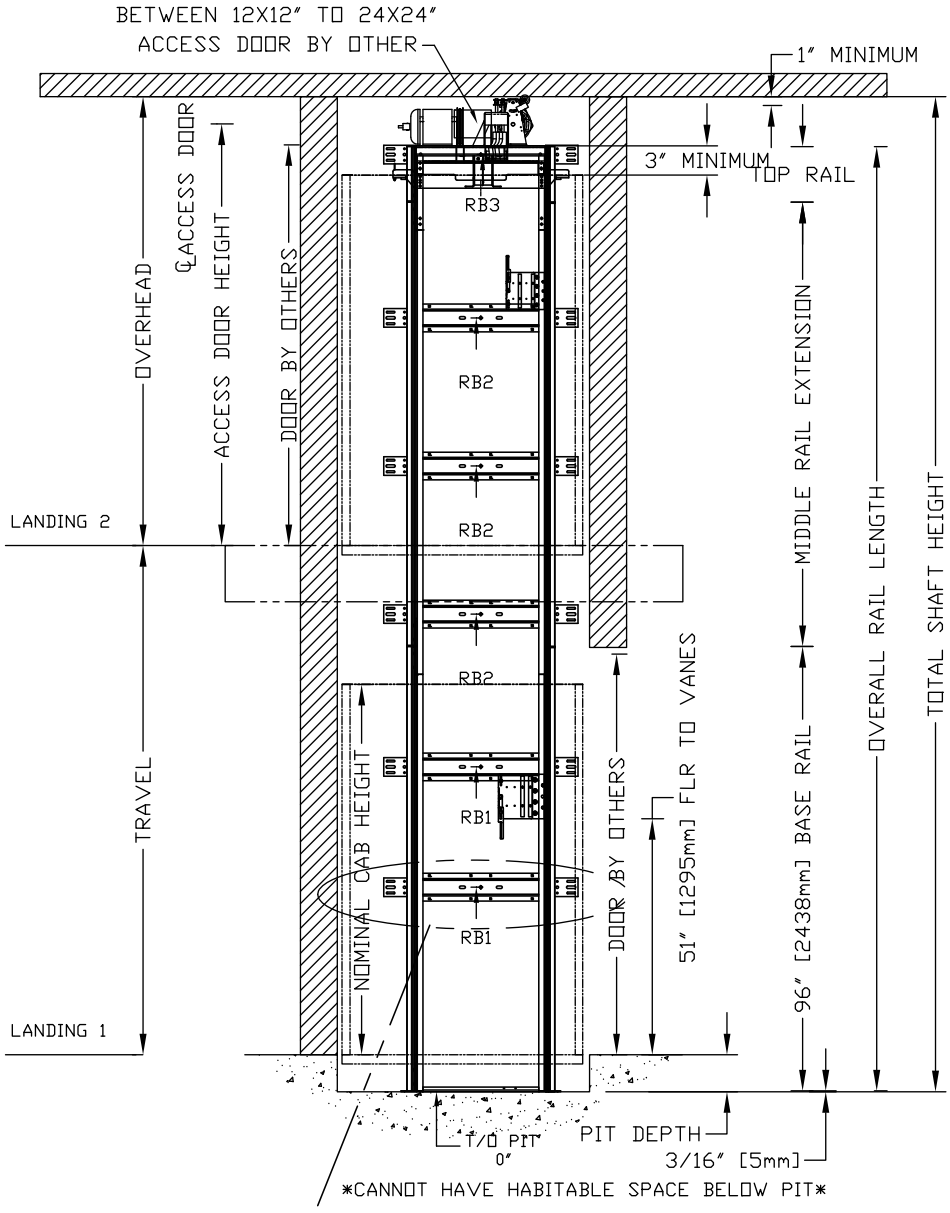
Plan view - gearless type 3 cab

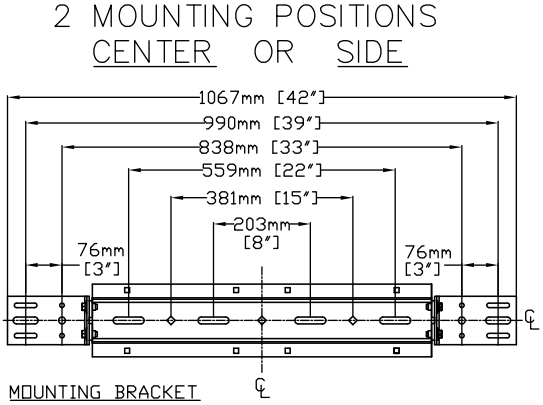


CLEAR INSIDE CAB WIDTH		CLEAR INSIDE CAB LENGTH		A FINISHED RUNWAY WIDTH		B FINISHED RUNWAY LENGTH		C RAIL CENTER LINE		D DOOR CENTER LINE		E DOOR CENTER LINE	
mm	Inches	mm		mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches
914	36	1219	48	1403	55 1/4	1441	56 3/4	787	31	781	30 3/4	876	34 1/2
914	36	1372	54	1403	55 1/4	1556	61 1/4	838	33	781	30 3/4	1029	40 1/2
914	36	1524	60	1403	55 1/4	1708	67 1/4	914	36	781	30 3/4	1181	46 1/2
1016	40	1372	54	1505	59 1/4	1556	61 1/4	838	33	883	34 3/4	1029	40 1/2

NOTE: For a platform size over 12 ft^2, a variance is required to accommodate a rated load of only 750 lb (341 kg). Please contact your local code official for details.

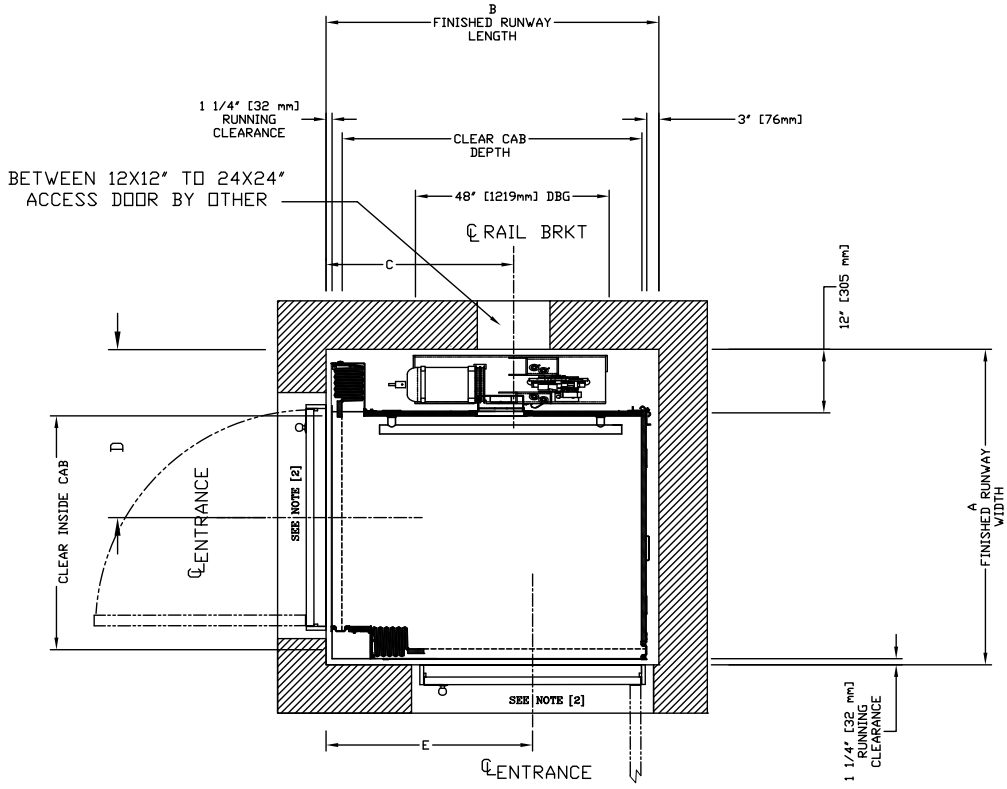
Sectional view - gearless type 3 cab





FINAL RAIL BRACKET RB3	BELOW THE MOTOR CONSULT YOUR CONCORD REPRESENTATIVE FOR EXACT LOCATION
INTERMEDIATE RAIL BRACKET RB2	32"[813mm] INTERVALS AFTER 2nd BOTTOM BRACKET
BOTTOM RAIL BRACKET RB1	44" [1118mm] & 71" [1804MM] ABOVE PIT FLOOR

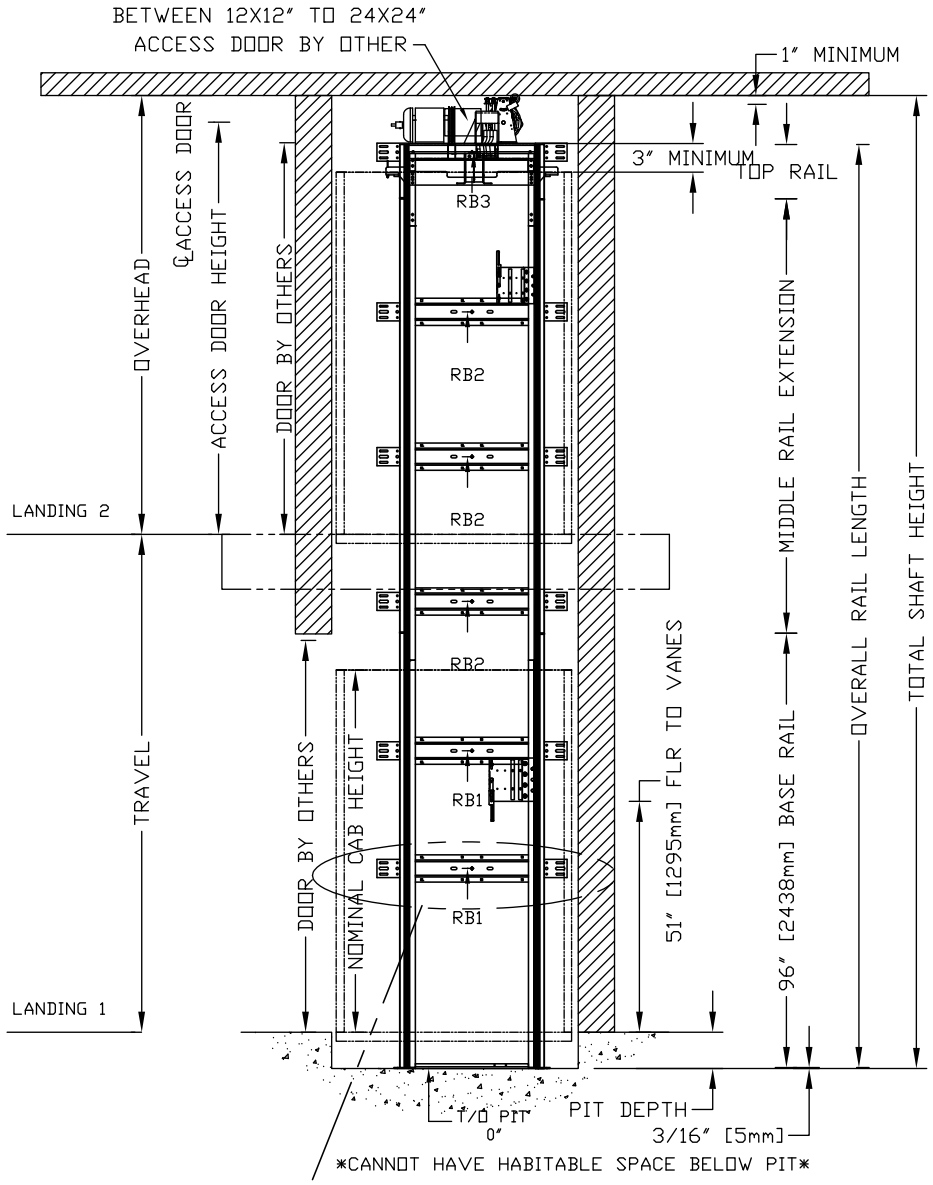
Plan view - gearless type 4 cab



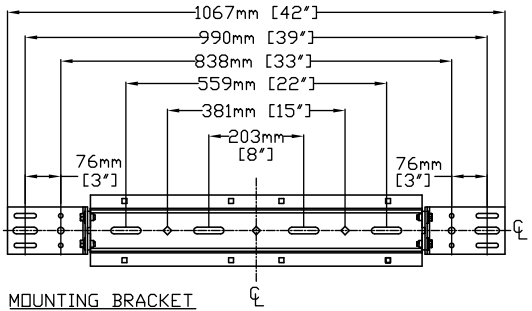
CLEAR INSIDE CAB WIDTH		CLEAR INSIDE CAB LENGTH		A FINISHED RUNWAY WIDTH		B FINISHED RUNWAY LENGTH		C RAIL CENTER LINE		D DOOR CENTER LINE		E DOOR CENTER LINE	
mm	Inches	mm		mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches
914	36	1219	48	1403	55 1/4	1441	56 3/4	787	31	781	30 3/4	876	34 1/2
914	36	1372	54	1403	55 1/4	1556	61 1/4	838	33	781	30 3/4	1029	40 1/2
914	36	1524	60	1403	55 1/4	1708	67 1/4	914	36	781	30 3/4	1181	46 1/2
1016	40	1372	54	1505	59 1/4	1556	61 1/4	838	33	883	34 3/4	1029	40 1/2

NOTE: For a platform size over 12 ft^2, a variance is required to accommodate a rated load of only 750 lb (341 kg). Please contact your local code official for details.

