



VICTORIAN

ELEVATOR PLANNING GUIDE

VICTORIAN LUXURY RESIDENTIAL ELEVATOR

REV. April, 2024

TABLE OF CONTENTS

1.	INTRODUCTION	
	TECHNICAL FEATURES.....	4
	NOTES ON DOOR ORIENTATION.....	5
2.	REQUIREMENTS & TYPICAL LAYOUTS	
	PIT & OVERHEAD: REQUIREMENTS.....	6
	MACHINE ROOM: REC. LAYOUT.....	7
	CONTROLLER: TYPICAL MACHINE ROOM EQUIPMENT.....	8
	POWER UNIT: TYPICAL MACHINE ROOM EQUIPMENT.....	8
3.	PITLOADS & WALL MOUNTS	
	PITLOAD 1,000 LBS CAPACITY ELEVATORS.....	9
	PITLOAD 1,400 LBS CAPACITY ELEVATORS.....	10
	MACHINE ROOM 1,000 LBS CAPACITY ELEVATORS.....	11
	MACHINE ROOM 1,400 LBS CAPACITY ELEVATORS.....	12
4.	GOOD GATE CAB DOOR CONFIG.	
	INLINE TYPICAL CONFIGURATION.....	13
	90° TYPICAL CONFIGURATION.....	14
	180° TYPICAL CONFIGURATION.....	15
	TYPE-5 TYPICAL CONFIGURATION.....	16
5.	2-SPEED VICTORY CAB & LANDING CONFIG.	
	INLINE TYPICAL CONFIGURATION.....	17
	180° TYPICAL CONFIGURATION.....	18
	TYPE-5 TYPICAL CONFIGURATION.....	19
6.	3-SPEED VICTORY CAB & LANDING CONFIG.	
	INLINE TYPICAL CONFIGURATION.....	20
	180° TYPICAL CONFIGURATION.....	21
	TYPE-5 TYPICAL CONFIGURATION.....	22

ELEVATOR PLANNING GUIDE

VICTORIAN RESIDENTIAL ELEVATOR

This planning guide is designed to assist architects, contractors, homeowners, and elevator professionals in planning for a home elevator that meets the requirements of ASME A17.1 Part V Section 5.3.

We strongly recommend that you contact the codes authority having jurisdiction in the area(s) where the elevator will be installed. Become familiar with all requirements governing the installation and use of elevators in private residences. It is extremely important for you to know and adhere to all regulations concerning installation and use of elevators.

IMPORTANT NOTICE:

This planning guide provides nominal dimensions and specifications useful for 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. Visit our website at www.sabreelevator.com and click on "Request a Quote"

Elevator configurations and dimensions are in accordance with our interpretation of the standards set forth by ASME A17.1 Part V Section 5.3. Please consult Sabre Elevator or an authorized dealer in your area for more specific information pertaining to your project, including any deviation between referenced standards and those of any local codes or laws. Always contact local code authorities for any variation to standards.

Please note all dimensions and specifications contained herein are nominal and should only be used in the early planning stages. Construction of the actual hoistway and related Victorian Elevator requirements should be based off job-specific application drawings.

This elevator requires 240 VAC, single phase 60 Hz circuit with ground and separate 115 VAC, single phase 60 Hz circuit with ground fused 15 amp for light circuits.

TECHNICAL SPECIFICATIONS

GENERAL SPECIFICATIONS

	STANDARD	OPTIONAL
DRIVE TYPE	2:1 Roped Hydraulic	Electric Winding Drum
RATED CAPACITY	1,000 LBS	1,400 LBS
TRAVEL SPEED	40 FPM	
MAXIMUM TRAVEL	50'	
MAXIMUM LANDINGS	5	Beyond 5 stops, consult manufacturer
POWER REQUIREMENT	240V Single Phase 30 amp 110V Single Phase 15 amp	

DESIGN SPECIFICATIONS

	STANDARD	OPTIONAL
CABIN HEIGHT	84"	96"
CABIN DOORS	Manual Good Gate	Automatic Good Gate 2-speed or 3-speed Victory Door
LANDING DOORS	Landing doors by others	2-speed or 3-speed* Victory Door
<i>*3-SPEED VICTORY LANDING DOORS ONLY AVAILABLE FOR 84" CABIN HEIGHT.</i>		

FIXTURE SPECIFICATIONS

	STANDARD	OPTIONAL
CAR OPERATING PANEL (COP)	Illuminated pushbuttons with digital position indicator (DPI)	Digital touch screen
PHONE	No Phone	Cabinet with standard phone
CALL STATIONS	Illuminated push-buttons	Illuminated push-buttons with DPI

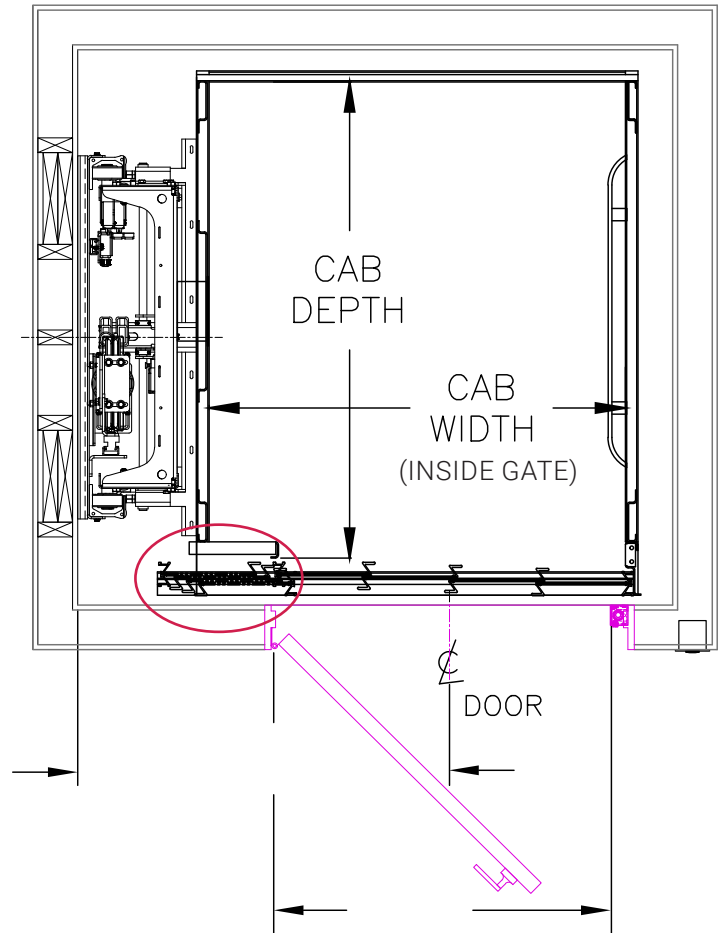
NOTE ON DOOR ORIENTATION

The **sliding gate on all models** is designed to recess towards the rail wall, allowing us to efficiently utilize hoistway space.

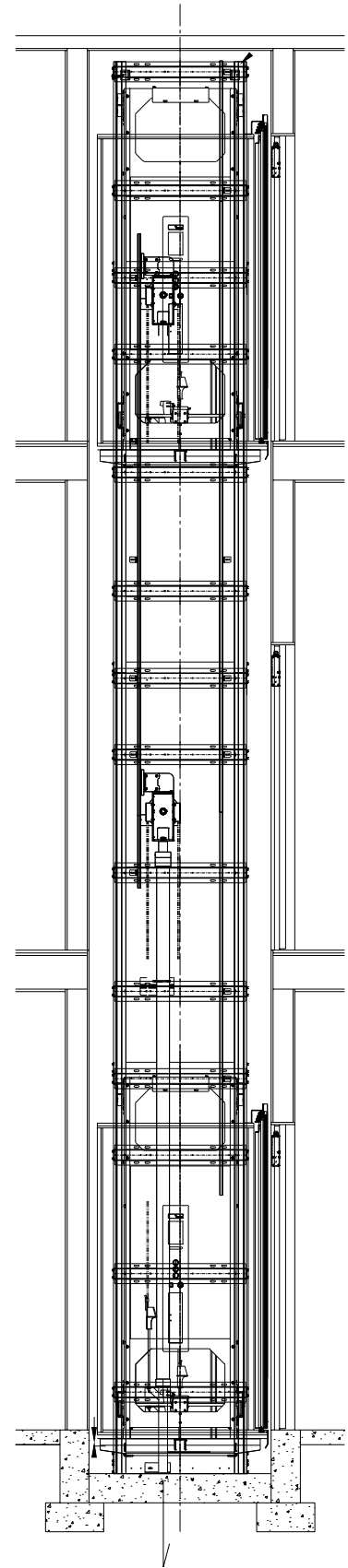
Since the gate collapses in the direction of the recess / rail wall, the opening will be on the **opposite side** of the rail wall.

It is recommended to try to align the opening of the landing door **with** the opening of the gate.

A good rule of thumb is to have the hinges of your landing door on the **same side as the rail wall**.



