

### NOTES CONCERNING THE BASIC INSTALLATION

- It is best to have a professional install the door assembly, preferably someone with experience in installing acoustical or heavy doors. Installation of any door must be done carefully to ensure proper operation after installation. Because of the special characteristics of an acoustical door, there are additional installation procedures required to provide proper sound insulation once the door is in service. A professional installer should read through the instructions before beginning the installation to note installation instructions specific to the Wenger® Acoustical Door and to be certain necessary materials are on hand. Using more than one person is recommended due to several of the installation techniques as well as the weight of the assembly pieces.
- A gap may exist between the frames and wall surfaces after a successful installation. Cover this gap with trim molding or use acoustical caulk or grout to fill the gap. However, do not adjust the door frames to eliminate the gap. This will twist the frames which must be plumb and in plane to ensure the maximum acoustical efficiency of the door installation (see *Preparing for Door Assembly Installation*, Step 2 on page 3).
- Use care when working around the door seals to prevent damage. The door seals are permanently attached, attempting to remove them will result in damage.
- Keep accessories mounted on the door to a minimum, mounting them on the wall instead. When hardware, such as a handle, must be attached to the door, avoid putting screws or other hardware all the way through the door if possible. Through hardware creates a direct sound transmission path through the door and may detract from the sound-isolating performance of the door.
- Make certain to give this manual to the appropriate person at the installation site after the Acoustical Door installation is complete. This manual contains necessary maintenance information they will need as well as the Acoustical Door warranty.

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## **SAFETY**

Throughout this manual you will find **CAUTIONS** and **WARNINGS** which are defined as follows.

- **WARNING** means that failure to follow the instruction may result in serious injury or death.
- **CAUTION** means that failure to follow the instruction may result in serious injury or damage to the Acoustic Door.

## **INSTALLATION**

- Make sure that anyone who helps Install the Acoustical Door has read and understands this manual.
- Many steps require that two or more people work together in the installation. Some components are very heavy and are difficult to handle.
- Always use appropriate lifting equipment (lift trucks, hoists, etc.) when moving Acoustical Door packing crates.
- Acoustical Door components can cause serious injury if dropped.
- Always wear gloves and safety shoes when installing the Acoustical Door.
- Always wear a hard hat when installing the Acoustical Door.
- The Acoustical Door installation must comply with the instructions contained in this Owner's Manual. For additional copies of the Owner's Manual, contact Wenger Corporation Customer Service at 1-800-887-7145.
- Acoustical Door components can fall over unexpectedly when leaned against a wall and cause serious injury to personnel.

## INSTALLATION TOOLS & MATERIALS AND PREPARING FOR DOOR ASSEMBLY INSTALLATION

### INSTALLATION TOOLS & MATERIALS

Tools Necessary for Installation:

- C-clamps
- Caulk gun
- Hex wrench
- Circular saw
- Hammer drill with masonry bit (masonry wall installation)
- Diamond-tipped circular saw blade or other concrete-cutting tool (masonry wall installation)
- Level
- Hand saw
- Side-cutting pliers
- Cordless drill with bits
- Utility knife
- Chisel

Materials Supplied in the Hardware Packs:

- Door Frames Hardware Pack: (30)  $\frac{1}{4}$ " x  $\frac{3}{4}$ " self-drilling, self-tapping screws
- Door Hardware Pack: (10)  $\frac{1}{32}$ " hinge shims, (25)  $\frac{1}{16}$ " hinge shims, (7)  $\frac{3}{8}$  x 1" button-head screws
- Sill Coverplate Hardware Pack: (3) #10 x  $\frac{1}{4}$ " oval-head screws

Materials Supplied by Installer:

- Shims (and fasteners) for plumbing Frames in wall
- $\frac{5}{16}$ "-diameter. lag screws
- #10x3" wood screws (stud wall installation)
- Caulk

Acoustical caulk is necessary for maximum sound-insulation efficiency of the door assembly (except for sealing around the lockset, etc., see below).

This caulk may be purchased from:

Owens Corning QuietZone Acoustic Caulk  
800-438-7465 ([www.owenscorning.com](http://www.owenscorning.com))

If unable to obtain acoustical caulk, use a siliconized acrylic-latex caulk with a 35-year life expectancy. Make certain it is paintable after curing or is a color matching your color scheme. This caulk also is acceptable for sealing around the lockset, handle and other door-mounted hardware.

Manufacturers of this caulk include:

DAP ALEX PLUS  
800-327-8477 ([www.dap.com](http://www.dap.com))

Silicones Unlimited SU3000  
336-659-6674

OSI Pro Series SA167  
800-227-6095 ([www.osisealants.com](http://www.osisealants.com))

- Grout  
Suggested grouts (other standard grouts are acceptable, too):  
Rockite Anchoring Cement  
Hartline Products Company, Inc  
4150 Mayfield Rd, Cleveland OH 44121  
216-291-2303
- Lumber for rough-opening framing (stud wall installation)
- Construction adhesive (stud wall installation)
- Fasteners for rough-opening framing (stud wall installation)
- Mortar (masonry wall installation)
- Self-tapping Masonry screws (masonry wall installation)
- Masonry Anchors for  $\frac{5}{16}$ "-diameter. lag screws (masonry wall installation)

### PREPARING FOR DOOR ASSEMBLY INSTALLATION

**1** Make certain that the wall at the installation site will bear the weight of the acoustical door (see Door Assembly Weights chart on facing page).

**2** Check the wall for vertical plumb and horizontal plane. The door installation can accept variances of no more than  $\frac{1}{8}$ " in plumb over the height of the door and no more than  $\frac{1}{8}$ " in plane over the width of the door (including the frame). Adjust the wall if necessary before beginning the door installation. The wall must be plumb and in plane (within the variances stated above) for proper operation of the acoustical door after installation. If the Frames are racked or twisted beyond these variances, uneven pressure will exist between the Frames and seals, resulting in sound leakage.

**2a** If you are installing a six-foot Double Door, go to the installation instructions on page 25.

**3** Get assistance to move the large assembly materials to the installation site. The Door Frame and Door are very heavy. Move the pieces to the site while they are in the crates to prevent damage. Unpack the crates at the site.

**4** Identify and separate the various assembly pieces: The pieces for the Door Frame are in their own crate as is the Door; the Door Sill Coverplate is in a small sleeve contained within the frame crate. Hardware packs for the Frame and Door are contained within the appropriate crates. The hardware pack for the Sill Coverplate is taped to the Coverplate. Be careful when unpacking Frame and Door pieces to make certain you have all pieces and packs before throwing out any packing materials.

**5** Unpack the Door Frame pieces from the crate. Unscrew the side panel with the "Open This End" label first. The Door Frame consists of two pieces: the piece with an open end is the Wall Frame, the other piece is the Common Frame. You will need to unscrew the block attached to the crate before you can remove the Frame pieces.

**6** Remove the packing foam from the Frame flanges that was applied for protection during shipping.

**7** Find and remove the hardware pack for the Frame from the crate.

**8** Remove the cloth absorber insulation strips from the Common Frame and set aside.

*(Continued on page 5)*

**DOOR ASSEMBLY WEIGHTS CHART AND FRAME, DOOR & ROUGH-OPENING DIMENSIONS CHART**

**Door Assembly Weights**

FRAME WEIGHTS	3070 — 3' - 0"		3570 — 3' - 6"		4070 — 4' - 0"		6070 — 6' - 0"	
	Bare	Crated	Bare	Crated	Bare	Crated	Bare	Crated
4.50" to 6.50" Walls	233	466	240	576	244	597	395	560
6.50" to 8.50" Walls	234	476	241	586	245	607	397	562
8.50" to 10.50" Walls	235	485	242	595	246	616	399	564
10.50" to 12.50" Walls	236	495	243	605	247	626	401	566

DOOR WEIGHTS	3070 — 3' - 0"		3570 — 3' - 6"		4070 — 4' - 0"	
	Bare	Crated	Bare	Crated	Bare	Crated
Solid: No Window	254	430	260	556	288	607
W0333: Small Window	260	448	269	569	298	616
W2064: Large Window	267	467	294	596	324	640

**NOTE:** Door Frames are available in four jamb depth ranges for each Door size. These jamb depth ranges match the four wall thicknesses listed under Frame Weights.

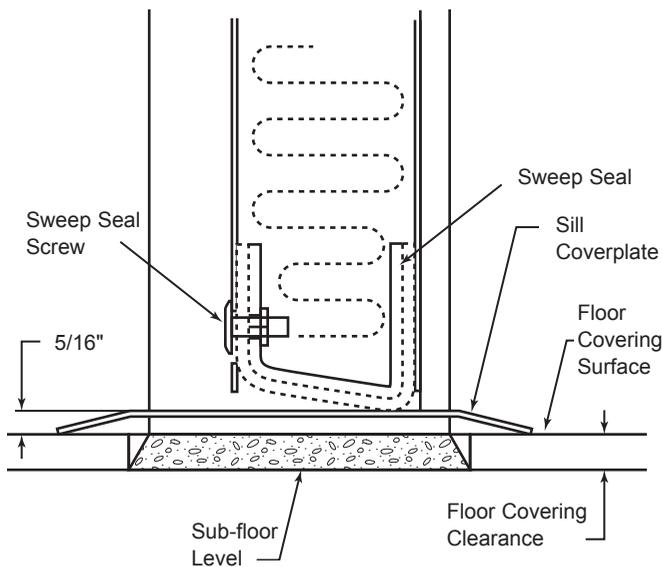
**Frame, Door & Rough-opening Dimensions**

	3070 — 3' - 0"	3570 — 3' - 6"	4070 — 4' - 0"	6070 — 6' - 0"
Frame Width	44-1/2"	50-1/2"	56-1/2"	84-7/8"
Clear Jam Width	35"	41"	47"	74-3/4"
Frame Height	86"	86"	86"	86"
Clear Jam Height	81-5/8"	81-5/8"	81-5/8"	81-5/8"
Latch Strike Height	40-5/16"	40-5/16"	40-5/16"	40-5/16"
Latch Handle Height	38-5/8"	38-5/8"	38-5/8"	38-5/8"
Rough-opening Width	41-5/16"	47-5/16"	53-5/16"	82"
Rough-opening Height	84-1/2"	84-1/2"	84-1/2"	84-1/2"
Shim Width*	40-13/16"	46-13/16"	52-13/16"	81-3/16"

\* This is the measurement used in the calculation in *Installing the Door Frame in Wood (or Steel) Stud and Wallboard Walls, Step 7* and *Installing the Door Frame in Masonry Walls, Step 8*.

## PREPARING FOR DOOR ASSEMBLY INSTALLATION (CONTINUED)

FIGURE A



This cross-section view of the lower Door, Frame and floor area shows the threshold height position of the Sill Coverplate relative to the finish floor surface. Note that the area under the Frame between the finish floor surfaces on either side of the Frame must be filled in with grout or mortar if the finish floor isn't continuous beneath the Frame.

FIGURE B



Make certain the Common Frame is accurately leveled in both directions, so it is plumb vertically and relative to the plane of the wall surface, before clamping in position. A helper will make this much easier. You may want to use two levels at the same time, one for vertical and one for plane of the wall (which is the level shown above).

**9** Determine the threshold height to allow for carpet or other floor coverings. For these doors, the top of the Sill Coverplate will be  $\frac{5}{16}$ " above the bottom of the Frame, and the lip of the Coverplate will extend to the bottom of the Frame (see Figure A).

**10** Turn to *Installing the Door Frame in Wood (or Steel) Stud and Wallboard Walls*, below, or *Installing the Door Frame in Masonry Walls*, page 9, depending on your installation requirements.

## INSTALLING THE DOOR FRAME IN WOOD (OR STEEL) STUD AND WALLBOARD WALLS

**1** Install rough-opening framing, allowing for the rough-opening dimensions appropriate for your door shown in *Frame, Door and Rough-opening Dimensions* on page 4. Use 2 x 6 or larger wood framing members, making sure the framing depth is within the range of the door frame jamb depth you are installing (see Note on page 4). Add extra height to the rough-opening dimensions to allow for carpet or other floor covering if necessary (see Step 9 under *Preparing for Door Assembly Installation*). Attach the framing to the wall, using construction adhesive and fasteners appropriate for the size and weight of the door being installed (see weight chart on page 4).

**2** Seal the rough-opening framing to the wall at all seams using acoustical caulk (see caulking materials on page 3). Let the caulk set according to manufacturer's instructions.

**3** Slide the Common Frame into the rough opening. Use a level to plumb the frame in the opening, both vertically and relative to the plane of the wall, temporarily adding tapered wood shims on the sides of the rough opening as needed. Also use temporary shims underneath the bottom of the frame to allow for floor covering clearance if necessary. Measure diagonally between corners to make certain Frame is square. Clamp the frame against the wall/shims on both sides, using C-clamps, to hold the frame in plumb and squared position (see Figure B).

**4** Locate the (4)  $\frac{11}{32}$ "-diameter. anchor holes on each side of the Common Frame (see Figure C, opposite page). Carefully mark through these holes to scribe the anchor points on the rough-opening framing.

## INSTALLING THE DOOR FRAME IN WOOD (OR STEEL) STUD AND WALLBOARD WALLS (CONTINUED)

**5** Remove the Common Frame from the opening and remove the temporary shims on the sides of the opening. Leave temporary shims allowing for flooring clearance in place.

**6** Measure the distance across the opening at the bottom anchor point.

**7** Subtract the appropriate Shim Width (see Shim Width dimensions in *Frame, Door and Rough-opening Dimensions*, page 4) from this width measurement to calculate the measurement of the difference (see Figure D).

**8** First install shims on the hinge side of the door, using wood shims, beginning just above the bottom anchor point. Install a shim set equal in thickness to one-half of the difference measurement calculated in Step 7. Fasten the shims in place, making certain the surface of each fastener head is flush with the face of the top shim.

**9** Apply a long level to this bottom shim set and determine the shim thickness needed just above the top anchor point to plumb the vertical (see Figure E, page 7). Fasten a shim set in place above the top anchor point.

**10** With the long level pressed lightly against the top and bottom shim sets, add shims out to the level just above the two intermediate anchor points (see Figure E, page 7), and fasten these shims in place.

**11** Use a level to locate shim sets directly across the door opening from the shim sets on the hinge side. Make certain to re-measure the Shim Width from page 4 to determine the thickness of each shim set. Fasten the shims in place.

**12** Trim all shims so that their ends are  $\frac{1}{2}$ " from the outside edges of the rough-opening framing.

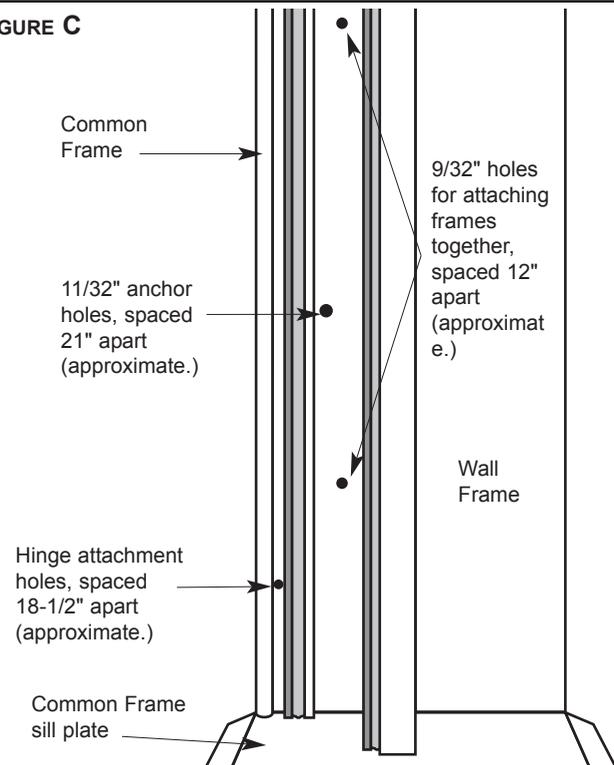
**13** Set the Wall Frame in place next to the opening, and mark the locations of the shims on the Wall Frame absorber foam. Trim away the foam in the shim locations. (skip this step if you have a 1-Hour. fire rated frame.)

**14** Slide the Wall Frame into the opening until the flange contacts the rough-opening framing.

**15** Slide the Common Frame into the opening and start it onto the Wall Frame (see Figure F, page 7).

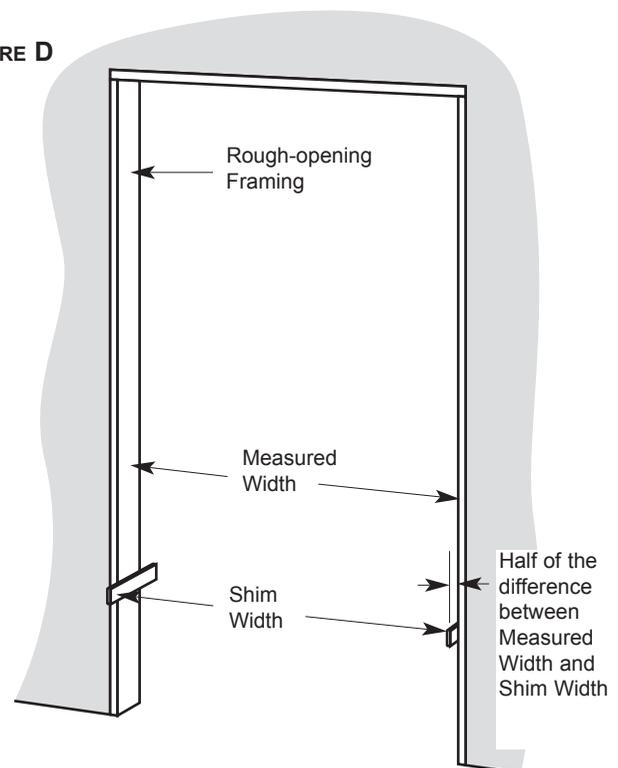
(Continued on page 7)

FIGURE C



This illustration shows relative positions of fastener holes in the Common Frame (hole sizes not to scale for clarity). Hinge side is shown; hole positions are identical on latch side of frame, except hinge holes aren't included.

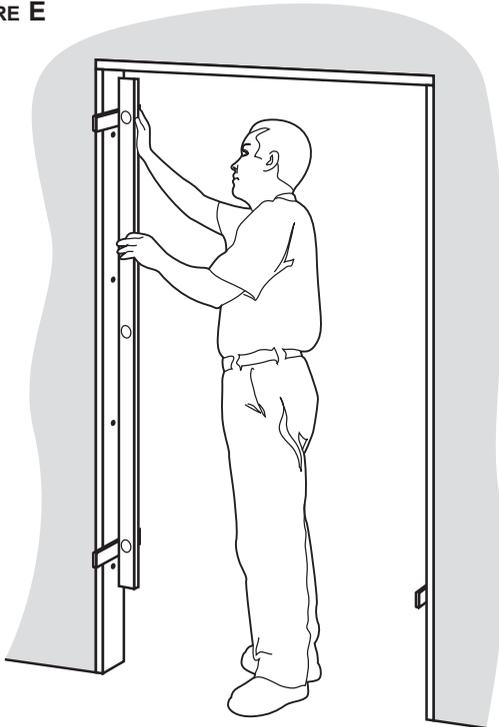
FIGURE D



Note that for clarity we've shown both lower shim sets in position to indicate the Shim Width measurement. The shim set opposite that on the hinge side is actually installed after attaching all hinge-side shim sets.

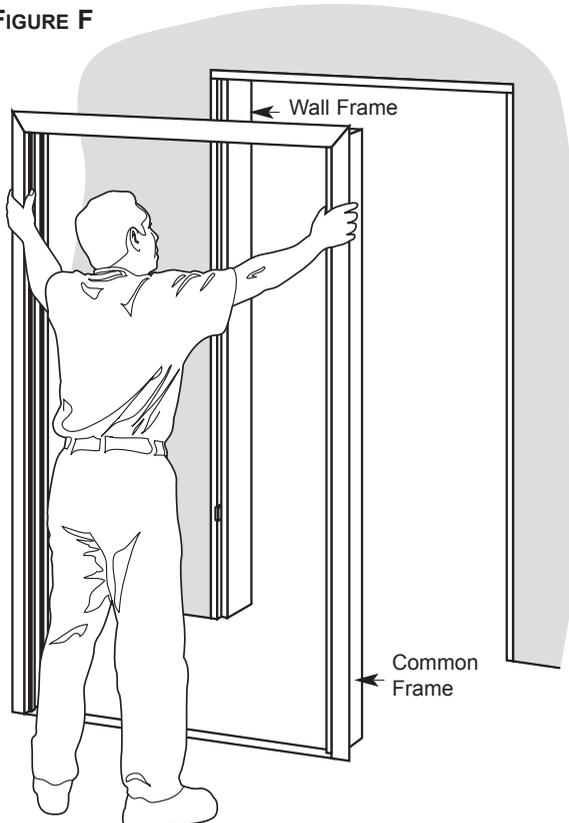
## INSTALLING THE DOOR FRAME IN WOOD (OR STEEL) STUD AND WALLBOARD WALLS (CONTINUED)

FIGURE E



Place a long level against the bottom shim set to determine the thickness of the top shim set. Once the top shim set is attached, fill in the shim sets above the two intermediate anchor holes.

FIGURE F



Slide the Common Frame into position after the Wall Frame is in place.

**16** Clamp the Common Frame and Wall Frame together, making sure that the Common Frame slides smoothly into the Wall Frame and the flanges of both Frame pieces contact the rough-opening framing (see Figure G, next page).

**17** Carefully check the plumb and plane of the Frame pieces in both directions. Adjust the clamping to make sure that both sides of the frame are plumb and aligned level with each other (see Figure B on page 5). Add or adjust shims if necessary to bring the Frame pieces into proper alignment. Measure diagonally between Frame corners to check for square. Make certain the Frame pieces are positioned correctly before fastening them together (beginning in Step 18).

**18** Locate the (17)  $\frac{9}{32}$ "-diameter. holes in the sides and top of the Common Frame. Drive a  $\frac{1}{4}$ "-diameter. self-drilling, self-tapping screw from the hardware pack through each hole and into the Wall frame. Snug these screws but do not over-tighten.

**19** Locate the (8)  $\frac{11}{32}$ "-diameter. anchor holes in the Common Frame. Drill a  $\frac{5}{16}$ "-diameter. hole through the Wall Frame at each of these holes, but do not drill into the rough-opening framing.

**20** Drill a  $\frac{3}{16}$ "-diameter. pilot hole into the rough-opening framing at each anchor hole location (which are aligned with the scribed anchor points determined in Step 4), and drive a  $\frac{5}{16}$ "-diameter. lag screw through each anchor hole and into the pilot hole in the framing. Tighten these lag screws to hold the Frame in place.

**21** Make certain the Wall Frame is the same width at the top and bottom of the opening (spread the lower corners of the Wall Frame to match the top width if necessary). On each side flange of the Wall Frame, drill a  $\frac{7}{32}$ "-diameter. hole through the flange 2" from the bottom and drive a #10x3" wood screw through the flange into the rough-opening framing (see Figure H, next page).

**22** If the floor surface does not contact the bottom of the Frame or is not continuous underneath it, pack the space between the floor and the bottom of the Frame with grout (see Figure A, page 4). Remove any temporary shims underneath the bottom of the Frame before grouting.

**INSTALLING THE DOOR FRAME IN WOOD (OR STEEL) STUD AND WALLBOARD WALLS (CONTINUED)**

**23** Caulk the joint between the Common Frame and the Wall Frame on the push side of the Door (relative to operation of the Door after installation) with a continuous bead of acoustical caulk (see Figure I).

**24** Caulk between the wall and the Frame pieces on both push and pull sides of the Door with a continuous bead of acoustical caulk (see Figure I).

**25** Caulk both sides of the sill at the bottom of the Common Frame with a continuous bead of acoustical caulk (see Figure I).

**26** Remove any metal chips from the Frame pieces and magnetic seals.

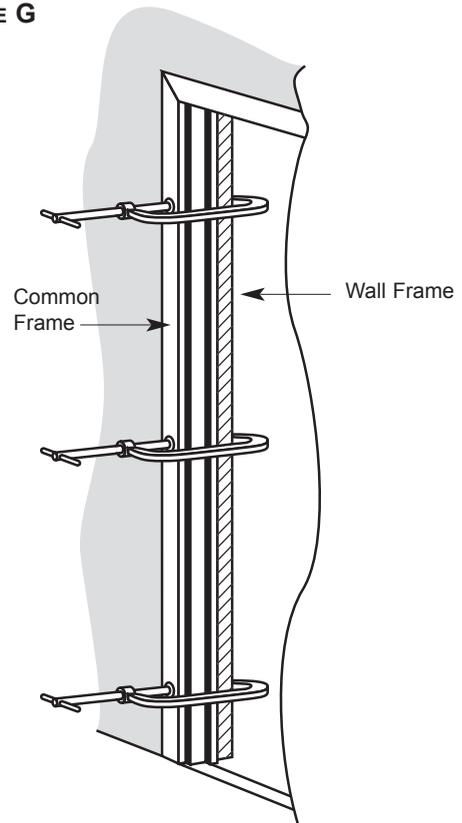
**27** Install the floor covering. If the floor covering is already in place, go to Step 28.

**28** Re-insert the absorber insulation strips (removed at *Preparing for Door Assembly Installation*, Step 7) into the Common Frame. **NOTE:** The hinge side absorber is slightly larger than the latch side absorber. Push the latch side absorber into the latch area behind the latch striker opening.

**Option: If you are installing a 1 Hour. Fire-rated Door, don't install the absorber strips. Turn to page 21 and follow the instructions for *Installing Frame Closure for a One-Hour Fire-rated Acoustical Door* before installing the Door.**

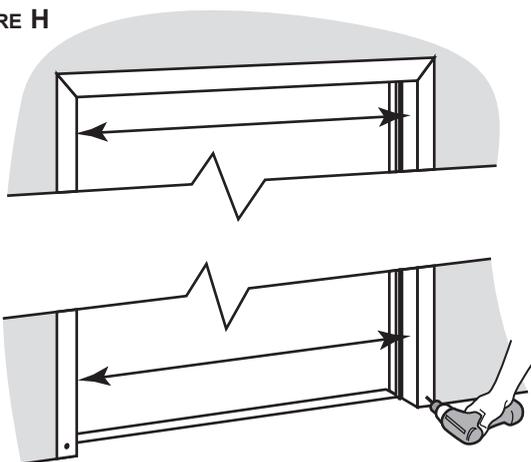
**29** Go to Step 1 of the *Installing the Door* instructions on page 13.

**FIGURE G**



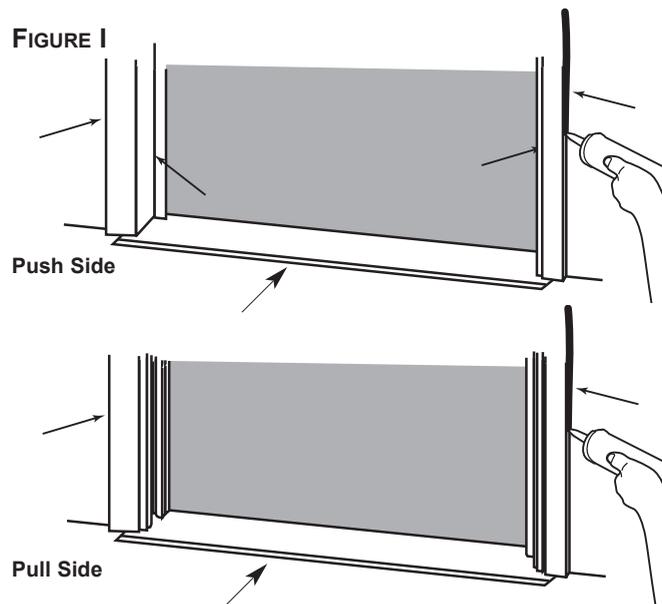
Clamp the Common Frame and Wall Frame together, sandwiching them around the wall surfaces, as shown in this cutaway view. Make certain the Common Frame fits smoothly into the Wall Frame and the flanges of both pieces contact the rough-opening framing.

**FIGURE H**



Drive fasteners through the bottom ends of the Wall Frame flanges into the rough-opening framing. First measure to check that the width at the bottom of the opening is identical to that at the top. Adjust the lower corners of the Wall Frame in or out to match the top width if necessary.

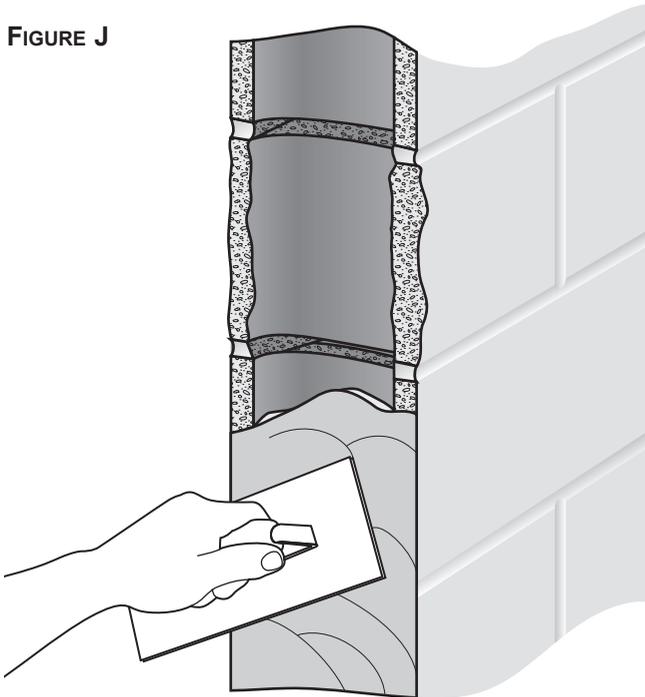
**FIGURE I**



Apply a continuous bead of acoustical caulk at the seams indicated by the arrows on both push and pull sides of the Frames. Make certain to apply caulk to the seam between Wall Frame and Common Frame on the push side.