Sectional view - gearless type 4 cab



2 MOUNTING POSITIONS
CENTER OR SIDE

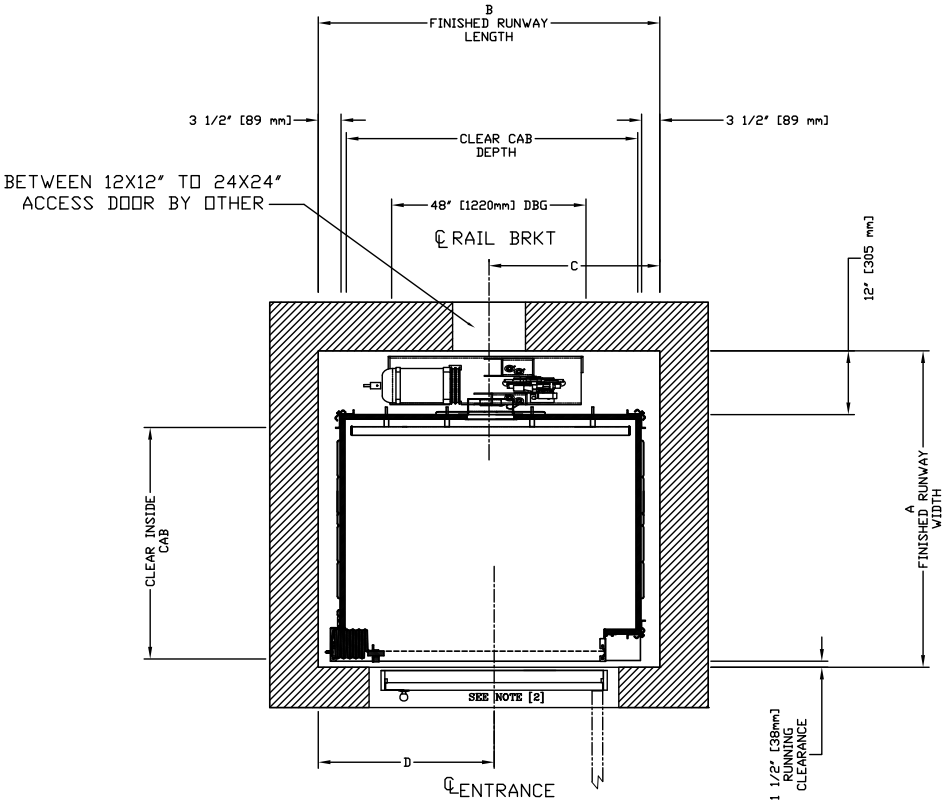


MOUNTING BRACKET

4 WALL ANCHOR POINTS MIN. PER BRACKET
2 PER SIDE OF RAIL BRACKET CENTER LINE
PULL OUT FORCE PER FASTENER 69 kg [152 LBS]

FINAL RAIL BRACKET RB3	BELOW THE MOTOR CONSULT YOUR CONCORD REPRESENTATIVE FOR EXACT LOCATION
INTERMEDIATE RAIL BRACKET RB2	32"[813mm] INTERVALS AFTER 2nd BOTTOM BRACKET
BOTTOM RAIL BRACKET RB1	44" [1118mm] & 71" [1804MM] ABOVE PIT FLOOR

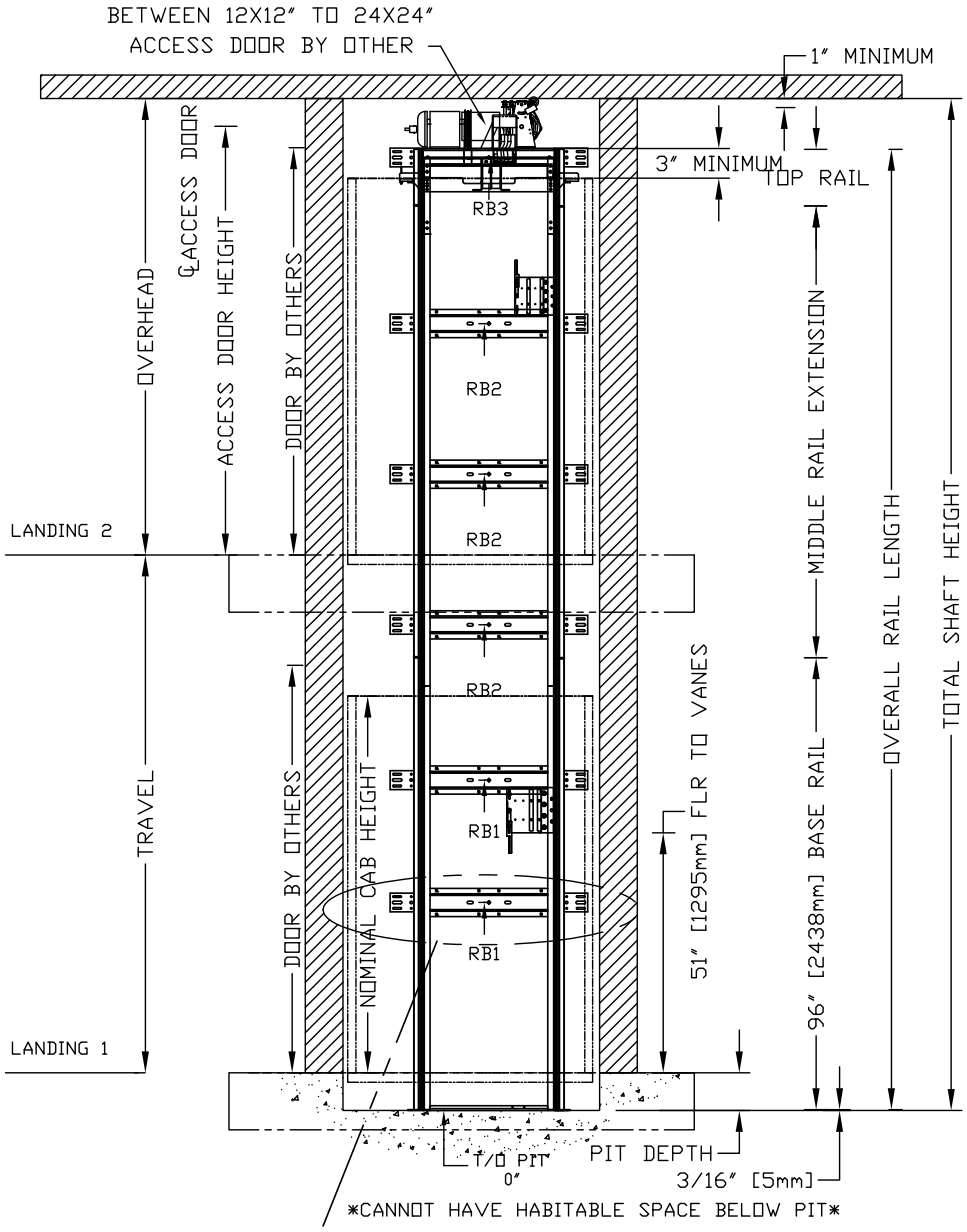
Plan view - gearless type 5 cab

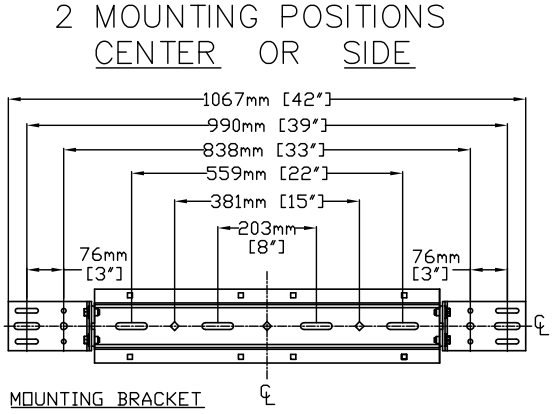


CLEAR INSIDE CAB WIDTH		CLEAR INSIDE CAB LENGTH		A FINISHED RUNWAY WIDTH		B FINISHED RUNWAY LENGTH		C RAIL CENTER LINE		D DOOR CENTER LINE	
mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches
914	36	1219	48	1403	55 1/4	1435	56 1/2	718	28 1/4	718	28 1/4
914	36	1372	54	1403	55 1/4	1588	62 1/2	794	31 1/4	794	31 1/4
914	36	1524	60	1403	55 1/4	1740	68 1/2	870	34 1/4	870	34 1/4
1016	40	1372	54	1505	59 1/4	1588	62 1/2	794	31 1/4	794	31 1/4

NOTE: For a platform size over 12 ft^2, a variance is required to accommodate a rated load of only 750 lb (341 kg). Please contact your local code official for details.

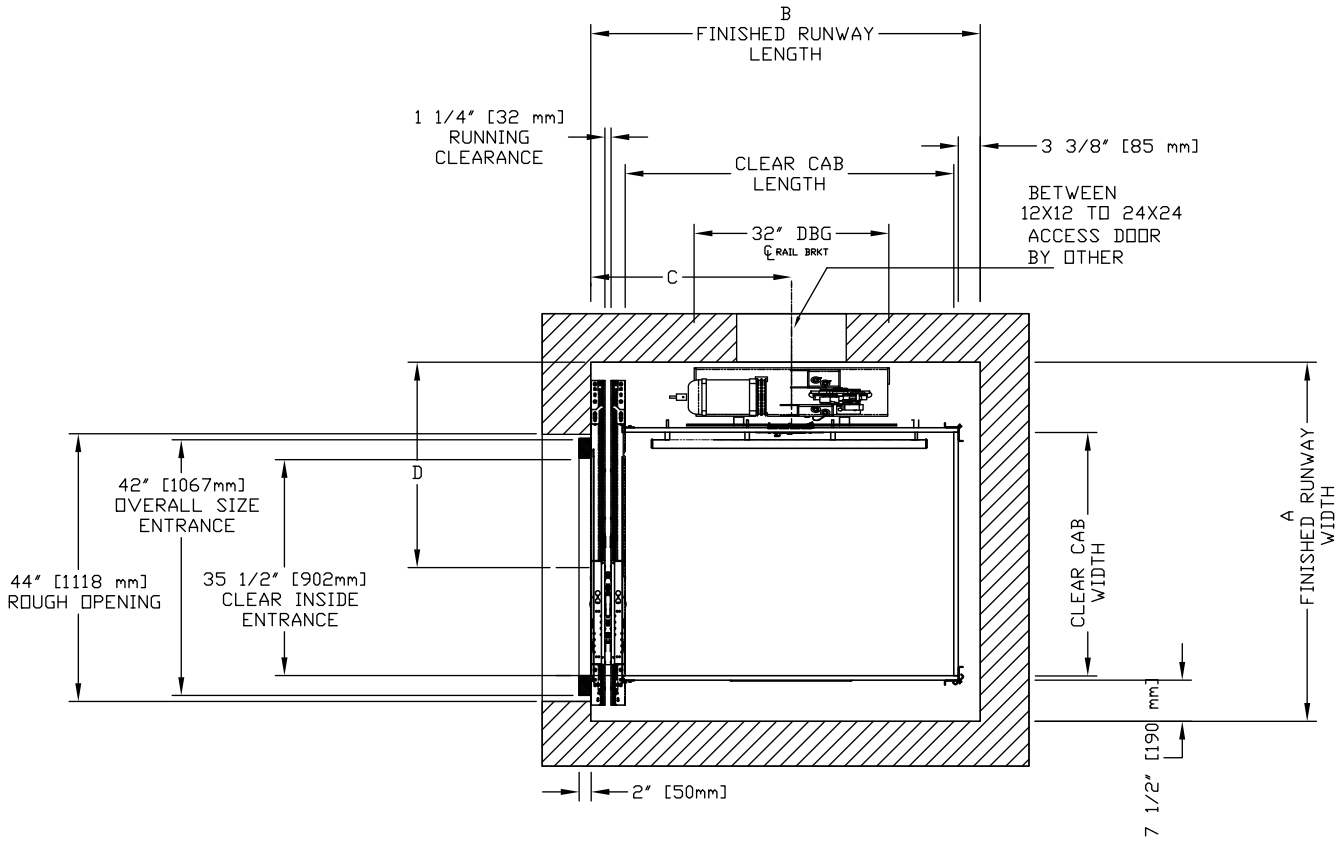
Sectional view - gearless type 5 cab





FINAL RAIL BRACKET RB3	BELOW THE MOTOR CONSULT YOUR CONCORD REPRESENTATIVE FOR EXACT LOCATION
INTERMEDIATE RAIL BRACKET RB2	32"[813mm] INTERVALS AFTER 2nd BOTTOM BRACKET
BOTTOM RAIL BRACKET RB1	44" [1118mm] & 71" [1804MM] ABOVE PIT FLOOR

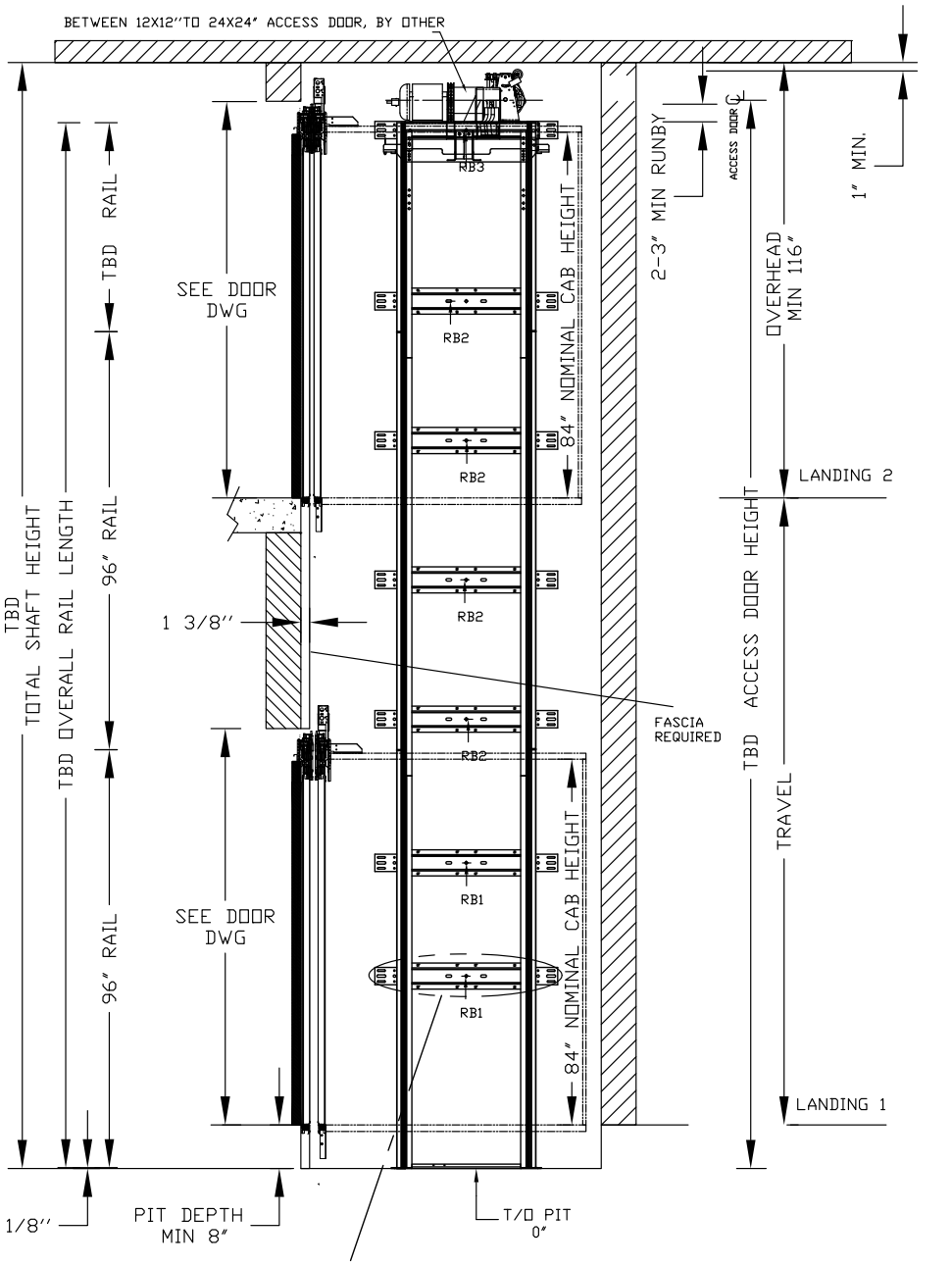
Plan view - gearless type 1L cab with auto slim doors