PIT & OVERHEAD: REQUIREMENTS



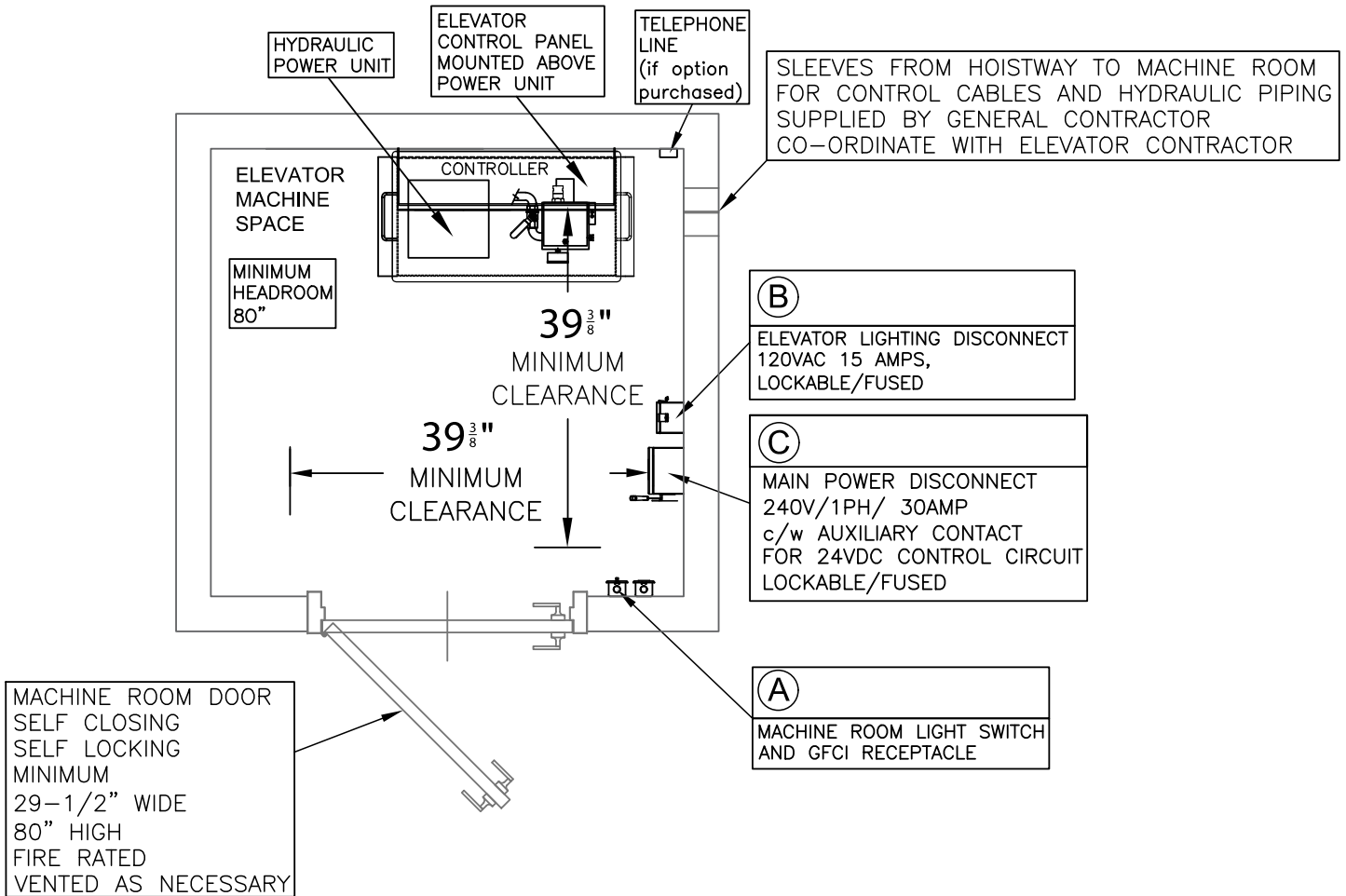
DOOR TYPE	MINIMUM OVERHEAD REQUIRED
Good Gate 84" – Manual	96"
Good Gate 84" – Automatic	96" minimum, 102" preferred
Good Gate 96" – manual	108
Good Gate 96" – Automatic	108" minimum, 114" preferred
Speed Victory Door 78-3/4"	108"
2-Speed Victory Door 84"	108"
2-Speed Victory Door 96"	120"
3-Speed Victory Door 78-3/4"	108"
3-Speed Victory Door 84"	108"
3-Speed Victory Door 96"	120"
<i>*84" AND 94" AVAILABLE ON CAB DOOR ONLY</i>	

Overhead is measured from the floor of the upper landing to the top of the hoistway.

ELEVATOR CAPACITY	MINIMUM PIT DEPTH
≤ 1,000 LBS	9" minimum, 12" preferred
1,400 LBS	12"
<i>9" PIT DEPTH MAY IMPOSE ADDITIONAL COST</i>	

In some cases, a 1,400 lbs capacity rating may be required. This is determined by square footage and configuration of cab.

MACHINE ROOM: REC. LAYOUT



MACHINE SPACE REQUIREMENTS (BY OTHERS)

MACHINE ROOM / SPACE LIGHTING AND SERVICE RECEPTACLE

A machine room is required however, it does not need to be dedicated. Power to be supplied from distribution panel as an independent branch circuit. Provide a telephone line to the machine room and connected to the elevator controller (if applicable)

LIGHTING SUPPLY DISCONNECT

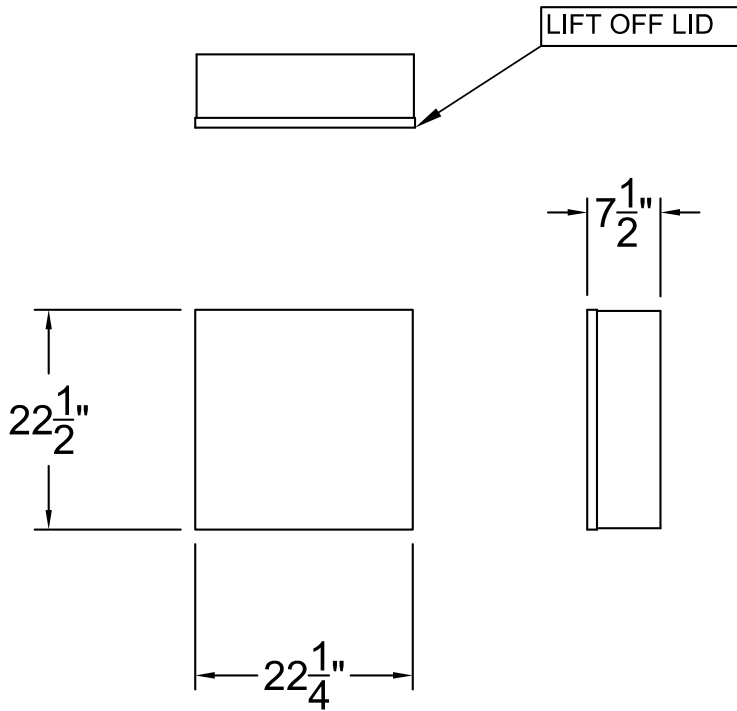
15 AMP fused lockable disconnect switch for 120-1-60 power supply. Power to be supplied from distribution panel as an independent branch switch circuit. Switch to be fused at 15 AMP.

MAIN DISCONNECT

Fused lockable disconnect switch for main power supply provided with neutral. Switch must also be provided with an auxiliary contact designed to open when the disconnect switch is opened.

CONTROLLER: TYPICAL MACHINE ROOM EQUIPMENT

MOUNTED ON WALL OF MACHINE ROOM



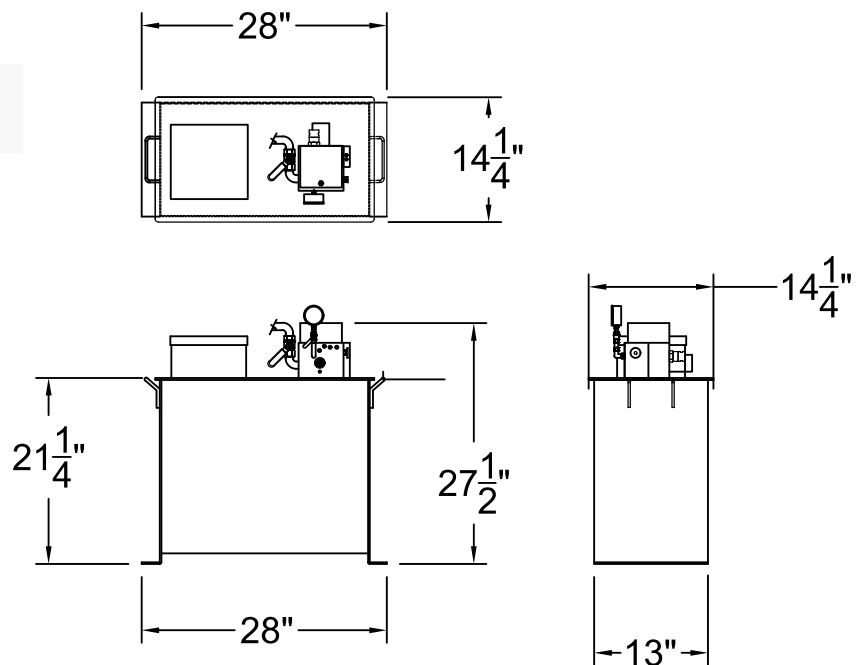
Elevator Control Enclosure:

As per national Electrical Code, all electrical equipment requires a 36" clear working space in front of the equipment

