



COUNTY OF GLENN
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DI AULABAUGH
Clerk of the Board of Supervisors
General Services Director

REQUEST FOR INFORMATION (RFI) #1

Solicitation Description: CDBG FUNDED HAMILTON CITY LIBRARY & COMMUNITY HALL ADA UPGRADE

Solicitation Opening Date and Time: Monday, December 23, 2019 at 10:30 a.m.

RFI Number: 001

RFI Date: Friday, December 13, 2019

Contract Specialist or Purchasing Agent: *Joe Bettencourt, Supervising Staff Services Analyst- General Services*
jbettencourt@countyofglenn.net, (530)934-6545

Below are responses to all Requests for Information received on and prior to December 13, 2019

1. **Question:** What is the Engineers Estimate?
1. **Response:** Addendum 1 changed the engineers estimate to 650,000

2. **Question:** Has a hazardous material assessment been conducted on the Community Hall or Library?
2. **Response:** A hazardous material assessment has not been completed for the Community Hall or Library. The County will contract for a hazardous material assessment from a third party and work with a third party hazardous material contractor to negate any issues discovered in the hazardous material assessment. Hazardous material testing and/or mitigation will not be the responsibility of the awarded contractor for this project.

3. **Question:** Is there any additional detail regarding the planter installation separating the parking lot from the sidewalk?
3. **Response:** Additional planter detail has been added in Addendum #1 Attachment 1.

4. **Question:** At Library – (N) Floor Plan – Door C (Inswing at Storage) – This door can not have panic hardware on an inswing door. It will need to be a lever lockset only. If the door is changed to an outswing application, then we can add panic hardware. Please clarify/verify.
4. **Response:** Door Type C Exterior exit doors do not swing inward. Provide hardware as specified. Unisex restrooms Door Type B (Group 1). At West Elevation pair of existing Assembly entry doors (group 5). Stage and Storage Doors Type B (Group 2). At East Elevation Assembly entry door (Group 3). At West Elevation Library entry door (Group 4).

5. **Question:** Section 087100 – Finish Hardware – Floor Wall Stops – Glynn Johnson does make floor/wall stops. We will supply Ives floor/wall stops. Please clarify/verify.
5. **Response:** Ives-Glynn Johnson is an acceptable equal to specified or scheduled products. Concave wall stop and heavy duty floor stops to match specified products. Trimco is also listed in Hardware schedule.

6. **Question:** Section 087100 - Finish Hardware - Hardware Group 3 – Threshold Set – The 192A is 4” & not 3”. The 3” is the 191A. Which threshold is to be supplied 3” or 4””? Please clarify/verify.
6. **Response:** 3” plate is acceptable.
7. **Question:** Arrow Lift is requesting that their product be approved as an equal to the specified in Spec Section 14 41 50. Specifications & Product information is attached.
7. **Response:** Yes, the Arrow Lift Product is acceptable as an acceptable “equal to”. Product detail is attached as ATTACHMENT 1 to this RFI.
8. **Question:** We are concerned about the Contract Time stated to be 60 Calendar Days as stated in the Notice to Bidders. This is not enough time to complete the scope of work shown in the plans. The submittal process takes a lot of time to acquire and for review before much of the work begins.
8. **Response:** The Contract Time will remain as stated in Notice to Bidders.
9. **Question:** I had a member who was having a hard time reading E1.1 since a lot of the writing is very light. Is there a better version of this sheet available?
9. **Response:** The writing is legible, but you need to zoom in on the PDF version for it be legible. If viewed/printed at actual size the writing is legible.
10. **Question:** We are a sub-contractor looking to provide a quote for division 14-41-50 wheelchair lift on your project. Can you provide us with a list of Prime Contractors bidding your project?
10. **Response:** Prospective Bidders can be found on <https://www.ebidboard.com>. Project is: Hamilton City Library & Community Hall ADA Upgrade- a CDBG funded project.
11. **Question:** Who should Request for Information’s be sent to?
11. **Response:** facilities2@countyofglenn.net
12. **Question:** is the Contractor/Sub-Contractor responsible for providing a weatherhead and wire from the panel? And that PGE is providing the service drop?
12. **Response:** This question is still under review and the County will provide a response prior to 5:00 p.m. on Monday December 16th 2019 and issued as an addendum to this RFI.

Attachments:

1. Arrow Lift Attachments

This RFI has been emailed to all who attended the mandatory walk through as well as posted here:
<http://www.countyofglenn.net/govt/bids>



Symmetry Vertical Platform Lift

Model VPC-UL

Vertical Platform Conveyance-Unenclosed Lift
Residential and Commercial Application



 **symmetry**
National Reach. Local Service.

Now Available with:

- Low Profile Carriage
- High Speed Screw Drive at 20 fpm
- Full Speed Battery Back-up
- Reduced Pit Application



Convenient access to all levels

Whether it's commercial or residential use, outdoors or indoors, Symmetry vertical platform lifts eliminate the barrier that stairs can cause for people with limited mobility. A cost-effective solution, platform lifts create convenient access without compromising architectural character.

The Symmetry VPC Model UL is designed in compliance with ICC/ A117.1 NEC and ASME A18.1. The entire Symmetry VPC product line is designed around ADA 4.11 compliance and public and private accessibility. Suitable for indoor and outdoor use in Acme Screw and Hydraulic drive systems.

Standard Features

- 750# capacity
- Speed: 10 fpm (Screw Drive); 17-20 fpm (Hydraulic Drive)
- Lifting height: up to 60" for commercial applications and 168" for residential applications
- Steel constructed with electrostatic, powder-coated finish
- * A.W.A.R.E. system - State of the art diagnostics
- Constant pressure up/down control switch installed on the platform
- Constant pressure, elevator-style, hall call control stations provided at each landing

Optional Features

- **Low profile Carriage: 1 1/2" pit depth**
- 230V motor
- **Remote mounted controller**
- ADA phone for both indoor and outdoor models
- Emergency lights
- Key switch to lock platform
- Flip-up ramp
- **Battery Back-up at Full Speed**

Safety Features

- Nonskid platform surface
- Obstruction safety panel under platform (when not installed within a runway enclosure)
- Alarm and emergency stop switch
- Grab rail
- Landing interlocks keep door locked when the lift is on another floor
- Upper final limit

Platform Sizes

- 36" W x 48" D
- 36" W x 54" D
- 36" W x 60" D
- 42" W x 60" D

Exit Configurations

- Straight through
- 90°
- Same side

Vertical Platform Lift Gate/Door Options

- 42" platform gate*
- 42" landing gate*
- 80" landing gate*
- Non-fire-rated red oak door**
- Fire-rated steel door

* Available with optional acrylic insert

*Indicates exclusive to Symmetry Elevating Solutions

**Also available in other wood choices, by request

Choose from a stationary or a more compact folding ramp, depending on your space requirements.

Symmetry platform lifts come with an industry leading **four (4) year warranty** on parts & basic unit, including all electrical and drive components.

* A.W.A.R.E. system (Active Wiring, Accessories, Relay & Electronics Diagnosis). Available only through Symmetry Elevating Solutions

Division 14 Specs: www.div14specs.com - One stop website to view brochures, download specifications, CAD, PDF, and Revit files.

SpeCreator: www.speccreator.us - Custom designed software and specification generator created to easily build division 14 product specifications. The SpeCreator will create your project specific set of CSI 3-part specifications.

VPC Drive Options

- Screw Drive: 9 fpm
- High Speed Screw Drive: 20 fpm
- Screw Drive with Full Speed Battery Back-up (9 fpm or 20 fpm)
- Chain Hydraulic Drive 2HP / 24VDC: 20 fpm

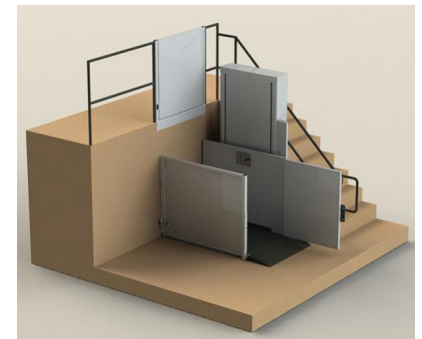
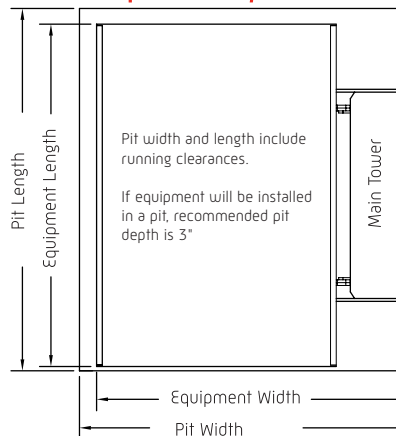
Straight through configuration				
Nominal Platform Size	Equipment Width	Equipment Length	Pit Width	Pit Length
36" x 48"	*48 1/2"	**48"	*51 1/2"	49 1/2"
36" x 54"	*48 1/2"	**54"	*51 1/2"	55 1/2"
36" x 60"	*48 1/2"	**60"	*51 1/2"	61 1/2"
42" x 60"	*54 1/2"	**60"	*57 1/2"	61 1/2"
90° configuration				
42" x 60"	*54 1/2"	**60"	*55 1/4"	63 1/2"

* Additional 1" equipment width required when supplied with a platform gate that is hinged on the same side as the main tower.

** Equipment length increases when supplied with a ramp

*This brochure is intended for informational purposes only

Footprint Layout



Straight Through Unenclosed Configuration Shown

Enclosure Color Options

- Ivory standard
 - White optional
 - Black optional
 - Grey optional
- Full selection of RAL colors available



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305.02/14

Vertical Platform Lift (VPL) Design Guide

ASME A18.1

For Models:

VPL-UL (Unenclosed Lift)

VPL-EL (Enclosure Lift)

VPL-ELP (Plexiglass Enclosure Lift)

VPL-SL (Shaftway Lift)

VPL-RL (Residential Lift)

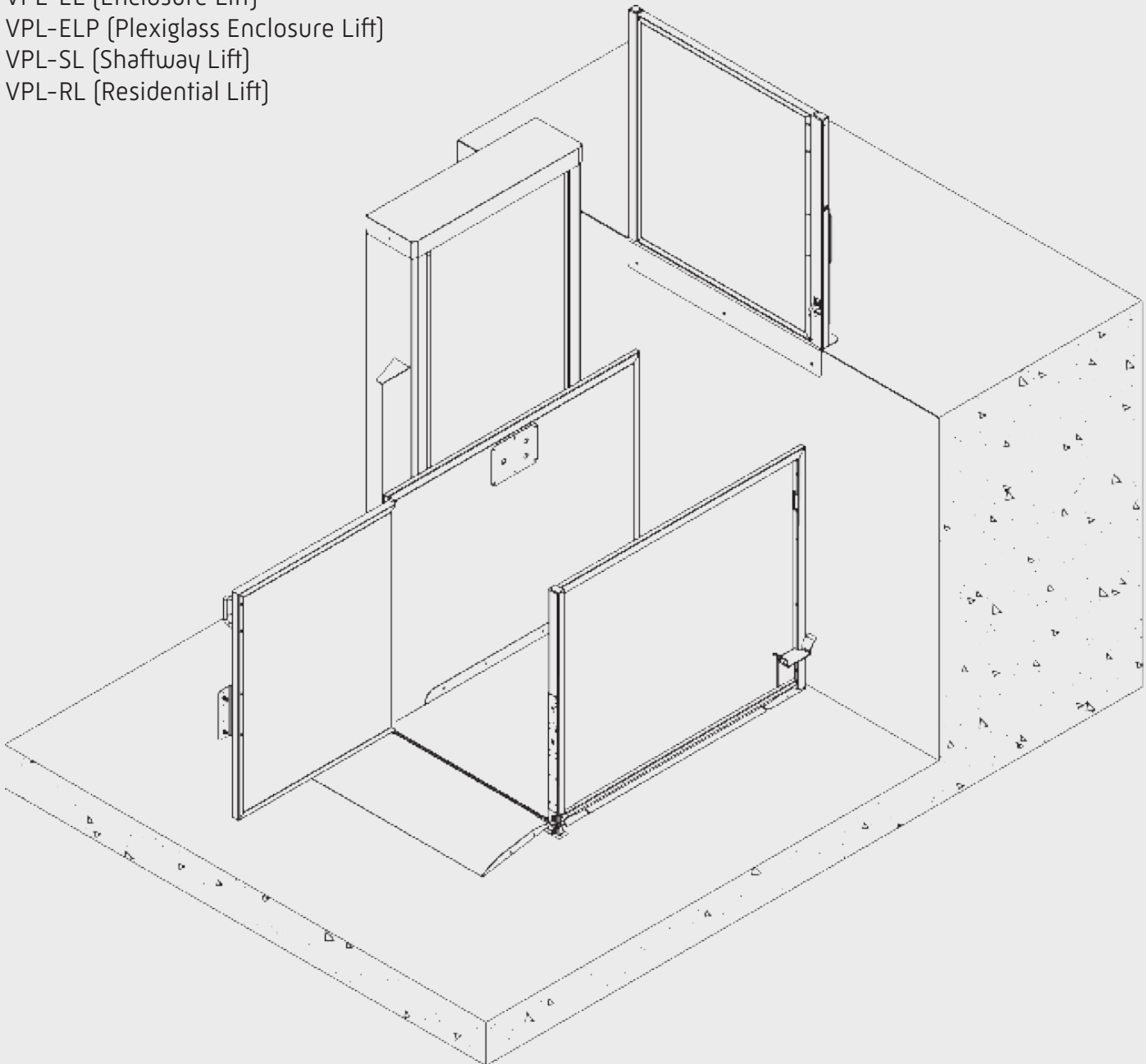



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About Symmetry Elevating Solutions

Symmetry is a beautifully crafted, expertly engineered accessibility-related product line proudly **made in the U.S.A.** at the Bella Elevator LLC manufacturing plant. Promoted and sold by our  exclusive nationwide network of carefully selected Symmetry partners and associates, Symmetry offers residential elevators, vertical platform lifts (VPL) and limited use/limited application (LU/LA) elevators.