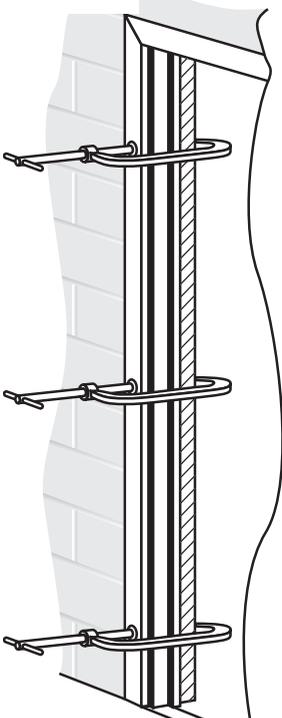
## INSTALLING THE DOOR FRAME IN MASONRY WALLS

FIGURE J



Use mortar to fill any voids existing between remaining concrete block or solid wall materials and the rough-opening dimensions. A smooth, continuous surface at the rough-opening dimensions is necessary for proper installation of the Frame.

FIGURE K



Make certain the Common Frame is accurately leveled in both directions, so it is plumb vertically and relative to the plane of the wall surface, before clamping in position. A helper will make this much easier. You may want to use two levels at the same time, one for vertical and one for plane of the wall (which is the level shown above).

## INSTALLING THE DOOR FRAME IN MASONRY WALLS

**1** Cut the rough opening to the dimensions shown on the drawing, allowing extra height to allow for carpet or other floor covering if necessary (see Step 9 under *Preparing for Door Assembly Installation*). Fill any voids between remaining masonry surfaces and rough-opening dimensions with mortar (see Figure J), allowing adequate setting time for the mortar, before proceeding with Door Frame installation. A solid, continuous surface is necessary for proper installation.

**2** Remove the absorber foam from the outside of the Wall Frame, if provided.

**3** Slide the Common Frame into the wall. Use a level to plumb the frame in the opening, both vertically and relative to the plane of the wall, temporarily adding tapered wood shims on the sides of the rough opening as needed. Also use temporary shims underneath the bottom of the frame to allow for floor covering clearance if necessary. Measure diagonally between corners to make certain Frame is square. Clamp the frame against the wall/shims on both sides, using C-clamps, to hold the frame in plumbed and squared position (see Figure K). Make certain the Common Frame is plumb and in plane across its width (see *Preparing for Door Assembly Installation*, Step 2) before beginning Step 4.

**4** Locate the (4)  $1\frac{1}{32}$ "-diameter. holes on each side of the Common Frame (see Figure L, next page). Carefully mark through these holes to scribe the anchor points on the rough-opening walls.

**5** Remove the Common Frame from the opening and remove the temporary shims on the sides of the opening. Leave temporary shims allowing for flooring clearance in place.

**6** Drill holes for and install suitable masonry anchors for  $\frac{5}{16}$ "-diameter lag screws at each marked anchor point. Make certain to use anchors of the proper size and strength to ensure secure installation of the Frames.

**7** Measure the distance across the opening at the bottom anchor point.

**8** Subtract the appropriate Shim Width (see Shim Width dimensions in *Frame, Door and Rough-opening Dimensions* on page 4) from this width measurement to calculate the measurement of the difference (see Figure M, next page).

## INSTALLING THE DOOR FRAME IN MASONRY WALLS (CONTINUED)

**9** First install a shim on the hinge side of the door, beginning just above the bottom anchor point. Install a shim equal in thickness to one-half of the difference measurement calculated in Step 8. Fasten the shim in place, using fasteners appropriate for masonry surfaces. Make certain the surface of each fastener head is flush with the shim face. NOTE: Each end of the shim must be  $\frac{1}{2}$ " from the faces of the wall but the shim must not be a single piece across the rough-opening masonry surface. Grout must be able to flow around and through the shim location to fill all voids between the Frames and the masonry surfaces (see Step 23). It may be easiest to install a single shim (or set of tapered wood shims) of the correct thickness, fastened near both ends, then cut out the area between fasteners, using a hand saw. Make certain to leave enough shim material to adequately support the fasteners.

**10** Apply a long level to this bottom shim and determine the shim thickness needed just above the top anchor point to plumb the vertical (see Figure N on page 11). Fasten a shim in place above the top anchor point, following the same methods used for the bottom shim.

**11** With the long level pressed lightly against the top and bottom shims, add shims out to the level just above the two intermediate anchor points (see Figure N on page 11) and fasten these shim sets in place, using the same methods as for the other shims.

**12** Use a level to locate shims directly across the door opening from the shims on the hinge side. Make certain to re-measure the Shim Width from page 4 to determine the thickness of each shim set. Fasten the shims in place, using the same methods as for the other shims.

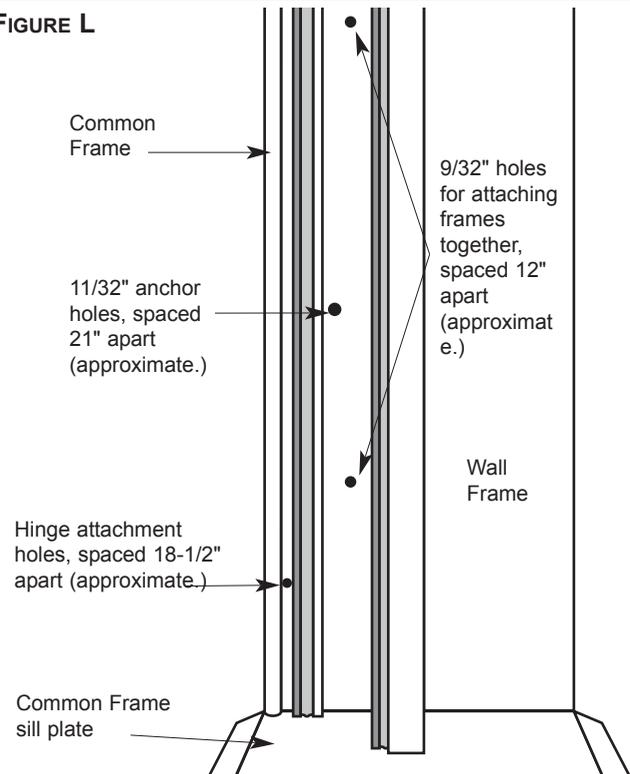
**13** Make certain the ends of all shims are  $\frac{1}{2}$ " from the faces of the wall, trimming if necessary.

**14** Slide the Wall Frame into the opening until the flange contacts the wall.

**15** Slide the Common Frame into the opening and start it onto the Wall Frame (see Figure O on page 11).

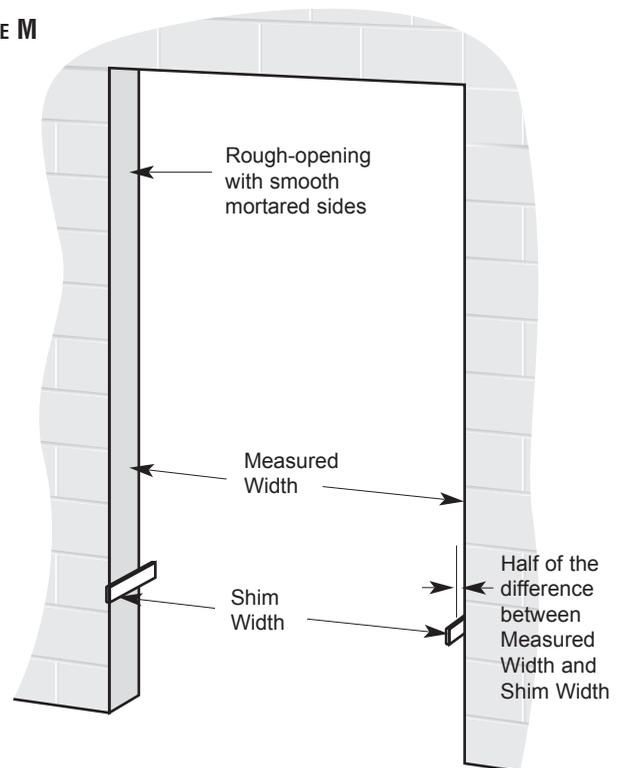
**16** Clamp the Common Frame and Wall Frame together, making sure that the Common Frame slides smoothly into the Wall Frame (see Figure P, page 12).

FIGURE L



This illustration shows relative positions of fastener holes in the Common Frame (hole sizes not to scale for clarity). Hinge side is shown; hole positions are identical on latch side of frame, except hinge holes aren't included.

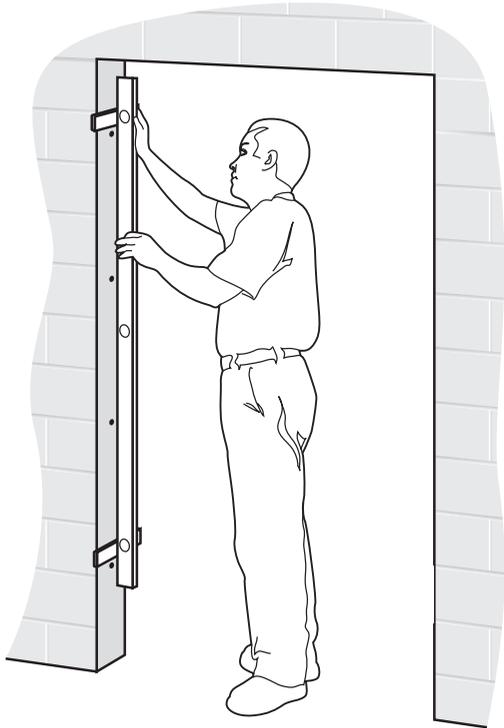
FIGURE M



Note that for clarity we've shown both lower shim sets in position to indicate the Shim Width measurement. The shim set opposite that on the hinge side is actually installed after attaching all hinge-side shim sets.

(Continued on page 11)

## INSTALLING THE DOOR FRAME IN MASONRY WALLS (CONTINUED)



Place a long level against the bottom shim set to determine the thickness of the top shim set. Once the top shim set is attached, fill in the shim sets above the two intermediate anchor holes.

**17** Carefully check the plumb and plane of the Frame pieces in both directions. Adjust the clamping to make sure that both sides of the frame are plumb and aligned level with each other (see Figure B on page 5). Add or adjust shims if necessary to bring the Frame pieces into proper alignment. Measure diagonally between Frame corners to check for square. Make certain the Frame pieces are positioned correctly before fastening them together (beginning in Step 18).

**18** Locate the (17)  $\frac{9}{32}$ "-diameter. holes in the sides and top of the Common Frame. Drive a  $\frac{1}{4}$ "-diameter self-drilling, self-tapping screw from the hardware pack through each hole and into the Wall frame. Snug these screws but do not over-tighten.

**19** Locate the (8)  $\frac{11}{32}$ "-diameter. anchor holes in the Common Frame. Drill a  $\frac{5}{16}$ "-diameter. hole through the Wall Frame at each of these holes, but do not drill into the wall or previously installed anchors (see Step 6).

**20** Drive a  $\frac{5}{16}$ -inch diameter. lag screw through each anchor hole location and into the masonry anchor installed in Step 6. Tighten these lag screws to hold the Frame in place.

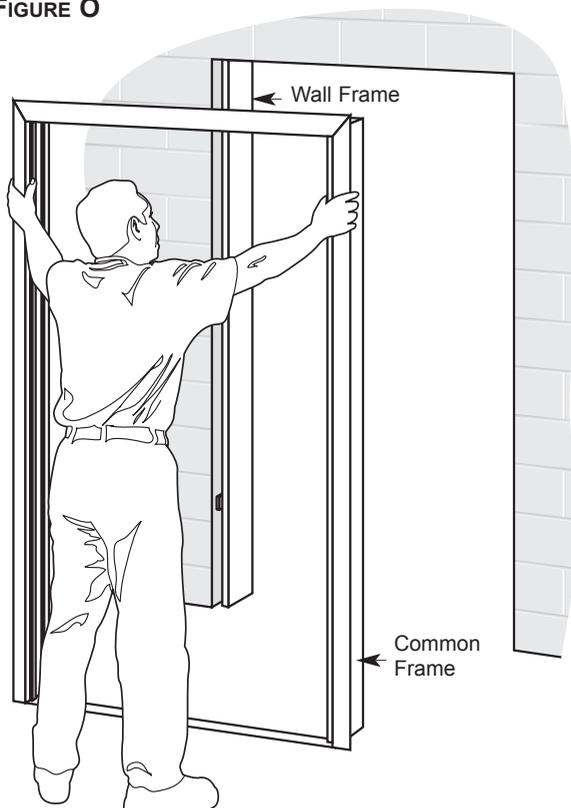
**21** Make certain the Wall Frame is the same width at the top and bottom of the opening (spread the lower corners of the Wall Frame to match the top width if necessary). On each side flange of the Wall Frame, drill a  $\frac{5}{16}$ "-diameter. hole through the flange 2" from the bottom (see Figure Q, next page).

**22** Drill a pilot hole of the proper diameter and depth for a 3"-long, self-tapping masonry screw into the wall at each hole in the flange. Drive a screw through each hole in the flange and into the wall.

**23** Cut and install temporary cross braces between the sides of the Frames to prevent bowing when adding grout.

**24** Fill the open areas between the Frames and all masonry surfaces with grout on the sides and top. Mix a grout consistency that will flow completely into the space between Frames and masonry and around shims, making certain all voids are filled with grout.

FIGURE O



Slide the Common Frame into position after the Wall Frame is in place.

## INSTALLING THE DOOR FRAME IN MASONRY WALLS (CONTINUED)

**25** Once the grout is set, remove the cross braces. If the floor surface does not contact the bottom of the Frame or is not continuous underneath it, pack the space between the floor and the bottom of the Frame with grout (see Figure A, page 5). Remove any temporary shims underneath the bottom of the Frame before grouting.

**26** Caulk the joint between the Common Frame and the Wall Frame on the push side of the Door (relative to operation of the Door after installation) with a continuous bead of acoustical caulk (see Figure R).

**27** Caulk both sides of the sill at the bottom of the Common Frame with a continuous bead of acoustical caulk and between the Frames and wall surface on both sides of the door (see Figure R).

**28** Remove any metal chips from the frame and magnetic seals.

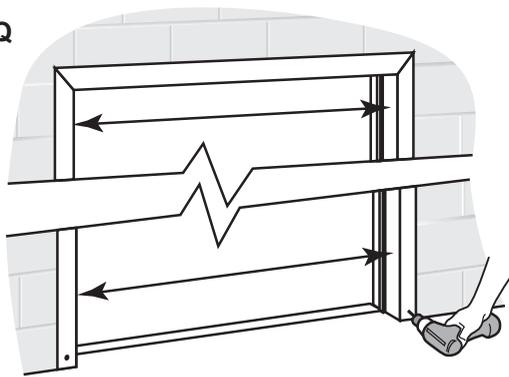
**29** Install the floor covering. If the floor covering is already in place, go to Step 30.

**30** Re-insert the absorber insulation strips (removed at *Preparing for Door Assembly Installation*, Step 7) into the Common Frame. **NOTE:** The hinge side absorber is slightly larger than the latch side absorber. Push the latch side absorber into the latch area behind the latch striker opening.

**Option: If you are installing a 1 Hour. Fire-rated Door, don't install the absorber strips. Turn to page 20 and follow the instructions for Installing Frame Closure for a 1 Hour. Fire-rated Acoustical Door before installing the Door.**

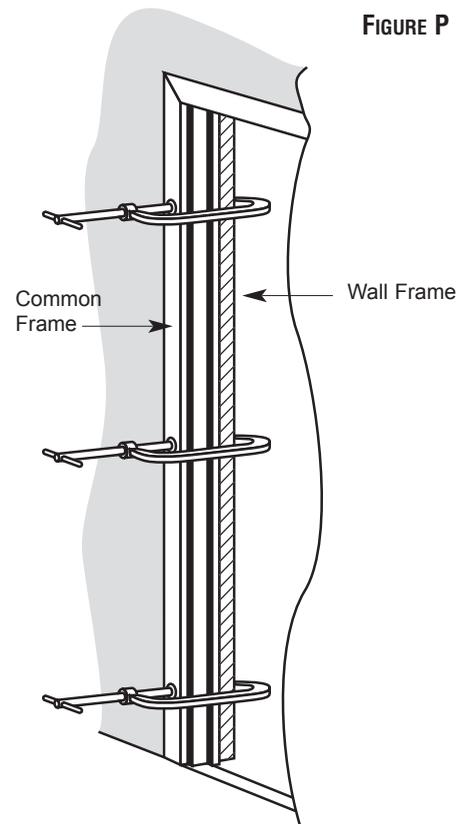
**31** Go to Step 1 of the *Installing the Door* instructions on page 13.

FIGURE Q



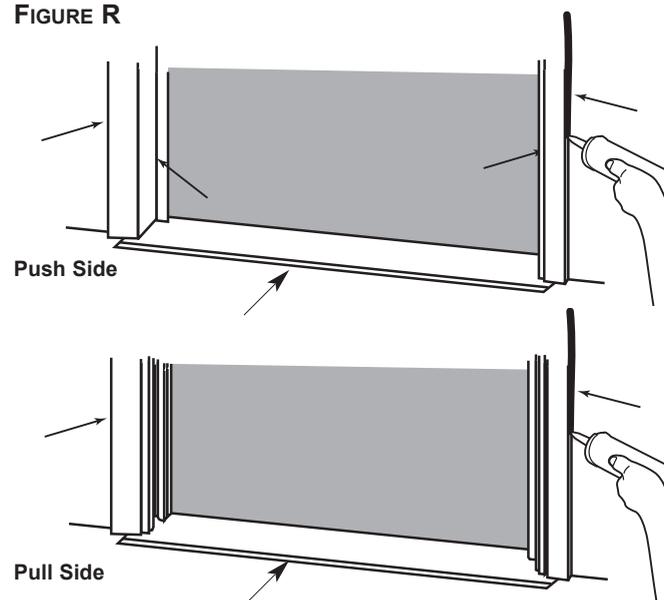
Drive fasteners through the bottom ends of the Wall Frame flanges into the concrete block wall. First measure to check that the width at the bottom of the opening is identical to that at the top. Adjust the lower corners of the Wall Frame in or out to match the top width if necessary.

FIGURE P



Clamp the Common Frame and Wall Frame together, sandwiching them around the wall surfaces, as shown in this cutaway view. Make certain the Common Frame fits smoothly into the Wall Frame and the flanges of both pieces contact the rough-opening framing.

FIGURE R



Apply a continuous bead of acoustical caulk at the seams indicated by the arrows on both push and pull sides of the Frames. Make certain to apply caulk to the seam between Wall Frame and Common Frame on the push side.

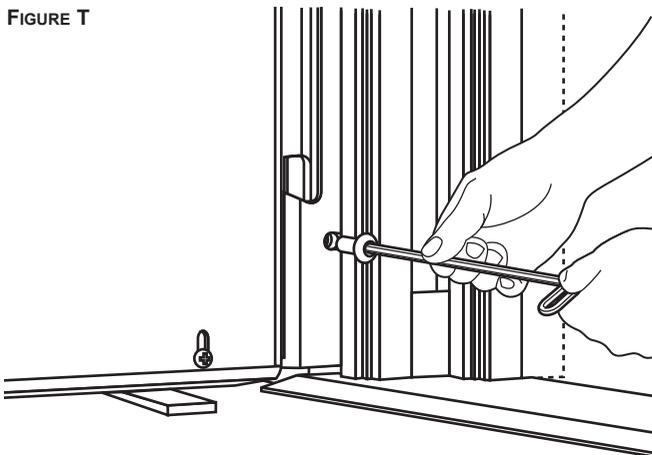
## INSTALLING THE DOOR

FIGURE S



Use temporary shims of appropriate thickness to position the Door at the proper height for installation. Keep the Door as vertical as possible when aligning its hinge with the hinge side of the Frame (which is on the Common Frame piece of the Frame assembly). A helper will be necessary to position the Door accurately and safely.

FIGURE T



Place one of the  $\frac{3}{8}$  x 1" button-head screws on the end of a hex wrench and insert it through the bottom hole in the Door hinge and into the threaded hole in the Frame assembly. Have a helper hold the Door so the bottom hole in the Door hinge is aligned with the bottom threaded hole in the Frame—alignment of the other holes isn't necessary at this step.

## INSTALLING THE DOOR

**1** Open the Door crate, make certain you have the Door hardware pack before throwing away packing materials.

**2** Move the Door to the installed Frame assembly on the Common Frame side of the assembly. Place it in upright position with the Door in the open position and its hinge side near the hinge side of the Frame. Use a helper and temporary shims underneath the Door to hold it upright and as plumb as possible relative to the hinge side of the Frame (see Figure S).

**3** Lift and slide the Door until the bottom hole in the Door hinge is aligned with the bottom threaded hole in the Frame. Insert one of the  $\frac{3}{8}$  x 1" button-head screws from the hardware pack through the Door hinge and into the threaded hole (see Figure T). Tighten this screw until it holds the lower portion of the hinge in position but don't snug it up completely.

**4** Lift the latch side of the door until the top hole in the Door hinge is aligned with the top threaded hole in the Frame. Insert a  $\frac{3}{8}$  x 1" button-head screw through the top hole in the Door hinge and into the threaded hole, and tighten lightly. You may need to lift on the Door at the hinge side to get the screw to start into the threaded hole. Push the Door all the way into the frame, tighten the top screw, then go back and finish tightening the bottom screw until it is snug.

**5** Insert the remainder of the screws into the remaining holes and tighten, again being careful not to over-tighten.

**6** Swing the Door closed and examine the gap between the Door and the Frame at the latch side. Measure the gap at the top and the bottom of the Door (see Figure U on page 15). If the gap is less than  $\frac{3}{16}$ " at both spots, go to Step 15. If the gap is more than  $\frac{3}{16}$ " at either spot, go to Step 7.

*(Continued on page 15)*

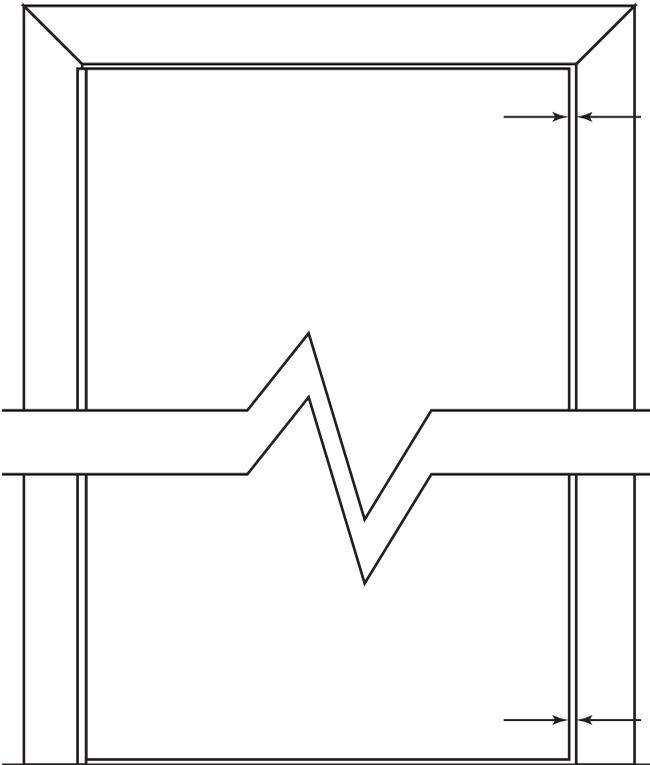
**HINGE SHIM QUANTITIES CHART**

**Hinge Shim Quantities**

	<b>GAP AT TOP</b>	<b>1/8"</b>	<b>5/32"</b>	<b>3/16"</b>	<b>7/32"</b>	<b>1/4"</b>	<b>9/32"</b>	<b>5/16"</b>	<b>11/32"</b>	<b>3/8"</b>
<b>GAP AT BOTTOM</b>	<b>Hinge Screw Location</b>	<b># Shims</b>								
		1/32' 1/16'	1/32' 1/16'	1/32' 1/16'	1/32' 1/16'	1/32' 1/16'	1/32' 1/16'	1/32' 1/16'	1/32' 1/16'	1/32' 1/16'
<b>1/8"</b>	<b>Top</b>	0 0	1 0	0 1	1 1	0 2	1 2	0 3	1 3	0 4
	<b>2nd</b>	0 0	0 0	1 0	0 1	1 1	1 1	0 2	1 2	0 3
	<b>3rd</b>	0 0	0 0	1 0	1 0	0 1	0 1	1 1	1 1	0 2
	<b>4th</b>	0 0	0 0	0 0	0 0	1 0	1 0	1 0	1 0	0 1
	<b>Bottom</b>	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
<b>5/32"</b>	<b>Top</b>	0 0	1 0	0 1	1 1	0 2	1 2	0 3	1 3	0 4
	<b>2nd</b>	0 0	1 0	1 0	0 1	1 1	0 2	0 2	1 2	0 3
	<b>3rd</b>	0 0	1 0	1 0	0 1	0 1	1 1	1 1	0 2	0 2
	<b>4th</b>	0 0	1 0	1 0	1 0	1 0	0 1	0 1	0 1	0 1
	<b>Bottom</b>	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0
<b>3/16"</b>	<b>Top</b>	0 0	1 0	0 1	1 1	0 2	1 2	0 3	1 3	0 4
	<b>2nd</b>	0 0	1 0	0 1	0 1	1 1	0 2	1 2	1 2	0 3
	<b>3rd</b>	1 0	1 0	0 1	0 1	1 1	1 1	0 2	0 2	1 2
	<b>4th</b>	1 0	1 0	0 1	0 1	0 1	0 1	1 1	1 1	1 1
	<b>Bottom</b>	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
<b>7/32"</b>	<b>Top</b>	0 0	1 0	0 1	1 1	0 2	1 2	0 3	1 3	0 4
	<b>2nd</b>	0 0	1 0	0 1	1 1	1 1	0 2	1 2	0 3	0 3
	<b>3rd</b>	1 0	0 1	0 1	1 1	1 1	0 2	0 2	1 2	1 2
	<b>4th</b>	0 1	0 1	0 1	1 1	1 1	1 1	1 1	0 2	0 2
	<b>Bottom</b>	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
<b>1/4"</b>	<b>Top</b>	0 0	1 0	0 1	1 1	0 2	1 2	0 3	1 3	0 4
	<b>2nd</b>	1 0	1 0	0 1	1 1	0 2	0 2	1 2	0 3	1 3
	<b>3rd</b>	0 1	0 1	1 1	1 1	0 2	0 2	1 2	1 2	0 3
	<b>4th</b>	1 1	1 1	1 1	1 1	0 2	0 2	0 2	0 2	1 2
	<b>Bottom</b>	0 2	0 2	0 2	0 2	0 2	0 2	0 2	0 2	0 2
<b>9/32"</b>	<b>Top</b>	0 0	1 0	0 1	1 1	0 2	1 2	0 3	1 3	0 4
	<b>2nd</b>	1 0	0 1	0 1	1 1	0 2	1 2	1 2	0 3	1 3
	<b>3rd</b>	0 1	1 1	1 1	0 2	0 2	1 2	1 2	0 3	0 3
	<b>4th</b>	1 1	0 2	0 2	0 2	0 2	1 2	1 2	1 2	1 2
	<b>Bottom</b>	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
<b>5/16"</b>	<b>Top</b>	0 0	1 0	0 1	1 1	0 2	1 2	0 3	1 3	0 4
	<b>2nd</b>	1 0	0 1	1 1	1 1	0 2	1 2	0 3	0 3	1 3
	<b>3rd</b>	1 1	1 1	0 2	0 2	1 2	1 2	0 3	0 3	1 3
	<b>4th</b>	0 2	0 2	1 2	1 2	1 2	1 2	0 3	0 3	0 3
	<b>Bottom</b>	0 3	0 3	0 3	0 3	0 3	0 3	0 3	0 3	0 3
<b>11/32"</b>	<b>Top</b>	0 0	1 0	0 1	1 1	0 2	1 2	0 3	1 3	0 4
	<b>2nd</b>	1 0	0 1	1 1	0 2	0 2	1 2	0 3	1 3	0 4
	<b>3rd</b>	1 1	0 2	0 2	1 2	1 2	0 3	0 3	1 3	1 3
	<b>4th</b>	1 2	1 2	1 2	0 3	0 3	0 3	0 3	1 3	1 3
	<b>Bottom</b>	1 3	1 3	1 3	1 3	1 3	1 3	1 3	1 3	1 3
<b>3/8"</b>	<b>Top</b>	0 0	1 0	0 1	1 1	0 2	1 2	0 3	1 3	0 4
	<b>2nd</b>	0 1	0 1	1 1	0 2	1 2	1 2	0 3	1 3	0 4
	<b>3rd</b>	0 2	0 2	1 2	1 2	0 3	0 3	1 3	1 3	0 4
	<b>4th</b>	0 3	0 3	0 3	0 3	1 3	1 3	1 3	0 4	0 4
	<b>Bottom</b>	0 4	0 4	0 4	0 4	0 4	0 4	0 4	0 4	0 4

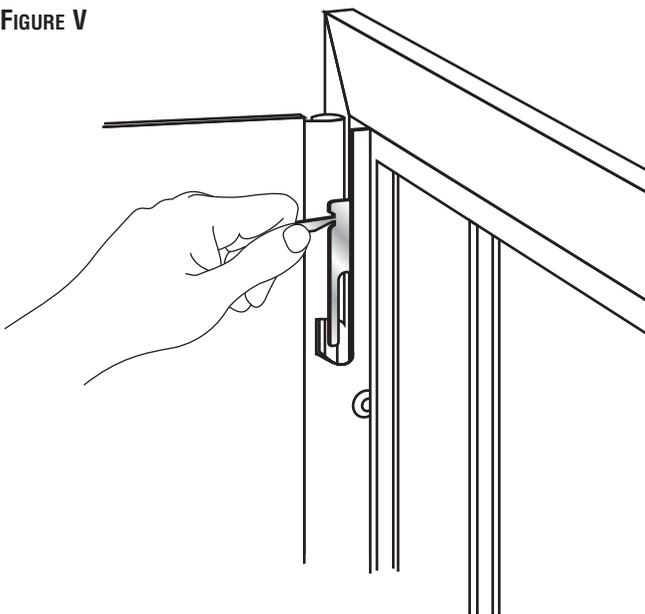
## INSTALLING THE DOOR (CONTINUED)

FIGURE U



Carefully measure the gap between the Door and the Frame at the latch side at the top and bottom of the Door. Any gap of more than 3/16" will require installation of hinge shims.

