savaria®

Multilift

VERTICAL PLATFORM LIFT

INSTALLATION GUIDE

Part No. 000643, Rev. 029
06-m08-2024

Standard notations

The following notations may be used throughout this guide to emphasize important safety information, mechanical concerns, and other important information. Please review and follow all of these messages.

DANGER	Danger messages indicate an imminently hazardous situation, which, if not avoided, results in death or serious injury. All danger messages feature a standard ISO safety alert symbol followed by the signal word DANGER in capitalized black lettering on a red background.
WARNING	Warning messages indicate a potentially hazardous situation, which, if not avoided, could result in death or serious injury. All warning messages feature a standard ISO safety alert symbol followed by the signal word WARNING in capitalized black lettering on a dark yellow background.
CAUTION	Caution messages indicate a potentially hazardous situation, which, if not avoided, could result in death or serious injury. All caution messages feature a standard ISO safety alert symbol followed by the signal word CAUTION in capitalized black lettering on a yellow background.
CAUTION	Caution messages that do not include the ISO safety alert symbol indicate a potentially hazardous situation for the machine only, which, if not avoided, could result in damage to the machine. All caution messages include the signal word CAUTION in capitalized black lettering on a yellow background.
NOTE	Note messages provide information, such as reminders, general information about a previous statement, or additional guidelines that do not fit into the flow of the preceding text. All note messages include the signal word NOTE in capitalized white lettering on a blue background.

Hazards and warnings

ELECTRICAL SHOCK HAZARD

Do not connect or disconnect wiring while the power is on. Before servicing, disconnect all power to the equipment.

WARNING

SUDDEN MOVEMENT HAZARD

System may start unexpectedly upon application of power. Unpredictable equipment operation may result in death or serious injury.

ELECTRICAL SHOCK HAZARD

Savaria Concord Lifts, Inc. is not responsible for any modifications of the product made by the user.
Do not allow unqualified personnel to use equipment. Failure to comply could result in death or serious injury.
Maintenance, inspection, and replacement of parts must be performed only by authorized personnel familiar with installation, adjustment, and maintenance.
Do not remove covers or touch circuit boards while the power is on.

WARNING

FIRE HAZARD

Do not use an improper voltage source.
Verify that the rated voltage matches the voltage of the incoming power supply before applying power.

DANGER

HAZARD WARNING

Be aware that during the installation, service and maintenance of this equipment, you could or will be exposed to unsafe crushing, shearing and falling hazards.

Job site tools

The following list provides tools and materials used during installation:

- Electric drill
- Metal and concrete drill bits
- Hammer drill for concrete fasteners
- Electric grinder
- Allen wrenches (inch sizes)
- Screwdrivers (including Robertson #1, 2, 3)
- Socket and wrench set (inch sizes)
- Level
- Vise-grip pliers
- Cutting pliers
- Multimeter
- Box cutter/knife
- Scissors
- 10" medium cut file (for filing joints) - optional
- Wall anchors
- 25' tape measure
- Carpenter's level and square
- Plumb bob and line
- Chalk line
- Metal and wood stud finder
- Multimeter
- Safety items (as required): hard hats, safety glasses, steel toe shoes, heavy gloves, etc.
- Hand dolly

Disclaimer

Savaria Concord Lifts, Inc. disclaims liability for any personal injury or property damage resulting from the operation of a product that has been modified from the original Savaria design. No person or company is authorized to change the design of this product without written authorization by Savaria.

IMPORTANT

APPLICABLE CODES

You must ensure that your installation conforms to all local codes and standards including the applicable electrical, building, and elevator/lift codes.

Each region will use a specific year of the code and it is the responsibility of the installing company to confirm which year of the code is applicable.

For the MULTILIFT, the following elevator/lift codes apply:

- ASME A18.1-2003 Section 2 (Public)
- ASME A18.1-2005 Section 2 (Public)
- ASME A18.1-2008 Section 2 (Public)
- ASME A18.1-2011 Section 2 (Public)
- ASME A18.1-2014 Section 2 (Public)
- ASME A18.1-2017 Section 2 (Public)
- ASME A18.1-2003 Section 5 (Private)
- ASME A18.1-2005 Section 5 (Private)
- ASME A18.1-2008 Section 5 (Private)
- ASME A18.1-2011 Section 5 (Private)
- ASME A18.1-2014 Section 5 (Private)
- ASME A18.1-2017 Section 5 (Private)
- ASME A18.1–2020 Section 2 (Public)
- ASME A18.1–2020 Section 2 (Public)
- ASME A18.1-2023 Section 5 (Private)
- ASME A18.1-2023 Section 5 (Private)
- ASME A17.1-1996 Section 20 (Public)
- ASME A17.1-1996 Section 21 (Private)
- CAN/CSA B355 S1-02 (Public)
- CAN/CSA-B355-09 (Public)
- CAN/CSA-B355-15 (Public & Private)
- CAN/CSA-B355-19 (Public & Private)
- CAN/CSA B613-2000 (Private)

Revision history of this guide

- October 1, 2010 – Initial release of new format
- October 19, 2011 – Updated Step 5 on page 8 so specify Group 22F battery; Updated Step 7 on page 10 to indicate that limit switch configuration in an example
- January 3, 2012 – Added Pro-door installation drawings to Appendix A
- June 14, 2012 – Revised landing gate harness drawing in Appendix A (changed Euchner/Sick Lock to WR500 Lock)
- July 31, 2012 – Revised landing gate harness drawing in Appendix A (notes added at bottom of GAL and WR500 boxes)
- November 16, 2012 – Added disclaimer (above); Revised Step 5 on page 8; Added new Step 13 on page 16 to permanently install batteries; Revised Maintenance section on page 24
- February 26, 2013 – Added a Note and photo on page 5 as a reminder to remove the shipping straps; added same reminder to Note on page 6
- April 21, 2014 – Changed flowchart on page 4 and STEP 2 on page 5 to "Unpack and check shipment"; Revised STEP 5 battery procedure on page 8; Added a Note to the Maintenance section on page 24; Added two new input/output drawings on pages 26 and 27 in Appendix A
- November 6, 2014 – Added Important notice regarding Applicable Codes on page 3
- January 20, 2015 – Added new 2014 code on page 3
- February 2, 2016 – Removed word 'recommended' from Maintenance Schedule on page 24
- March 28, 2016 – Changed 15A to 20A in STEP 5 on page 9 and STEP 13 on page 16
- June 6, 2016 – Revised cover photo; Revised Figure 1 on page 7; Revised Figure 7 on page 9
- August 11, 2016 – Revised STEP 8 on page 11
- November 11, 2016 – Revised STEP 6 on page 10 to include optional tower support bracket installation
- February 10, 2017 – Revised Maintenance table on page 25
- July 21, 2017 – Revised photos of switches in Figure 25 on page 17
- December 14, 2017 – Revised STEP 6 on page 10 to indicate tower support bracket is needed for 72" enclosure units and 42" wide cabs
- August 7, 2018 – Added important note re: phone on page 24
- August 24, 2018 – Added important note re: anchors on page 10
- September 27, 2018 – Added ASME 18.1-2017 to code list on this page
- November 28, 2018 – Added note re: power cord on page 9
- December 17, 2018 – Revised steps on page 22 to 24
- January 7, 2020 – Added door closer installation instructions at end of manual as Appendix B
- February 24, 2020 - Reordered steps on page 23
- February 25, 2020 - Added new Appendix B - Savaria Link Option on page 44 - old Appendix B is now C
- July 31, 2020 - Added danger warning on page 2
- June 16, 2023 - Revised figures 15-17 on page 13
- January 23, 2024 - Added Appendix A Maintenance Schedule, Added revision number.
- August 6, 2024 - Revised applicable codes

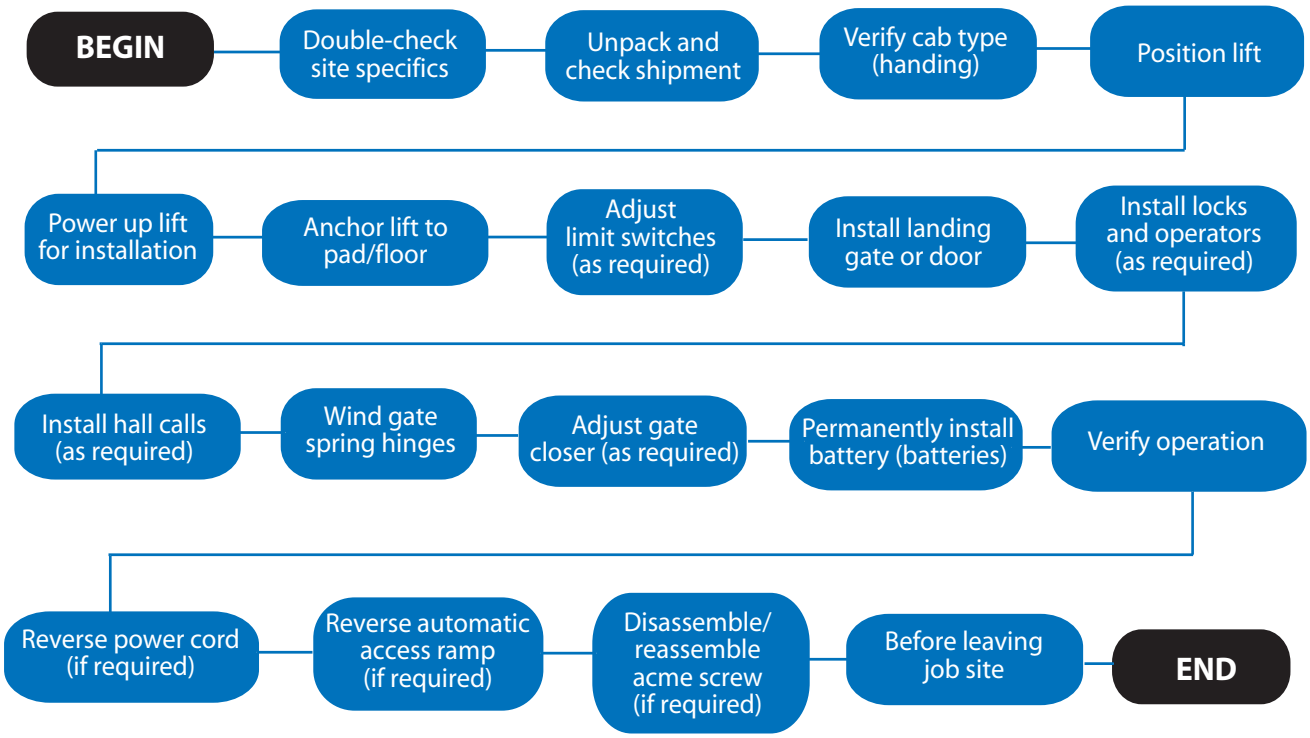
List of installation steps

⚠ WARNING

Follow the steps provided to ensure your safety during installation. Failure to follow instructions renders the Limited Warranty null and void. In addition, any party installing the product who deviates from the installation instructions agrees to indemnify, save, and hold harmless the manufacturer from any and all loss, liability, or damage that may occur as a result of the deviation.

The following table lists the installation steps.

Installation flow chart



Step 1
Double-check site specifics

Double-check all site specifics and preparatory work by others prior to installation.

Procedure

1 Prior to delivery, ensure that you have clear access into the building and a clear route to the installation site.
2 For job site verification, use the following information sources:
   - Plan drawings (also referred to as installation drawings or shop drawings)
   - Written and verbal direction from the customer, electrical contractors, mechanical contractors, inspector, and architect.
3 Ensure the installation surface is flat and level, and free of debris, and will support the lift's load per the plan drawings. If concrete was poured, ensure the concrete has set completely.
4 Ensure that the minimum overhead clearance is in compliance with codes.
5 Verify that all dimensions are per the plan drawings. If they do not match, contact Savaria's *Technical Support* at 1 (800) 791-7999 for assistance.
6 Ensure the electrical installation of a permanent power source complies with the electrical requirements provided on the plan drawings.
7 Ensure there are no fire and safety issues. Contact Savaria's *Technical Support* at 1 (800) 791-7999 if there are any fire and safety issues.
8 Verify there is adequate lighting at the landings.

Step 2
Unpack and check shipment

Unpack and check the contents of the shipment.

Procedure

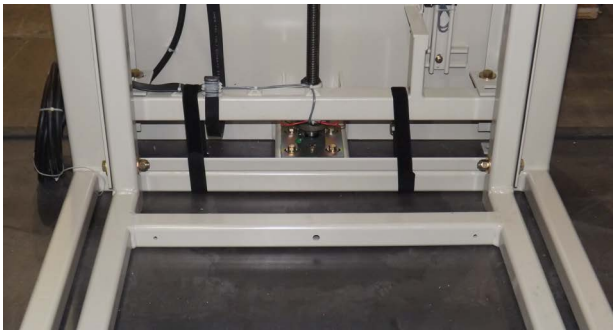
1 Prior to installation, unpack the shipment and verify the contents.
2 Check the condition of the shipment for any damage; installing damaged parts can lead to safety violations and void the limited warranty. Contact Savaria's *Technical Support* at 1 (800) 791-7999 if any parts are damaged.

NOTE

If possible, take a photograph of any damaged part(s).

NOTE

On 72" units, be sure to remove the straps that are used to lock the sling in place during shipping.



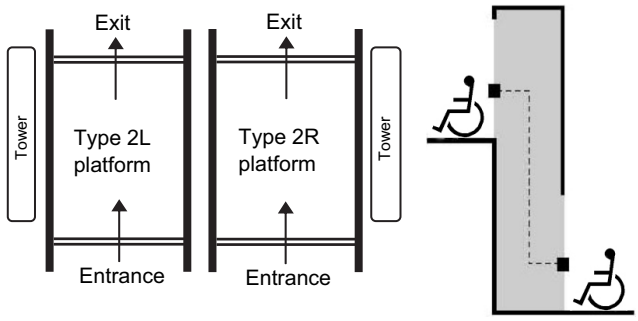
Step 3
Verify cab type (handing)

Verify the type of cab and the handing.

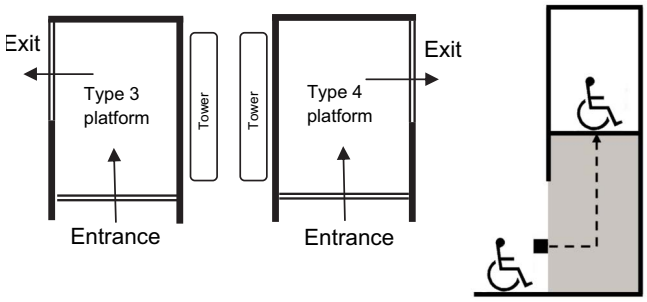
Procedure

Prior to installation, it is important to know what type of cab is being installed. The handing is specific to the type of cab and will determine where the tower is to be installed.

Type 2



Type 3 and Type 4



Step 4
Position lift

Position the lift.

Procedure

NOTE

The Multilift is shipped fully assembled. Be sure to remove the shipping straps securing the sling to the tower.

1 Position the lift on the pad/floor ensuring that the running clearance between the top landing and the platform is per your plan drawings. Refer to the plan drawings shipped with your lift. A sample plan drawing is provided on the next page.

2 Observe the following safety concepts as well.

a. Guarding of top landing

- A door or gate must be used to prevent an accidental fall from the top landing. This door/gate must be unlocked ONLY when the lift is level with the landing.

b. Prevention of shear points along the travel

- A platform moving along stationary objects can sometimes create crushing and shearing hazards (see Figure 1 below).
- A typical situation of a shearing hazard is when the platform crosses the underside of the landing. This situation can be corrected by the use of a fascia panel as shown below.

⚠ DANGER

It is critical to recognize possible crushing or shearing (pinch) hazards and eliminate them.