Strictly following national code guidelines and adhering to local jurisdiction requirements and variances, Symmetry products are ADA and ASME compliant and manufactured to meet the end users' specific needs. Symmetry Elevating Solutions representatives possess a wealth of knowledge and experience and are committed to excellence for the life of the product—before, during and after project completion.

With dealer locations spanning North America, we are equipped to meet the accessibility needs of a wide spectrum of clients, from home and business owners, to schools, municipalities and other governmental entities.

Please note that this guide is for planning purposes only, applies exclusively to national code and should not be used for construction. Prior to construction, please contact your local Symmetry Elevating Solutions representative and request a job-specific set of elevator plans to ensure that you obtain the accurate dimensions and requirements for your project.

Your representative will also assist you to identify resources to ensure that your project plans will comply with the applicable state and local codes and the permitting authorities.

These rules have been developed as a guideline and are based on the information supplied in ICC A117.1 and ASME A18.1. Please consult your local authority having jurisdiction regarding local codes and regulations.

Platforms

- 36" x 48" minimum clear space on platform for most applications.
- If the VPL exits 90° from an entry point, the clear space must be 42" x 60".

Doors & Gates

- 32 inch minimum clear opening for a door or gate accessing the VPL from the end.
- 42 inch minimum clear opening for a door or gate accessing the VPL from the side.
- All doors/gates require a minimum 18 inch latch side clearance. A greater distance may need to be provided as described in ICC A117.1.
- Power-assisted doors/gates are required in all applications that are not straight-through, depending on model approval and layout. This includes all applications servicing more than two landings.
- Gates must be a minimum 42 inches tall.
- Doors must have 80 inch clear inside height.
- Upper and lower doors/gates must be installed flush to the interior of the hoistway.
- In unenclosed commercial applications, a platform gate and a safety pan are required.

Lift Height

- Unenclosed commercial applications cannot exceed 60 inches in travel height.
- Shaftway and enclosure applications are available at travel heights not to exceed 168 inches; up to 240 inches on Hydraulic Drive [with variance].
- Some state and local jurisdictions have additional travel height restrictions.

Ramps

- Stationary end ramps will project 25 inches minimum from either the edge of the running clearance (for models with a platform gate) or the outside face of the lower landing door or gate.
- Automatic folding ramps will project 15 inches from the edge of the platform on the lower landing side of the lift. [Not available on tower forward.]

Pits

- The minimum depth of a pit for a VPL will be 1½ inches deep, however a 3 inch pit is recommended. If an unenclosed lift is provided without a ramp, the minimum pit depth is 3 inches.
- When a VPL is installed in a pit and in an outdoor application, the pit must have means to prevent the collection of water.

Anchoring

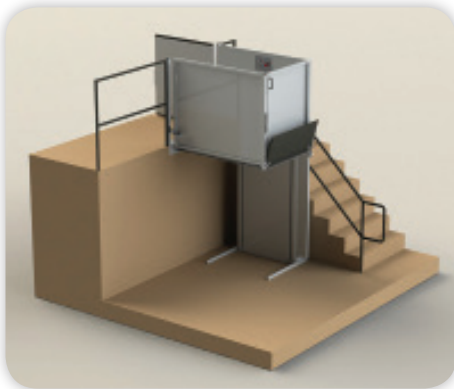
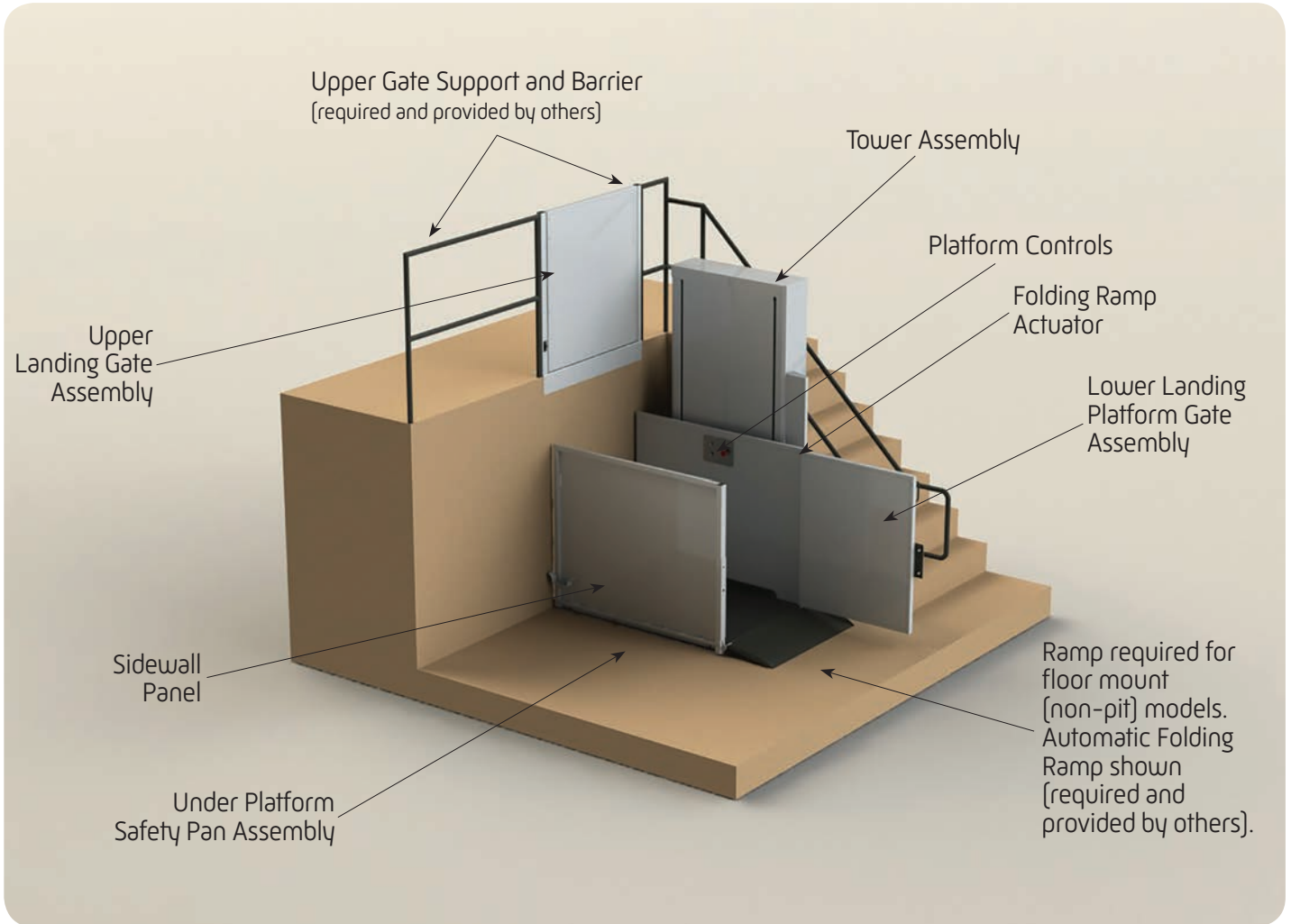
- The machine base must be anchored to the floor. Floor to be smooth and level with 4 inch minimum concrete thickness and capable of withstanding a 3,200 psi load.
- If travel height is 60 inches or less, wall fastening is not required except in 90° applications.
- Doors and gates are not free-standing and must be anchored vertically and horizontally.

Clearances

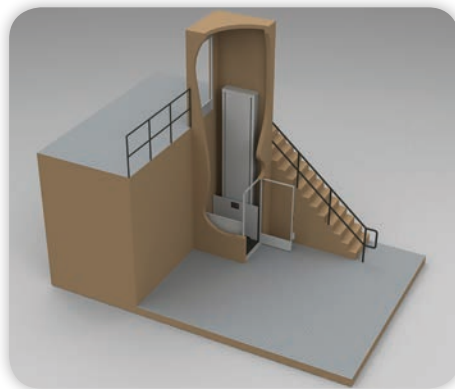
- The running clearance on a side of the lift that will be used to enter/exit the lift must be ⅜ inch minimum to ¾ inch maximum.
- The running clearance on a non-opening side of the platform must be 2 inch minimum.
- 79 inch minimum head clearance is required throughout the travel of the conveyance.

Electrical/Lighting

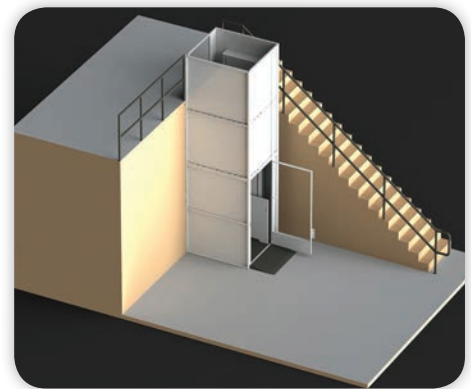
- Hoistway lighting is provided by others. 5 ftc required on the platform surface throughout the travel of the conveyance. An auxiliary light consisting of no fewer than two lamps producing .2 ftc on the floor and controls for not less than 4 hours, is activated automatically in the event of a power outage.
- A disconnect (provided by others) shall be a listed device conforming to NFPA 70/NEC 620.51 and shall be installed within sight of the motor controller. The disconnecting means shall be externally operable, have permanent means of locking the device in the open position and be labeled with the location of the supply side overcurrent protection means.



VPL-UL
(Unenclosed Lift)



VPL-SL
(Shaftway Lift)



VPL-EL
(Enclosure Lift)

Standard Features

- Rated capacity: 750 lb.
- Lifting height: up to 168" (not available on VPL-UL) (Hydraulic units may exceed 168" with variance)
- Steel construction with powder-coated finish
- A.W.A.R.E. system (Active Wiring, Accessories, Relay and Electronics Diagnosis)*
- Constant-pressure up/down control switch installed on the platform
- Constant-pressure control station provided at each landing
- Four-year limited parts warranty

Safety Features

- Grab rail (optional on VPL-RL)
- Non-skid platform surface (Black)
- Obstruction safety panel under platform (when not installed within a runway enclosure)
- Alarm (optional on VPL-RL)
- Emergency stop switch
 - Illuminated (not available on VPL-RL)
- Landing interlocks keep doors closed/locked when the platform is at another landing
- Upper final limit switch (optional on Hydraulic Drive)
- Safety lift nut for Acme Screw Drive
- Broken chain safeties for Hydraulic Drive

Optional Features

- Low profile carriage: 1½" (not available on unenclosed lifts)
- Remote mounted controller
- 230 VAC power supply
- ADA phone for both indoor and outdoor models
- Emergency platform lighting
- Full-speed battery backup
- 5 ftc LED lights with or without battery backup
- Power gate/door operators
- Manual lowering wrench (standard for non-hydraulic commercial lifts)
- Flip-up ramp (unenclosed only)
- Single or double slope roof (VPL-EL and VPL-ELP only)

Clear Platform Sizes

(Custom sizes and designs available)

- 36"W x 48"D standard
- 36"W x 54"D optional
- 36"W x 60"D optional
- 42"W x 60"D optional

Enter/Exit Configurations

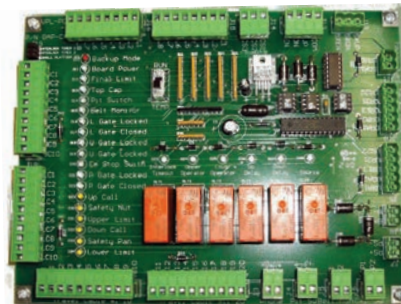
- Straight-Through
- 90° Adjacent
- 3 Openings (not available on VPL-RL)
- Enter/Exit Same Side (not available on VPL-UL)

Platform Lift Gate/Door Options

- 42" platform gate** (not available for VPL-RL)
- 42" landing gate** (not available for VPL-RL)
- 80" landing gate**
- Non-Fire-rated Red Oak door†
- 1½ hour Fire-rated steel door (B Label)

Drive Options

- Acme Screw Drive: 10 fpm, 1.5 HP, 115 VAC
- Accelerated Acme Screw Drive: 20 fpm, 1.5 HP, 115 VAC
- Chain Hydraulic Drive: 17-20 fpm, 3 HP, 115 VAC (not available on VPL-RL)