POWER UNIT: TYPICAL MACHINE ROOM EQUIPMENT

SITS ON FLOOR OF MACHINE ROOM

Elevator Hydraulic Power Unit

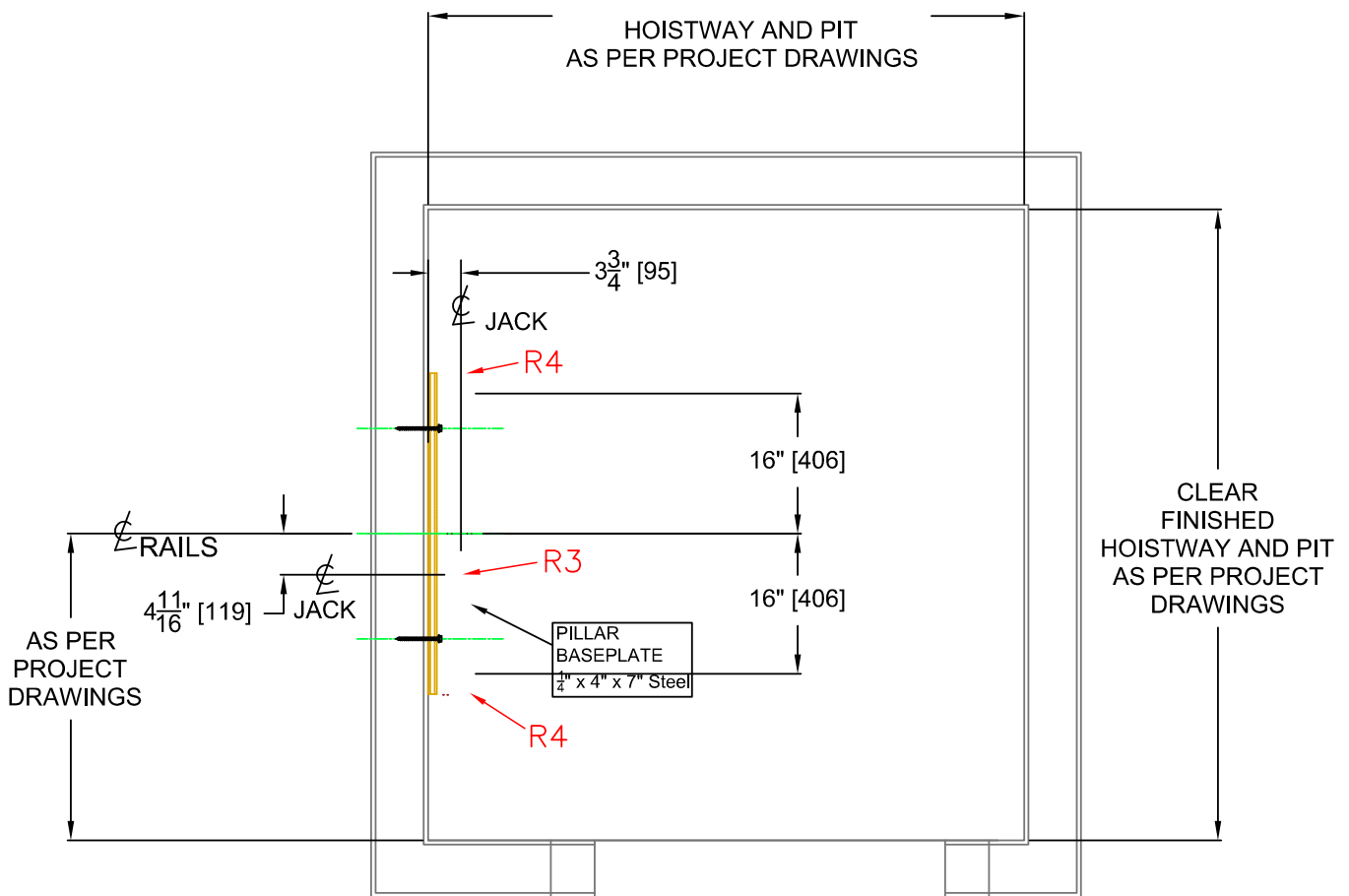


PIT LOADS: TYPICAL LOADS

1,000 LBS CAPACITY ELEVATORS

PIT REACTIONS

R3	7,300 lbs. [32.47 kN]	Reaction doubled for impact and adjusted for start / stop jerk.
R4	1,500 lbs. [6.67 kN]	Safety engagement per rail



MACHINE SPACE REQUIREMENTS (BY OTHERS)

8" (203 MM) CONCRETE SLAB POURED ON UNDISTURBED OR COMPACTED SOIL WITH A MINIMUM ALLOWABLE BEARING PRESSURE OF 1.0 KSF

MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS MUST BE NO LESS THAN 20 MPA

REINFORCING STEEL (#5, GRADE 60) MUST BE PLACED AT THE BOTTOM OF THE SLAB IN 2 TRAVERSE DIRECTIONS AND AT A SPACING OF 12" (305 MM)

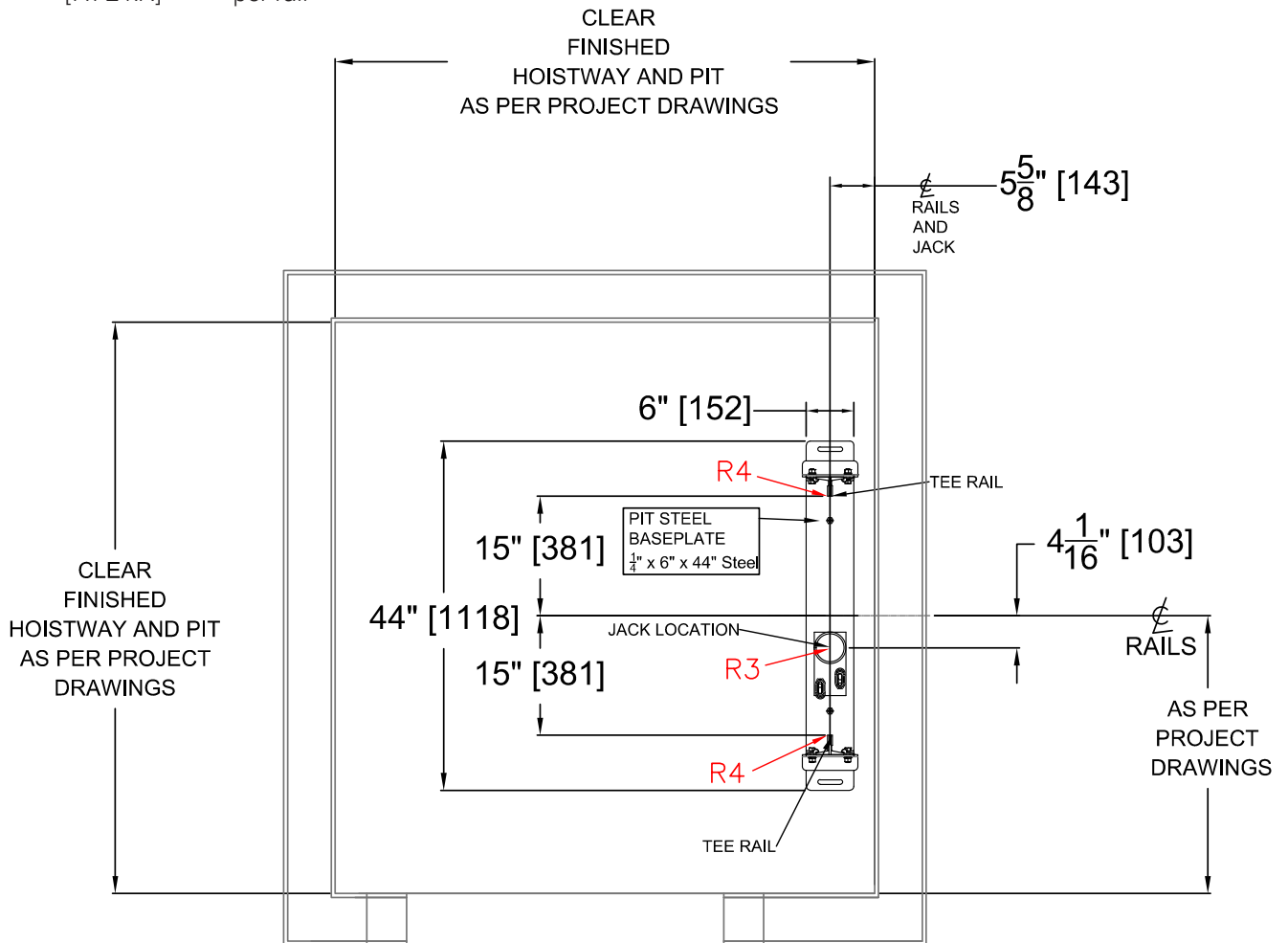
HOISTWAY PIT FLOOR TO SUPPORT A LOAD OF 10 KIPS (10,000 LBS.)/ 44.48 KN (INCLUDES IMPACT)

PIT LOADS: TYPICAL LOADS

1,400 LBS CAPACITY ELEVATORS

PIT REACTIONS

R3	9,336 lbs. [41.52 kN]	Reaction doubled for impact and adjusted for start / stop jerk.
R4	1,736 lbs. [7.72 kN]	Safety engagement per rail



MACHINE SPACE REQUIREMENTS (BY OTHERS)

8" (203 MM) CONCRETE SLAB POURED ON UNDISTURBED OR COMPACTED SOIL WITH A MINIMUM ALLOWABLE BEARING PRESSURE OF 1.0 KSF

MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS MUST BE NO LESS THAN 20 MPA

REINFORCING STEEL (#5, 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.)/ 44.48 KN (INCLUDES IMPACT)