FIGURE V



Insert each hinge shim through the opening in the continuous hinge above the appropriate button-head screw location.

**7** you will need to add hinge shims from the hardware pack at the button-head screws. If the gap is larger at one end than the other (indicating the Door is not plumb relative to the sides of the Frame), you will need to add a gradually increasing thickness of shims at each of the screws. 1/32"- and 1/16"-thick stainless steel hinge shims are included in the Door hardware pack. See the chart on page 13 for the number of shims of each thickness to add.

**8** To add hinge shims, open the Door and loosen each of the 3/8 x 1" button-head screws 4 full turns. Push the Door hinge out until it is against the screw heads.

**9** Lay out the number of shims needed at each screw location per the shim chart.

**10** Starting at the top screw location, insert a shim through the opening in the hinge, placing it between the hinge flange and the Frame and dropping it onto the screw (see Figure V). Bend the long tab on the hinge shim as needed to make it easier to get the shim in place. Add any additional shims in front of the first one until all shims are in place.

**11** Repeat for the rest of the screws, adding the number of shims at each location as shown in the chart.

**12** With all hinge shims in place, begin at the top of the door and tighten each screw.

**13** With a side-cutting pliers, cut each of the hinge shim tabs off as close to the body of the shim as possible. You may also break the tabs off by bending back and forth repeatedly.

**14** Close the Door and re-examine the gap to ensure that the Door is plumb relative to the latch side of the Frame. Adjust the shimming if necessary.

**15** With the Door closed, examine the fit of the Door relative to the plane of its face within the frame. There should be an equal amount of Door edge visible beyond the Frame at the top and bottom of the Door (see Figure W, next page). Follow Step 16 or 17 to make necessary adjustments, depending on the fit.

## INSTALLING THE DOOR (CONTINUED)

**16** If the amount of door visible is greater at the top of the Door, open the door and loosen the bottom four button-head screws. Lift and pull on the latch side of the Door until the bottom of the hinge moves out. Tighten the bottom screw and loosen the top screw. Lift and push on the latch side of the Door until the top of the hinge moves in. Tighten the top screw and close the Door. Examine the fit and readjust if necessary. Then go to Step 18.

**17** If the amount of Door edge visible is greater at the bottom of the Door, open the door and loosen the bottom four button-head screws. Lift and push on the latch side of the Door until the bottom of the hinge moves in. Tighten the bottom screw and loosen the top screw. Lift and pull on the latch side of the Door until the top of the hinge moves out. Tighten the top screw and close the Door. Examine the fit and re-adjust if necessary.

**18** Open the Door and re-tighten all screws. Make certain all screws are fully tightened.

**19** Pull the Sill Coverplate from its protective sleeve and remove the hardware pack.

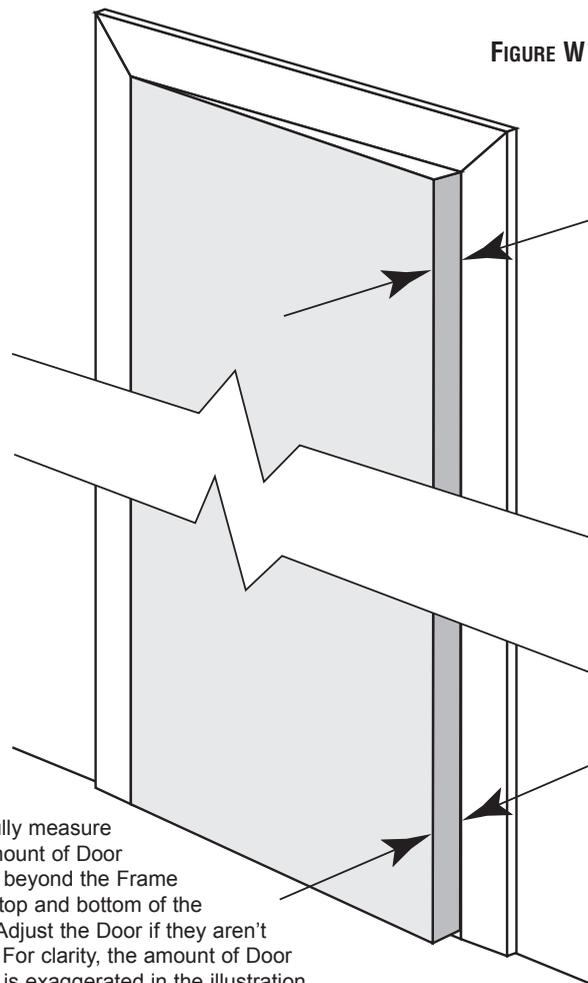
**20** Apply three continuous beads of acoustical caulk to the Common Frame sill plate: one bead on the pull-side edge and two beads on the middle of the plate. All beads should run from side to side (see Figure X). Make certain to avoid the screw holes in the sill plate with the innermost bead of caulk avoids

**21** Slide the Sill Coverplate into place from the door pull side over the beads of caulk. Lift the magnetic seals slightly and slide the Coverplate under the seals.

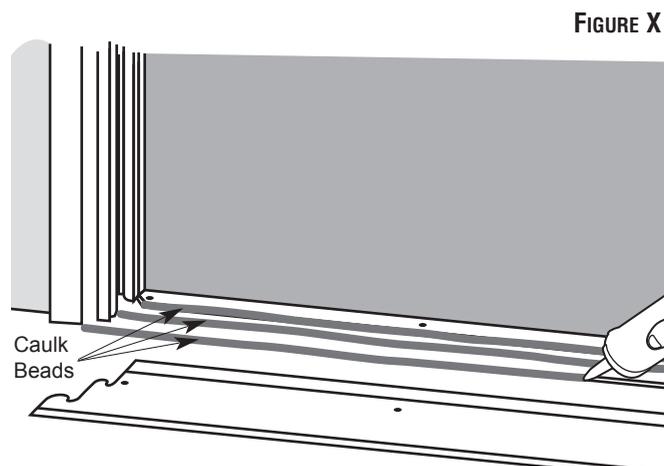
**22** Insert the three oval-head screws from the hardware pack into the holes in the Coverplate and tighten.

**23** Remove the vinyl tape spanning the bottom edge of the door that serves as a protective covering for the sweep seal. Be careful not to cut, damage or remove the Teflon coating adhered to the sweep seal's outer surface. Remove the protective covering from each magnetic sea. Use a sharp chisel to trim each magnetic seal at the Coverplate. Make a straight cut so the seal slides freely along it but there is no more than a  $\frac{1}{32}$ " gap between seal and Coverplate (see Figure Y, page 17). Use a sharp chisel to make this cut—a utility knife can't be used to make a straight, un-beveled cut with the proper gap.

(Continued on page 17)



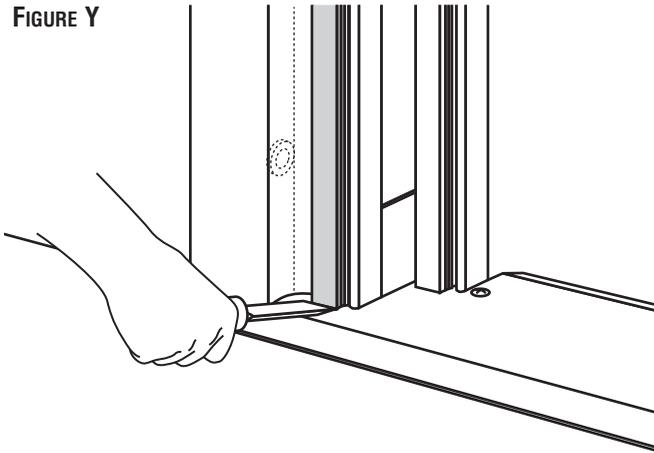
Carefully measure the amount of Door visible beyond the Frame at the top and bottom of the Door. Adjust the Door if they aren't equal. For clarity, the amount of Door visible is exaggerated in the illustration.



Apply a continuous bead of acoustical caulk to the front edge of the pull side of the sill plate on the Common Frame. Also apply two similar beads to the middle of the sill plate. Make certain the beads of caulk extend unbroken to both sides of the Frame. Note that the innermost caulk bead on the middle angles away from the Common Frame to keep the caulk away from the screw holes in the sill plate.

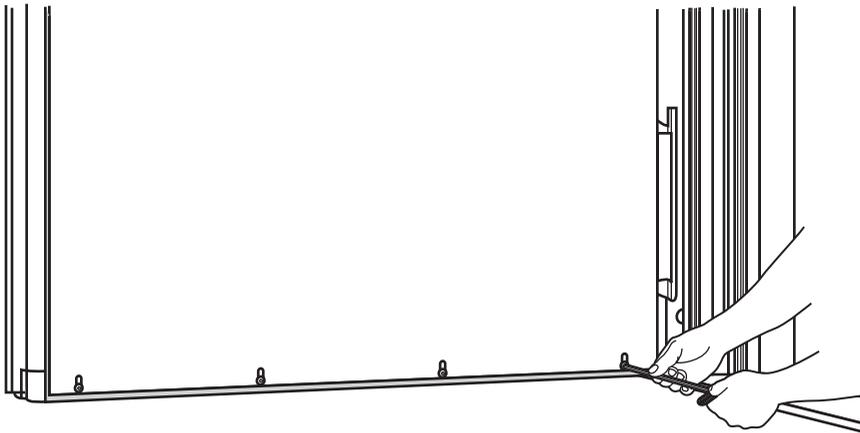
## INSTALLING THE DOOR (CONTINUED)

FIGURE Y



Use a sharp chisel to trim the magnetic seals after removing their protective covering. Cut with the beveled edge of the chisel against the Sill Coverplate.

FIGURE Z



Begin sweep seal adjustment by loosening the four screws holding the sweep seal within the Door and moving the seal down fully so the screws are at the bottoms of the slots.

**24** With the door open, begin adjusting the sweep seal by loosening the four screws holding the sweep seal to the inner face of the Door (see Figure Z).

**25** Move the sweep all the way down in the slots and close the door slowly. You will need to be on the push side of the Door when it is closed.

**26** When the Door is completely closed, tighten the screws.

**27** Check the gap between the sweep seal and the Sill Coverplate by sliding a credit card or other thin card between the seal and Coverplate. The card should meet slight resistance all along the seal. If it slides in without resistance, loosen the screw in that area, move the seal down and retighten the screw. If there is too much resistance, loosen the screw in that area, raise the seal slightly and retighten the screw.

**28** As a further check, have a helper shine a flashlight or other bright light along the sweep seal on one side of the door while you look for light shining through on the other. No light should be visible through the sweep seal area. Adjust as necessary (as in Step 27).

**29** Close the Door and note the closing force. If the Door closes too tightly, loosen the screws, move the sweep seal up very slightly and retighten the screws. Check the sweep seal fit again following Steps 27 and 28 and adjust as necessary.

**30** Continue checking and making adjustments until the Door and sweep seal pass the adjustment checks in Steps 27-29. Then make certain all four sweep seal screws are tight.

**31** The Door assembly is now ready for attachments and painting (see page 18).

## NOTES CONCERNING LOCKSET, HANDLE & CLOSER INSTALLATION AND CONCERNING PAINTING OF THE DOOR ASSEMBLY PIECES

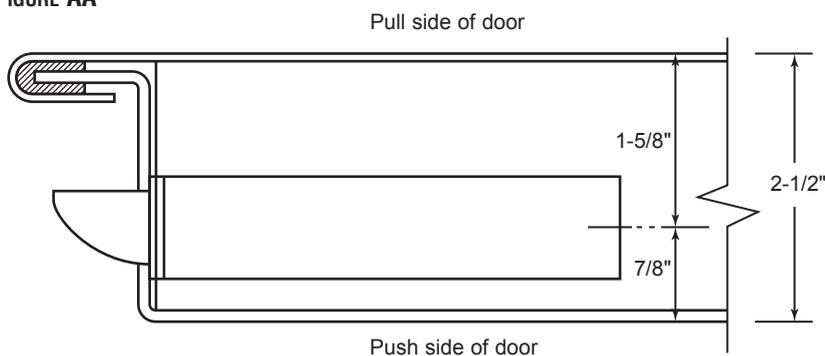
### NOTES CONCERNING LOCKSET, HANDLE & CLOSER INSTALLATION

- UL labeled doors require closers and a positive latching device.
- Follow the manufacturers' installation instructions for these units. For locksets, you will need to get extension hardware from the lock manufacturer.  
**NOTE: This hardware must fit a 2-1/2"-thick door with the lockset located 1-5/8" from the pull side and 7/8" from the push side of the door. See Figure AA.** This extension hardware may also vary if the lock cylinder is to be on the push side or on the pull side of the door. Consult with the lock manufacturer for this extension hardware. The Schlage L9000 series mortise locks (L9010 Passage Latch, L9070P Classroom Lock, L9453P Entrance Lock, L9460P Cylinder & Thumb Turn and L9462P Double Cylinder) are available with this extension hardware (which may need to be special ordered from your hardware supplier).
- Seal the gaps between the door and any handles, lockset trim plates, or other hardware using non-porous gaskets or siliconized acrylic-latex caulk.
- Avoid putting screws and other hardware all the way through the door, if possible. Through hardware creates a direct sound transmission path through the door and may detract from the sound-isolating performance of the door.

### NOTES CONCERNING PAINTING OF THE DOOR ASSEMBLY PIECES

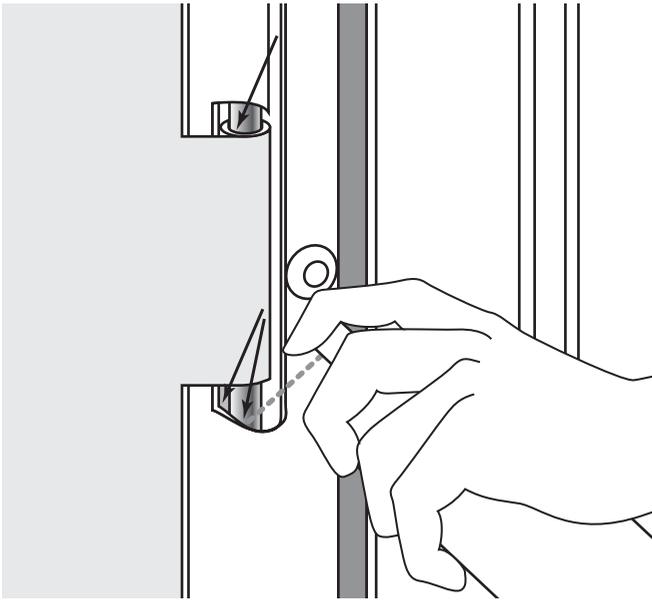
- All exposed surfaces of this door assembly are factory coated with a durable baked-on gray primer. This finish may be repainted after installation is complete.
- Remove the Frame absorbers and mask off the magnetic door seals, sweep seal, lockset, handles and other hardware before painting.
- Use care when working around the door seals to prevent damage. The door seals are permanently attached, attempting to remove them will result in damage.
- The following paints can be used for the top coat over the primer:
  - Water-Reducible Acrylic Melamine Coatings
  - Solvent Thinned Acrylic Melamine Coatings
  - Water-Reducible Alkyd Coatings
  - Solvent-Thinned Alkyd Coatings,
  - Two-Component Urethane Coatings (Solvent thinned)
  - Epoxy Powder Coatings
  - Polyester Urethane Powder Coatings
  - Hybrid Powder Coatings
  - Polyester TGIC Powder coatings.
- For other paints and coatings, test a small area before applying to the primer, or call our Technical Assistance Line, 800-733-0393 for further information about your paint's compatibility.

FIGURE AA



Lockset hardware installed on the Acoustical Door must fit a 2-1/2"-thick door with the centerline of the lockset located 1-5/8" from the pull side and 7/8" from the push side.

FIGURE BB



Lubricate each segment of the hinge where indicated by the arrows: Spray lubricant on the hinge barrel at the top and bottom of each segment to coat the hinge pin; also spray lubricant at the bottom of each segment on the bearing surfaces.

NOTES CONCERNING MAINTENANCE

*Hinge:*

- Lubricate each segment of the hinge every six months of use with Slick 50 One Lube or equivalent PTFE Lubricant (see **Figure BB**).
  - Open the door as wide as possible.
  - Spray each hinge barrel to coat the hinge pin.
  - Spray the bearing surfaces at each segment.
  - Wipe off any excess lubricant.
  - Allow lubricant to dry before using the door.
- Make certain each hinge attachment screw is tight when lubricating the hinge segments.

*Seals:*

- The door seals are designed to provide years of trouble-free operation. Over time, wear or damage may occur that may detract from the door's performance. To ensure the door's acoustical performance, periodically inspect all seals for excessive wear, cracks and scuff marks. Replace seals that are worn or damaged. Contact Wenger Corporation for replacement seals and kits.
- Inspect and readjust the sweep seal annually following the instructions in *Installing the Door*, Steps 27-29.

*Finish:*

- The Acoustical Door is covered with a baked-on primer. Clean this surface with mild soap and water. If a finish coat of paint is applied over the primer, follow the paint manufacturer's cleaning recommendations.

*Window:* (for door models containing one)

- Clean an Acoustical Door window with standard window-cleaning products and methods.
- If a window pane is broken, obtain a replacement pane at any qualified glass supply business. Use the following specifications to obtain the proper type of glass:

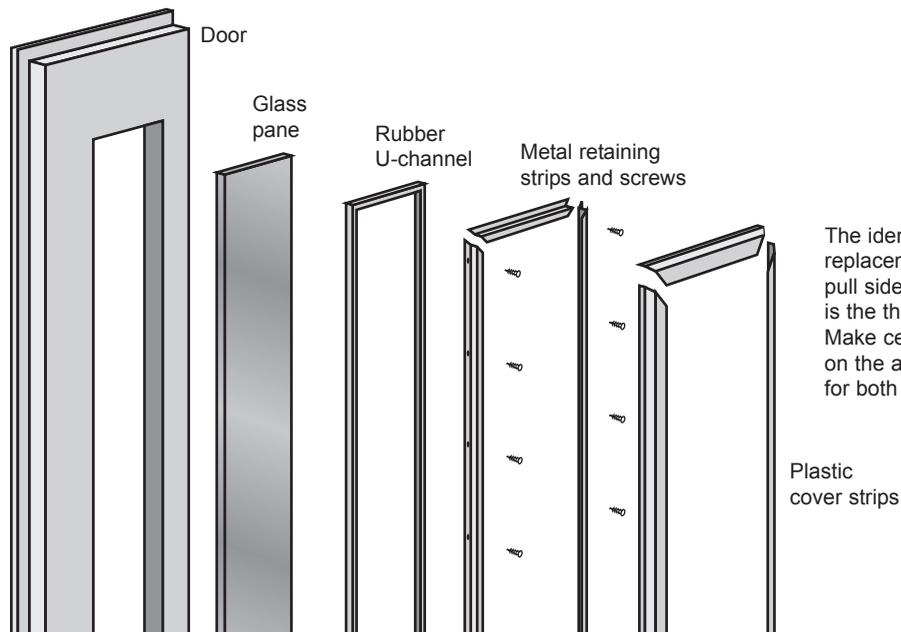
Pull side of door:	1/4"-thick laminated glass for <b>non-fire-rated</b> doors 1/4"-thick UL-approved wire glass for <b>fire-rated</b> doors
Push side of door:	3/8"-thick laminated glass for <b>non-fire-rated</b> doors 3/8"-thick laminated glass for <b>fire-rated</b> doors

(Continued on next page)

## NOTES CONCERNING MAINTENANCE (CONTINUED)

- Remove and replace a pane of glass from its own side of the door using the following procedure (see **Figure CC** for part identification and location). **NOTE:** If the panes of glass are broken on both the push and pull sides of the door and are replaced at the same time, be certain to purchase and install the proper thickness of glass for each side.
  - 1) Remove the plastic cover strips. These must be replaced each time a pane of glass is replaced. Call Wenger Corporation Customer Service (800-326-8474) for replacement parts.
  - 2) Remove the screws and metal retaining strips around the frame.
  - 3) Carefully remove the rubber U-channel from the old pane.
  - 4) Remove any broken glass or other debris from the door.
  - 5) Apply the rubber U-channel to the new pane, making sure to push the rubber together in the corners.
  - 6) Clean the inside glass surface thoroughly.
  - 7) Set the pane in place and reapply the metal retainer strips and screws.
  - 8) Wash the surface of the metal retainer strips with isopropyl alcohol.
  - 9) Peel the backing from the new plastic cover strips and attach to the retainer strips. Be sure to match the corners carefully.
  - 10) Wash the outside glass surface thoroughly.

**FIGURE CC**



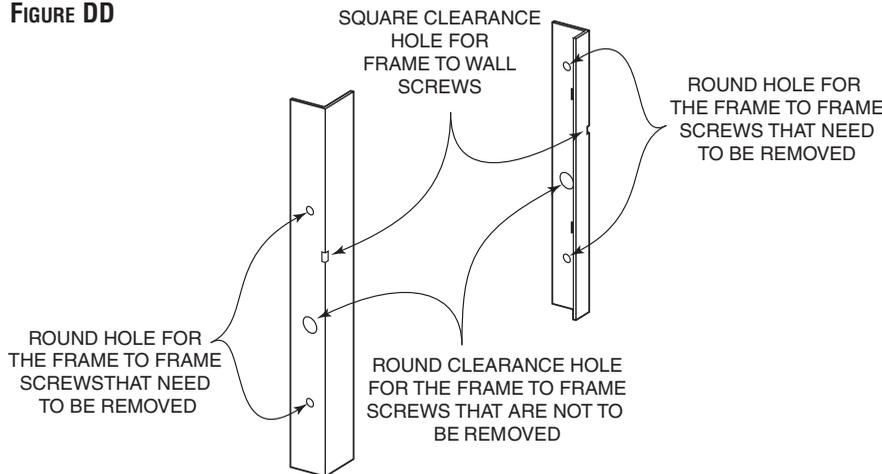
The identification, location and order of glass replacement parts is the same for both the push and pull sides. The only difference between the two sides is the thickness of the glass (see opposite page). Make certain to install glass of the correct thickness on the appropriate side of the door if replacing glass for both sides at the same time.

**INSTALLING FRAME CLOSURE FOR A 1 HOUR. FIRE-RATED ACOUSTICAL DOOR.**

**1** After the frame assembly has been completely installed into the rough opening but before the door is hung, unpack the parts accompanying the Fire-rated Acoustical Door necessary for installing the closure:

- Intumescent strips for hinge slide, latch upper side, latch lower side, and top of Common Frame
- L-brackets for hinge side, latch upper side, latch lower side, and top of Common Frame
- S-clips (14 pieces)
- Perforated trim strips for hinge side, latch upper side, latch lower side, and top of Common Frame

**FIGURE DD**



Locate the leg of the L-bracket without holes in it and clean it with isopropyl alcohol.



**2** Begin installation of closures into the Frame assembly by looking at the solid L-brackets. Note the two sets of larger clearance holes and one set of smaller attachment holes, and find the leg of the L that does not have holes.

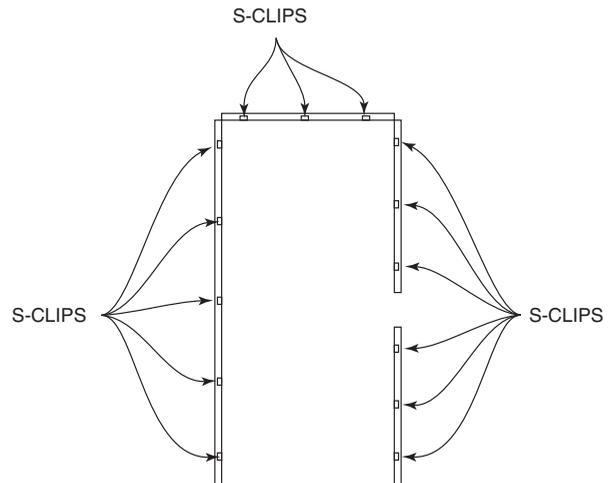
**3** Clean the outer surface of this leg with isopropyl alcohol (see Figure DD).

## INSTALLING FRAME CLOSURE FOR A 1 HOUR, FIRE-RATED ACOUSTICAL DOOR (CONTINUED)

**4** Apply the 14 S-clips to the L-bracket edges on the legs without holes as shown in Figure EE and Figure FF. Make sure the clips are placed on the 'L' side of the bracket.

**5** Match the lengths of Intumescent strip with the solid L-brackets. Peel the backer from the Intumescent strips and apply each strip to the outside surface on one of the L-brackets, making sure one edge of each strip is flush with the edge of the L-bracket (see Figure GG, below right, and Figure HH, on page 23).

FIGURE EE



Install the S-clips in the approximate locations shown above. Make sure the clips are attached to the 'L' side of the bracket—the leg facing away from the Frame assembly (see illustration below, left).

FIGURE FF

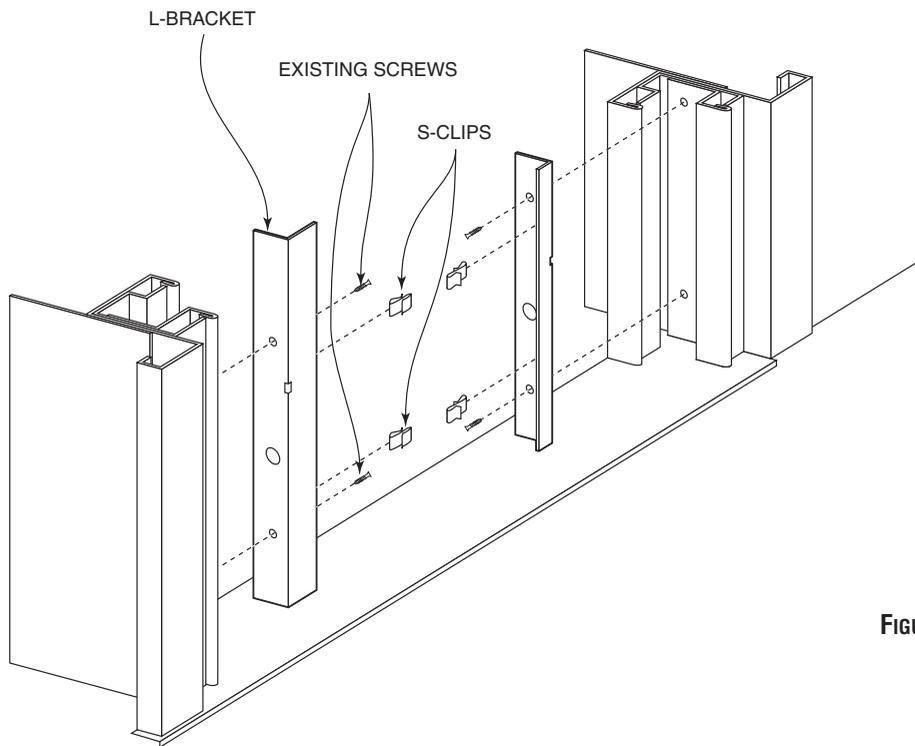
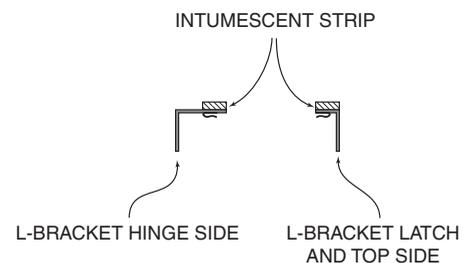


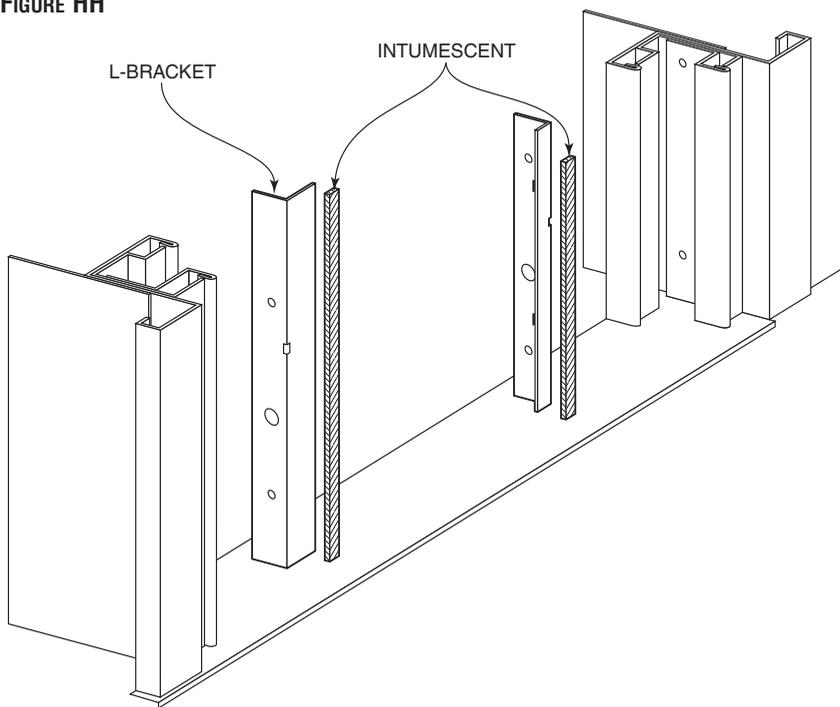
FIGURE GG



Attach each Intumescent strip so that one edge is flush with the edge of the L-bracket.

## INSTALLING FRAME CLOSURE FOR A 1 HOUR, FIRE-RATED ACOUSTICAL DOOR (CONTINUED)

FIGURE HH



**6** Place the L-bracket assemblies next to the Common Frame in the appropriate locations and determine which of the smaller screws in the frame are in line with the small holes in the brackets (see Figure DD, page 21 and Figure II, below left). Carefully remove these screws. Do not loosen or remove any other screws in the frame. The L-brackets will have clearance holes to fit over the heads of these screws.

**7** Place the bracket assemblies in their proper locations and attach them to the frame with the screws you previously removed (see Figure II and Figure JJ). Tighten these screws carefully but make sure you do not strip the hole when tightening them.