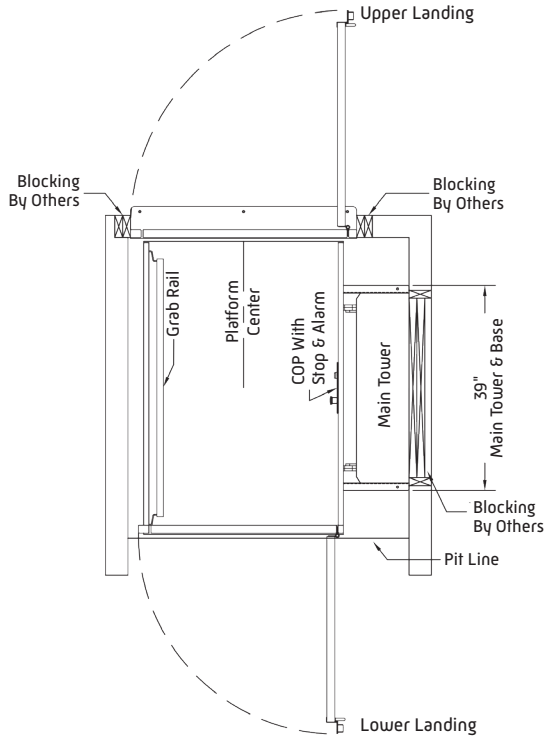


LED Diagnostic Board
(located under the main tower)

* Symmetry Elevating Solutions exclusive

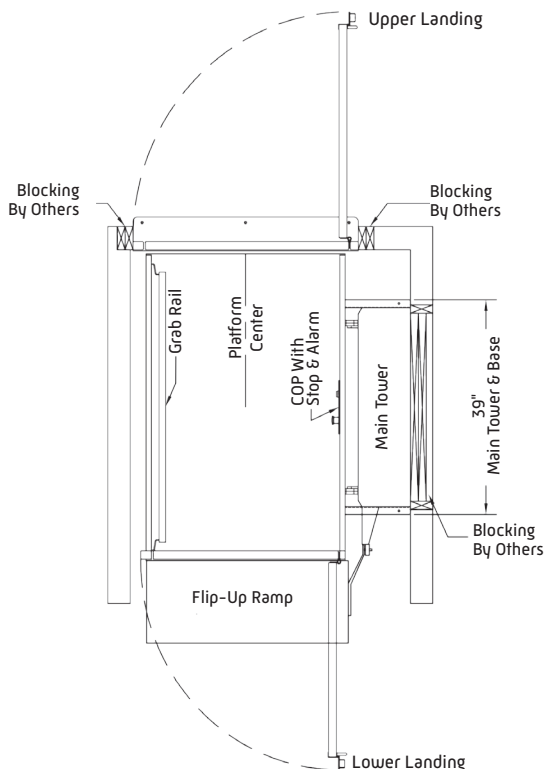
** Available with optional acrylic insert

† Also available in other wood choices, by request



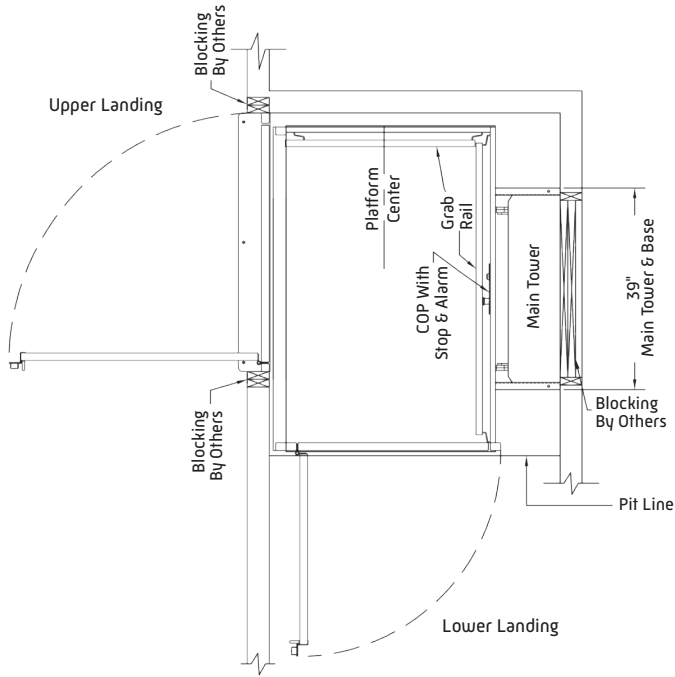
Unenclosed Design
Straight-Through With Pit

Clear Platform Width	Clear Platform Length	Finished Hoistway Width	Finished Hoistway Length	Upper Gate Center Line
36"	48"	53½"	51¼"	31½"
36"	54"	53½"	57¼"	31½"
36"	60"	53½"	63¼"	31½"
42"	60"	59½"	63¼"	34½"



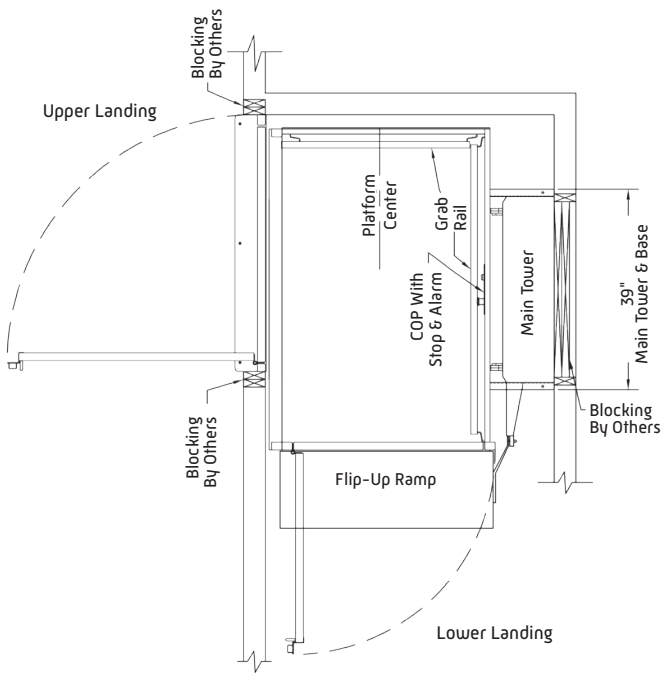
Unenclosed Design
Straight-Through With Flip-Up Ramp

Clear Platform Width	Clear Platform Length	Finished Hoistway Width	Finished Hoistway Length	Upper Gate Center Line
36"	48"	53½"	65½"	31½"
36"	54"	53½"	71½"	31½"
36"	60"	53½"	77½"	31½"
42"	60"	59½"	77½"	34½"



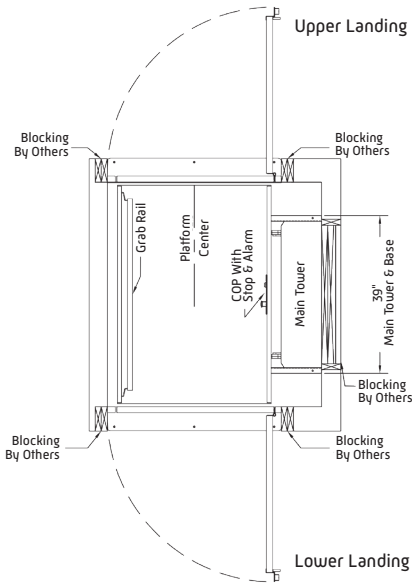
Unenclosed Design
90° With Pit

Clear Platform Width	Clear Platform Length	Finished Hoistway Width	Finished Hoistway Length	Upper Gate Center Line
42"	60"	56¼"	66¼"	34"



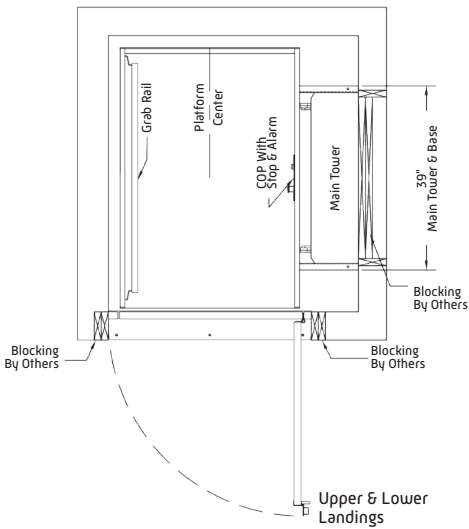
Unenclosed Design
90° With Flip-Up Ramp

Clear Platform Width	Clear Platform Length	Finished Hoistway Width	Finished Hoistway Length	Upper Gate Center Line
42"	60"	56¼"	80½"	34"



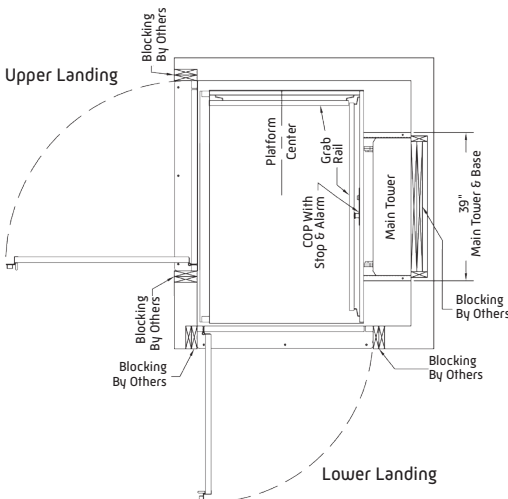
Shaftway Design
Straight-Through

Clear Platform Width	Clear Platform Length	Finished Hoistway Width	Finished Hoistway Length	Upper Gate Center Line
36"	48"	53"	49½"	31½"
36"	54"	53"	55½"	31½"
36"	60"	53"	61½"	31½"
42"	60"	59"	61½"	34½"



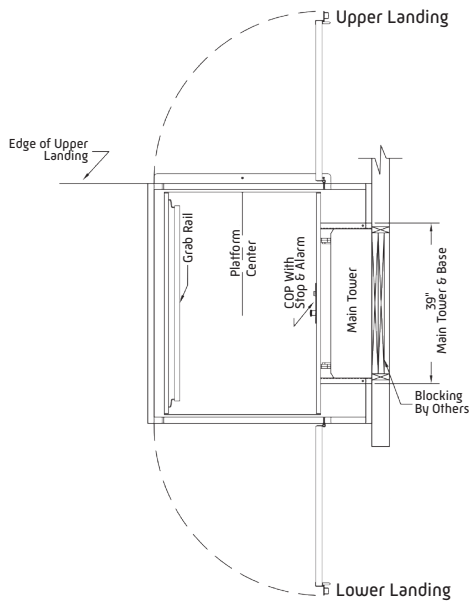
Shaftway Design
Enter/Exit Same Side

Clear Platform Width	Clear Platform Length	Finished Hoistway Width	Finished Hoistway Length	Platform Center Line
36"	48"	53"	52½"	31½"
36"	54"	53"	58½"	31½"
36"	60"	53"	64½"	31½"
42"	60"	59"	64½"	34½"



Shaftway Design
90° Exit

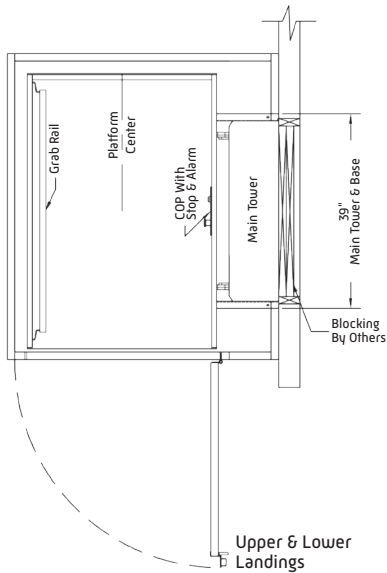
Clear Platform Width	Clear Platform Length	Finished Hoistway Width	Finished Hoistway Length	Upper Gate Center Line	Lower Gate Center Line
42"	60"	56¼"	64½"	25"	33⅛"



Enclosure Design Straight-Through

Clear Platform Width	Clear Platform Length	Finished Enclosure Width	Finished Enclosure Length	Platform Center Line
36"	48"	54½"	52¼"	31½"
36"	54"	54½"	58¼"	31½"
36"	60"	54½"	64¼"	31½"
42"	60"	60½"	64¼"	34½"

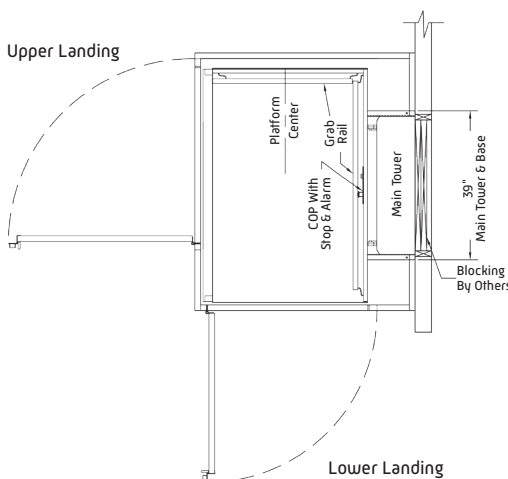
Note: For pit dimensions, add ¾" to the enclosure dimensions, in each direction.



Enclosure Design Enter/Exit Same Side

Clear Platform Width	Clear Platform Length	Finished Enclosure Width	Finished Enclosure Length	Platform Center Line
36"	54"	54½"	61⅜"	31½"
36"	60"	54½"	67⅜"	31½"
42"	60"	60½"	67⅜"	34½"

Note: For pit dimensions, add ¾" to the enclosure dimensions, in each direction.