CLEAR INSIDE CAB WIDTH		CLEAR INSIDE CAB LENGTH		A FINISHED RUNWAY WIDTH		B FINISHED RUNWAY LENGTH		C RAIL CENTER LINE		D DOOR CENTER LINE	
mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches
914	36	1219	48	1499	59	1473	58	794	31 1/4	838	33
914	36	1372	54	1499	59	1626	64	845	33 1/4	838	33
914	36	1524	60	1499	59	1778	70	921	36 1/4	838	33
1016	40	1372	54	1524	60	1626	64	845	33 1/4	883	34 3/4

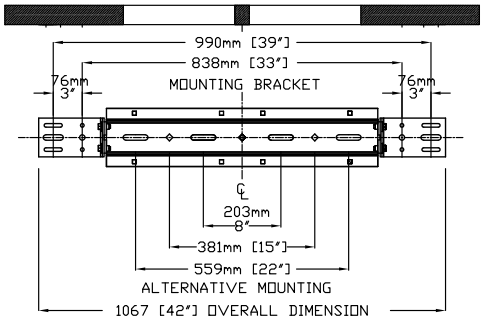
NOTE: For a platform size over 12 ft^2, a variance is required to accommodate a rated load of only 750 lb (341 kg). Please contact your local code official for details.

Sectional view - gearless type 1L cab with auto slim doors



LOAD BEARING WALL (SEE PLANNING GUIDE)

CANNOT HAVE HABITABLE SPACE BELOW PIT

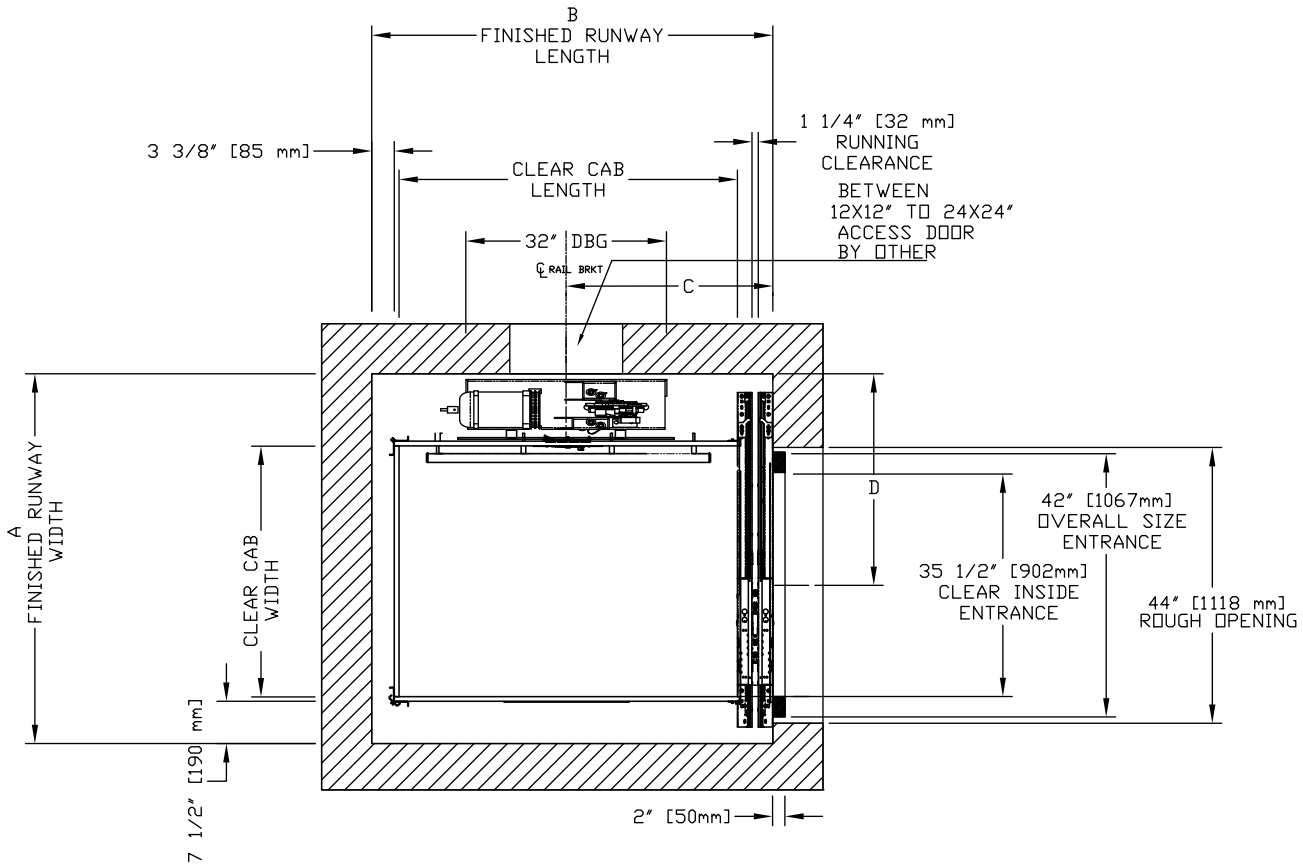


MOUNTING BRACKET

4 WALL ANCHOR POINTS MIN. PER BRACKET
2 PER SIDE OF RAIL BRACKET CENTER LINE
PULL OUT FORCE PER FASTENER 69 kg [152 LBS]

FINAL RAIL BRACKET RB3	BELOW THE MOTOR CONSULT YOUR CONCORD REPRESENTATIVE FOR EXACT LOCATION
INTERMEDIATE RAIL BRACKET RB2	32"[813mm] INTERVALS AFTER 2nd BOTTOM BRACKET
BOTTOM RAIL BRACKET RB1	39" [991mm] & 71" [1804MM] ABOVE PIT FLOOR

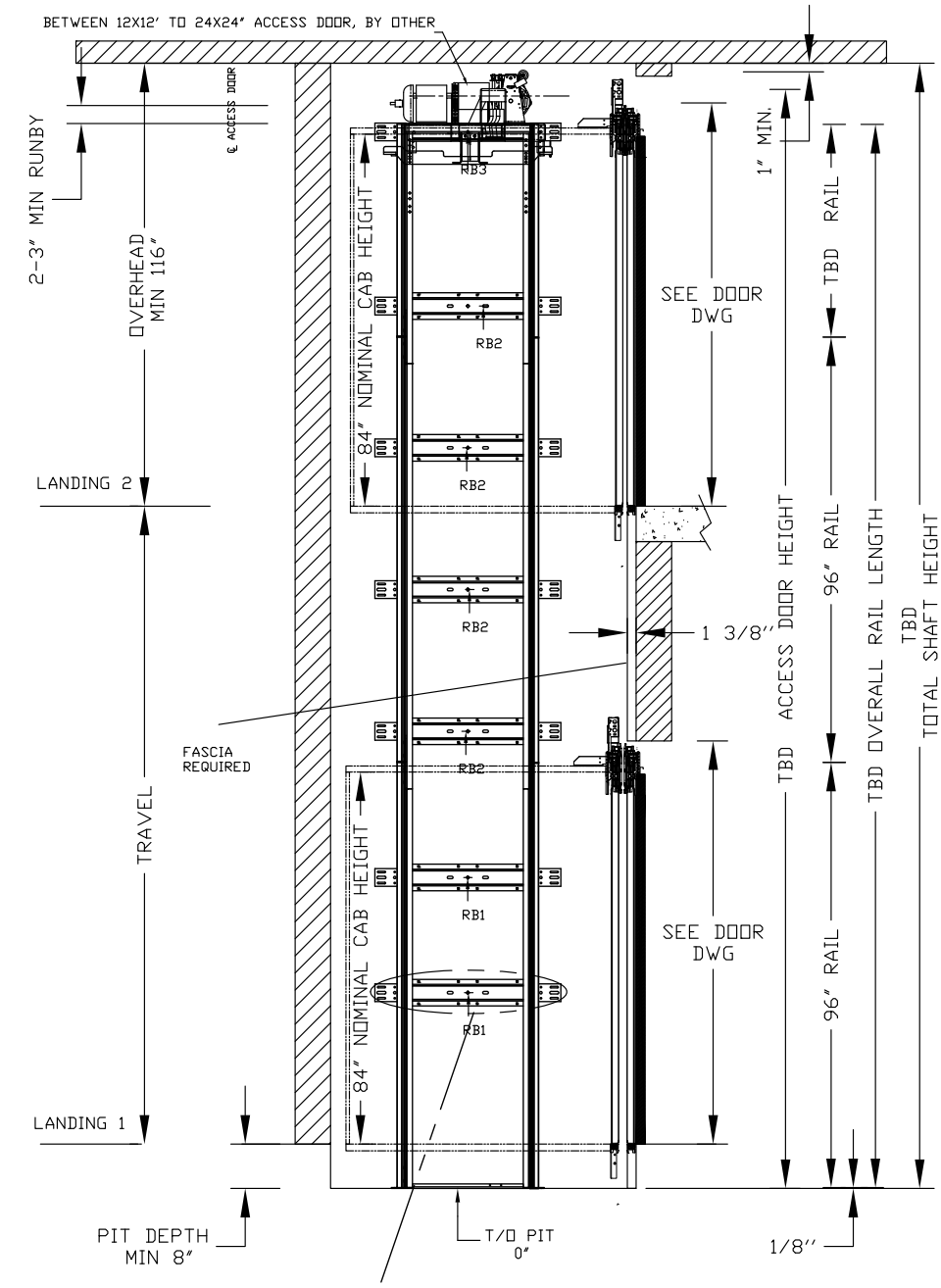
Plan view - gearless type 1R cab with auto slim doors



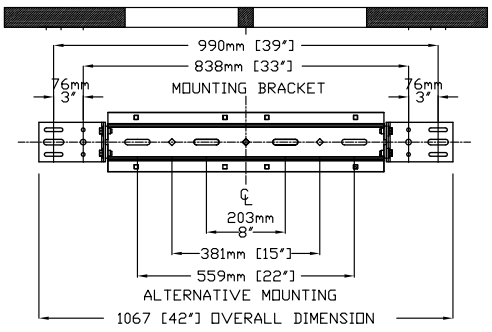
CLEAR INSIDE CAB WIDTH		CLEAR INSIDE CAB LENGTH		A FINISHED RUNWAY WIDTH		B FINISHED RUNWAY LENGTH		C RAIL CENTER LINE		D DOOR CENTER LINE	
mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches
914	36	1219	48	1499	59	1473	58	794	31 1/4	838	33
914	36	1372	54	1499	59	1626	64	845	33 1/4	838	33
914	36	1524	60	1499	59	1778	70	921	36 1/4	838	33
1016	40	1372	54	1524	60	1626	64	845	33 1/4	883	34 3/4

NOTE: For a platform size over 12 ft^2, a variance is required to accommodate a rated load of only 750 lb (341 kg). Please contact your local code official for details.

Sectional view - gearless type 1R cab with auto slim doors



CANNOT HAVE HABITABLE SPACE BELOW PIT

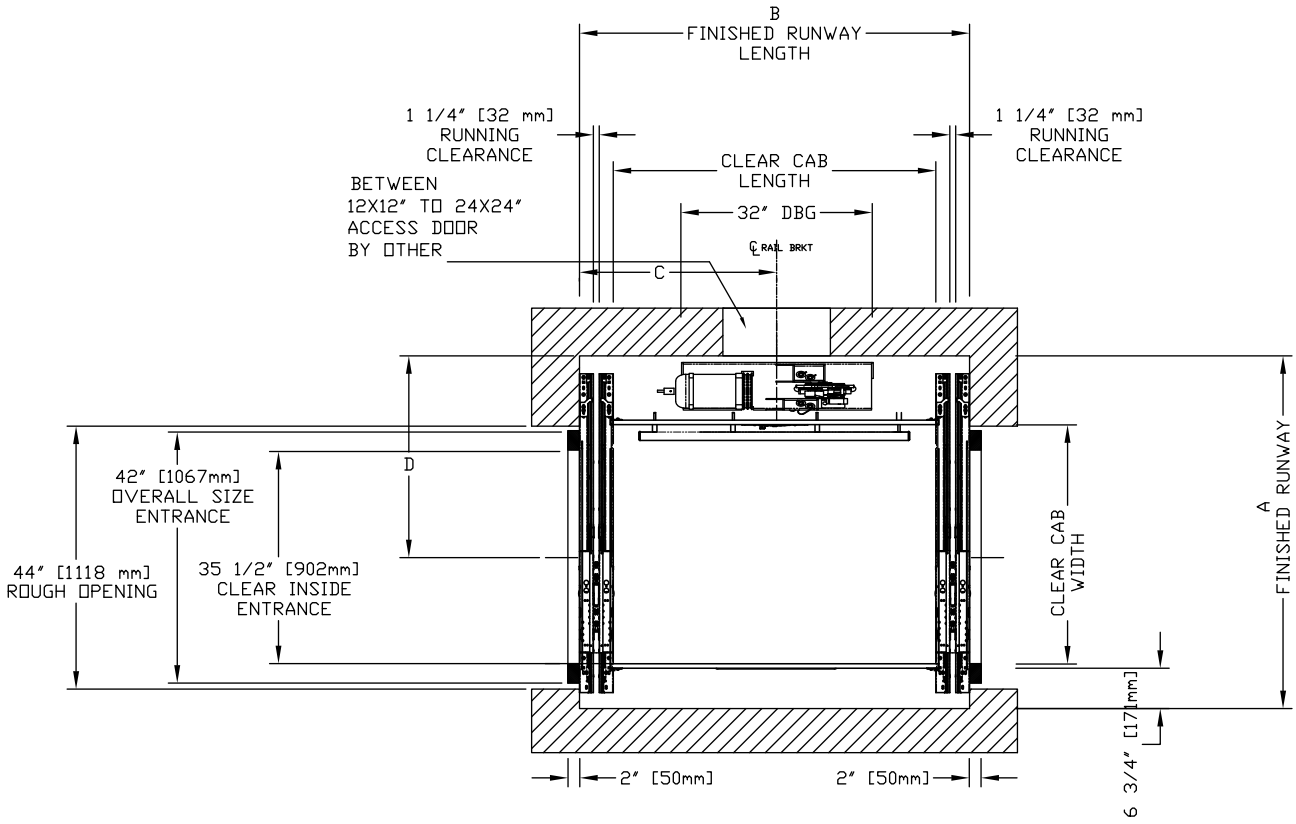


MOUNTING BRACKET

4 WALL ANCHOR POINTS MIN. PER BRACKET
2 PER SIDE OF RAIL BRACKET CENTER LINE
PULL OUT FORCE PER FASTENER 69 kg [152 LBS]

FINAL RAIL BRACKET RB3	BELOW THE MOTOR CONSULT YOUR CONCORD REPRESENTATIVE FOR EXACT LOCATION
INTERMEDIATE RAIL BRACKET RB2	32"[813mm] INTERVALS AFTER 2nd BOTTOM BRACKET
BOTTOM RAIL BRACKET RB1	39" [991mm] & 71" [1804MM] ABOVE PIT FLOOR