Figure 1
Shearing (pinch) hazard

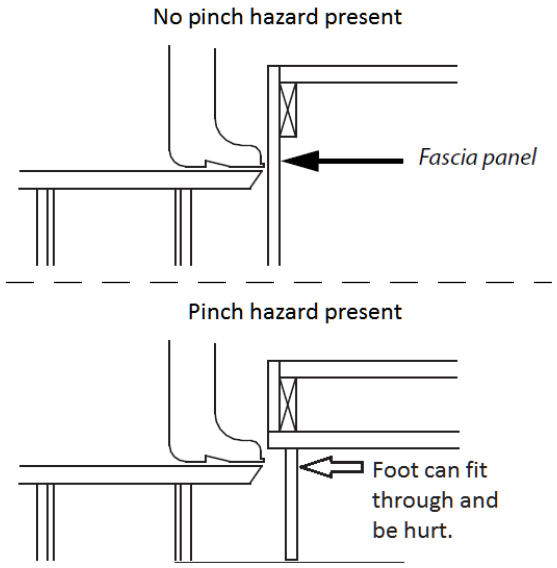
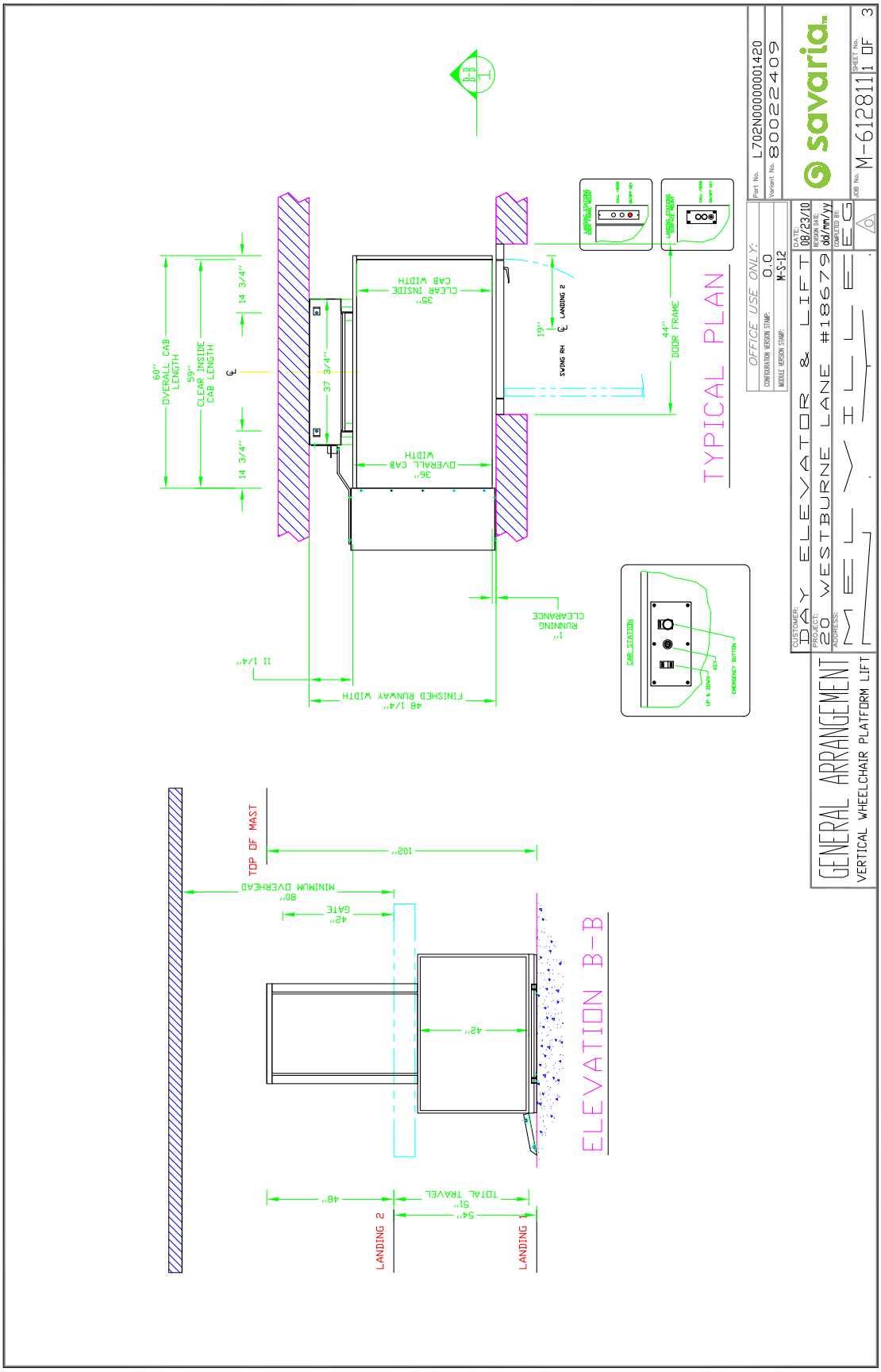


Figure 2
Sample plan drawing



Step 5
Power up lift for installation

Connect the power and then start up the lift.

Procedure

For 110 VAC units

1 Remove the top cap and front panel.

Figure 3
Remove top cap and front panel

2 The lift power cord exists the base of the tower on the left-hand side. Connect the power cord to a 110 VAC, single-phase, 60 Hz, 20-Amp dedicated circuit.

NOTE

IMPORTANT!
This connection is for installation purposes only. Please change to an appropriate connection for a 20 Amp circuit in your region.

Figure 4
Power cord exiting tower

3 The lift should be ready to run.

4 If the lift does not run, remove the panel in front of the controller and diagnose the problem electrically, referring to the wiring diagrams shipped with the lift.

For 12 VDC units

1 Connect the battery cables to a Group 22F battery (refer to the specifications below).

2 The lift should be ready to run.

3 If the lift does not run, remove the panel in front of the controller and diagnose the problem electrically, referring to the wiring diagrams shipped with the lift.

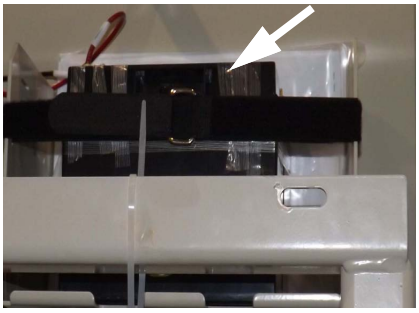
Battery specifications (Group 22F)

Item	Specification
Type	Lead acid, deep cycle
Voltage	12 VDC
Capacity	Minimum 65 Amp Hour (AH)
Maximum dimension to fit in tower	Height: 8-5/16″ Width: 6-7/8″ Length: 9-1/2″
Models	U.S. Battery East: 1-800-522-0945 West: 1-800-695-0945 22F-HC Interstate Batteries 1-800-CRANK IT USRM-22FS

For 24 VDC units

1 The lift is shipped with the battery jumper wire disconnected and put in a plastic bag (shown below). You need to reconnect this wire between the batteries as shown in Figure 7 at the bottom of the page.

Figure 5
Batteries in 24 VDC unit

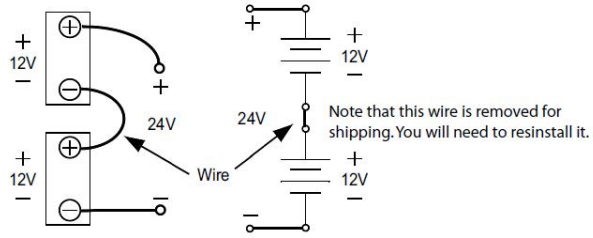


2 The battery cables must be connected in series to the two 12V batteries (P/N 105921) as shown below. The batteries are Universal UB12180 12V, 18AH.

3 The lift should be ready to run.

4 If the lift does not run, remove the panel in front of the controller and diagnose the problem electrically, referring to the wiring diagrams shipped with the lift.

Figure 6
Connecting two batteries



NOTE: Refer to STEP13 later in this manual to permanently install the batteries inside the tower and connect the cables.

Step 6
Anchor lift to pad/floor

Anchor the lift to the pad/floor after verifying the running clearance.

Procedure

1 Ensure the lift is positioned on the pad/floor so there is an adequate running clearance between the top landing and the platform per your site plan drawings.

2 There is an optional tower support bracket (see below) that must be used for 72" enclosure units and 42" wide cabs.

   a. Also note that the concrete slab needs to have an additional 8" (203 mm) behind the tower to accommodate this support bracket.

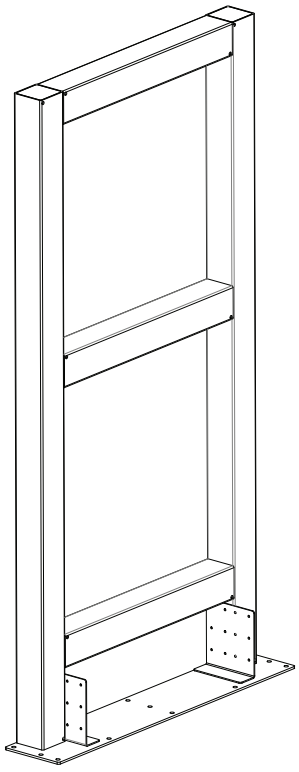
   b. Secure the tower support bracket to the concrete slab using at least four concrete anchors.

IMPORTANT

Note that the anchors provided by Savaria are standard/typical anchors and are not suitable for all site conditions. Always make sure the anchors used are proper for the type of floor on site.

   c. Drill and tap holes through the tower into the support bracket from the inside out (or drill through and use longer bolts with nuts). Two anchor points into the tower are sufficient but make sure they are as high as possible.

Figure 7
Tower support bracket



3 Raise the platform to allow you to work underneath.

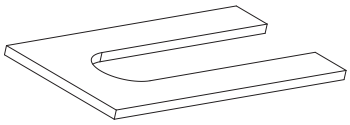
4 Double-check the position of the lift and then install the anchor bolts through the four anchor points as shown below to anchor the lift to the floor/pad.

IMPORTANT

Note that the anchors provided by Savaria are standard/typical anchors and are not suitable for all site conditions. Always make sure the anchors used are proper for the type of floor on site.

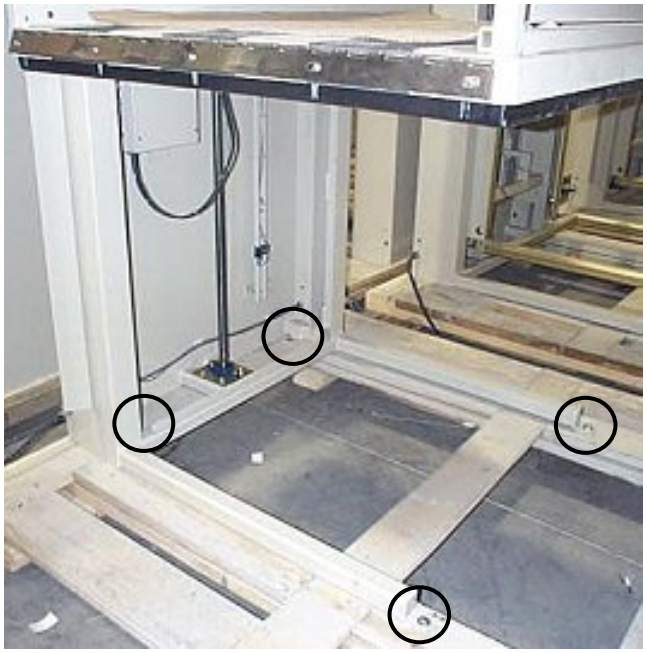
5 Before tightening down the bolts, use shims (320651 shown below) as needed to ensure the lift is plumb and level.

Figure 8
Shim 320651



6 Once complete, lower the platform back down to the pad/floor.

Figure 9
Anchor points



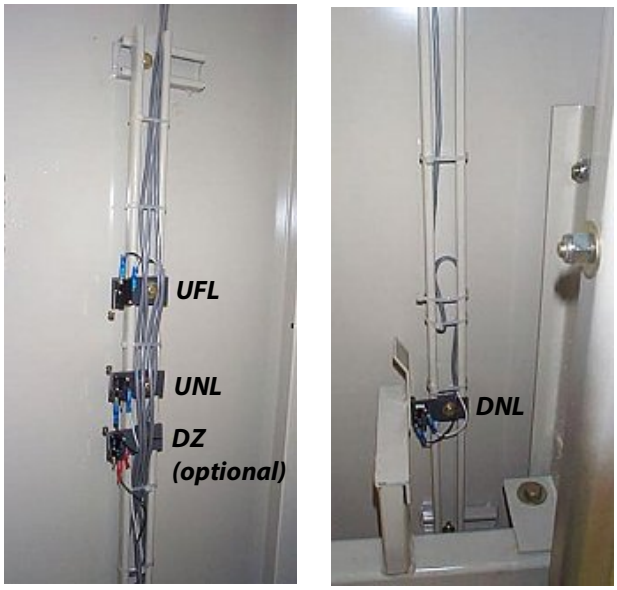
Step 7
Adjust limit switches (as required)

Adjust the limit switches (as required).

Procedure

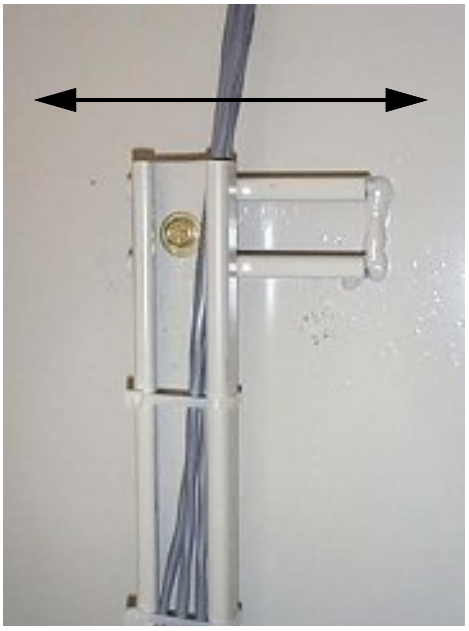
The illustration below shows an example of the limit switches.

Figure 10
Limit switches



Note that there is a lateral adjustment on the track that supports the limit switches. This adjustment brings the switches closer to or further away from the platform cam. Double-check this adjustment.

Figure 11
Limit switch lateral adjustment



Up normal limit (UNL) switch adjustment

Adjust the Up Normal Limit (UNL) switch to the proper height to stop the lift level with the landing.

Up final limit (UFL) switch adjustment

Adjust the Up Final Limit (UFL) switch above the Up Normal Limit (UNL) switch in order to shut the entire lift down if it ever goes beyond the top landing. This switch needs to be activated by the platform before any mechanical contact occurs between the internal components of the lift (distance of less than 2 inches).

Down normal limit (DNL) switch adjustment

Adjust the Down Normal Limit (DNL) switch to the proper height to stop the lift just above ground level.

Door zone (DZ) switch adjustment – optional (mechanical lock only)

On lifts where a mechanical lock is used on a landing door, a Door Zone (DZ) switch is required to allow the lift to run during the unlocking process of the door. Adjust this switch to respect the following sequence as the lift travels toward a landing:

a. Activation of the Door Zone (DZ) switch.
b. Unlocking of the door.
c. Activation of either the Up Normal Limit (UNL) switch or the Down Normal Limit (DNL) switch.

Step 8
Install landing gate or door

Install the landing gate or door.

Procedure

Installation of the landing gate/door is specific to each job site. Refer to your site plan drawings. Install the gate or door at the upper landing using the hardware provided.

Install gate

Note that there are two options for installing the gate.

- Option 1 (Figure 12) – Notch out the landing so the gate angle bracket is flush with the vertical landing surface.
- Option 2 (Figure 13) – Install a 1/4" fascia panel to fill in the gap in the vertical landing surface from underneath the gate angle bracket down to the floor/ground.

NOTE

Note that if your site has a hoistway or pit, be sure to add the 1/4" to those dimensions.

Figure 12
Notch out landing to install gate

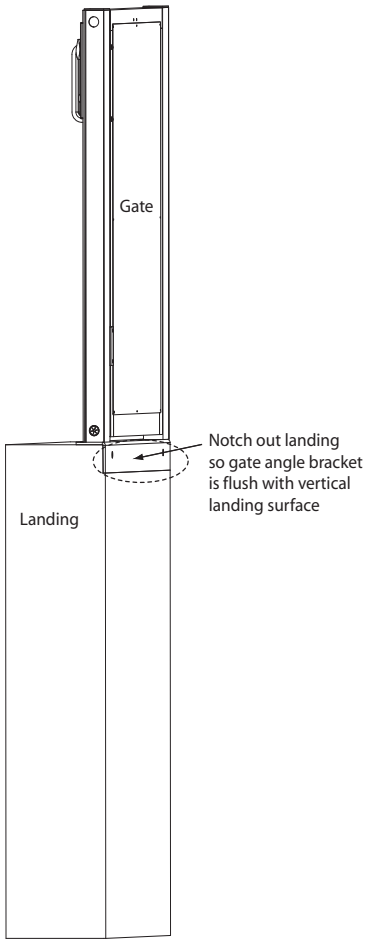
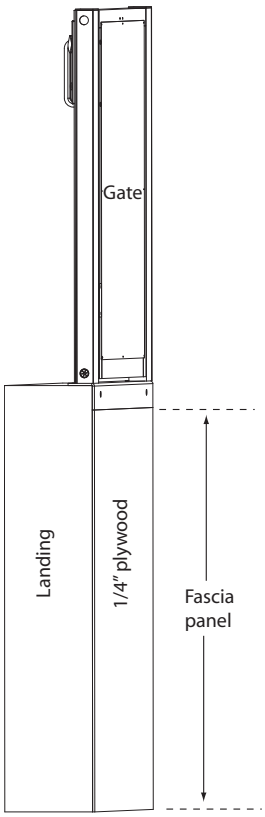


Figure 13
Install fascia panel for gate

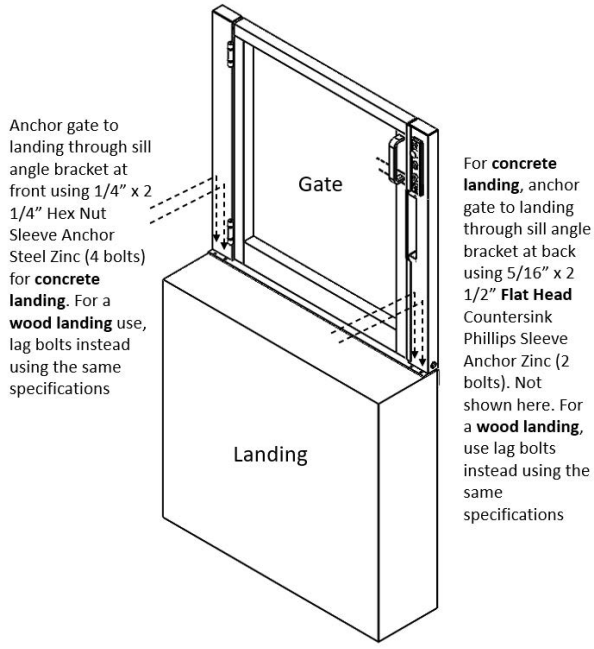


1 If there is a filler panel next to the door/gate (Figure 14), attach the filler panel to the door/gate using Phillips screws (107254 - 10-12x2" and 107255 - 10-12x3").

Figure 14
Attach filler panel to door/gate

2 Center and then anchor the gate to the landing using the hardware provided (four bolts at the front; two bolts at the back) as shown below.

Figure 15
Anchor gate to landing



3 Wire the gate per the wiring diagrams shipped with the lift. Refer also to the landing gate harness drawings in Appendix A.