Enclosure Design 90° Exit

Clear Platform Width	Clear Platform Length	Finished Enclosure Width	Finished Enclosure Length	Platform Center Line
42"	60"	57⅝"	67⅜"	34"

Note: For pit dimensions, add ¾" to the enclosure dimensions, in each direction.

Generic Static Loading Table for Vertical Platform Lifts Anchored to Floor and Wall

Symbol	Description	Value [Max]
F1=1090 lb.	Payload (Max)	750 lb.
	Car (Platform) Wt. Max	340 lb.
F2	Shroud Weight	See Chart
F3	Floor Reaction (Inboard)	See Chart
F4	Floor Reaction (Outboard)	See Chart
F5	Wall Anchoring Reaction	See Chart
F6	Enclosure Weight*	See Chart
F7	Floor Shear Reaction	See Chart

Layout Geometry			
L1	L2**	L3	L4**
33.156	33.75	5.25	5.0

Model	Shroud Height	Approximate Anchor Height (L5)
42	67	43.88
60	85½	61.68
72	97	75.5
96	121	101.44
120	145	123.44
144	169	147.7
168	193	168.7

Note: These are the reaction forces based on the gravity loads and operation of the lift. These calculations do not include external loading due to such things as wind, snow, rain, seismic activity, etc. Adhere to local building codes, regulations and safety factors for the supporting structures.

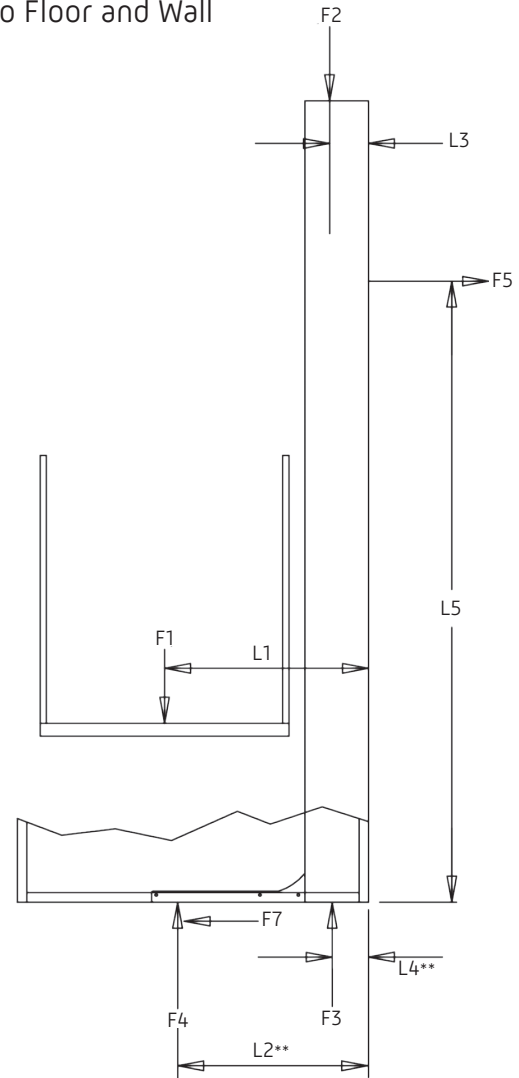
Static Equilibrium:

(Sum of forces and sum of moments = 0)

$$F1 + F2 = F3 + F4$$

$$F7 = F5$$

$$F5 * L5 + F4 * L2 + F3 * L4 = F2 * L3 + F1 * L1$$



Values below are totals-divide by the number of bolts for individual bolt loads

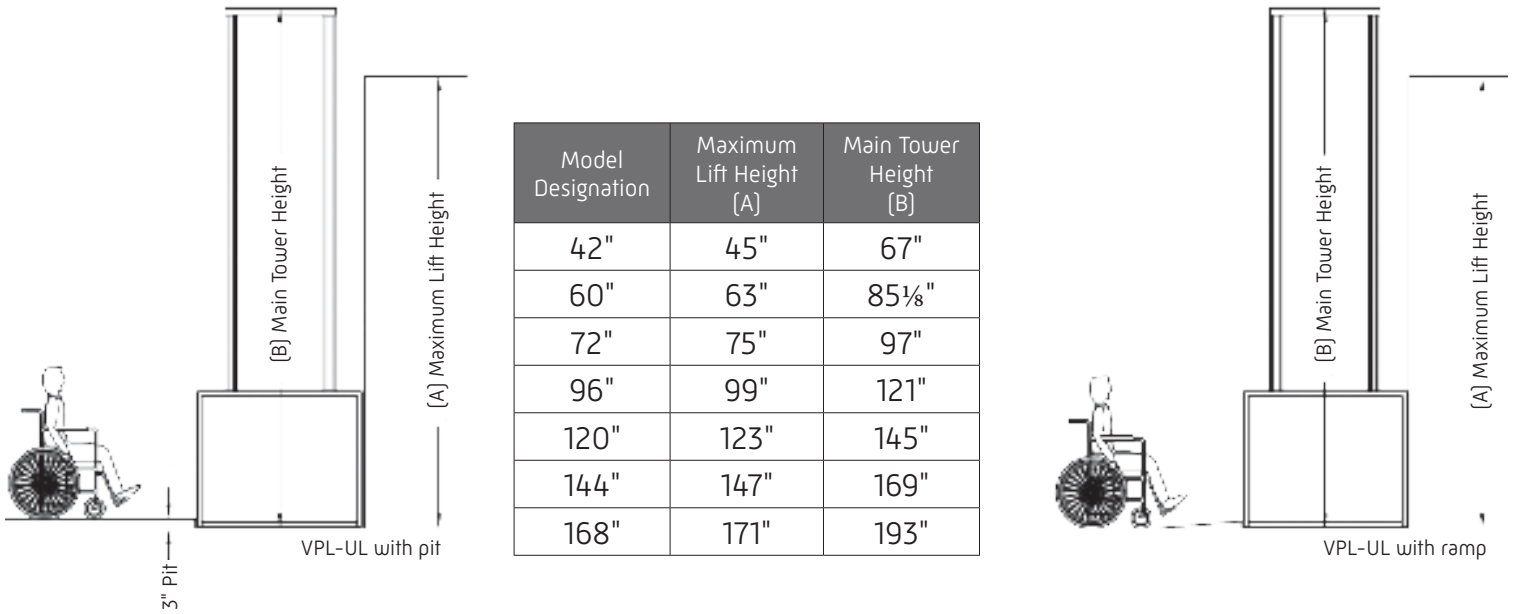
Model	Max Shroud lbs. F2	Inboard Floor Reaction lbs. F3**	Outboard Floor Reaction lbs. F4**	Wall Reaction lbs. F5**	Max Enclosure lbs. F6***		Floor Shear Reaction lbs. F7**
					Steel	Plexi	
42	446	1536	0	702	497	437	702
60	505	1595	0	500	573	498	500
72	544	1634	0	408	650	568	408
96	667	1757	0	304	765	666	304
120	743	1833	0	250	867	754	250
144	804	1894	0	209	978	848	209
168	899	1989	0	183	1079	935	183

* The enclosure weight is transferred directly to the floor along it's perimeter through pads (two to a side) except for the back side where the wing walls bolt up directly to the tower.

** The reaction force values are based upon using an approximate horizontal mid-point location on the base as the single point of action for the floor reaction. In reality there is a load distribution across the base plate versus a single point load. This distribution will vary by unit size, platform size and position, etc. The assumption of a point load based on the centroid of a distributed load, however, does appear to provide reasonable results. We have chosen locations of the lines of action of reaction forces based upon the applicable geometry of the components and also based on multiple FEA structural analysis runs which provide support for those choices. We also assume the outboard floor bolt reaction forces go to zero, and this assumption provides a conservative approach and is supported by multiple FEA runs.

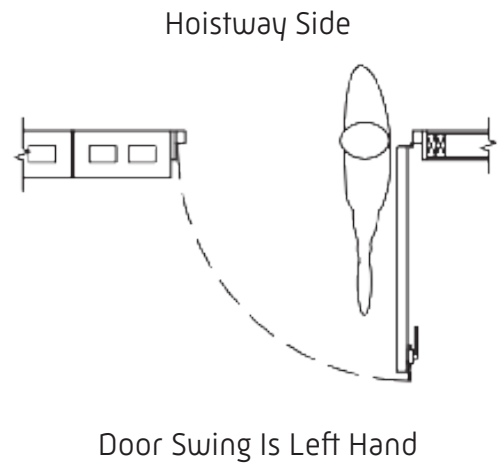
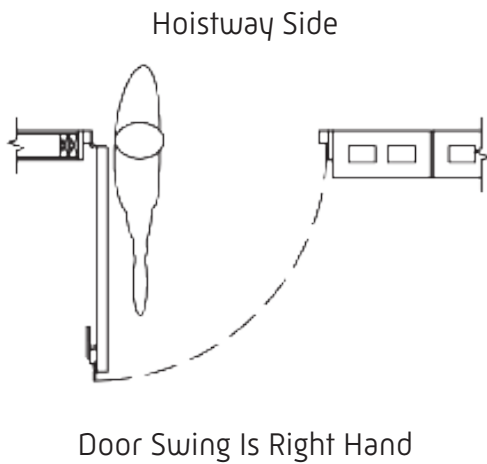
*** On enclosures, add 175 lbs. for a roof option and add 161 lbs. for a 6'8" or above option.

The tower height will be taller than the landing height.



Door/Gate Swing

To determine a door or gate swing: With the door open, stand in the doorway with your back against the hinges, and move your arm in the direction of the open door. If you use your right arm, it is a right hand swing. If you use your left arm, it is a left hand swing.

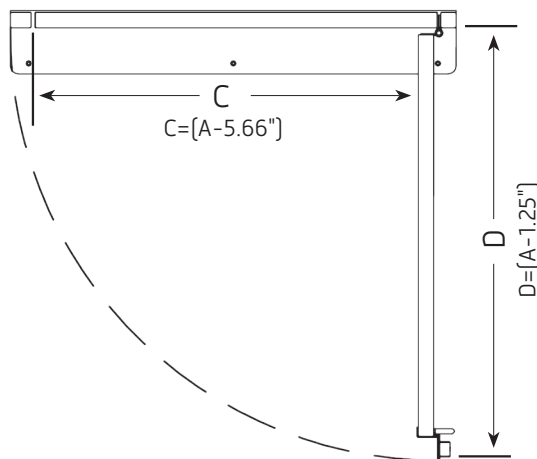
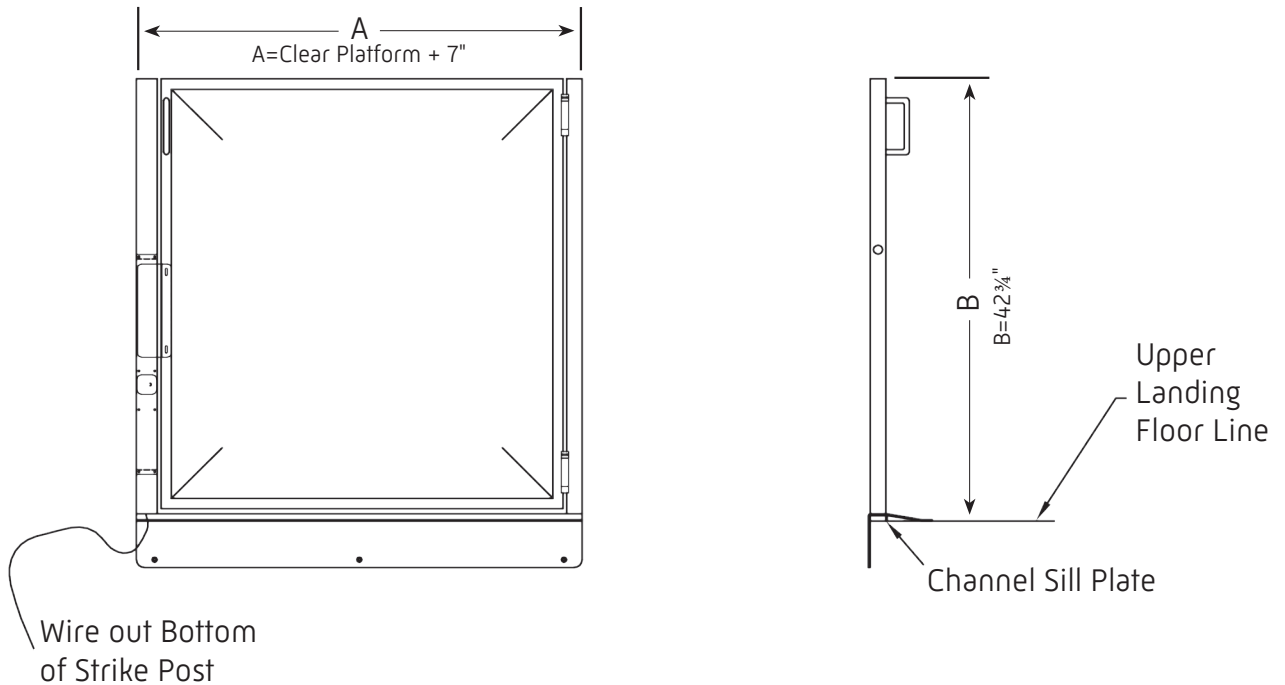


Note:

Call station locations must be clear of door swings

Upper landings are required to have a gate or door at a minimum of 42" tall and interlocked to the vertical platform lift.