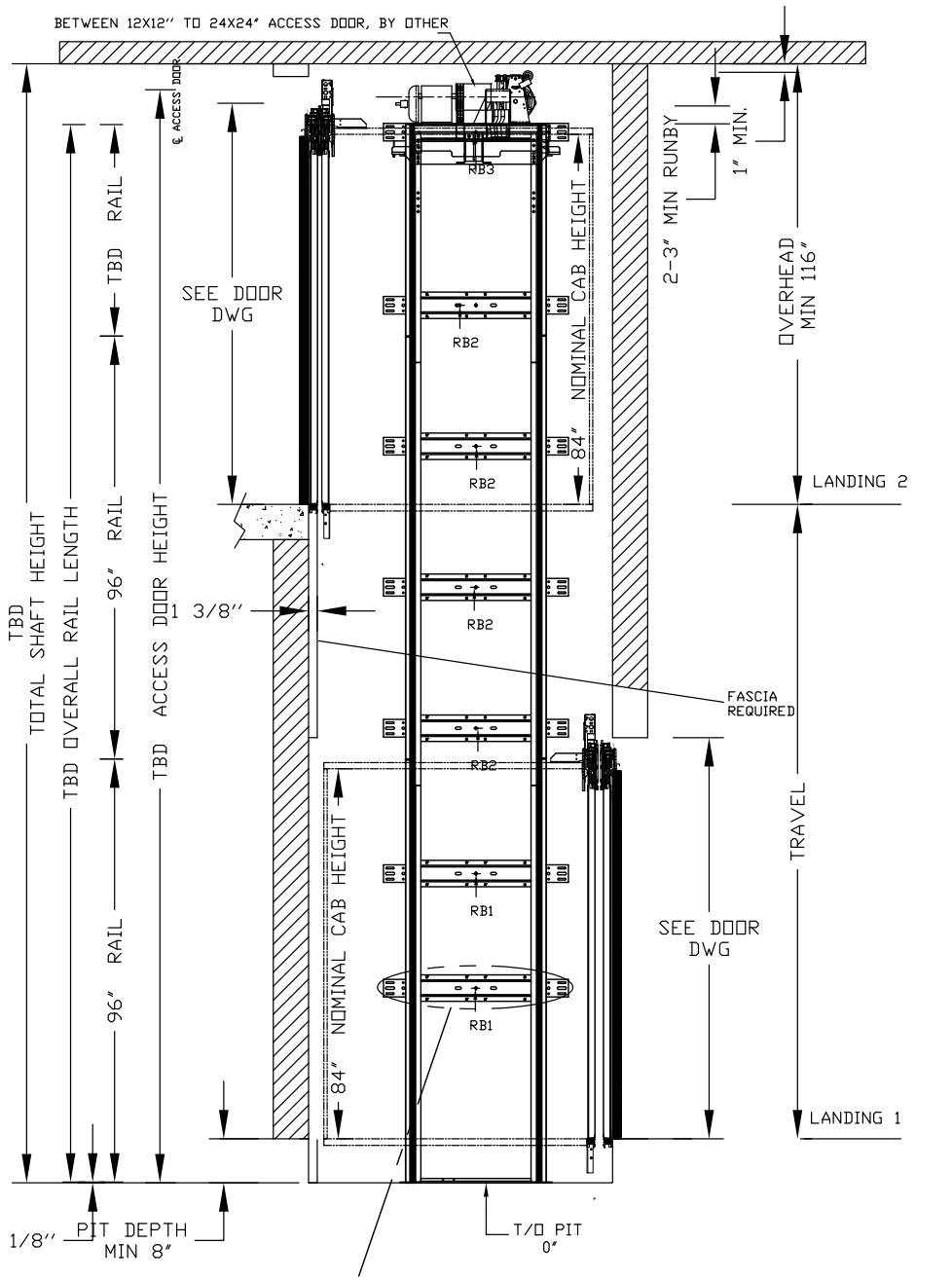
Plan view - gearless type 2 cab with auto slim doors

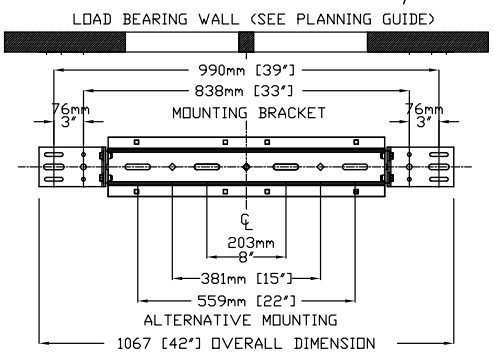


CLEAR INSIDE CAB WIDTH		CLEAR INSIDE CAB LENGTH		A FINISHED RUNWAY WIDTH		B FINISHED RUNWAY LENGTH		C RAIL CENTER LINE		D DOOR CENTER LINE	
mm	Inches	mm		mm	Inches	mm	Inches	mm	Inches	mm	Inches
914	36	1219	48	1499	59	1518	59 3/4	759	29 7/8	838	33
914	36	1372	54	1499	59	1670	65 3/4	835	32 7/8	838	33
914	36	1524	60	1499	59	1822	71 3/4	911	35 7/8	838	33
1016	40	1372	54	1524	60	1670	65 3/4	835	32 7/8	883	34 3/4

NOTE: For a platform size over 12 ft^2, a variance is required to accommodate a rated load of only 750 lb (341 kg). Please contact your local code official for details.

Sectional view - gearless type 2 cab with auto slim doors



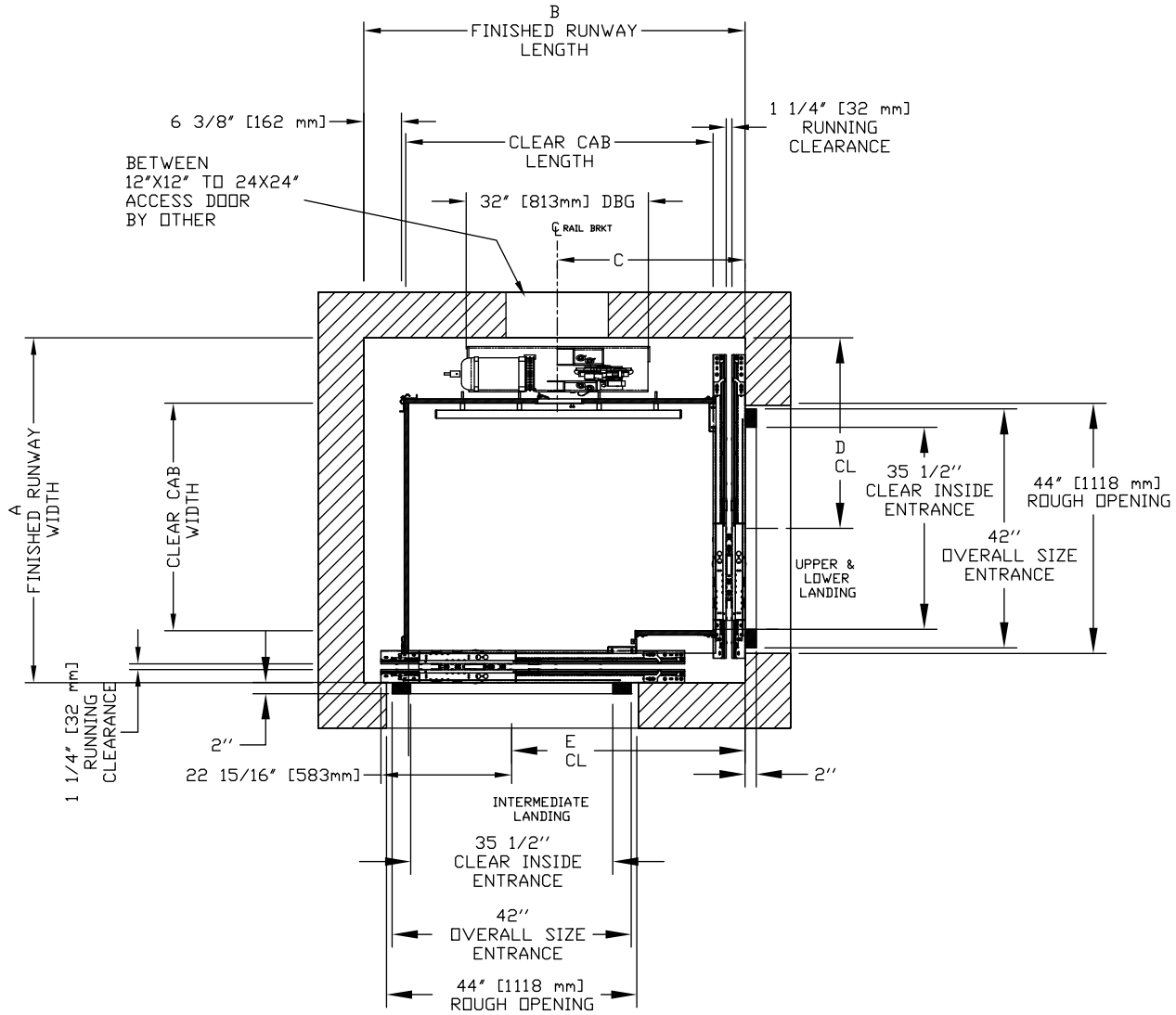


MOUNTING BRACKET

4 WALL ANCHOR POINTS MIN. PER BRACKET
2 PER SIDE OF RAIL BRACKET CENTER LINE
PULL OUT FORCE PER FASTENER 69 kg [152 LBS]

FINAL RAIL BRACKET RB3	BELOW THE MOTOR CONSULT YOUR CONCORD REPRESENTATIVE FOR EXACT LOCATION
INTERMEDIATE RAIL BRACKET RB2	32"[813mm] INTERVALS AFTER 2nd BOTTOM BRACKET
BOTTOM RAIL BRACKET RB1	39" [991mm] & 71" [1804MM] ABOVE PIT FLOOR

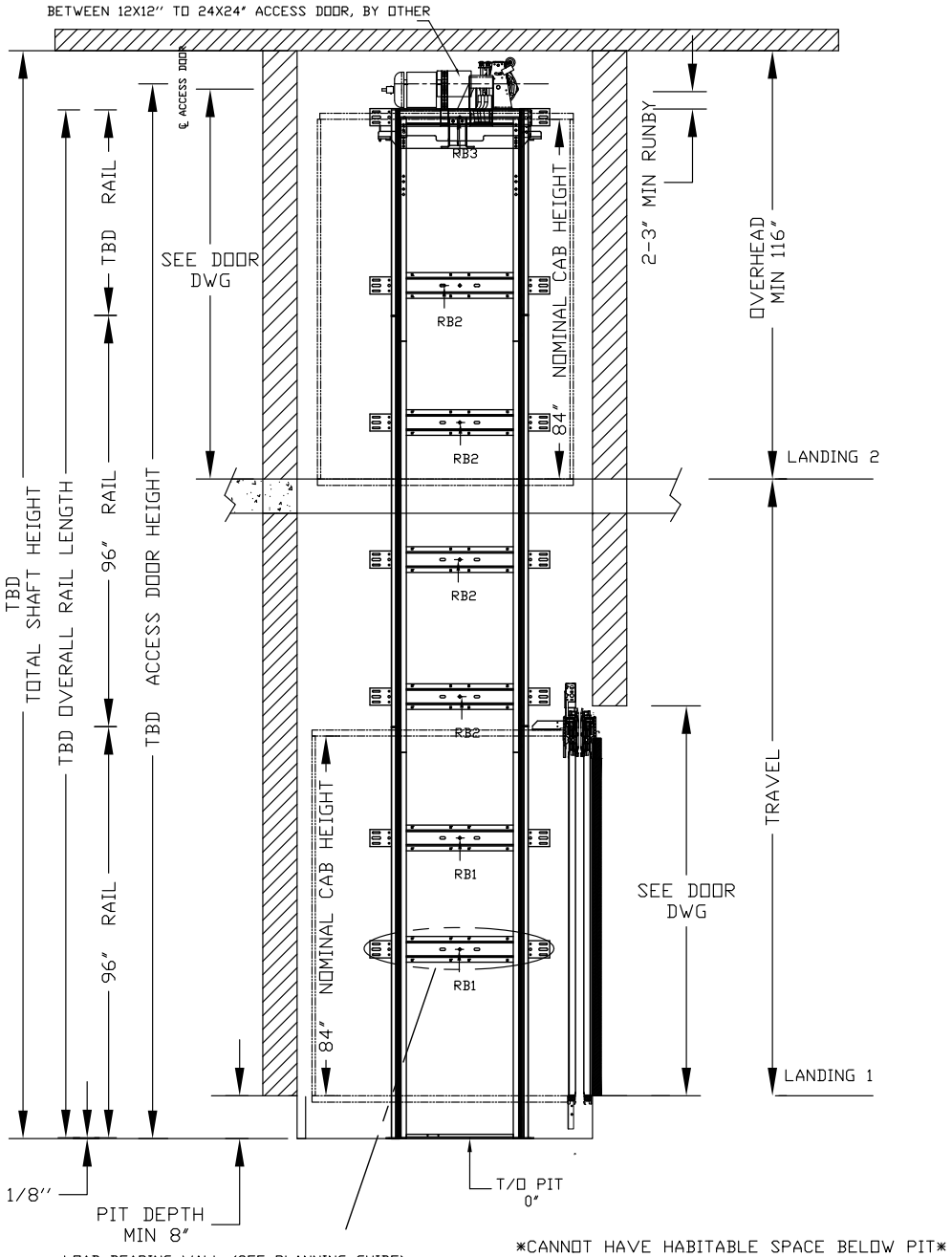
Plan view - gearless type 3 cab with auto slim doors