NOTE

Refer to Appendix A for drawings illustrating the four different pro-door installation methods.

Install door with sill channel (Figure 16)

1 Center and then anchor the door sill channel to the landing using the hardware provided (six bolts) as shown in Figure 16 on the next page).

2 Wire the door per the wiring diagrams shipped with the lift.

Install door with sill angle (Figure 17)

Note that there are two options for installing the door with sill angle (see Figure 17 on the next page).

- Option 1 – Notch out the landing so the sill angle bracket is flush with the vertical landing surface. Refer to Figure 12 on the previous page (note that a gate is shown in Figure 11 instead of a door but the same concept applies).
- Option 2 – Install a 1/4" fascia panel to fill in the gap in the vertical landing surface from underneath the door sill angle bracket down to the floor/ground. Refer to Figure 13 on the previous page (note that a gate is shown instead of a door but the same concept applies).

1 Center and then anchor the door to the landing using the hardware provided (four bolts at the front; two bolts at the back) as shown below.

2 Wire the door per the wiring diagrams shipped with the lift.

Figure 16
Install door with sill channel

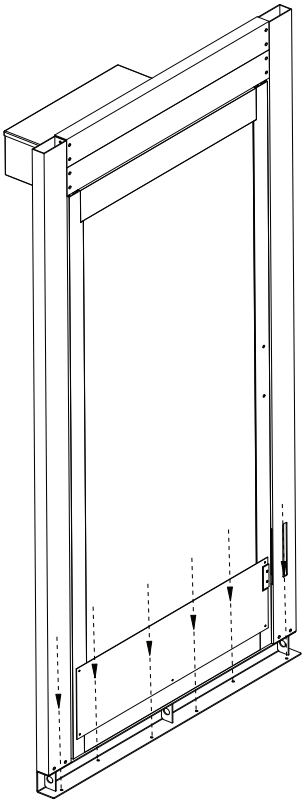
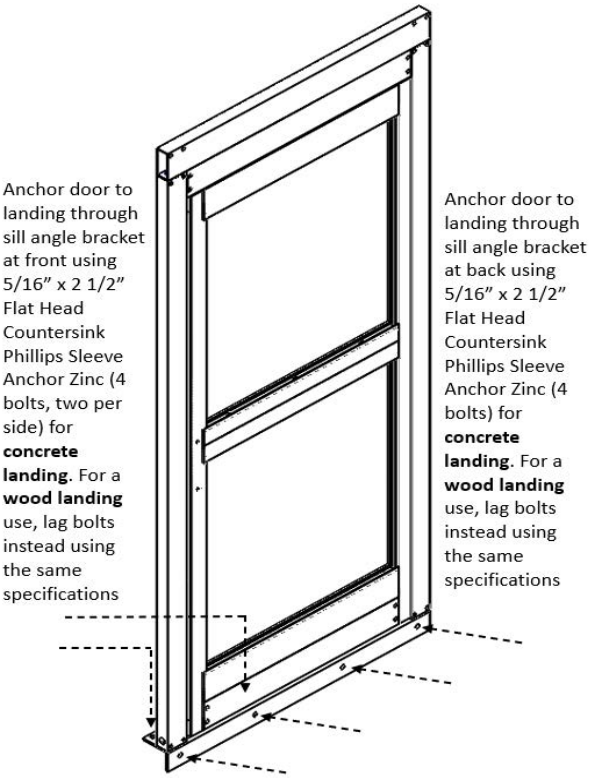


Figure 17
Install door with sill angle



Step 9
Install locks and operators (as required)

Install the locks and operators (as required).

Procedure

The installation of locks and operators is specific for each job site.

For installation of all locks, refer to the VPL Lock Installation Guide P/N 000696.

For installation of the Anny Gate Operator, refer to the Anny Gate Operator Installation Guide P/N 000697.

For installation of other operator types, refer to the documentation that comes with the operator.

Step 10
Install hall calls (as required)

Install the hall calls as required.

Procedure

The hall calls may be flush mount, surface mount or in frame, depending on the job specifications. Refer to the drawings provided in Appendix A.

NOTE

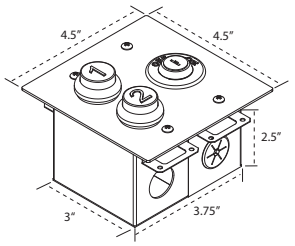
The installation of hall calls is specific to each job site. Refer to the section 'Hall Calls' in Appendix A for illustrations of the various types of hall calls.

1 Mount the hall call at each landing using the hardware supplied with the hall call.

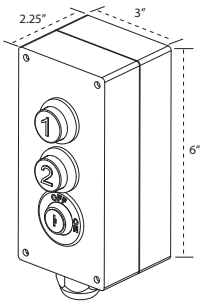
2 Route the wiring from the hall call in to the tower.

3 Route the wiring to the controller and connect per the wiring diagrams shipped with the lift.

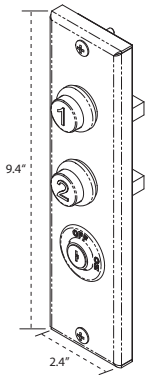
Figure 18
Sample Hall Calls



Flush mount



Surface mount



In frame

Step 11
Wind gate spring hinges

Wind the spring hinges on the gate.

Procedure

It is necessary to wind the gate spring hinges. You will need vise-grip pliers for this procedure. You will also find an Allen key and two pins in a plastic bag provided with the gate.

Figure 19
Allen key and two pins

Follow these steps to wind the spring hinges:

1 Insert the Allen key into the hinge. Increase the tension of the spring hinge by turning the Allen key.

Figure 20
Insert Allen key in hinge and turn to increase tension

2 Put the pin in place and remove the Allen key.

Figure 21
Put pin in place and remove Allen key

3 Repeat steps 1 and 2 to increase the tension.
4 Repeat steps 1, 2 and 3 for the second hinge.

Step 12
Adjust gate closer (as required)

Adjust the gate closer (as required)

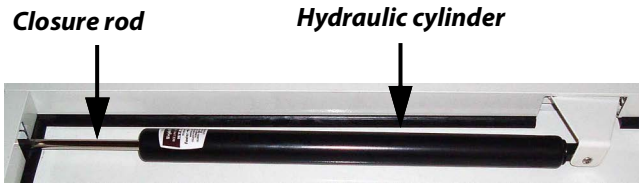
Procedure

The self-closing device inside the gate top crosspiece has been preset to ensure closing. The gate closer is concealed within the top aluminum section of the gate on the hinge side. The closer arm is held in place by two screws visible on the inside of the gate.

NOTE

The arm does NOT need to be removed in order to adjust the gate closer. (These screws will only need to be removed if the closer arm needs adjustment).

Figure 22
Gate closer



To adjust the gate closer, you will need:
- Vise-grip pliers
- 18" (457 mm) length of 18 gauge stranded wire

1 Open the gate to about 75 degrees and attach a pair of vise-grip pliers on the visible closer rod, as close to the gate as possible. This prevents the closer rod from retracting inside the tube (jack unit) when the rotation pin is removed.

2 Slack off the pressure on the rotation pin. Partially close the gate so that the pin can be easily removed. Move the end of the closer rod clear of the jamb bracket so that the hole in the rod's end is accessible.

3 Thread the 18 gauge wire through the hole in the end of the closer rod and FIRMLY grasp both ends of the wire. Release the vise-grip pliers from the closer rod. When the vise-grip pliers are released, slowly allow the closer rod to retract under pressure into the aluminum tube. The 18 gauge wire enables you to control the retraction into the tube. More importantly, it enables you to withdraw the closer rod again for adjustment and re-attachment with the rotation pin.

4 To adjust the closer speed, grasp the 18 gauge wire and manually pull the closer rod until you can access the end of the closer rod. To reduce the gate closing speed, turn the closer rod clockwise. To increase the gate closing speed, turn the closer rod counter-clockwise. This can be done while holding the wire and turning the rod manually or with pliers, as required.

NOTE

Adjustments are sensitive. Adjust by a 1/2 turn at a time only.

5 To test the closing speed of the gate, the closer rod and rotation pin must be reinstalled into the jamb bracket using the previous procedure for removing the pin.

NOTE

Never adjust the gate closer so that the gate slams closed or closes too slowly. Both situations will cause erratic and unreliable operation of the gate.

6 Reinstall the closer rod and rotation pin into the jamb bracket.

NOTE

Never adjust the gate closer so that the gate slams closed or the gate closes too slowly. Both situations will cause erratic and unreliable operation of the gate.

Step 13
Permanently install battery (batteries)

Permanently install the battery (batteries) in the tower.

Procedure

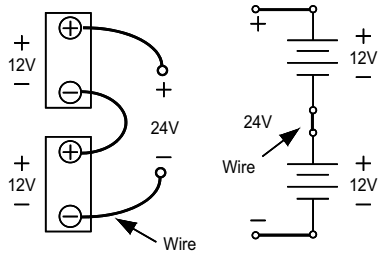
For 12 VDC units

1 Disconnect the battery that was temporarily connected outside the tower for installation and testing.
2 Install the Group 22F battery in the battery rack and secure it in place.
3 Route the battery cables inside the tower and connect them to the battery.
4 Connect the power cord to a 110 VAC, single-phase, 60 Hz, 20-Amp dedicated circuit.
5 The lift is now ready to run.
6 If the lift does not run, remove the panel in front of the controller and diagnose the problem electrically, referring to the wiring diagrams shipped with the lift.

For 24 VDC units

1 Disconnect the batteries that were temporarily connected outside the tower for installation and testing.
2 Install the two 12V batteries (P/N 105921) in the battery rack and secure them in place.
3 Route the battery cables inside the tower and connect them to the batteries.
4 Connect the battery cables (negative last for safety).
5 Connect the power cord to a 110 VAC, single-phase, 60 Hz, 20-Amp dedicated circuit.
6 The lift is now ready to run.
7 If the lift does not run, remove the panel in front of the controller and diagnose the problem electrically, referring to the wiring diagrams shipped with the lift.

Figure 23
Connecting two batteries

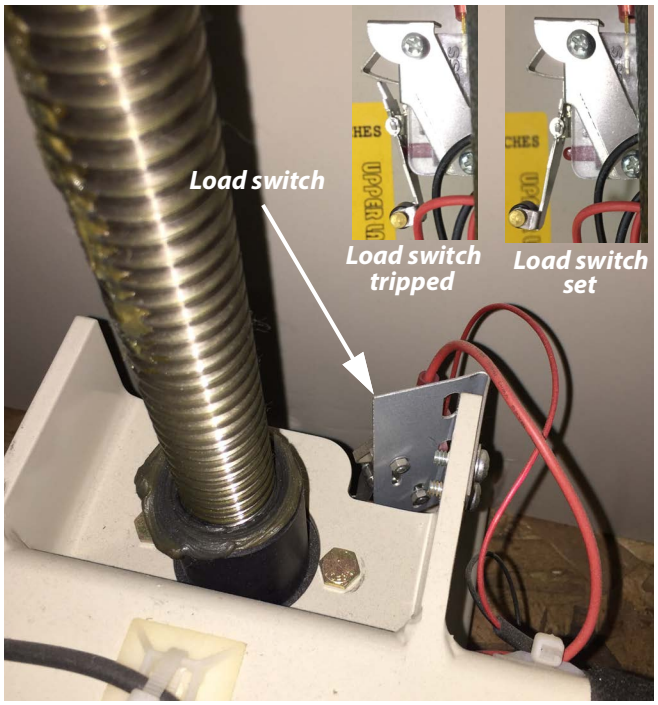


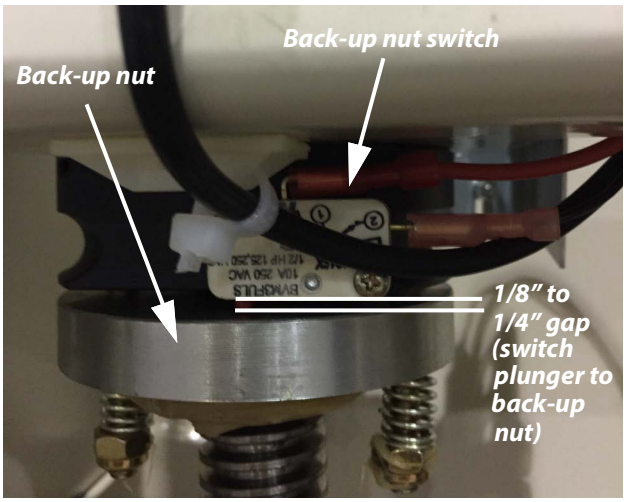
Step 14
Verify operation

Verify the following operational features of the lift:

- General operation of the lift.
- Operation and alignment of the Up Final Limit (UFL) switch (activate by hand).
- Operation of the back-up nut switch (see below).
- Operation of the load switch (see below). Lower the platform to the ground using the hand crank in order to release the load on the main nut. The lift should not run up until you restore the load on the main nut by moving the platform up with the hand crank.
- Operation of the underpan sensor.
- Operation of the emergency stop.
- Operation of the door lock contacts. The lift should not run unless the door is closed and locked.

Figure 24
Load switch and back-up nut switch





Step 15
Reverse power cord (if required)

Reverse the power cord from one side of the tower to the other.

Procedure

Follow these steps to reverse the power cord from the left side to the right side of the tower.

1 Unplug the power cord from the wall outlet.
2 Remove the power cord plug from the cord.
3 Remove the power cord grommet from the tower.
4 Remove the cord from the zip-tie anchor point(s).

Figure 25
Power cord on left side

5 Reroute the power cord to exit through the bottom right side panel knockout in the tower.
6 Reinstall the power cord grommet on the right side panel.
7 Reinstall the plug on the cord.
8 Reanchor the power cord using the supplied zip-ties.

Figure 26
Power cord on right side

Step 16

Reverse automatic access ramp (if required)

Reverse the automatic access ramp (if required).

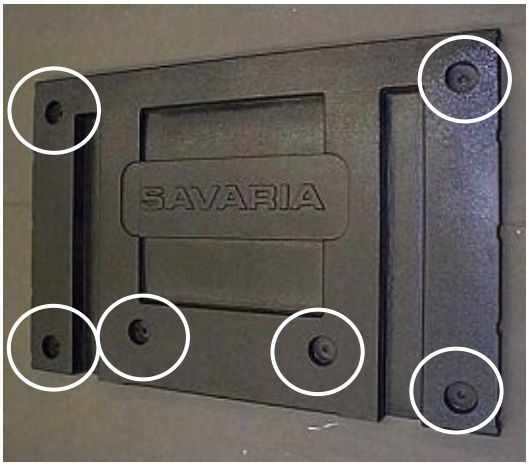
Procedure

Follow the steps below to reverse the automatic access ramp (if required).

1 Remove the top cap and the front panel.

2 Remove the underpan (six bolts).

Figure 27
Remove underpan

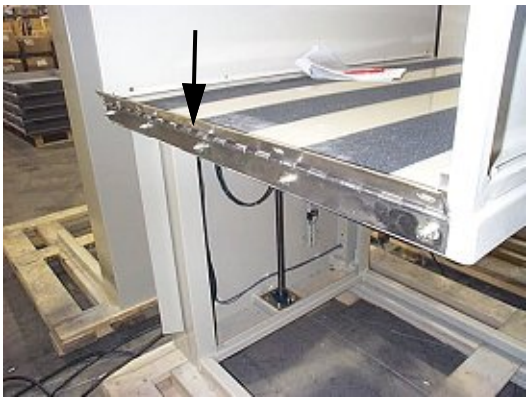


3 Remove the automatic access ramp.

Figure 28
Remove automatic access ramp

4 Remove the hinge from the platform (five screws).

Figure 29
Remove platform hinge



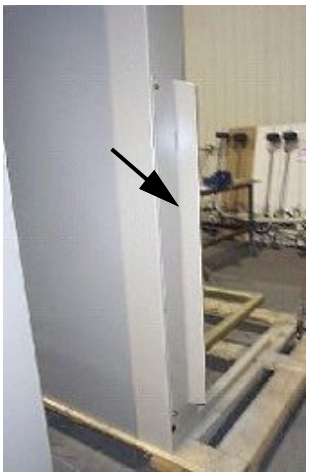
5 Reverse the position of the actuating arm from one side of the ramp to the other.

Figure 30
Reverse position of actuating arm on ramp

6 Reinstall the hinge (five screws) and the automatic access ramp on the other side of the platform (five screws).

7 Reverse the position of the cam rail from one side of the tower to the other.

Figure 31
Remove position of cam rail on tower



8 Reinstall the underpan (six bolts).

9 Reinstall the front panel and top cap.

Step 17

Disassemble/reassemble the acme screw (if required)

Disassemble/reassemble the acme screw (if required).

Procedure

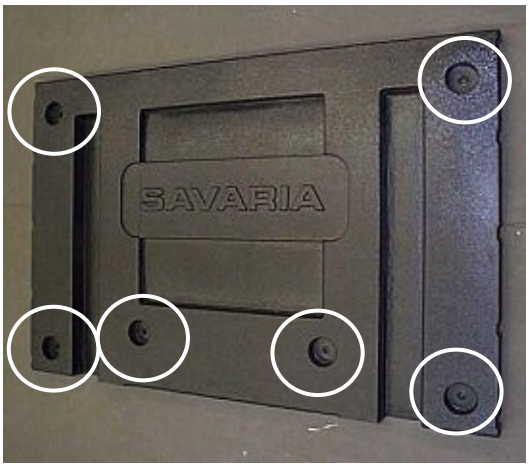
> **⚠ WARNING**
>
> Always disconnect the power source (power cord and battery, if equipped) before working on the lift.

Disassemble the acme screw

1 Follow these steps to remove the platform.

a. Remove the underpan.

