

INTELLI-TRACK™ STACKING PARTITION SYSTEM



INTRODUCTION

INTELLI-TRACK™ SPS

IMPORTANT NOTES:

- 1) The CRL Intelli-Track™ Stacking Partition System has unique structural support requirements. Please request or download, free of charge, our "SPS Structural Engineering Design Guide" for use by the architectural/engineering design group on this project.
- 2) Fasten Track to the overhead support structure with 3/8" (9.5) Hex Head type fasteners made from one of the following materials: A307 galvanized or A316 stainless steel. Always use Lock Washers.
- 3) All glass should be fully tempered with polished edges. Laminated glass should not be used with CRL Wedge-Lock Rails. However, laminated glass can be used for fully framed wall Panel installations.
- 4) Track is pre-drilled to allow for mounting to optional suspension brackets or directly to concrete, metal or wood. Please consult with CRL Technical Sales. Fasteners to attach Track or brackets to structure are not provided by CRL.
- 5) The circular table/bench saw must be capable of cutting 3/8" (9.5) thick aluminum sections. The diameter of the aluminum cutting blade must accommodate an extrusion profile with the following dimensions: 4-7/8" (123.8) wide x 3-9/16" (90.5) tall. Miter cutting capability will not be required in most cases, as CRL provides prefabricated corners and intersections.

Tools Required

- 7/8" Open-End Wrench (Two)
- 9/16" Socket Hex
- Ratchet Wrench with 4" Extension
- 3/16" Hex Bit Socket or T-Handle Hex Tool
- 7/32" Hex Bit Socket or T-Handle Hex Tool
- 2 mm Hex Bit Socket or T-Handle Hex Tool
- Hammer with Smooth Face
- Saw Horses (Two)
- CRL PLS2 Palm Laser Level or
Optional Conventional Level
- CRL Glass Cleaner
- Cordless Drill
- #1 Phillips Screwdriver
- Circular Table/Bench Saw with Aluminum
Cutting Blade

The rapidly changing technology within the architectural aluminum products industry demands that C.R. Laurence/U.S. Aluminum reserve the right to revise, discontinue, or change any product line, specification, or electronic media without prior written notice.

NOTE: Dimensions in parentheses () are millimeters unless otherwise noted.

PHASE ONE

SPS Track Installation

Read these instructions completely before beginning the installation.

Component Placement Plan (CPP)

Review the Component Placement Plan provided by CRL to determine placement of the Track components. Each component is labeled to match its designated location on the plan.

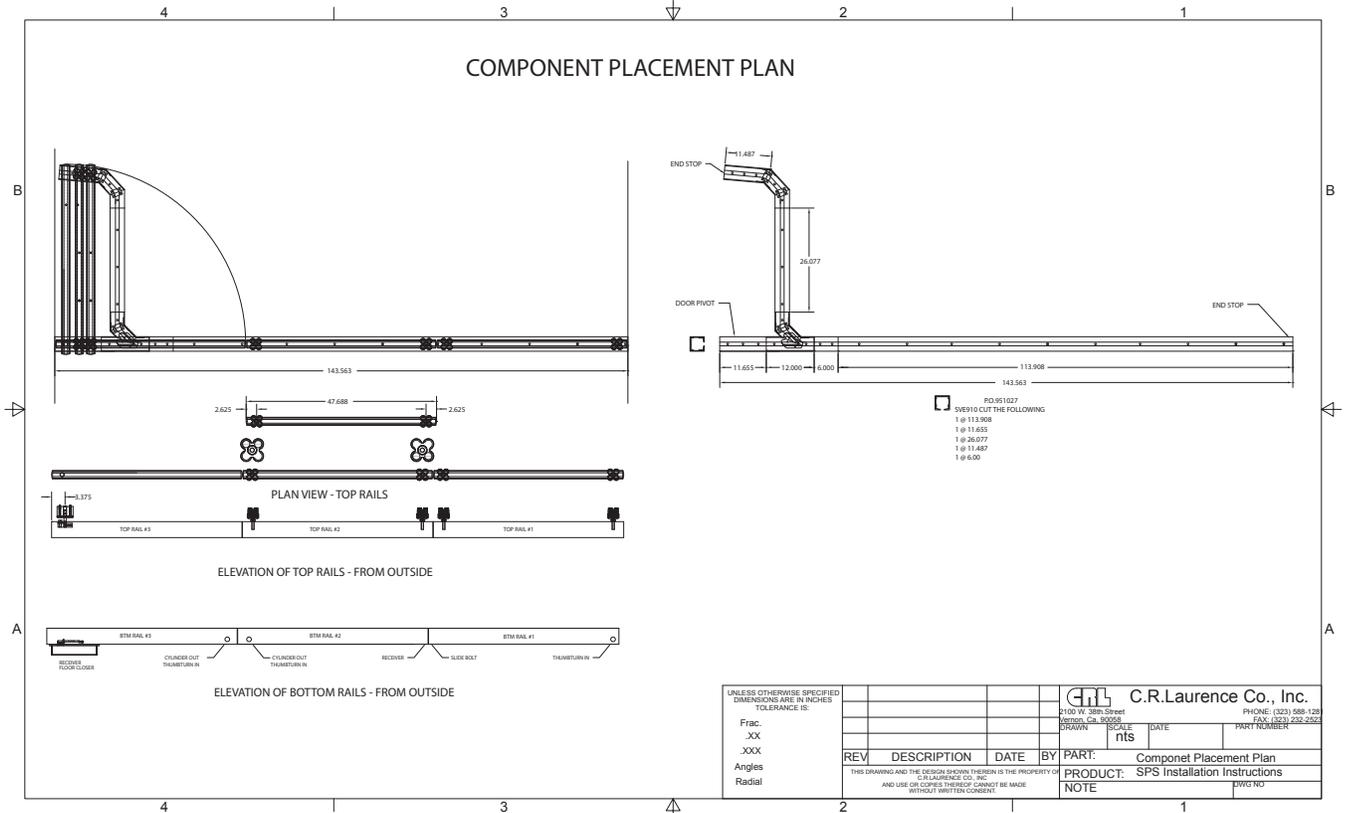


Figure 1

Sample Shop Drawing
 Provided by C.R. Laurence

Before Track Installation, Consider the Following:

1. CRL provides mounting systems for attaching Track directly to concrete, metal, and wood, as well as mounting systems for suspending Track beneath concrete and steel structures. When mounting Track directly to building structure, it is important that the mounting surface be level and parallel to the floor. The use of CRL shims to correct minor variations is acceptable.
2. Measure from the Track-mounting surface to the floor at multiple locations. The floor should be flat in all areas of Panel movement. Abrupt changes in elevation can force all Panels to be elevated above the nominal 1/4" (6.4) floor clearance, as they must all clear the highest elevation when moving toward the parking area.
3. 1/4" (6.4) is the nominal clearance between the floor and bottom Wall Panel Rails; 5/16" (7.9) is the maximum recommended clearance.

Track Layout Procedure

1. Lay out the Track on the floor as detailed by the Component Placement Plan (CPP) . This will verify that all component pieces are present and correct (Fig 2).

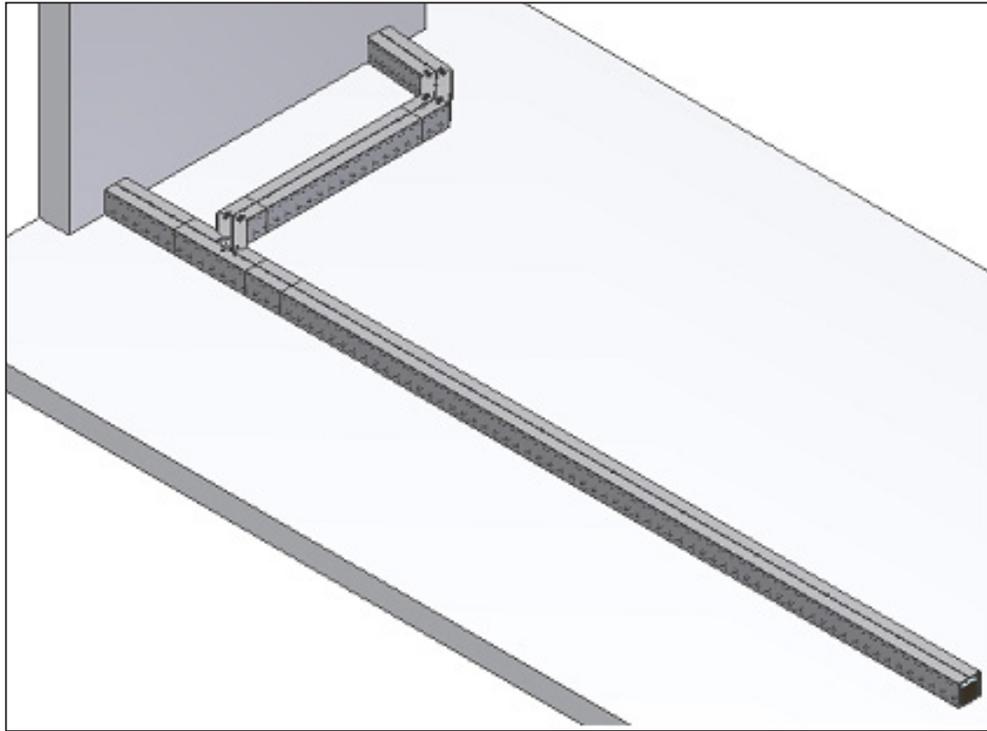


Figure 2

2. Position all Stops and Door Top Pivots in their approximate locations in the Track as detailed by the CPP (Fig 3). SPS Door Top Pivot and Adjustable Roller Stop final adjustments will be done in **Phase 2** after Track has been completely installed.

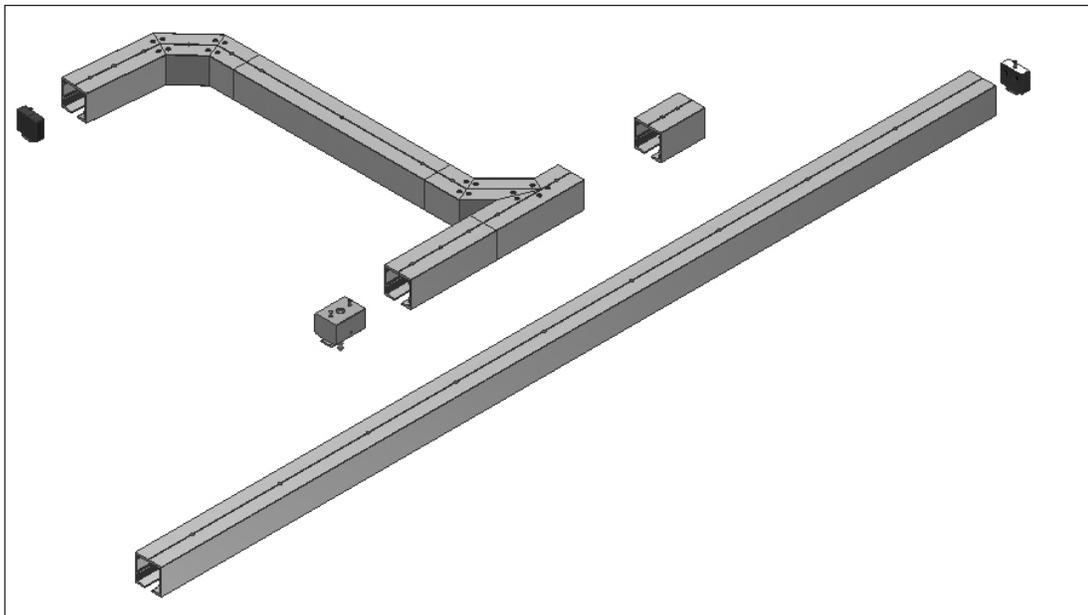


Figure 3

Install the Parking Area Assembly

Install the Parking Area Assembly(ies), align and fasten to the overhead support structure. Use 3/8" Hex Head fasteners made from one of the following materials: A307 Galvanized or A316 Stainless Steel.

NOTE: ALWAYS USE LOCK WASHERS.

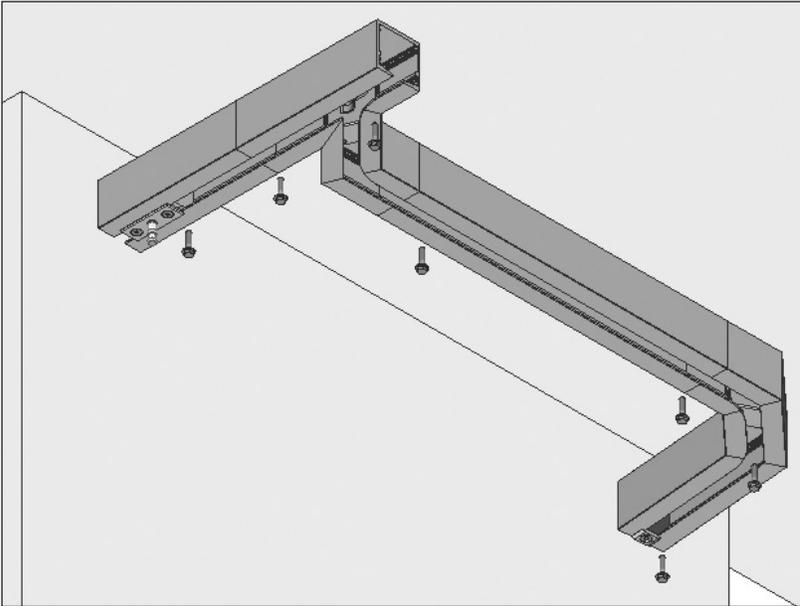


Figure 4
Install the Parking Area First

Install the Remaining Track Sections

NOTE: If your SPS System was ordered prefabricated, proceed to **Step 3 on Page 6.**

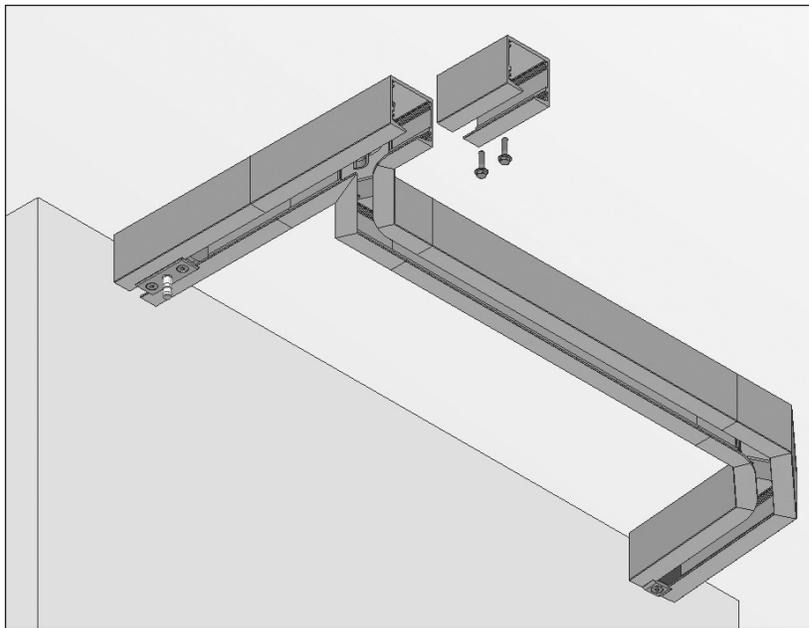


Figure 5
Install the Remaining Track
Components

1. Locate and install the Roller Access Splice as shown on the CPP. If your SPS System was ordered with stock length Track(s), The Roller Access Splice is pre-drilled and ready to receive two fasteners. Align the Roller Access Splice with the end of the Parking Area Assembly and fasten into place (Fig 5). Use 3/8" Hex Head type fasteners made from one of the following materials: A307 Galvanized or A316 Stainless Steel.

NOTE: ALWAYS USE LOCK WASHERS.

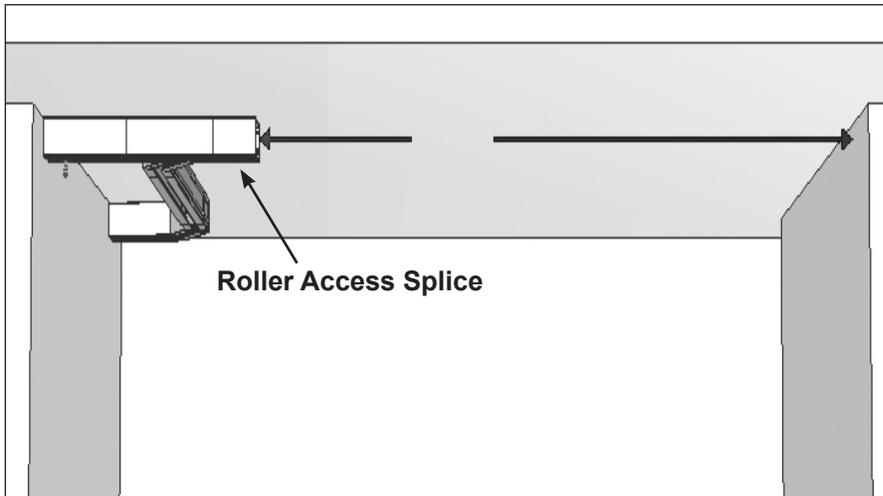


Figure 6
Measure from the Roller Access Splice when using stock lengths.

2. Measure back to the Roller Access Splice to determine your cut lengths of the remaining Track, allowing for slight clearance for later removal of the Roller Access Splice.

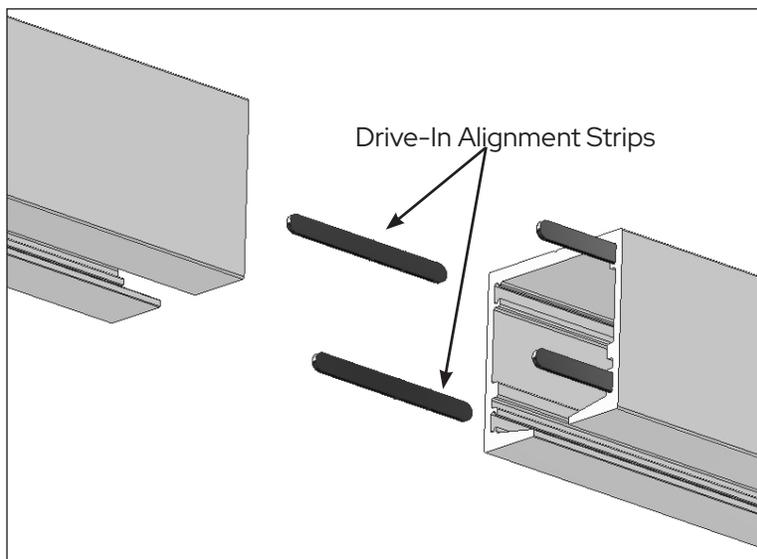


Figure 7
Secure Track Sections with Drive-In Alignment Strips.

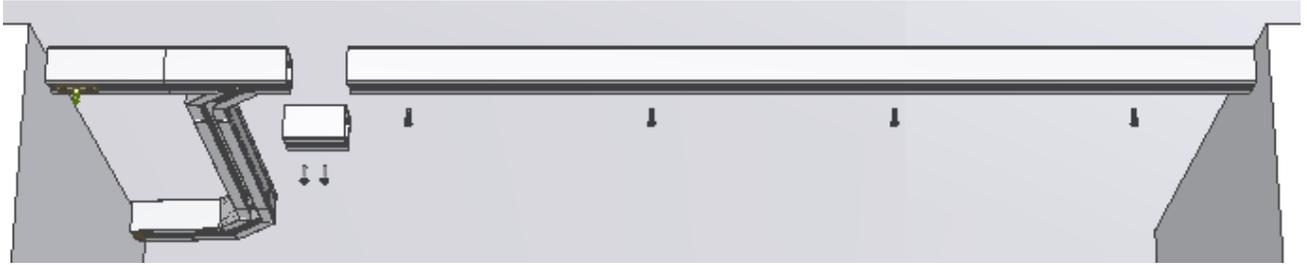
Do not use on either end of the Roller Access Splice.