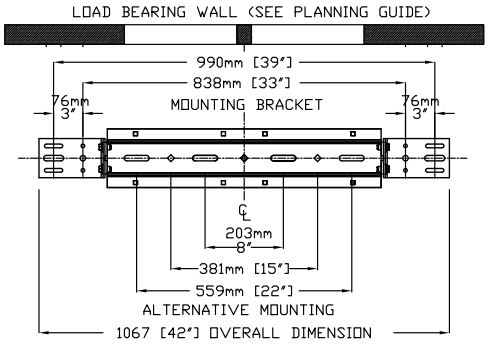
CLEAR INSIDE CAB WIDTH		CLEAR INSIDE CAB LENGTH		A FINISHED RUNWAY WIDTH		B FINISHED RUNWAY LENGTH		C RAIL CENTER LINE		D DOOR CENTER LINE		E DOOR CENTER LINE	
mm	Inches	mm		mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches
914	36	1372	54	1540	60 5/8	1702	67	838	33	838	33	1064	41 7/8
914	36	1524	60	1540	60 5/8	1854	73	914	36	838	33	1216	47 7/8
1016	40	1372	54	1581	62 1/4	1702	67	838	33	883	34.75	1064	41 7/8

NOTE: For a platform size over 12 ft^2, a variance is required to accommodate a rated load of only 750 lb (341 kg). Please contact your local code official for details.

Sectional view - gearless type 3 cab with auto slim doors



CANNOT HAVE HABITABLE SPACE BELOW PIT

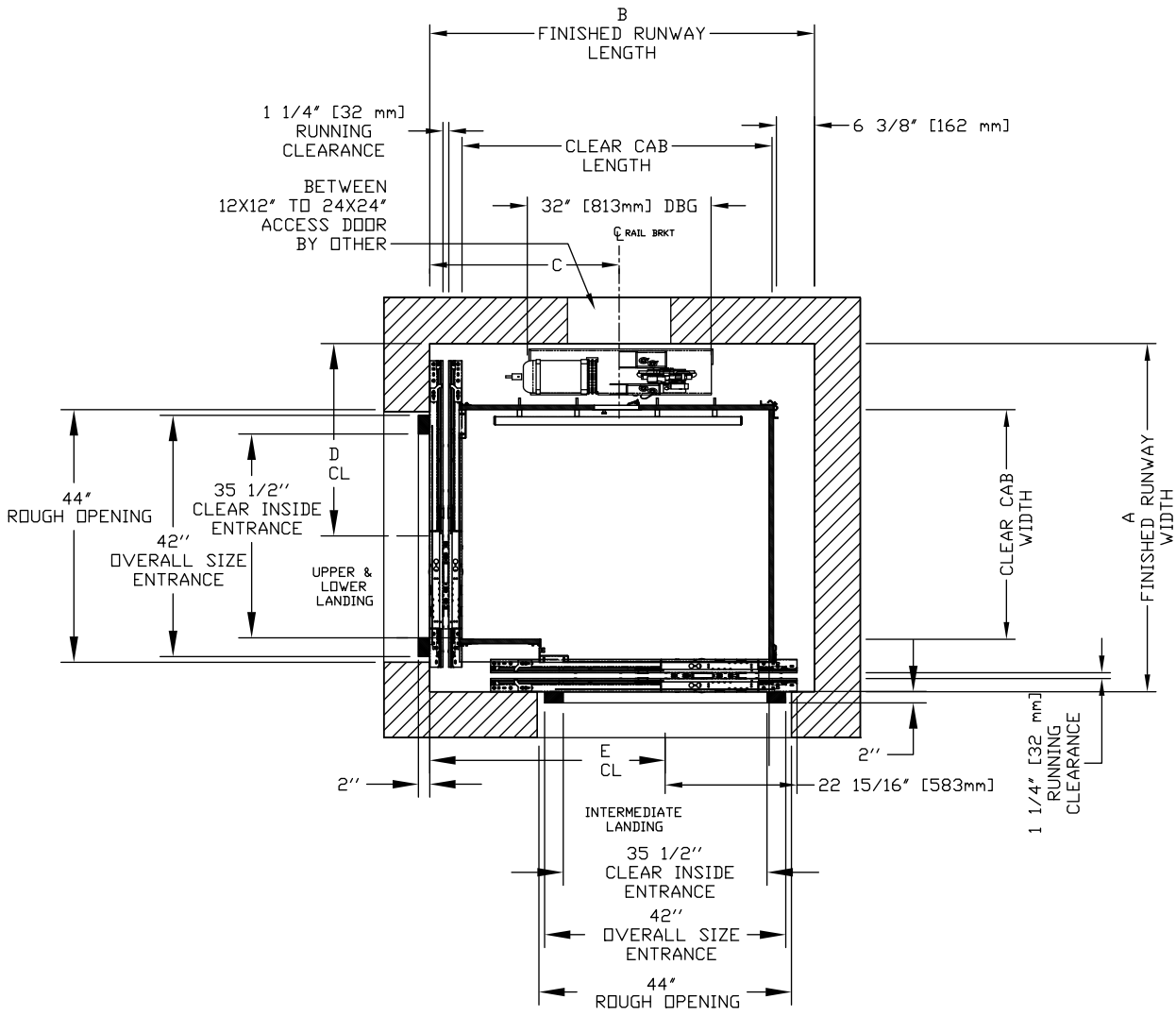


MOUNTING BRACKET

4 WALL ANCHOR POINTS MIN. PER BRACKET
2 PER SIDE OF RAIL BRACKET CENTER LINE
PULL OUT FORCE PER FASTENER 69 kg [152 LBS]

FINAL RAIL BRACKET RB3	BELOW THE MOTOR CONSULT YOUR CONCORD REPRESENTATIVE FOR EXACT LOCATION
INTERMEDIATE RAIL BRACKET RB2	32"[813mm] INTERVALS AFTER 2nd BOTTOM BRACKET
BOTTOM RAIL BRACKET RB1	39" [991mm] & 71" [1804MM] ABOVE PIT FLOOR

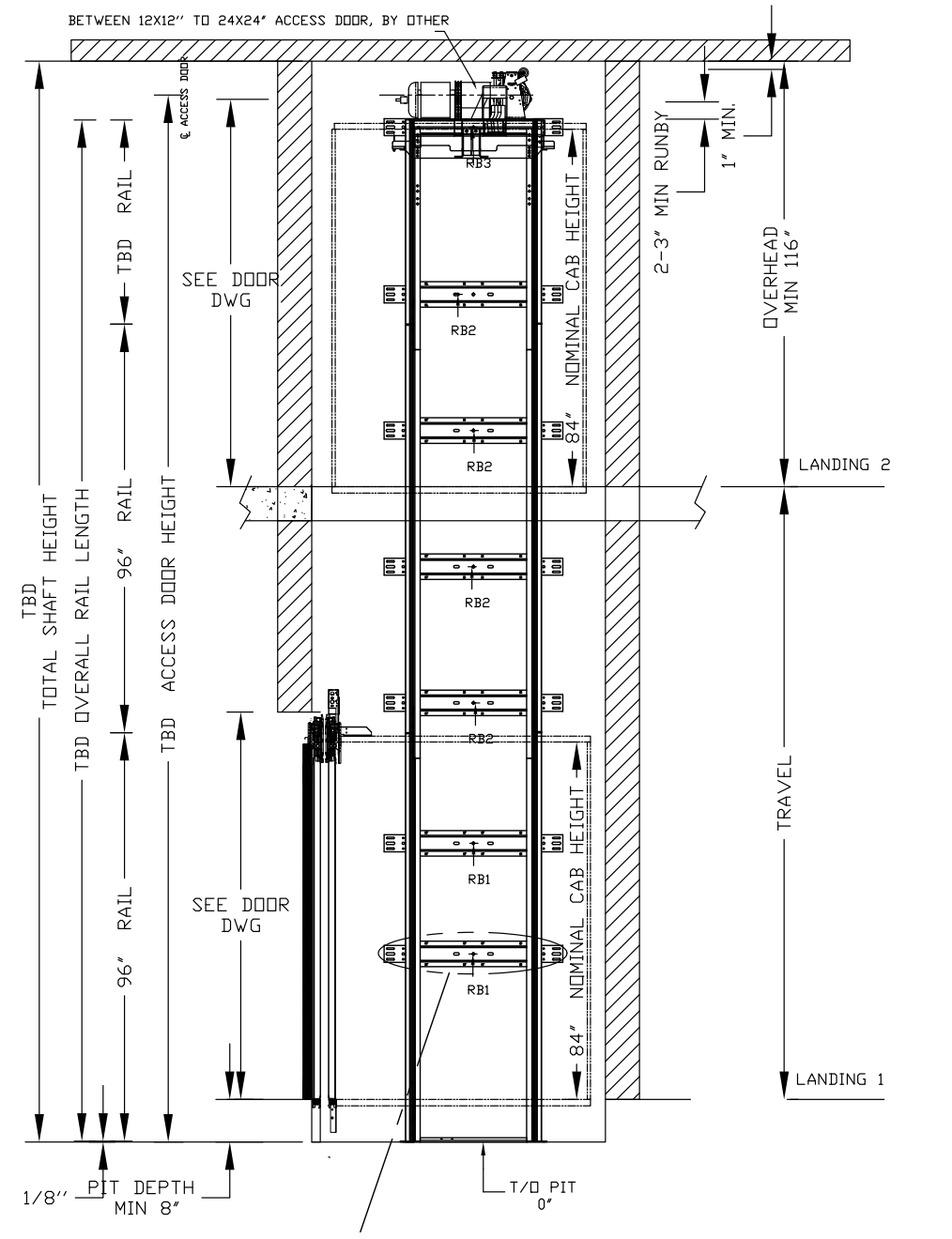
Plan view - gearless type 4 cab with auto slim doors

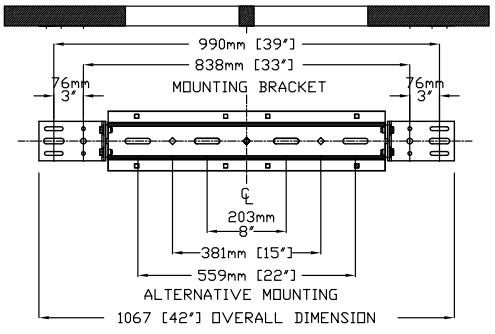


CLEAR INSIDE CAB WIDTH		CLEAR INSIDE CAB LENGTH		A FINISHED RUNWAY WIDTH		B FINISHED RUNWAY LENGTH		C RAIL CENTER LINE		D DOOR CENTER LINE		E DOOR CENTER LINE	
mm	Inches	mm		mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches
914	36	1372	54	1540	60 5/8	1702	67	838	33	838	33	1064	41 7/8
914	36	1524	60	1540	60 5/8	1854	73	914	36	838	33	1216	47 7/8
1016	40	1372	54	1581	62 1/4	1702	67	838	33	883	34.75	1064	41 7/8

NOTE: For a platform size over 12 ft^2, a variance is required to accommodate a rated load of only 750 lb (341 kg). Please contact your local code official for details.

Sectional view - gearless type 4 cab with auto slim doors



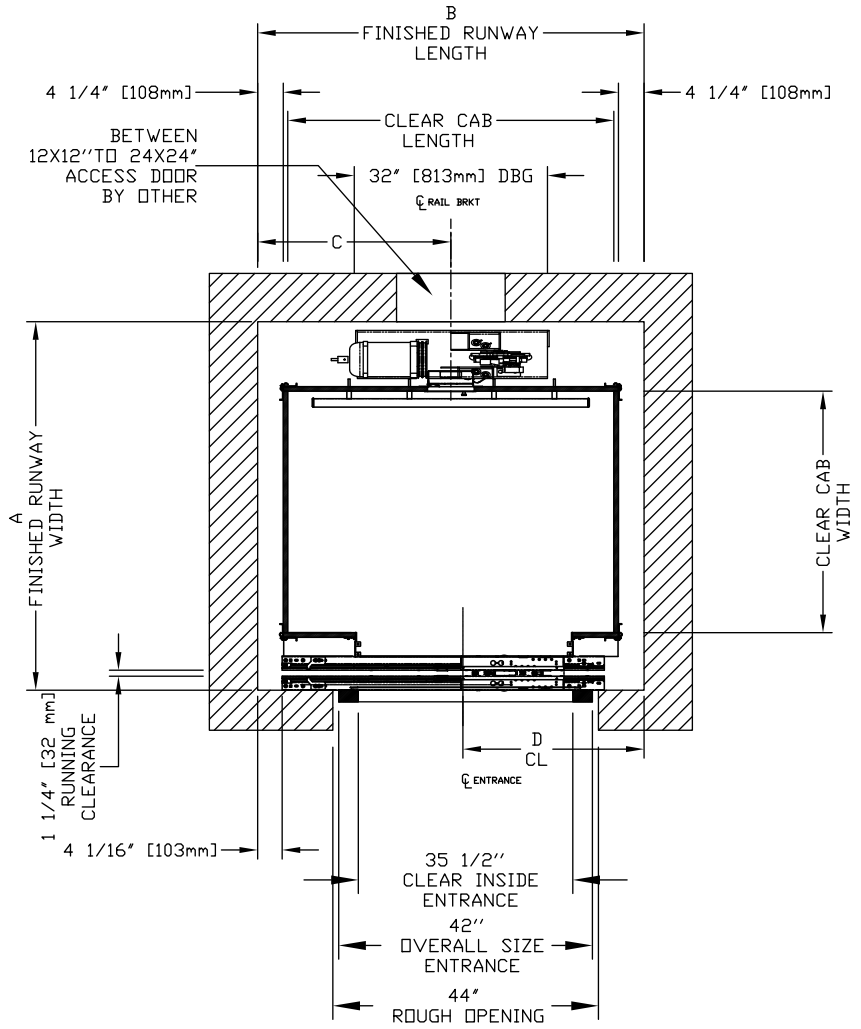


MOUNTING BRACKET

4 WALL ANCHOR POINTS MIN. PER BRACKET
2 PER SIDE OF RAIL BRACKET CENTER LINE
PULL OUT FORCE PER FASTENER 69 kg [152 LBS]

FINAL RAIL BRACKET RB3	BELOW THE MOTOR CONSULT YOUR CONCORD REPRESENTATIVE FOR EXACT LOCATION
INTERMEDIATE RAIL BRACKET RB2	32"[813mm] INTERVALS AFTER 2nd BOTTOM BRACKET
BOTTOM RAIL BRACKET RB1	39" [991mm] & 71" [1804MM] ABOVE PIT FLOOR