RAIL WALL: REC. CONFIGURATIONS

1,000 LBS CAPACITY RECOMMENDED CONFIGURATION

RAIL SUPPORT WALL DESIGN MUST BE VERIFIED BY CUSTOMER'S STRUCTURAL ENGINEER/ARCHITECT

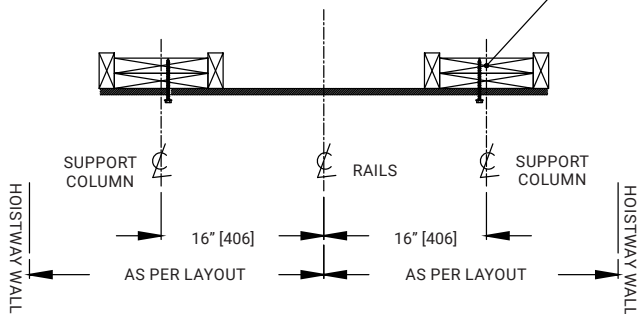
STATIC REACTIONS

R1	R2
570 LBS	225 LBS
2535 N	1000N

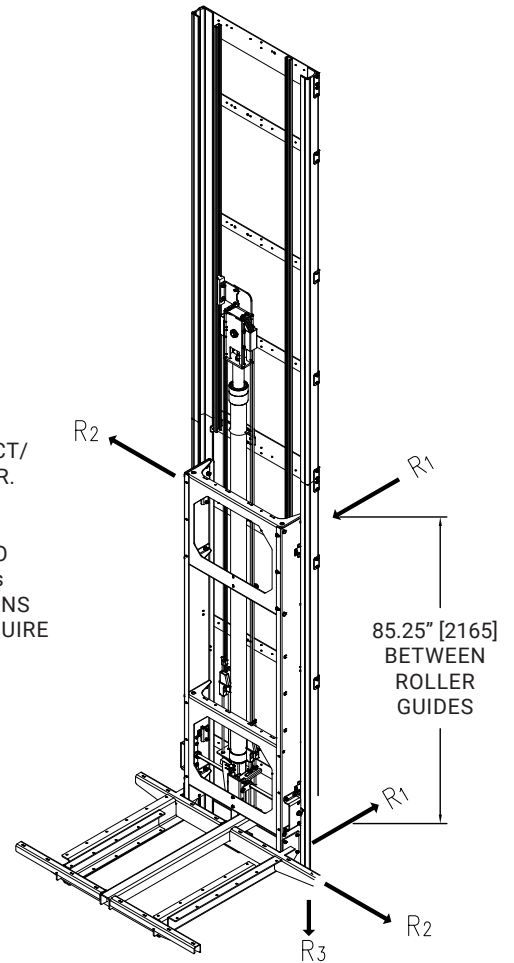
PIT REACTIONS

R3	7300 LBS [32.47 kN]	REACTIONS DOUBLED FOR IMPACT AND ADJUSTED FOR START/STOP Jerk
----	------------------------	---

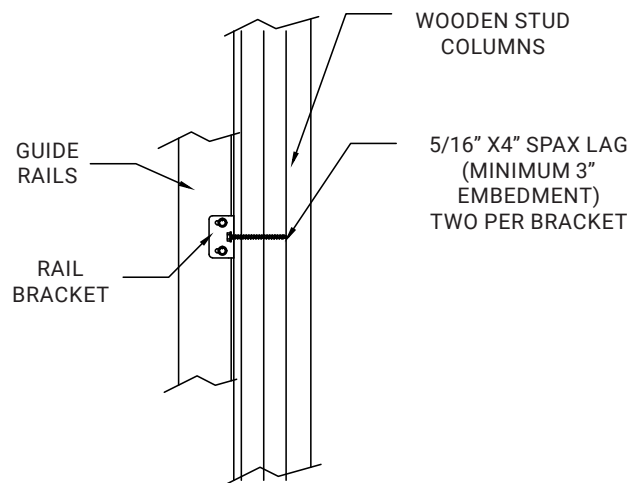
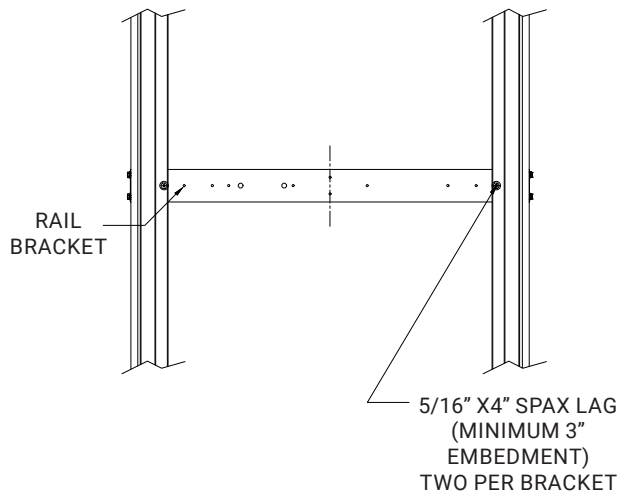
TOP SECTION VIEW



SUGGESTED CONSTRUCTION ONLY. TO BE VERIFIED BY CUSTOMER'S ARCHITECT/STRUCTURAL ENGINEER. TWO RAIL SUPPORT COLUMNS EACH CONSTRUCTED OF: TWO 2X10s INSIDE TWO 2X4s BETWEEN FLOORS. SPANS OVER 10 FEET MAY REQUIRE ADDITIONAL BRACING



FRONT SECTION VIEW



SIDE SECTION VIEW

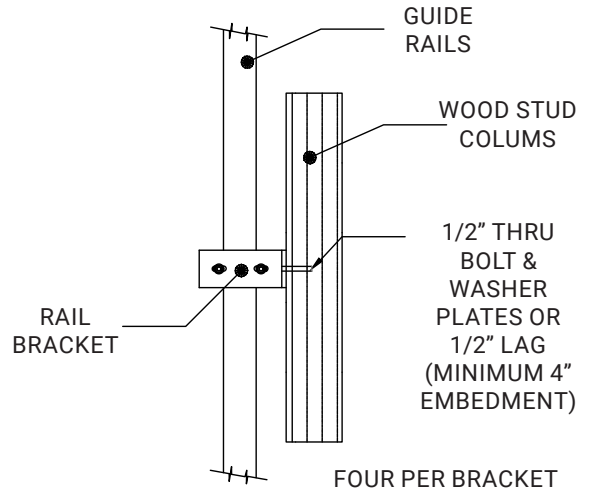
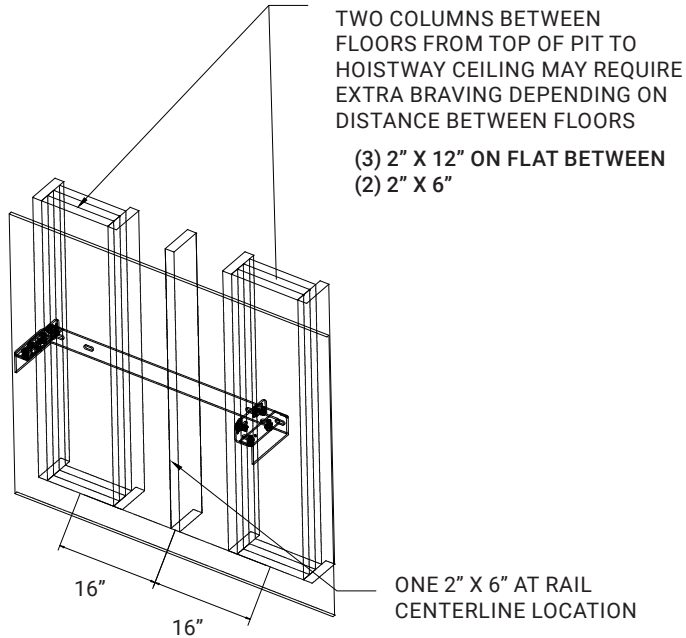
THE ELEVATOR DEVICES CODE REQUIRES THAT THE BUILDING CONSTRUCTION FORMING THE SUPPORTS FOR THE GUIDE RAIL BRACKETS SHALL BE DESIGNED TO WITHSTAND THE FORCES AS INDICATED IN THE DRAWING PACKAGE. THE GENERAL CONTRACTOR SHALL ENSURE THAT THE APPROPRIATE PROFESSIONAL (ARCHITECT AND/OR ENGINEER) REVIEW THE INDICATED FORCES TO ENSURE THAT THE BUILDING DESIGN/CONSTRUCTION MEETS ALL REQUIRED CODES.

MAXIMUM ALLOWABLE DEFLECTION OF RAIL WALL IS 3mm [.125"]

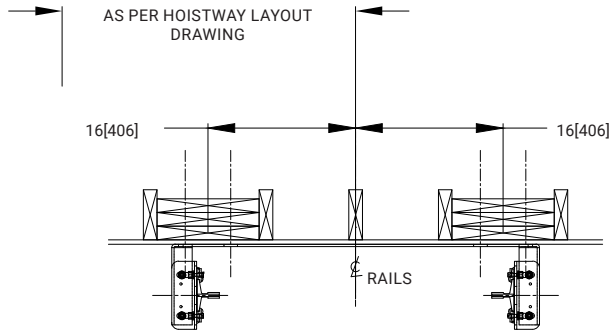
RAIL WALL: REC. CONFIGURATIONS

1,400 LBS CAPACITY RECOMMENDED CONFIGURATION

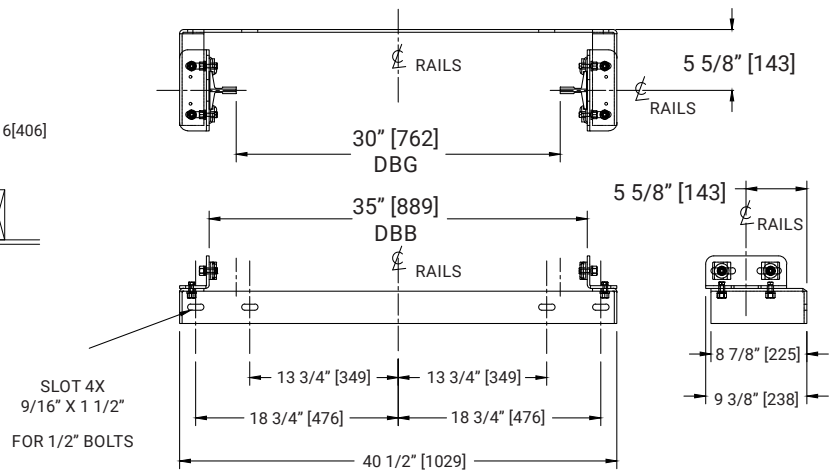
RAIL SUPPORT WALL DESIGN MUST BE VERIFIED BY CUSTOMER'S STRUCTURAL ENGINEER/ARCHITECT