3. Install four Drive-In Alignment Strips at all Track joints, except at the Roller Access Splice. Each Drive-In Alignment Strip installs barbed-end first, align with the receiving socket in the Track extrusion, and then drive-in with a smooth faced hammer. One half of each Alignment Strip's length should remain exposed, ready to engage the next Track section (Fig. 7).

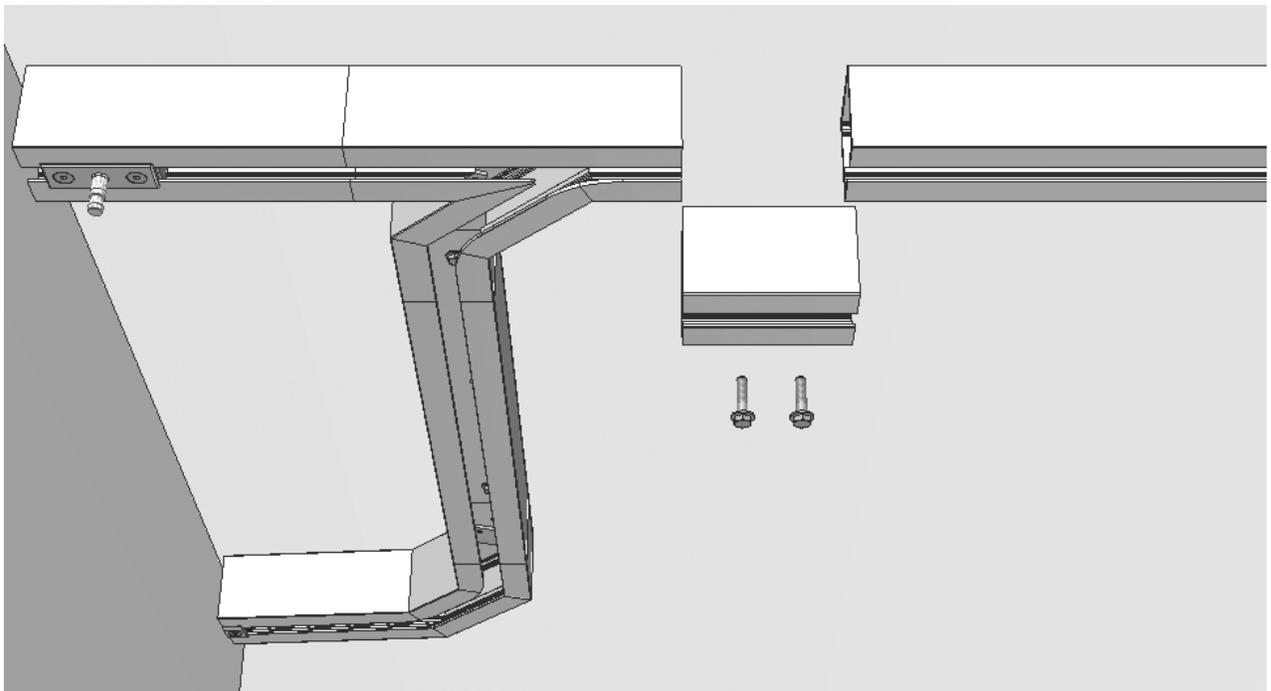
4. Install the remaining Track section(s) working toward the Roller Access Splice and carefully following the CPP. Use 3/8" Hex Head type fasteners made from one of the following materials: A307 Galvanized or A316 Stainless Steel.

NOTE: ALWAYS USE LOCK WASHERS.

NOTE: Before installing the Track section(s) immediately before and after the Roller Access Splice you will need to remove the Roller Access Splice, if previously installed, to allow room to engage the Drive-In Alignment Strips.



Install Roller Access Splice



NOTE: If you have not previously installed the Roller Access Splice, do so now. The Roller Access Splice is pre-drilled and ready to receive two fasteners.

1. Align the Roller Access Splice with the end of the Parking Area Assembly and/or Track section(s). Fasten into place. Use 3/8" Hex Head type fasteners made from one of the following materials: A307 Galvanized or A316 Stainless Steel.

NOTE: ALWAYS USE LOCK WASHERS.

2. Ensure a slight clearance for later removal of the Roller Access Splice.

THIS FIRST PHASE OF THE INSTALLATION IS COMPLETE

Insert Pivots and Stops

NOTE: Sliding Wall Panels must not be allowed to hit the end of Pivoting Doors. To prevent this from happening a Stop must be installed between the free-swinging end of Pivoting Doors and adjacent Sliding Wall Panels (Fig. 4).

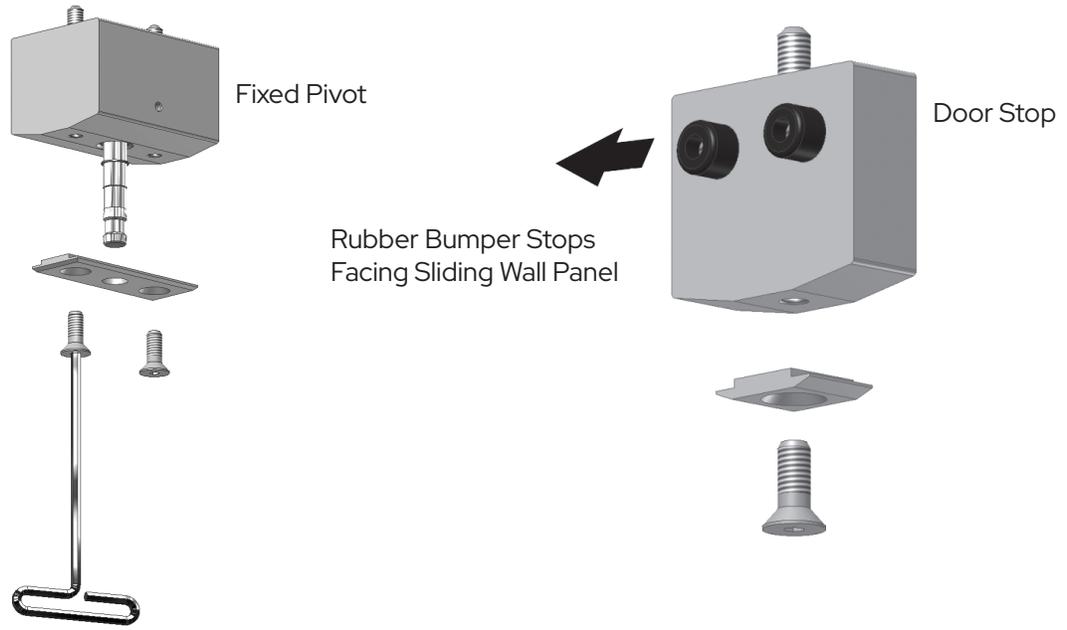


Figure 4

Look at the CPP to determine the order for inserting Pivots and Stops into the Track via the opening for the Roller Access Splice. Using 7/32" Hex Bit Socket or T-Handle Hex Tool, remove the clamping plate that is exposed on the bottom of Pivots and Stops. Make certain that the set screws and sliding Pivot Pin do not extend above the top surface, as this will prevent collision with Track Mounting Bolts while sliding them along the Track to the installation location.

NOTE: Pivots do not have a special orientation during insertion into the Track, but Stops must be rotated such that their rubber bumpers face toward the adjacent Sliding Wall Panel.

Insert Pivots and Stops (Continued)

Position and Secure the Stop

1. Install a Stop at all locations where a Sliding Wall Panel can collide with building structure and Pivoting Doors. Make certain that the Stop's rubber bumpers face toward the Sliding Wall Panels (Fig 5).

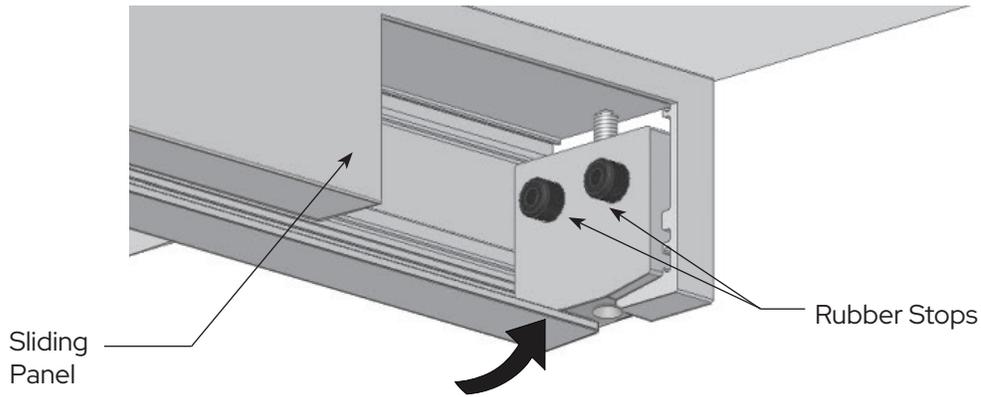


Figure 5

2. Using a 3/16" Hex Drive Socket or T-Handle Hex Tool, turn the set screw clockwise until it sits tight against the top of the Track (Fig 6).

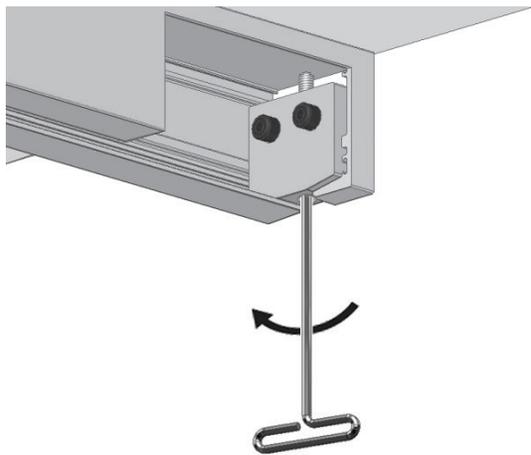


Figure 6

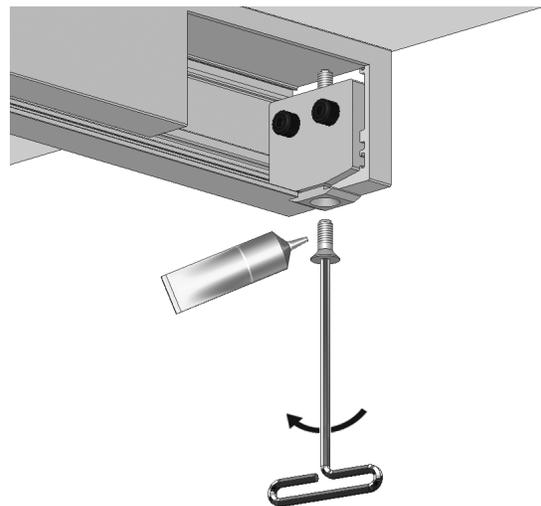
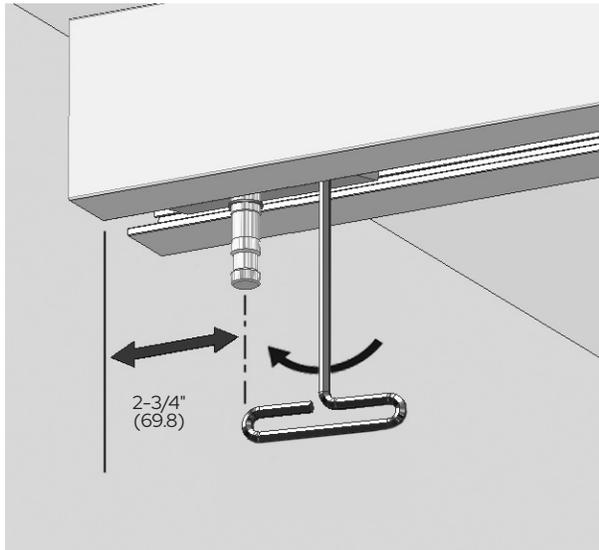


Figure 7

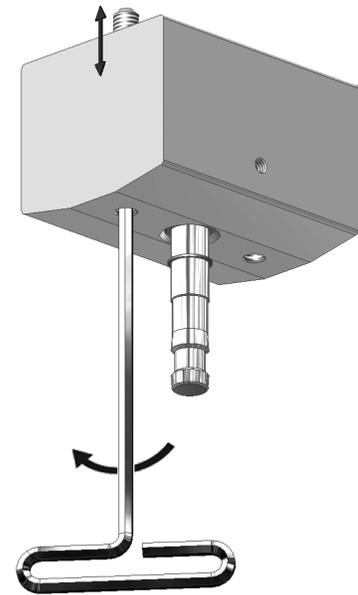
3. Using a 7/32" Hex Drive Socket or T-Handle Hex Tool, re-attach the Clamping Plate. The supplied Loctite® Threadlocker must be applied to the threads, preventing loosening. Tighten this screw firmly as its clamping action prevents the Stop from moving (Fig 7).

Insert Pivots and Stops (Continued)

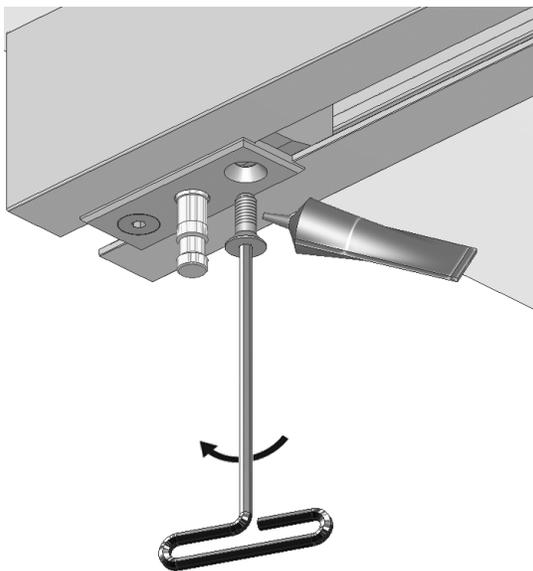
Position and Secure the Top Door Pivot



1. The centerline of the pivot pin should be positioned at 2-3/4" (69.8) from the finished wall.



2. Using a 3/16" Hex Drive Socket or T-Handle Hex Tool turn the two set screws clockwise until they sit tight against the top of the Track.

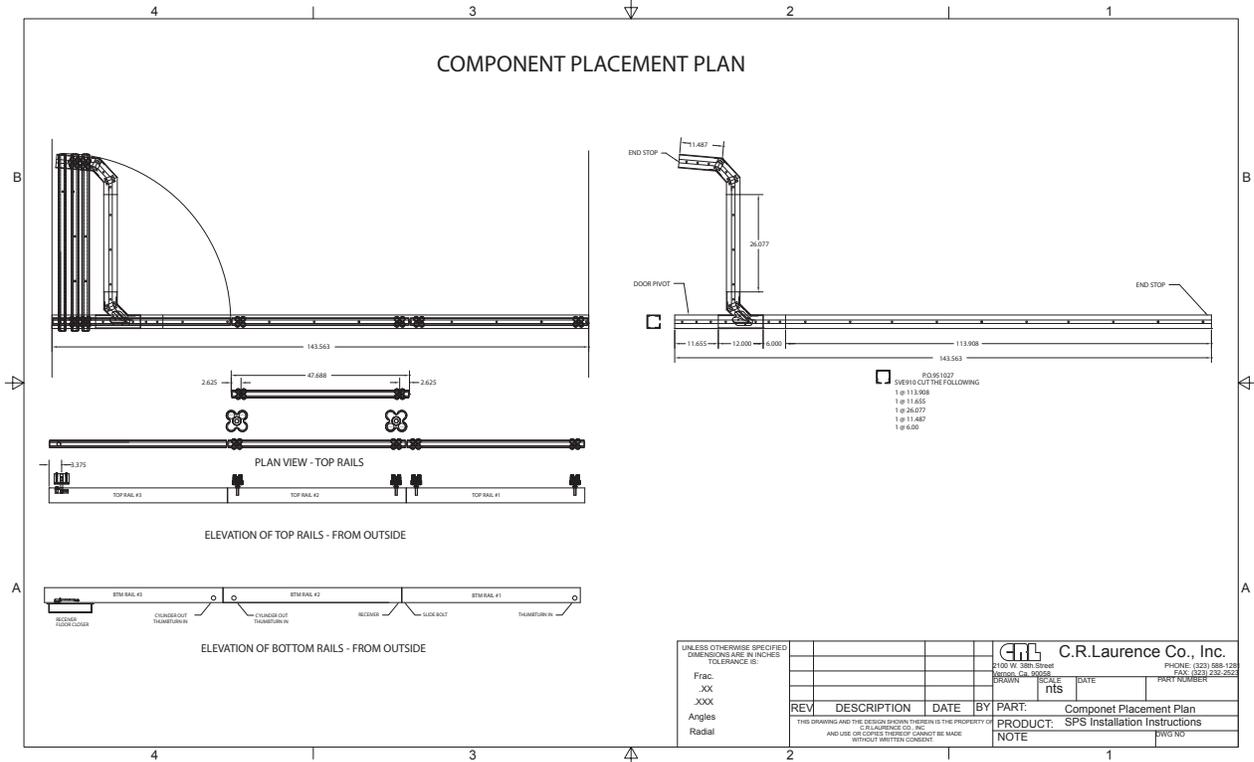


3. Using a 7/32" Hex Socket or T-Handle Hex Tool, re-attach the clamping plate. Apply the supplied Loctite® Threadlocker to the threads. Tighten the screw firmly.