In 90° or enter/exit same side applications, the upper landing gate is typically required to have an automatic gate/door operator.



Gate Information			
Width A	Height B	Clear Opening C	Projection D
43"	42"	37 ⁵ / ₁₆ "	41 ³ / ₄ "
47"	42"	41 ⁵ / ₁₆ "	45 ³ / ₄ "
48"	42"	42 ⁵ / ₁₆ "	46 ³ / ₄ "
The gates listed in this chart are not self supporting			

Note: Add 3" width if gate has mid-mount operator

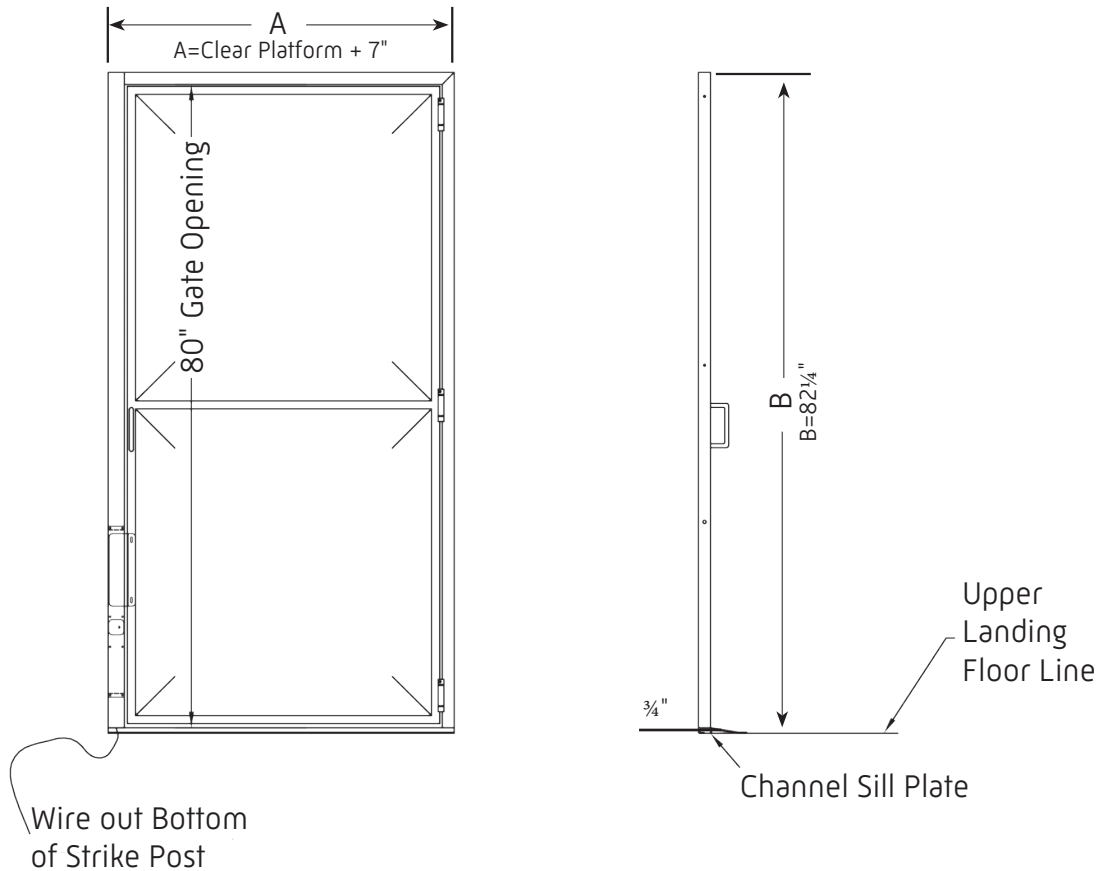
Gates

Lower landing gate

Lower landings are required to have either a platform gate or lower landing gate or door interlocked to the vertical platform lift.

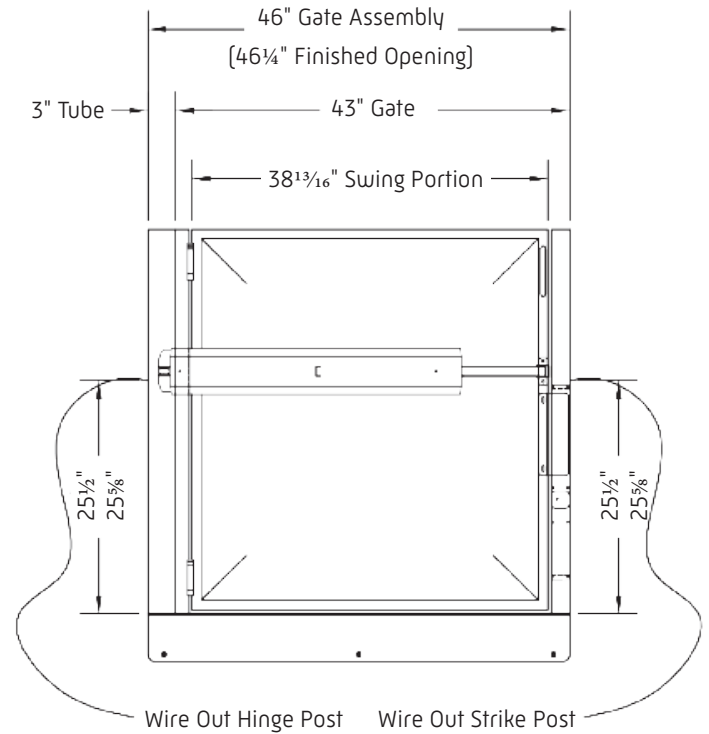
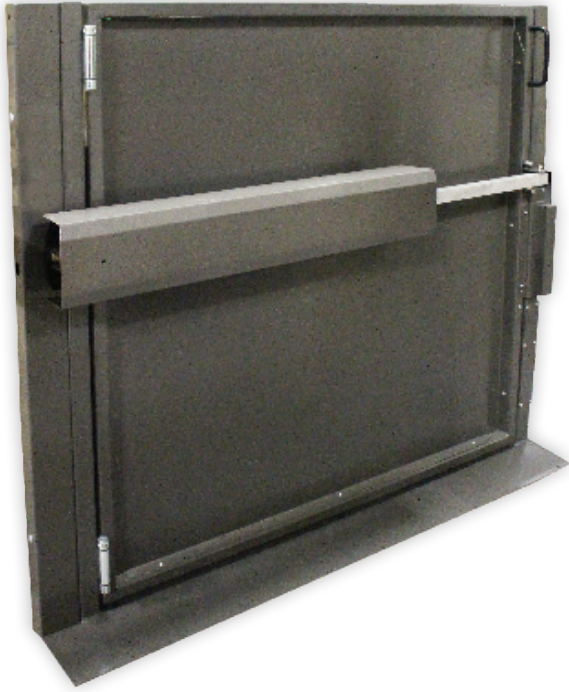
The interlock prevents the gate/door from being opened when the platform is not at the landing and prevents the vertical platform lift from moving away from a landing if the gate/door is not closed and locked.

In 90° or enter/exit same side applications, the upper landing gate is typically required to have an automatic gate/door operator. In unenclosed applications, a platform gate is not available on the wide side of the platform.



Gate Information			
Width A	Height B	Clear Opening C	Projection D
43"	81 ¹¹ / ₁₆ "	37 ⁵ / ₁₆ "	41 ³ / ₄ "
47"	81 ³ / ₄ "	41 ⁵ / ₁₆ "	45 ³ / ₄ "
48"	81 ¹¹ / ₁₆ "	42 ⁵ / ₁₆ "	46 ³ / ₄ "
The gates listed in this chart are not self supporting			

Note: Add 3" width if gate has mid-mount operator



Standard Features

- In 90° or enter/exit same side applications, the upper landing gate is typically required to have an automatic gate/door operator
- Low profile "Smart Operation"*
- Indoor and outdoor use
- 2 speed operation
- Automatic reset upon contact with an obstruction
- Opening/closing time: Approximately 8 seconds
- Adjustable hold open time
- Battery backup standard with commercial applications
- Capable of manual pull to open or push to close without damage to operator

Optional Features

- Battery back up for residential applications

* Allows operator to open, stop at obstruction, close and remain in normal operation mode. Operator will not stop mid-cycle and leave unit non-operational.



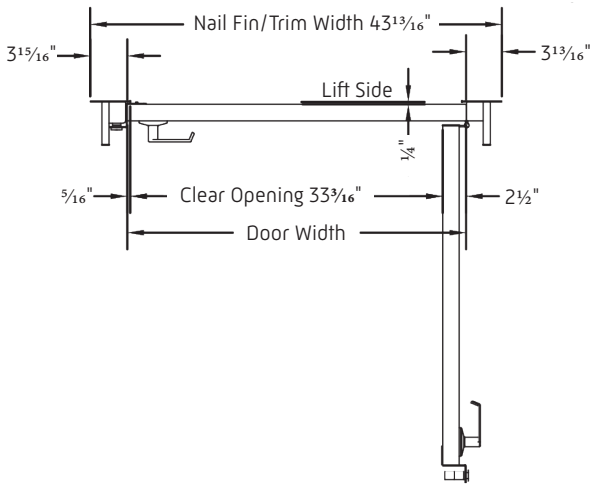
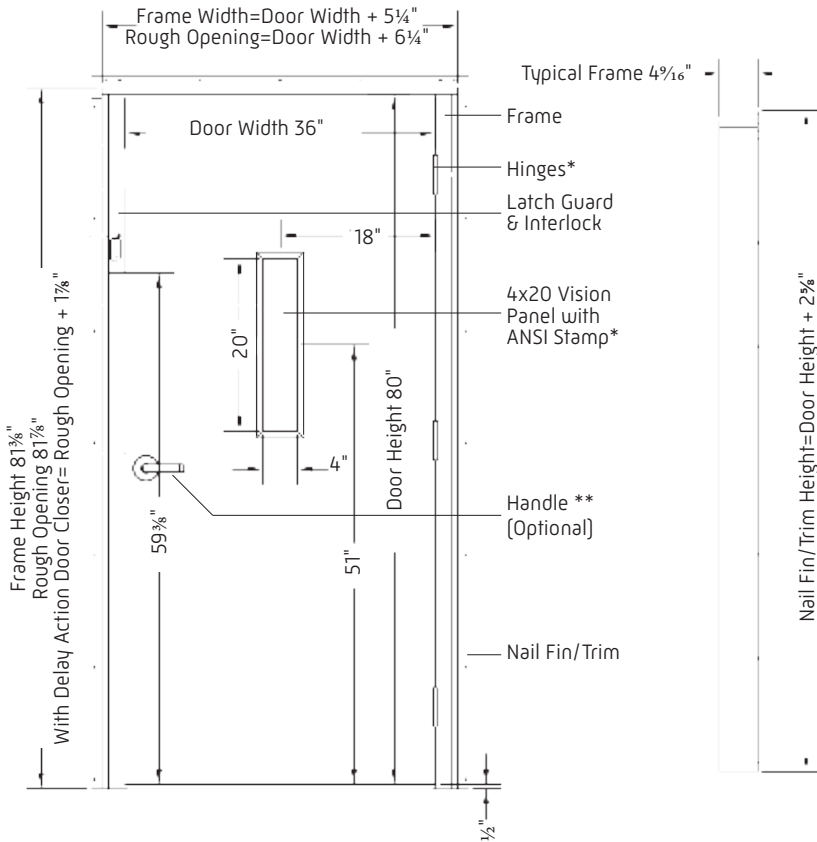


Standard Features

- In 90° or enter/exit same side applications, the upper landing gate is typically required to have an automatic gate/door operator
- Indoor and outdoor use
- Automatic reset upon contact with an obstruction
- Opening/closing time: Approximately 8 seconds
- Adjustable hold open time
- Capable of manual pull to open or push to close without damage to operator
- Low-energy operator
- ADA compliant

Optional Features

- Rain cover for outdoor applications



Latch Guard
(Exterior View)



Electro-Mechanical
Interlock (EMDL)