FIGURE II

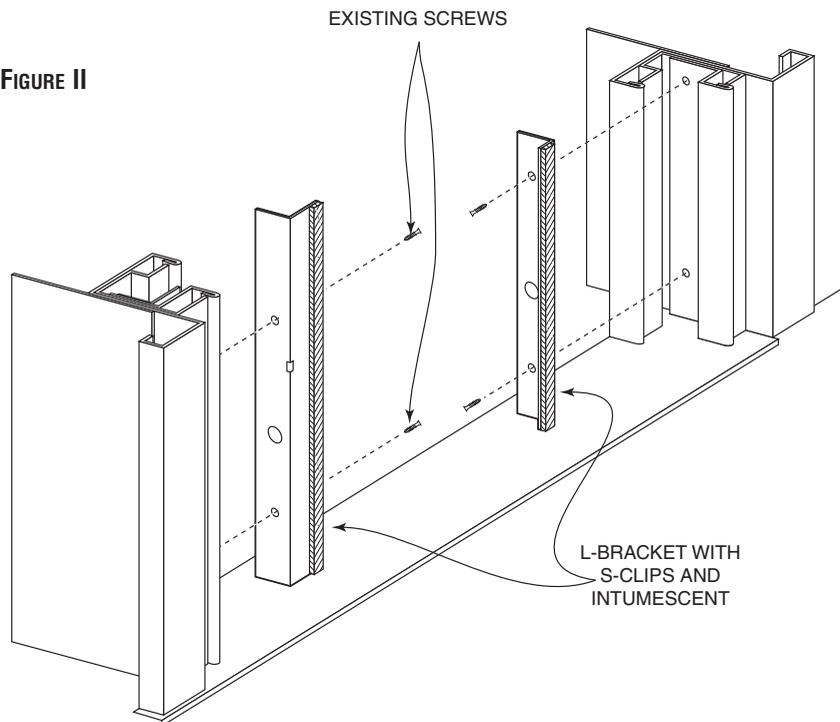
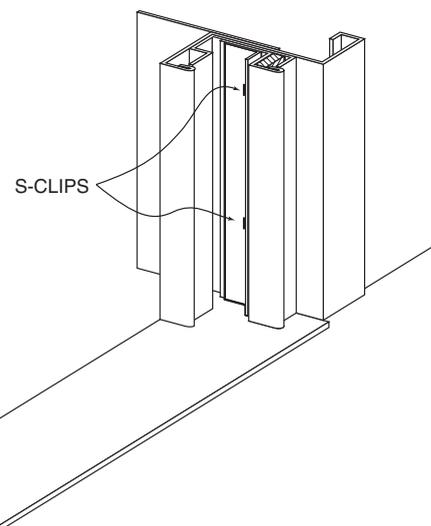


FIGURE JJ

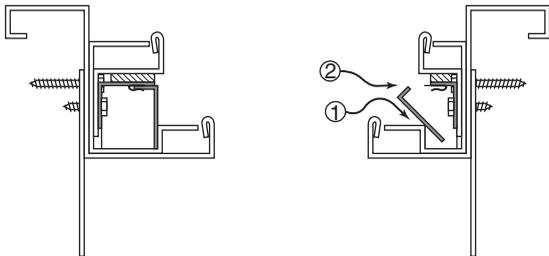


## INSTALLING FRAME CLOSURE FOR A 1 HOUR, FIRE-RATED ACOUSTICAL DOOR (CONTINUED)

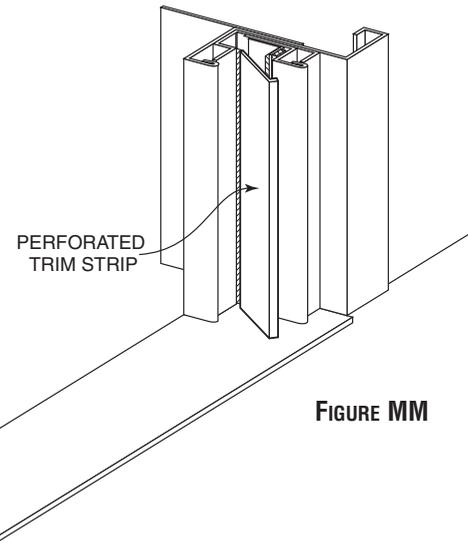
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**8** Match the lengths of Perforated trim strips with the Common Frame locations. Slide the long leg of a piece of the Perforated trim into the Frame along the Insulation, then push the short leg into the S-clip on the previously installed L-brackets (see Figure LL and Figure MM). Use this method for each piece of Perforated trim.

**FIGURE LL**



Slide the long leg of a Perforated trim strip into the Frame (#1), then push the short leg into the S-clip (#2). Note: The illustration above shows the Perforated strip completely installed in the Frame section at the left.



**FIGURE MM**

# SIX FOOT DOUBLE DOOR INSTALLATION

## INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME

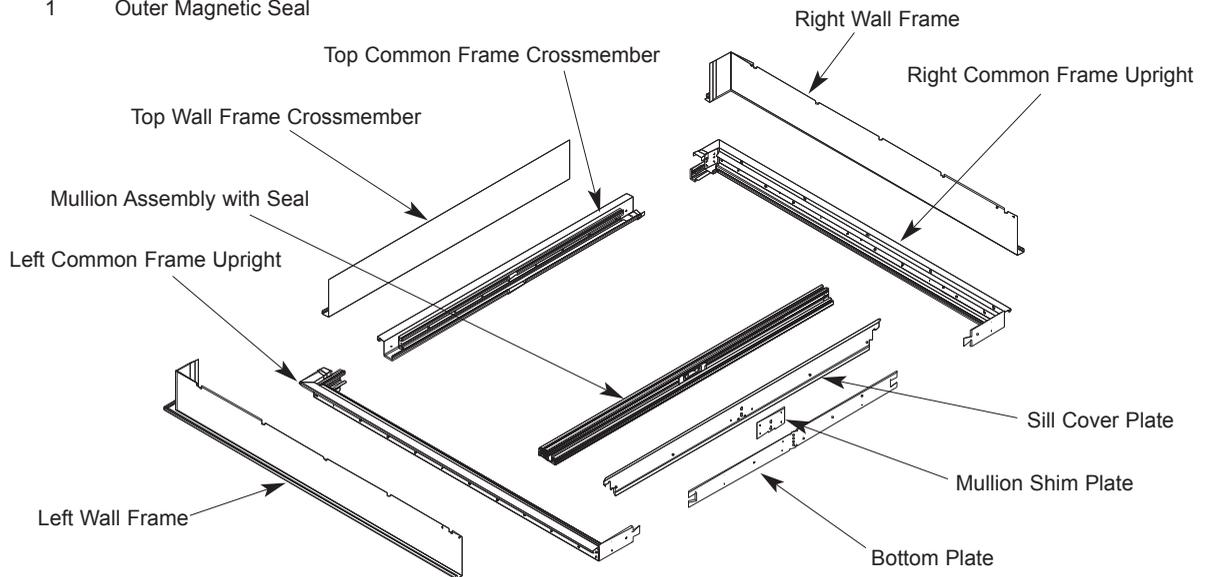
**1** Get assistance to move large assembly materials to the installation site. The Door Frame is very heavy — see the weight chart on page 4 for the weight of the door frame you have. Move the pieces to the installation site while they are crated to prevent damage. If you must unpack the crate to move the frame, remove all of the parts and hardware listed below.

**2** Unpack the Door Frame pieces from the crate. Unscrew the top of the crate. Identify and separate the various assembly pieces:

Quantity	Item	Quantity	Item
1	Left Common Frame Upright	1	Right Wall Frame
1	Right Common Frame Upright	1	Top Wall Frame Crossmember
1	Top Common Frame Crossmember	1	Mullion Assembly with Seal
1	Bottom Cross Plate	1	Sill Cover Plate
1	Left Wall Frame	1	Door Frame Hardware Pack
2	Installation Plates	1	Mullion Shim Plate

One Set of Seal Components:

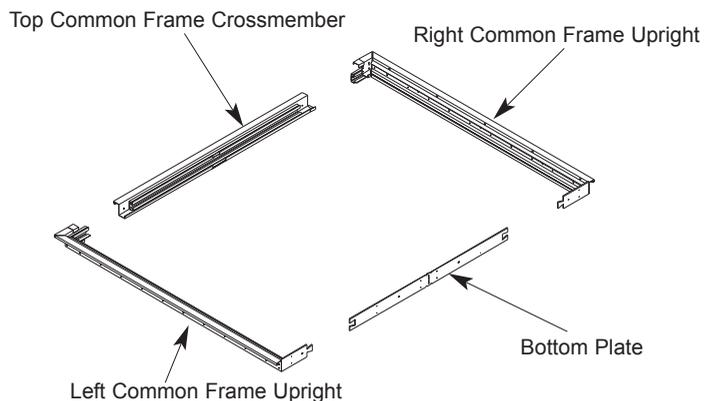
Quantity	Item
1	Double-sticky Tape
1	Inner Magnetic Seal
1	Outer Magnetic Seal



**3** Remove the packing foam from the Frame flanges that was applied for protection during shipping.

**4** Remove the cloth absorber insulation strips from the Common Frame and set aside.

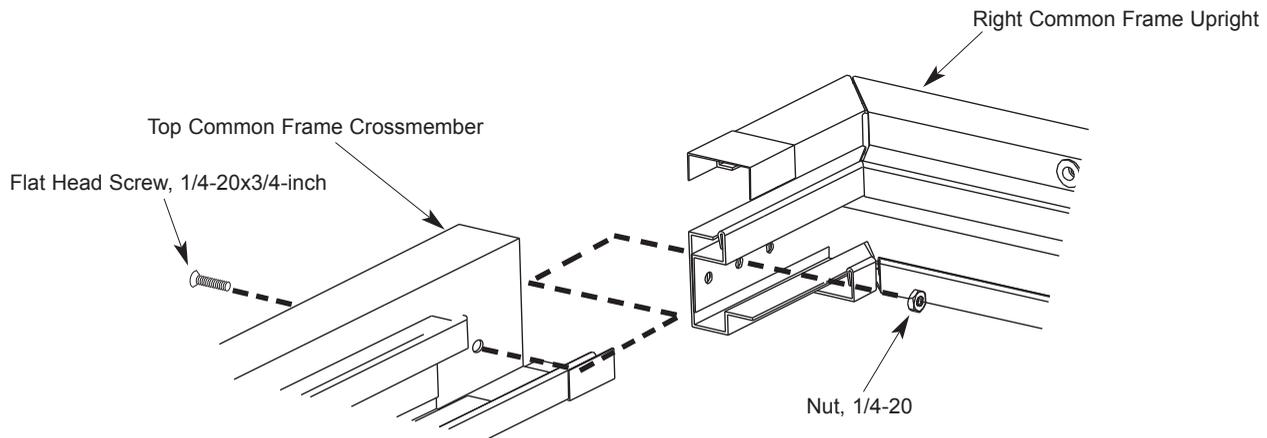
**5** Lay the Common Frame pieces out on the floor as shown.



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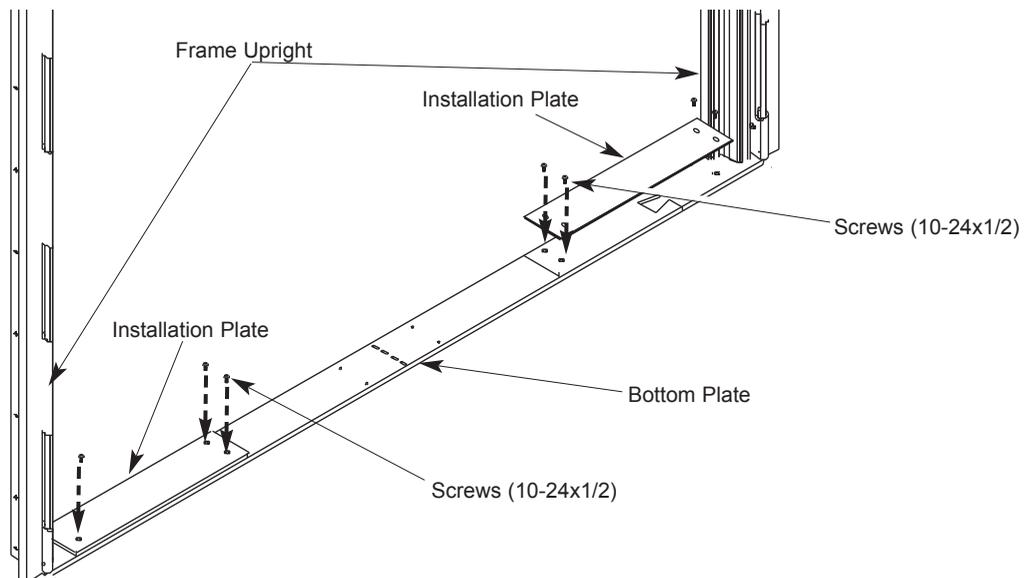
**INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME CONTINUED**

**6** Assemble the Right Common Frame Upright to the Top Common Frame Crossmember by sliding the Top Common Frame Crossmember into the Right Common Frame Upright and attaching the two frame members together with a Flat Head Screw, 1/4-20x3/4, and Nut, 1/4-20, as shown below. Tighten the Screw and Nut firmly.



**7** Assemble the Left Common Frame Upright to the Top Common Frame Crossmember by sliding the Top Crossmember into the Left Common Frame Upright. Attach the two frame members together with a Flat Head Screw, 1/4-20x3/4, and Nut, 1/4-20, as done in step 6. Tighten the Screw and Nut firmly.

**8** Insert the dovetail tabs on the frame uprights into the mating slots in the bottom plate. Attach the bottom plate to the uprights using the Installation Plates and the Screws (10-24x1/2-inch) provided as shown below.

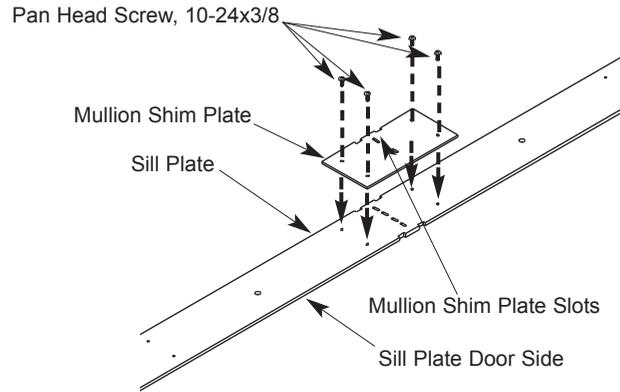


**Note:** The Installation Plates secure the Bottom Plate to the Uprights during installation. Remove the Installation Plates before the installation of the Sill Coverplate.

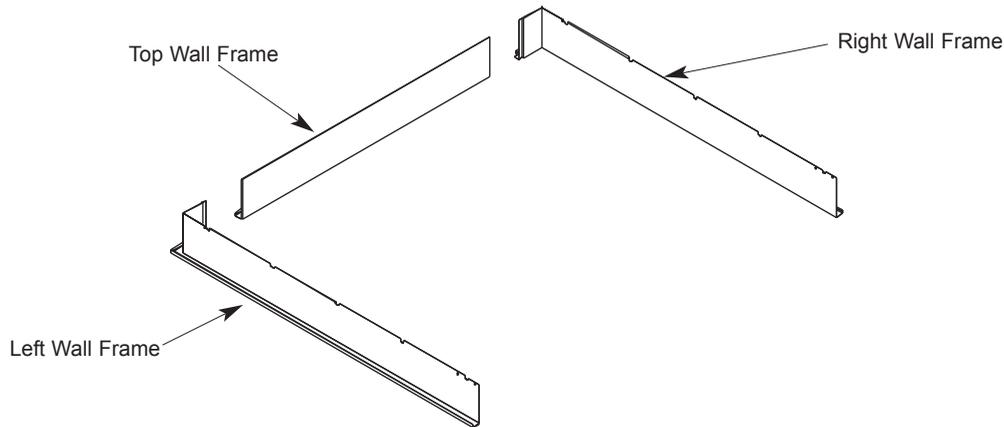
**INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME CONTINUED**

**9** Attach the Mullion Shim Plate to the Sill Plate with four Pan Head Screws, 10-24x3/8, as shown below. Make sure that the Mullion Shim Plate Slots *face away* from the door side of the Sill Plate.

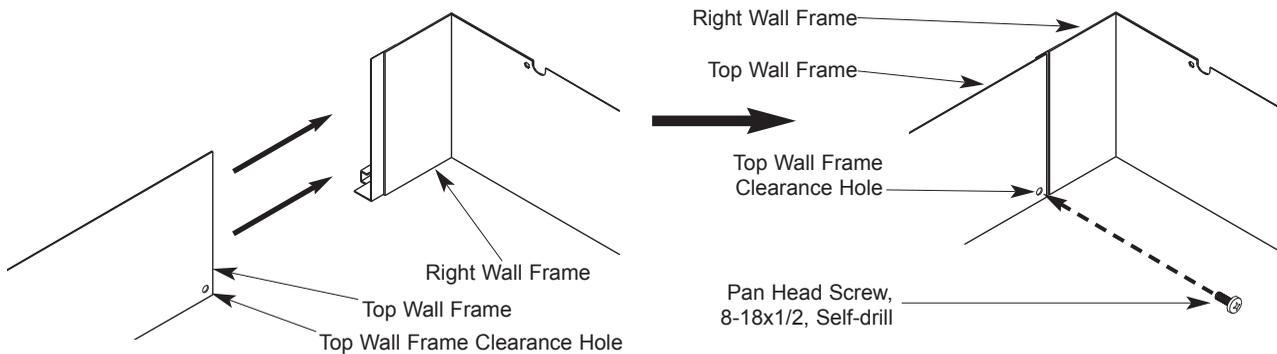
**Note:** The Shim Plate assures working clearance after installing the Frame to the Wall. The Shim Plate is removed after the Frame is installed.



**10** Place the Wall Frame pieces on the floor as shown below.



**11** Assemble the Right Wall Frame Upright to the Top Wall Frame Crossmember by sliding the two frame members together as shown. Attach the two Frames together with a Pan Head Screw, 8-18x1/2-inch, Self-drill, by drilling the Screw through the Top Wall Frame Clearance Hole.

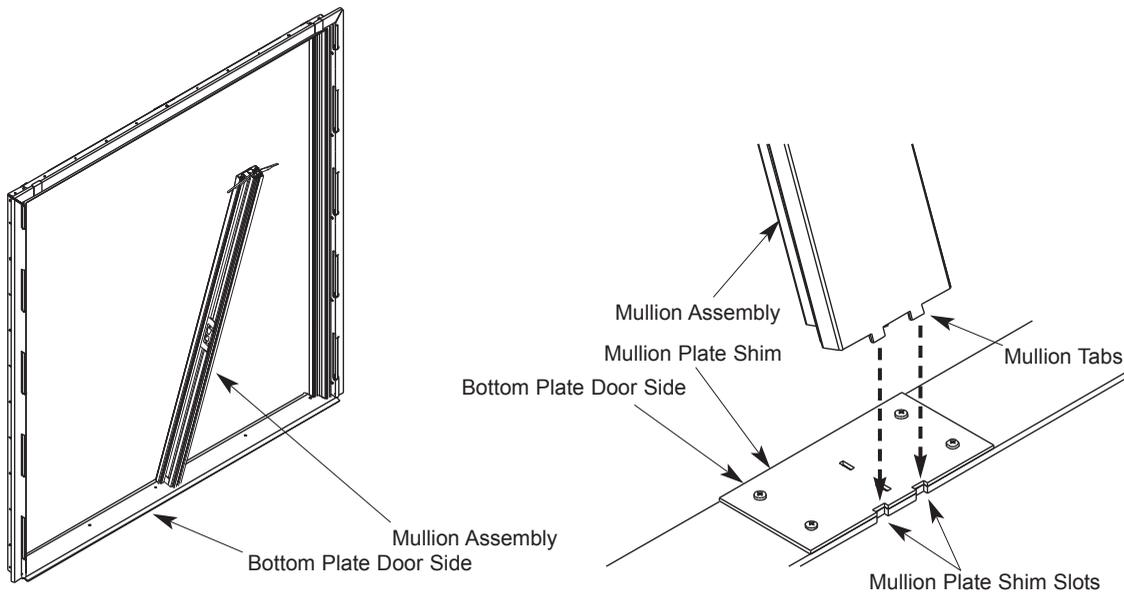


**12** Assemble the Left Wall Frame Upright to the Top Wall Frame Crossmember in the same way as done in step 10.

**13** Place the Mullion Assembly onto the floor and remove the Magnetic Gasket.

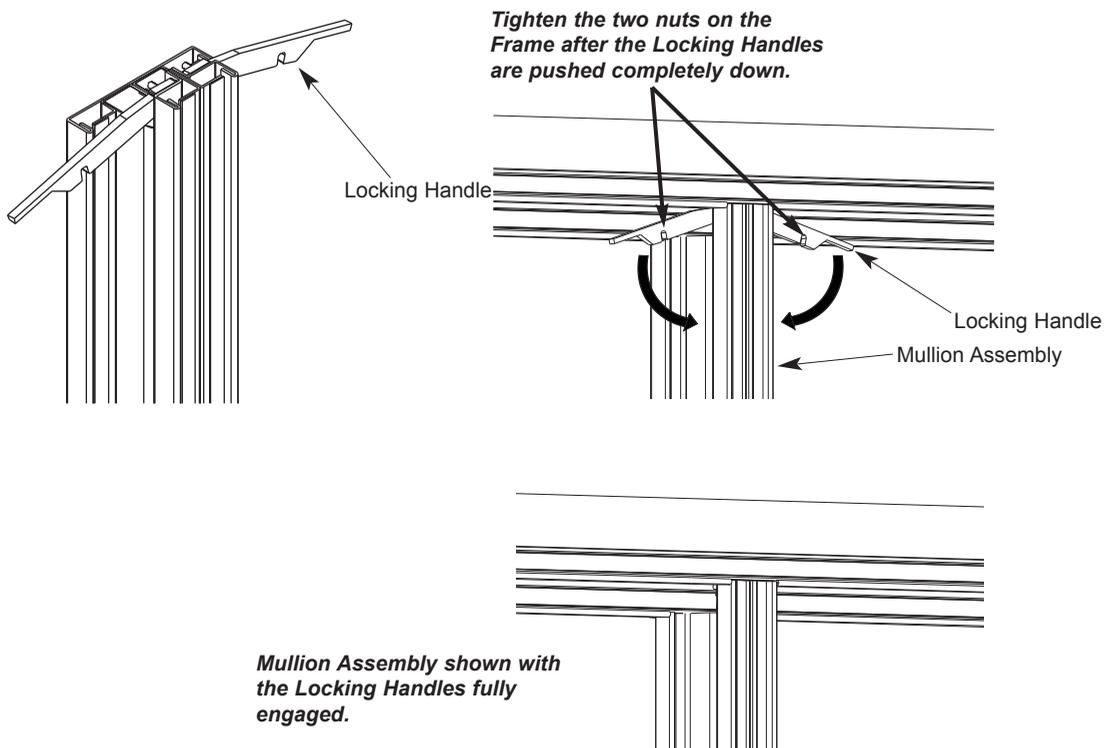
**INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME CONTINUED**

**14** Install the Mullion Assembly by aligning the tabs on the bottom of the Mullion with the Mullion Shim Plate Slots (insert the tabs into the Slots).



**15** Push the top of the Mullion fully into the cut-out in the Top Common Frame Crossmember until it is seated against the frame and the back of the Mullion and the Frame are flush with each other.

**16** Push the locking handles all the way down to lock the mullion in place. Make sure the tabs of the locking handles are fully engaged behind the frame plate. Tighten the nut on the locking fastener to secure the locking handles in place.



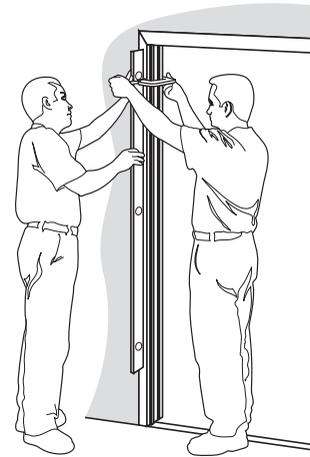
## INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME CONTINUED

**Note:** To install the Non-fire Rated Double Door Frame in Wood (or Steel) Stud and Wallboard Walls, continue with step 17. To install the Non-fire Rated Double Door Frame in Masonry Walls, go to step 45 on page 34.

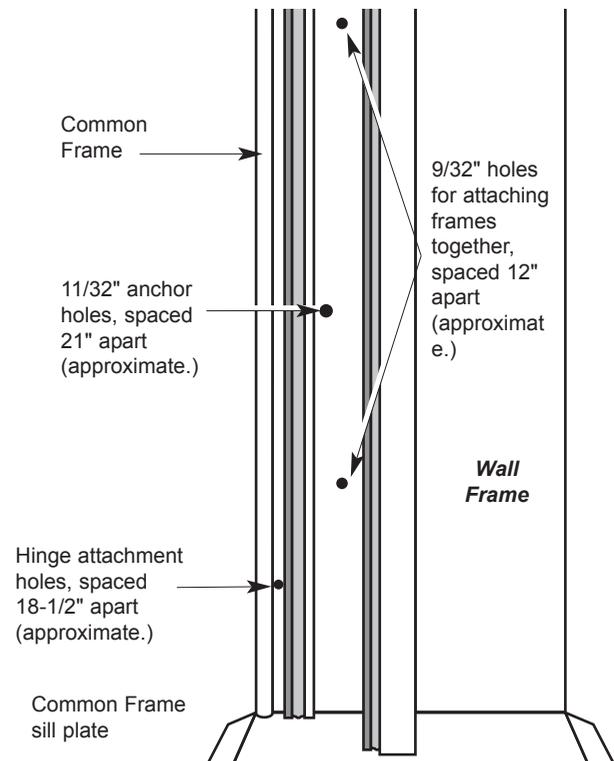
**17** Install rough-opening framing, allowing for the rough-opening dimensions appropriate for your door shown in *Frame, Door and Rough-opening Dimensions* on page 4. Use 2 x 6 or larger wood framing members, making sure the framing depth is within the range of the door frame jamb depth you are installing (see Note on page 4). Add extra height to the rough-opening dimensions to allow for carpet or other floor covering if necessary (see Step 9 under *Preparing for Door Assembly Installation*). Attach the framing to the wall, using construction adhesive and fasteners appropriate for the size and weight of the door being installed (see weight chart on page 4).

**18** Seal the rough-opening framing to the wall at all seams using acoustical caulk (see caulking materials on page 3). Let the caulk set according to manufacturer's instructions.

**19** Slide the Common Frame into the rough opening. Use a level to plumb the frame in the opening, both vertically and relative to the plane of the wall, temporarily adding tapered wood shims on the sides of the rough opening as needed. Also use temporary shims underneath the bottom of the frame to allow for floor covering clearance if necessary. Measure diagonally between corners to make certain Frame is square. Clamp the frame against the wall/shims on both sides using C-clamps to hold the frame in a plumbed position as shown at the right.



**20** Locate the four 11/32-inch diameter anchor holes on each side of the Common Frame. Refer to the illustration at the right. Carefully mark through these holes to scribe the anchor points on the rough-opening framing.



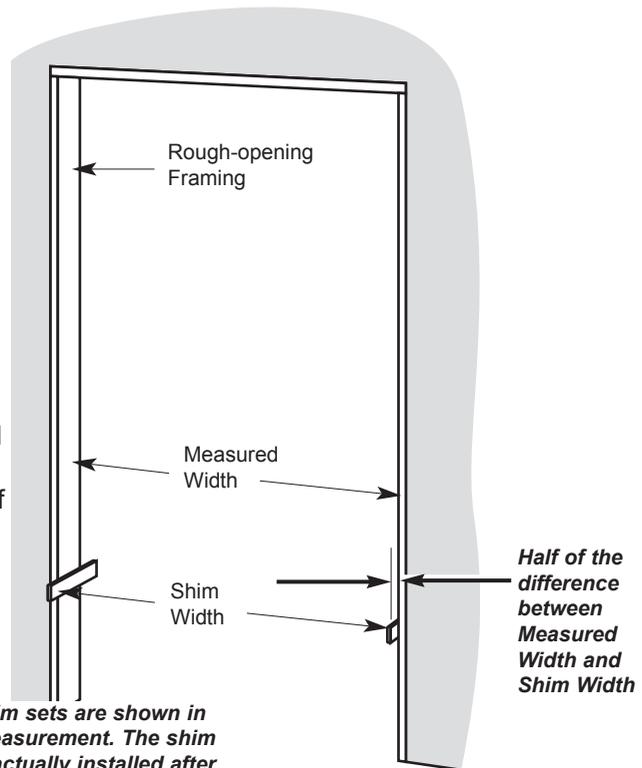
## INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME CONTINUED

**21** Remove the Common Frame from the opening and remove the temporary shims on the sides of the opening. Do not remove temporary shims for floor clearance.

**22** Measure the distance across the opening at the bottom anchor point.

**23** Subtract the appropriate Shim Width (see Shim Width dimensions in *Frame, Door and Rough-opening Dimensions*, page 4) from this width measurement and calculate the Shim Width as shown in the illustration at the right.

**24** Install shims on one side of the door, using wood shims, beginning just above the bottom anchor point. Install a shim set equal in thickness to one-half of the difference measurement calculated in Step 23. Fasten the shims in place, making certain the surface of each fastener head is flush with the face of the top shim.

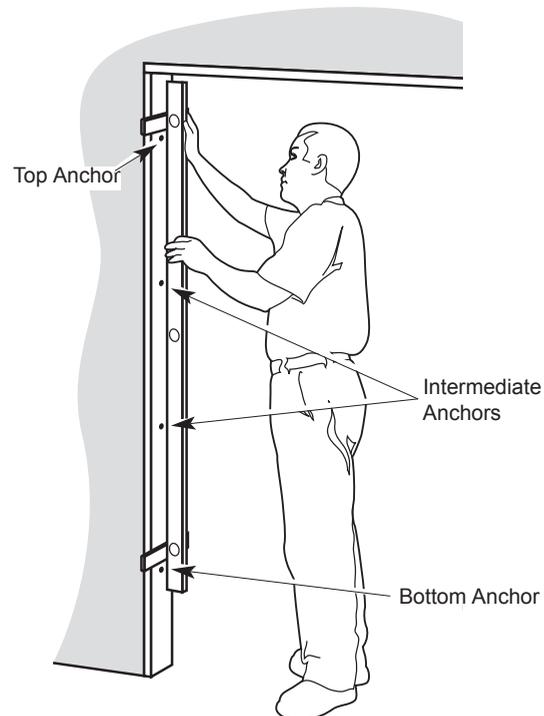


**25** Place a long level against the bottom shim set and determine the shim thickness needed just above the top anchor point to plumb the vertical as shown at the right. Fasten a shim set in place above the Top Anchor point.