PHASE TWO

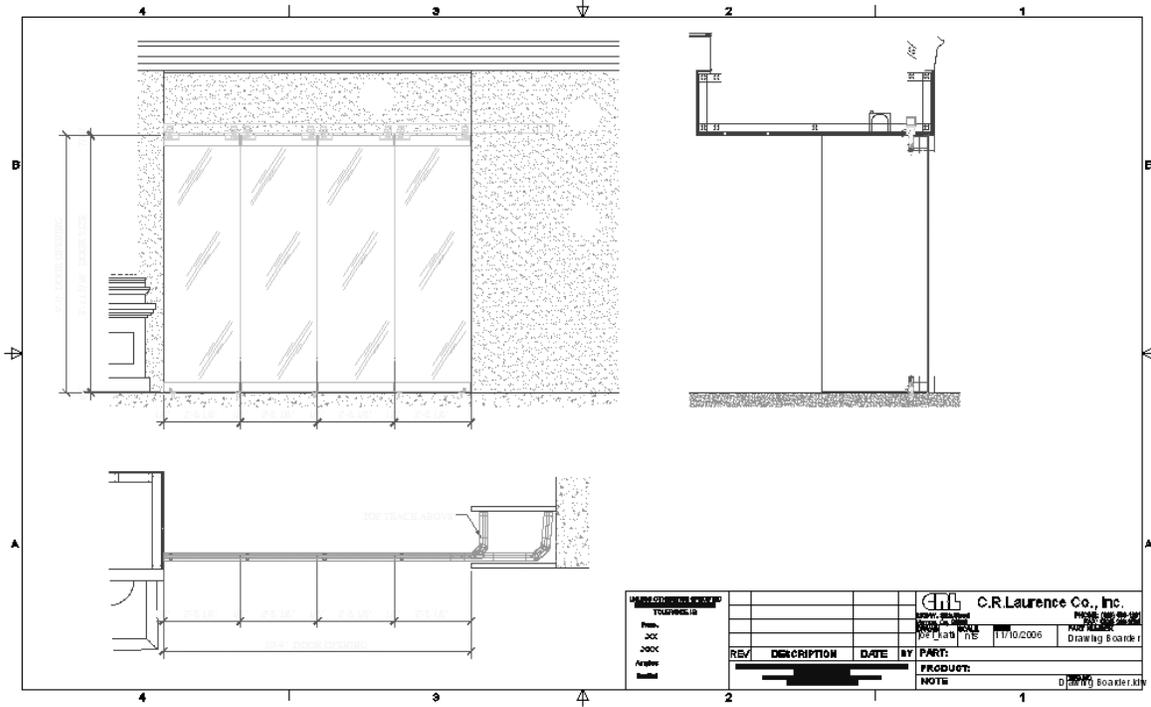
SPS Glass Wall Panel Assembly, Installation

Component Placement Plan (CPP)



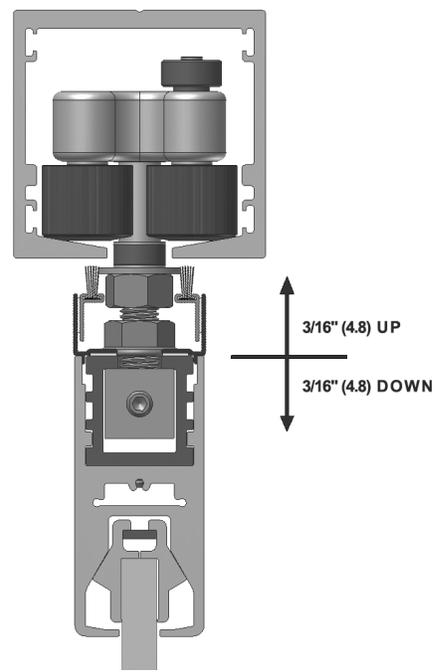
Review the Component Placement Plan provided by CRL to determine Wall Panel Bottom Rail configuration, size, and sequence number. **NOTE:** The #1 Wall Panel is the Panel farthest from the parking area. Each component is labeled to match its designated location on the plan.

Determine Glass Sizes

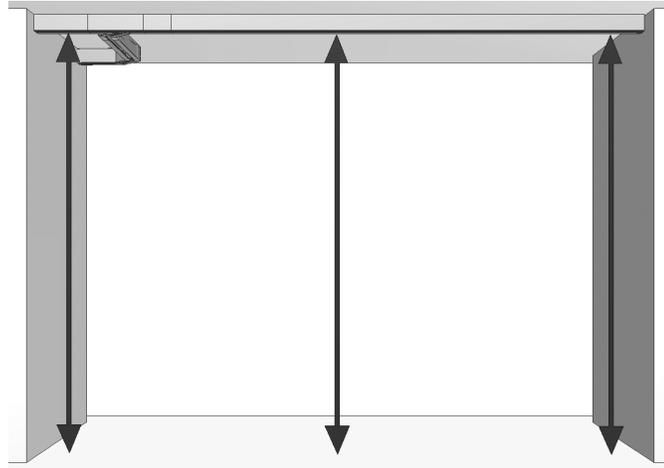


NOTE: If field conditions have been carefully inspected, glass can be fabricated before Track installation, but the safest route is to measure for glass after the Track is installed.

CRL Technical Sales can provide glass deduction dimensions for the various combinations of Glass Wall Panel Rail profile heights, in combination with the Supporting Track (at the nominal roller height adjustment). The CRL SPS allows for plus and minus 3/16" (4.8) height adjustment from nominal, for a total of 3/8" (9.5) height adjustment.

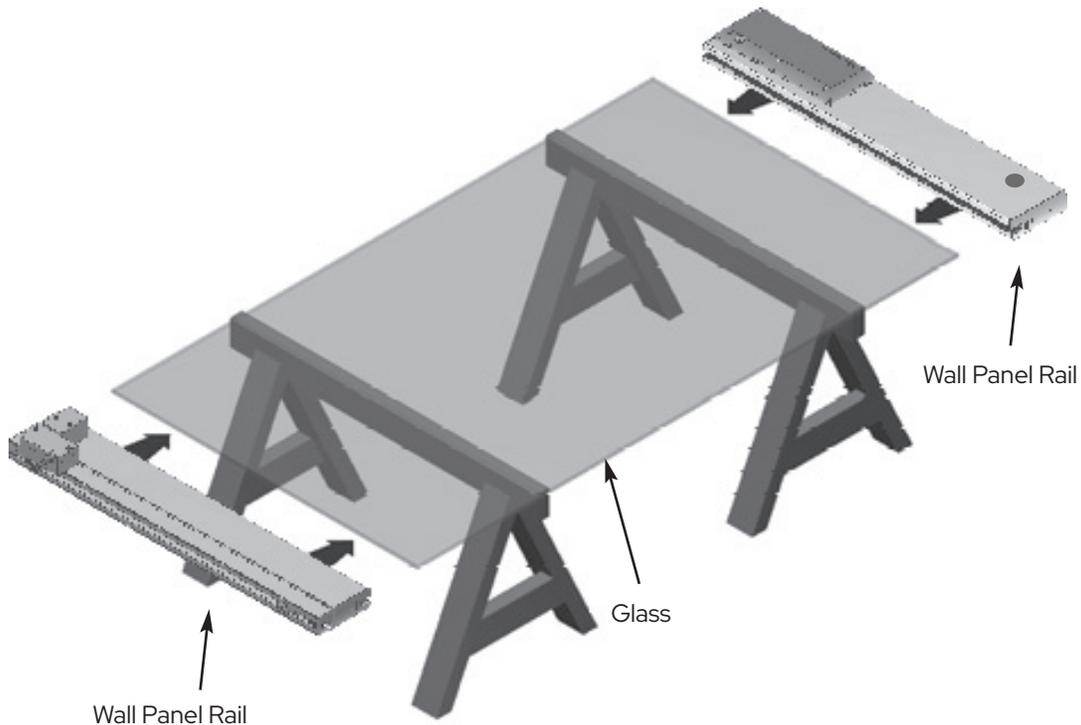


Assemble Wall Panels



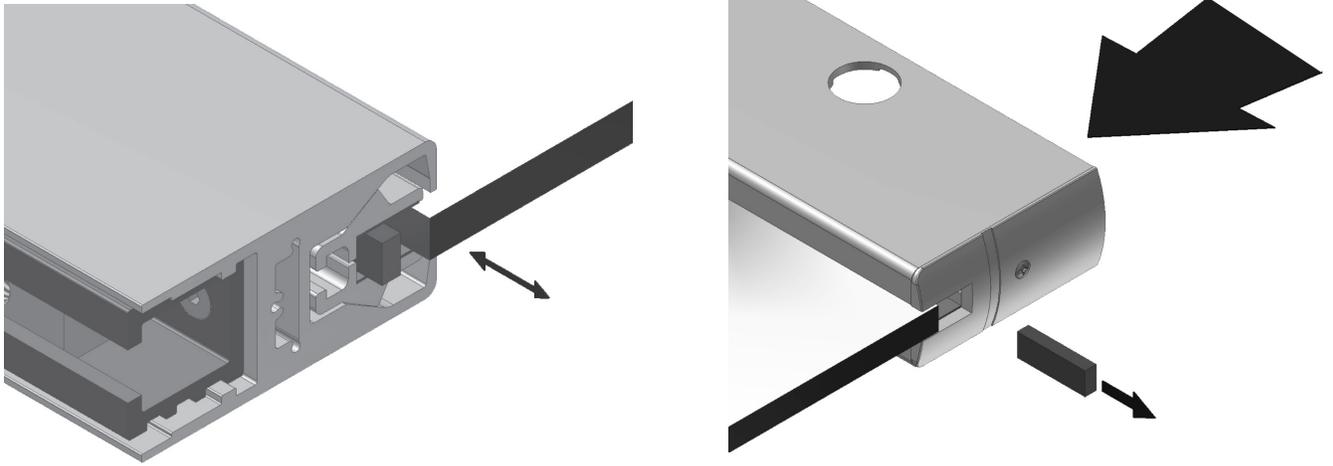
Measure from the bottom of the Track to the floor, deduct for the top and bottom rails, as well as the nominal 1/4" (6.4) clearance above the floor. The determination of Panel width requires many considerations, but in normal conditions the glass widths match the Wall Panel Rails and Door Rails. All vertical gaps between walls, wall Panel rails, and door rails are calculated at 1/8" unless specific instructions were given at time of ordering. Refer to CPP to verify.

NOTE: All glass should be fully tempered. Laminated glass should not be used with CRL Wedge-Lock Rails when fabricating Moving Wall Panels. However, laminated glass can be used for fully framed wall Panels (supplied by others).

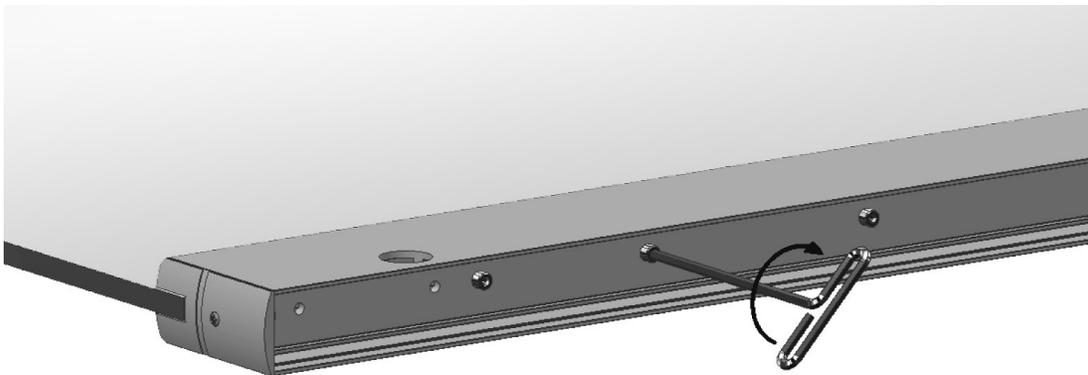


1. Lay your glass panel flat on two sawhorses or other appropriate support structure. At each end of the Wall Panel Rails are Spacer Blocks (used to keep the Wedge-Lock™ Clamps separated). Slip the Wall Panel Rail onto the glass and align the vertical edge of the glass even with the End Cap. Two Wall Panel Rails do not yet have End Caps, so align the edge of the glass to protrude from both ends of the Wall Panel Rail evenly.

Assemble Wall Panels (Continued)

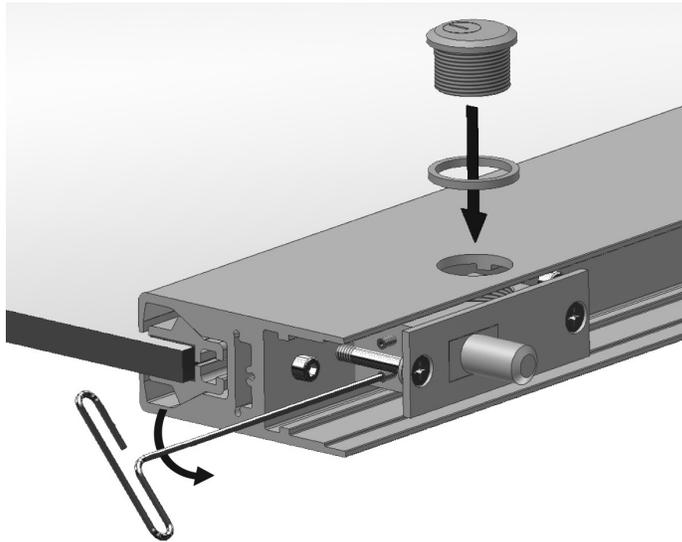


2. After this alignment is achieved, pull the Spacer Blocks from each end of the Wall Panel Rail, then push the Wall Panel Rail toward the glass until the glass bottoms out in the Wedge-Lock™ Channels. Check again for alignment.



3. Tighten a Socket Head Cap Screw in the middle of the channel with the 3/16" T-Handle Hex Tool, supplied. Top Wall Panel Rail Socket Head Cap Screws are accessed through holes in a cover plate. Tighten all of the Socket Head Cap Screws working left to right using the 3/16" T-Handle Hex Tool.

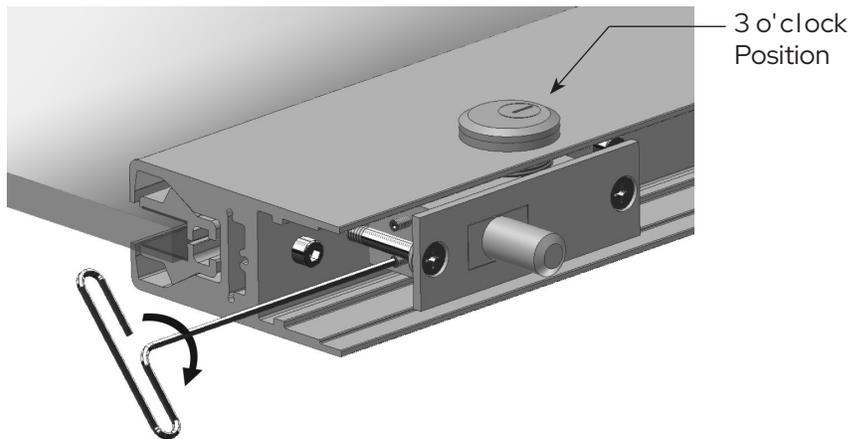
Assemble Wall Panels (Continued)



NOTE:

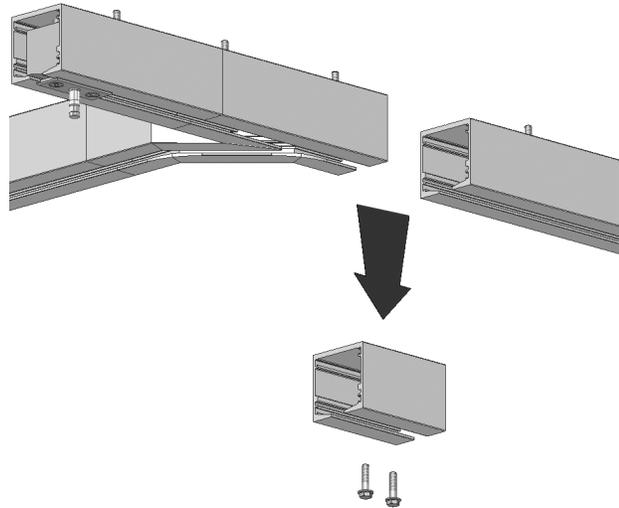
There are three different types of Cylinder's that can be used:
 Keyed Cylinder: Cat. No. DRA10
 Thumbturn: Cat. No. DRA22
 Dummy Cylinder: Cat. No. DRA30

- Remove End Cap to gain access to the two (2 mm) Allen Set Screws located in the end of the locking mechanism. Back the Allen Set Screws out until tips have cleared the threads for the Cylinder or Thumbturn. Thread the Cylinders or Cylinder/Thumbturn that have been chosen for the application through the prefabrication hole in the sides of the Door Rail and into the lock mechanism. Be sure the 1/8" (3 mm) Spacer Rings are on the Cylinder Thumbturn before doing this.

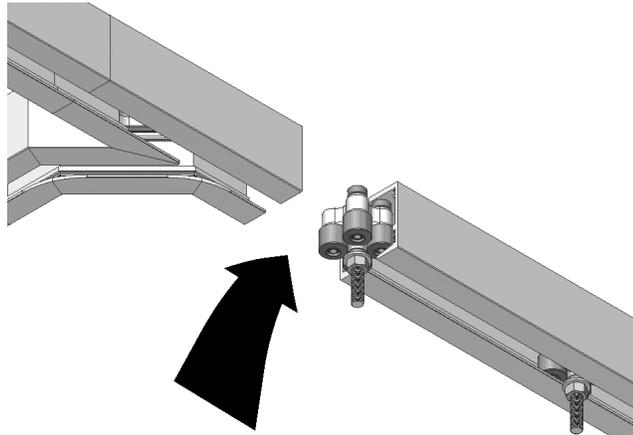


- Once the Cylinders are properly seated, position the small round turning portion of the Cylinder or Thumbturn in the 3 or 9 o'clock horizontal position, depending on which side of the door they are on. The small turning portion should always face to the opposite end of the Wall Panel Rail. Tighten the two (2 mm) Allen Set Screws to secure the Cylinders in the correct position. Check to see that the Cylinder/Thumbturn on each side of the Door Rail operates freely before attaching the End Cap.

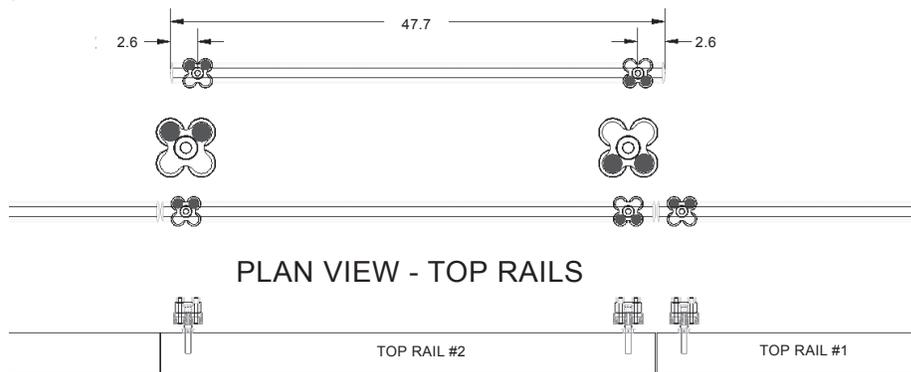
Install the Sliding Wall Panels into the Track



1. Remove the Roller Access Splice, which is typically located in front of the first Parking Area Track intersection. Consult CPP for location.



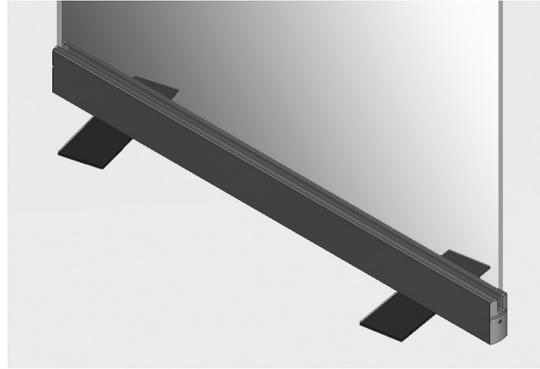
2. Starting with Panel #1, install a pair of Intelli-Track™ Roller Assemblies into the SPS Track through the roller-access opening.



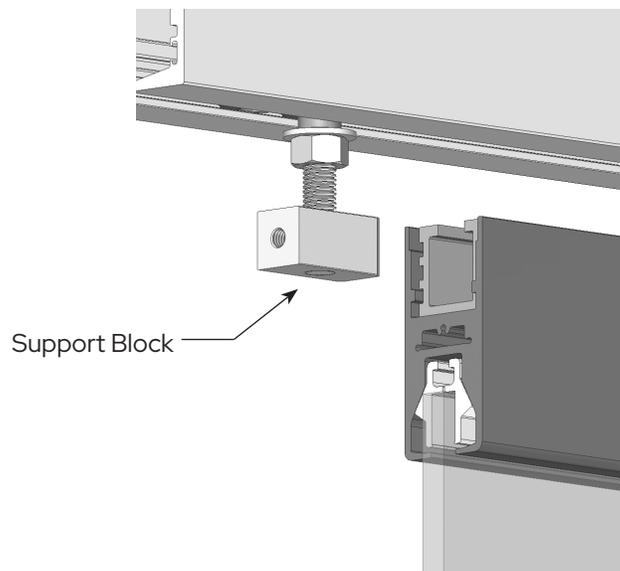
ELEVATION OF TOP RAILS - FROM OUTSIDE

Refer to the CPP for proper orientation of the Tracking Rollers of each Intelli-Track™ Roller Assembly before installing. The programming of the Movable Wall Panels is determined by the orientation of the Rollers and must match the CPP. This is the key element in determining how the Wall Panel is routed by the SPS intersections.