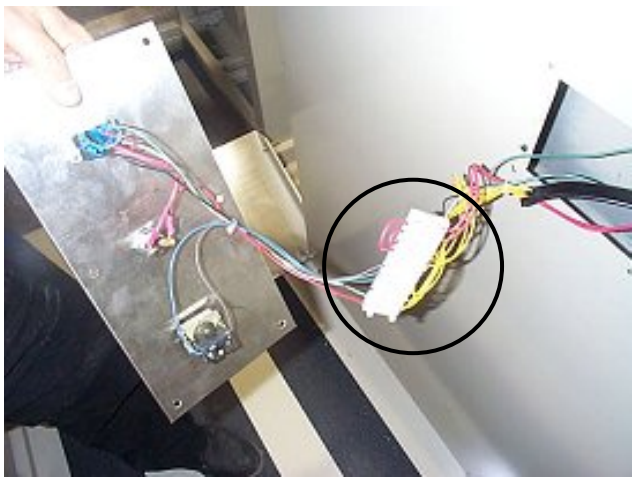
Figure 32
Remove underpan



b. Remove the car operating panel (COP).

c. Disconnect the travelling cable at the quick connect plug behind the COP.

Figure 33
Disconnect COP quick connect plug

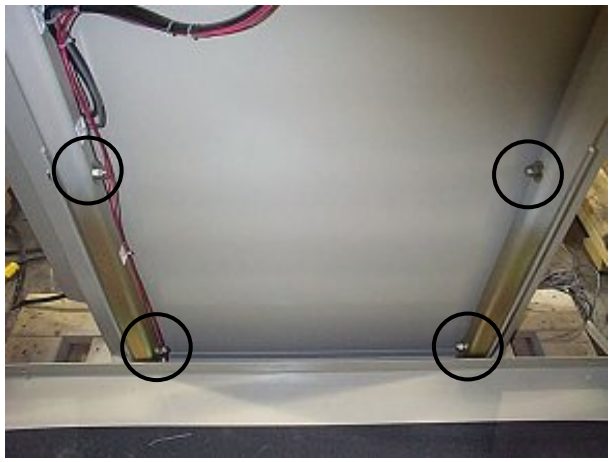


d. Remove the side panel wall on the tower side (four bolts).

Figure 34
Remove side panel on tower side

e. Remove the four bolts holding the carriage to the roller supports (two on each side).

Figure 35
Remove bolts holding carriage to roller supports



2 Follow these steps to remove the acme screw:

a. Remove the top cap (two screws).

Figure 36
Remove top cap

b. Remove the front panel (three screws).

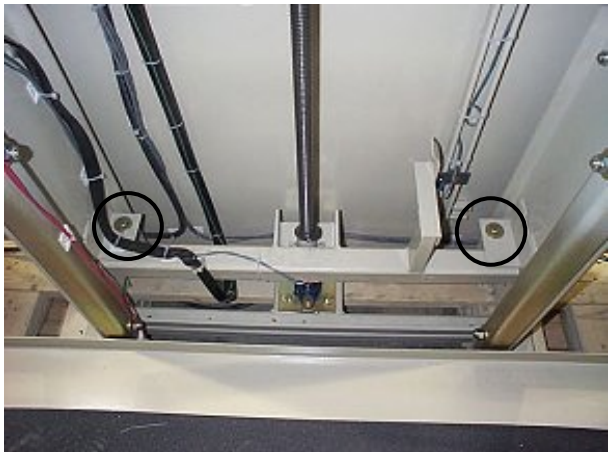
Figure 37
Remove front panel

c. Cut the four cable ties holding the travelling cable to the main crossmember.

Figure 38
Cut cable ties holding travelling cable

d. Remove the bolt holding each roller support to the main crossmember.

Figure 39
Remove bolts holding roller supports to crossmember



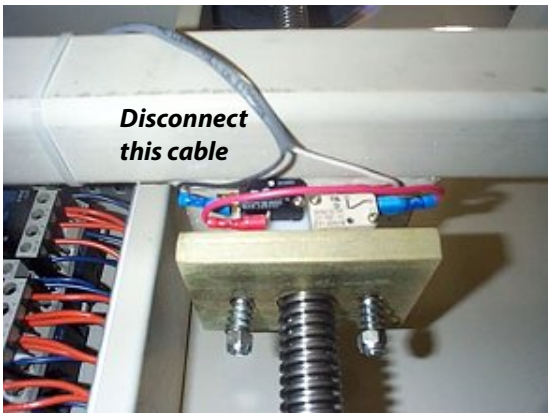
e. Remove the two roller supports by sliding them up.

f. Loosen the V-belts by loosening the motor base (four bolts).

Figure 40
Loosen V-belts by loosening motor base

g. Disconnect the cables going to the switches on the main nut (load switch and back-up nut switch).

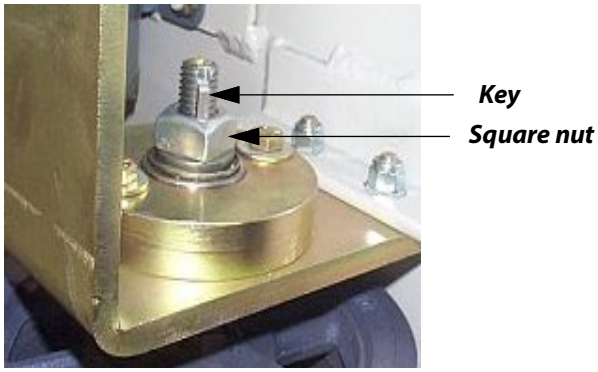
Figure 41
Disconnect cables going to main nut switches



h. Remove the key inserted in the square nut at the top of the acme screw.

i. Remove the square nut.

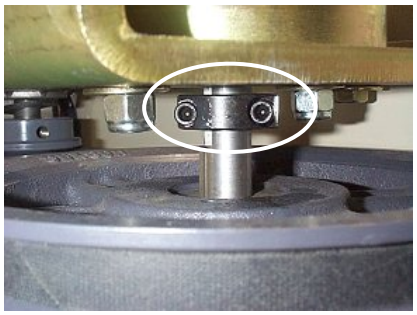
Figure 42
Remove the square nut



j. Remove the bearing.

k. Remove the shaft collar mounted on the acme screw just under the top bearing.

Figure 43
Remove the shaft collar mounted on the acme screw

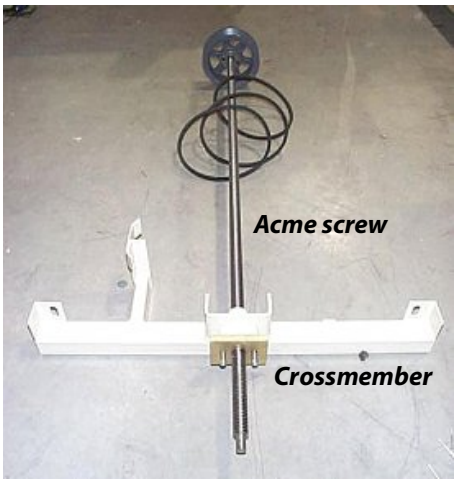


l. Loosen the two set screws holding the acme screw into the lower pillow block.

Figure 44
Loosen set screws holding acme screw in lower pillow block

m. Raise the acme assembly screw out of the lower pillow block and slide it out toward the front. Note that at this point, the main crossmember is still mounted on the screw as shown below.

Figure 45
Acme screw assembly



3 Remove the main nut and the back-up nut by rotating the acme screw while preventing the main crossmember from turning.

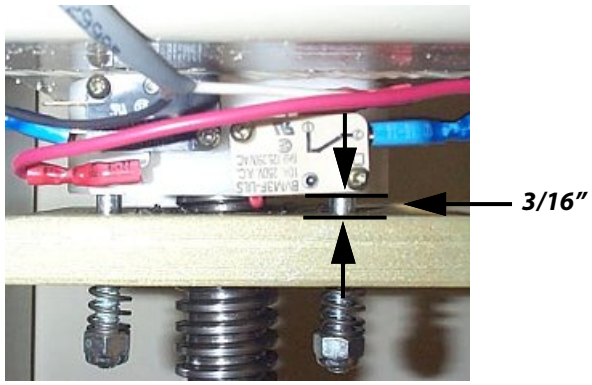
Reassemble the acme screw

1 Assemble the main nut and the back-up nut on the main crossmember as shown in Figure 46.

2 Insert the acme screw through the main nut and the back-up nut. The back-up nut has to be positioned (threaded) in order to respect the minimum (3/8″) and maximum (1/2″) distances from the main nut as shown in Figure 46.

3 Make sure the main nut and back-up nut are clean and free of any solid debris to ensure proper action of the microswitches.

Figure 46
Distance between main nut and back-up nut



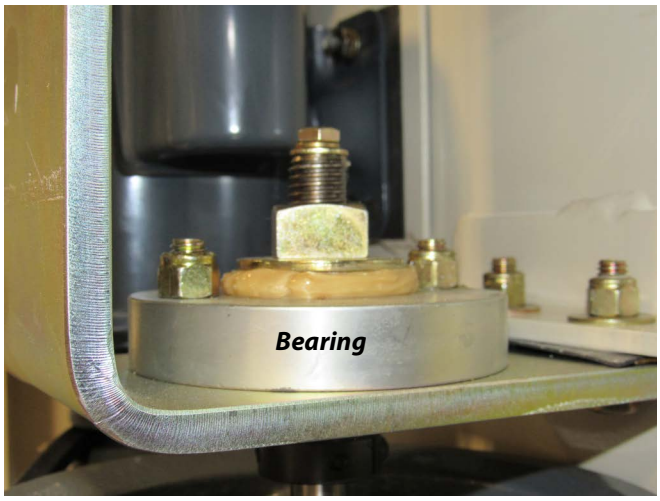
4 Follow these steps to install the acme screw.

a. Install the V-belts around the acme screw while trying to prevent them from getting grease on them. Note that if one of the V-belts needs to be replaced, they must all be replaced at the same time.

b. Insert the top of the acme screw through the top support and slide the bottom into the lower pillow block.

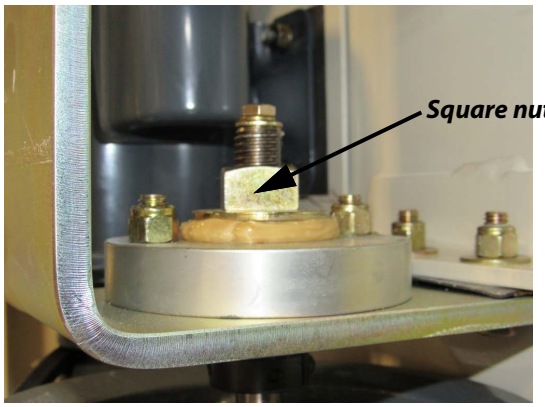
c. Place the top bearing on the acme screw (see below). Ensure it is free of dirt and properly lubricated. Repack with wheel bearing grease if necessary.

Figure 47
Top bearing on screw



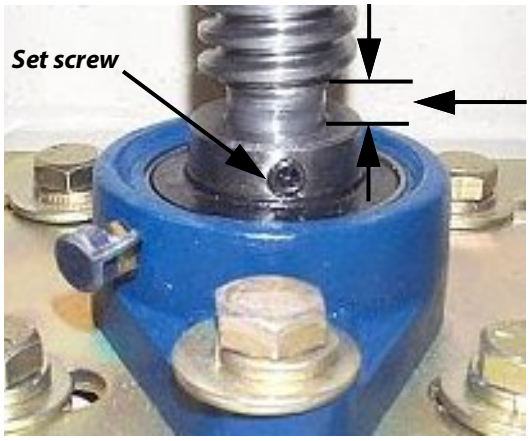
d. Thread the square nut onto the upper end of the screw (see below).

Figure 48
Square nut



e. Screw on the square nut until the shoulder at the bottom of the acme screw is within the minimum (1/16") and maximum (1/4") gap range as shown below. Note that this gap may vary. **DO NOT torque the square nut; see the IMPORTANT NOTE below.**

Figure 49
Distance between shoulder and pillow block



f. Align the keyway on the square nut with the one on the acme screw (see below) and then insert the key.

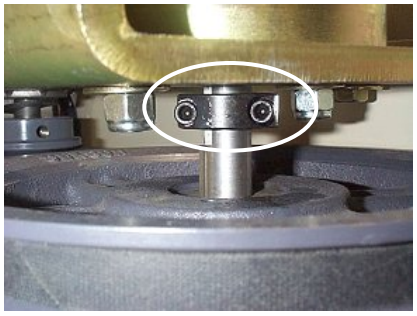
g. **IMPORTANT NOTE:** To align the keyway, **DO NOT** torque the square nut. Instead back off the square nut as necessary to enable insertion of the key. **There must be ZERO torque between the square nut and the acme screw.**

h. Once the proper gap range is achieved at the bottom of the screw, tighten the set screws holding the lower end of the screw into the pillow block.

Figure 50
Align keyway

i. Install the shaft collar on the acme screw, just on top of the key under the top bearing. Use blue loctite on the bolts to secure it in place.

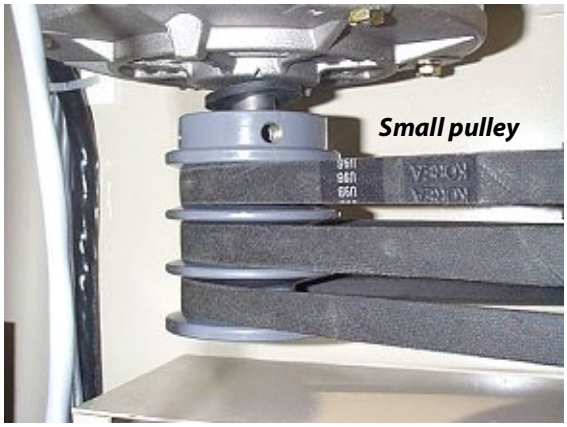
Figure 51
Install the shaft collar



j. Install the V-belts on the drive pulleys. Adjust the alignment of the two pulleys if necessary by moving either one. The small pulley can be moved up and down on the motor shaft (see Figure 50 below) using the pulley set screws. The larger pulley can be adjusted by moving the acme screw up or down by the top square nut while respecting the minimum and maximum distances specified in Figure 46 on the previous page. Wait until the screw has been aligned before adjusting the belt tension.

k. Reconnect the wires going to the switches on the main nut.

Figure 52
Adjust pulleys if necessary



5 Follow these steps to install the platform.

a. Install the roller supports and fasten them to the main crossmember.

b. Install the carriage to the roller supports.

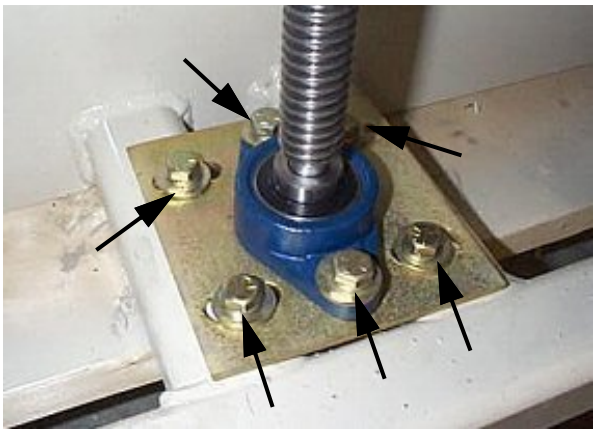
c. Fasten the traveling cable with cable ties to the main crossmember at the original positions. Ensure the cable is long enough to prevent it from hanging on the ground when at the lower landing.

6 If for any reason, the supports holding the top and lower bearings have been removed or loosened, it is very important to align the acme screw. Follow the steps below to do this.

a. Lower the platform within 1" from the lowest position possible without resting it on the ground.

b. Loosen the four bolts holding the lower bearing mounting plate and the two bolts holding the lower bearing as shown in Figure 49.

Figure 53
Loosen mounting plate bolts and bolts holding bearing



c. Ensure the lower bearing mounting plate and bearing are free to slide sideways. The purpose of this is to let the carriage dictate the position of the screw. Let the screw find its natural position.

d. Secure the lower bearing in place by tightening the six bolts holding the mounting plate and the bearing in place.

e. Run the platform within 1" from the highest position possible. Loosen the two bolts holding the upper bearing disk to the L-support. Ensure the disk is free to move sideways to allow the acme screw to move to its natural position.

Figure 54
Loosen bolts holding upper bearing disk to L-support

f. Tighten the upper bearing disk.

g. Adjust the belt tension by sliding the motor toward the left side.

7 Install the side panel wall on the tower side.

8 Reconnect the travelling cable quick connect plug to the COP.

9 Install the front panel (three screws).

10 Install the top cap (two screws).

Before leaving job site

Before leaving the job site, make sure the work area is clean and the lift is safe and operational.

Procedure

1 Clean up the work area.

2 Make sure all hardware has been tightened.

3 Explain the operation of the elevator to the customer.

4 Assist the customer on an orientation ride.

5 Provide a copy of the Owner's Manual and Warranty to the customer. Be sure to record all required details per the Owner's Manual.

IMPORTANT

Do NOT turn over the elevator prior to having an active phone line and having properly tested the phone or automatic dialer phone (as applicable).