**26** With the long level pressed lightly against the top and bottom shim sets, add shims out to the long level just above the two intermediate anchors as shown in the illustration at the right. Fasten these shims in place.

**27** Use a level to locate shim sets on the opposite side of the door opening. Make certain to re-measure the Shim Width from page 4 to determine the thickness of each shim set. Fasten the shims in place.

**28** Trim all shims so that their ends are 1/2-inch from the outside edges of the rough-opening framing.



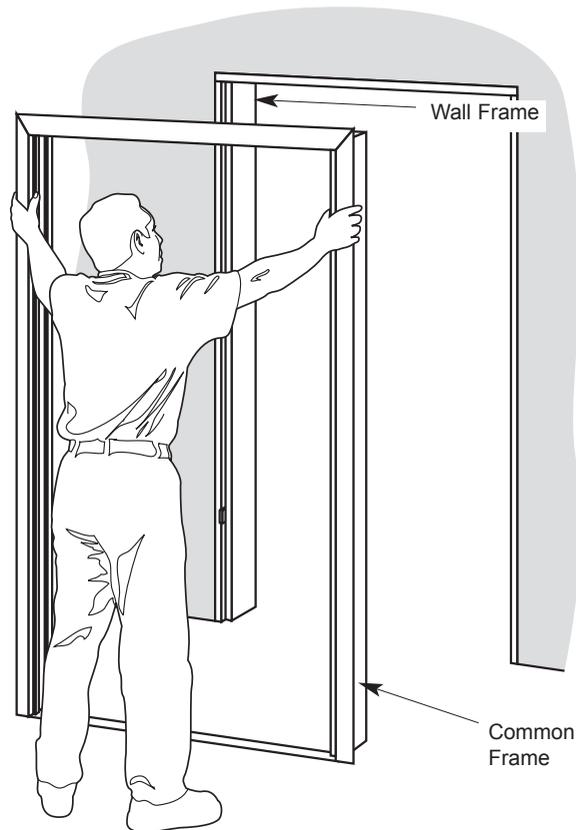
**INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME** CONTINUED

**29** Set the Wall Frame in place next to the opening, and mark the locations of the shims on the Wall Frame absorber foam. Trim away the foam in the shim locations.

**Note:** Skip step 29 if you have a One-Hour fire rated frame.

**30** Slide the Wall Frame into the opening until the flange contacts the rough-opening framing.

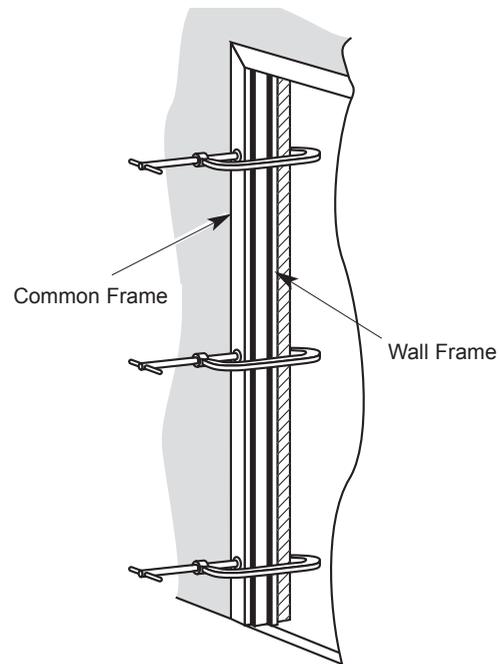
**31** Slide the Common Frame into the opening and start it onto the Wall Frame as shown at the right.



*Slide the Common Frame into position after the Wall Frame is in place.*

**32** Clamp the Common Frame and Wall Frame together, making sure that the Common Frame slides smoothly into the Wall Frame and that the flanges of both Frames contact the wall surface as shown in the illustration at the right.

**33** Carefully check the Frame plumb on the face and the inside. Adjust the clamping to make sure that both inside surfaces of the frame are plumb and parallel with each other. Add or adjust shims if necessary to bring the Frame pieces into proper alignment. Measure diagonally between Frame corners and make sure that the two dimensions are equal. Make certain the Frame pieces are positioned correctly before fastening them together (next step).



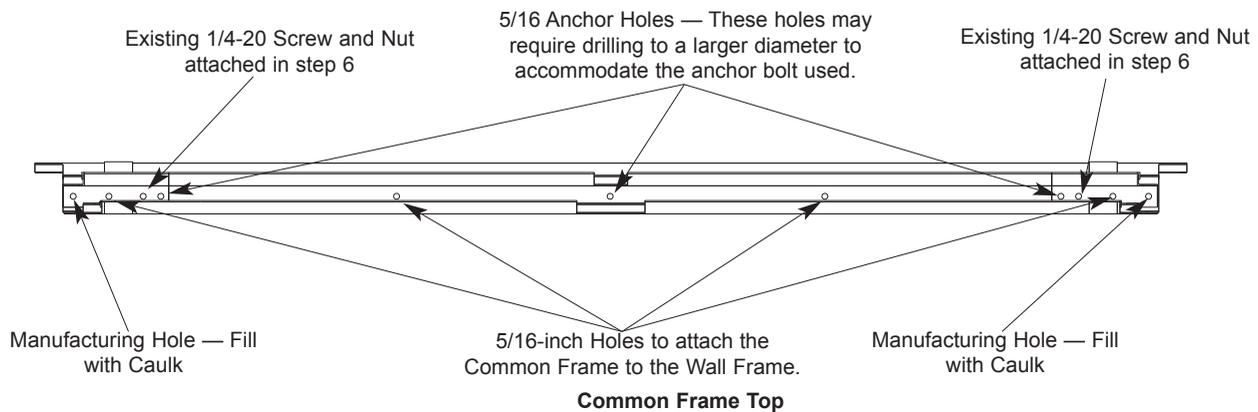
*Clamp the Common Frame and Wall Frame together, sandwiching them around the wall surfaces, as shown in this cutaway view. Make certain the Common Frame fits smoothly into the Wall Frame and the flanges of both pieces contact the wall surface.*

**INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME CONTINUED**

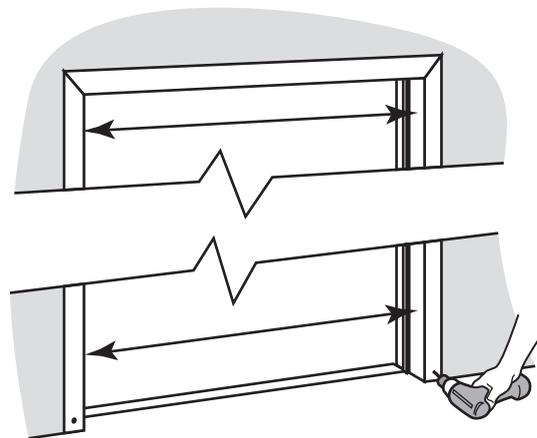
**34** Locate the 17 9/32-inch diameter holes in the sides and top of the Common Frame. Drive a 1/4-inch diameter self-drilling screw from the hardware pack through each hole into the Wall Frame. Make sure that the screws are snug but do not over-tighten.

**35** Locate the eight 11/32-inch diameter anchor holes in the Common Frame (refer to illustration adjacent to step 20). Drill a 5/16-inch diameter hole through the Wall Frame at each of these holes, but do not drill into the rough-opening framing.

**36** Drill a 3/16-inch diameter pilot hole into the rough-opening framing at each anchor hole location (which are aligned with the scribed anchor points determined in Step 20), and drive a 5/16-inch diameter lag screw through each anchor hole and into the pilot hole in the framing. Tighten these lag screws to hold the Frame in place. Refer to the Common Top Frame illustration below.

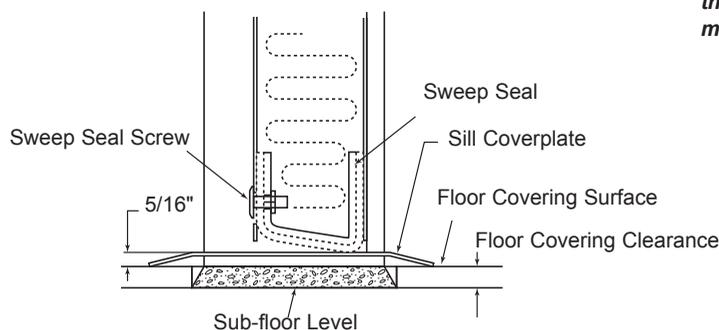


**37** Make certain the Wall Frame is the same width at the top and bottom of the opening (adjust the lower corners of the Wall Frame to match the top width if necessary). On each side flange of the Wall Frame, drill a 7/32-inch diameter hole through the flange two-inches from the bottom and drive a #10x3-inch wood screw through the flange into the rough-opening framing as shown in the illustration at the right.



*Drive fasteners through the bottom ends of the Wall Frame flanges into the rough-opening framing. First measure to check that the width at the bottom of the opening is identical to that at the top. Adjust the lower corners of the Wall Frame in or out to match the top width if necessary.*

**38** If the floor surface does not contact the bottom of the Frame or is not continuous underneath it, pack the space between the floor and the bottom of the Frame with grout (see illustration below). Remove any temporary shims underneath the bottom of the Frame before grouting.



---

**INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME** CONTINUED

**39** Caulk the joint between the Common Frame and the Wall Frame on the push side of the Door (relative to operation of the Door after installation) with a continuous bead of acoustical caulk as shown at the right.

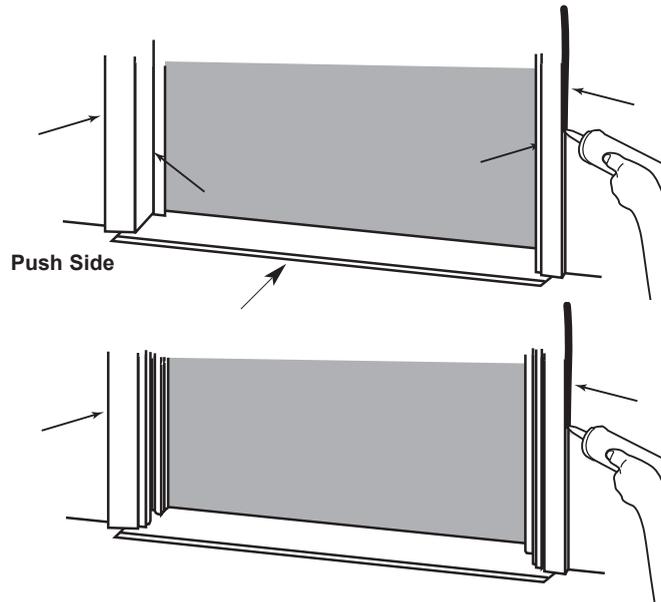
**40** Caulk between the Wall and the Frame pieces on both push and pull sides of the Door with a continuous bead of acoustical caulk as shown at the right.

**41** Caulk both sides of the sill at the bottom of the Common Frame with a continuous bead of acoustical caulk as shown at the right.

**42** Remove any metal chips from the Frame pieces and magnetic seals.

**43** Install the floor covering. If the floor covering is already in place, go to Step 28.

**44** Re-insert the absorber insulation strips (removed at Preparing for Door Assembly Installation, Step 8 on page 3) into the Common Frame. **Skip to step 73 to continue the Non-Fire Rated Double Door Frame Installation.**



*Apply a continuous bead of acoustical caulk at the seams indicated by the arrows on both push and pull sides of the Frames. Make certain to apply caulk to the seam between Wall Frame and Common Frame on the push side.*

**Note:** The hinge side absorber is slightly larger than the latch side absorber. Push the latch side absorber into the latch area behind the latch striker opening.

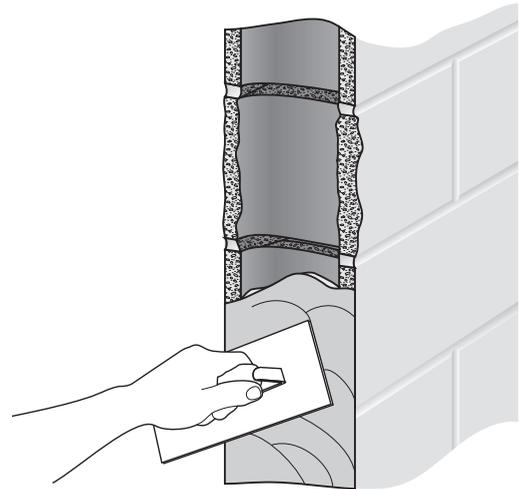
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## INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME CONTINUED

**Note:** If you are installing a Non-Fire Rate Double Door Frame into a Masonry Wall continue to step 45 below.

**Note:** If you are installing a Non-Fire Rate Double Door Frame into a Wood (or Steel) Stud and Wallboard Walls and have finished step 44, skip to step 73.

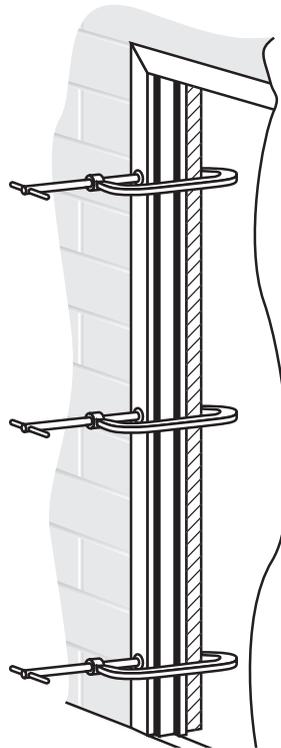
**45** Cut the rough opening to the dimensions shown on the drawing, allowing extra height to allow for carpet or other floor covering if necessary (see Step 9 page 3 under *Preparing for Door Assembly Installation*). Fill any voids between remaining masonry surfaces and rough-opening dimensions with mortar as shown in the illustration at the right. Allow adequate setting time for the mortar before proceeding with Door Frame installation. A solid, continuous surface is necessary for a good installation.



*Use mortar to fill any voids existing between remaining concrete block or solid wall materials and the rough-opening dimensions. A smooth, continuous surface at the rough-opening dimensions is necessary for proper installation of the Frame.*

**46** Remove the absorber foam from the outside of the Wall Frame, if provided.

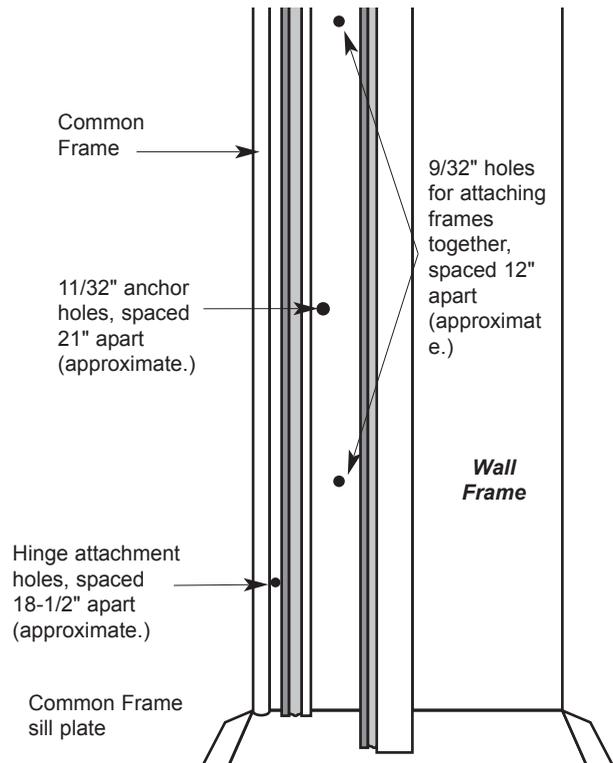
**47** Slide the Common Frame into the wall. Use a level to plumb the frame front surface and side, temporarily adding tapered wood shims on the sides of the rough opening as needed. Also use temporary shims underneath the bottom of the frame to allow for floor covering clearance if necessary. Measure diagonally between corners to make certain Frame is square. Clamp the frame against the wall/shims on both sides, using C-clamps, to hold the frame in plumbed and squared position as shown at the right. Make certain the Common Frame is plumb and in plane across its width (see *Preparing for Door Assembly Installation*, Step 2 page 3) before beginning Step 48.



*Make certain the Common Frame is accurately leveled in both directions, so it is plumb vertically and relative to the plane of the wall surface, before clamping in position. A helper will make this much easier. You may want to use two levels at the same time, one for vertical and one for plane of the wall (which is the level shown above).*

**INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME** CONTINUED

**48** Locate the four 11/32-inch diameter holes on each side of the Common Frame and three holes in the Top Frame (refer to the illustration at the right). Carefully mark through these holes to scribe the anchor points on the rough-opening walls.



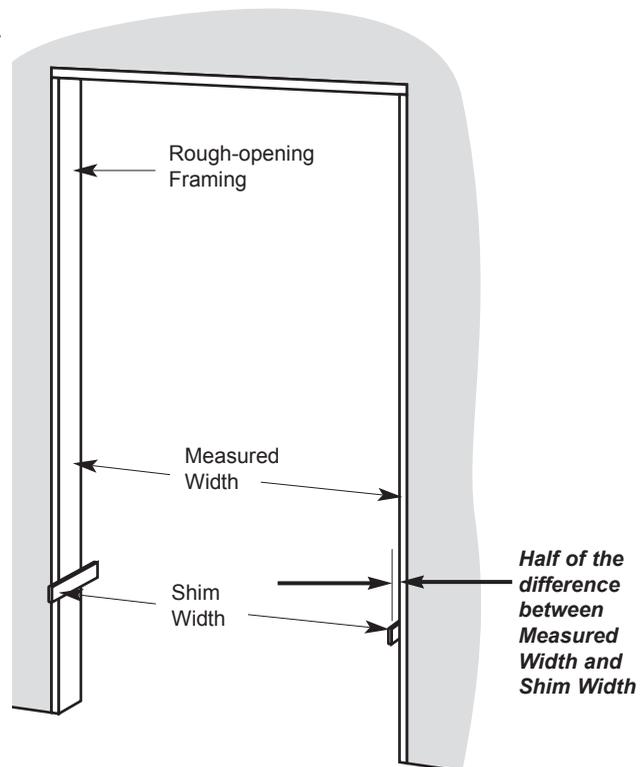
*This illustration shows relative positions of fastener holes in the Common Frame (hole sizes not to scale for clarity). Hinge side is shown; hole positions are identical on latch side of frame, except hinge holes aren't included.*

**49** Remove the Common Frame from the opening and remove the temporary shims on the sides of the opening. Leave temporary shims allowing for flooring clearance in place.

**50** Drill holes for and install suitable masonry anchors for 5/16-inch diameter lag screws at each of the 11 marked anchor points. Make certain to use anchors of the proper size and strength to ensure secure installation of the Frames.

**51** Measure the distance across the opening at the bottom anchor point.

**52** Subtract the appropriate Shim Width (see Shim Width dimensions in *Frame, Door and Rough-opening Dimensions* on page 4) from this width measurement to calculate the measurement of the difference (refer to the illustration at the right).



*Note that for clarity that both lower shim sets are shown in position to indicate the Shim Width measurement. The shim set opposite that on the hinge side is actually installed after attaching all hinge-side shim sets.*

## INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME CONTINUED

**53** First install a shim on one side of the door, beginning just above the bottom anchor point. Install a shim equal in thickness to one-half of the difference measurement calculated in Step 52. Fasten the shim in place, using fasteners appropriate for masonry surfaces. Make certain the surface of each fastener head is flush with the shim face.

**Note:** Each end of the shim must be 1/2-inch from the face of the wall but the shim must not be a single piece across the rough-opening masonry surface. Grout must be able to flow around and through the shim location to fill all voids between the Frames and the masonry surfaces (see Step 23). It may be easiest to install a single shim (or a set of tapered wood shims) of the correct thickness, fastened near both ends, and then cut out the area between fasteners using a hand saw. Make certain to leave enough shim material support the fasteners.

**54** Apply a long level to the bottom shim and determine the shim thickness needed just above the top anchor point to plumb the vertical (refer to the illustration at the right). Fasten a shim in place above the top anchor point, following the same methods used for the bottom shim.

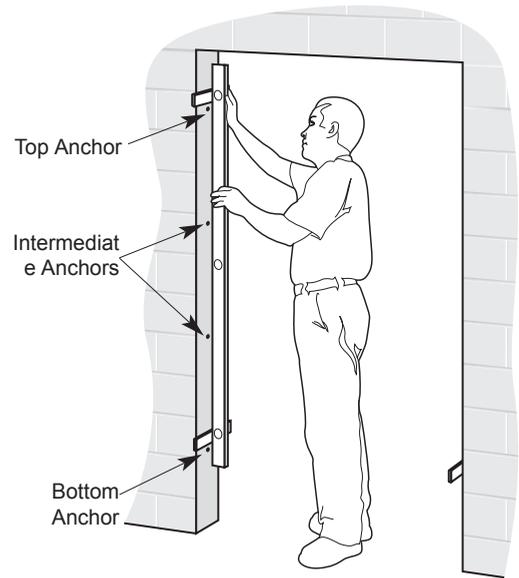
**55** With the long level pressed lightly against the top and bottom shims, add shims out to the level just above the two intermediate anchor points and fasten these shim sets in place as done in step 54.

**56** Use a level to locate shims directly across the door opening from the shims on the hinge side. Make certain to re-measure the Shim Width from page 4 to determine the thickness of each shim set. Fasten the shims in place, using the same methods as for the other shims.

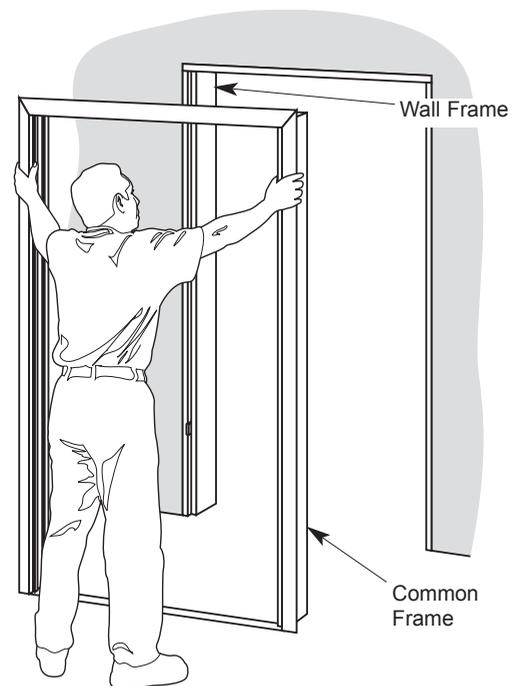
**57** Make certain the ends of all shims are 1/2-inch from the face of the wall, trimming if necessary. Refer to the note above that follows step 53.

**58** Slide the Wall Frame into the opening until the flange contacts the wall.

**59** Slide the Common Frame into the opening and start it onto the Wall Frame.



*Place a long level against the bottom shim set to determine the thickness of the top shim set. Once the top shim set is attached, fill in the shim sets above the two intermediate anchor holes.*



*Slide the Common Frame into position after the Wall Frame is in place.*

**INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME** CONTINUED

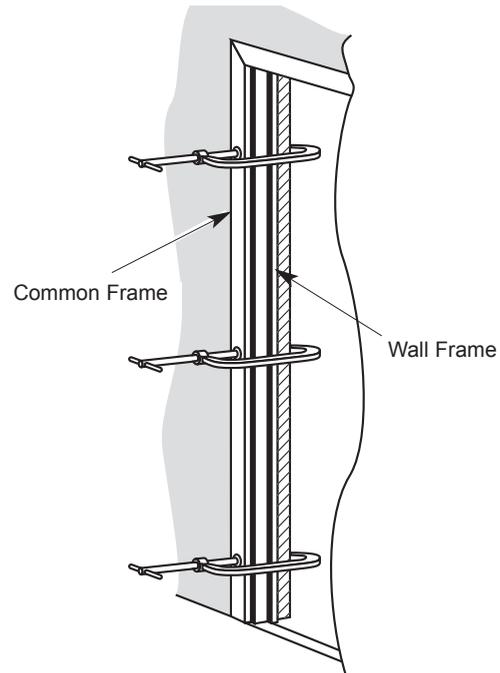
**60** Clamp the Common Frame and Wall Frame together, making sure that the Common Frame slides smoothly into the Wall Frame and that the flanges of both Frames contact the rough-opening framing as shown in the illustration at the right.

**61** Carefully check the Frame plumb on the face and the inside. Adjust the clamping to make sure that both inside surfaces of the frame are plumb and parallel with each other. Add or adjust shims if necessary to bring the Frame pieces into proper alignment. Measure diagonally between Frame corners and make sure that the two dimensions are equal. Make certain the Frame pieces are positioned correctly before fastening them together (next step).

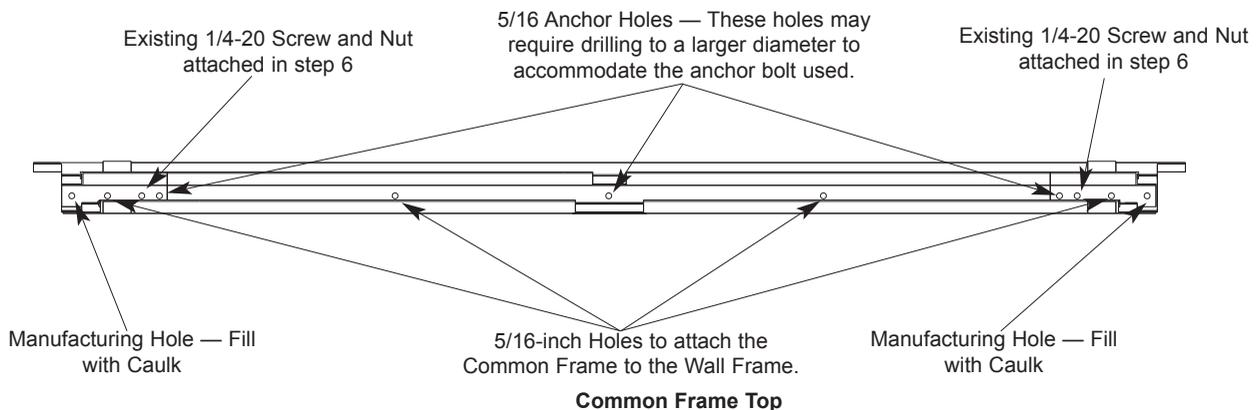
**62** Locate the 17 9/32-inch diameter holes in the sides and top of the Common Frame. Drive a 1/4-inch diameter self-drilling screw from the hardware pack through each hole into the Wall Frame. Make sure that the screws are snug but do not over-tighten.

**63** Locate the 11 11/32-inch diameter anchor holes in the Common Frame (refer to illustration adjacent to step 20). Drill a 5/16-inch diameter hole through the Wall Frame at each of these holes, but do not drill into the rough-opening framing.

**64** Drive a 5/16-inch diameter lag screw through each anchor hole location and into the masonry anchor installed in Step 50. Tighten these lag screws to hold the Frame in place. Refer to the Common Top Frame illustration below.



*Clamp the Common Frame and Wall Frame together, sandwiching them around the wall surfaces, as shown in this cutaway view. Make certain the Common Frame fits smoothly into the Wall Frame and the flanges of both pieces contact the rough-opening framing.*



**65** Drill a pilot hole of the proper diameter and depth for a three-inch long, self-tapping masonry screw into the wall at each hole in the flange. Drive a screw through each hole in the flange and into the wall.

**66** Cut and install temporary cross braces between the sides of the Frames to prevent bowing when adding grout.

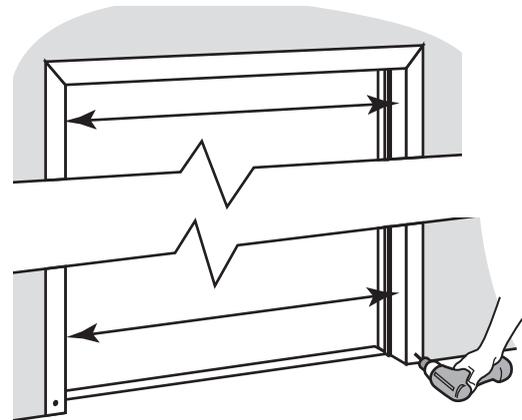
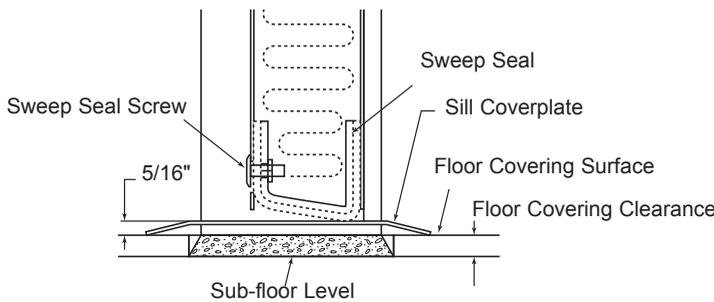
**67** Fill the open areas between the Frames and all masonry surfaces with grout on the sides and top. Mix a grout consistency that will flow completely into the space between Frames and masonry and around shims, making certain all voids are filled with grout..

**INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME** CONTINUED

**68** Once the grout is set, remove the cross braces. If the floor surface does not contact the bottom of the Frame or is not continuous underneath it, pack the space between the floor and the bottom of the Frame with grout (see the illustration below). Remove any temporary shims underneath the bottom of the Frame before grouting.

**69** Make certain the Wall Frame is the same width at the top and bottom of the opening (adjust the lower corners of the Wall Frame to match the top width if necessary). On each side flange of the Wall Frame, drill a 7/32-inch diameter hole through the flange two-inches from the bottom and drive a #10x3-inch wood screw through the flange into the rough-opening framing.

**70** If the floor surface does not contact the bottom of the Frame or is not continuous underneath it, pack the space between the floor and the bottom of the Frame with grout (refer to the illustration below). Remove any temporary shims underneath the bottom of the Frame before grouting.