INSTALL SLIDING WALL PANELS INTO THE TRACK

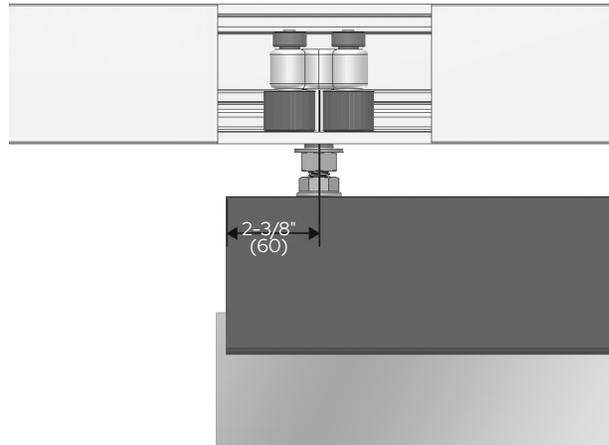


NOTE: Care should be taken to protect the finished flooring from possible damage while hanging the movable Wall Panels. Do not use protective materials under the Wall Panels that are more than 1/4" (6.4) thick, as this makes hanging the Panels difficult.



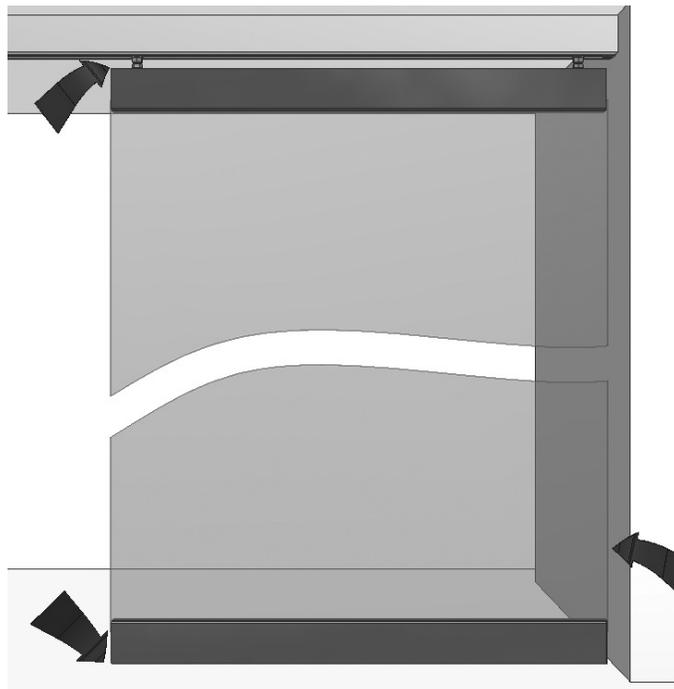
1. The top Wall Panel Rail (WPR) End Caps are not installed at the factory, but are included in the WPR box. The End Caps should not be installed onto the top WPR until the Panels are hung and adjusted. Rotate the Support Block until the set screw is facing outward. Lift one end of the Wall Panel until aligned and push the Support Block into the WPR. Repeat this process for both ends of the WPR. The Roller Assemblies are set to the minimum floor clearance adjustment at the factory. This can be verified by seeing that the pendant bolt is flush with the bottom of the Support Block. This should provide adequate clearance between the floor and Wall Panel for movement.

Install Sliding Wall Panels into the Track (Continued)



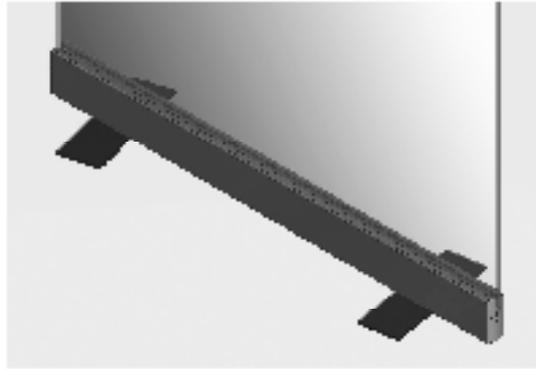
- Slide the Intelli-Track™ Roller Assembly in-line with the Wall Panel Rail (WPR) until the distance from the WPR's ends (without the End Cap) to the center of the pendant bolt equals 2-3/8" (60) or matches a custom dimension given on the CPP. Tighten the Lateral Adjustment Locking-nut with a 7/8" open-end wrench to lock the Roller at this location. The weight of the Wall Panel is now fully supported by the Track. **CAUTION: Do not attempt to slide the Wall Panel until this step is completed. When you first move the Panel, make sure to check floor clearance throughout the entire opening as you move the Panel, and be aware at all times where the open splice is located in the Upper Track.**

Adjusting the Sliding Wall Panels

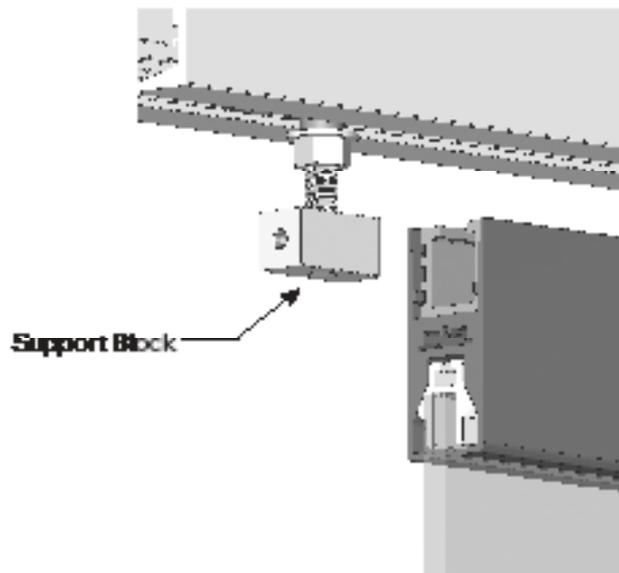


- Slide the #1 Wall Panel to its proper location as indicated on the CPP. Position the Panel against the wall or pivoting door's edge. Examine the vertical and horizontal gaps and adjust as required.

INSTALL SLIDING WALL PANELS INTO THE TRACK

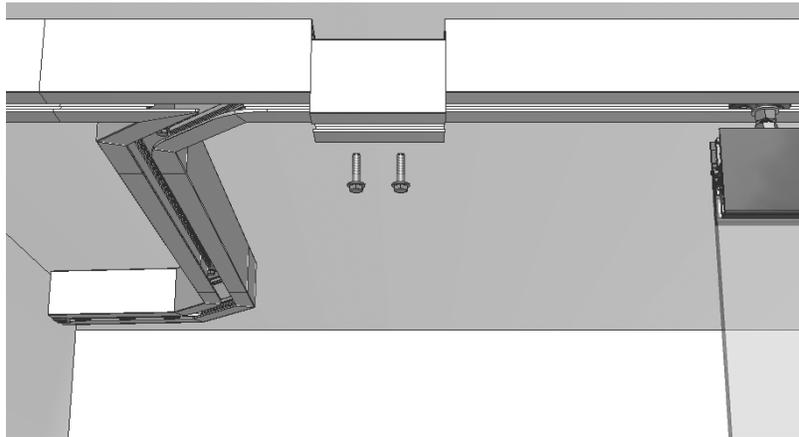


NOTE: Care should be taken to protect the finished flooring from possible damage while hanging the movable Wall Panels. Do not use protective materials under the Wall Panels that are more than $\frac{1}{4}$ " (6.4) thick, as this makes hanging the Panels difficult.



1. The top Wall Panel Rail (WPR) End Caps are not installed at the factory, but are included in the WPR box. The End Caps should not be installed onto the top WPR until the Panels are hung and adjusted. Rotate the Support Block until the set screws are facing outward. Lift one end of the Wall Panel until aligned and push the Support Block into the WPR. Repeat this process for both ends of the WPR. The Roller Assemblies are set to the minimum floor clearance adjustment at the factory. This can be verified by seeing that the pendant bolt is flush with the bottom of the Support Block. This should provide adequate clearance between the floor and Wall Panel for movement.

Re-install the Roller Access Splice



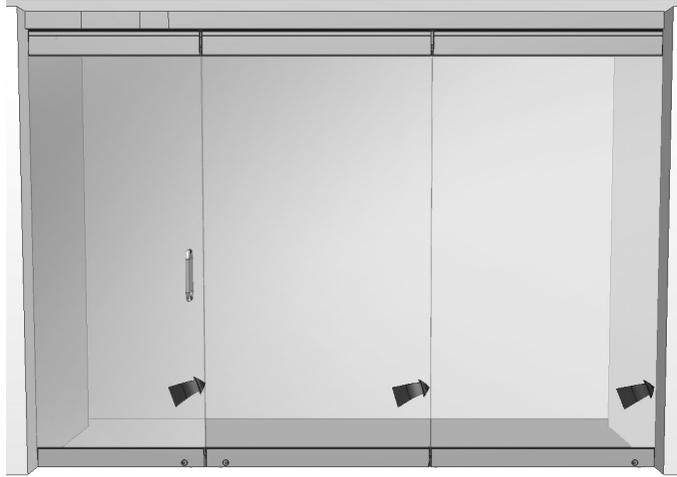
After all Sliding Wall Panels have been attached to the Top Track, re-install the Roller Access Splice that was removed in.

Adjust Roller Spacing for the Parking Area

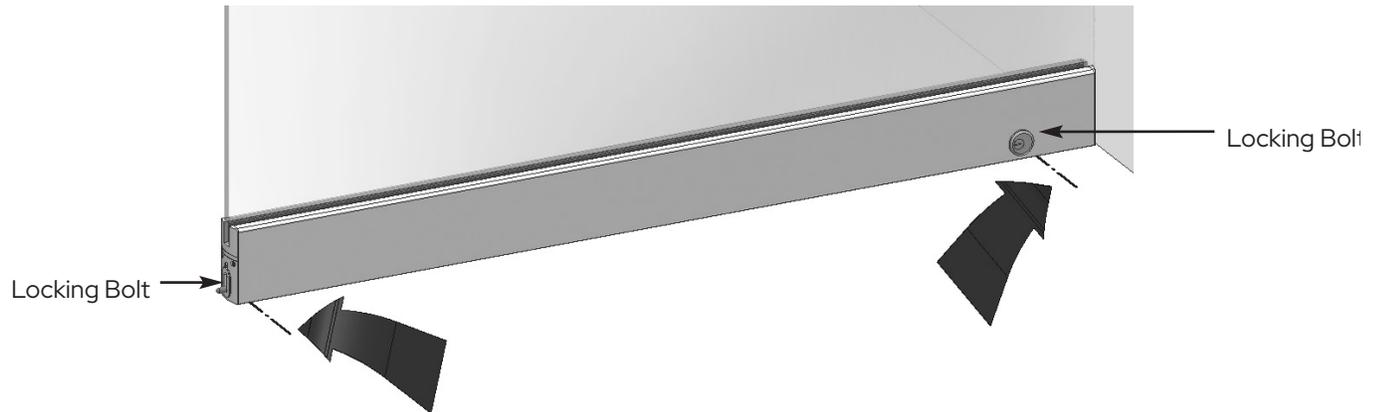


1. Move the Panel nearest to the parking area to the parking area's double Track entrance. Working with the Roller Assembly that first enters the parking area, loosen the Lateral Adjustment Locking Nut **on this end only**. Carefully move the Wall Panel into the parking area until it comes to rest. Adjust the position of the Intelli-Track™ Roller Assemblies laterally until both Pendant Bolts are centered in the Track slots (**important step for smooth operation**), and retighten the Lateral Adjustment Locking Nut.
2. Repeat step **1** for all of the Sliding Wall Panels.

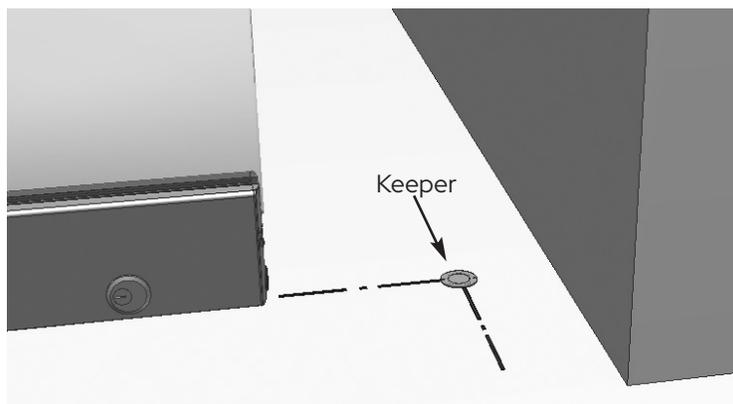
Install Floor Keepers



1. Move the #1 Wall Panel into its closed position and verify the vertical gap of 1/8" (3.2), or as specified. Adjust if necessary.



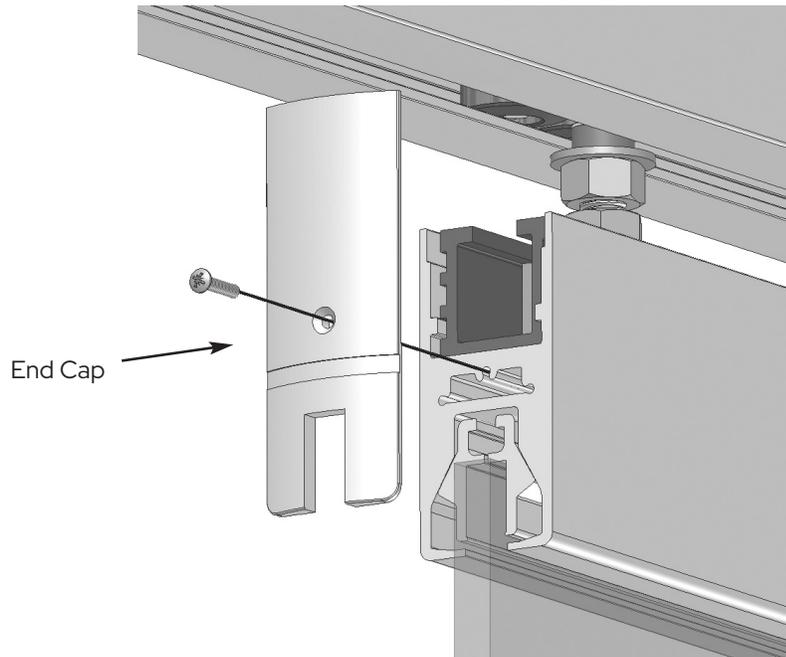
2. The #1 Wall Panel will have two locking bolts. Mark their centerline positions on the floor.



Next, slide the Panel out of the way, drill for and install the Keepers into the floor. Move the Wall Panel into position and lock it to the floor.

3. Repeat Steps 1 and 2 for all Sliding Wall Panels.

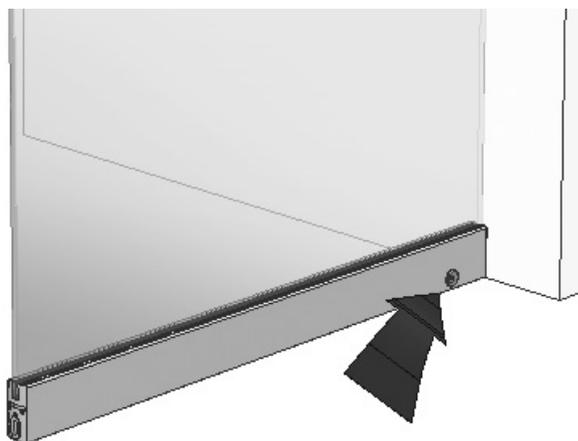
Install the Wall Panel Top Rail End Caps



The End Caps are located in a package along with the Seal Kits. Using a Phillips screwdriver, fasten the End Caps to both ends of all Sliding Wall Panels in the system. Finish matched fasteners are taped to the back side of the End Caps.

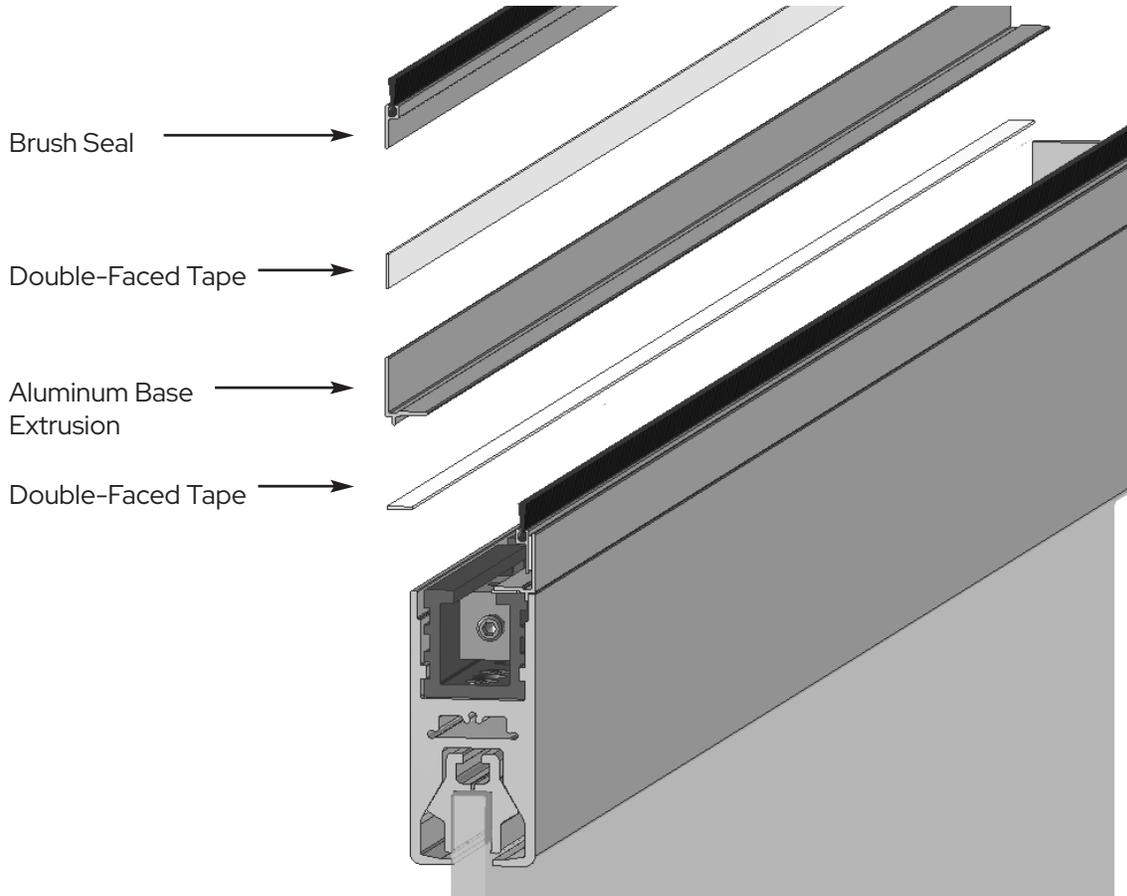
NOTE: SPS End Caps are taller than the bottom rail's in order to match up with Top Seal System as described in the next step.