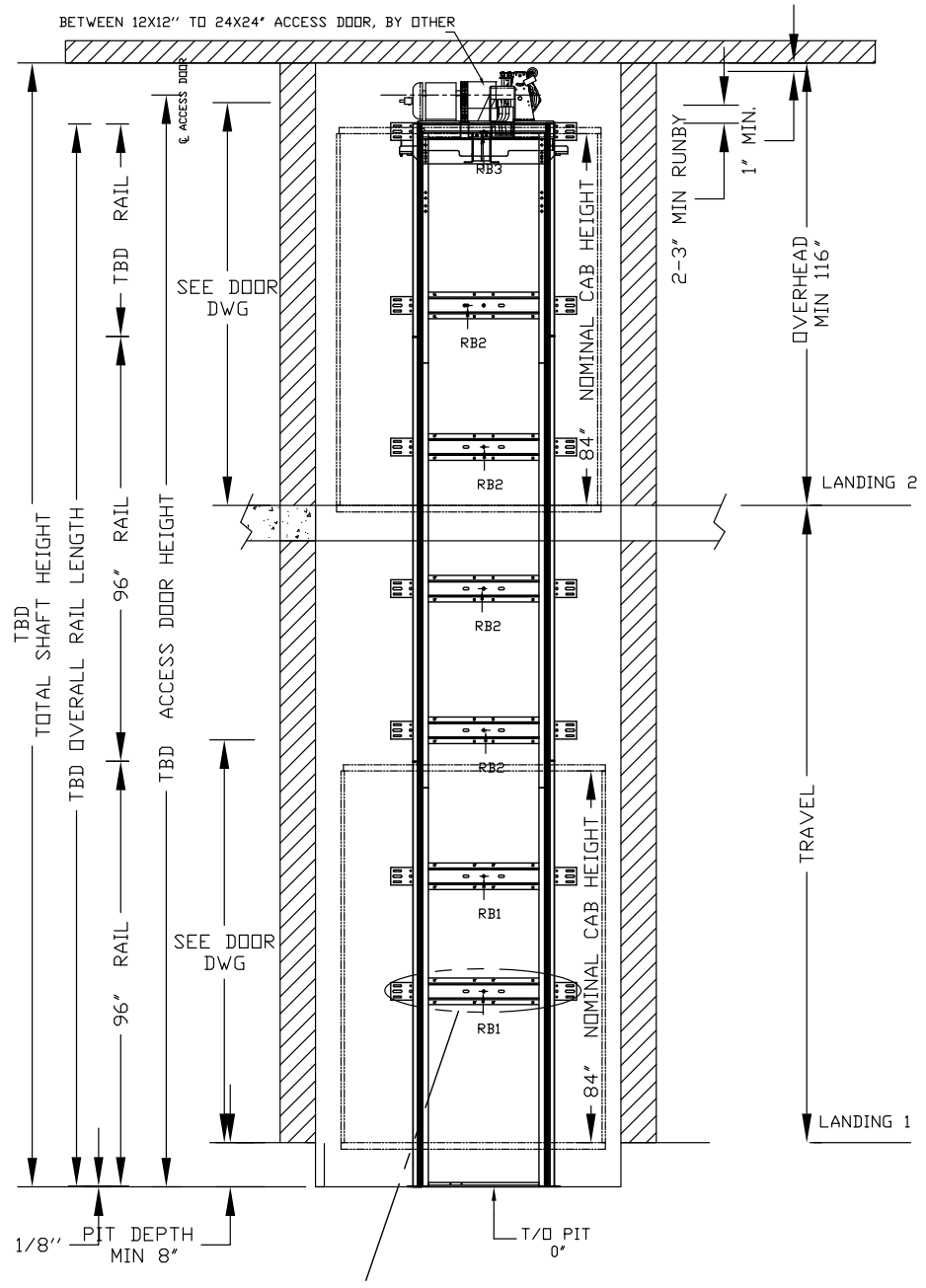
Plan view - gearless type 5 cab with auto slim doors

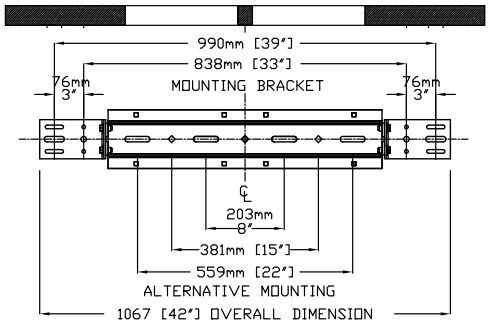


CLEAR INSIDE CAB WIDTH		CLEAR INSIDE CAB LENGTH		A FINISHED RUNWAY WIDTH		B FINISHED RUNWAY LENGTH		C RAIL CENTER LINE		D DOOR CENTER LINE	
mm	Inches	mm		mm	Inches	mm	Inches	mm	Inches	mm	Inches
914	36	1372	54	1486	58 1/2	1626	64	813	32	762	30
914	36	1524	60	1486	58 1/2	1778	70	889	35	762	30
1016	40	1372	54	1588	62 1/2	1626	64	813	32	762	30

NOTE: For a platform size over 12 ft^2, a variance is required to accommodate a rated load of only 750 lb (341 kg). Please contact your local code official for details.

Sectional view - gearless type 5 cab with auto slim doors





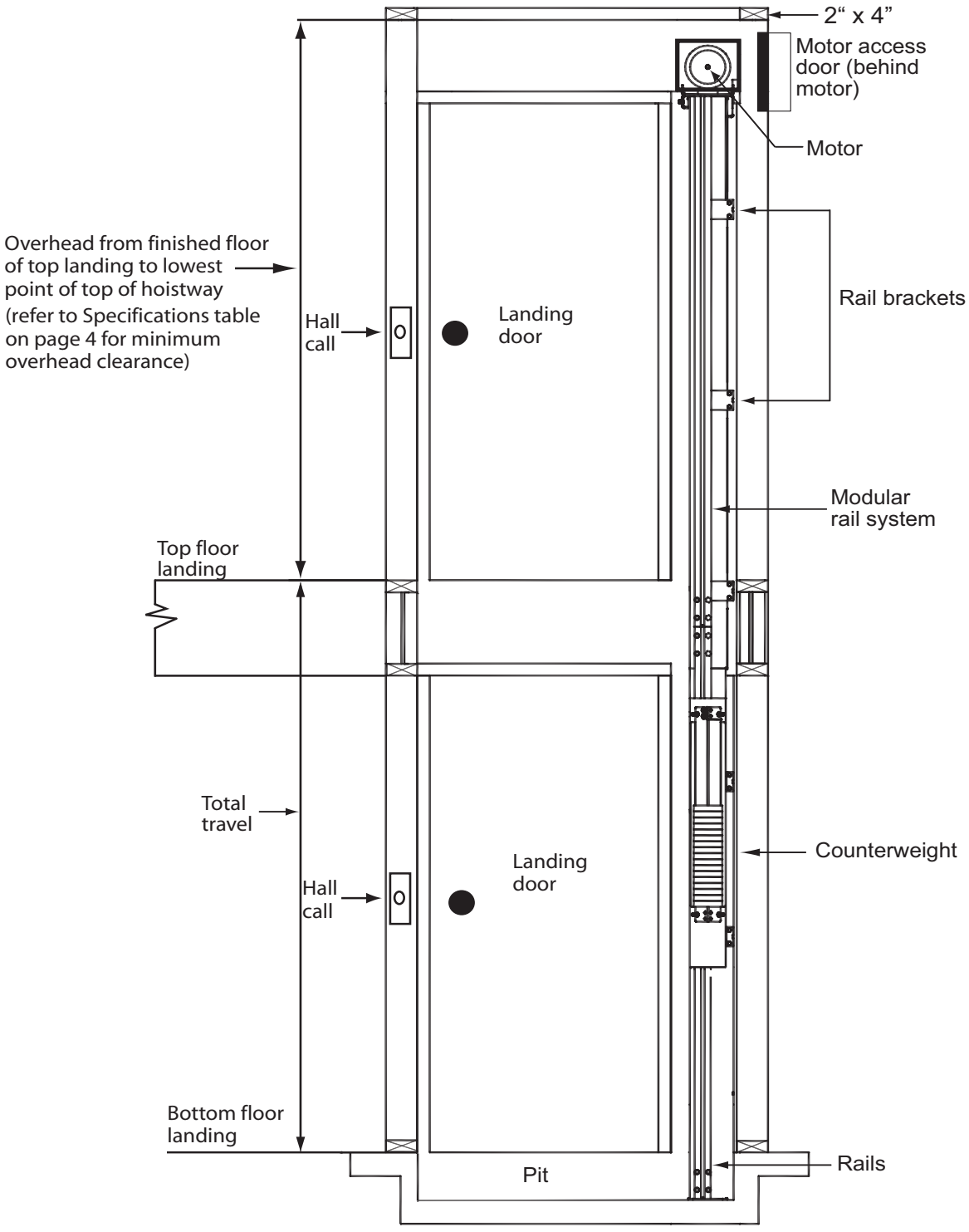
MOUNTING BRACKET

4 WALL ANCHOR POINTS MIN. PER BRACKET
2 PER SIDE OF RAIL BRACKET CENTER LINE
PULL OUT FORCE PER FASTENER 69 kg [152 LBS]

FINAL RAIL BRACKET RB3	BELOW THE MOTOR CONSULT YOUR CONCORD REPRESENTATIVE FOR EXACT LOCATION
INTERMEDIATE RAIL BRACKET RB2	32"[813mm] INTERVALS AFTER 2nd BOTTOM BRACKET
BOTTOM RAIL BRACKET RB1	39" [991mm] & 71" [1804MM] ABOVE PIT FLOOR

Eclipse hoistway with rail

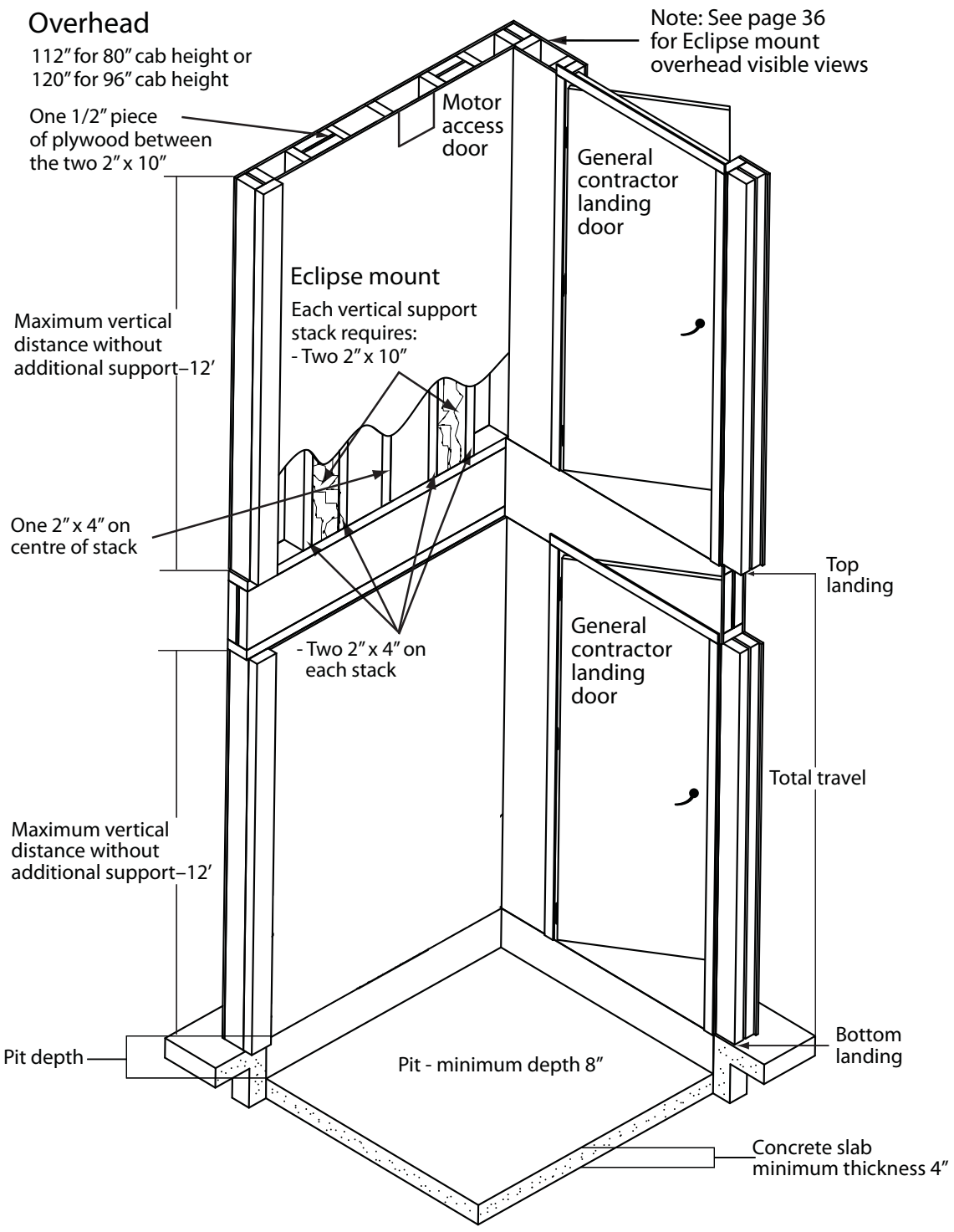
Hoistway type 1 right hand with rail



WARNING

Pipes conveying steam, gas or liquids, which, if discharged into the hoistway would endanger life, shall not be installed in the hoistway.