Appendix A Maintenance

Maintenance Schedule (General)

Verification	Frequency (Commercial/Exterior)	Frequency (Residential)
Verify correct operation of the phone (where applicable).	Every 6 months	**Normal**: Every Year **Heavy**: Every Year **Excessive**: Every 6 months
Verify the following: • General operation of the lift • Operation of the underpan sensors • Operation of the emergency stop • Operation of the door and gate lock contacts. The lift should not run unless the door or gate is closed and locked.	Every 6 months	**Normal**: Every Year **Heavy**: Every Year **Excessive**: Every 6 months

Verify the door lock operation:
• The lift is operational when the door is locked
• The lift is NOT operational when the door is open at a landing
• Insert the lock key to manually unlock the door and ensure the following:
  • The lift is NOT operational when the door is manually unlocked with the key
  • The key cannot be removed from the lock
	Every 6 months	**Normal**: Every Year
		Heavy: Every Year
		Excessive: Every 6 months

Verify that all hardware is tightened.	Every 6 months	**Normal**: Every Year **Heavy**: Every Year **Excessive**: Every 6 months
Check the rollers (function and wear).	Every 6 months	**Normal**: Every Year **Heavy**: Every Year **Excessive**: Every 6 months
Check the battery fluid level (optional system). Also check the voltage with the charger unplugged (13 VDC unloaded and no lower than 10-11 VDC when running up/down).	Every 6 months	**Normal**: Every Year **Heavy**: Every Year **Excessive**: Every 6 months
Verify the safety components: • Operation and alignment of the up final limit switch (activate by hand) • Operation of the back-up nut switch • Operation of the load switch. Lower the platform to the ground using the hand crank to release the load on the main nut. The lift should not run up until you restore the load on the main nut by moving the platform up with the hand crank. • Operation of the up relays. Verify that neither of the two up relays gets stuck in the activated position. Use a multimeter to verify that every N.O. contact is open when the relays are not activated.	Every 6 months	**Normal**: Every Year **Heavy**: Every Year **Excessive**: Every 6 months
Lubricate the acme screw, and upper and lower bearings using high-quality wheel bearing grease.	Every 6 months	**Normal**: Every Year **Heavy**: Every Year **Excessive**: Every 6 months
Ensure that all filler panels (aluminum, Plexiglas or glass) are securely fastened in the enclosure, doors and gates.	Every 6 months	**Normal**: Every Year **Heavy**: Every Year **Excessive**: Every 6 months

Maintenance Schedule (Adjusted)

Some Jurisdictions have their own state, county or local code that deviate from national code. Please fill out the below information with the requirements of your region:

Savaria Job Number: _____

Installation Address: _____

Verification	Adjusted
Verify correct operation of the phone (where applicable).	
Verify the following: • General operation of the lift • Operation of the underpan sensors • Operation of the emergency stop • Operation of the door and gate lock contacts. The lift should not run unless the door or gate is closed and locked.	

Verify the door lock operation:
• The lift is operational when the door is locked
• The lift is NOT operational when the door is open at a landing
• Insert the lock key to manually unlock the door and ensure the following:
  • The lift is NOT operational when the door is manually unlocked with the key
  • The key cannot be removed from the lock	

Verify that all hardware is tightened.	
Check the rollers (function and wear).	
Check the battery fluid level (optional system). Also check the voltage with the charger unplugged (13 VDC unloaded and no lower than 10-11 VDC when running up/down).	
Verify the safety components: • Operation and alignment of the up final limit switch (activate by hand) • Operation of the back-up nut switch • Operation of the load switch. Lower the platform to the ground using the hand crank to release the load on the main nut. The lift should not run up until you restore the load on the main nut by moving the platform up with the hand crank. • Operation of the up relays. Verify that neither of the two up relays gets stuck in the activated position. Use a multimeter to verify that every N.O. contact is open when the relays are not activated.	
Lubricate the acme screw, and upper and lower bearings using high-quality wheel bearing grease.	
Ensure that all filler panels (aluminum, Plexiglas or glass) are securely fastened in the enclosure, doors and gates.	

NOTE

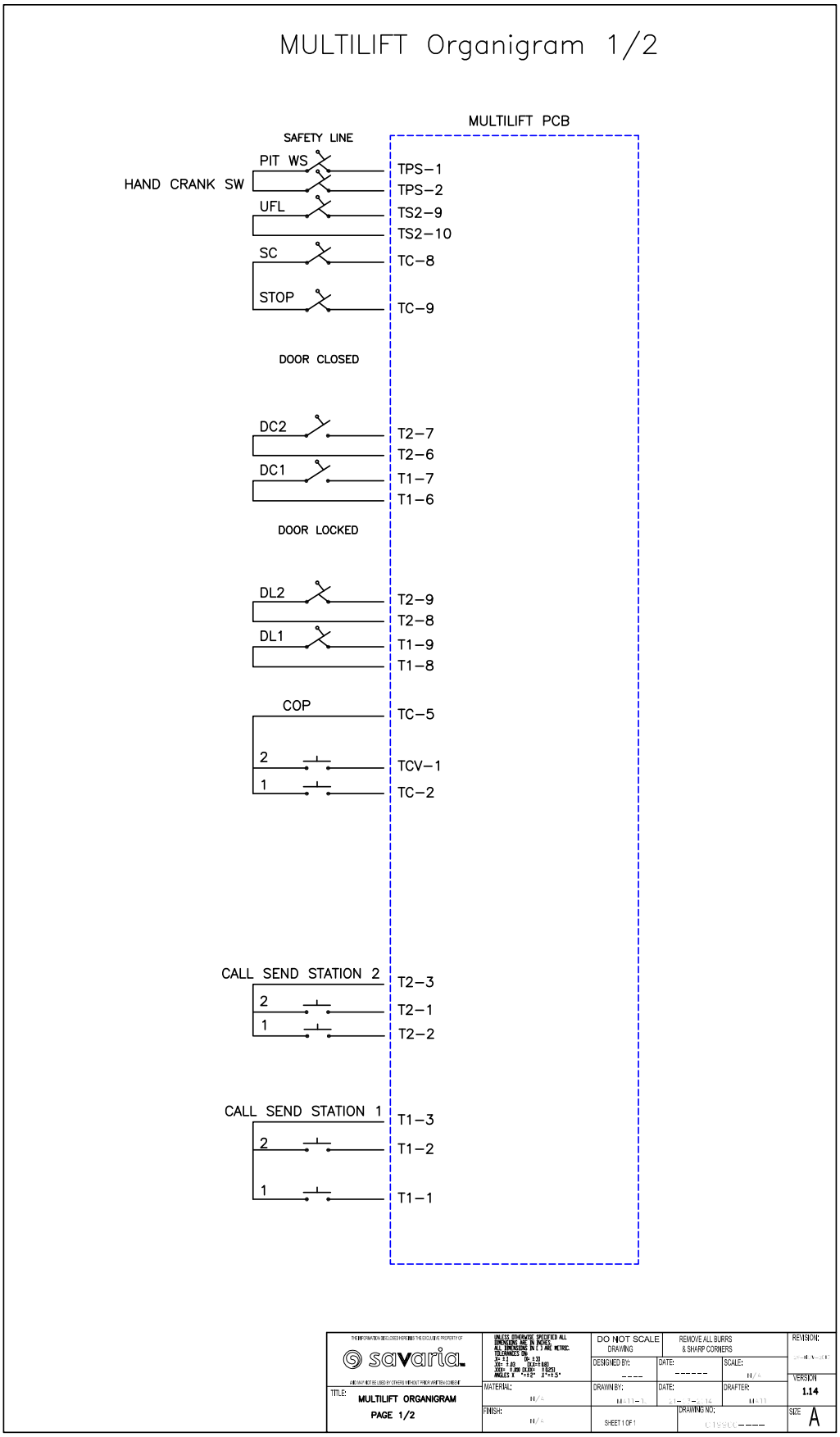
To prevent possible corrosion on outdoor units, all metal surfaces (for example, stainless steel) should be cleaned and waxed regularly with the appropriate cleaner and wax.

Appendix B
Reference Drawings

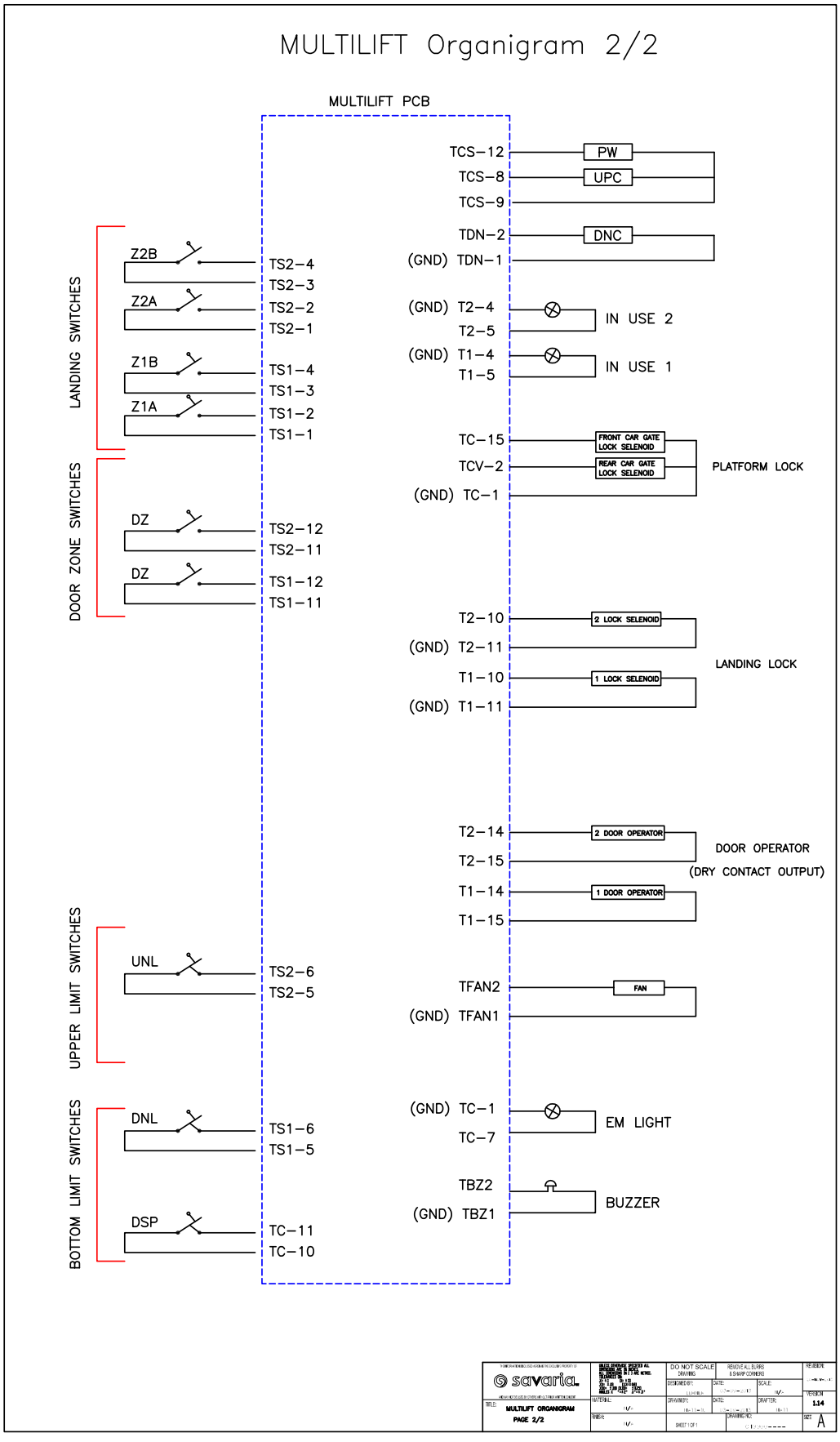
This appendix provides the following reference drawings:

- Multilift input/output drawing (sheet 1)
- Multilift input/output drawing (sheet 2)
- Hall call - flush remote
- Hall call -surface remote
- Hall call - in frame
- Landing gate harness
- Hall call only gate harness
- Pro-door installation methods

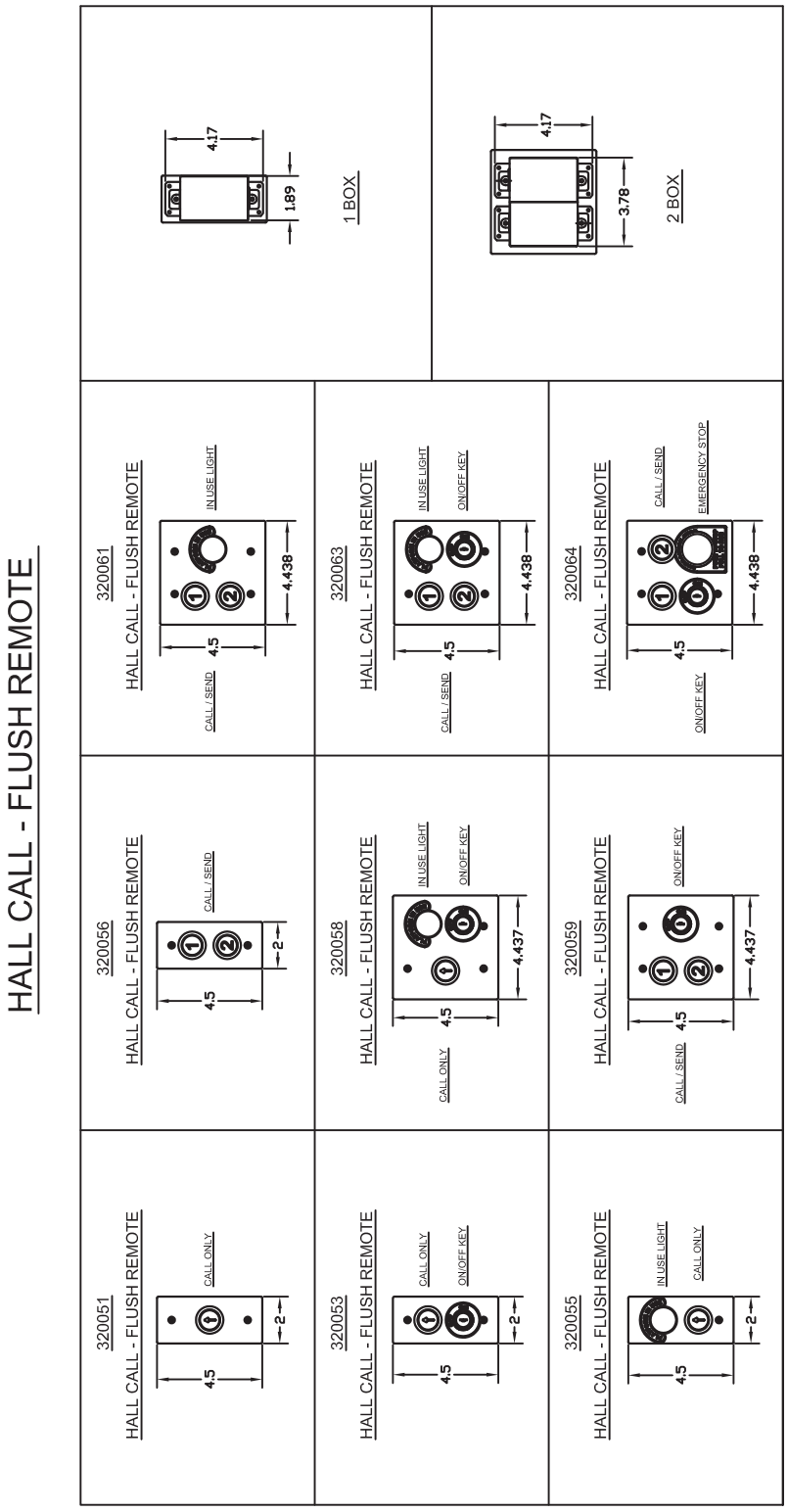
Multilift input/output drawing (sheet 1)



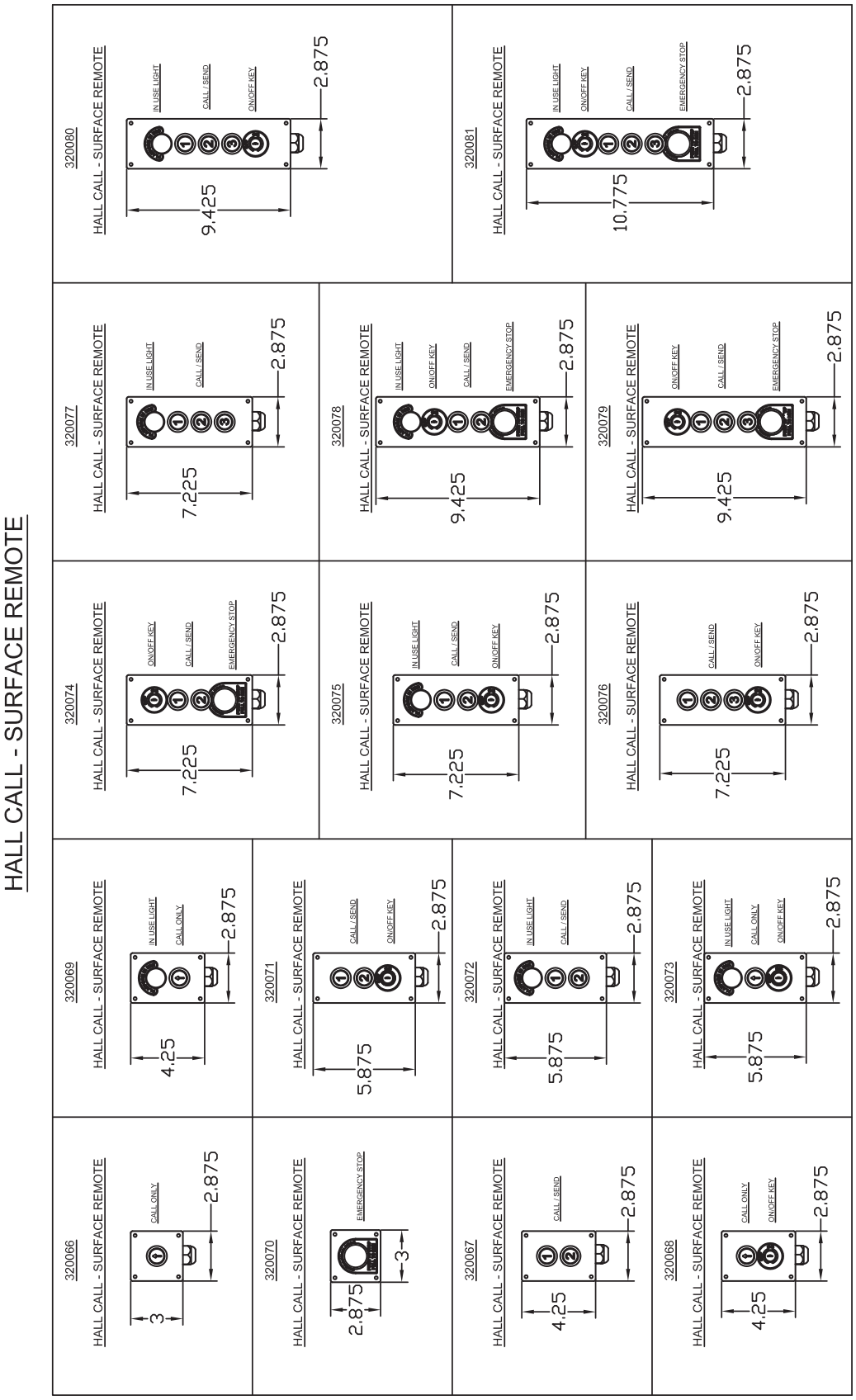
Multilift input/output drawing (sheet 2)