Install the Top Seal System

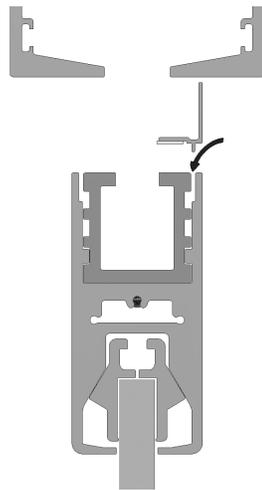


1. Move #1 Panel into the closed position and lock.

Install the Top Seal System (Continued)

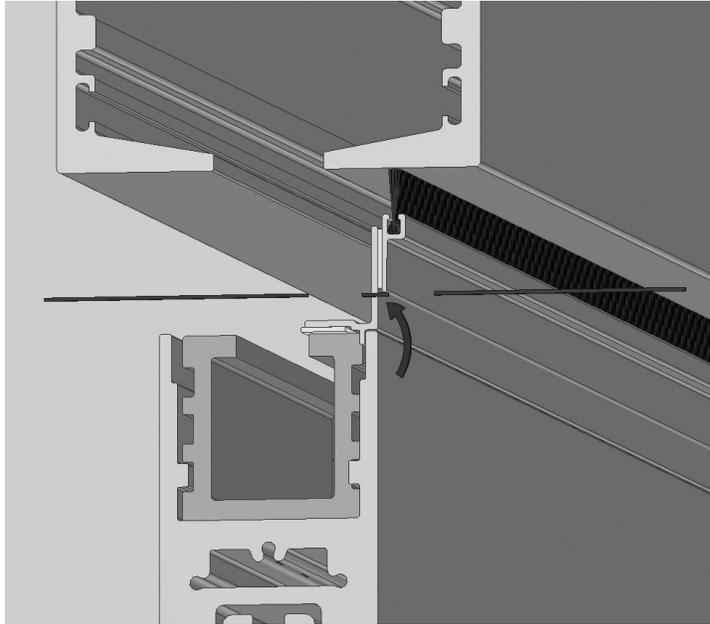


- 2. The Top Seal Kits are numbered to match the Wall Panel Rail for ease of mating. There is an Aluminum Base Extrusion and a Brush Seal for both sides of each rail. For clad finishes there is a strip of matching Cladding attached to the Aluminum Base Extrusion. Double-faced tape is factory applied to the bottom surface of the Base Extrusion for adhesion to the Wall Panel Rail, and to the Brush Seal for adhesion to the Base Extrusion.

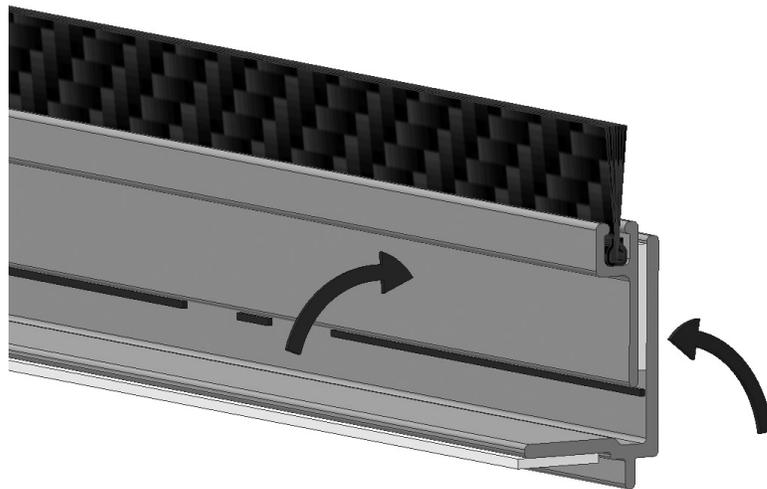


- 3. Dry-fit by placing the Base Extrusion on top of its Wall Panel Rail mate with the tape liner intact. If properly aligned with the rail's edge, it will drop down into an alignment slot.

Install the Top Seal System (Continued)

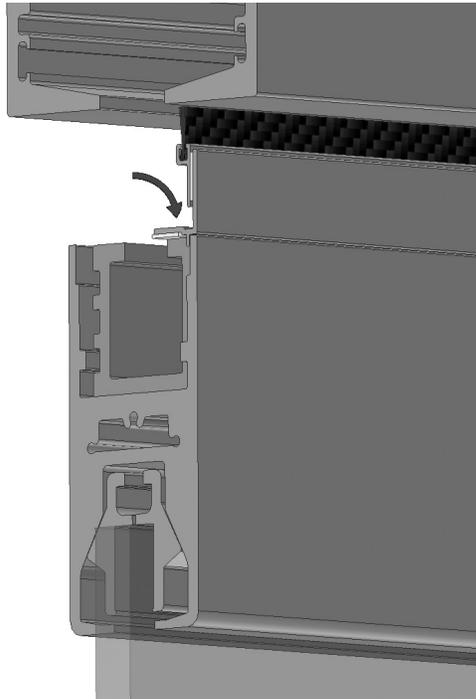


4. Dry-fit by positioning the Brush Seal on the exterior side of the Base Extrusion with its tape liner intact. Move the Brush Seal up until it has an even line with the Track above, and then make a pencil mark on the Base Extrusion at both ends for later alignment of the Brush Seal. Remove Brush Seal then Base Extrusion from the Wall Panel Rail.

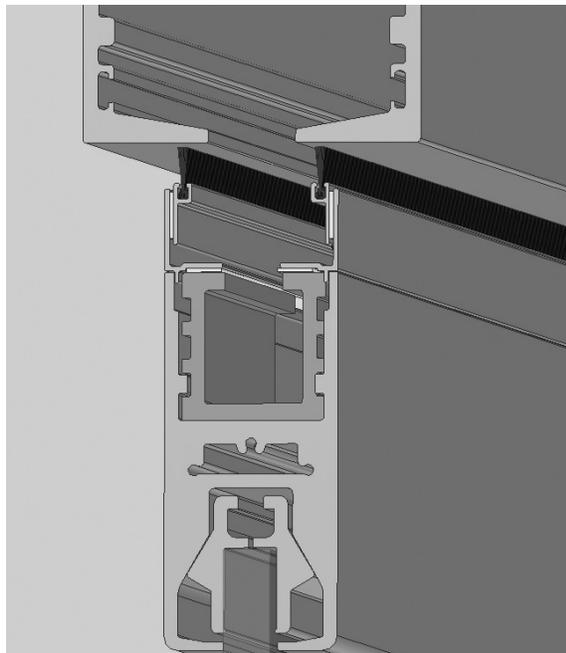


5. The Brush Seal is tape applied to the interior of the Base Extrusion (the opposite side that was marked with the pencil in the previous step). Remove the tape liner from the Brush Seal, align the bottom edge with the pencil marks made on the opposite side, and press the two pieces together. Apply moderate pressure for the full length of the extrusions to set the tape.

Install the Top Seal System (Continued)



6. Remove the tape liner from the Base Extrusion and adhere the assembly in to the Wall Panel. Pressure should be applied to the top of the Base Extrusion along its full length to set the tape.

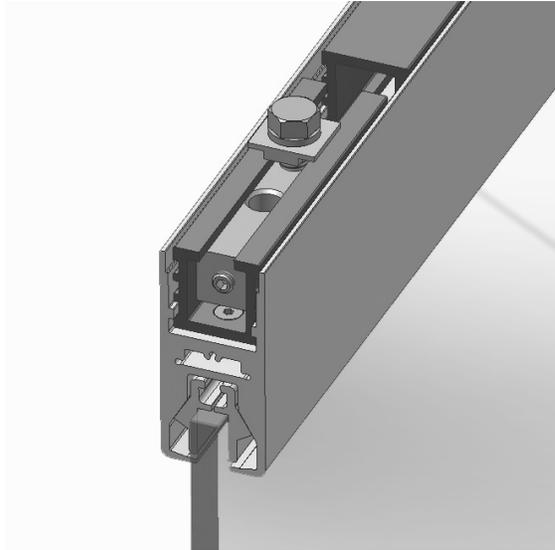


7. Repeat **Steps 1 through 6** for both sides of all Wall Panels in the system.

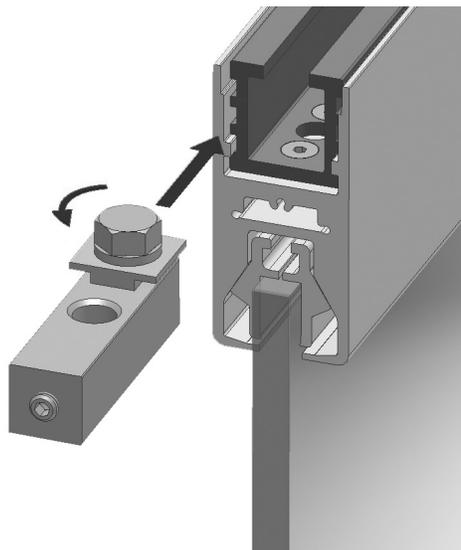
The Second Phase of the installation is complete.

PHASE THREE**Top Door Rail Fitting Pivot Receiver Installation**

1. The Top Door Rail Fitting Pivot Receiver must be installed into the top door rail. CRL will provide a special door rail preparation ready to accept this hardware.

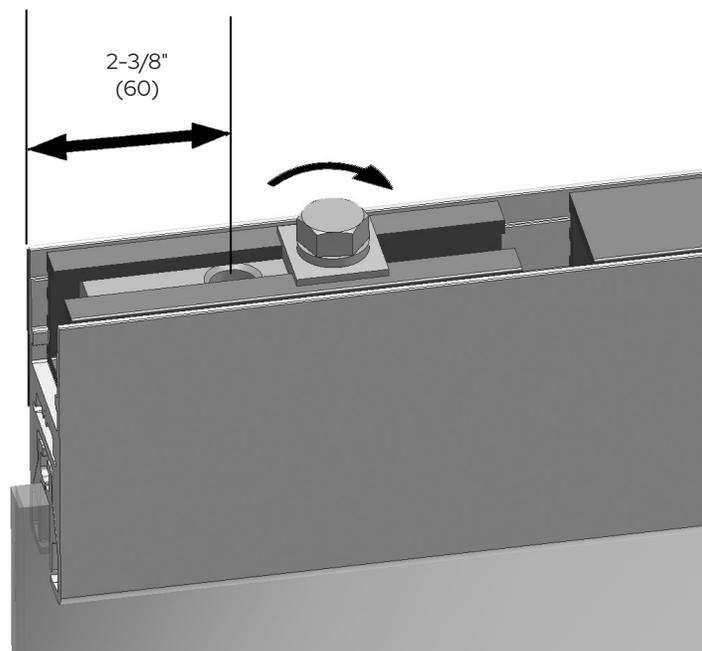


2. Loosen the 1/2" Hex Bolt located on the top of the Pivot Receiver. With the door rail's End Cap removed, slide in the Pivot Receiver. Make certain that the 3/8" set screw installed at the end of the Pivot Receiver is facing outward toward the end of the door rail. Loosen this set screw if it is visible in the pivot pin receiving hole.



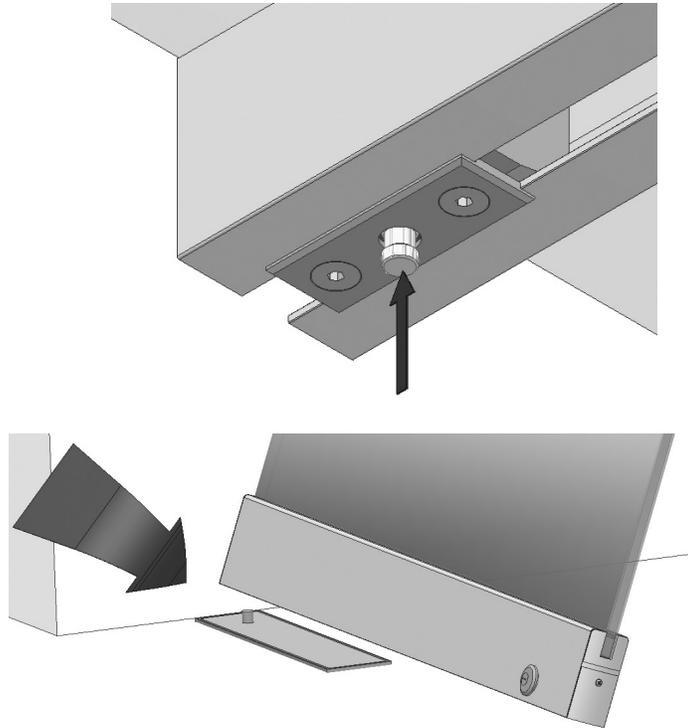
Top Door Rail Fitting Pivot Receiver Installation (Continued)

3. Align the pivot pin receiving hole's center at 2-3/8" (60.3) as measured from the end of the door rail, with the End Cap removed.
4. Using a 1/2" open-end wrench, tighten the 1/2" Hex Head bolt until the hardware is locked in place.

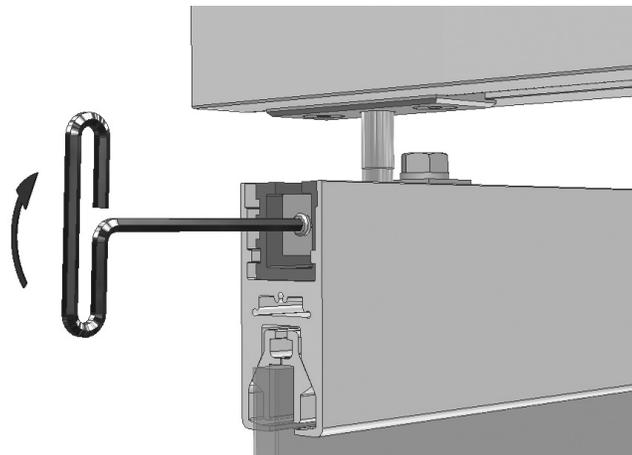


Hanging the Pivot Door

1. Lift the Pivot Pin up into the Track before resting the door on top of the floor mounted closing device.



2. Tilt the door to its upright position. Align the pivot pin receiving hole with the pivot pin, and then pull down on the pivot pin until it bottoms out in the receiving hole. It is now safe to release the weight of the door.



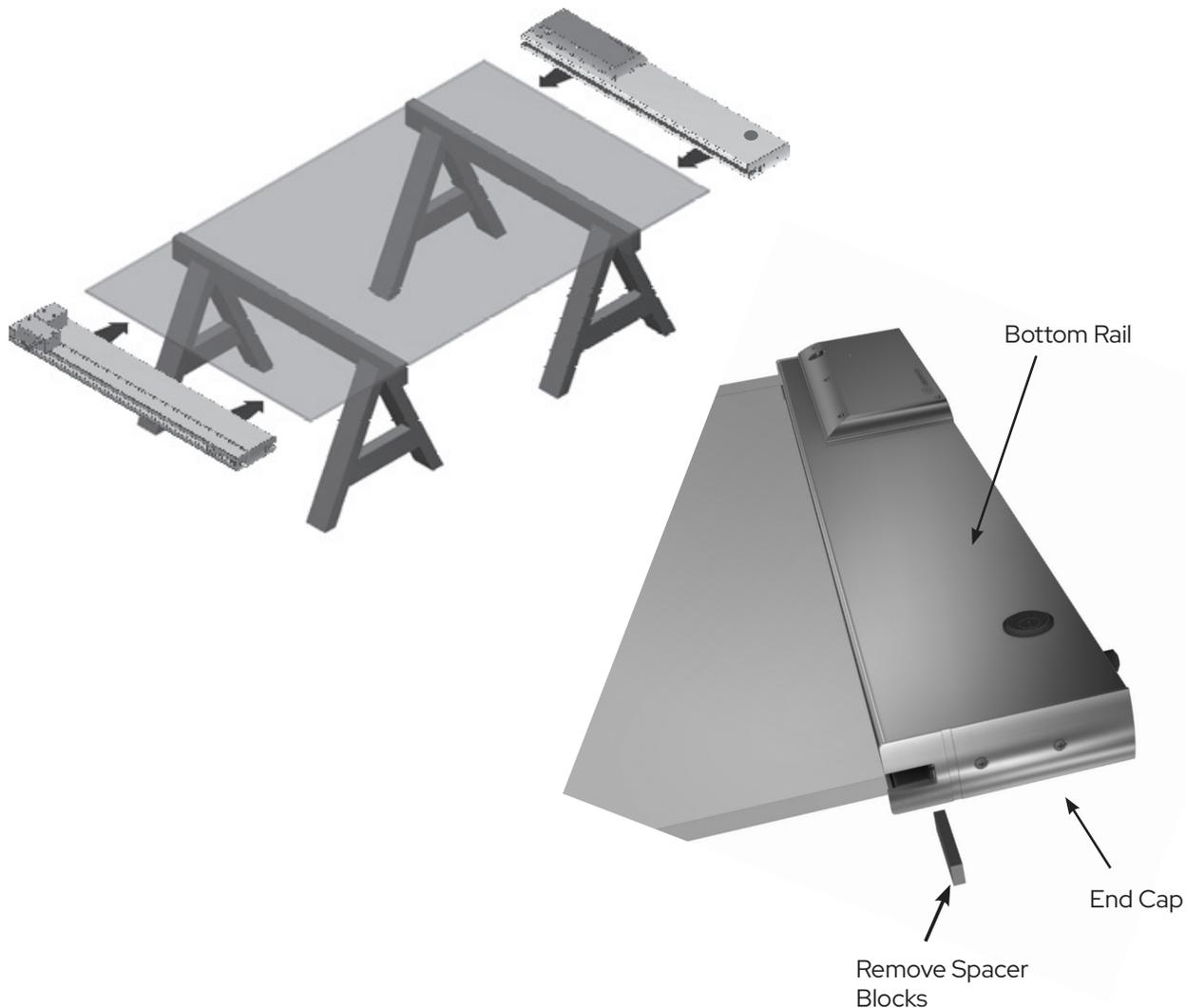
3. Carefully open the door to expose the 3/8" set screw found at the end of the Pivot Receiver. Using a 3/16" Hex Drive Socket or T-Handle Hex Tool, turn the set screw clockwise until it presses firmly against the Pivot Pin.

IMPORTANT NOTE: This step is critical in order to prevent the Pivot Pin from disengaging and possible door support failure.

Installing the Optional Convertible Door

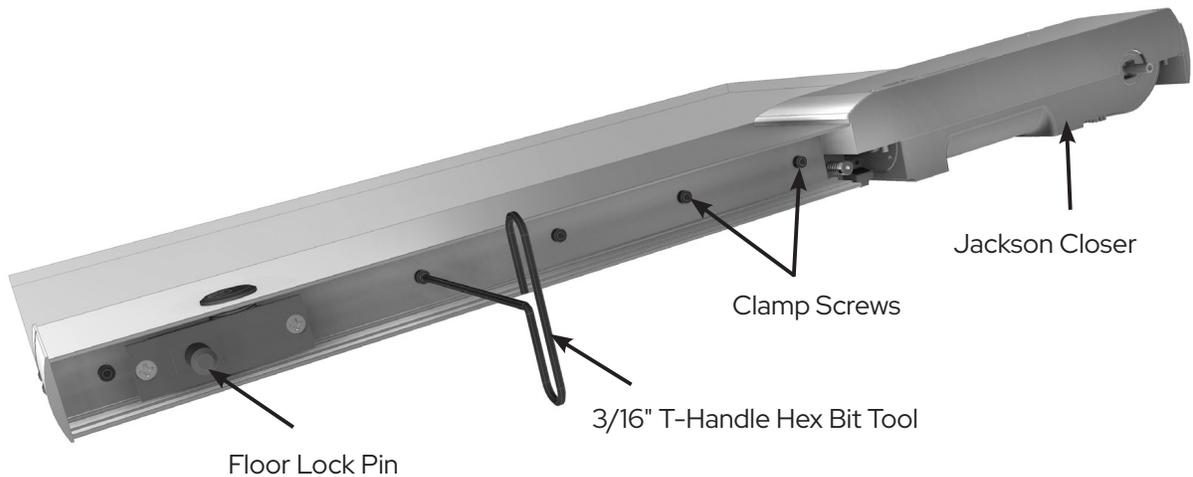
Always check your materials prior to attaching the Door Rails. Make sure that the glass is the correct size, and no visible defects are present.