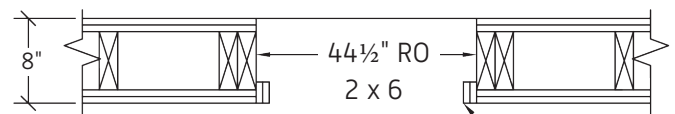
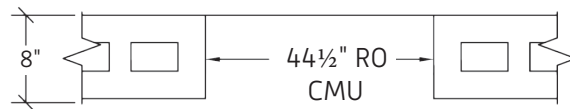
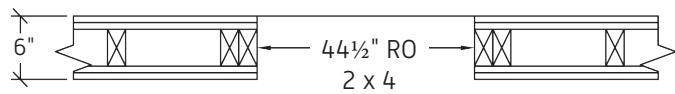
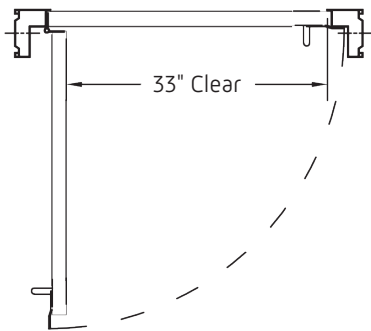
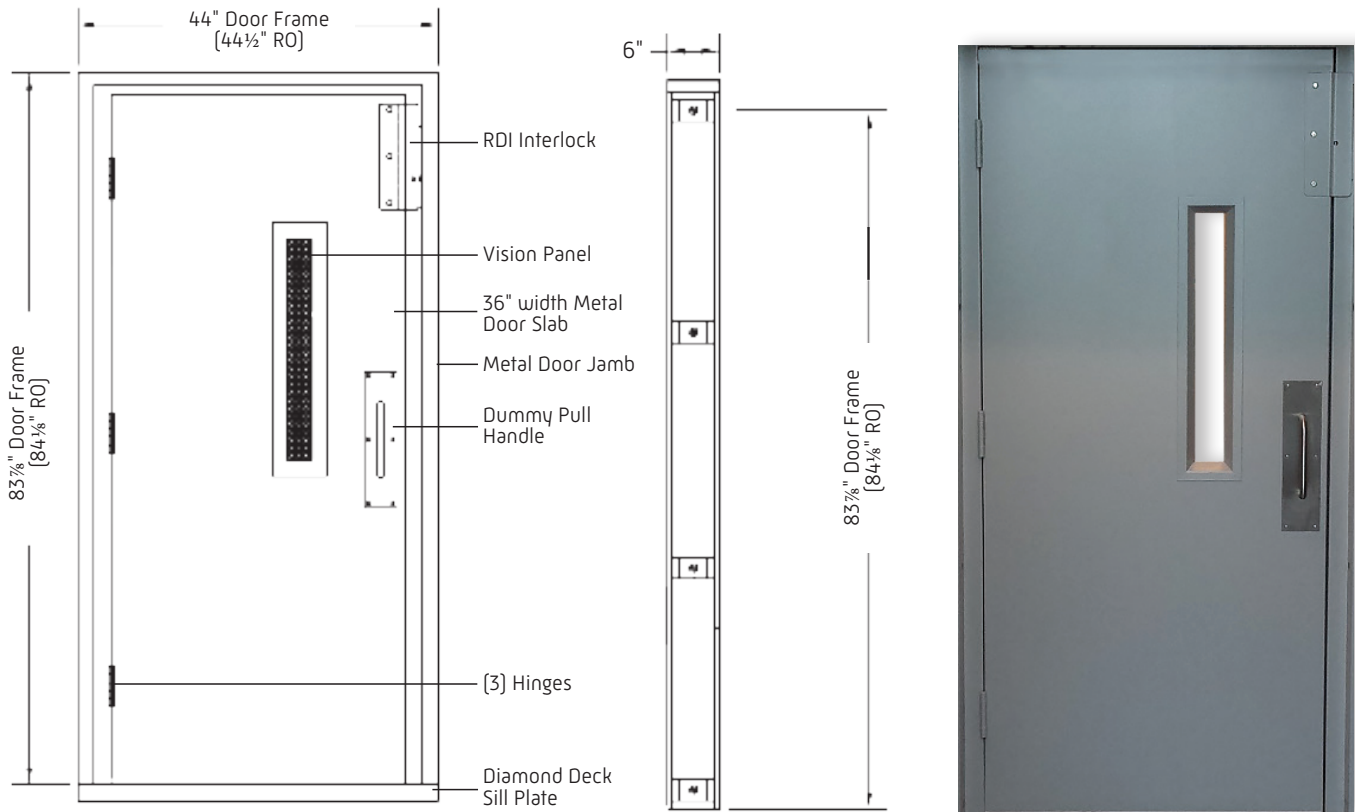
Dummy Handle
(Optional)

Notes:

- 1) The door/frame is suitable for installation in masonry or wood frame construction
- 2) The door/frame is installed with the door flush to the inside of the hoistway
- 3) The interior hoistway wall should be finished up to the rough opening
- 4) This can be furnished as a frame only or complete door with frame
- 5) Door closer or power door operator required for code compliance

* Hinges and vision panel provided only with complete door package.
** Handle optional with frame, but included with complete door package.

Fire-Rated Flush Door



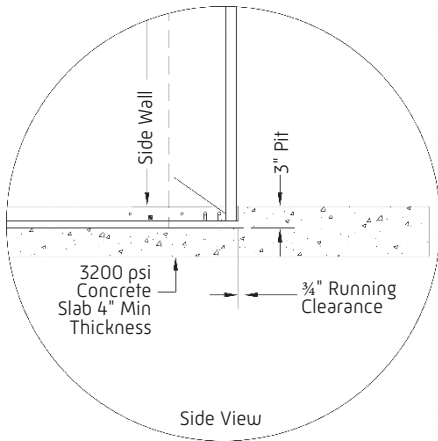
Add drywall strips after frame set

Notes:

- 1) RH shown LH opposite
- 2) Door suitable for installation masonry or wood frame construction
- 3) Install door frame body flush with the inside of the hoistway
- 4) Distance between the door sill and the platform must be between ⅜" - ¾"
- 5) Drywall to be finished up to the door frame
- 6) [RO]= Rough Opening 84¼" x 44½"
- 7) Door closer or power door operator required for code compliance
- 8) Trim sill plate as needed for low profile VPL installations

All applications will be installed in one of the following manners.

UL Pit



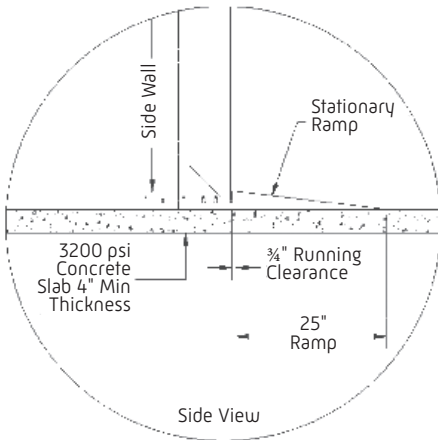
Pit

For ease of use, a pit is the best option. A 3" depression in the slab is the typical pit application. This will allow for a smooth transition from the finished floor at the lowest landing to the platform surface of the vertical platform lift.

Stationary Ramp

In locations where a pit is not a feasible option, a stationary ramp may be utilized. The stationary ramp is located at the lowest landing and provides access to the lift platform by transitioning from the finished floor of the lowest landing to the platform surface of the vertical platform lift. A door/gate operator will be required.

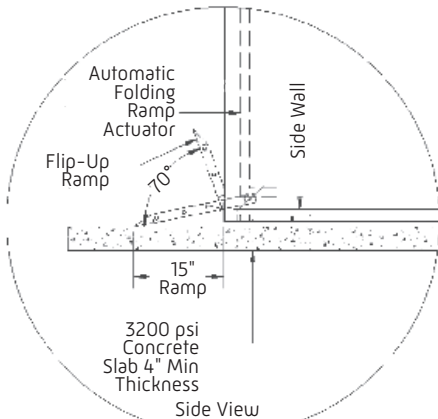
UL Stationary Ramp



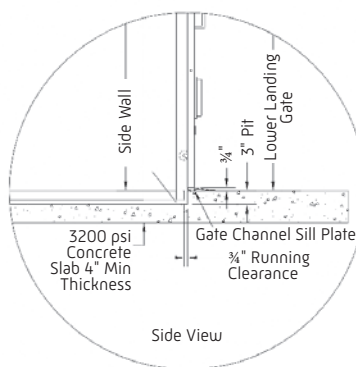
Flip-Up Ramp

As an alternative to the pit and stationary ramp, a flip-up ramp can be used. The flip-up ramp is mounted to the edge of the platform on the side of the lift accessing the lowest landing. A flip-up ramp cannot be used in a shaftway or enclosure application, nor can it be mounted on the side of the lift that is opposite the main tower. When an flip-up ramp is used, the unit must also have a safety pan. A gate operator will be required.

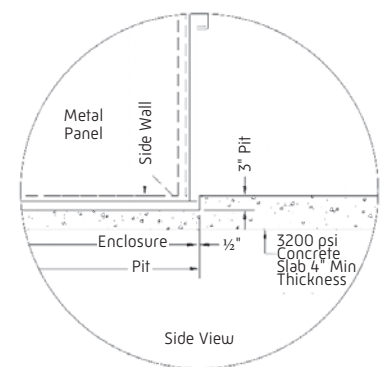
UL Flip-Up Ramp



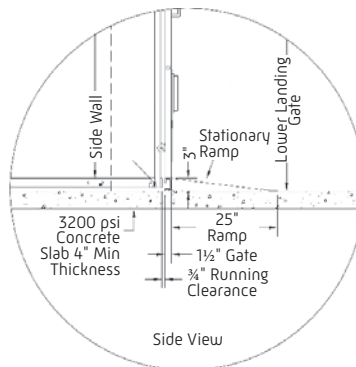
SL Pit



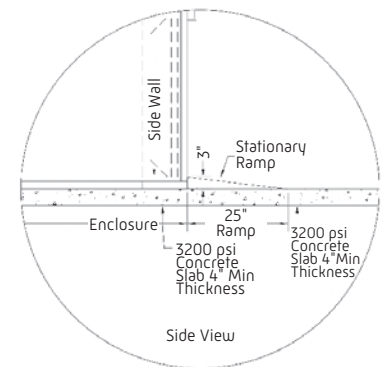
EL Pit



SL Stationary Ramp

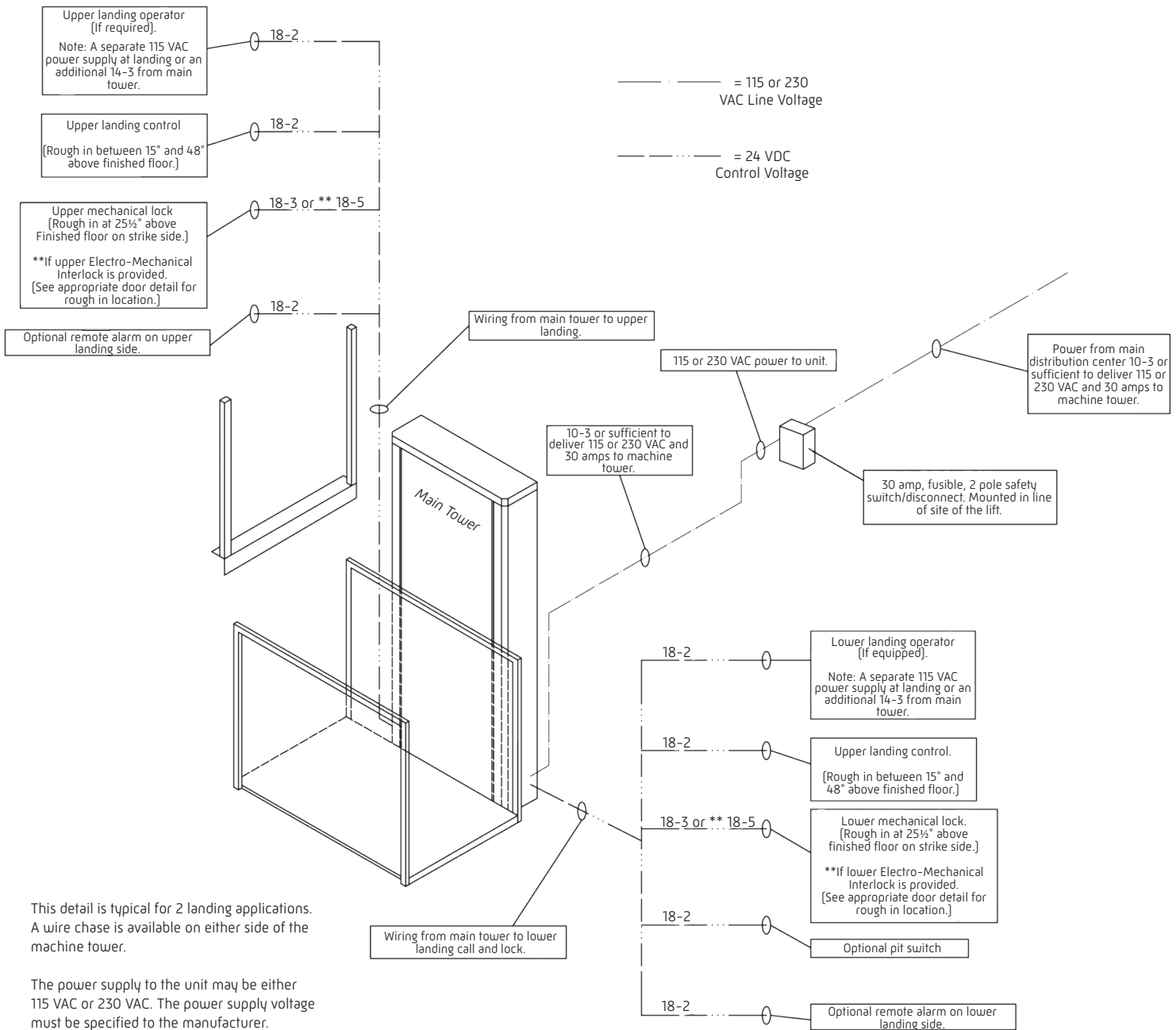


EL Stationary Ramp



Typical Conduit Layout

Consult with the elevator/accessibility contractor prior to hoistway construction to coordinate the location of electrical boxes.