TOP SECTION VIEW



STANDARD RAIL BRACKET ASSEMBLY



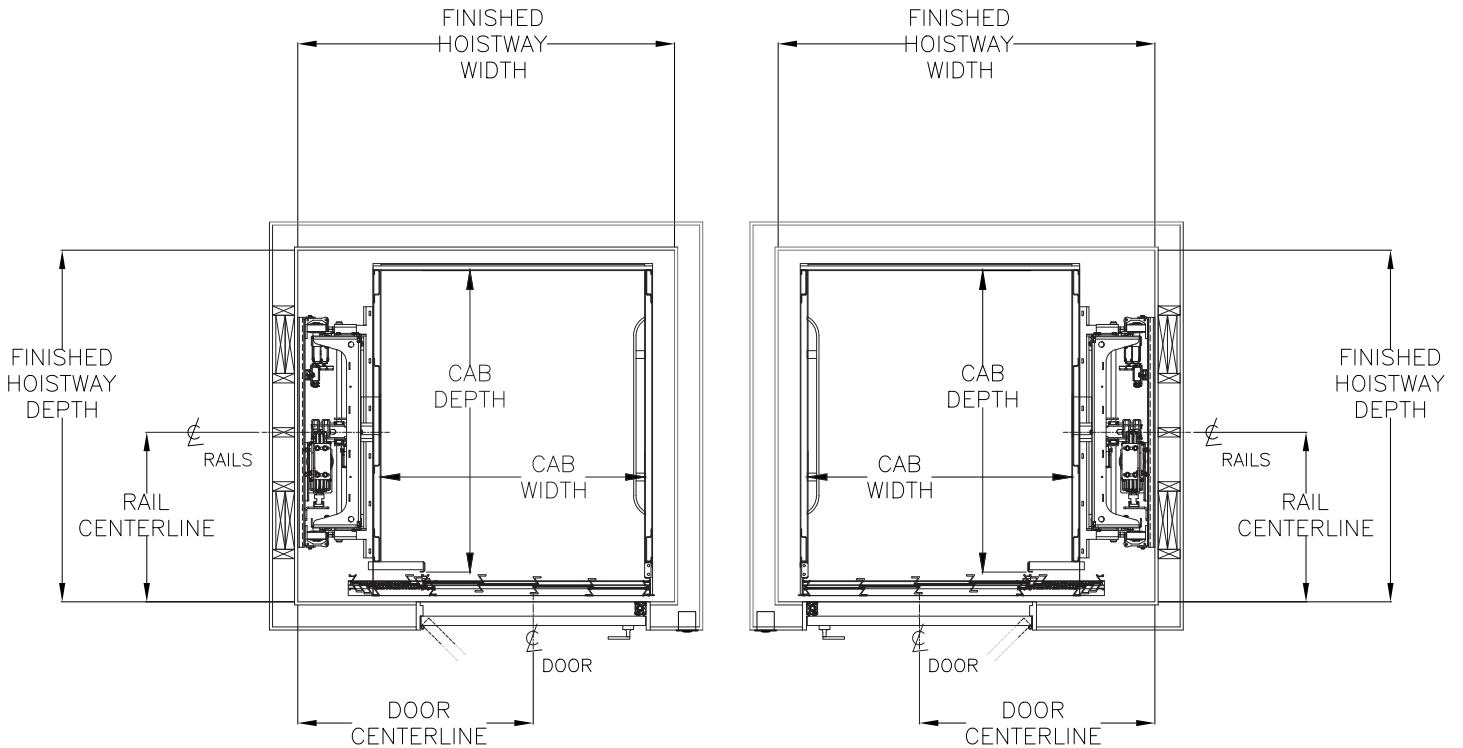
THE ELEVATOR DEVICES CODE REQUIRES THAT THE BUILDING CONSTRUCTION FORMING THE SUPPORTS FOR THE GUIDE RAIL BRACKETS SHALL BE DESIGNED TO WITHSTAND THE FORCES AS INDICATED IN THE DRAWING PACKAGE. THE GENERAL CONTRACTOR SHALL ENSURE THAT THE APPROPRIATE PROFESSIONAL (ARCHITECT AND/OR ENGINEER) REVIEW THE INDICATED FORCES TO ENSURE THAT THE BUILDING DESIGN/CONSTRUCTION MEETS ALL REQUIRED CODES.

MAXIMUM ALLOWABLE DEFLECTION OF RAIL WALL IS 3mm [.125"]

GOOD GATE CONFIGURATIONS

INCLUDES: INLINE, 90 DEGREE, 180 DEGREE, AND STYLE-5

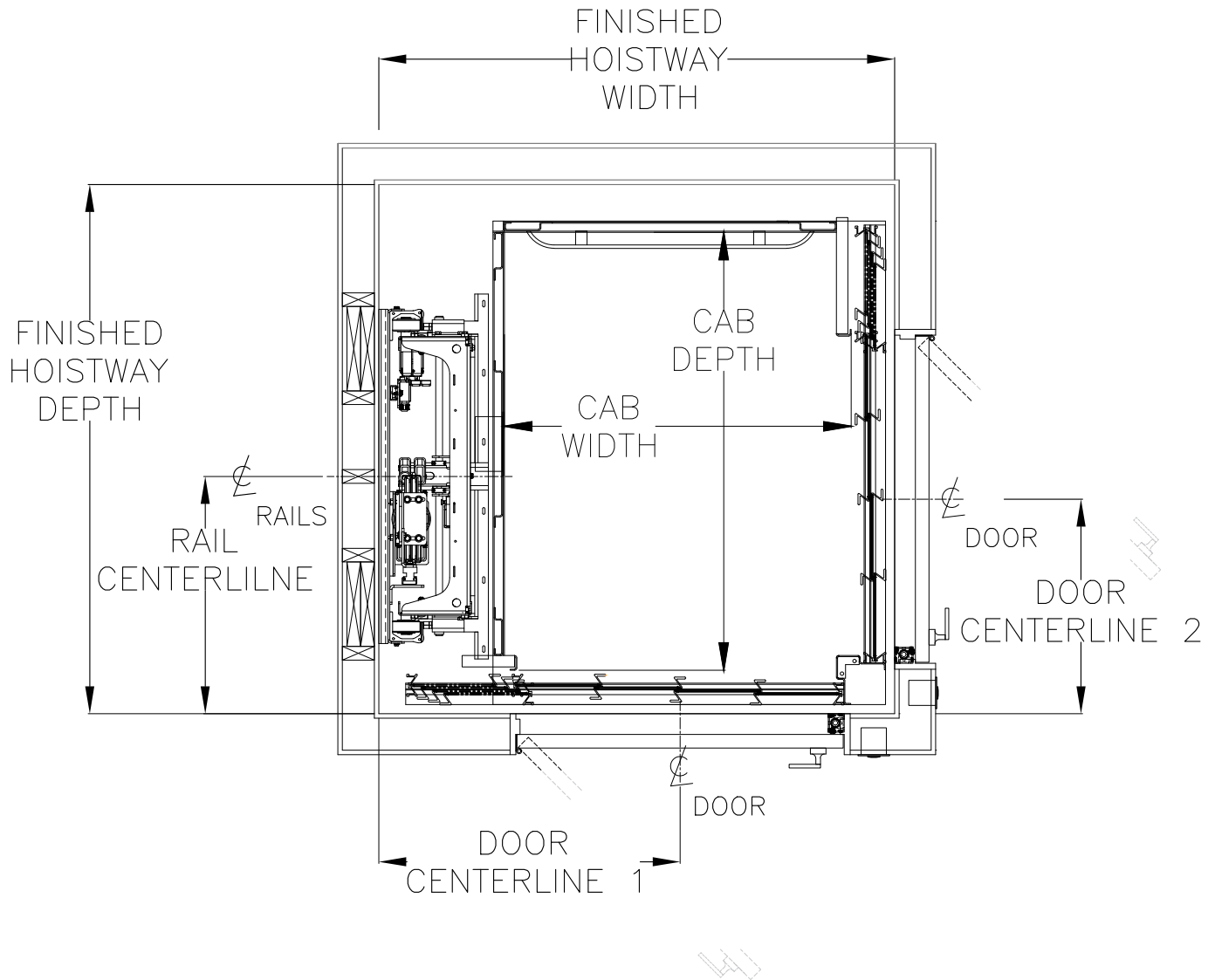
INLINE TYPICAL CONFIGURATION CAB ONLY - MANUAL AND AUTOMATIC



CAB SIZE W X D	HOISTWAY WIDTH	HOISTWAY DEPTH	RAIL CENTERLINE	DOOR CENTERLINE
36" X 48"	54"	56"	27"	31-1/2"
36" X 54"	54"	62"	30"	31-1/2"
36" X 60"	54"	68"	33"	31-1/2"
42" X 48"	60"	56"	27"	37-1/2"
42" X 42"	60"	50"	24"	37-1/2"
40" X 54"	58"	62"	30"	35-1/2"
42" X 54"	60"	62"	30"	37-1/2"

90° TYPICAL CONFIGURATION

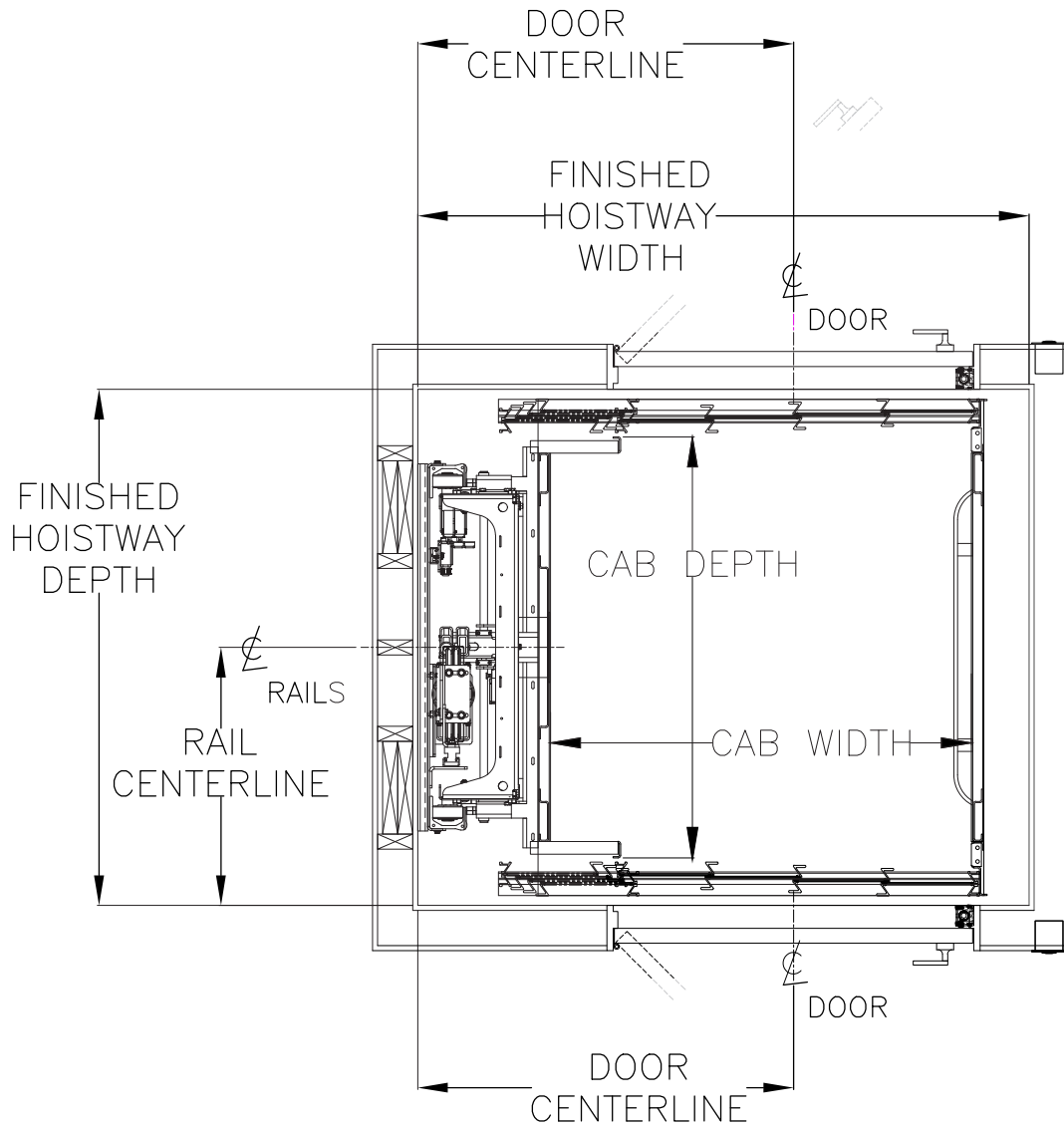
CAB ONLY - MANUAL AND AUTOMATIC



CAB SIZE W X D	HOISTWAY WIDTH	HOISTWAY DEPTH	RAIL CENTERLINE	DOOR CENTERLINE
36" X 48"	55"	57-1/2"	28-3/4"	31-1/2"
36" X 54"	55"	63-1/2"	31-3/4"	31-1/2"
36" X 60"	55"	69-1/2"	34-3/4"	31-1/2"
42" X 48"	59"	63-1/2"	31-3/4"	35-1/2"
42" X 42"	61"	51-1/2"	25-3/4"	37-1/2"
40" X 54"	61"	57-1/2"	28-3/4"	37-1/2"
42" X 54"	61"	63-1/2"	31-3/4"	37-1/2"