*Drive fasteners through the bottom ends of the Wall Frame flanges into the rough-opening framing. First measure to check that the width at the bottom of the opening is identical to that at the top. Adjust the lower corners of the Wall Frame in or out to match the top width if necessary.*

**71** Caulk the joint between the Common Frame and the Wall Frame on the push side of the Door (relative to operation of the Door after installation) with a continuous bead of acoustical caulk as shown at the right.

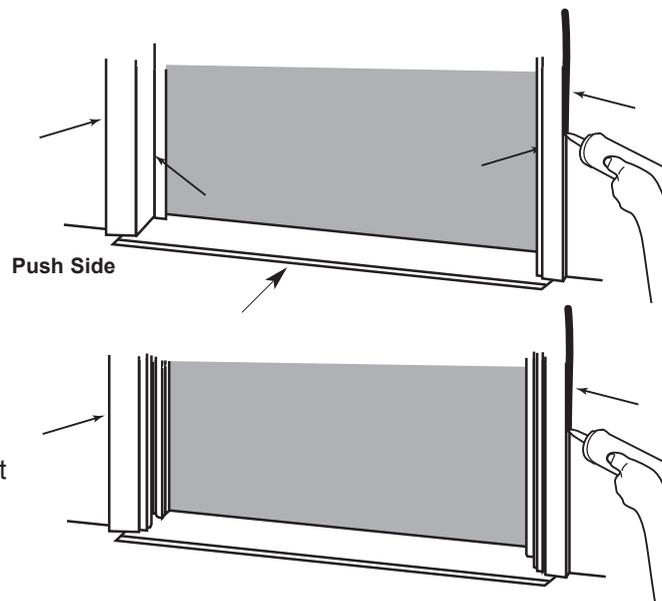
**72** Caulk between the Wall and the Frame pieces on both push and pull sides of the Door with a continuous bead of acoustical caulk as shown at the right.

**73** Caulk both sides of the sill at the bottom of the Common Frame with a continuous bead of acoustical caulk as shown at the right.

**74** Remove any metal chips from the Frame pieces and magnetic seals.

**75** Install the floor covering. If the floor covering is already in place, go to Step 77.

**76** Re-insert the absorber insulation strips (removed at Preparing for Door Assembly Installation, Step 7) into the Common Frame. Go to step 77 to continue the Double Door Frame Installation.



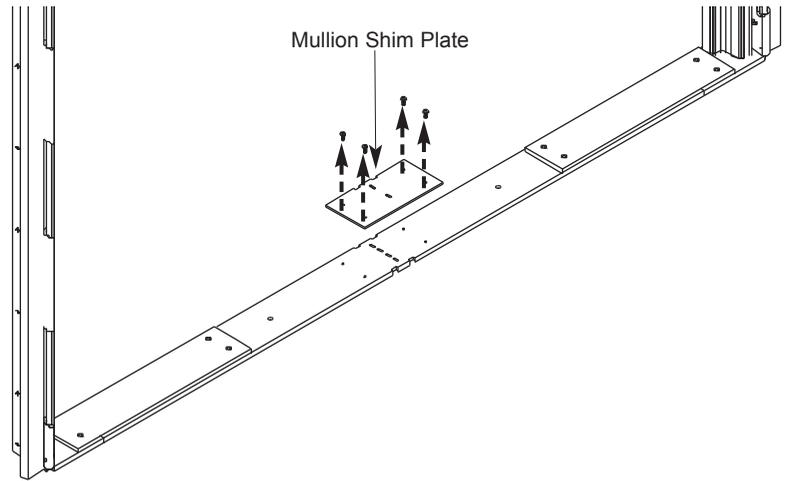
**Note:** The hinge side absorber is slightly larger than the latch side absorber. Push the latch side absorber into the latch area behind the latch striker opening.

*Apply a continuous bead of acoustical caulk at the seams indicated by the arrows on both push and pull sides of the Frames. Make certain to apply caulk to the seam between Wall Frame and Common Frame on the push side.*

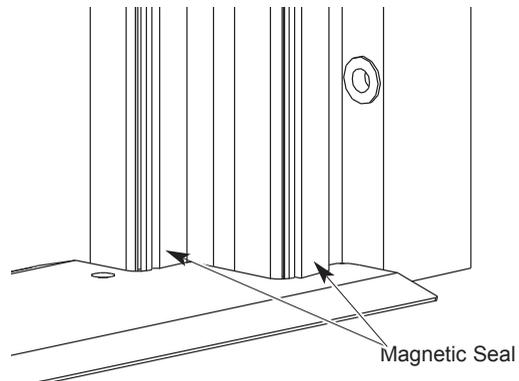
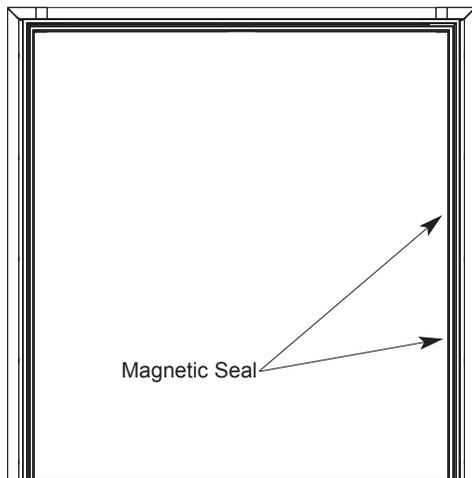
**INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME CONTINUED**

**Note:** If you are installing a One-Hour Fire-rated Door, don't install the absorber strips. Turn to step 74 on page 55 and follow the instructions for Installing Frame Closure for a One-Hour Fire-rated Acoustical Door before installing the Door.

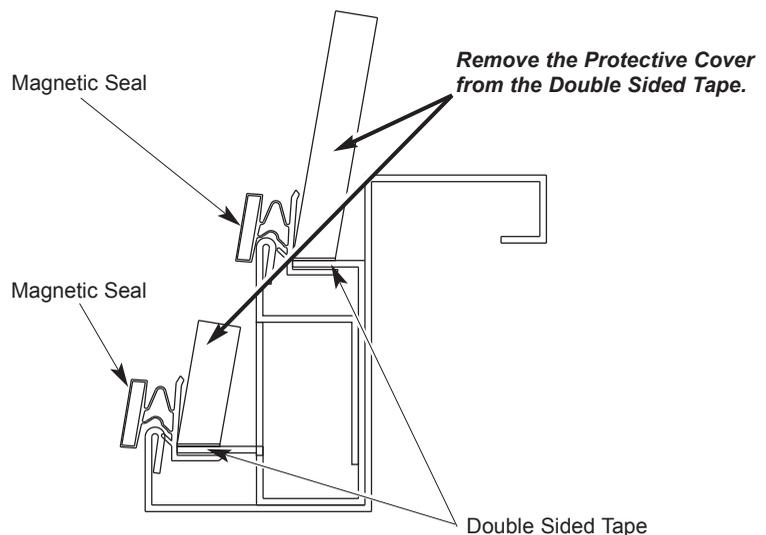
**77** After installing the Frame with the Mullion, remove the Mullion from the frame. Remove and discard the Mullion Shim Plate. Remove and discard the Installation Plates.



**78** Starting at an upper inside corner, install the magnetic seals to the frame. Insert the mounting flap of the seal into the frame slot until the entire seal is in place. Make sure the mounting flap is completely inserted at the corners. Adjust the seal to relieve any waviness or stretching of the seal.



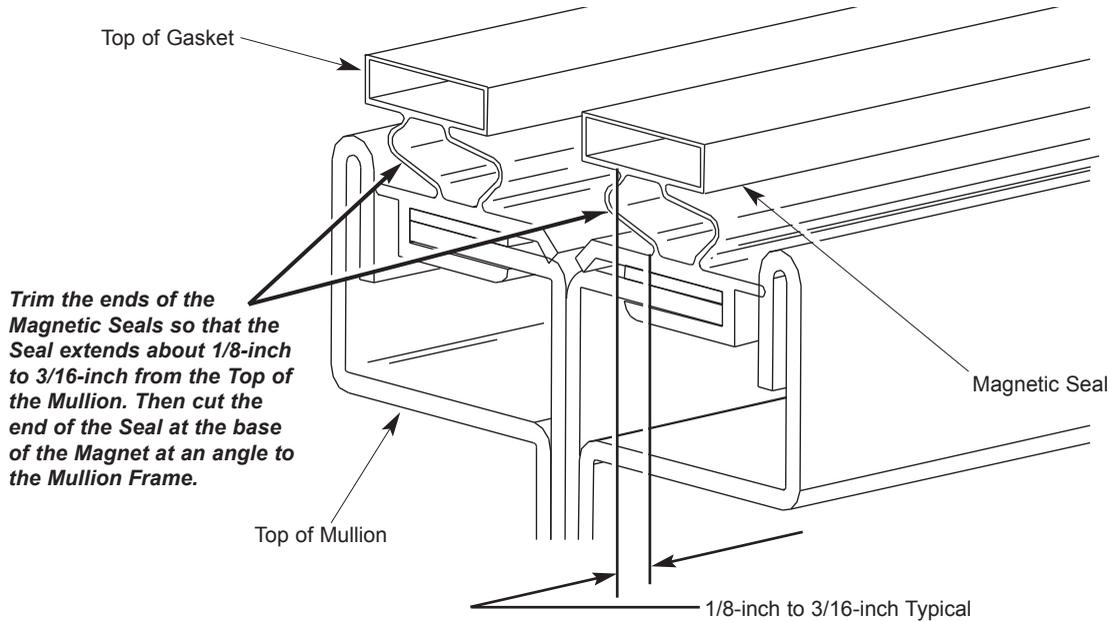
**79** Lift the magnetic seal until you can peel the Protective Cover from the Double Sided Tape. Pull the cover tape from beneath the magnetic seals. Press the magnetic seals against the double-sticky tape to secure them in place.



**INSTALL THE NON-FIRE RATED DOUBLE DOOR FRAME** CONTINUED

**80** Trim the lower ends of the magnetic seals so that they just touch the bottom plate. These seals will be re-trimmed after the sill cover plate is installed.

**81** With the Mullion Assembly disassembled from the Frame, install and trim the Magnetic Gasket as shown in the illustration below. Trim the Magnetic Gasket Top before attaching it to the Mullion. When the Gasket is trimmed and located, remove the protective covering from the double-sided tape and attach the Gasket to the Mullion. Then, trim the Gasket flush with the bottom of the Mullion.

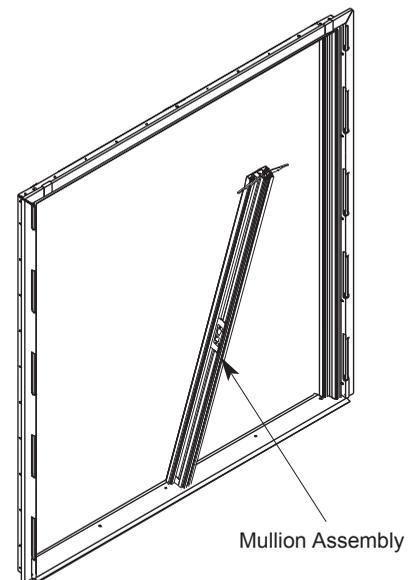
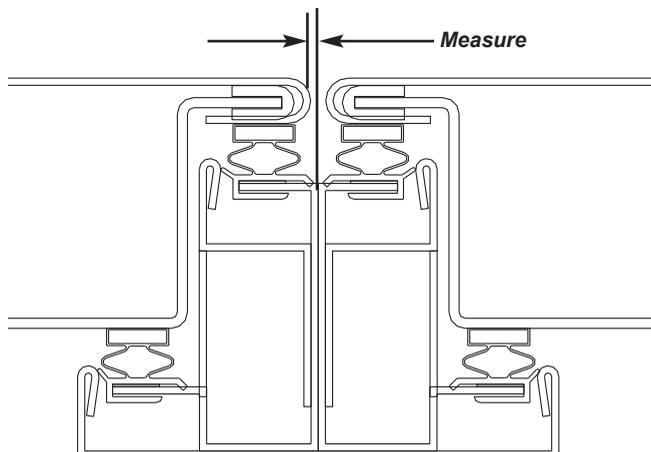


**82** Remove the installation strips on the Bottom Plate. Attach 1/4-20 Flat Head Screws appropriate for the type of floor using the holes in the Bottom Plate for attaching to the floor.

**83** Install the Sill Cover Plate using the screws provided with the plate.

**84** Install the Mullion Assembly.

**85** Go to step 1 of *Installing the Door* instructions on page 13. At step 6 of these instructions, measure from the centerline of the Mullion to the Leaf. Use this measurement with the Shim Chart on page 14.



## INSTALL THE FIRE RATED DOUBLE DOOR FRAME

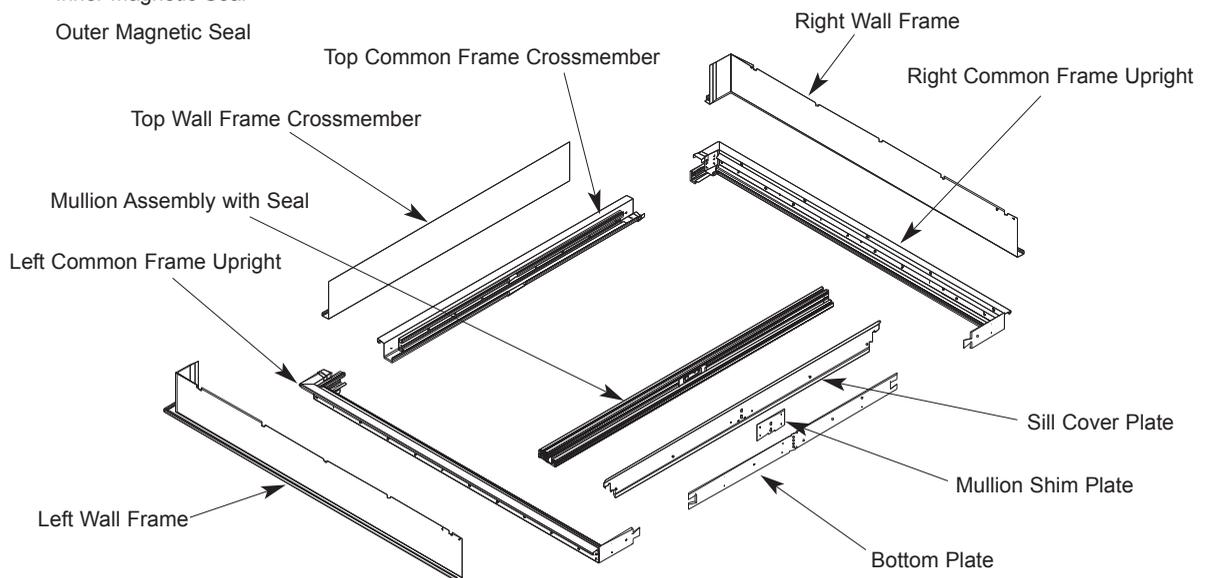
**1** Get assistance to move the large assembly materials to the installation site. The Door Frame is very heavy — see the weight chart on page 4 for the weight of the door frame you have. Move the pieces to the installation site while they are in the crate to prevent damage, if possible. If you must unpack the crate to move the frame, be sure to get all of the parts and hardware as shown in the listing below.

**2** Unpack the Door Frame pieces from the crate. Unscrew the top of the crate. Identify and separate the various assembly pieces:

Quantity	Item	Quantity	Item
1	Left Common Frame Upright	1	Right Wall Frame
1	Right Common Frame Upright	1	Top Wall Frame Crossmember
1	Top Common Frame Crossmember	1	Mullion Assembly with Seal
1	Bottom Cross Plate	1	Sill Cover Plate
1	Left Wall Frame	1	Door Frame Hardware Pack
2	Installation Plates	1	Mullion Shim Plate

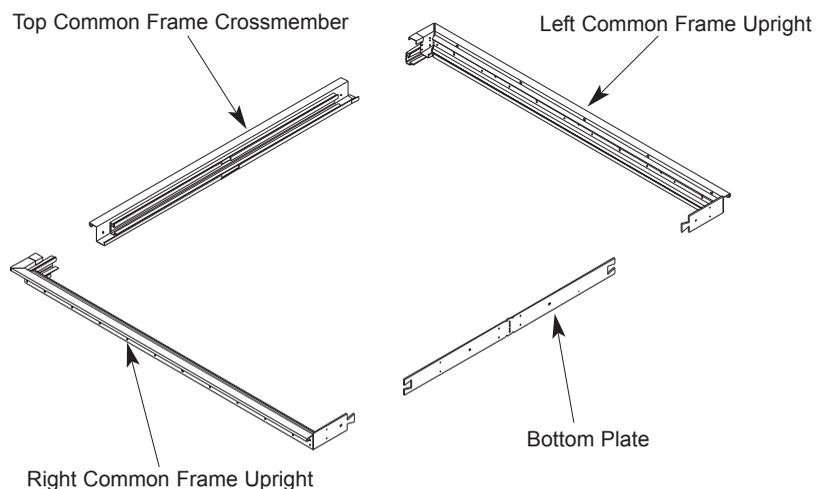
One Set of Seal Components:

Quantity	Item
1	Double-sticky Tape
1	Inner Magnetic Seal
1	Outer Magnetic Seal



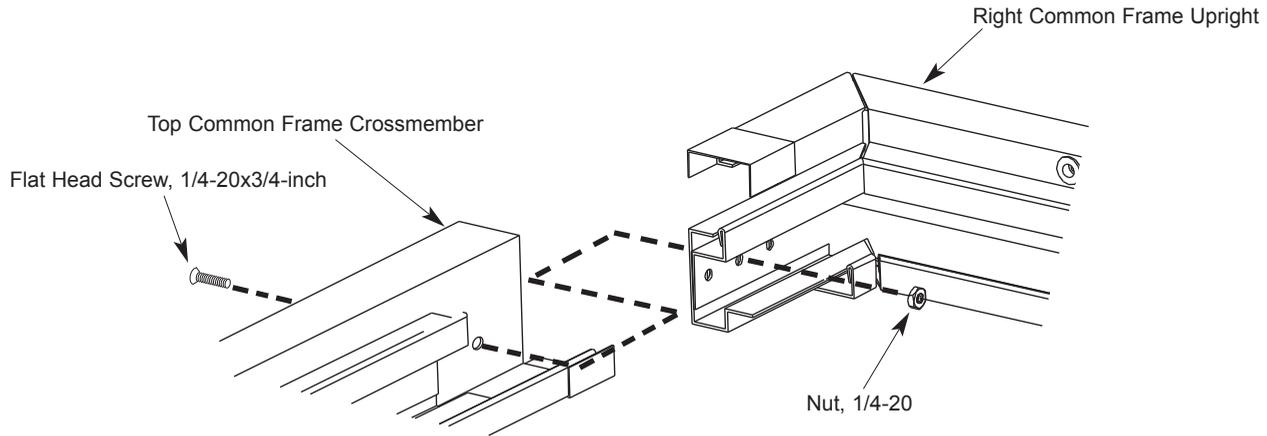
**3** Remove the packing foam from the Frame flanges that was applied for protection during shipping.

**4** Lay the Common Frame pieces out on the floor as shown.



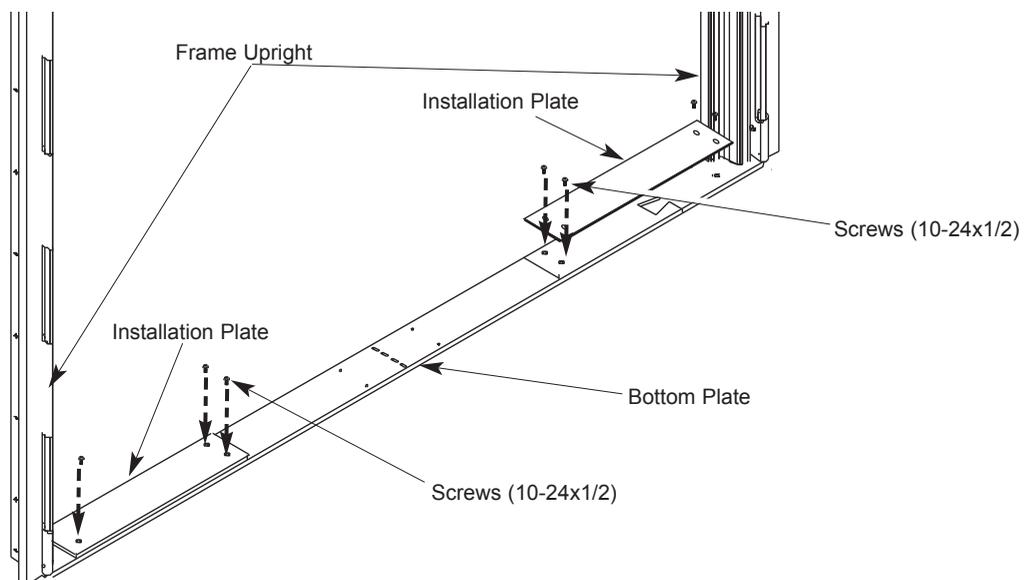
## INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED

**5** Assemble the Right Common Frame Upright to the Top Common Frame Crossmember by sliding the Top Common Frame Crossmember into the Right Common Frame Upright and attaching the two frame members together with a Flat Head Screw, 1/4-20x3/4, and Nut, 1/4-20, as shown below. Tighten the Screw and Nut firmly.



**6** Assemble the Left Common Frame Upright to the Top Common Frame Crossmember by sliding the Top Crossmember into the Left Common Frame Upright. Attach the two frame members together with a Flat Head Screw, 1/4-20x3/4, and Nut, 1/4-20, as done in step 6. Tighten the Screw and Nut firmly.

**7** Insert the dovetail tabs on the frame uprights into the mating slots in the bottom plate. Attach the bottom plate to the uprights using the screws (10-24x1/2-inch) provided as shown below.

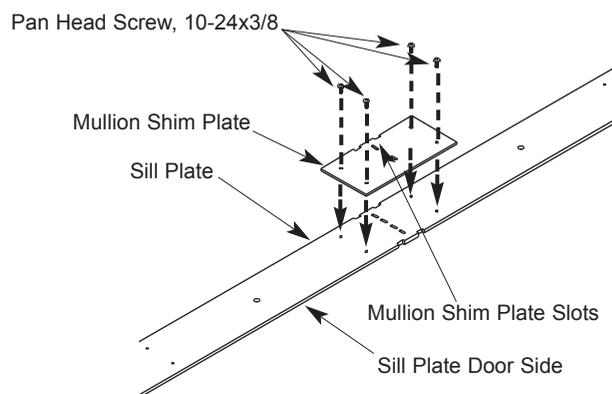


**Note:** The Installation Plates secure the Bottom Plate to the Uprights during installation. Remove the Installation Plates before the installation of the Sill Coverplate.

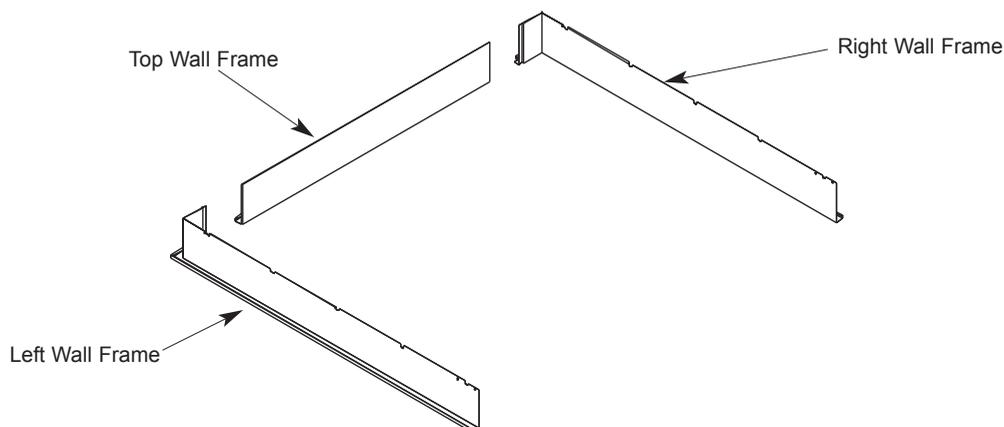
**INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED**

**8** Attach the Mullion Shim Plate to the Sill Plate with four Pan Head Screws, 10-24x3/8, as shown below. Make sure that the Mullion Shim Plate Slots *face away* from the door side of the Sill Plate.

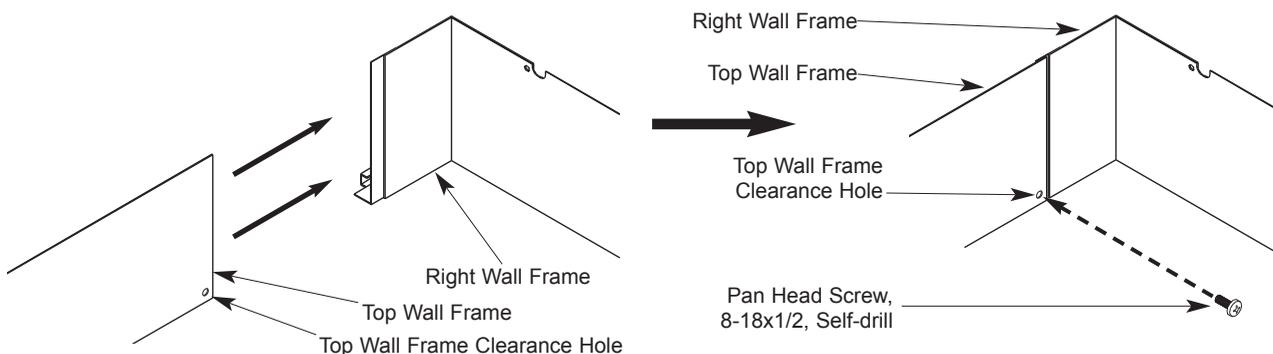
**Note:** The Shim Plate assures working clearance after installing the Frame to the Wall. The Shim Plate is removed after the Frame is installed.



**9** Place the Wall Frame pieces on the floor as shown below.



**10** Assemble the Right Wall Frame Upright to the Top Wall Frame Crossmember by sliding the two frame members together as shown. Attach the two Frames together with a Pan Head Screw, 8-18x1/2-inch, Self-drill, by drilling the Screw through the Top Wall Frame Clearance Hole.

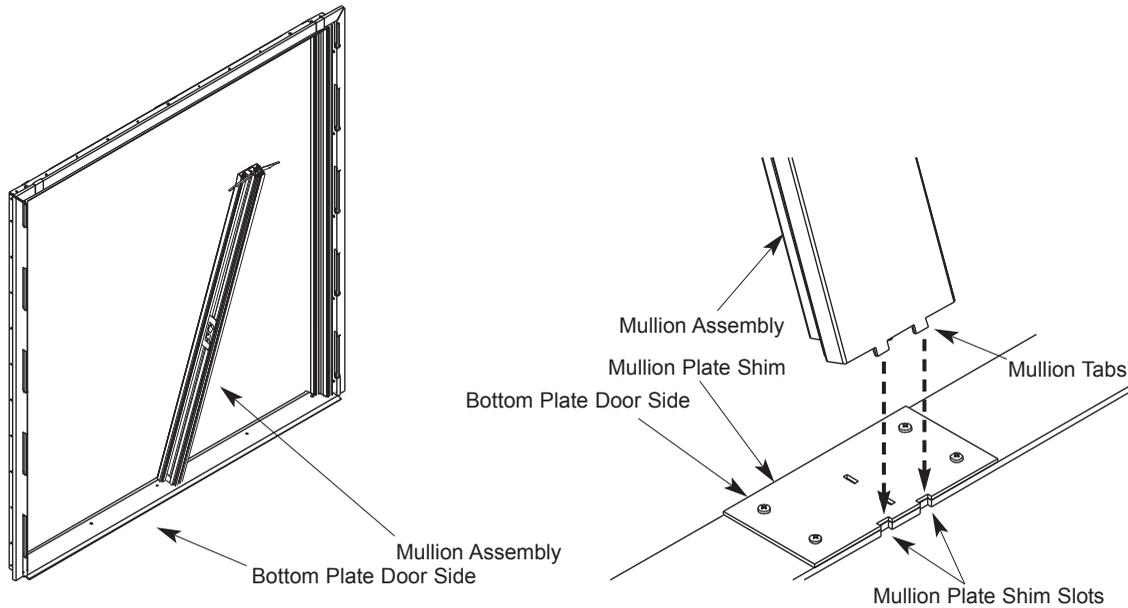


**11** Assemble the Left Wall Frame Upright to the Top Wall Frame Crossmember in the same way as done in step 10.

**12** Place the Mullion Assembly onto the floor and remove the Magnetic Gasket.

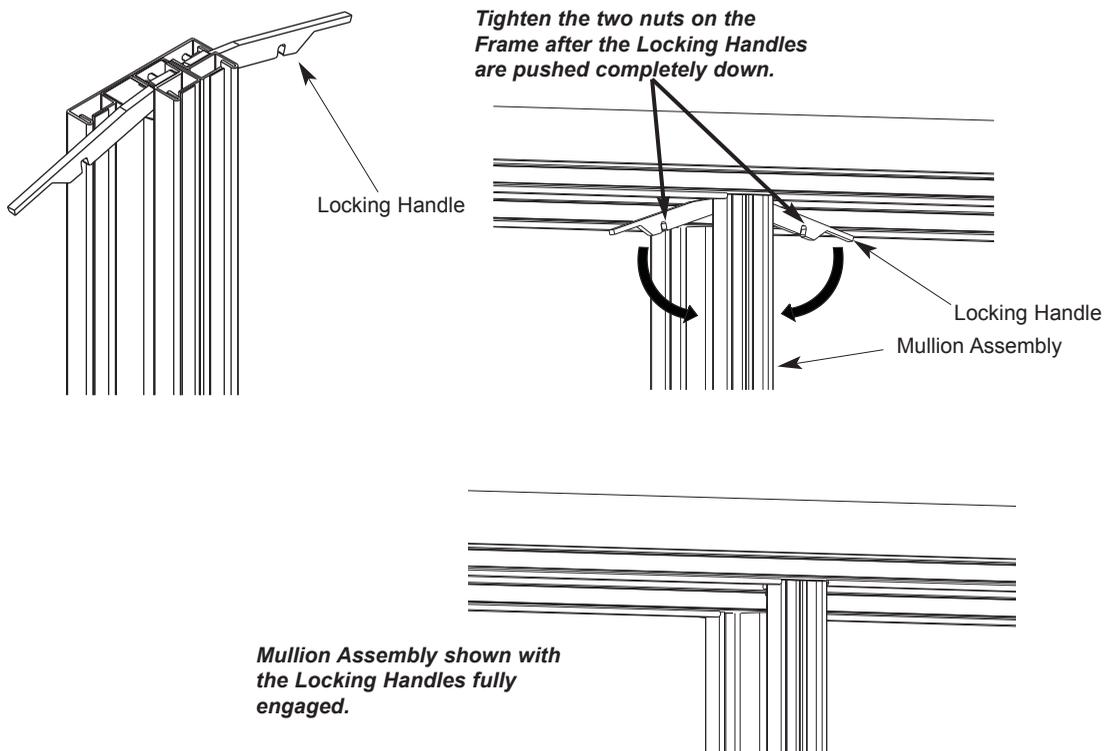
**INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED**

**13** Install the Mullion Assembly by aligning the tabs on the bottom of the Mullion with the Mullion Shim Plate Slots (insert the tabs into the Slots).