Please note that this guide is for planning purposes only, applies exclusively to national code, and should not be used for construction. Prior to construction, please contact your local Symmetry Elevating Solutions representative and request a job-specific set of elevator plans to ensure that you obtain the accurate dimensions and requirements for your project.

Your representative will also assist you to identify resources to ensure that your project plans will comply with the applicable state and local codes and the permitting authorities.



AIA Continuing Education

symmetryelevator.com/aia

Symmetry offers in-person and online course options to obtain continuing education credits. Each completed course is worth 1 (one) LU/A HSW/SD credit and provides a detailed review of residential elevators, vertical wheelchair lifts and limited use/limited application (LU/LA) elevators.

Our continuing education AIA courses also address specification, code application, suitability of product type and the direct governance and guidelines of the ADA, ANSI and ASME.

IMPORTANT: The following items must be performed or provided by the Owner/Owner's Agents and/or General Contractor prior to work commencing on the lift installation. These items must be provided at no cost to Arrow Lift.

All work by others must conform to applicable national, state, and local codes.

Arrow Lift's project schedule and contract price are based on these items being provided prior to and throughout the installation of the lift.

Failure to provide the items specified in this list may result in additional work performed by Arrow Lift beyond the scope of our contract impacting both project cost and completion schedule. A change order will be submitted by Arrow Lift for materials and/or labor expended as a result of the failure to provide these items.

TABLE OF CONTENTS:

SC	Safety & General Site Condition Requirements	Page 2
GC	General Contractor Work By Others	Page 3-4
AD	Accessibility Design Work By Others	Page 5
EL	Electrical Work By Others	Page 6
LV	Low Voltage Work By Others	Page 7
SE	Structural Design Work By Others	Page 8-9

SAFETY & GENERAL SITE CONDITION REQUIREMENTS

STAGING & EQUIPMENT STORAGE:

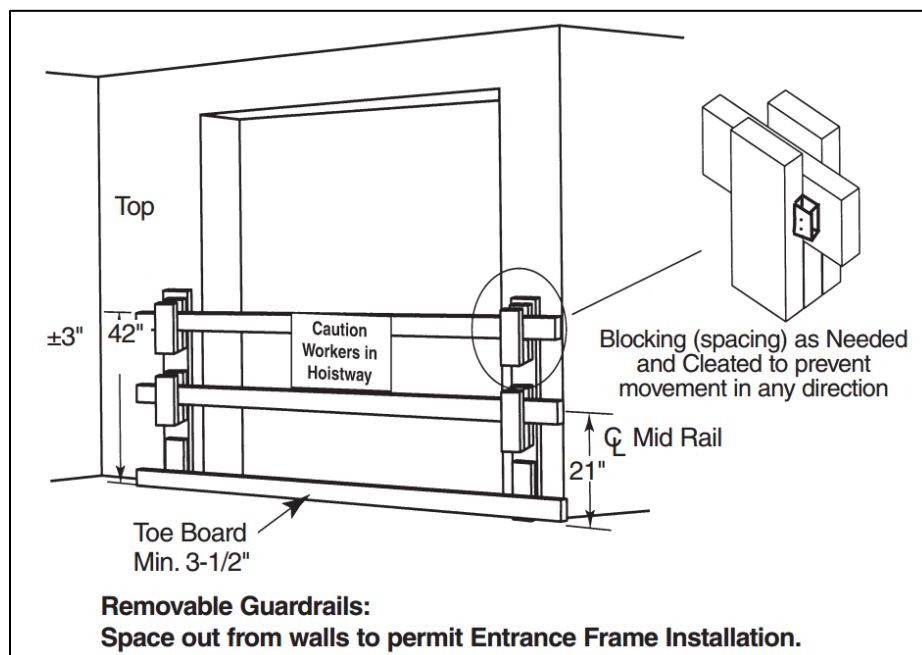
- **DRY & ENCLOSED INDOOR SPACE FOR STAGING OF EQUIPMENT** must be provided within 100'0" of the lift space.
- **SPACE REQUIREMENTS** are 20'0" x 20'0" clear minimum for lifts with 2 landing entrances.
- **ROLL-ABLE ACCESS** must be provided from ground level to the lift location and staging area. Use of cranes, booms, or freight elevators must be authorized by Arrow Lift to ensure safety of lift equipment and personnel is maintained at all times.
- **STORAGE OF EQUIPMENT:** If lift installation is delayed after manufacturing has commenced, arrangements must be made to store the lift equipment until the site is ready for installation.
- **WARRANTIES MAY BE VOIDED OR MODIFIED** if lift equipment storage and/or staging is other than in a dry & enclosed building structure.

DISPOSAL OF CRATING, DEBRIS, & INCIDENTAL WASTE:

- **ON-SITE DUMPSTER(S)** must be provided on-site for disposal of lift equipment crating material.
- **ON-SITE GARBAGE CONTAINERS** must be provided in order to allow for dispose of debris & incidental waste after installation of the lift has begun.

JOB SITE SAFETY:

- **WHERE FALL HAZARDS EXCEEDING 6'0" ARE PRESENT:**
 - **REMOVABLE GUARDRAILS** must be provided at all entrances prior to lift delivery.
 - **FALL PROTECTION:** Provide 5,000 lb rated structural tie off (fall protection) point in shaft to meet OSHA requirements. Located near top entrance door wall. Must be fixed during installation, but may be removed after installation if desired. Field locate or as specified on Shop Drawings.
- **OSHA COMPLIANCE:** Ensure that all other trades, subcontractors, and personnel are working in a safe and OSHA-compliant manner.
- **ON-SITE SANITATION:** Safe & sanitary arrangements must be provided for installation staff.



LIFT AREA & LANDINGS:

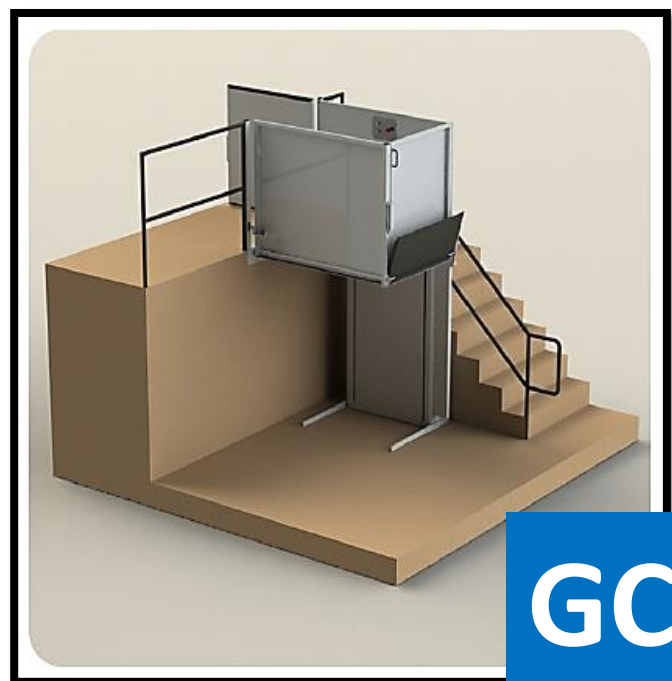
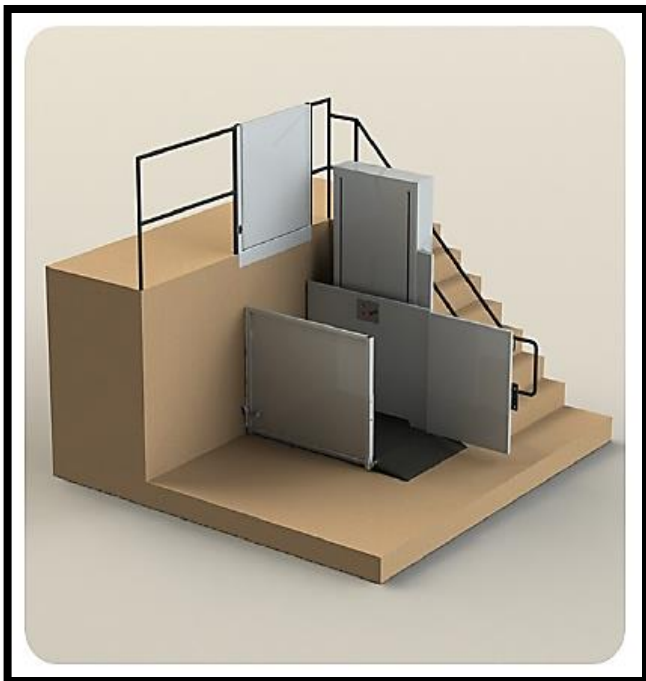
○ LIFT AREA PREPARATION:

- **Lift space** of the size required to fit lift. Complete with all demolition and additional framing components necessary to prepare the existing building to receive the lift.
- **Free of any obstructions** unrelated to the elevating device. (i.e. pipes, ducts, etc.)
- **Required clearances** at lift landings per ANSI A117.1 (American National Standard - Accessible and Usable Buildings and Facilities). Clearances will vary pending equipment layout and approaches. Architect responsible for building particulars.
- **Wood bucks** or core filled block on both sides of all finished door/gate openings. If using steel studs, provide wood bucks inside steel studs as outlined in shop drawings.
- **Filler panels, walls or railings** where specified as outlined in shop drawings.
- **TIE BACK BLOCKING:** Provide blocking in wall, behind lift tower, for lift attachment or adjacent wall if triangular tie-back bracket provided with lift. Tie-back blocking to span entire width of lift space tower attachment wall or as specified in shop drawings. Stacked 2x10s, core filled block or CMU walls will provide adequate tie-back. Structural design and requirements by others. Field locate or as specified on Shop Drawings.
- **PIT/SLAB** pending application, designed and constructed to support loads imposed. Pit must be dry, smooth, and level (no sumps, drains, no backup of water into the pit). Verify rebar locations with architect/shops. Structural design and requirements by others. See shop drawings for pit depth if applicable (typically 3" deep). Gravity drain required for pitted outdoor applications.
- **FLOORING:** Provide finished commercial grade flooring at all landings.
- **FINISH WORK:** Finish (trim, caulk, paint, and seal) lift area as needed after installation.
- **STAGING AREA:** Provide a secure staging area for the storage of materials during the lift installation process. Typical space requirements are approx. 150 s.f. Field Coordinate with Arrow Lift.
- **LIMIT ACCESS:** Control access to the area of construction so as to minimize the possibility of injury to persons other than Authorized Construction and Elevator Personnel during the construction process.



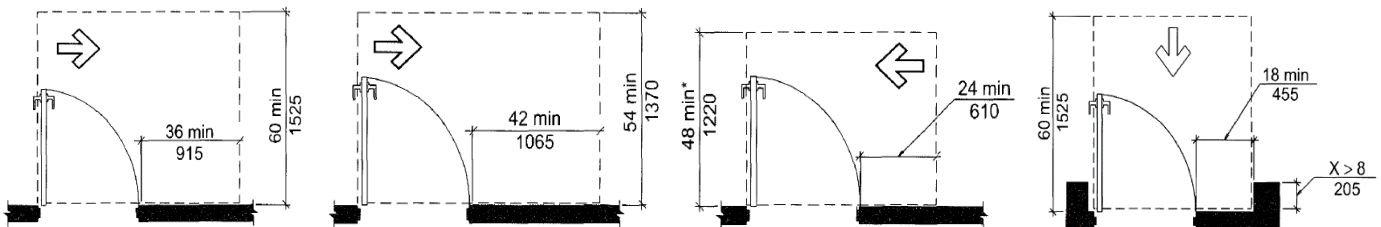
CONSTRUCTION NOTES

- Floor to be smooth and level with 4 inch minimum concrete thickness and capable of withstanding a 3200 PSI load.
- If the conveyance is installed within a pit and is in an outdoor application, the pit must be provided with an adequate drain.
- Hoistway walls must be plumb, square, and complete to the point that it can be turned over to the customer before unit installation.
- Upper and lower doors or gates must be installed **FLUSH TO THE INTERIOR OF THE HOISTWAY**.
- 80 inch minimum head clearance is required throughout the travel of the conveyance.
- Hoistway lighting is provided by others. 5ftc required on the platform surface throughout the travel of the conveyance. An auxiliary light consisting of no fewer than 2 lamps producing .2ftc on the floor and controls for not less than 4 hours, and activated automatically in the event of a power outage.
- Main tower **MUST BE FASTENED** to the wall and floor with anchors suitable to the site conditions, and capable to withstand the forces placed upon them.
Note: If travel height is 60" or less, the wall fastening is not required.
- All blocking is provided by others.



LANDINGS:

- **LIFT LANDINGS LOCATION & LAYOUT** must meet Lift & Building Code requirements as defined by the Local Authority Having Jurisdiction.
- **LANDING LEVEL** must be level within 1:48 in all directions per ANSI A117.1.
- **RAMPS**, where provided, must either lead to an adequately sized, level landing, or be matched with a Low Energy Power Door Operator (PDO) if leading directly into a landing door. Ramps must meet sloping requirements found in Lift & Building Codes.
- **LANDING HEADROOM** must be at least 80" clear or as required by Building Code.
- **LANDING DIMENSIONS** must meet ANSI A117.1 Door Swing clearances for one of the cases outlined below, or be equipped with Low Energy Power Door Operators (addition of PDOs may impact cost).