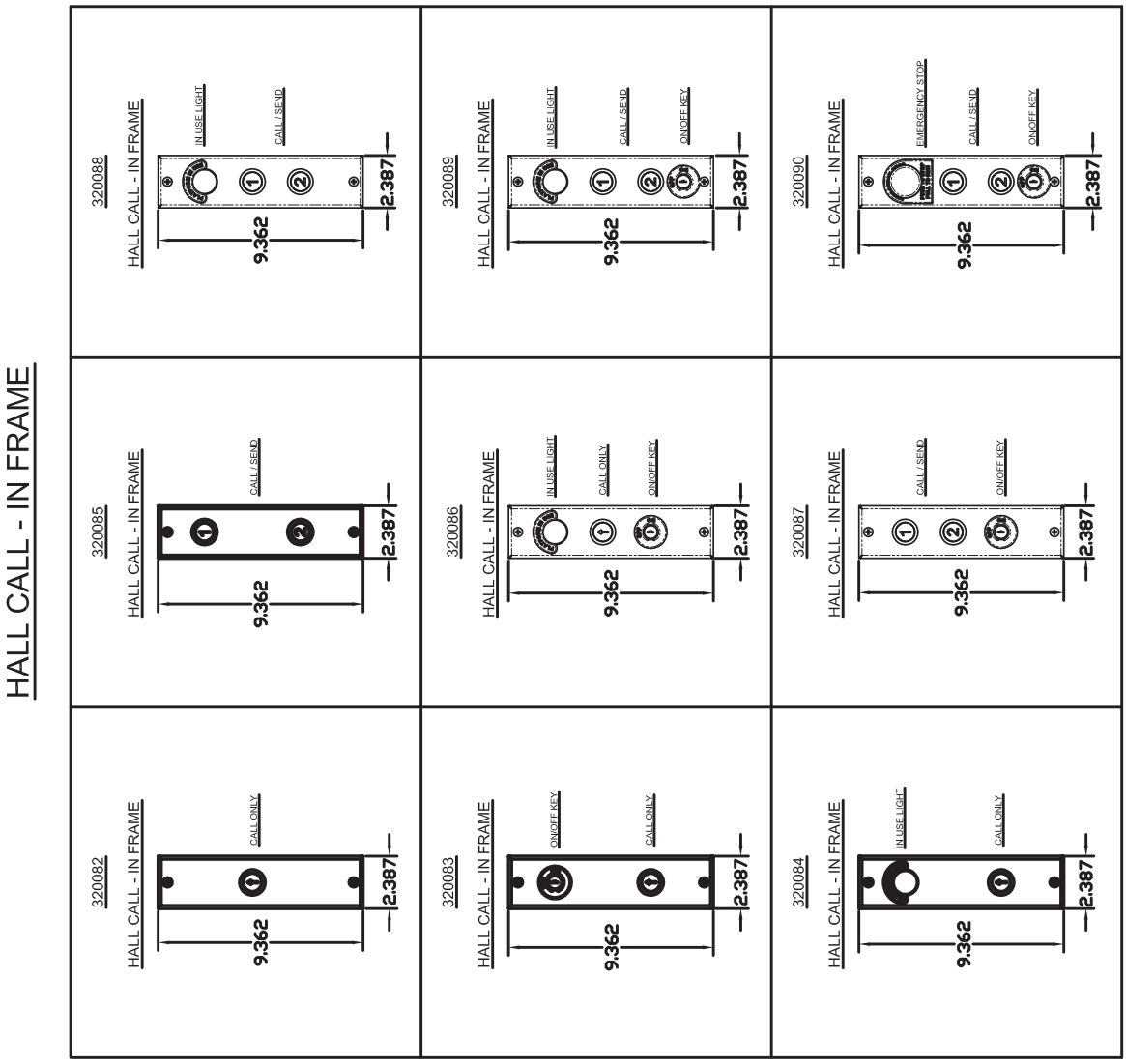
Hall call - flush remote



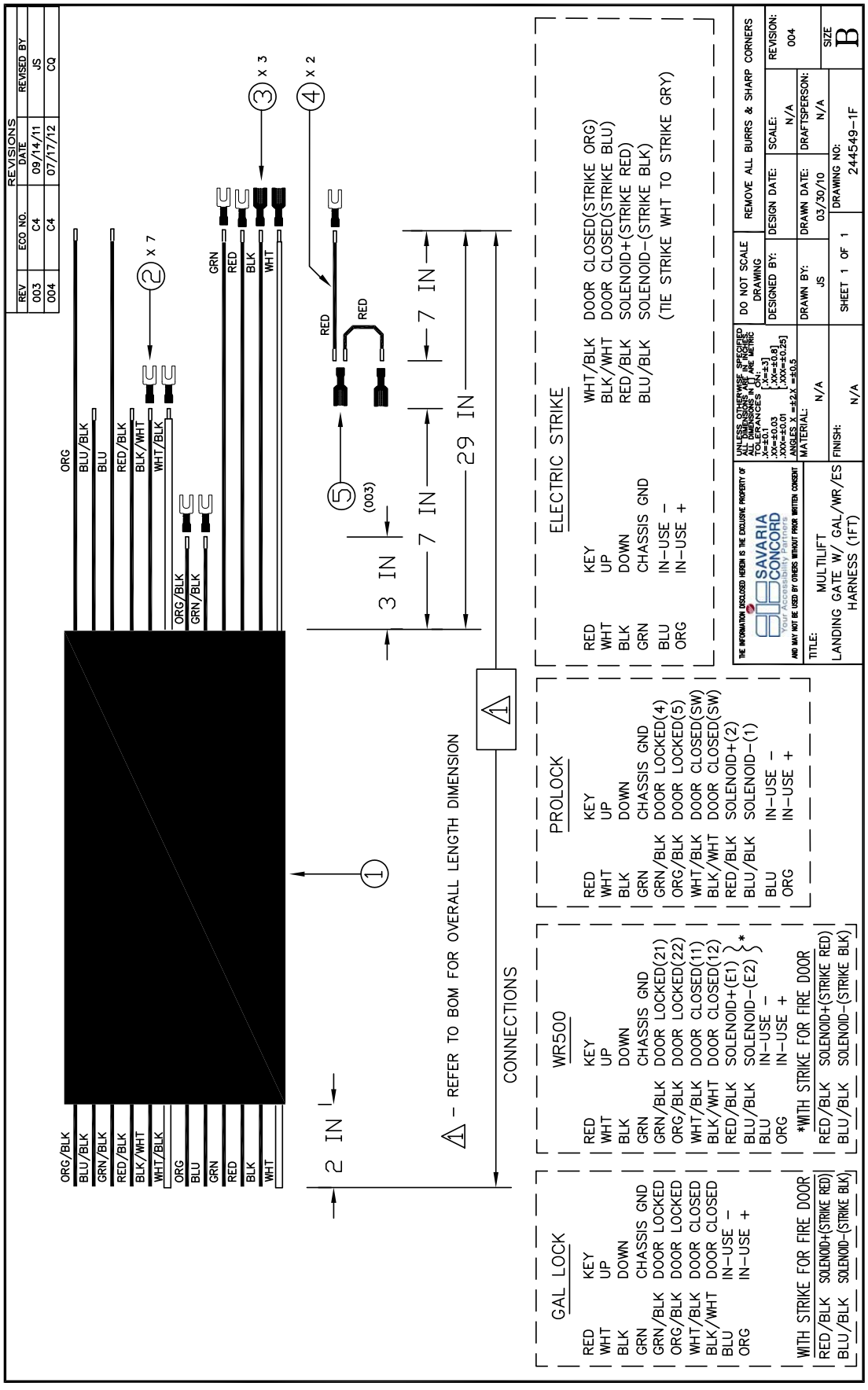
Hall call - surface remote



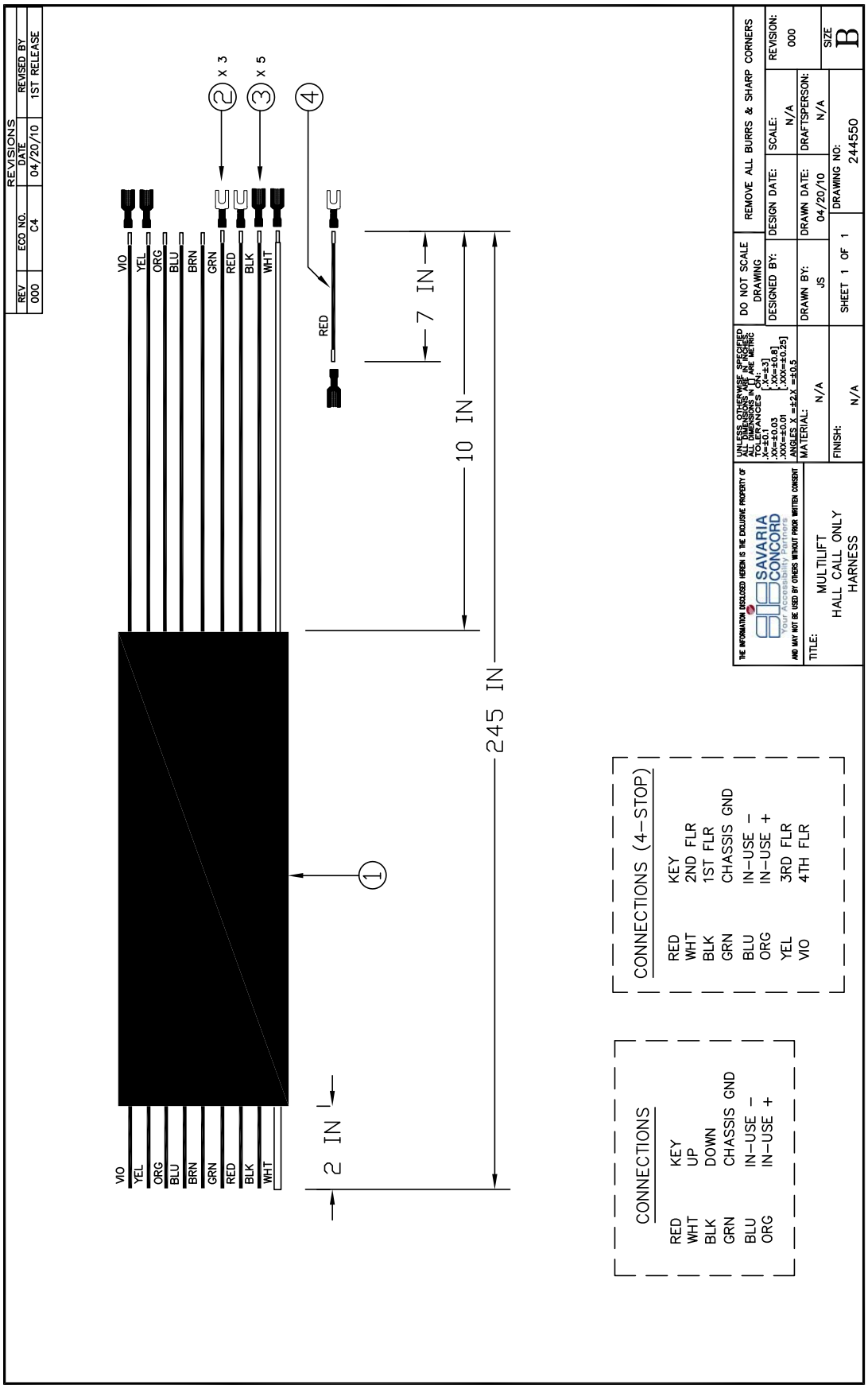
Hall call - in frame



Landing gate harness



Hall call only gate harness



Pro-Door Installation Method 1: Anchor tube installation (drywall)

REVISIONS			
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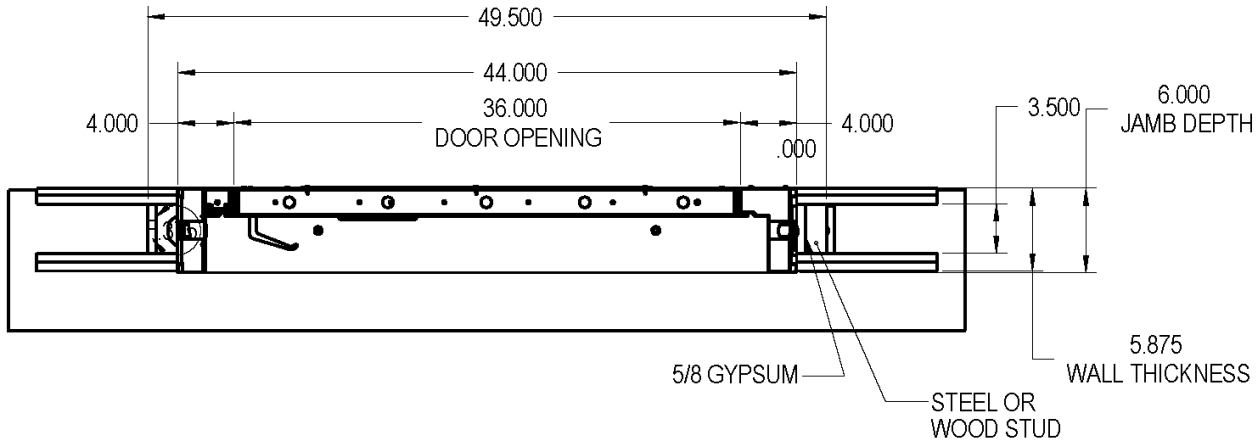
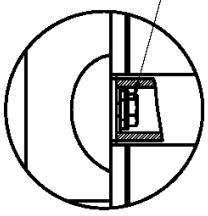
000	C4	06/08/2011	ALEX B

PRO-DOOR 4 INSTALLATION METHODS:

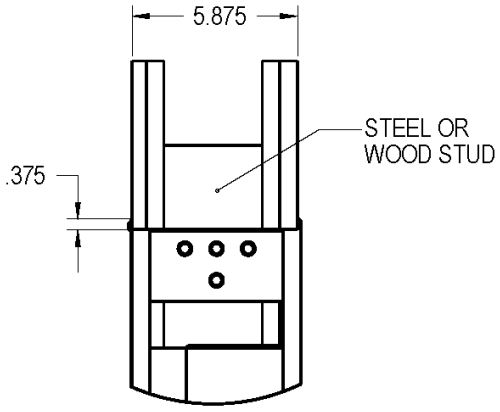


1. ANCHOR TUBE INSTALLATION: GYPSUM BOARD AND STEEL OR WOOD STUD WALLS

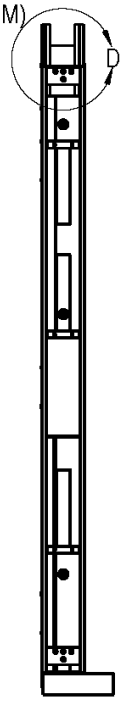
1 LAYER OF 1/2" ON THE HOISTWAY SIDE WITH 1 LAYER OF 5/8" ON THE CENTER SIDE
AND 2 LAYER OF 5/8" GYPSUM BOARD ON ENTRANCE SIDE,
AND 1 LAYER OF 5/8 GYPSUM ON BOTH SIDES OF THE DOOR (INSIDE)
AND 3 1/2" DEEP STEEL BEAM OR 2" X 4" WOOD STUD OR ELSE BOTH SIDE (OUTSIDE OF THE 5/8 GYPSUM)



DETAIL F
SCALE 1 : 3



DETAIL D
SCALE 1 : 6



UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES. ALL DIMENSIONS IN [ ] ARE METRIC. TOLERANCES ON:
.X=±.1 [X=±3]
.XX=±.03 [X.X=±0.8]
.XXX=±.010 [X.XX=±0.25]
ANGLES X°=±2° .X°=±.5°