180° TYPICAL CONFIGURATION

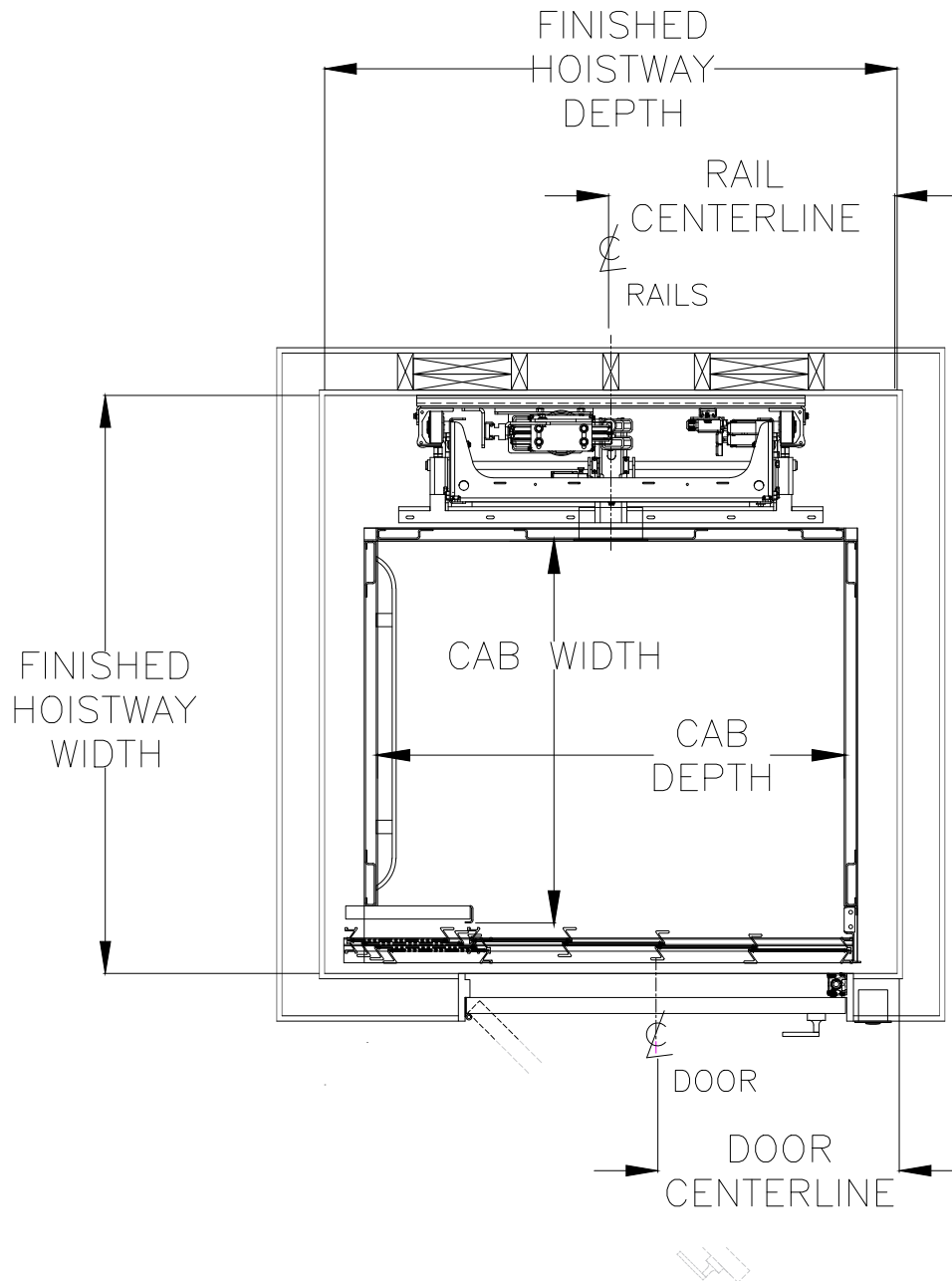
CAB ONLY - MANUAL AND AUTOMATIC



CAB SIZE W X D	HOISTWAY WIDTH	HOISTWAY DEPTH	RAIL CENTERLINE	DOOR CENTERLINE
36" X 48"	55"	57-1/2"	28-3/4"	31-1/2"
36" X 54"	55"	63-1/2"	31-3/4"	31-1/2"
36" X 60"	55"	69-1/2"	34-3/4"	31-1/2"
42" X 48"	59"	63-1/2"	31-3/4"	35-1/2"
42" X 42"	61"	51-1/2"	25-3/4"	37-1/2"
40" X 54"	61"	57-1/2"	28-3/4"	37-1/2"
42" X 54"	61"	63-1/2"	31-3/4"	37-1/2"

TYPE-5 TYPICAL CONFIGURATION

CAB ONLY - MANUAL AND AUTOMATIC

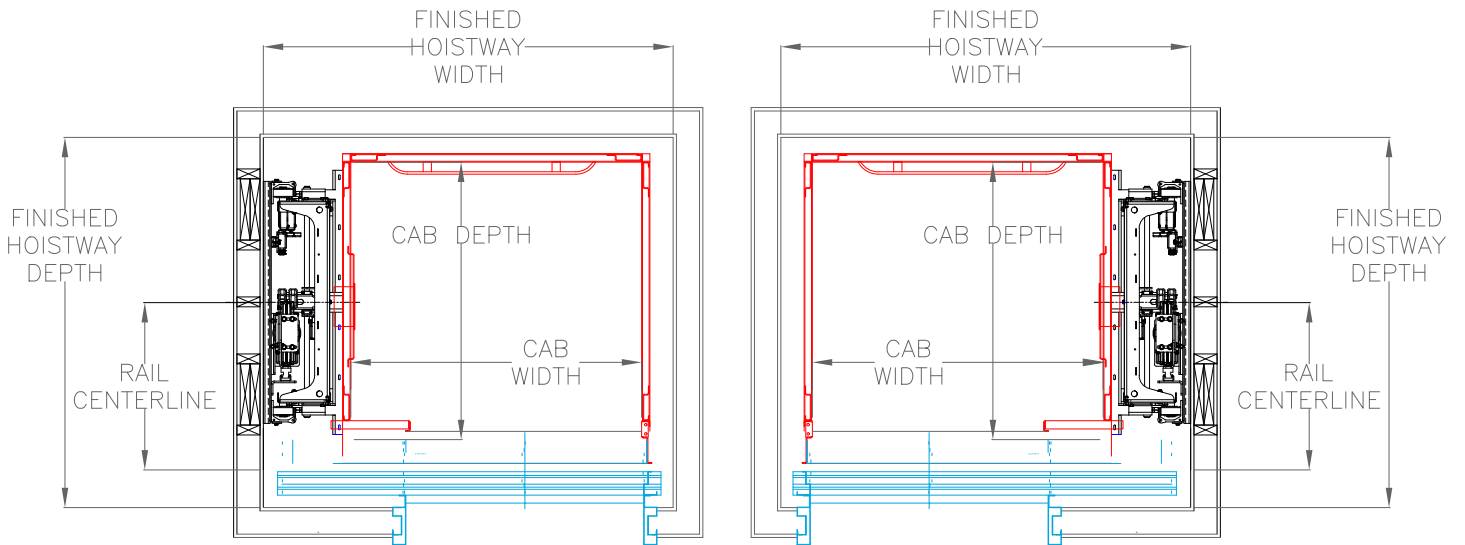


CAB SIZE W X D	HOISTWAY WIDTH	HOISTWAY DEPTH	RAIL CENTERLINE	DOOR CENTERLINE
36" X 48"	54-1/2"	54"	27"	22-3/4"
36" X 48"	54-1/2"	58"	29"	22-3/4"
42" X 44"	60-1/2"	54"	27"	22-3/4"
42" X 48"	60-1/2"	58"	29"	22-3/4"

2-SPEED VICTORY CONFIGURATIONS

INCLUDES: INLINE, 180°, AND STYLE-5.