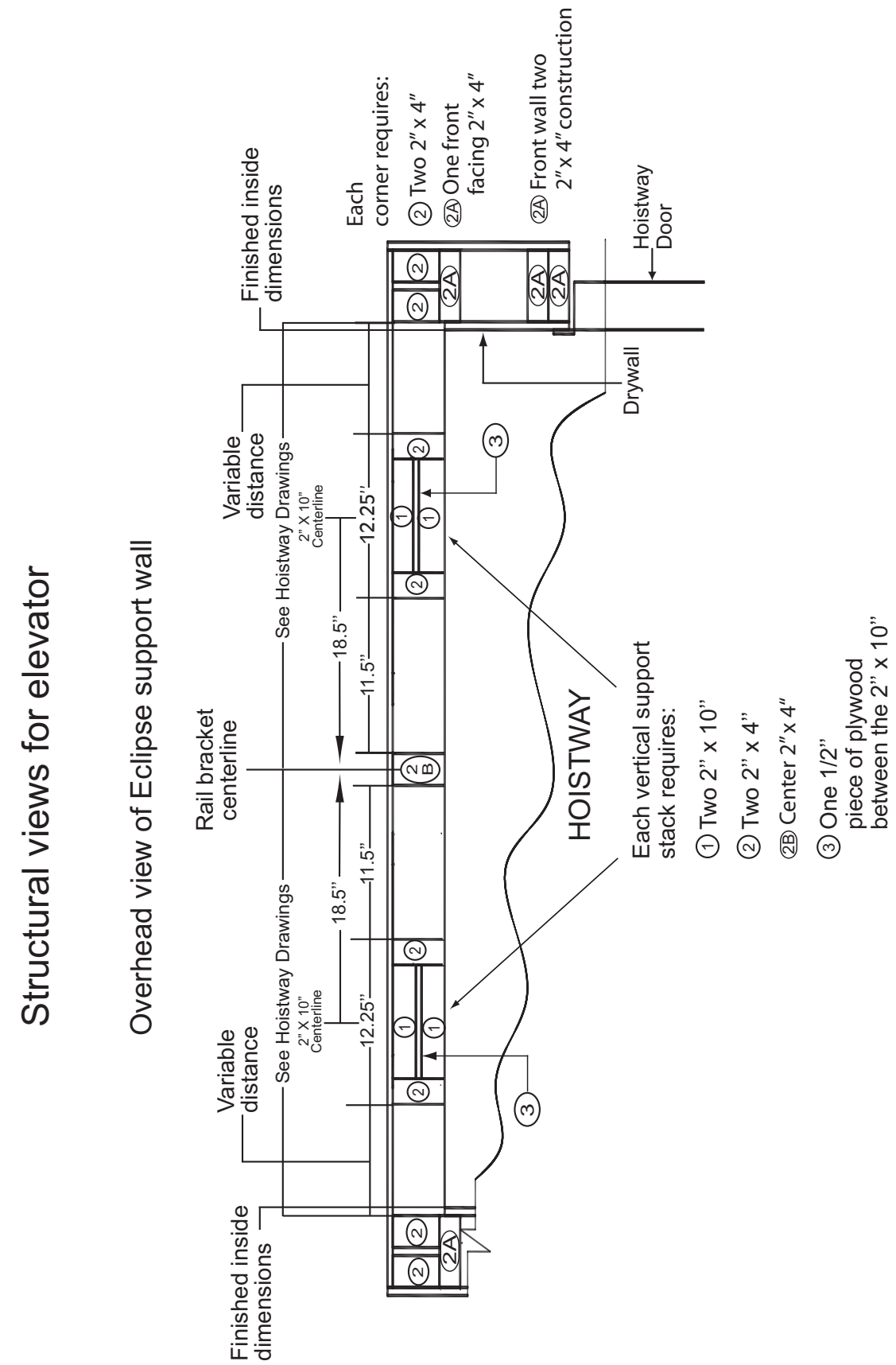
Eclipse hoistway mount



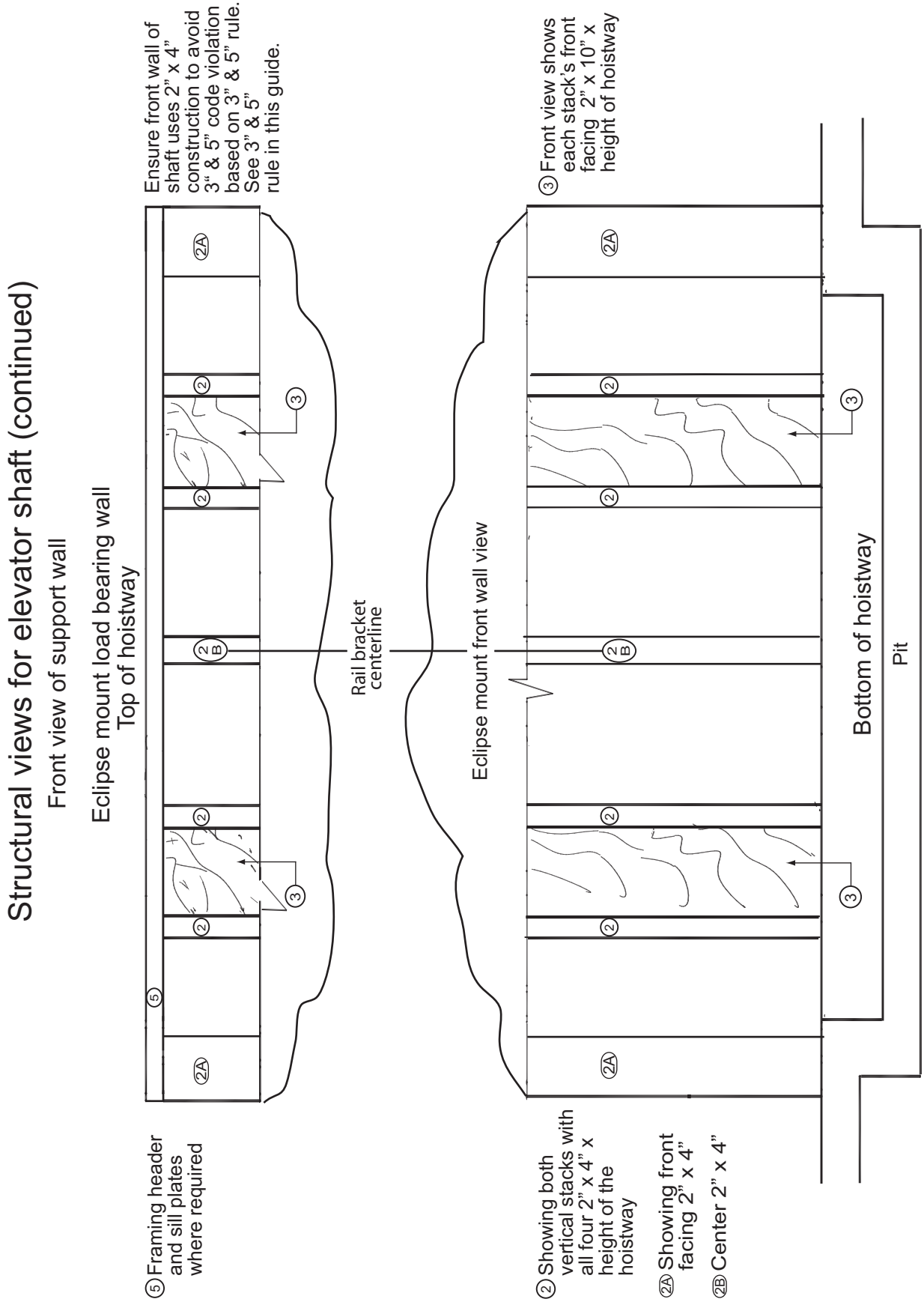
⚠ WARNING

For a consistent ride, the hoistway temperature must be maintained between 10°C and 30°C (50°F and 86°F).

Eclipse top of hoistway view for wood construction



Wall configuration for wood construction (continued)



Loads on building and forces on rails

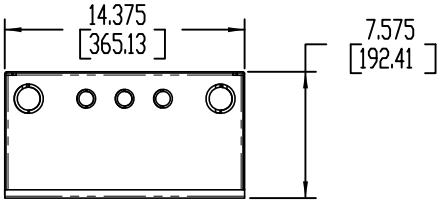
RAIL FORCES		R3 NOTE
		PIT FLOOR TO SUPPORT LOAD OF: 6400 .LBS * (INCLUDES IMPACT)
*R1	*R2	4 WALL ANCHOR POINTS MIN. PER BRACKET. 2 PER SIDE OF RAIL BRACKET CENTER LINE. PULL OUT FORCE PER FASTENER 152 .LBS.
304 lbf	194 lbf	
Rail Weight 6.0 lbs / ft		

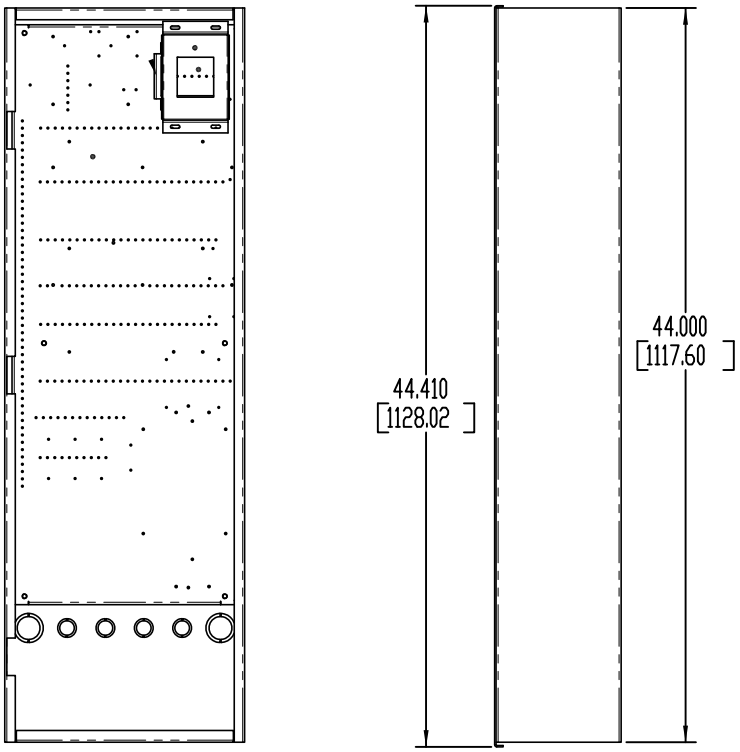
R1: Equal and opposing reaction loads caused by offset suspension means relative to center of mass- top shoes pull out; bottom shoes push in.

R2: Side forces experienced on rail face caused by asymetrical loading.

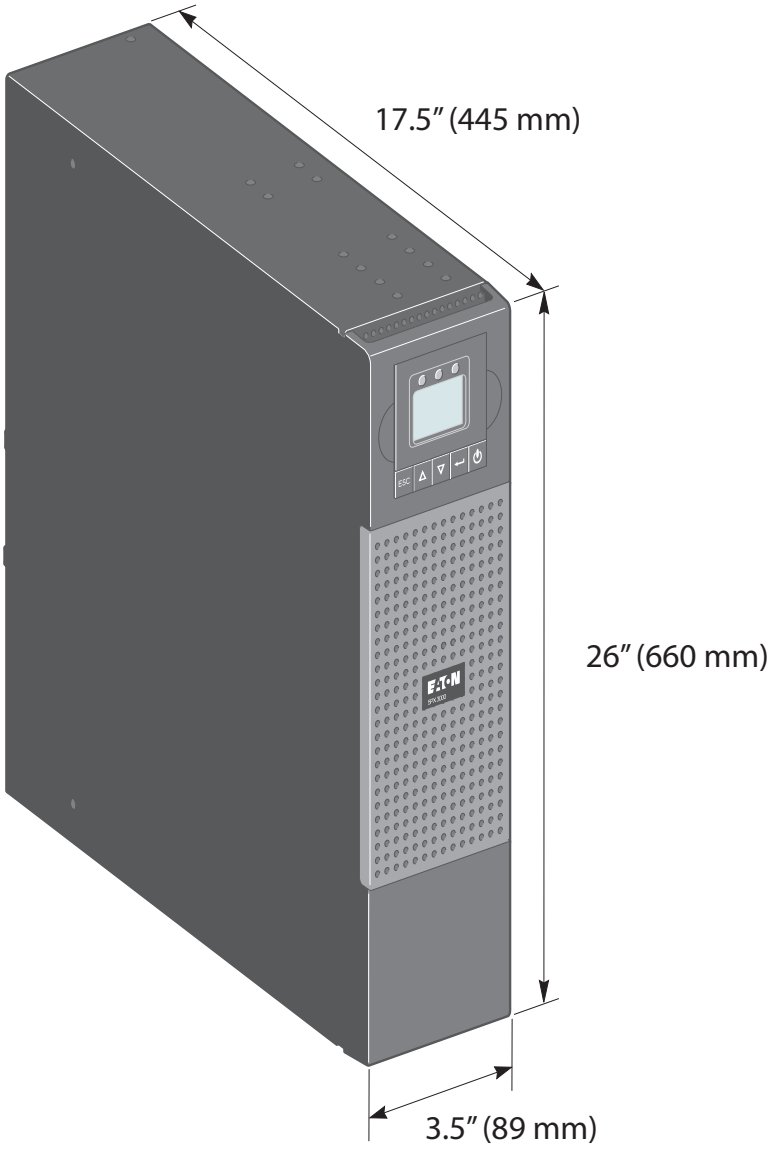
R3: Downforce on the rail under safety stop conditions.

Controller box dimensions





UPS dimensions



Eclipse electrical requirements

By General Contractor/Owner

Your electrician and phone installer supply the following connections:
Main disconnect - One (1) 230V single-phase 30 Amp fused disconnect box with 20 Amp fuse/breaker (if voltage is not 230V minimum, a buck-boost transformer is required)
Lighting disconnect - One (1) 120V 15 Amp fused disconnect or circuit breaker for cab lighting
Telephone line - One (1) telephone line jack in close proximity to the controller
NOTE: Savaria Corporation does not provide power cable to main disconnect.