DO NOT SCALE DRAWING	REMOVE ALL BURRS & SHARP CORNERS			REVISION: 000
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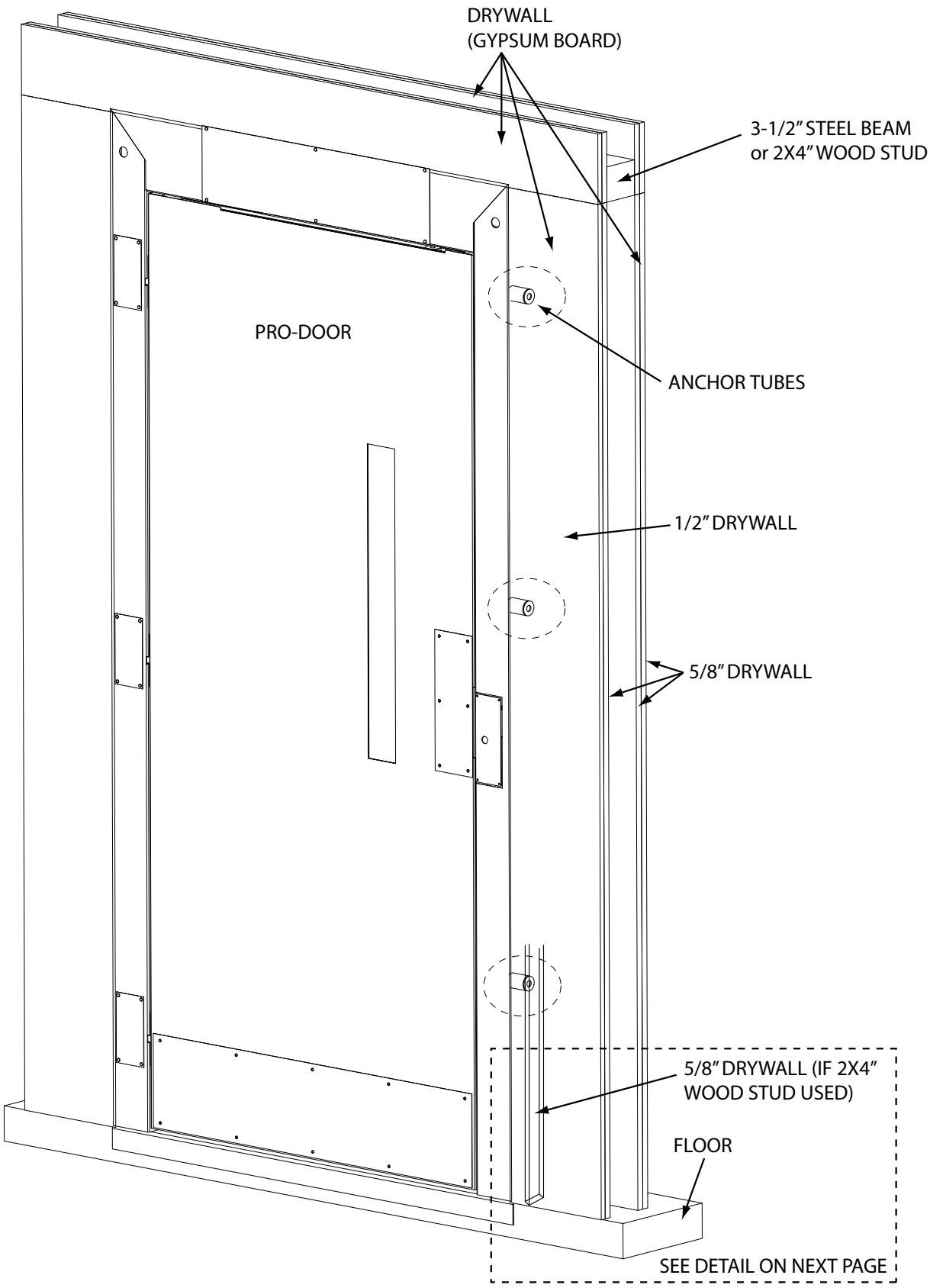
DRAWN BY: KEVIN Z	DATE: 06/08/2011	DRAFTER: KEVIN Z		
MATERIAL: N/A				
FINISH: N/A	SHEET 1 OF 4	DRAWING NO: 211580rev000		SIZE A

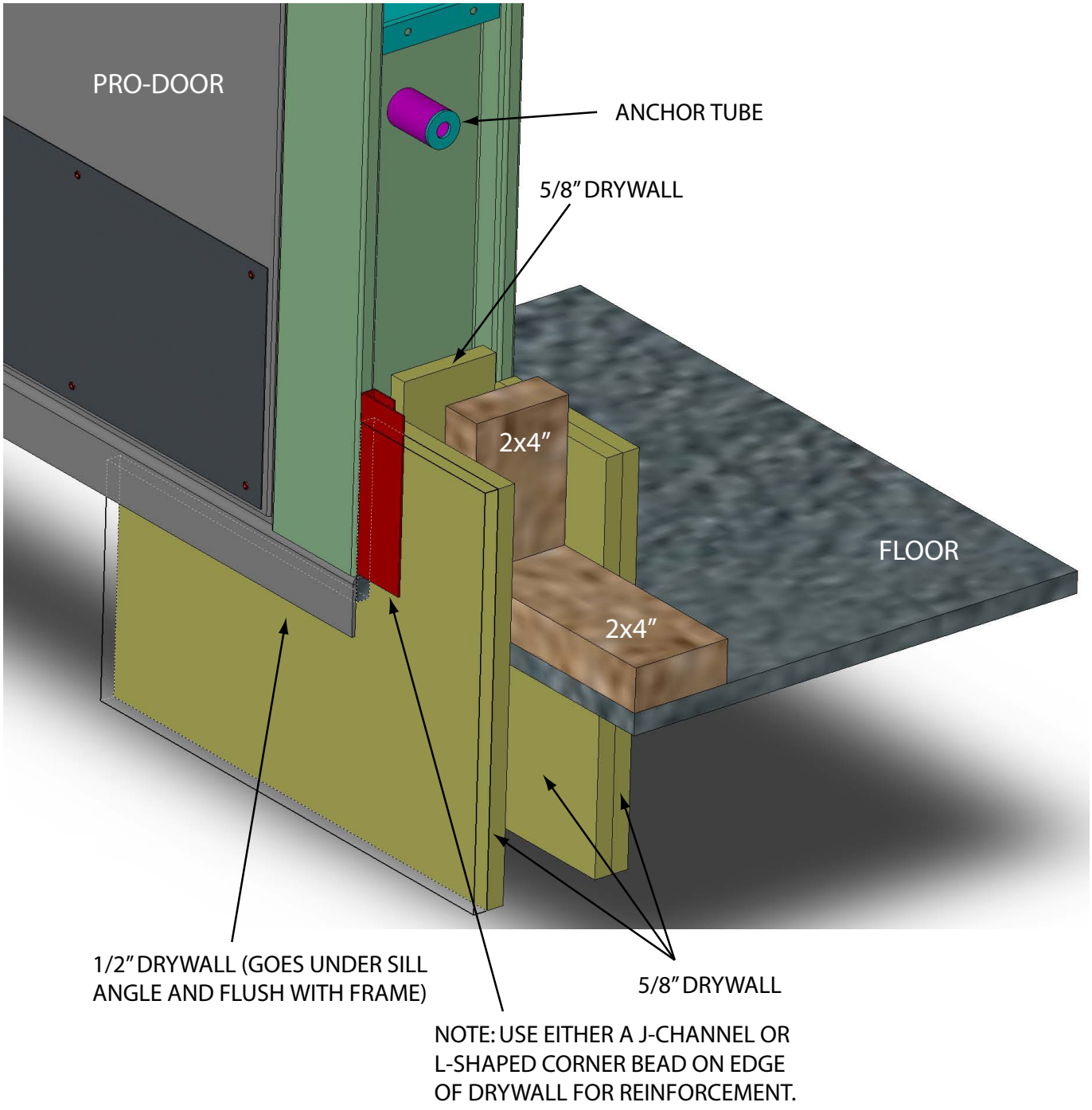
TITLE:
INSTALLATION METHOD

PRO-DOOR

Pro-Door Installation Method 1: Anchor tube installation (drywall)



Pro-Door Installation Method 1: Anchor tube installation (drywall)



Pro-Door Installation Method 2: Anchored to concrete

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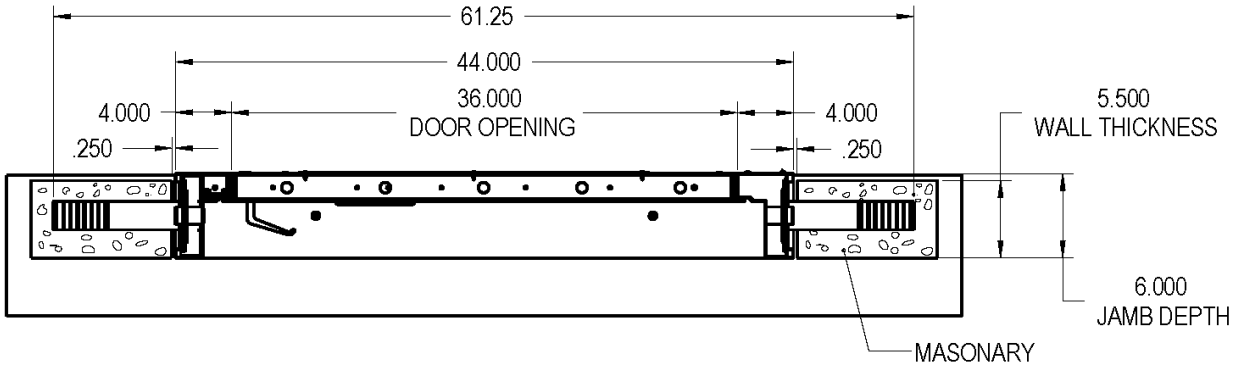
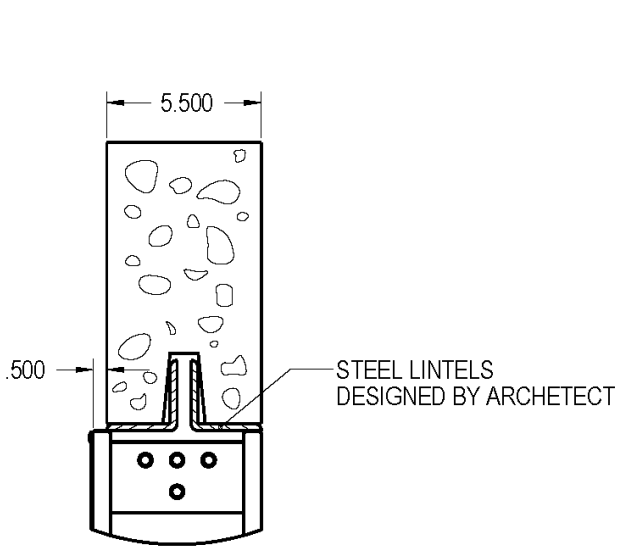
000	C4	06/08/2011	ALEX B

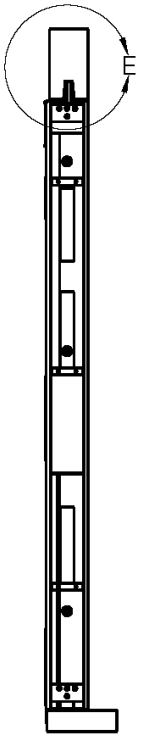


2. ADJUSTABLE MASONARY ANCHOR: MASONARY WALL

5 1/2" OR 7 1/2" MASONARY THICKNESS WALL WITH ADJUSTABLE MASONARY ANCHORS.



DETAIL E
SCALE 1 : 6



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		DESIGNED BY: KEVIN Z	DATE: 06/08/2011	SCALE: 1:12
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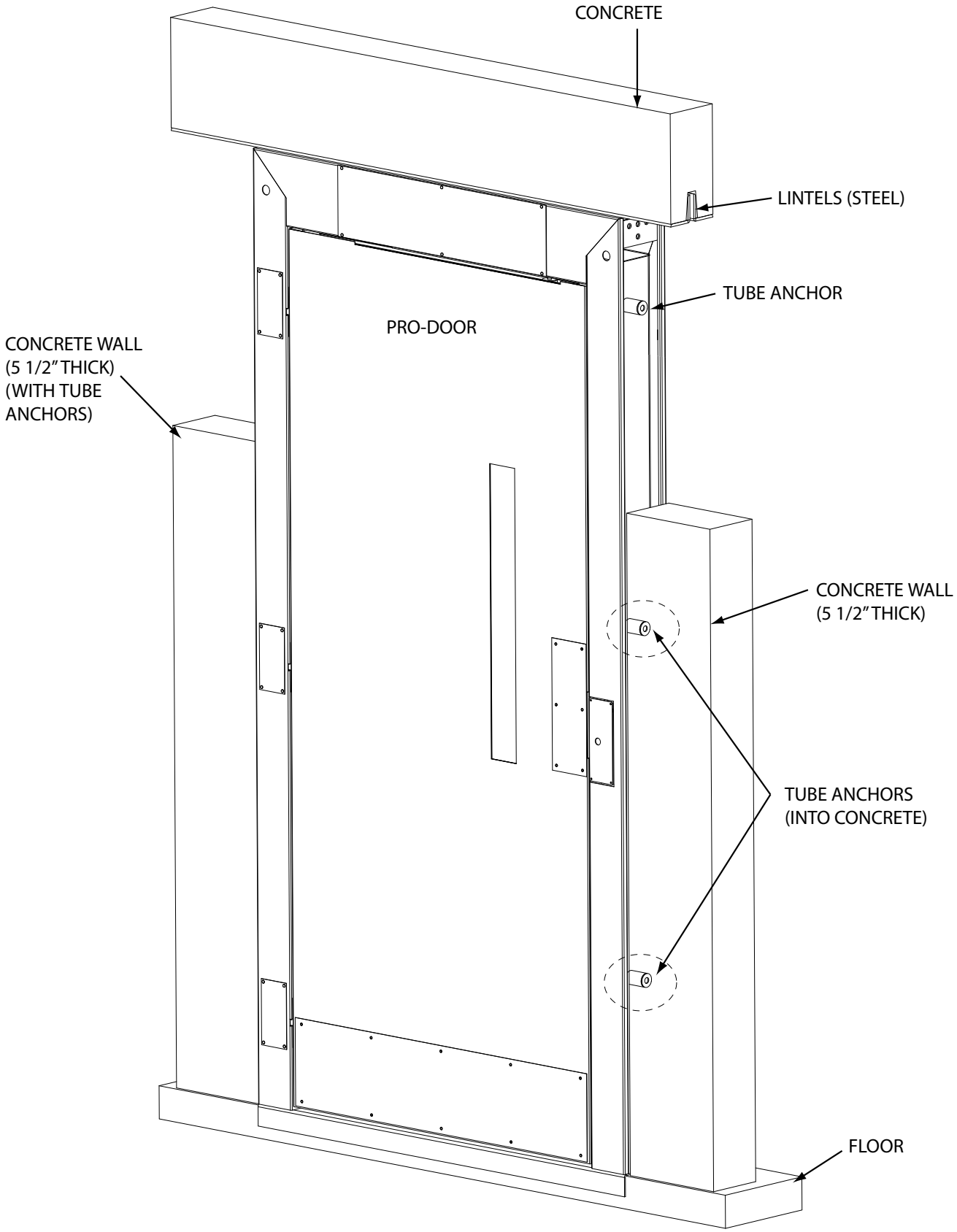
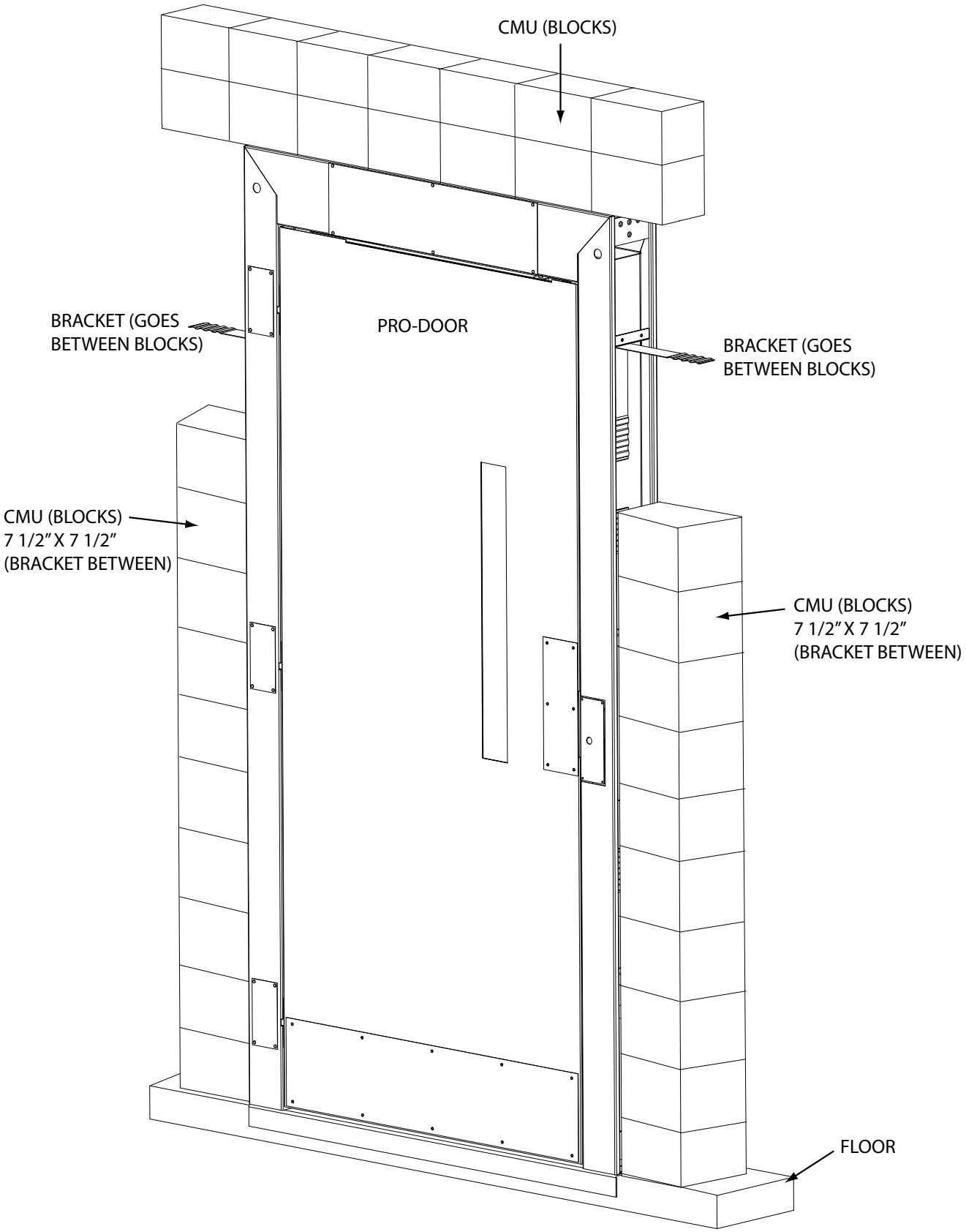
Pro-Door Installation Method 2a: Anchored to concrete (walls shown here)