INLINE TYPICAL CONFIGURATION CAB AND LANDING DOORS

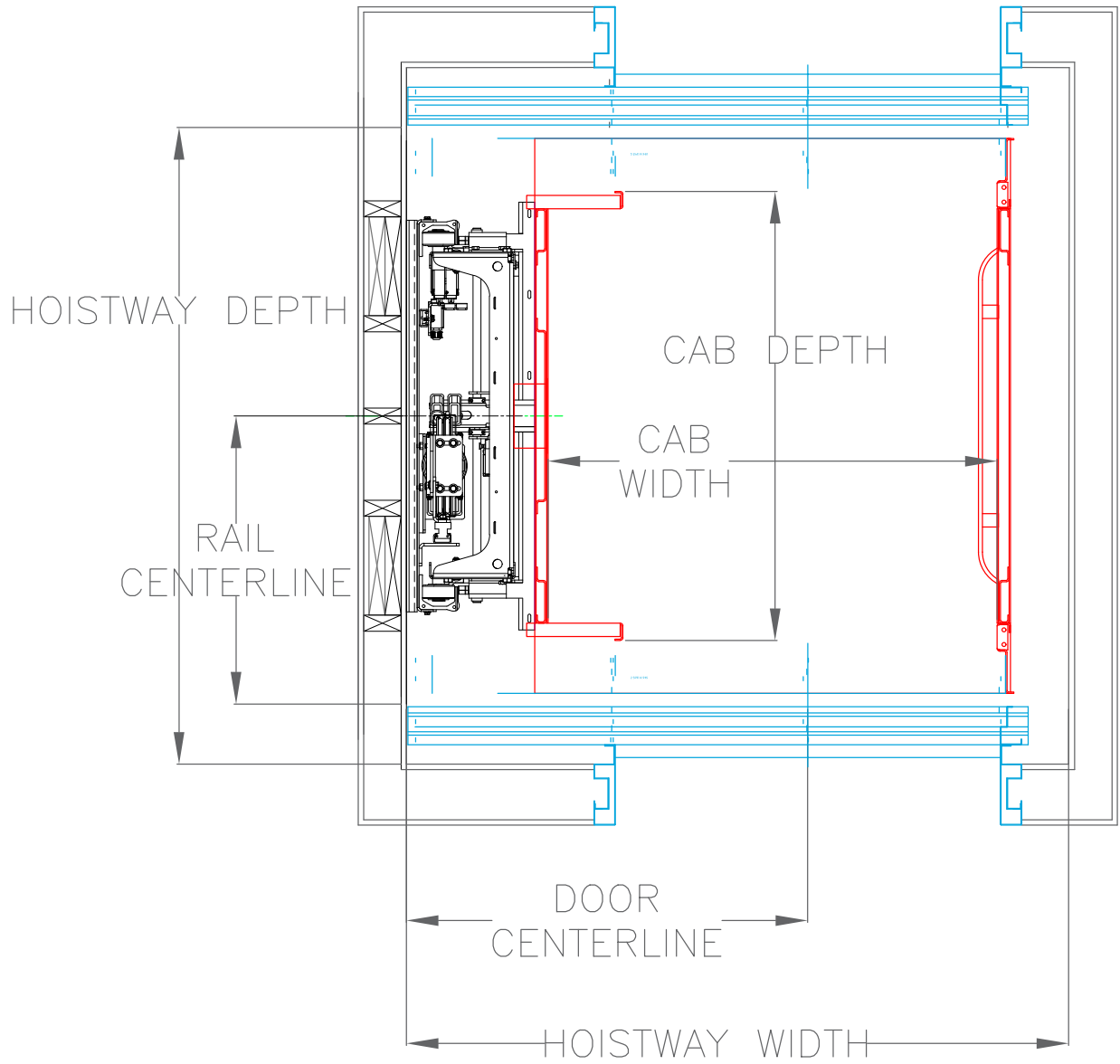


CAB SIZE W X D	HOISTWAY WIDTH	HOISTWAY DEPTH	RAIL CENTERLINE	DOOR CENTERLINE
42" X 42"	62"	56"	31"	37-1/2"
42" X 48"	62"	62"	34"	37-1/2"
42" X 54"	62"	68"	37"	37-1/2"

NOTE THAT FOR THIS CAB STYLE, THE RAIL CENTERLINE CANNOT BE CENTRED ON THE RAIL WALL. THE CENTERLINE IN THESE CHARTS ARE MEASURED FROM THE CORNER OF THE WALL WITH THE LANDING DOOR DO THE CENTRE OF THE RAILS.

180° TYPICAL CONFIGURATION

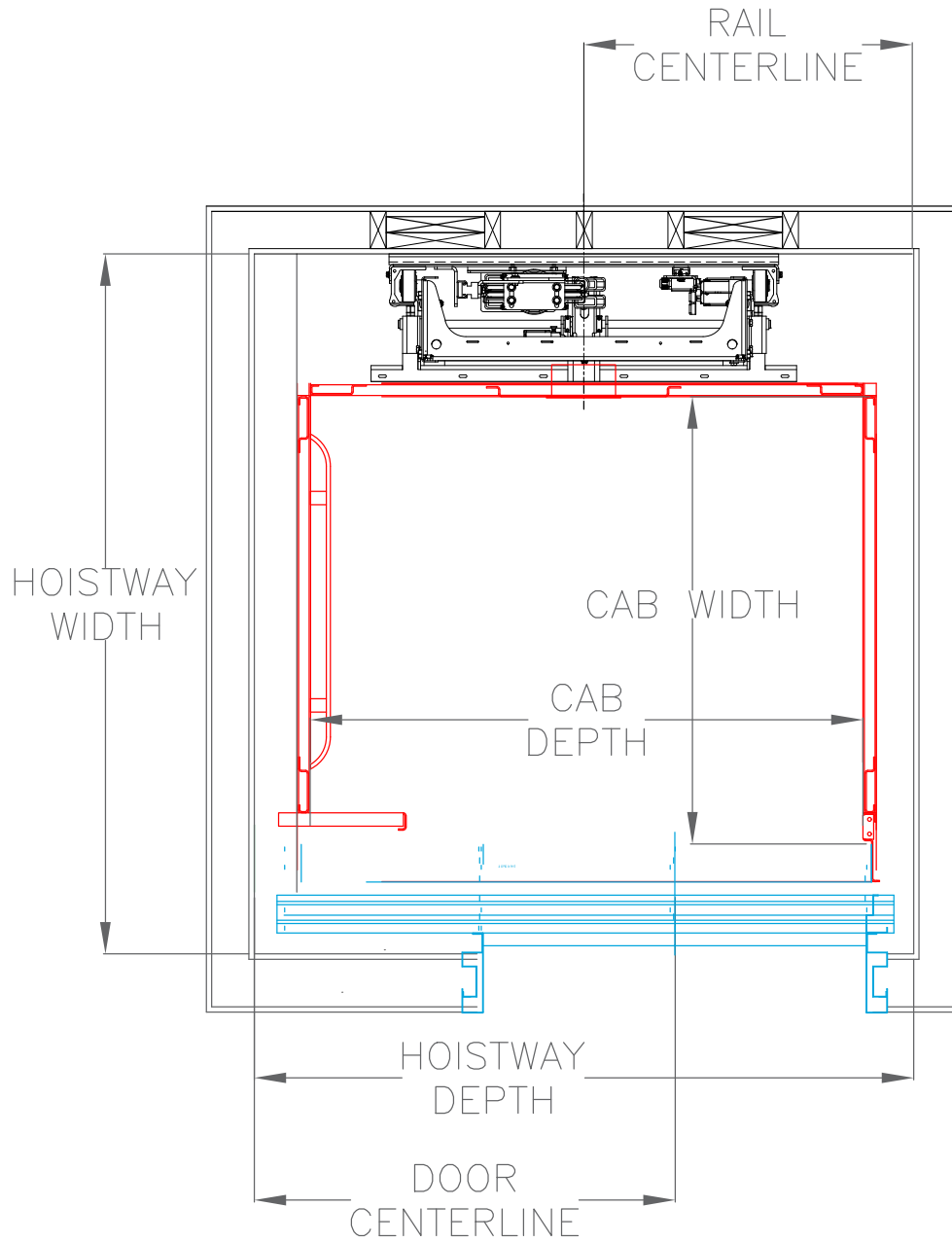
CAB AND LANDING DOORS



CAB SIZE W X D	HOISTWAY WIDTH	HOISTWAY DEPTH	RAIL CENTERLINE	DOOR CENTERLINE
42" X 42"	62"	65"	32-1/2"	37-1/2"
42" X 48"	62"	71"	35-1/2"	37-1/2"
42" X 54"	62"	77"	38-1/2"	37-1/2"

STYLE-5 TYPICAL CONFIGURATION

CAB AND LANDING DOORS

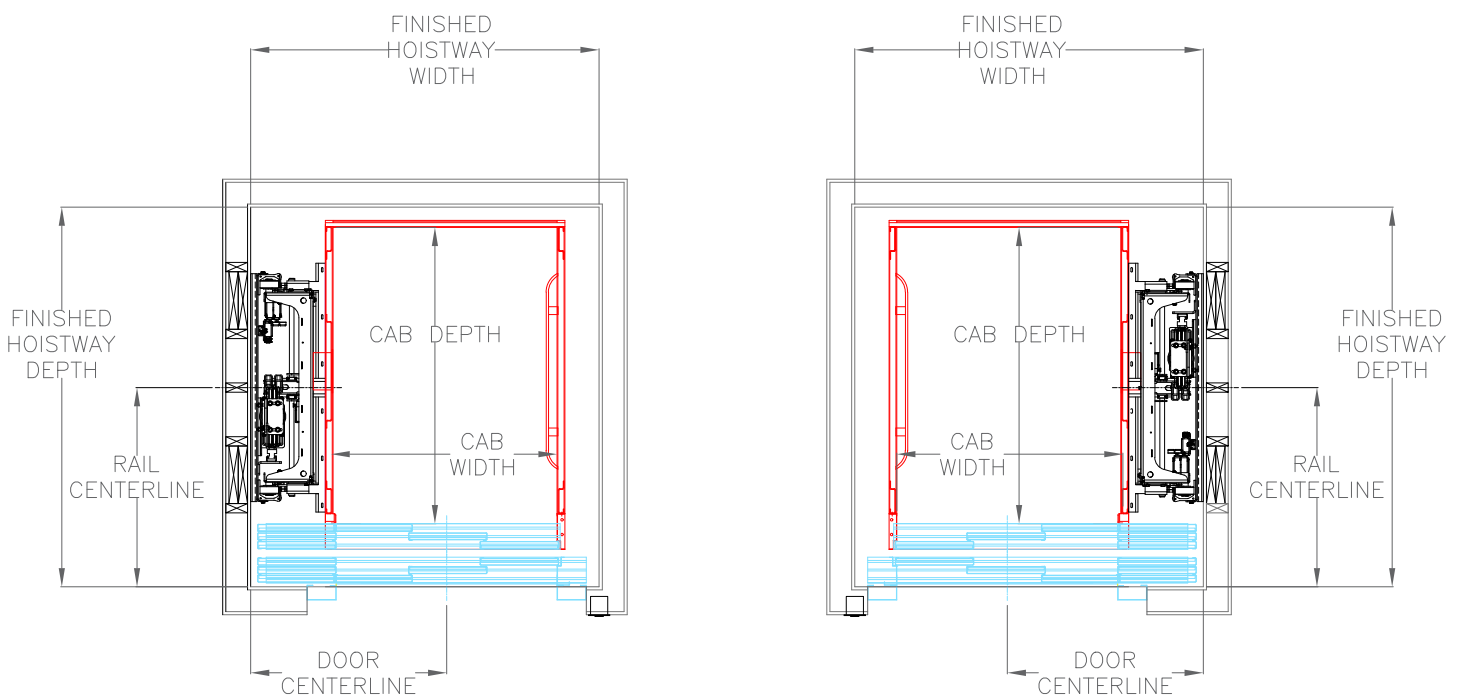


CAB SIZE W X D	HOISTWAY WIDTH	HOISTWAY DEPTH	RAIL CENTERLINE	DOOR CENTERLINE
36" X 52"	60"	62"	31"	39-1/2"
36" X 54"	60"	64"	32"	39-1/2"
42" X 52"	66"	62"	31"	39-1/2"
42" X 54"	66"	64"	32"	39-1/2"

3-SPEED VICTORY CONFIGURATIONS

INCLUDES: INLINE, 180°, AND STYLE-5. ONLY AVAILABLE IN 78-3/4" DOOR HEIGHT.