IMPORTANT NOTE: As with all glass used with the Intelli-Track™ SPS System, each Panel should be fully tempered. Annealed or Laminated glass should not be used with CRL Wedge-Lock™ Rails when fabricating Moving Wall Panels.



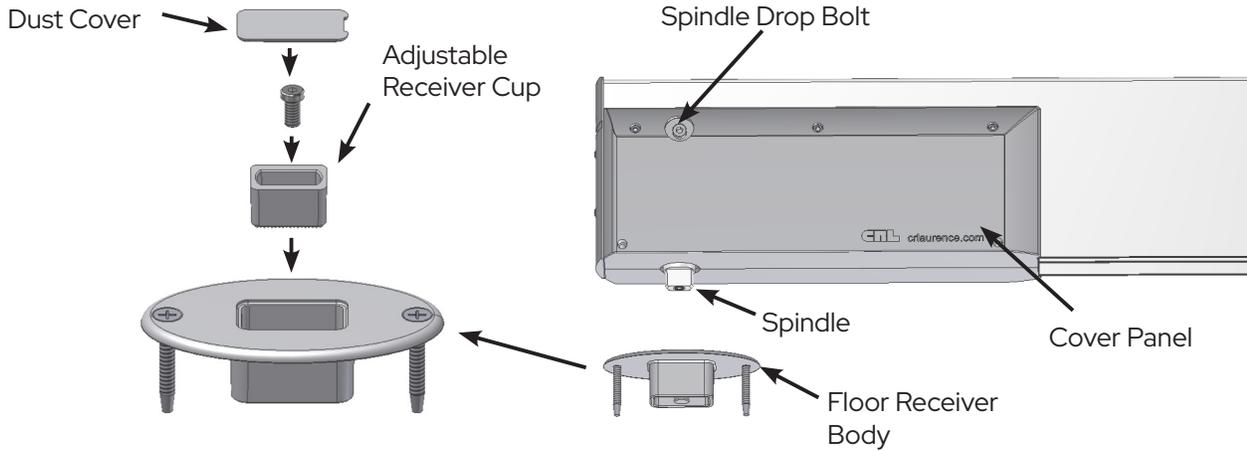
1. Place the door glass on a horizontal surface or saw horses. Make sure that you have edge access all around the glass perimeter. At each end of the Top and Bottom Rails are Spacer Blocks used for shipping the Wedge-Lock™ Clamps. **Remove before installing .**
2. Slip the Top and Bottom Rails onto the glass and align the vertical edge overhang using a loose end cap. You can attach the bottom End Caps at this point but not the top caps. The glass should be flush with the End Cap surface. The rails must be completely tight against the glass edges before tightening the clamping system in the next step.

View of Bottom Rail



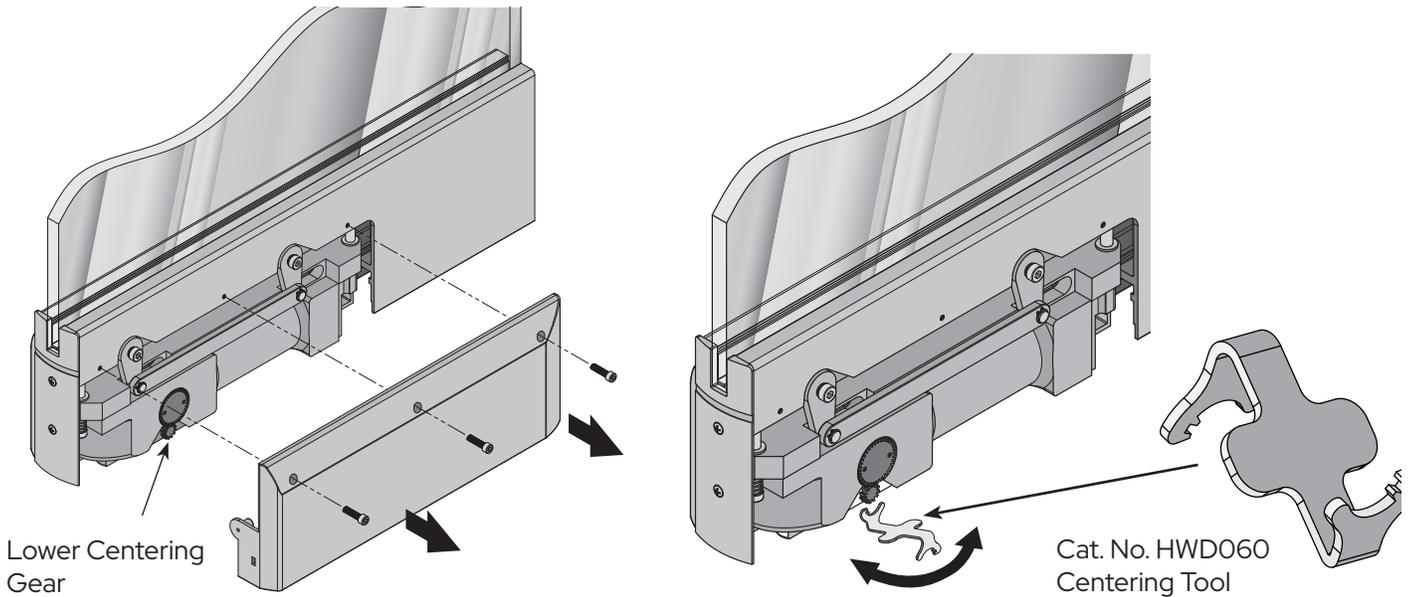
3. Starting with a Clamp Screw toward the center of the Bottom Rail, tighten with the 3/16" Hex Bit Drive Socket or T-Handle Hex Tool. Snug each fastener but do not torque. Alternate back-and-forth working your way out to the ends. When all fasteners are snug, repeat the same pattern until the Allen Wrench turns 1/4 turn past tight. This will assure a torque on each screw about 7-8 foot pounds. Usually a third sequence of tightening is not necessary. However, it's easy to make a quick check by simply inserting the T-Handle Allen Wrench into a screw that was already tightened a second time.
4. Repeat the process for the Top Rail. The fasteners are accessed through holes in the cover plate. It is especially important to properly torque each fastener as in Step 3. The Top Rail Clamp is responsible for supporting most of the door's weight. Failure to properly install the door by not tightening the Socket Head Cap screws to their specified torque may result in personal injury.
5. Attach the Roller Assemblies to the Top Door Rail in the same method as outlined in the Stacking Panel Installation Manual. Spacing will be determined by the width of the parking section Track.
6. Insert the Convertible Door into the Intelli-Track™ access section and slide into position.

Bottom Pivot Assembly

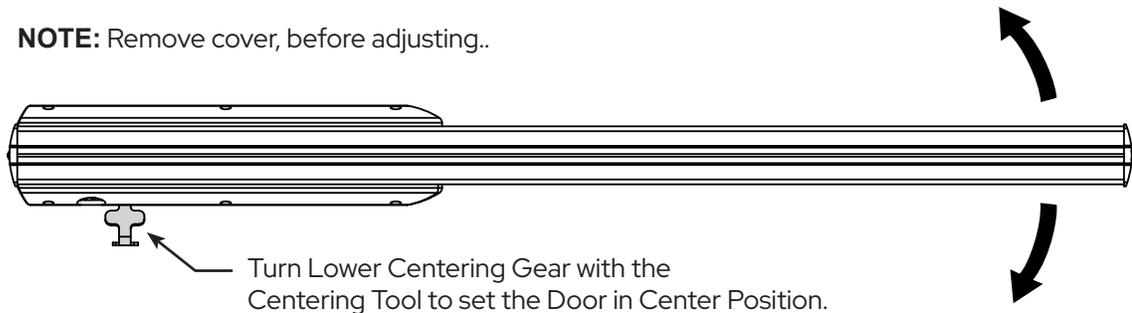


Centering the Door

To center the SPS Convertible Door use the Cat. No. HWD060 Centering Tool. Remove either side Cover Panel and place the Centering Tool over the Lower Centering Gear. Try 1/4 turn and check door by opening all of the way and letting it self close. Adjust until door centers in opening. Replace the cover when done.



NOTE: Remove cover, before adjusting..



Turn Lower Centering Gear with the Centering Tool to set the Door in Center Position.

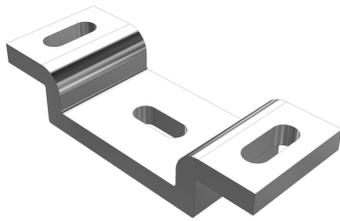
DROP-TRACK SUPPORT SYSTEM

PRODUCT DESCRIPTION

Many commercial installations of a Stacking Partition System require the track to be mounted well below an overhead fixed surface in order to align with the drop-ceiling plane. Previous track support systems have been limited to a short drop length and have required a great number of support rods in order to maintain load support and lateral stability.

CRL's new Drop Track Support system has been engineered to allow a greater distance from the overhead mounting surface to the SPS Track. We have reduced the installation time with the addition of the new Intermediate Support Rail Assembly and adjustable Lateral Support Rods. The result is an increase in sectional strength and system stability.

PARTS IDENTIFICATION



Dual Rod Bracket



Halfen T-Bolt System



Single Rod Bracket



Lateral Stabilizer Tie Rod assembly for drops 50'' - 60''



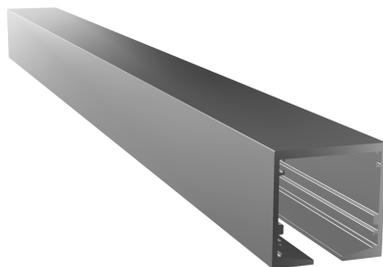
Intermediate Support Rail



Lateral Stabilizer Tie Rod assembly for drops 42'' - 50''



Lateral Stabilizer Tie Rod assembly for drops 34'' - 42''



Main Track



Threaded Rod for drops less than 34''

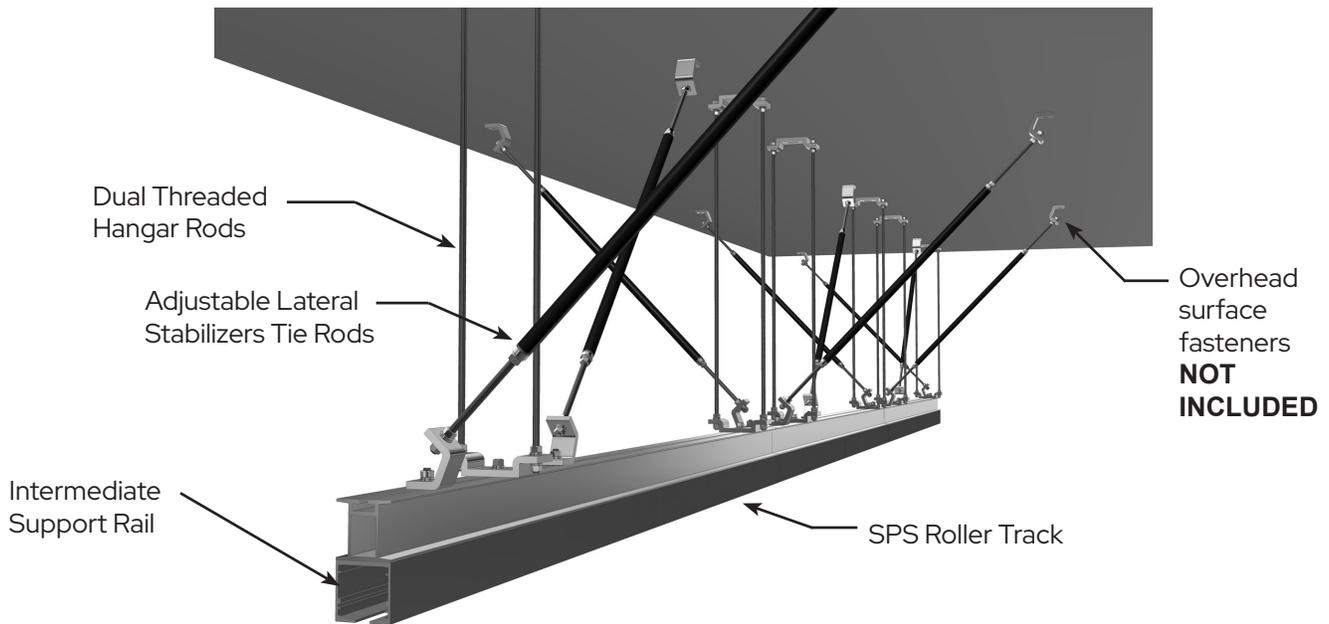


Corner Support Plate



Self Drilling Screw

TYPICAL DROP-TRACK INSTALLATION



Properly Engineered mounting procedures to a fixed overhead surface must be strictly followed. Any deviation could result in bodily injury to you and others.

INSTALLATION PROCEDURES

STEP 1: Parts Inventory. Make sure that you have all of the necessary components for the installation before starting the job.

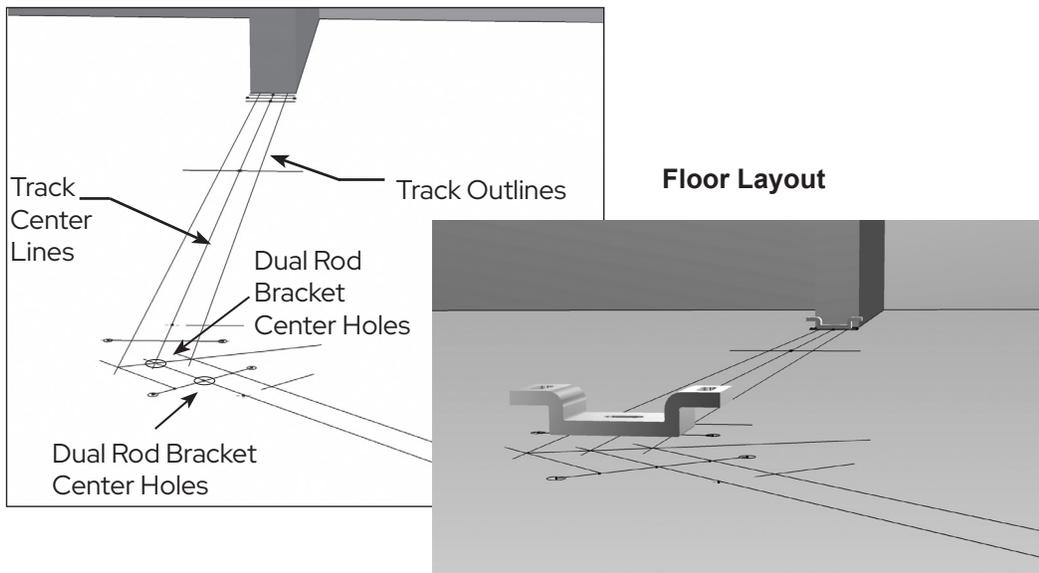
PARKING AREA:	Shipped from factory as a single-welded unit.
SPS ROLLER TRACK:	Pre-cut straight and mitered sections.
INTERMEDIATE SUPPORT RAIL:	Pre-cut straight and mitered sections
DUAL ROD BRACKETS:	Minimum four brackets (top and bottom) per 8' of track.
SINGLE ROD BRACKETS:	Minimum four brackets (top and bottom) per 8' of track.
LATERAL STABILIZER TIE RODS:	Minimum three assemblies per 8' of track.
34" THREADED ROD:	(Optional) Replaces Tie Rods on drops less than 34".
HALFEN T-BOLT ASSEMBLY:	One for each bottom bracket.
SELF-DRILLING SCREW:	Minimum every 12" of roller track.
CORNER SUPPORT PLATE:	Not Required on all systems.

NOTE: Fasteners are not included for attaching the brackets to the ceiling or roof-structure above. It is your reasonability to assure that the method of attachment is properly engineered to support the SPS system.

INSTALLATION PROCEDURES (Continued)

STEP 2: Floor Layout. Critical to a successful installation is an accurate layout directly below the work surface at the floor level. The layout area **MUST** be clean and free of any debris. If the floor coverings are installed, cover with a new layer of rosin paper to accept layout marks.

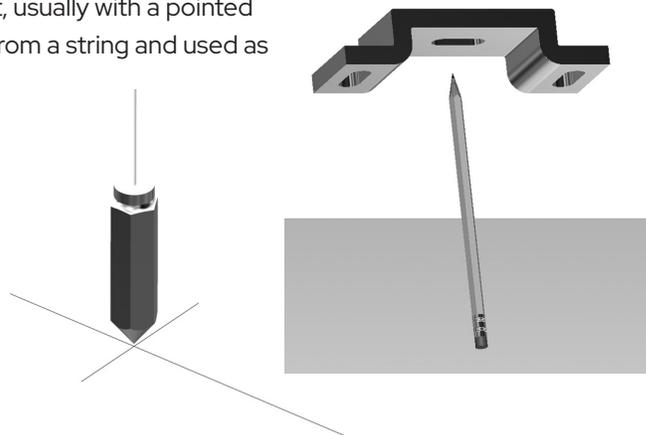
- (a) Begin by marking the centerline of the SPS track from wall-to-wall using the job drawings to obtain measurements and reference points.
- (b) Continue by drawing the track outlines. If possible, check layout lines against actual parts by setting them on top of the marks.
- (c) Using the job-site drawings and a Dual Rod Bracket, mark the center holes of each hanger on the floor.



STEP 3: Ceiling Layout. The goal is to precisely transfer the layout to the ceiling above.

There are several options available including the use of levels and plumb bobs.

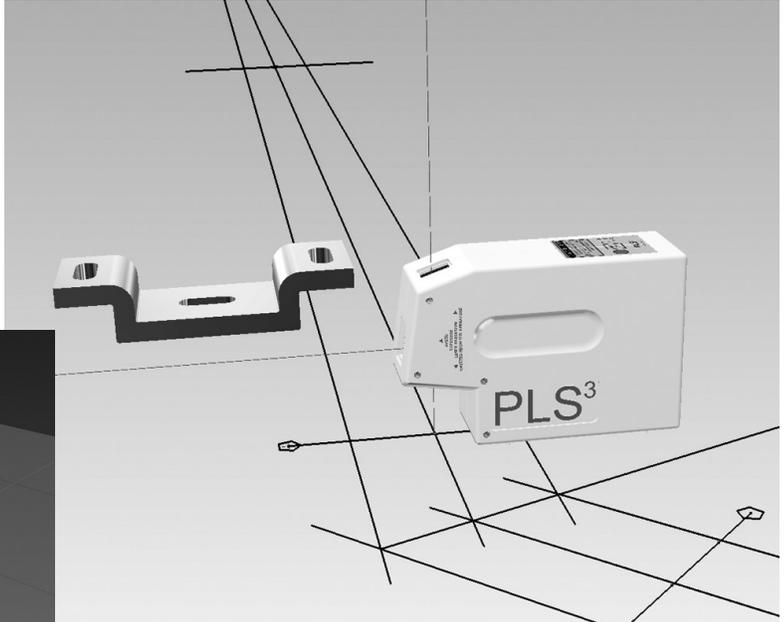
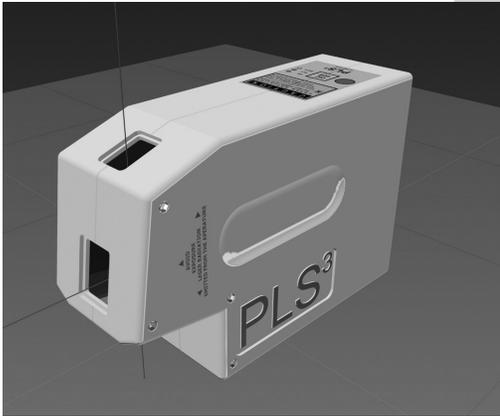
A plumb-bob or a plummet is a weight, usually with a pointed tip on the bottom, that is suspended from a string and used as a vertical reference line, or plumb-line. Simply have a helper hold the line end to the ceiling and you spot the point. Once the weight becomes stationary over the target, mark the ceiling indicating the center hole position of the Dual Rod Bracket.