Recommended manufacturers for fused disconnect

Square D

- Main disconnect: 230V single-phase disconnect
  model # H221N
  240V - 30 Amp with Interlock Kit - ELK031 Aux Contacts
  (normally opened/normally closed)
  In addition, two each - 250V, 20 Amp, RK5 fuses
- Lighting disconnect: 120V 15 Amp fused disconnect
  or circuit breaker

Siemens

- Main disconnect: 230V single-phase disconnect
  model #HF221N
  240V - 30 Amp with Interlock Kit-HA 161234 Aux Contacts
  (normally opened/normally closed)
  In addition, two each - 250V, 20 Amp, RK5 fuses
- Lighting disconnect: 120V 15 Amp fused disconnect
  or circuit breaker

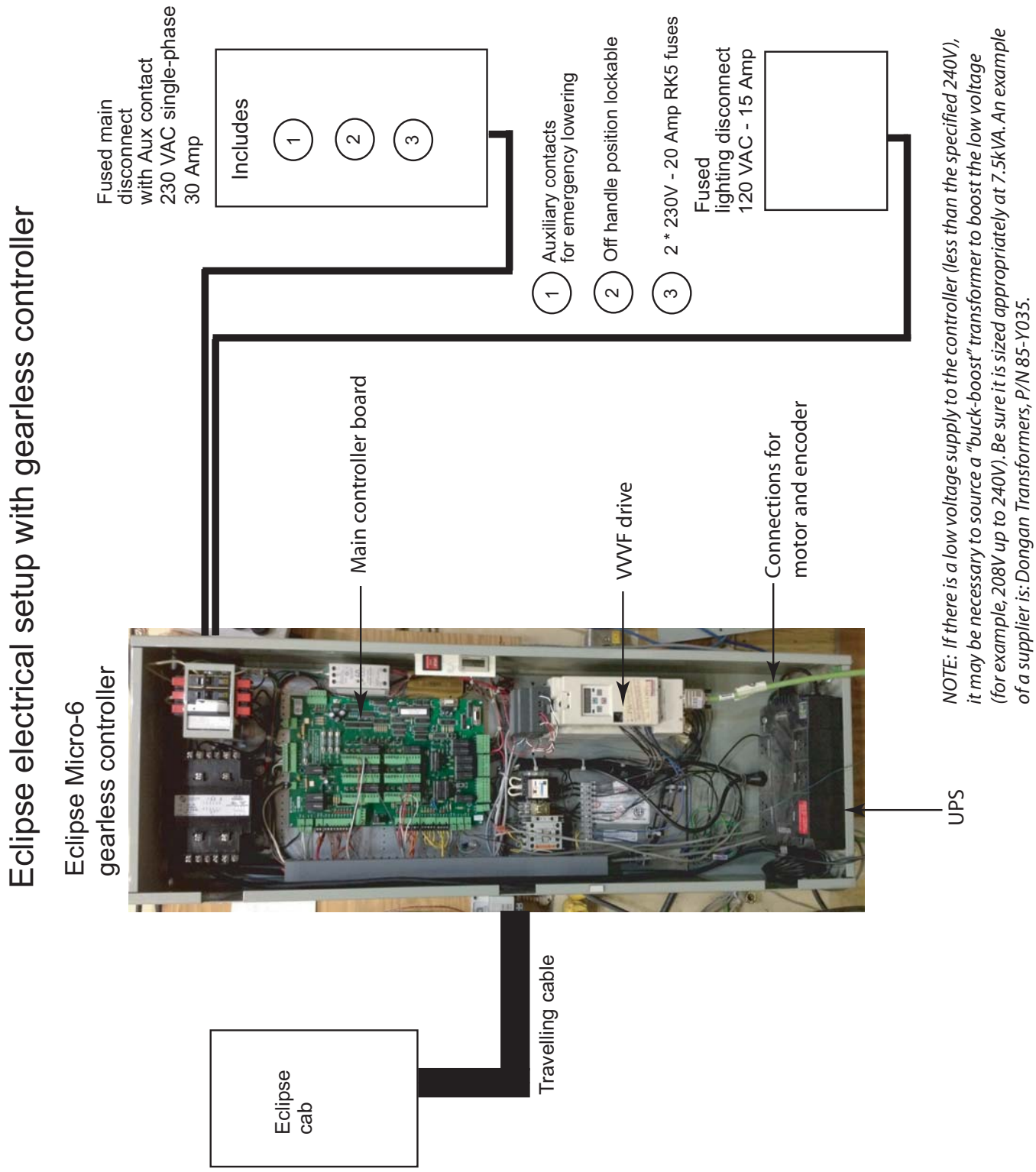
G.E.

- Main disconnect: 230V single-phase disconnect
  model # TH3221
  240V - 30 Amp with Interlock Kit - THAUX21D Aux Contacts
  (normally opened/normally closed)
  In addition, two each - 250V, 20 Amp, RK5 fuses
- Lighting disconnect - 120V 15 Amp fused disconnect
  or circuit breaker

Cutler Hammer

- Main disconnect: 230V single-phase disconnect
  model # DH221NGK
  240V - 30 Amp with Interlock Kit - THAUX21D Aux Contacts
  (normally opened/normally closed)
  In addition, two each - 250V, 20 Amp, RK5 fuses
- Lighting disconnect: 120V 15 Amp fused disconnect
  or circuit breaker

Recommended manufacturers for circuit breakers at the distribution panel (and the distribution panel itself): Square D or Siemens only.


Eclipse electrical setup with gearless controller
Eclipse Micro-6
gearless controller
Fused main
disconnect
with Aux contact
230 VAC single-phase
30 Amp
Includes
1
2
3
1 Auxiliary contacts
for emergency lowering
2 Off handle position lockable
3 2 * 230V - 20 Amp RK5 fuses
Fused
lighting disconnect
120 VAC - 15 Amp
Main controller board
VVF drive
Connections for
motor and encoder
UPS
Eclipse
cab
Travelling cable
NOTE: If there is a low voltage supply to the controller (less than the specified 240V),
it may be necessary to source a "buck-boost" transformer to boost the low voltage
(for example, 208V up to 240V). Be sure it is sized appropriately at 7.5kVA. An example
of a supplier is: Dongan Transformers, P/N 85-Y035.

Acceptance test/inspection for Private Residential Elevator
As per ASME A17.1 section 5.3

8.10.2.2.1 Inside the Car:

Clause	Tested Device	Procedure	Check/Reading
8.10.2.2.1 (b)(1)	Emergency stop Switch (5.3.1.18.7)	– Enter car from lowest landing. – Close landing door and Car gate. – Press signal for next upper landing. – Activate emergency stop switch at “stop” position – Car must stop and signal must sound. – Activate emergency stop switch at “run” position – Register a call to a landing to resume operation.	
8.10.2.2.1 (d)(2)	Car Floor and Landing Sill 5.3.1.4.2 Between car and landing sill	– Ensure that the clearance between the car platform and the landing sill shall be not less than 13 mm (0.5 in.) or more than 38 mm (1.5 in).	
8.10.2.2.1 (e)(1)	Car Lighting: Normal Illumination 5.3.1.8.3 Light in car (2.14.7.2.2)	– Ensure 4 lamps illuminated and working properly, lights will extinguish if car is at the floor, doors are closed, there is no demand for service and car is on automatic operation for not less than 5 minutes. – Measure the illumination at the car threshold, with the door close.	
8.10.2.2.1 (e)(2)	Car Lighting: Auxiliary Illumination 2.14.7.1.3 (If normal illumination power failure)	– Ensure minimum 2 lamps illuminated and working properly after disconnecting the lighting power. – Measure the illumination at the car threshold, with the door close.	
8.10.2.2. 1 (g)(2)	Car Door or Gate: Contact & Interlock 5.3.1.7.4 (b) Locking devices for hoistway doors and gates	– Car should be positioned on the lowest landing. – While positioned inside the car send a signal for the car to the most upper landing. – While the car is in motion, open the cab gate. – The car will stop until the gate is closed position.	
8.10.2.2.1 (p)(2)	Capacity Plate 5.3.1.20.1 Capacity plate	– Ensure capacity plate reading matches capacity of the elevator (see installation drawing datasheet)	

8.10.2.2.1 (q)	Emergency Operation Test (if battery backup provided)	– Run elevator cab to highest landing – Jump SW1 to SW2 on main board – Open main disconnect, shutting off the power. – Test that unit runs down to any lower floor and doors will open.	

8.10.2.2.2 Machine room: lockable controller **N/A. For remote controller projects, compliance achieve with proper lighting as per (2.7.1.1) and**

8.10.2.2.3 Top-of-Car:

8.10.2.2.3 (a)	8.10.2.2.3 (2.26.2.8) Car top Stop Switch	– By means of temporary run button raise elevator car until the top of the cab reaches the 36" above second landing. – Open second level entrance with emergency key. – Without fully body entry, activate car top stop switch. – Close landing door. – Remove temporary controls and place under normal operation. – Elevator should not accept any signals from the hall calls or car operating panel. – After test is completed reactivate lift by disarming car top stop switch.	

8.10.2.2.4 Outside Hoistway

Clause	Tested Device	Procedure	Check/Reading
8.10.2.2.4 (d)	Hoistway Door locking: Locking device	Each landing entrance should be tested as follow: – The car should be at any other landing the then one tested. – From outside the hoistway, safely try manually to open then door. – The doors should be locked, therefore not opening.	

8.10.2.2.4 (d)	Hoistway Door locking: Floor Door open / locked Signal Test	Each landing entrance should be tested as follow: – Bring the cab to the tested landing, open and keep the door open. – Call the car to any other landing. – Elevator should not accept any signals from the hall calls or car operating panel. – Close the door and resume operation. – At a floor have the elevator called to an alternate floor. – While the elevator is in motion insert the emergency unlocking tool provided with the lift. – Moving the unlocking tool in an upward motion disengage the lock. – The elevator will stop by detecting a door open signal.	
	Mainline Disconnect	– Identify and test main disconnect. – Inspect fuse and breaker for proper rating. – Ensure that the auxiliary disconnect is wired and that the car will not run down when mainline is turned off.	
	110 volt Lockable Disconnect	– Ensure emergency lighting is operational when the disconnect is open. – Inspect fuse and breaker for proper rating.	
	Manual Operation	– Open hoistway access panel. – Once panel is open the lift will not operate (plunger switch is part of the safety circuit). – Access panel must allow clear visual view of the elevator car the hoistway and the chain sprocket. – Access from rear of rail wall. Insert wrench onto sheave. – Turn wrench in either direction to achieve manual movement of the car.	

8.10.2.2.5 Pit:

Clause	Tested Device	Procedure	Check/Reading
8.10.2.2.5 (a)(8)	Pit Switch 2.2.6 and 2.26.12.7 Stop switch in pits	– Car should be located at the second landing. – Safely access the pit by the lower hoistway entrance (2.2.4). – Install shoring device at proper position per manual instruction. – Turn pit switch to the off position – Return all aspects of the elevator to the normal operating position except the pit switch. – Place call from either the car or hall station. – Car should not move. – Return pit switch to normal operating position.	
8.10.2.2.5 (d)	Down Limit (NLD) (5.3.1.17.1)	– Raise car to the upper landing. – Remove Car station control. – Locate down limit switch behind cab next to car station control cutout on the floor sensor assembly. – Secure the switch in the activated up position (cable tie or tape). – Signal the car to the lowest landing. – The lift should not run. – By releasing the switch the car will return to normal operation.	
8.10.2.2.5 (d)	Upper Limit (NLU) (5.3.1.17.1)	– Lower car to the lowest landing. – Remove Car station control. – Locate upper limit switch behind cab next to car station control cutout on the floor sensor assembly. – Secure the switch in the activated down position (cable tie or tape). – Signal the car to the upper landing. – The lift should not run. – By releasing the switch the car will return to normal operation.	

8.10.2.2.5 (d)	Final limit Test (5.3.1.17.2)	– Remove Car station control. – Lower car to the lowest landing. – Locate Final limit switch behind cab next to car station control cutout on the floor sensor assembly. Located between the upper and lower limit switches. – Secure the switch in the activated down position (cable tie or tape). – Signal the car to the upper landing. – The lift should not run. – By releasing the switch, the car will return to normal operation.	

8.10.2.2.6 Firefighters' operation: : N/A.

Additional Mechanical Tests:

Clause	Tested Device	Procedure	Check/Reading
8.10.2.2.3 (f)	Slack Rope Test (plank switch)	– Turn on power. – Use the temporary run control to lift the cab to upper most landing. – Place the shoring bracket at 42" above lowest landing sill. – Safely enter the hoistway and place a second shoring block at 2-3" above the lower landing sill. – Exit the hoistway and remove the shoring block from the 42" level. – Use the temporary run control to lower the cab onto the shoring block until the rope is slack. – The slack rope allows the safety bar to move; the lifting bracket springs decompress; the assembly engages the safety switch; the safeties engage. – The unit will not operate while the plank switch is engaged. – Use temporary run control to run car up to tighten the ropes. – Safely enter the car to reactivate the plank switch, ensure safety is completely disengaged assist if not.	
8.10.2.2.3	Suspension mean	– Check for two ropes suspending the car.	

8.10.2.2.3 (u)	Safeties Test (Drop Test)	– With the bottom landing door open raise the elevator cab to 44" above the lowest landing. – Without full body entry, install an extended hydraulic jack (min. 1 ½ ton) to full extension – Lower the cab onto the jack by means of the temporary run button until the slack rope safety is activated and there is slack in the rope . Ensure there is enough slack (at least 4") in the ropes so they do not start to tighten during the test. – Quickly release jack pressure allowing the car to move down. – Slack rope safety must remain locked and slack rope must remain visible. – On completion of this test manually raise the elevator cab by means of the temporary run button until slack rope safety devise has disengaged. – Reactivate the plank switch, ensure slack rope has completely reset, assist if not.	

Additional Electrical Tests:

Clause	Tested Device	Procedure	Check/Reading
8.10.2.2.2 & 2.12	Physical Ground test	– Using a jumper wire. – Ensure ground is properly attached to building ground. (TB2 on main board). – Attach one end to any part of the safety circuit. – Touch the other end to ground. – While the unit is in a running mode or in a stopped position, the unit will cease to operate, fuse F2 (2 A on car junction board may blow). Drive restart will be required.	

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