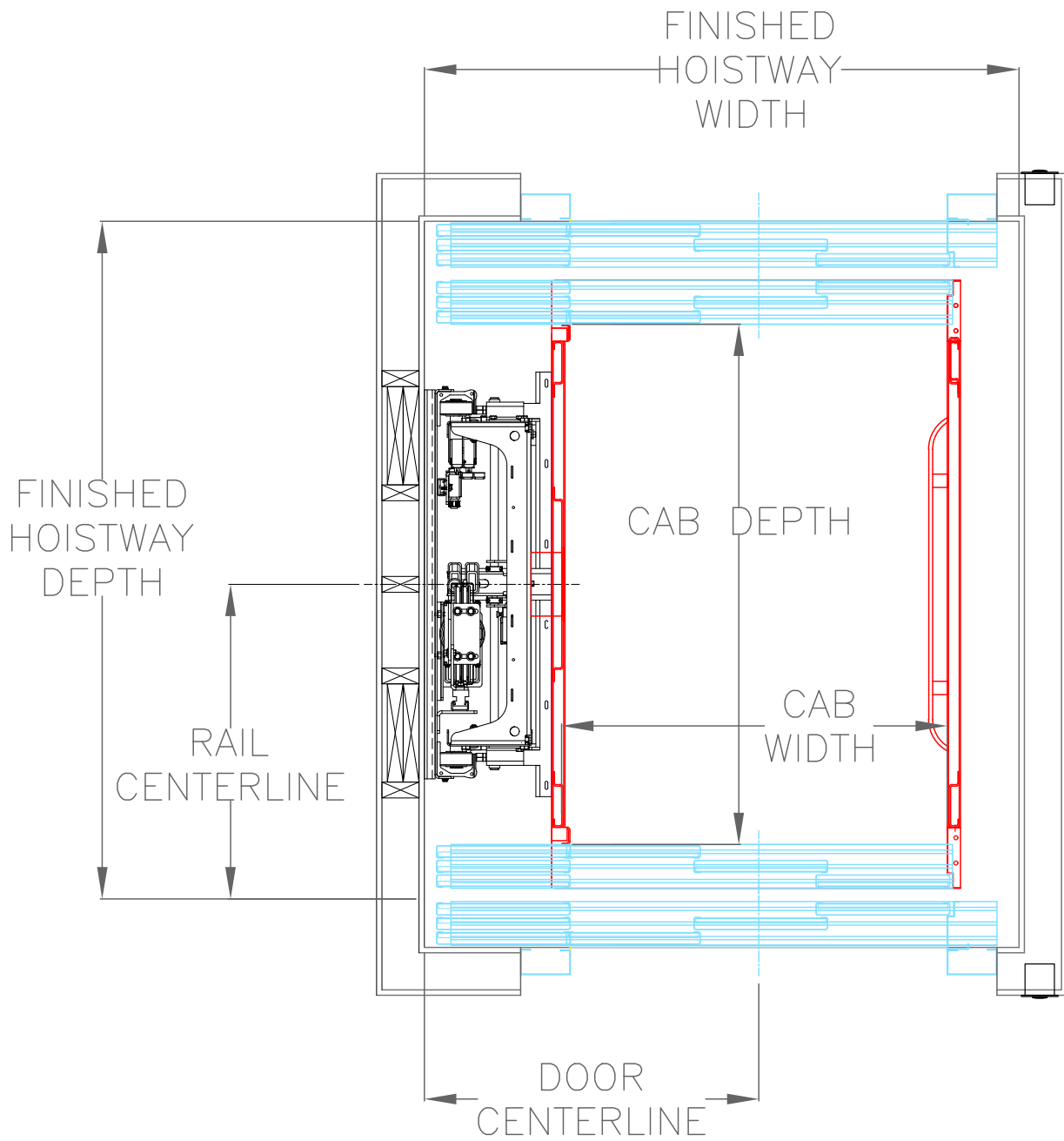
INLINE TYPICAL CONFIGURATION CAB AND LANDING DOORS



CAB SIZE W X D	HOISTWAY WIDTH	HOISTWAY DEPTH	RAIL CENTERLINE	DOOR CENTERLINE
36" X 42"	56"	58"	33"	31-1/2"
36" X 48"	56"	64"	36"	31-1/2"
36" X 54"	56"	70"	39"	31-1/2"

180° TYPICAL CONFIGURATION

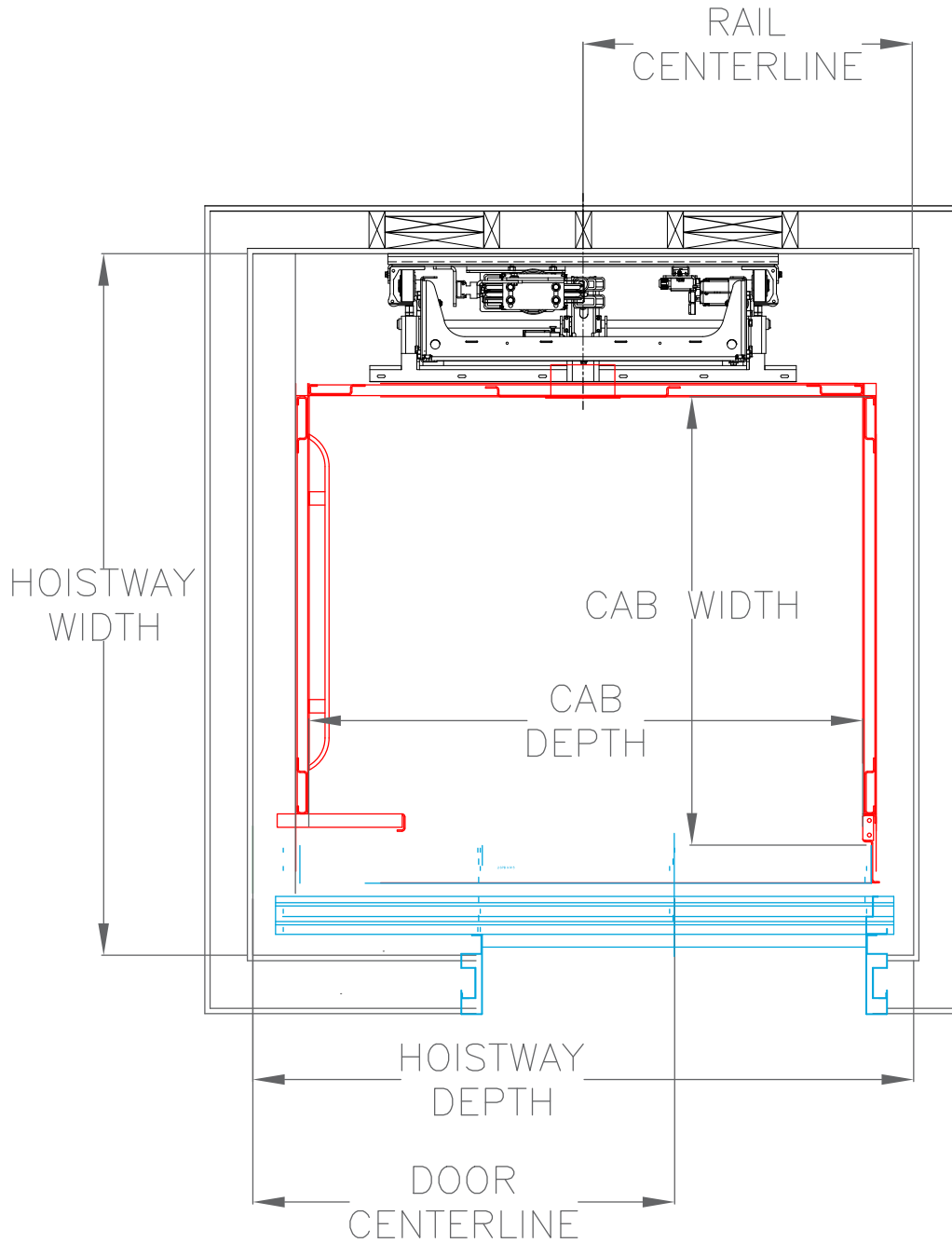
CAB AND LANDING DOORS



CAB SIZE W X D	HOISTWAY WIDTH	HOISTWAY DEPTH	RAIL CENTERLINE	DOOR CENTERLINE
36" X 42"	56"	62-1/4"	31-1/8"	31-1/2"
36" X 48"	56"	68-1/4"	34-1/8"	31-1/2"
36" X 54"	56"	74-1/4"	37-1/8"	31-1/2"

STYLE-5 TYPICAL CONFIGURATION

CAB AND LANDING DOORS



CAB SIZE W X D	HOISTWAY WIDTH	HOISTWAY DEPTH	RAIL CENTERLINE	DOOR CENTERLINE
48" X 36"	60"	62"	31"	39-1/2"
48" X 42"	60"	64"	32"	39-1/2"