Pro-Door Installation Method 2b: Anchored to concrete (blocks shown here)



Pro-Door Installation Method 3: Angle plate connection (no existing walls)

REVISIONS			
REV	ECO NO.	DATE	APPROVED
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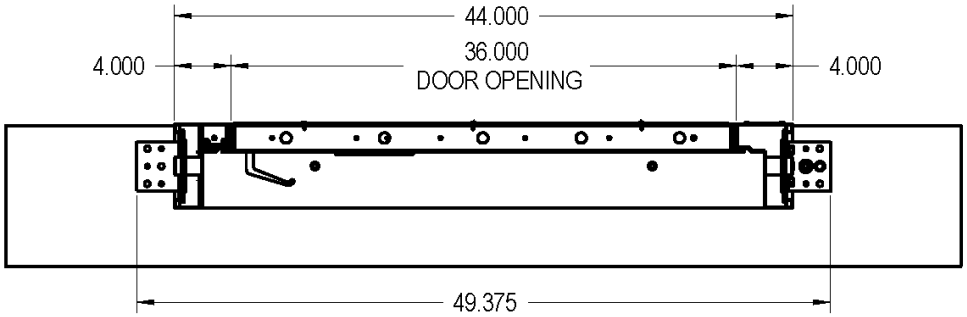
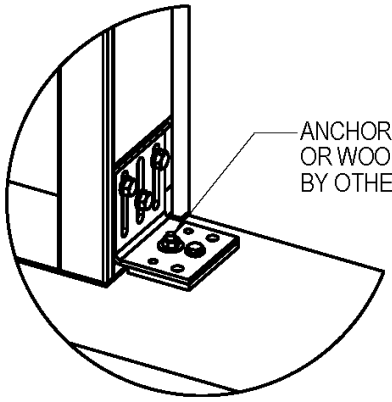
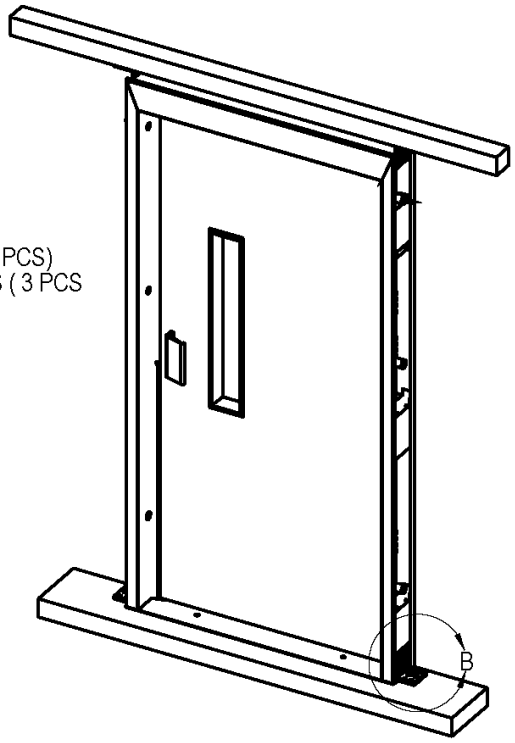


3. ANGLE PLATE CONNECTION: FOR MASONARY WALLS OR GYPSUM WALLS (NO WALLS WHEN INSTALLATION)

USE 4 PCS OF ANGLE PLATE 211560 TO CONNECT THE DOOR (4 CORNERS) ON GROUND AND TOP BEAM.



DETAIL B
SCALE 1 : 6



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.XX=±.03 [X.X=±0.8]
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ANGLES X°=±2° .X°=±.5°

DO NOT SCALE DRAWING	REMOVE ALL BURRS & SHARP CORNERS		REVISION: 000
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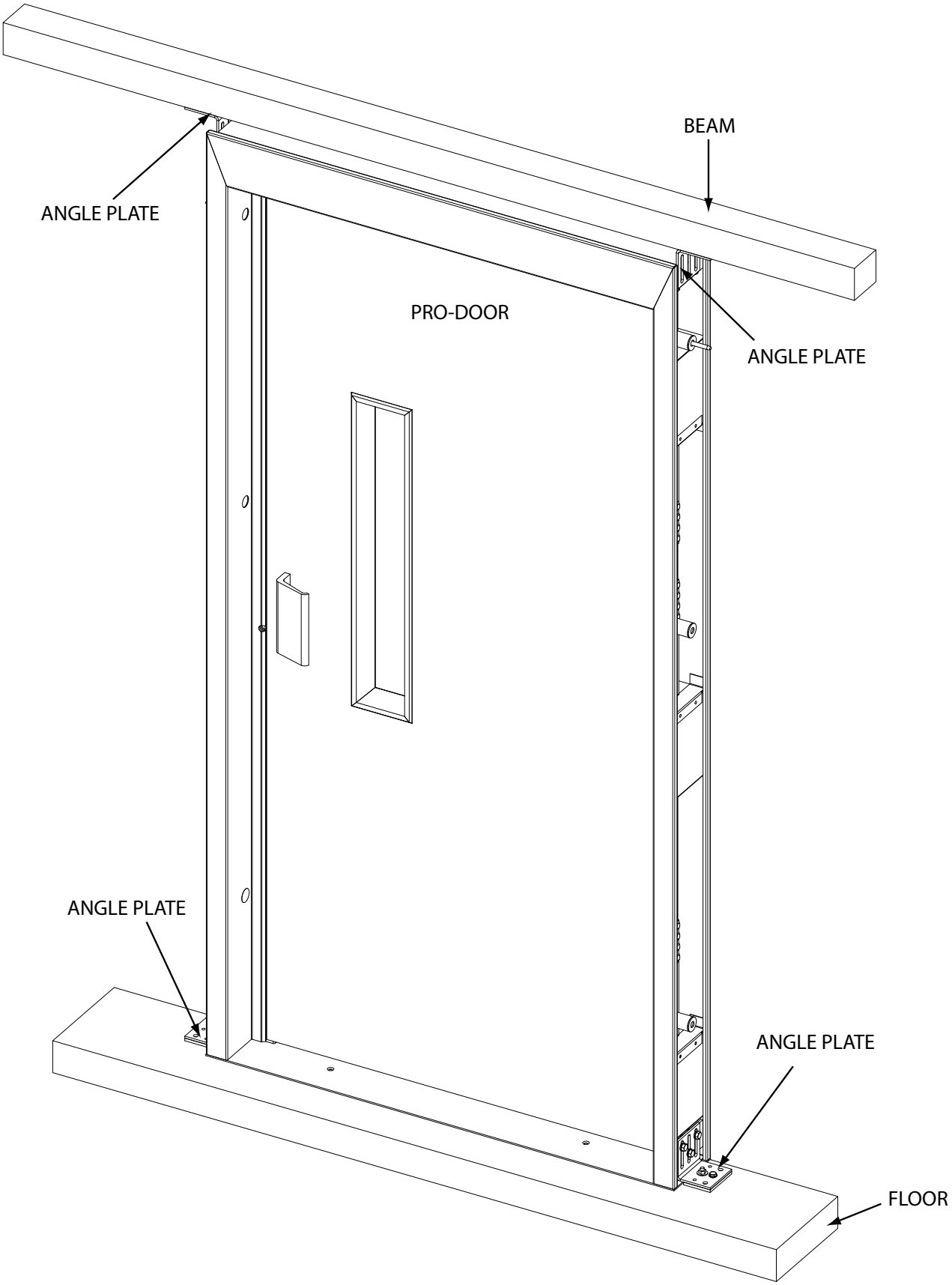
DRAWN BY: KEVIN Z	DATE: 06/08/2011	DRAFTER: KEVIN Z	
MATERIAL: N/A			
FINISH: N/A	SHEET 3 OF 4	DRAWING NO: 211580rev000	SIZE A

TITLE:
INSTALLATION METHOD

PRO-DOOR

Pro-Door Installation Method 3: Angle plate connection (no existing walls)



Pro-Door Installation Method 4: Angle plate connection (existing walls)

REVISIONS			
REV	ECO NO.	DATE	APPROVED
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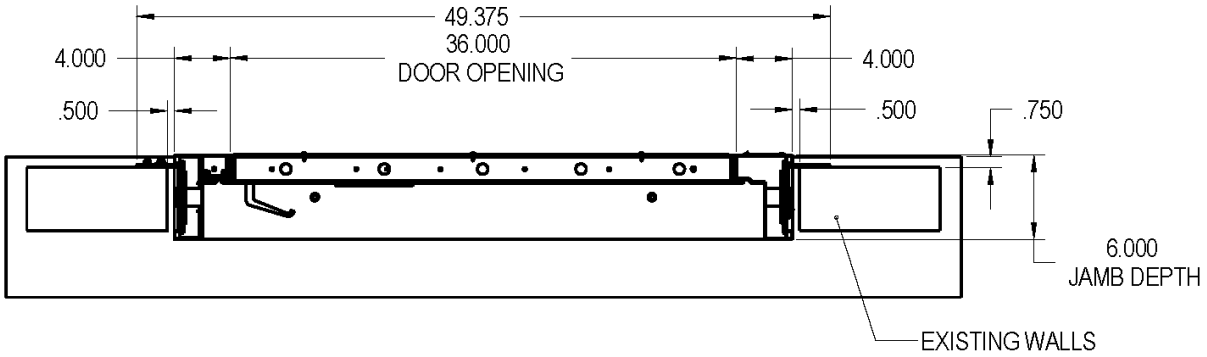
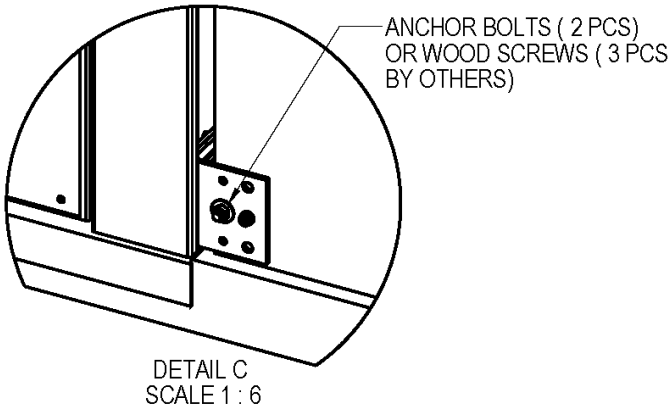


4. ANGLE PLATE CONNECTION: FOR EXISTING MASONARY WALLS OR GYPSUM WALLS

USE 4 PCS OF ANGLE PLATE 211560 TO CONNECT THE DOOR (4 CORNERS) ON WALLS (HOISTWAY SIDE).



DETAIL C
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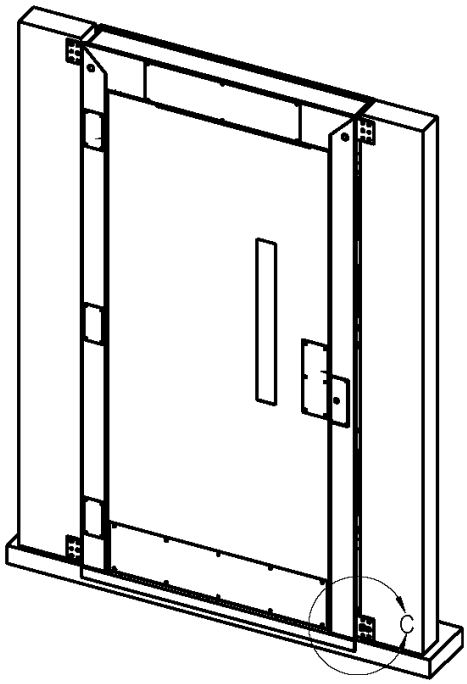

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XX=±.03 [XX=±0.8]
XXX=±.010 [XXX=±0.25]
ANGLES X°=±2° X°=±.5°

DO NOT SCALE DRAWING	REMOVE ALL BURRS & SHARP CORNERS		REVISION: 000
DESIGNED BY: KEVIN Z	DATE: 06/08/2011	SCALE: 1:12	06/08/2011 VERSION
DRAWN BY: KEVIN Z	DATE: 06/08/2011	DRAFTER: KEVIN Z	
SHEET 4 OF 4	DRAWING NO: 211580rev000		SIZE A

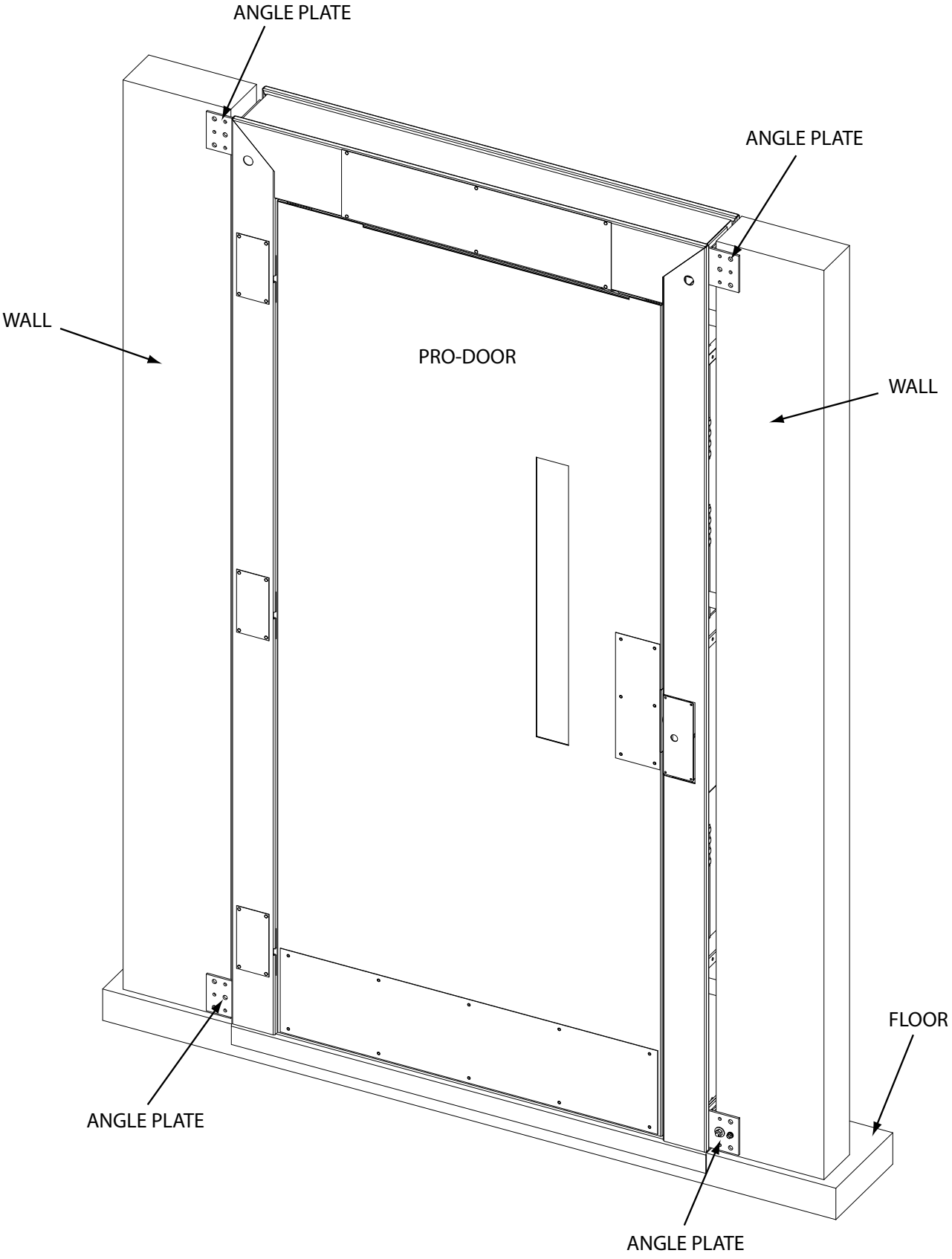
MATERIAL: N/A

FINISH: N/A

TITLE:
INSTALLATION METHOD

PRO-DOOR

Pro-Door Installation Method 4: Angle plate connection (existing walls)



Appendix C
Savaria Link Option

For information on the Savaria Link option, refer to the following document:

- Savaria Link Installation and Setup Guide, P/N 001180

Appendix D
Door Closer Installation

This appendix provides door closer installation instructions.

Multilift Vertical Platform Lift
INSTALLATION GUIDE

Part No. 000643, Rev. 029

Savaria Concord Lifts, Inc.
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Fax: (905) 791-2222

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