**14** Push the top of the Mullion fully into the cut-out in the Top Common Frame Crossmember until it is seated against the frame and the back of the Mullion and the Frame are flush with each other.

**15** Push the locking handles all the way down to lock the mullion in place. Make sure the tabs of the locking handles are fully engaged behind the frame plate. Tighten the nut on the locking fastener to secure the locking handles in place.



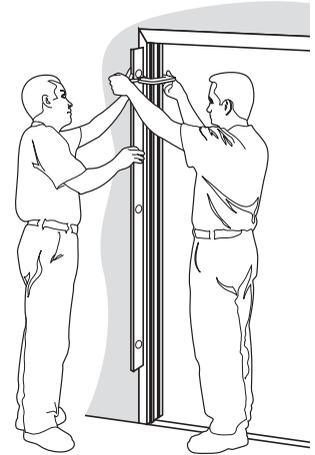
## INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED

**Note:** To install the Double Door Frame in Wood (or Steel) Stud and Wallboard Walls, continue with step 16 below. To install the Double Door Frame in Masonry Walls, go to step 44 on page 50.

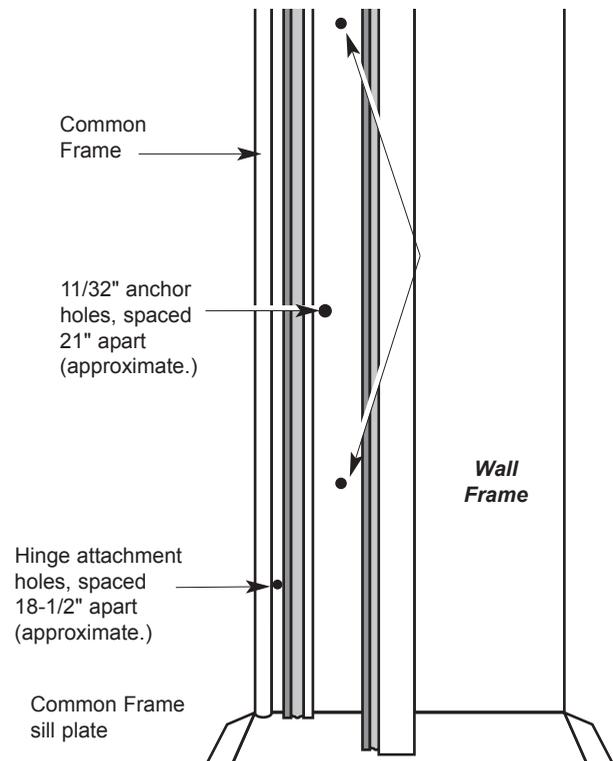
**16** Install rough-opening framing, allowing for the rough-opening dimensions appropriate for your door shown in *Frame, Door and Rough-opening Dimensions* on page 4. Use 2 x 6 or larger wood framing members, making sure the framing depth is within the range of the door frame jamb depth you are installing (see Note on page 4). Add extra height to the rough-opening dimensions to allow for carpet or other floor covering if necessary (see Step 9 on page 5 under *Preparing for Door Assembly Installation*). Attach the framing to the wall, using construction adhesive and fasteners appropriate for the size and weight of the door being installed (see weight chart on page 4).

**17** Seal the rough-opening framing to the wall at all seams using acoustical caulk (see caulking materials on page 3). Let the caulk set according to manufacturer's instructions.

**18** Slide the Common Frame into the rough opening. Use a level to plumb the frame in the opening, both vertically and relative to the plane of the wall, temporarily adding tapered wood shims on the sides of the rough opening as needed. Also use temporary shims underneath the bottom of the frame to allow for floor covering clearance if necessary. Measure diagonally between corners to make certain Frame is square. Clamp the frame against the wall/shims on both sides using C-clamps to hold the frame in a plumbed position as shown at the right.



**19** Locate the four 11/32-inch diameter anchor holes on each side of the Common Frame. Refer to the illustration at the right. Carefully mark through these holes to scribe the anchor points on the rough-opening framing.



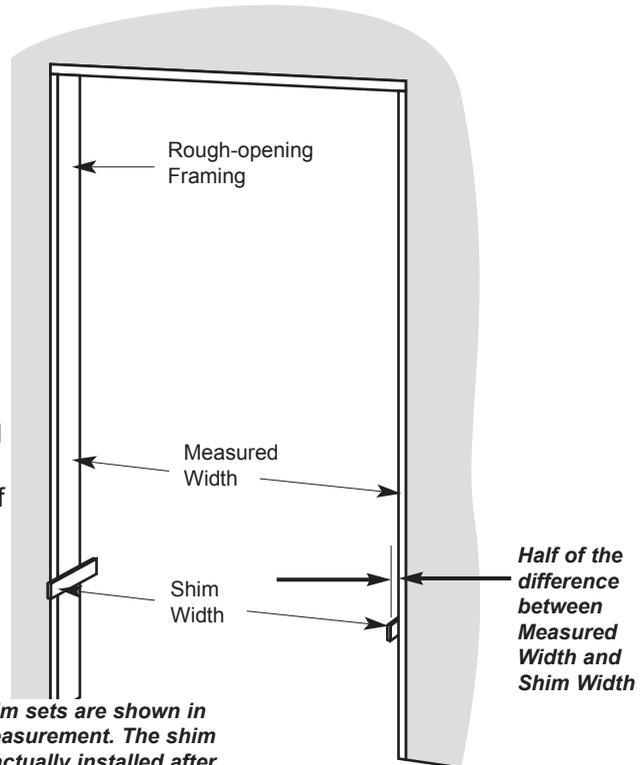
## INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED

**20** Remove the Common Frame from the opening and remove the temporary shims on the sides of the opening. Do not remove temporary shims for floor clearance.

**21** Measure the distance across the opening at the bottom anchor point.

**22** Subtract the appropriate Shim Width (see Shim Width dimensions in *Frame, Door and Rough-opening Dimensions*, page 4) from this width measurement and calculate the Shim Width as shown in the illustration at the right.

**23** Install shims on one side of the door, using wood shims, beginning just above the bottom anchor point. Install a shim set equal in thickness to one-half of the difference measurement calculated in Step 22. Fasten the shims in place, making certain the surface of each fastener head is flush with the face of the top shim.

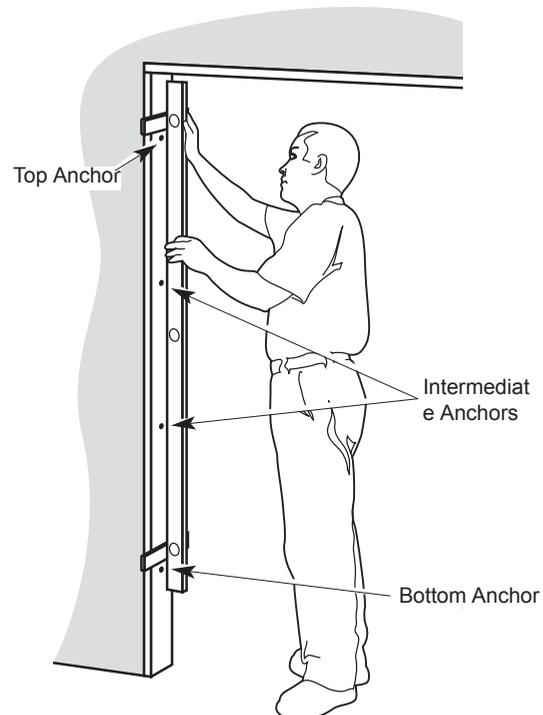


**24** Place a long level against the bottom shim set and determine the shim thickness needed just above the top anchor point to plumb the vertical as shown at the right. Fasten a shim set in place above the Top Anchor point.

**25** With the long level pressed lightly against the top and bottom shim sets, add shims out to the long level just above the two intermediate anchors as shown in the illustration at the right. Fasten these shims in place.

**26** Use a level to locate shim sets on the opposite side of the door opening. Make certain to re-measure the Shim Width from page 4 to determine the thickness of each shim set. Fasten the shims in place.

**27** Trim all shims so that their ends are 1/2-inch from the outside edges of the rough-opening framing.



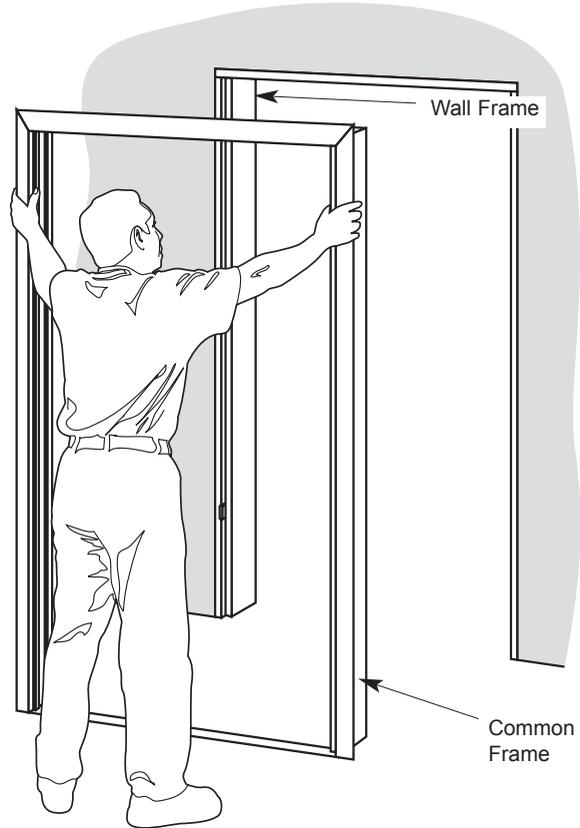
## INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED

**28** Set the Wall Frame in place next to the opening, and mark the locations of the shims on the Wall Frame absorber foam. Trim away the foam in the shim locations.

**Note:** Skip this step if you have a 1-Hour. fire rated frame.

**29** Slide the Wall Frame into the opening until the flange contacts the rough-opening framing.

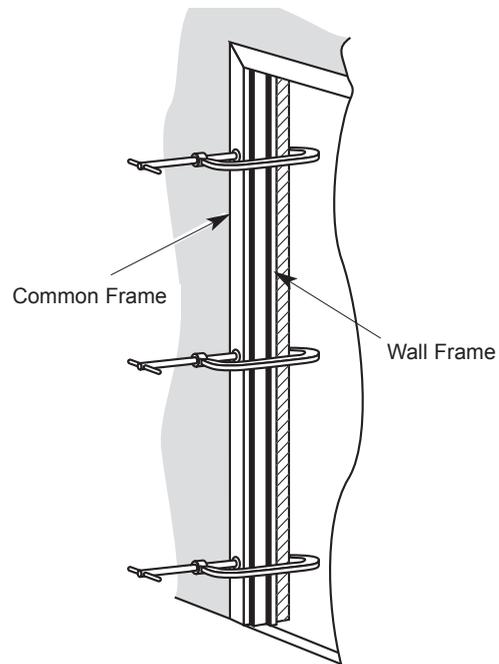
**30** Slide the Common Frame into the opening and start it onto the Wall Frame as shown at the right.



*Slide the Common Frame into position after the Wall Frame is in place.*

**31** Clamp the Common Frame and Wall Frame together, making sure that the Common Frame slides smoothly into the Wall Frame and that the flanges of both Frames contact the rough-opening framing as shown in the illustration at the right.

**32** Carefully check the Frame plumb on the face and the inside. Adjust the clamping to make sure that both inside surfaces of the frame are plumb and parallel with each other. Add or adjust shims if necessary to bring the Frame pieces into proper alignment. Measure diagonally between Frame corners and make sure that the two dimensions are equal. Make certain the Frame pieces are positioned correctly before fastening them together (next step).



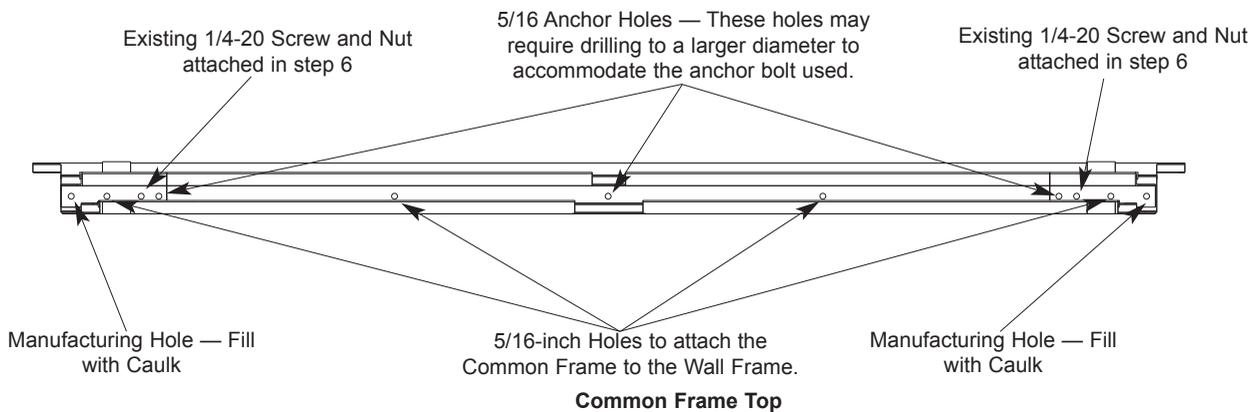
*Clamp the Common Frame and Wall Frame together, sandwiching them around the wall surfaces, as shown in this cutaway view. Make certain the Common Frame fits smoothly into the Wall Frame and the flanges of both pieces contact the rough-opening framing.*

## INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED

**33** Locate the 17 9/32-inch diameter holes in the sides and top of the Common Frame. Drive a 1/4-inch diameter self-drilling screw from the hardware pack through each hole into the Wall Frame. Make sure that the screws are snug but do not over-tighten.

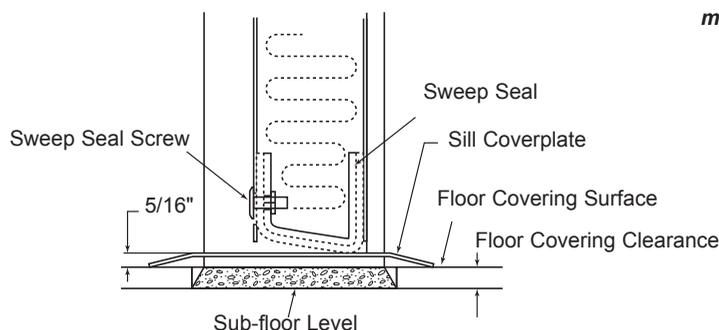
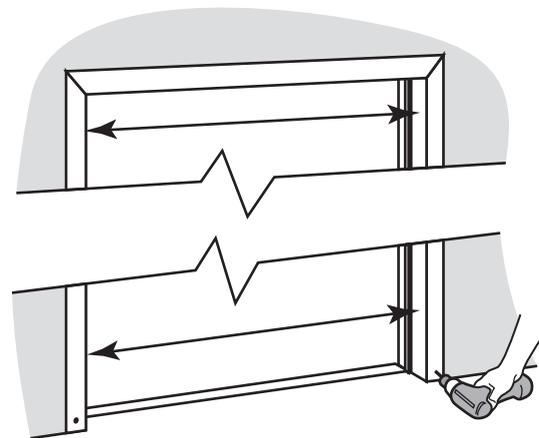
**34** Locate the eight 11/32-inch diameter anchor holes in the Common Frame (refer to illustration adjacent to step 19 on page 45). Drill a 5/16-inch diameter hole through the Wall Frame at each of these holes, but do not drill into the rough-opening framing.

**35** Drill a 3/16-inch diameter pilot hole into the rough-opening framing at each anchor hole location (which are aligned with the scribed anchor points determined in Step 19), and drive a 5/16-inch diameter lag screw through each anchor hole and into the pilot hole in the framing. Tighten these lag screws to hold the Frame in place.



**36** Make certain the Wall Frame is the same width at the top and bottom of the opening (adjust the lower corners of the Wall Frame to match the top width if necessary). On each side flange of the Wall Frame, drill a 7/32-inch diameter hole through the flange 2-inches from the bottom and drive a #10x3-inch wood screw through the flange into the rough-opening framing as shown in the illustration at the right.

**37** If the floor surface does not contact the bottom of the Frame or is not continuous underneath it, pack the space between the floor and the bottom of the Frame with grout (refer to the illustration below). Remove any temporary shims underneath the bottom of the Frame before grouting.



**INSTALL THE FIRE RATED DOUBLE DOOR FRAME** CONTINUED

**38** Caulk the joint between the Common Frame and the Wall Frame on the push side of the Door (relative to operation of the Door after installation) with a continuous bead of acoustical caulk as shown at the right.

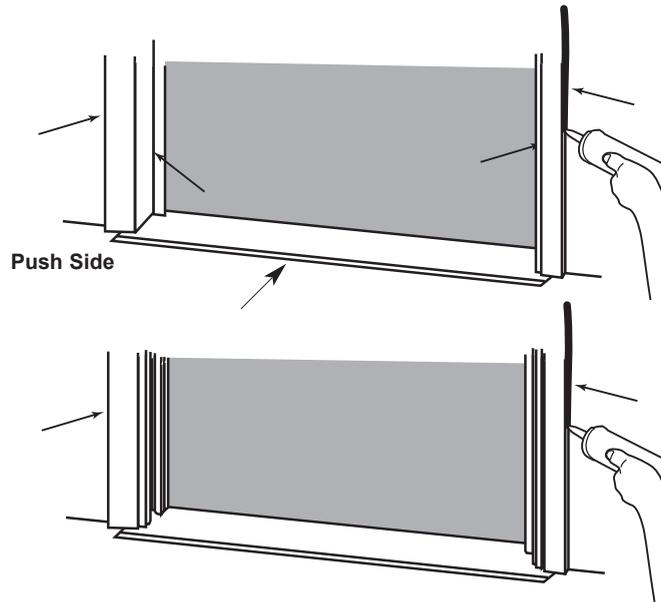
**39** Caulk between the Wall and the Frame pieces on both push and pull sides of the Door with a continuous bead of acoustical caulk as shown at the right.

**40** Caulk both sides of the sill at the bottom of the Common Frame with a continuous bead of acoustical caulk as shown at the right.

**41** Remove any metal chips from the Frame pieces and magnetic seals.

**42** Install the floor covering. If the floor covering is already in place, go to Step 28.

**43** Turn to step 74 on page 55 and follow the instructions for Installing Frame Closure for a One-Hour Fire-rated Acoustical Door before installing the Door.

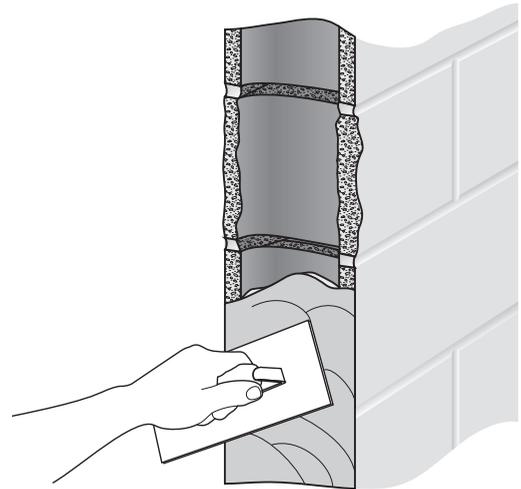


*Apply a continuous bead of acoustical caulk at the seams indicated by the arrows on both push and pull sides of the Frames. Make certain to apply caulk to the seam between Wall Frame and Common Frame on the push side.*

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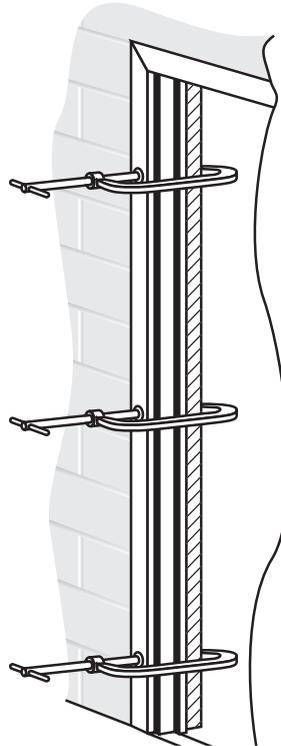
**INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED**

**44** Cut the rough opening to the dimensions shown on the drawing, allowing extra height to allow for carpet or other floor covering if necessary (see Step 9 on page 5, *Preparing for Door Assembly Installation*). Fill any voids between remaining masonry surfaces and rough-opening dimensions with mortar as shown in the illustration at the right. Allow adequate setting time for the mortar before proceeding with Door Frame installation. A solid, continuous surface is necessary for a good installation.



*Use mortar to fill any voids existing between remaining concrete block or solid wall materials and the rough-opening dimensions. A smooth, continuous surface at the rough-opening dimensions is necessary for proper installation of the Frame.*

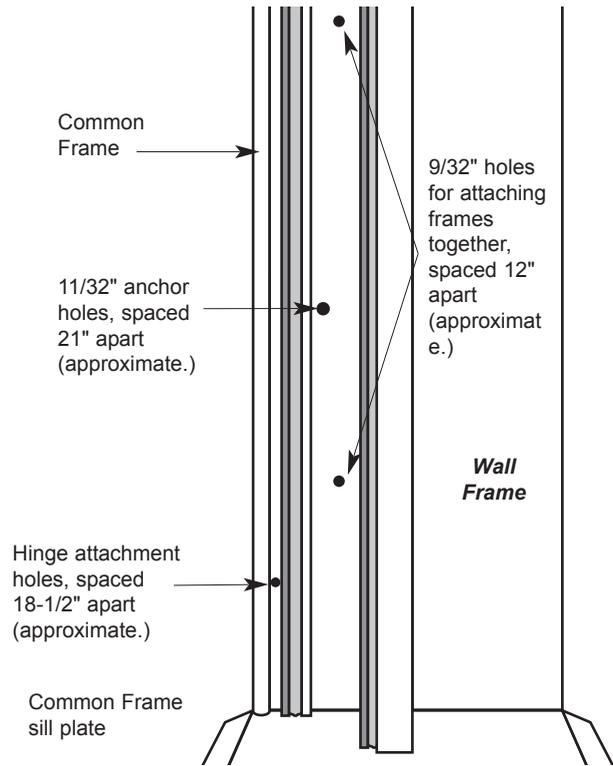
**45** Slide the Common Frame into the wall. Use a level to plumb the frame front surface and side, temporarily adding tapered wood shims on the sides of the rough opening as needed. Also use temporary shims underneath the bottom of the frame to allow for floor covering clearance if necessary. Measure diagonally between corners to make certain Frame is square. Clamp the frame against the wall/shims on both sides, using C-clamps, to hold the frame in plumbed and squared position as shown at the right. Make certain the Common Frame is plumb and in plane across its width (see *Preparing for Door Assembly Installation*, Step 2 on page 3) before beginning Step 46.



*Make certain the Common Frame is accurately leveled in both directions, so it is plumb vertically and relative to the plane of the wall surface, before clamping in position. A helper will make this much easier. You may want to use two levels at the same time, one for vertical and one for plane of the wall (which is the level shown above).*

**INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED**

**46** Locate the four 11/32-inch diameter holes on each side of the Common Frame (refer to the illustration at the right). Carefully mark through these holes to scribe the anchor points on the rough-opening walls.



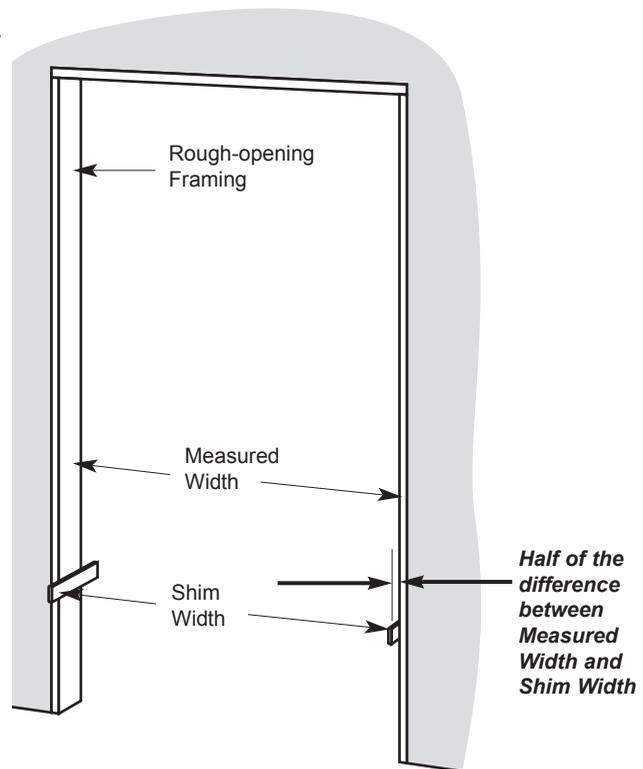
*This illustration shows relative positions of fastener holes in the Common Frame (hole sizes not to scale for clarity). Hinge side is shown; hole positions are identical on latch side of frame, except hinge holes aren't included.*

**47** Remove the Common Frame from the opening and remove the temporary shims on the sides of the opening. Leave temporary shims allowing for flooring clearance in place.

**48** Drill holes for and install suitable masonry anchors for 5/16-inch diameter lag screws at each of the eight marked anchor points. Make certain to use anchors of the proper size and strength to ensure secure installation of the Frames.

**49** Measure the distance across the opening at the bottom anchor point.

**50** Subtract the appropriate Shim Width (see Shim Width dimensions in *Frame, Door and Rough-opening Dimensions* on page 4) from this width measurement to calculate the measurement of the difference (refer to the illustration at the right).

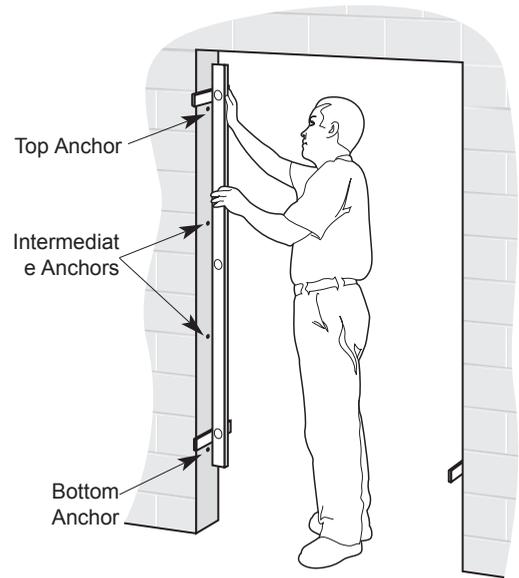


*Note that for clarity that both lower shim sets are shown in position to indicate the Shim Width measurement. The shim set opposite that on the hinge side is actually installed after attaching all hinge-side shim sets.*

## INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED

**51** First install a shim on one side of the door, beginning just above the bottom anchor point. Install a shim equal in thickness to one-half of the difference measurement calculated in Step 50. Fasten the shim in place, using fasteners appropriate for masonry surfaces. Make certain the surface of each fastener head is flush with the shim face.

**Note:** Each end of the shim must be 1/2-inch from the face of the wall but the shim must not be a single piece across the rough-opening masonry surface. Grout must be able to flow around and through the shim location to fill all voids between the Frames and the masonry surfaces (see Step 22 on page 46). It may be easiest to install a single shim (or a set of tapered wood shims) of the correct thickness, fastened near both ends, and then cut out the area between fasteners using a hand saw. Make certain to leave enough shim material support the fasteners.



*Place a long level against the bottom shim set to determine the thickness of the top shim set. Once the top shim set is attached, fill in the shim sets above the two intermediate anchor holes.*

**52** Apply a long level to the bottom shim and determine the shim thickness needed just above the top anchor point to plumb the vertical (refer to the illustration at the right). Fasten a shim in place above the top anchor point, following the same methods used for the bottom shim.

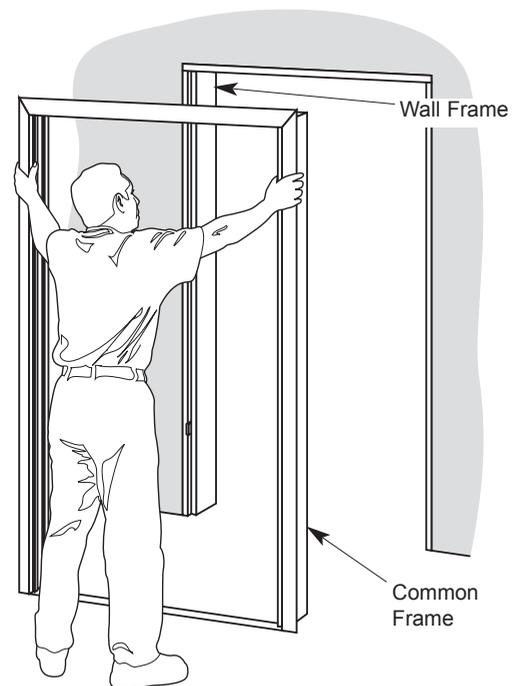
**53** With the long level pressed lightly against the top and bottom shims, add shims out to the level just above the two intermediate anchor points and fasten these shim sets in place as done in step 52.