INSTALLATION PROCEDURES (Continued)

STEP 4: Continued

Another transfer method uses a Self Leveling Laser Alignment Tool. CRL's PLS3 works extremely well for transferring the marks from floor to ceiling with an accuracy of 1/4" per 100'. Given the amount of unsuitability built into the support system, the PLS3 is well within tolerance. The tool also self-levels to any floor that is within 6° of horizontal. Switch the laser on and place the downward beam directly over the cross mark of the center bracket hole. For this application it does not matter which way the device is pointing as we are only concerned with the overhead indicator dot for our ceiling holes. Mark each bracket center hole location on the ceiling surface.



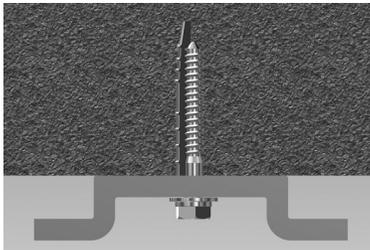
**CRL Professional Laser Alignment Tool
CAT. NO. PLS3**

STEP 5 Bracket Attachment. Typically the brackets are attached to a steel structure like an I-Beam or Channel, a Concrete Ceiling, or a Laminated Beam.

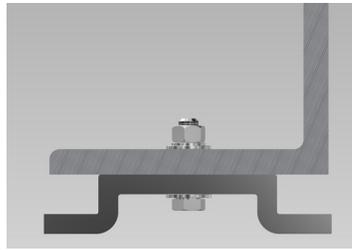
**Recommended hanger spacing: Parking Area: Min 18" on center
Non-Parking Area: Min 96" on center.**

Lock washers should be used at all nut locations. The ceiling support structure design should be capable of supporting a concentrated dead load of 1,135 lbs at each anchor point.

Continue attaching all the system Dual Rod Brackets before proceeding to the next step. Be sure to properly orient each one before tightening the fasteners.



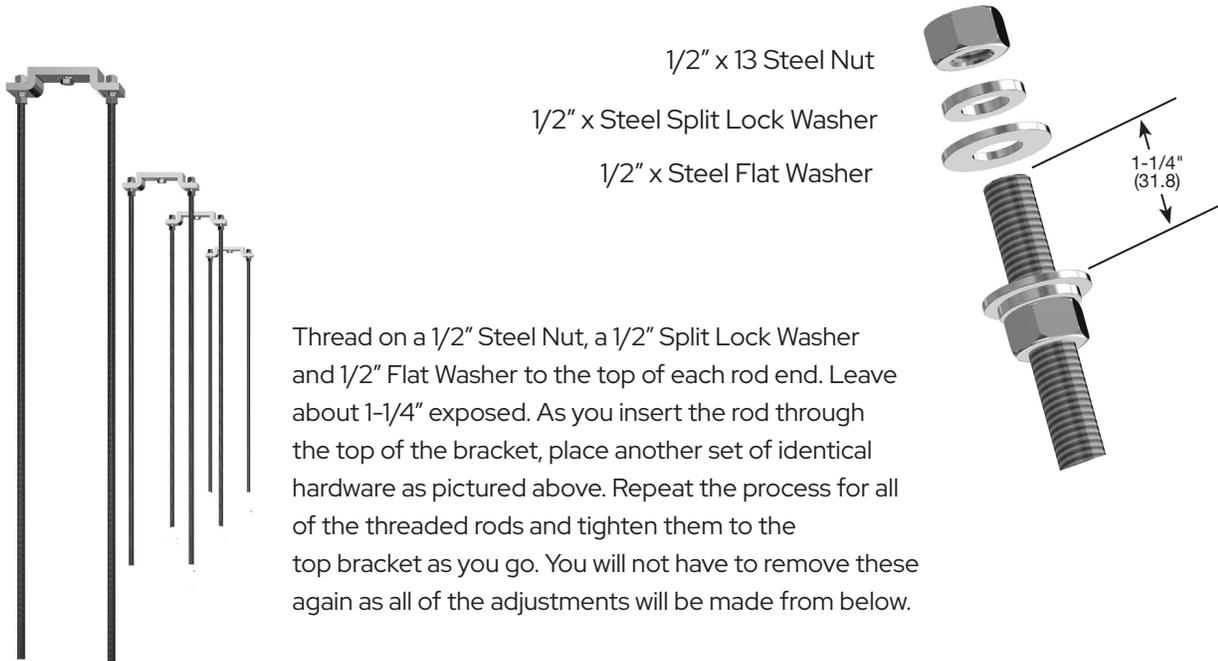
Attachment to Concrete Surface



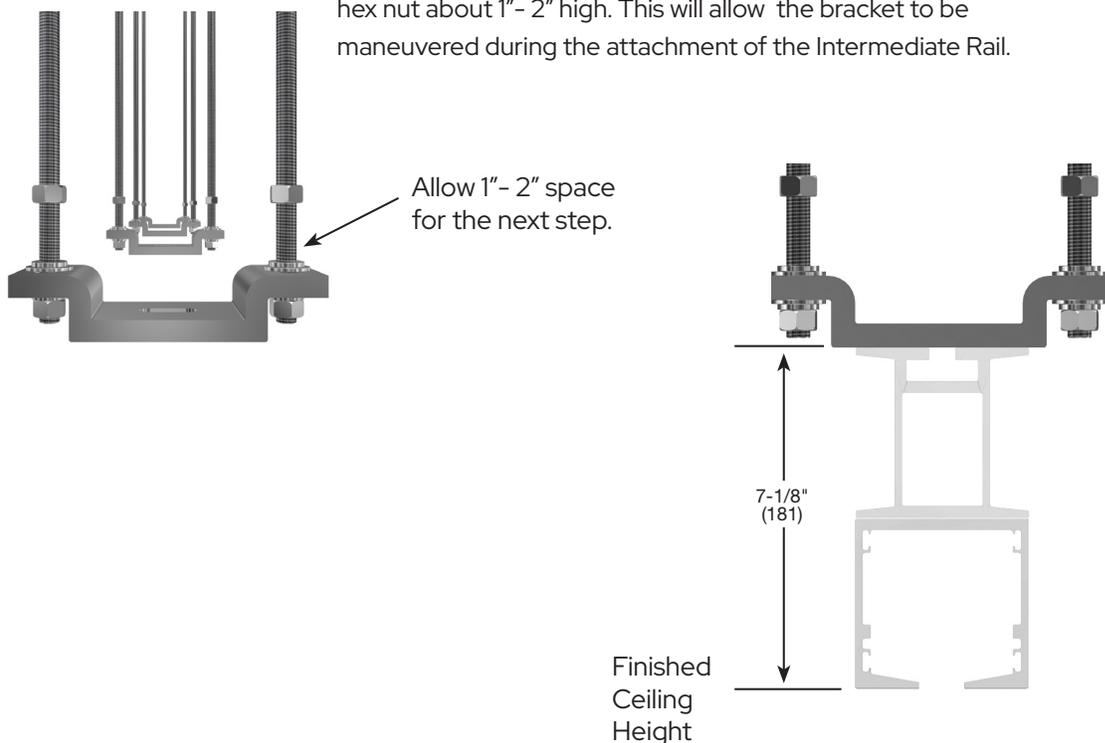
Attachment to Steel Channel

INSTALLATION PROCEDURES (Continued)

STEP 6 Attach the threaded rods.



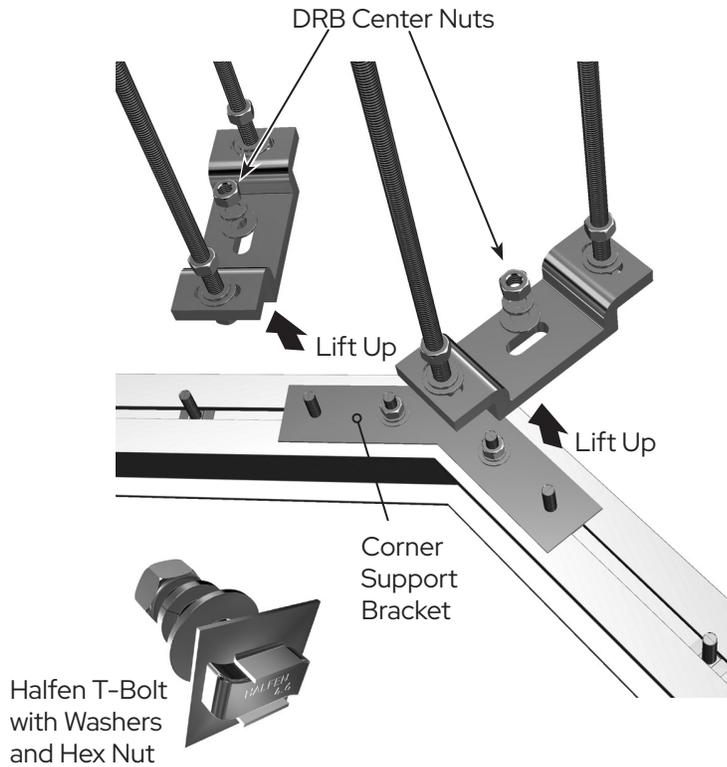
STEP 7 Attach the bottom Dual Rod Brackets. Using the same washer and nut sequence as above, install all of the bottom Dual Rod Brackets the appropriate distance from the floor. It is not important to make them perfectly level at this time. However, it is a good idea to leave the top hex nut about 1" - 2" high. This will allow the bracket to be maneuvered during the attachment of the Intermediate Rail.



INSTALLATION PROCEDURES (Continued)

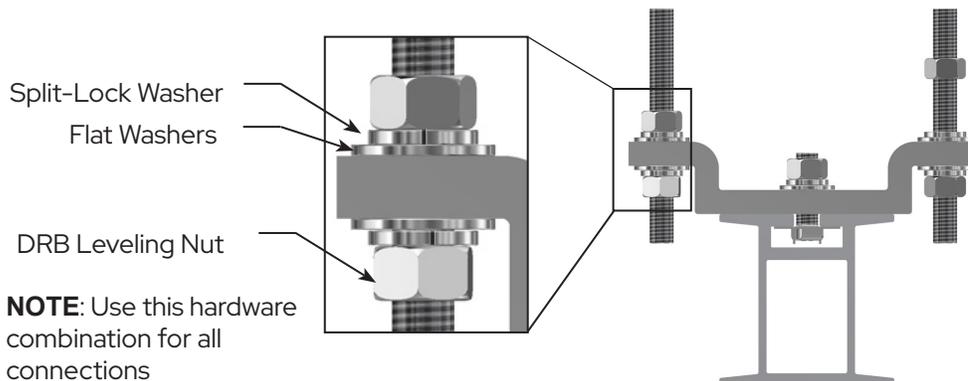
STEP 8 Install the Intermediate Rail.

- (a) Start by laying out the Intermediate Support Rail components on the floor in alignment with the track outline marks made earlier. The slotted side should be up.
- (b) Slide the Halfen T-Bolt units into the rail slot from the ends. One for each Dual Rod Bracket and four for each Corner Support Bracket. Note: Once the rails are assembled it is not possible to add or remove the T-bolts.



- (c) Corner Support Brackets are used for 45° connections above non-welded track joints. They are not required in the parking areas or straight runs.
- (d) Assemble two 45° Intermediate rail sections if using corner support brackets and lift up to the hanging Dual Rod Brackets for attachment to the Halfen T-Bolts using the 1/2" Nut and Washer System.
- (e) Complete assembly of the entire Intermediate Rail system and attach to the remaining Dual Rod Brackets with the 1/2" Hex Nut and Washers.
- (f) After all of the Intermediate Railing is hung, permanently torque down the DRB Center Nuts.

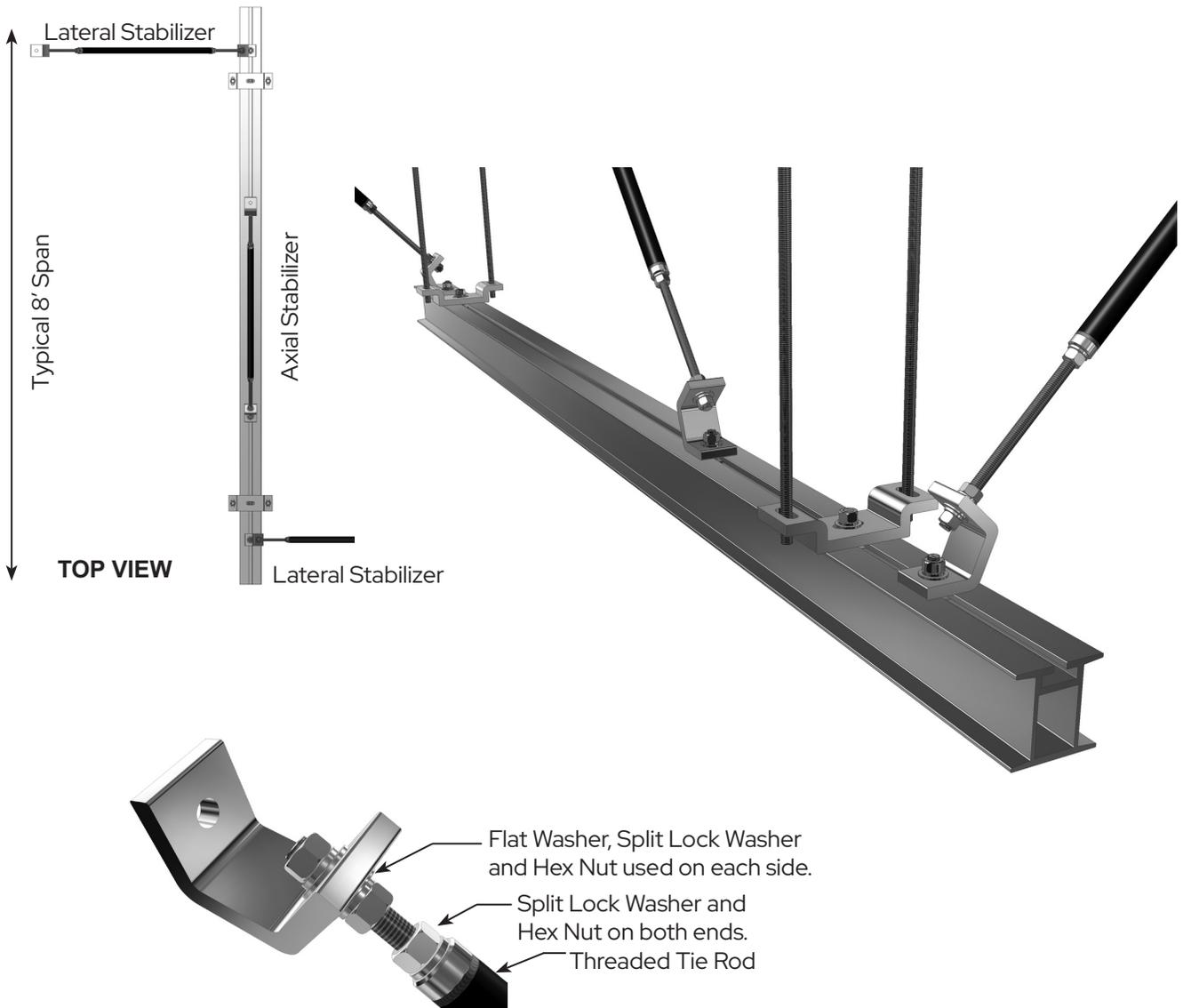
- STEP 9** Level the Intermediate Rail. It is usually more important to level the Intermediate Rail to the floor than to the horizon. If the Floor below has a slight slope, the rail should follow because the SPS Panels require a 1/4" to 5/16" bottom clearance. Adjust level and height using the DRB Leveling Nuts.



NOTE: Use this hardware combination for all connections

INSTALLATION PROCEDURES (Continued)

STEP 10 Add Stabilizer Rods. After the Intermediate Rail is in position and securely fastened to the Dual Rod Brackets, rigidity is added to the structure with the Stabilizer Tie Rods. The Stabilizers must prevent both lateral and axial movement. The engineering drawings should reflect this type of arrangement. An Axial Stabilizer should be located at a minimum of every 8'. The same eight foot rule holds true for the Lateral Stabilizer Tie Rods. (see top view illustration.)

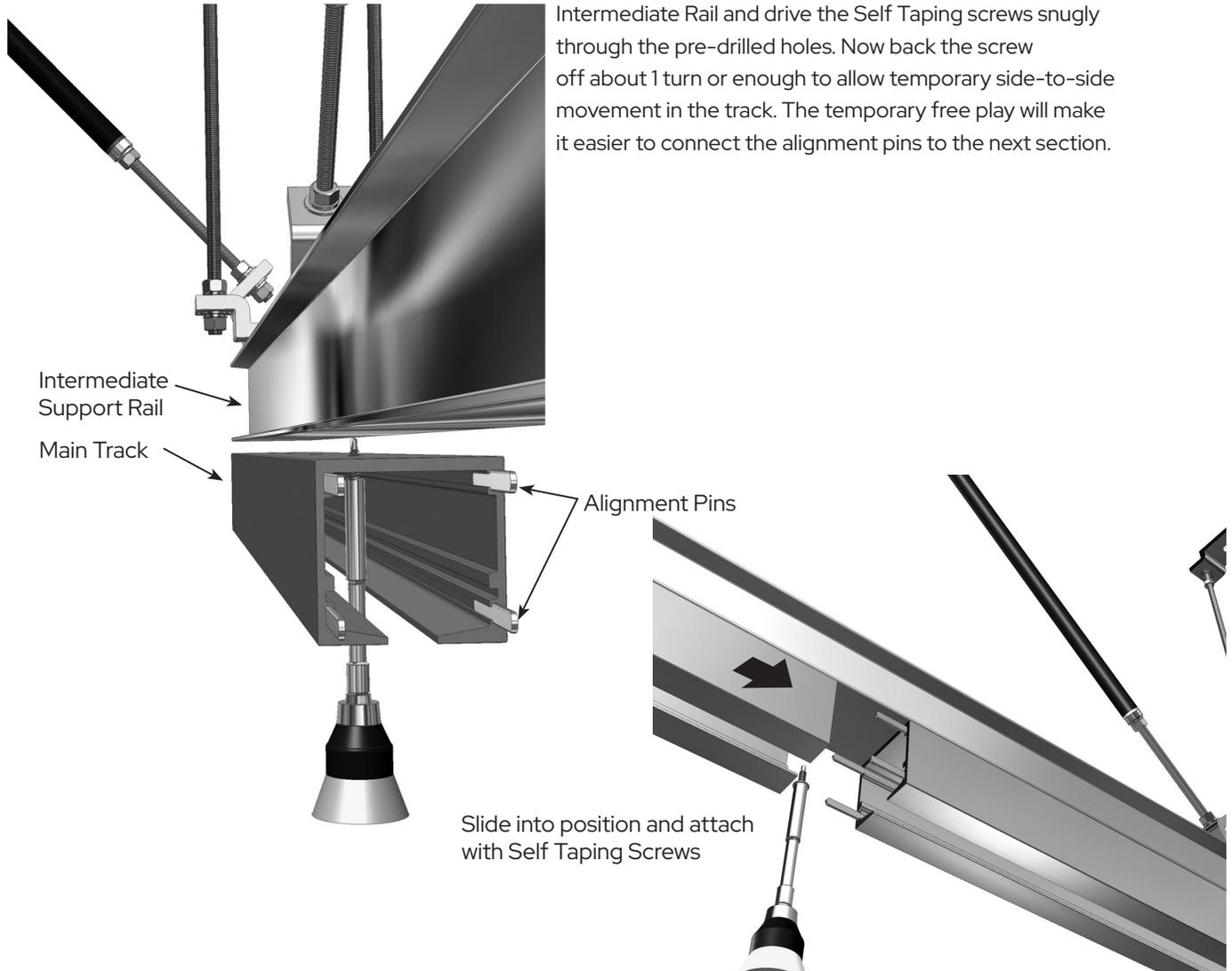


After securing each stabilizer to the ceiling above and to the Intermediate Rail, turn the Threaded Tie Rods to remove any free play. Tighten each locking hex nut to complete the procedure. The Stabilizers may require periodic adjustment in order to compensate for structural shifting.