*54 min (1370) if closer is provided



LIFT SPACE:

- **LIFT MAIN LINE POWER (CIRCUIT 1):** Provide dedicated single phase 115-120 VAC 30 Amp Service.
 - Provide Siemens GF321N Disconnect with single pole Auxiliary Contacts or comparable bladed, lockable model fusible with Bussman type FRN fuses. Make final connections to disconnect prior to installation. Label disconnect with feeder circuit and panel number(s).
 - Provide 3 separate color 10ga stranded wires and 2 separate color 14ga stranded wires for battery backup in conduit from disconnect to lift tower in lift space as specified in shop drawings.
- **LIFT LIGHTING and GFCI POWER (CIRCUIT 2):** Provide dedicated single phase 110-120 VAC 15 Amp Service for all lift space lighting, landing lighting and GFCI servicing outlet.
- **LIFT SPACE 24/7 LIGHT:** Provide top of lift space in an OSHA approved light fixture.
 - Lift space lighting to provide a minimum of 5 foot-candles at slab level. 24/7 or motion sensing.
 - Lighting must not encroach into 80" clear overhead above lift platform at highest point of travel.
- **LIFT SPACE EMERGENCY LIGHTING:** Provide top of lift space in OSHA approved fixture.
 - Emergency lighting to provide a minimum of 0.2 foot-candles at slab level, for a minimum duration of 4 hours.
 - Lighting must be a two-bulb fixture with approximately equal wattage.
 - Lighting must not encroach into 80" clear overhead above lift platform at highest point of travel.
- **LOBBY 24/7 LIGHTING:** Must be provided (24x7 or motion sensing) to provide 5 ft-c at each landing door controls while the lift is in operation.
- **SERVICING OUTLET:** Provide GFCI Servicing Outlet at lower landing area near lift.
- **EMPTY CHASES and JUNCTION BOXES:** Provide empty conduit runs, flex with pull string, boxes, wiring and other specified items on shop drawings.
 - **Lift Tower junction boxes** in wall behind lift tower or as specified in shop drawings. Typical 2 - 4"x4" 1900 style deep junction boxes flush mount in wall with 4"x4" extension ring. One low voltage terminations, one high voltage terminations as indicated in shop drawings.
 - **Lift hall call control stations junction boxes** flush mount in wall at each landing for lift hall call control stations as required when power operation. Typical 4"x4" square 1900 style deep junction box with single gang mud ring with empty conduit run back to lift tower low voltage junction box. Must be located 24" clear of landing gate/door swing on strike side and maximum 42" AFF (Above Finished Floor) per code.
 - **Lift gate/door opening empty ½" conduit/flex** with pull string from each gate/door strike side back to lift tower low voltage junction box as specified in shop drawings. Locate at height (AFF) on strike side of opening as indicated in shop drawings.



LIFT TOWER:

- **PHONE LINE:** *If applicable*, a live analog dedicated phone line as required to the lift space in EMT conduit. Coordinate final connection to low voltage junction box in lift space. Terminate as specified in shop drawings. Use CAT 5/5E/6 blue pair.
- **ALTERNATE VOICE COMMUNICATION METHODS (VOIP etc.):** Any electronic components required to maintain the phone signal and/or connectivity must be connected to a backup power source which will automatically provide power to all such components for at least 4 hours in case of a failure of main building power. Provider must provide an interface device and program it with a standard WINK or disconnect signal per FCC and CRTC requirements.



TIE BACK BLOCKING & PIT/SLAB LOADING:

GENERIC STATIC LOADING TABLE FOR VERTICAL PLATFORM LIFTS ANCHORED TO FLOOR AND THE WALL

SYMBOL	DESCRIPTION	VALUE (MAX)
F1 = 1090 LB	PAYLOAD (MAX)	750 LB
	CAR (PLATFORM) WTMAX	340 LB
F2	SHROUD WEIGHT	SEE CHART
F3	FLOOR REACTION (INBOARD)	SEE CHART
F4	FLOOR REACTION (OUTBOARD)	SEE CHART
F5	WALL ANCHORING REACTION	SEE CHART
F6	ENCLOSURE WEIGHT *	SEE CHART
F7	FLOOR SHEAR REACTION	SEE CHART

* NOTE: The enclosure weight is transferred directly to the floor along it's perimeter through posts (two to a side) except for the back side where the ring bolts bolt up directly to the tower.

LAYOUT GEOMETRY

L1	L2	L3	L4
33.156	30.25	5.25	5.187

MODEL	SHROUD HEIGHT	APPROXIMATE ANCHOR HEIGHT (L5)
42	67	43.88
60	85-1/8	61.68
72	97	75.5
96	121	101.44
120	145	123.44
144	169	147.7
168	193	168.7

NOTE: These are the reaction forces based on the gravity loads and operation of the lift. These calculations do not include external loading due to such things as wind stress, rain, seismic activity, etc. Adhere to local building codes, regulations, and safety factors for the supporting structures.

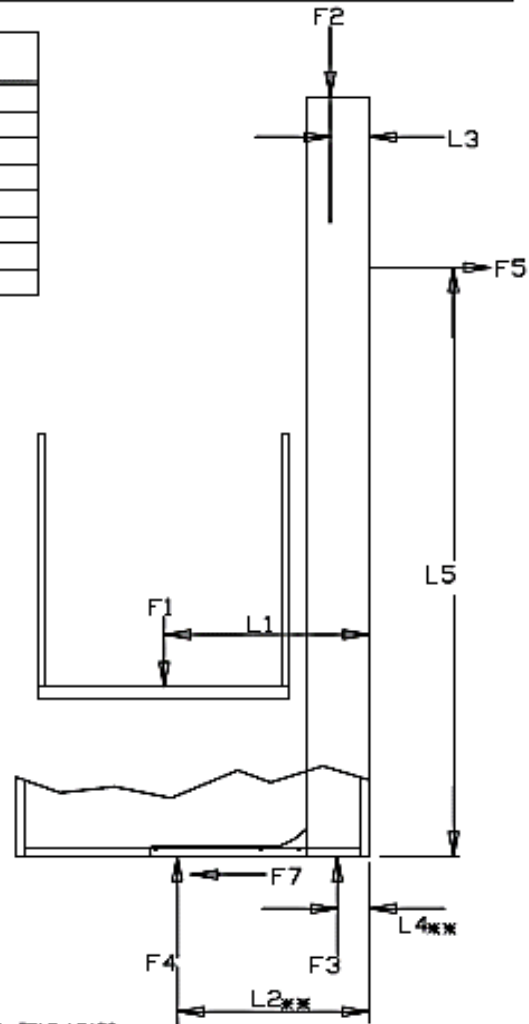
STATIC EQUILIBRIUM

(SUM OF FORCES AND SUM OF MOMENTS = 0)

$$F1 + F2 = F3 + F4$$

$$F7 = F5$$

$$F5 \cdot L5 + F4 \cdot L2 + F3 \cdot L4 = F2 \cdot L3 + F1 \cdot L1$$



VALUES BELOW ARE TOTALS-DIVIDE BY THE NUMBER OF BOLTS FOR INDIVIDUAL BOLT LOADS

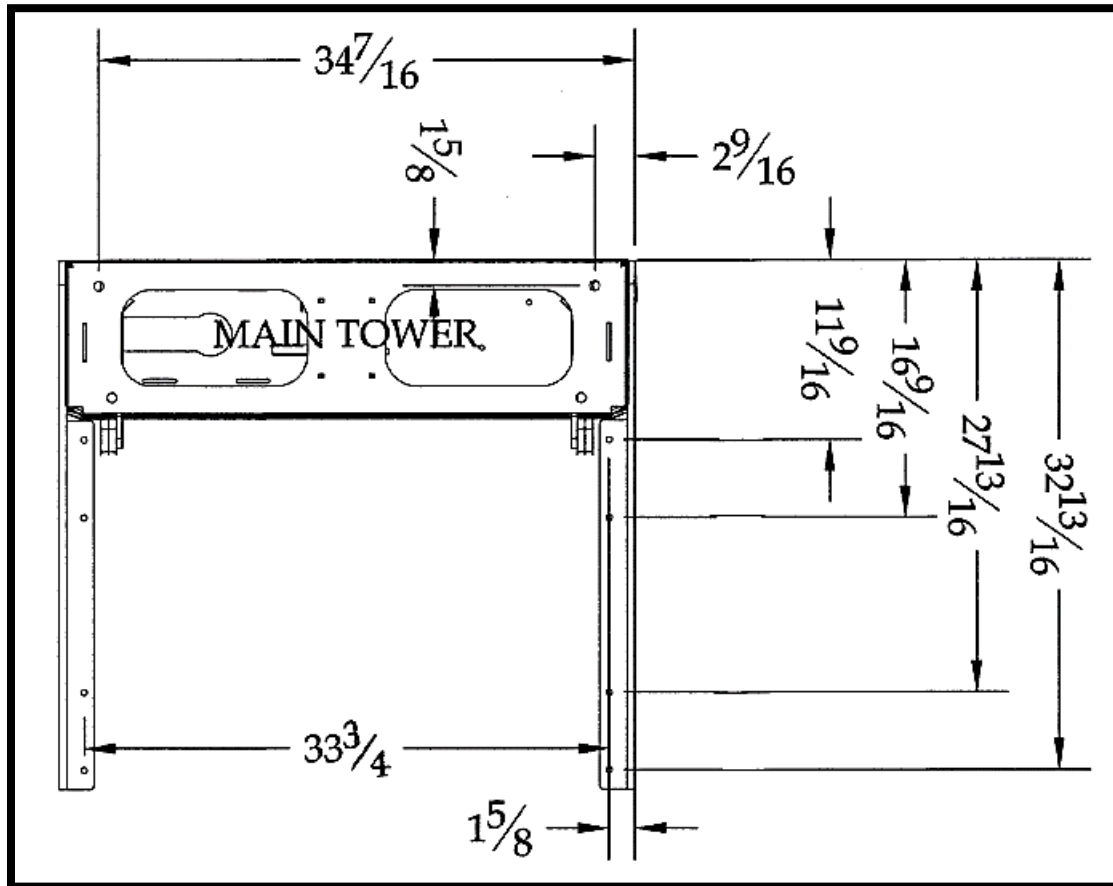
MODEL	MAX SHROUD WT. (LBS)	INBOARD FLOOR REACTION (LBS)	OUTBOARD FLOOR REACTION (LBS)	WALL REACTION (LBS)	MAX ENCLOSURE WT. (LBS)**		FLOOR SHEAR REACTION (LBS)
	F2	F3	F4	F5	STEEL F2	PLEXI	F7
42	446	1232	304	522	497	437	522
60	505	1291	304	371	573	498	371
72	544	1330	304	303	650	568	303
96	667	1452	305	226	765	666	226
120	743	1528	305	186	867	754	186
144	804	1589	305	155	978	848	155
168	899	1684	305	136	1079	935	136

** ON ENCLOSURES, ADD 175# FOR A ROOF OPTION AND ADD 161# FOR A 6'-8" ABOVE OPTION

** The reaction force values are based on using an average (mid-point) location of the base holes as well as an average (mid-point) location of the outermost leg holes. Depending on what actual holes are used as anchor points, the reaction forces will change accordingly.



MACHINE BASE ANCHORING LOCATIONS:





Typical Commercial VPL (Vertical Platform Lift)_Un-Enclosed order/installation progress schedule

- **Signed Proposal or Order Confirmation received by Arrow Lift**
 - Site specific equipment drawings will be processed within **2 weeks** typical from order confirmation and sent out for approval by owner, GC, arch or other
- **Framing or Electrical Rough-In Stage** – Site visit by Arrow Lift representative - pending contractor and project timelines.
 - Signed shop drawings and any other pertinent paperwork must be received by Arrow Lift prior to this point.
 - Once physical site is framed/blocked or poured as applicable for the VPL location and electrical roughed in, Arrow Lift will physically visit the site to gather final measurements for manufacturing.
 - Equipment can be released for production. **Manufacturing can run up to 4-6 weeks pending unit type.**
- **Site readiness** – Site must be ready with initial particular items to receive the VPL for installation. This includes, but is not limited too;
 - Lift space sheetrock installed and taped, if applicable
 - Primed and 1 coat of paint preferred. Touch up of walls may be necessary after initial install.
 - Pit (if provided) cleaned
 - All general electrical in place
 - **Timing - ?** Dependent upon other parties.
- **Installation Week 1** – Installation of VPL equipment
 - Goal is to install VPL to substantial completion (typical 70%-90% complete).
 - **3-4 day process typical**
- **Work by Others** – Arrow Lift off site.
 - Arrow lift issues formal written check list of items requiring completion by your team associated to the VPL. Typical items below but not limited to this list.
 - Active analog phone line with programming instructions if code required
 - 24/7 monitoring required in commercial applications
 - Lighting (standard and emergency) as required
 - Finished flooring at landings
 - **Timing?** Dependent upon other parties.
- **Inspection (if applicable) and turnover** – Based on your team's status of any outlying associated WBO items.
 - Upon receipt of a signed Checklist stating all WBO items are complete, Arrow Lift returns to verify and call for inspection/turnover
 - AHJ availability. **Timeline varies per jurisdictional authority 10 day lead time not uncommon**
 - Equipment turn over for full use upon inspection approval (if applicable) or final of all work by others.