INSTALLATION PROCEDURES (Continued)

STEP 11 Attach the Track Sections. Insert four alignment pins in the shared end of the first track section furthest from the parking area. Using the Self Drilling Screws and an appropriate drill driver with socket, attach the track to the Intermediate Support Rail one section at-a-time. Align the track's edges to the

Intermediate Rail and drive the Self Taping screws snugly through the pre-drilled holes. Now back the screw off about 1 turn or enough to allow temporary side-to-side movement in the track. The temporary free play will make it easier to connect the alignment pins to the next section.



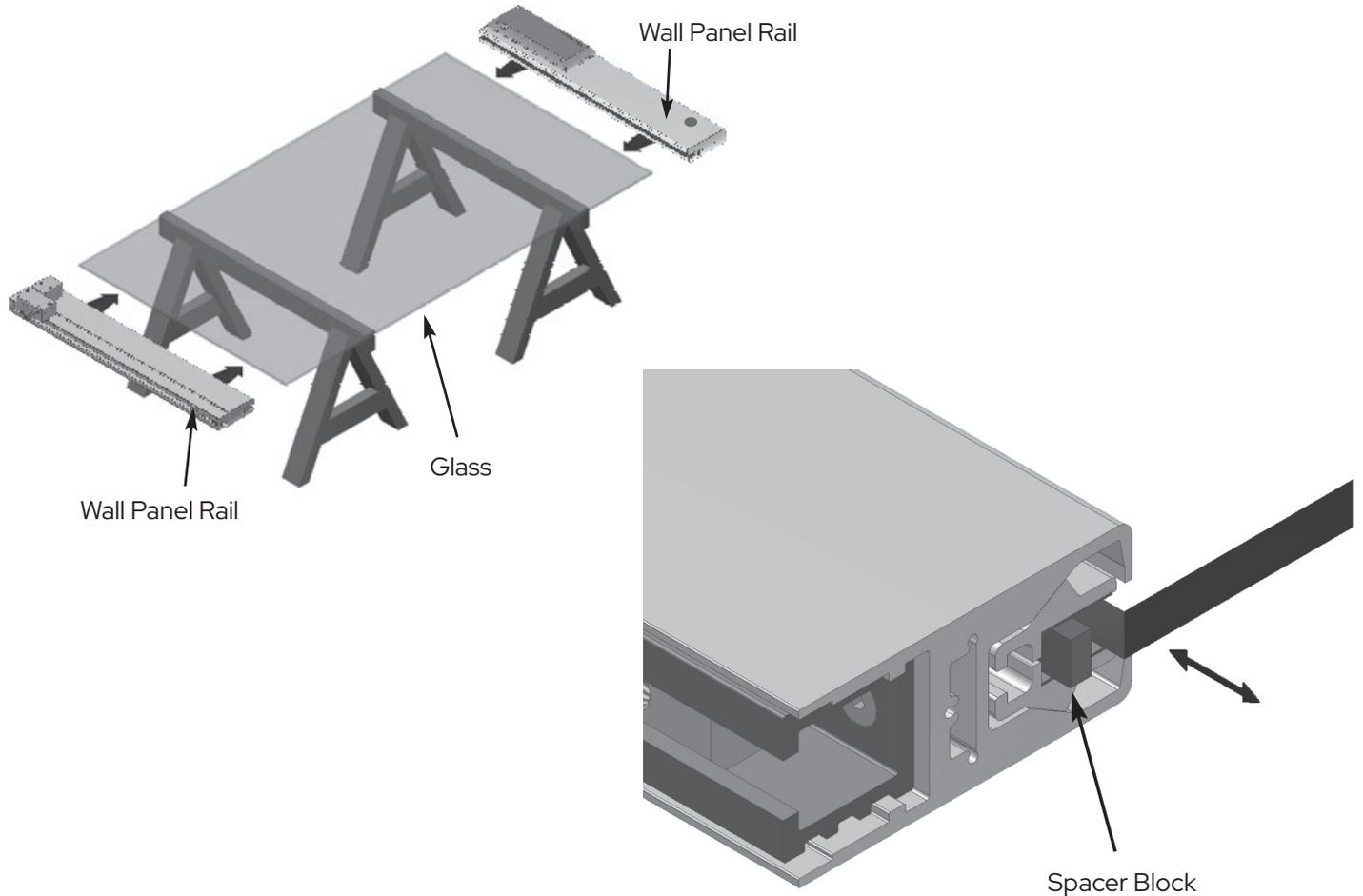
Continue attaching all of the track using the same procedures. However, it is important NOT to install alignment pins on the Access Section. It is the small removable section between the main track and the parking area to allow for the insertion of the stacking panels. The Access Section should be secured with 2-3 self taping screws. When all of the track sections are attached, carefully secure the attachment screws aligning edges as you go. Double check all of the Stabilizer Tie Rods insuring that the lock nuts are tight.

A properly installed Drop Track system should have good rigidity and straight sightlines. Any offset ends not aligned properly to the adjacent track can result in a "roller bump". Do not lubricate the track channel. Clean all debris from inside the track before use. The CRL Drop Track Support System allows easy adjustments while providing a rigid and secure platform for our Stacking Partition Systems.

CONVERTIBLE DOOR

The Assembly Instructions, Component Placement Plan (CPP), and tools are located in a marked hardware box. Always check your materials prior to attaching the Door Rails. Make sure that the glass is the correct size, and no visible defects are present.

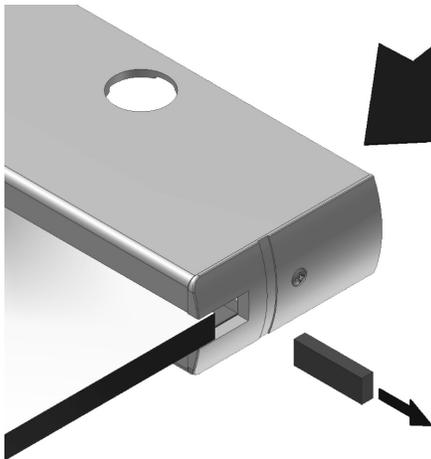
IMPORTANT NOTE: All glass should be fully tempered. Laminated glass should not be used with CRL Wedge-Lock™ Rails when fabricating Moving Wall Panels.



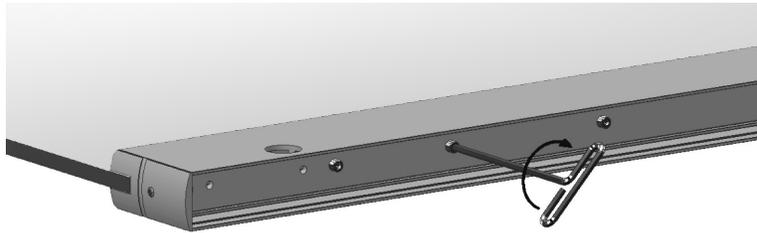
STEPS:

- 1) Lay your glass panel flat on two sawhorses or other appropriate support structure. At each end of the Wall Panel Rails are Spacer Blocks (used to keep the Wedge-Lock™ Clamps separated). Slip the Wall Panel Rail onto the glass and align the vertical edge of the glass even with the End Cap. Top Wall Panel Rails do not yet have End Caps, so align the edge of the glass to protrude from both ends of the Wall Panel Rail evenly.
- 2) The End Caps and Seal Kits for Top Wall Panel Rails are packaged separately, as they are installed in the final steps.

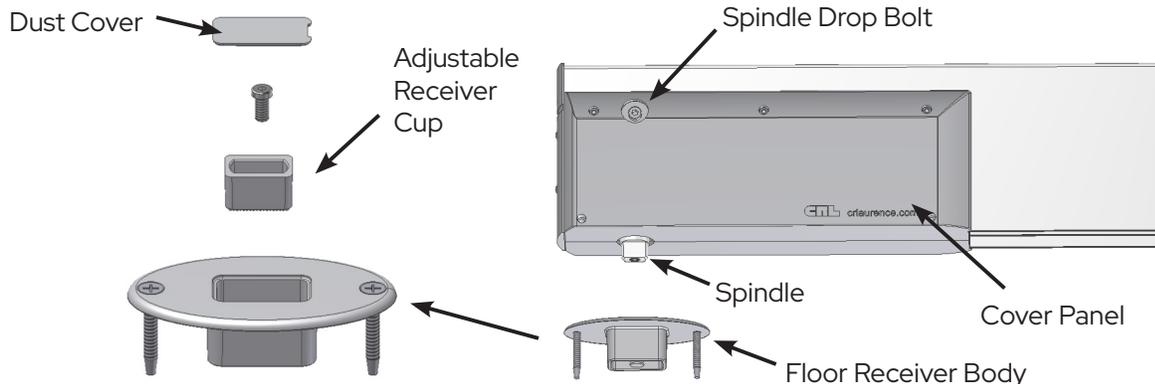
Convertible Door (Continued)



4) After alignment of the glass, pull the Spacer Blocks from each end of the Wall Panel Rail, then push the Wall Panel Rail toward the glass until the glass bottoms out in the Wedge-Lock™ Channels. Check again for alignment

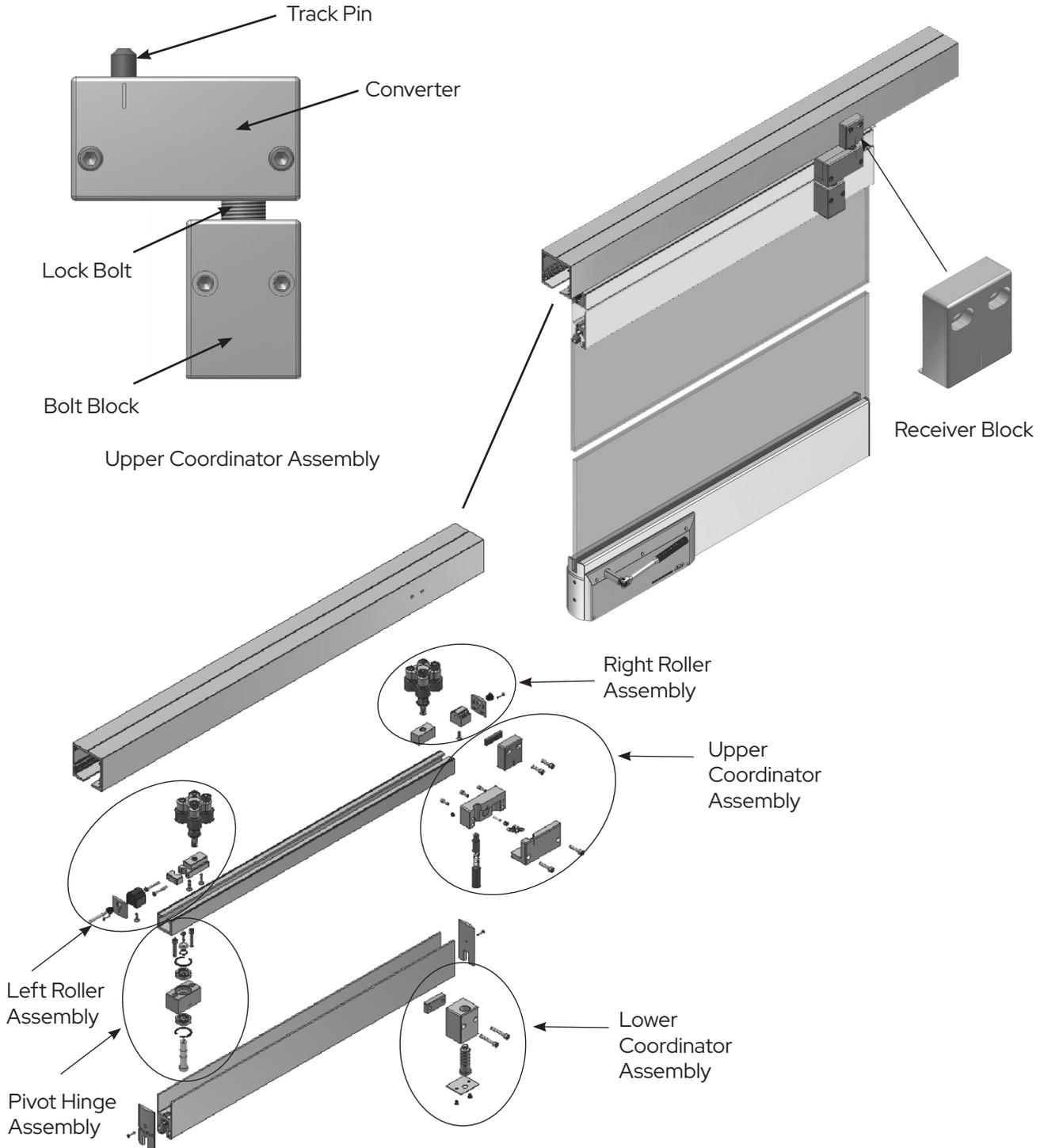


- 5) Tighten a socket head cap screw in the middle of the channel with the 3/16" Tee Handle Allen Wrench supplied in the hardware box. Top Wall Panel Rail Socket Head Cap Screws are accessed through holes in a cover plate. Tighten all of the Socket Head Cap Screws working left to right using the 3/16" Tee Handle Allen Wrench. To assure the proper torque is achieved (7 to 8 foot pounds), tighten again from left to right, only this time turn the Tee Handle Allen Wrench until it begins to twist. This twist indicates the proper torque has been achieved. Usually a third sequence of tightening is not necessary. However, it's easy to make a quick check by simply inserting the Tee Handle Allen Wrench into a screw that was already tightened a second time.
- 6) Attach the Roller Assemblies to the top Rail and slide the door into the track following the steps outlined in the Phase Two Assembly Instruction Section. Position the Convertible Door into the operating location along the overhead track. Proceed to the next step to install the Floor Receiver.
- 7) Adhere several layers of tape to the floor under the Convertible Door's location. Hold the door in position. Make sure that it is plumb, level and aligns with the adjacent panels. Lower the spindle firmly so that it imprints the tape. Slide the door to the side and install the floor receiver
- 8) Make a hole in the floor 1.25" Wide x 2.25" Long x 1.25" Deep centered around the mark left by the door spindle. Make sure that the receiver box is centered in the unit to allow adjustment latter in either direction.

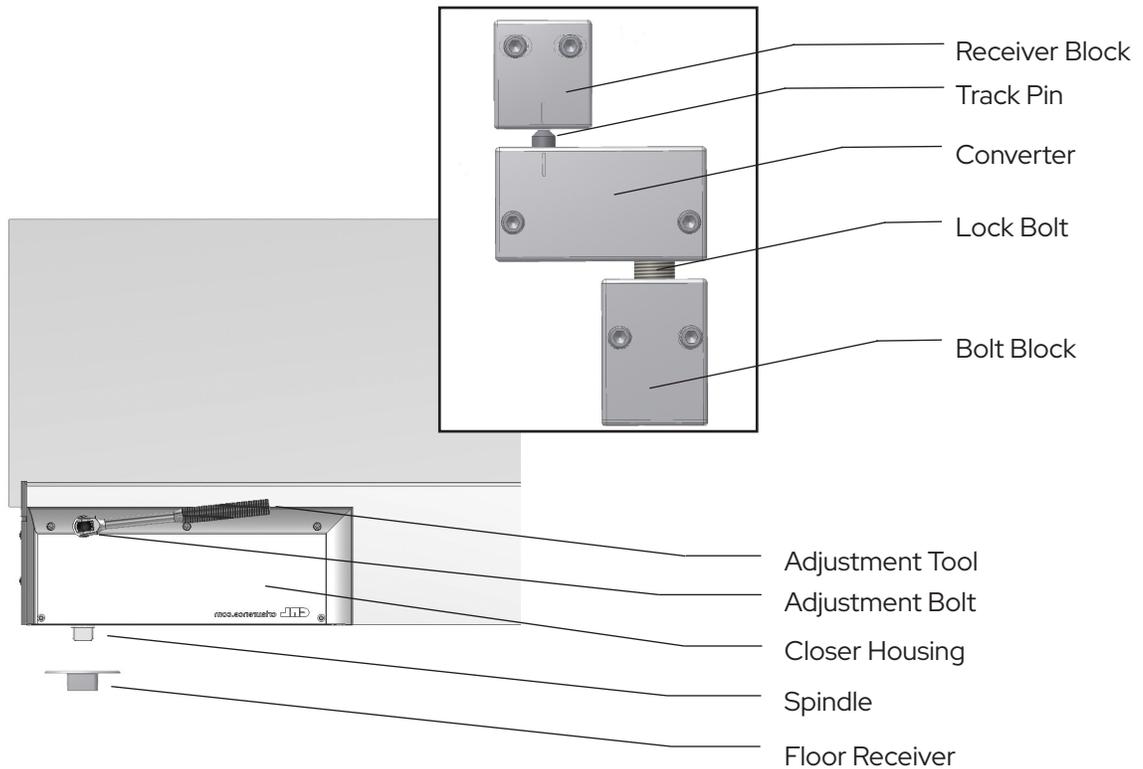


Convertible Door (Continued)

- 10) Engage the Spindle into the Floor Receiver and attach the Lock Pin Receiver Block to the track using 5/16 - 18 stainless hex bolts drilled and tapped. Make sure that the indicator marks line up. Before tightening the bolts completely, drop the Locking Bolt using the long reach Allen Tool until it disengages from the Converter Block. Doing so will raise the Track Pin and allow a more precise adjustment to the Receiver Block. Continue to tighten the 5/16" bolts and check for track pin bind.



Operating Procedures



IMPORTANT: To avoid damage and injury follow each step in the order presented.

Conversion to Swinging Door:

- 1) Slide panel into position.
- 2) Using the Adjustment Tool, lower the Spindle completely into the Floor Receiver.
- 3) With the Allen Tool, insert it through the Lock Bolt Access and turn the Lock Bolt Clockwise. Completely draw the Bolt Block up to the Converter until it is snug. At the same time the Track Pin will drop clear of the Receiver Block.
- 4) At this point the door should pivot with the closer engaged and open in both directions.

Conversion to Stacking Panel:

- 1) Using the Allen Tool, insert it through the Lock Bolt Access and turn the Lock Bolt Counterclockwise until it drops freely and is no longer engaged into the Converter.
- 2) Raise the Closer Spindle with the Adjustment Tool until it fully retracted into the Closer Housing.
- 3) The panel is ready to stack.

NOTE: Engagement of the Spindle into the Floor Receiver must be the First In and Last Out Procedure.