**54** Use a level to locate shims directly across the door opening from the shims on the hinge side. Make certain to re-measure the Shim Width from page 4 to determine the thickness of each shim set. Fasten the shims in place, using the same methods as for the other shims.

**55** Make certain the ends of all shims are 1/2-inch from the face of the wall, trimming if necessary.

**56** Slide the Wall Frame into the opening until the flange contacts the wall.

**57** Slide the Common Frame into the opening and start it onto the Wall Frame.



*Slide the Common Frame into position after the Wall Frame is in place.*

## INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED

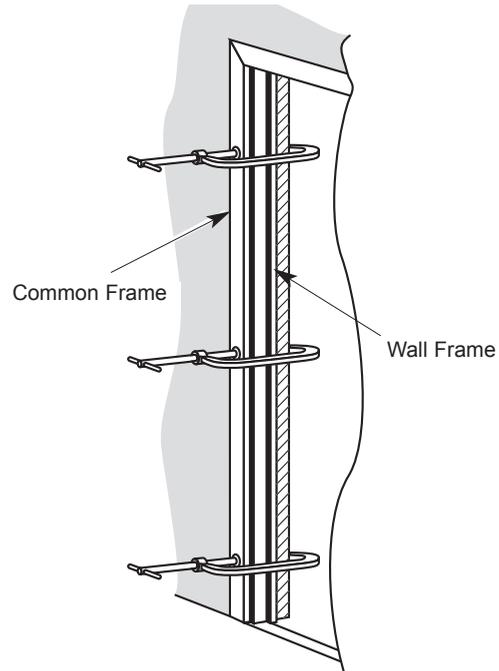
**58** Clamp the Common Frame and Wall Frame together, making sure that the Common Frame slides smoothly into the Wall Frame and that the flanges of both Frames contact the rough-opening framing as shown in the illustration at the right.

**59** Carefully check the Frame plumb on the face and the inside. Adjust the clamping to make sure that both inside surfaces of the frame are plumb and parallel with each other. Add or adjust shims if necessary to bring the Frame pieces into proper alignment. Measure diagonally between Frame corners and make sure that the two dimensions are equal. Make certain the Frame pieces are positioned correctly before fastening them together (next step).

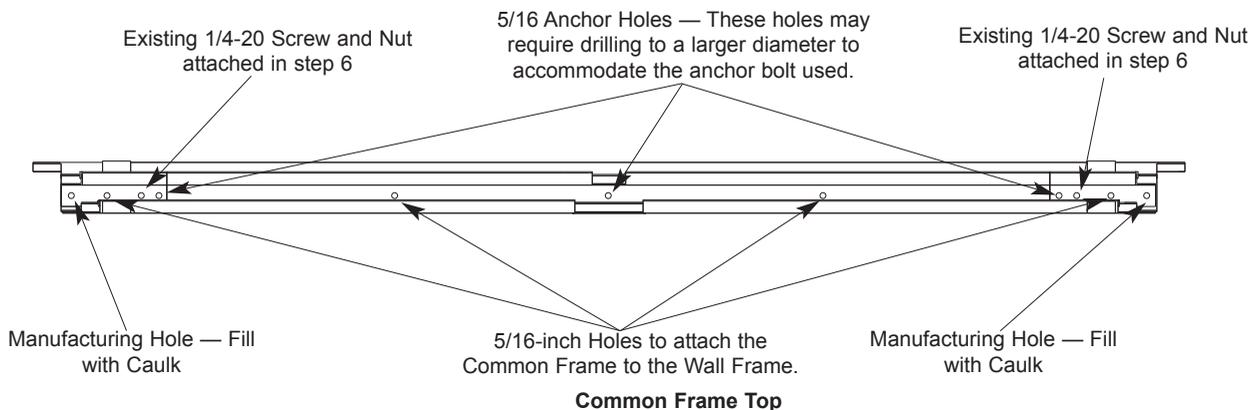
**60** Locate the 17 9/32-inch diameter holes in the sides and top of the Common Frame. Drive a 1/4-inch diameter self-drilling screw from the hardware pack through each hole into the Wall Frame. Make sure that the screws are snug but do not over-tighten.

**61** Locate the eight 11/32-inch diameter anchor holes in the Common Frame (refer to illustration adjacent to step 20). Drill a 5/16-inch diameter hole through the Wall Frame at each of these holes, but do not drill into the rough-opening framing.

**62** Drive a 5/16-inch diameter lag screw through each anchor hole location and into the masonry anchor installed in Step 48. Tighten these lag screws to hold the Frame in place. Refer to the Common Top Frame illustration below.



*Clamp the Common Frame and Wall Frame together, sandwiching them around the wall surfaces, as shown in this cutaway view. Make certain the Common Frame fits smoothly into the Wall Frame and the flanges of both pieces contact the rough-opening framing.*



**63** Drill a pilot hole of the proper diameter and depth for a three-inch long, self-tapping masonry screw into the wall at each hole in the flange. Drive a screw through each hole in the flange and into the wall.

**64** Cut and install temporary cross braces between the sides of the Frames to prevent bowing when adding grout.

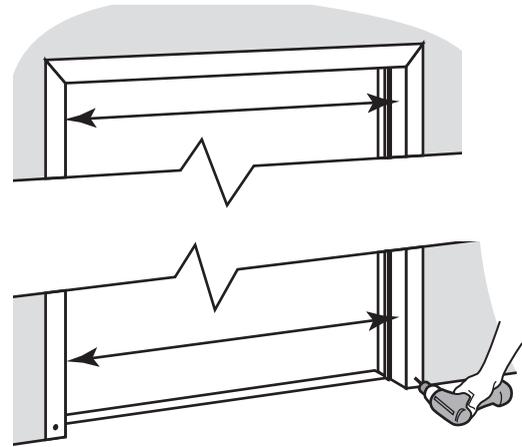
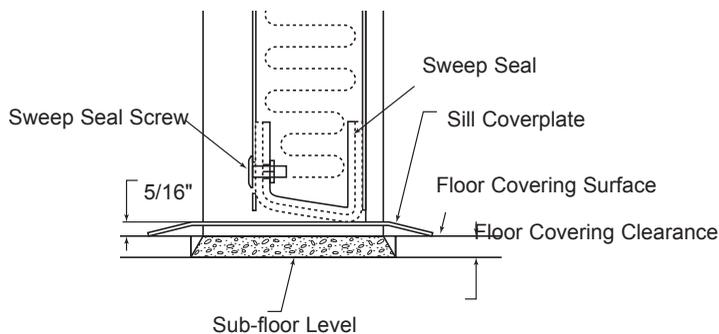
**65** Fill the open areas between the Frames and all masonry surfaces with grout on the sides and top. Mix a grout consistency that will flow completely into the space between Frames and masonry and around shims, making certain all voids are filled with grout.

## INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED

**66** Once the grout is set, remove the cross braces. If the floor surface does not contact the bottom of the Frame or is not continuous underneath it, pack the space between the floor and the bottom of the Frame with grout (see the illustration below). Remove any temporary shims underneath the bottom of the Frame before grouting.

**67** Make certain the Wall Frame is the same width at the top and bottom of the opening (adjust the lower corners of the Wall Frame to match the top width if necessary). On each side flange of the Wall Frame, drill a 7/32-inch diameter hole through the flange two-inches from the bottom and drive a #10x3-inch wood screw through the flange into the rough-opening framing as shown in the illustration at the right.

**68** If the floor surface does not contact the bottom of the Frame or is not continuous underneath it, pack the space between the floor and the bottom of the Frame with grout (refer to the illustration below). Remove any temporary shims underneath the bottom of the Frame before grouting.



**69** Caulk the joint between the Common Frame and the Wall Frame on the push side of the Door (relative to operation of the Door after installation) with a continuous bead of acoustical caulk as shown at the right.

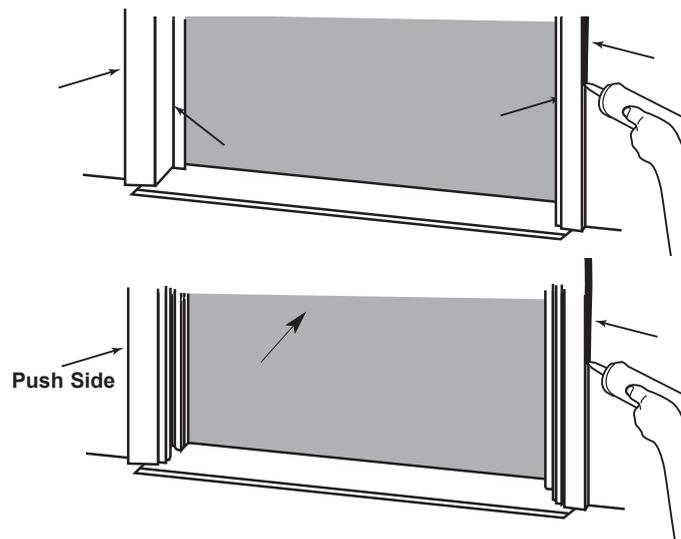
*Drive fasteners through the bottom ends of the Wall Frame flanges into the rough-opening framing. First measure to check that the width at the bottom of the opening is identical to that at the top. Adjust the lower corners of the Wall Frame in or out to match the top width if necessary.*

**70** Caulk between the Wall and the Frame pieces on both push and pull sides of the Door with a continuous bead of acoustical caulk as shown at the right.

**71** Caulk both sides of the sill at the bottom of the Common Frame with a continuous bead of acoustical caulk as shown at the right.

**72** Remove any metal chips from the Frame pieces and compression seals.

**73** Install the floor covering. If the floor covering is already in place, continue to Step 74.

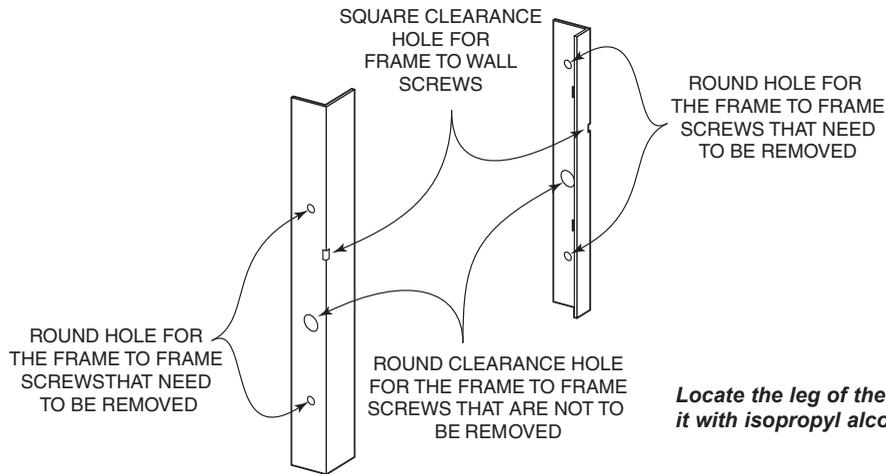


*Apply a continuous bead of acoustical caulk at the seams indicated by the arrows on both push and pull sides of the Frames. Make certain to apply caulk to the seam between Wall Frame and Common Frame on the push side.*

**INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED**

**74** After the Frame assembly has been installed into the rough opening but before the door is hung, unpack the parts accompanying the Fire-rated Acoustical Door required to install the closure:

- Intumescent strips for hinge slide, latch upper side, latch lower side, and top of Common Frame
- L-brackets for hinge side, latch upper side, latch lower side, and top of Common Frame
- S-clips (14 pieces)
- Perforated trim strips for hinge side, latch upper side, latch lower side, and top of Common Frame



**CAUTION**

Frame closure parts must fit a specific way to retain fire-rating capability. Follow the installation directions carefully.

*Locate the leg of the L-bracket without holes in it and clean it with isopropyl alcohol.*

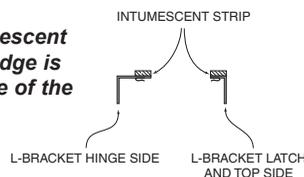
**75** Begin installation of closures into the Frame assembly by looking at the solid L-brackets. Note the two sets of larger clearance holes and one set of smaller attachment holes, and find the leg of the L that does not have holes.

**76** Clean the outer surface of this leg with isopropyl alcohol (refer to the illustration above).

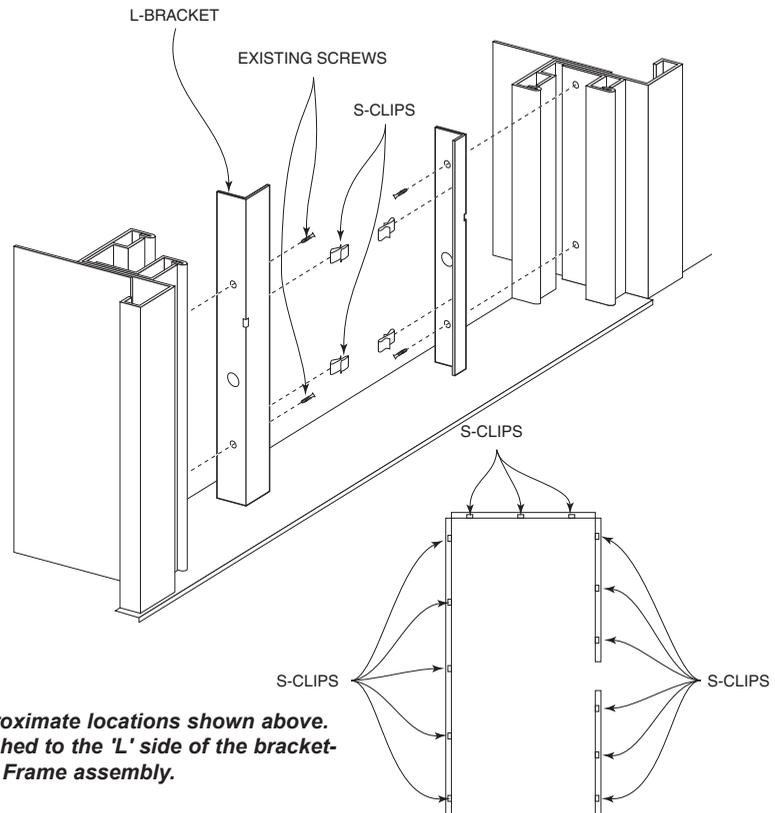
**77** Attach the 14 S-clips to the L-bracket edges on the legs without holes as shown in the illustration at the right. Make sure the clips are placed on the L side of the bracket.

**78** Match the lengths of Intumescent strip with the solid L-brackets. Peel the backer from the Intumescent strips and attach each strip to the outside surface on one of the L-brackets, making sure one edge of each strip is flush with the edge of the L-bracket (refer to the illustration at the right and on the following page).

*Attach each Intumescent strip so that one edge is flush with the edge of the L-bracket.*



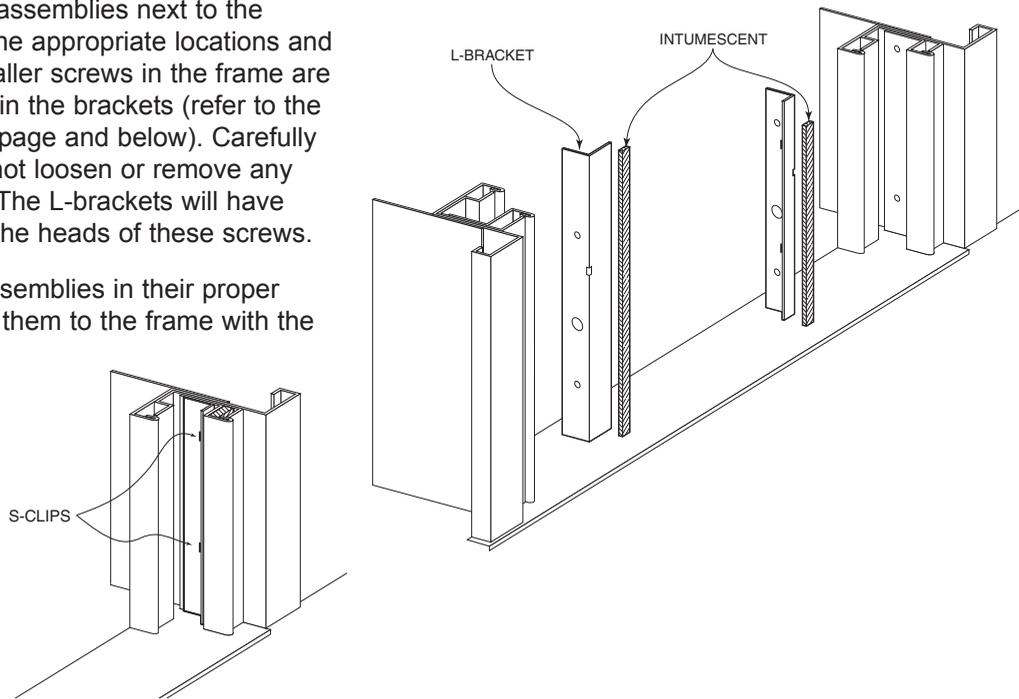
*Install the S-clips in the approximate locations shown above. Make sure the clips are attached to the 'L' side of the bracket—the leg facing away from the Frame assembly.*



**INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED**

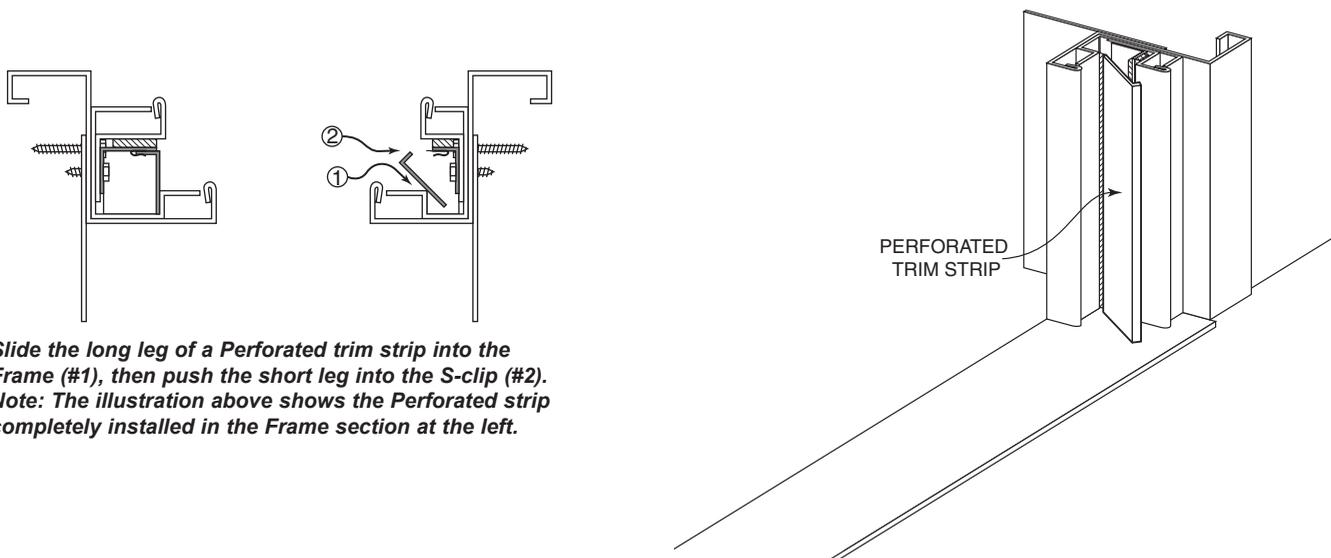
**79** Place the L-bracket assemblies next to the Common Frame in the appropriate locations and determine which of the smaller screws in the frame are in line with the small holes in the brackets (refer to the illustration on the previous page and below). Carefully remove these screws. Do not loosen or remove any other screws in the frame. The L-brackets will have clearance holes to fit over the heads of these screws.

**80** Place the bracket assemblies in their proper locations and attach them to the frame with the screws you previously removed (refer to the illustrations below). Tighten these screws carefully but make sure you do not strip the hole when tightening them.



**81** Match the lengths of Perforated trim strips with the Common Frame locations. Slide the long leg of a piece of the Perforated trim into the Frame along the Insulation, then push the short leg into the S-clip on the previously installed L-brackets (refer to the illustrations below). Use this method for each piece of Perforated trim.

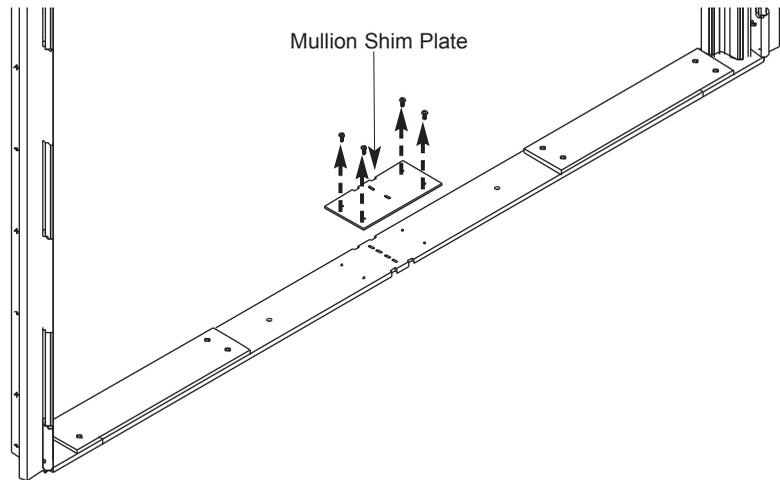
**Note:** Continue to step 80 to finish installing the Fire Rated Double Door Frame.



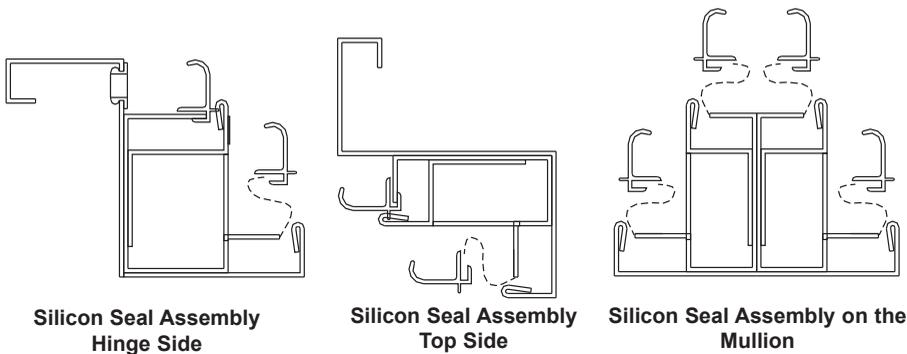
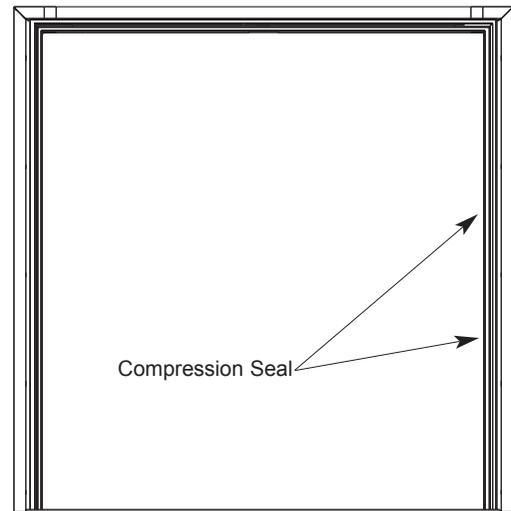
*Slide the long leg of a Perforated trim strip into the Frame (#1), then push the short leg into the S-clip (#2). Note: The illustration above shows the Perforated strip completely installed in the Frame section at the left.*

**INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED**

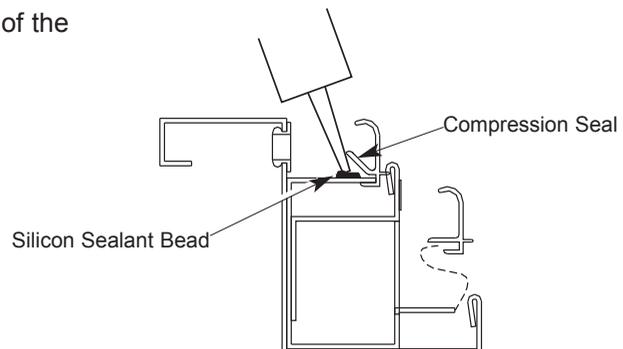
**82** After installing the Frame with the Mullion, remove the Mullion from the frame. Remove and discard the Mullion Shim Plate. Remove and discard the Installation Plates.



**83** Starting at an upper inside corner, install the compression seals to the frame. Insert the mounting flap of the seal into the frame slot until the entire seal is in place. Make sure the mounting flap is completely inserted at the corners. Adjust the seal to relieve any waviness or stretching of the seal. Make sure that the seal is not pulled tight at the corners.

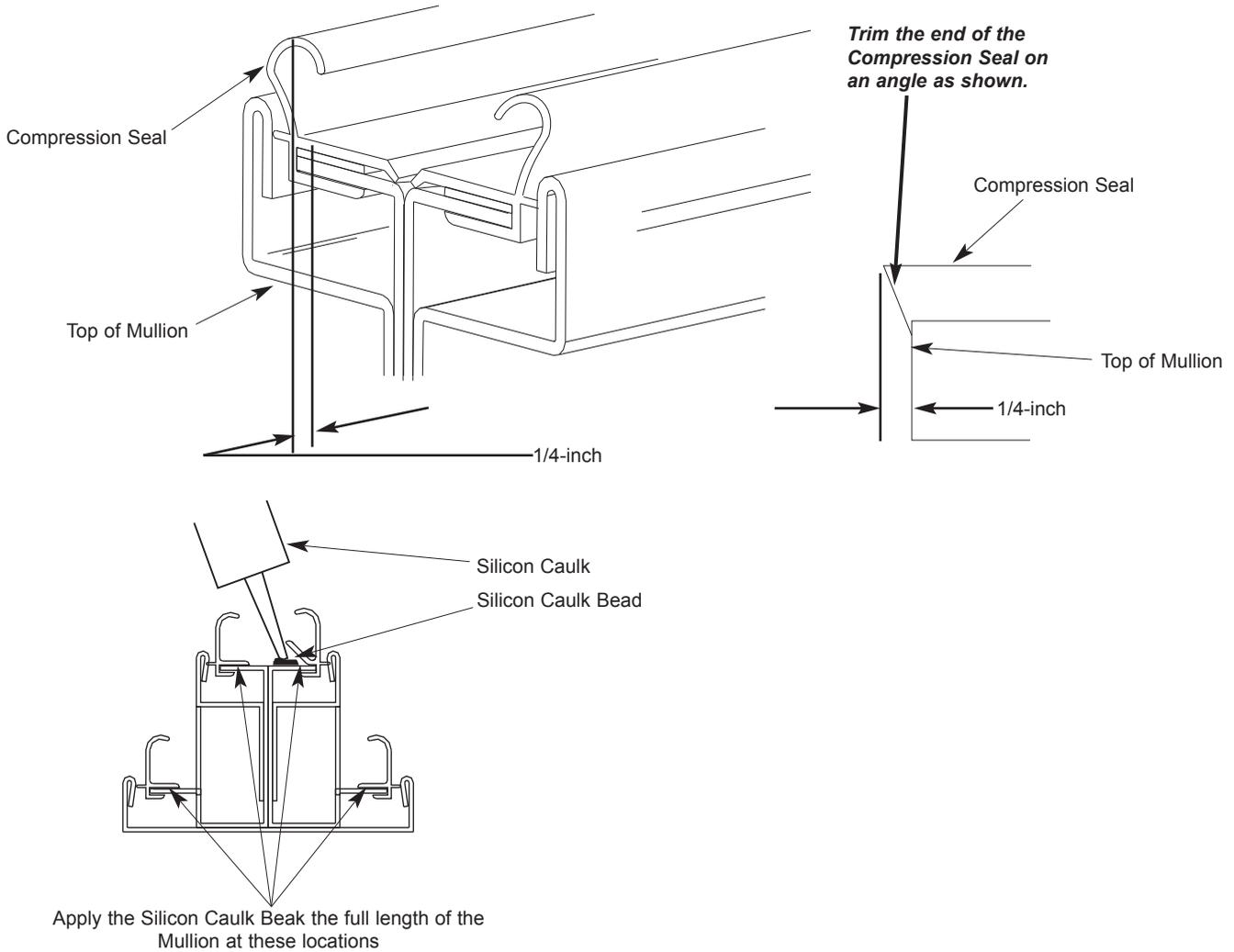


**84** Lift the compression seal and apply a thin bead of the silicon sealant between the seal and the frame.



**INSTALL THE FIRE RATED DOUBLE DOOR FRAME CONTINUED**

**85** While the Mullion Assembly is removed from the Frame, install and trim the silicone compression gasket as shown in the illustrations below. Trim the top of the gasket first before attaching it to the Mullion. When the gasket is trimmed and positioned, apply a bead of silicon caulk as shown below and attach the gasket to the Mullion. Allow the silicon caulk to set according to the manufacturer's recommendations. After the caulk dries, trim the gasket flush with the bottom of the Mullion.

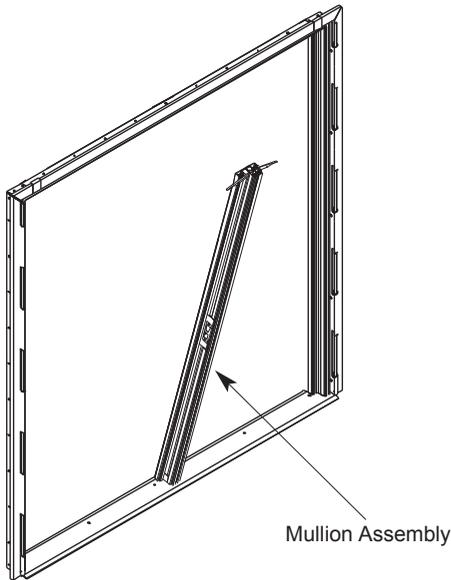


**86** Remove the installation strips on the bottom plate. Apply 1/4-inch diameter flat head anchor screws as appropriate for the type of floor through the holes provided to attach the bottom plate to the floor.

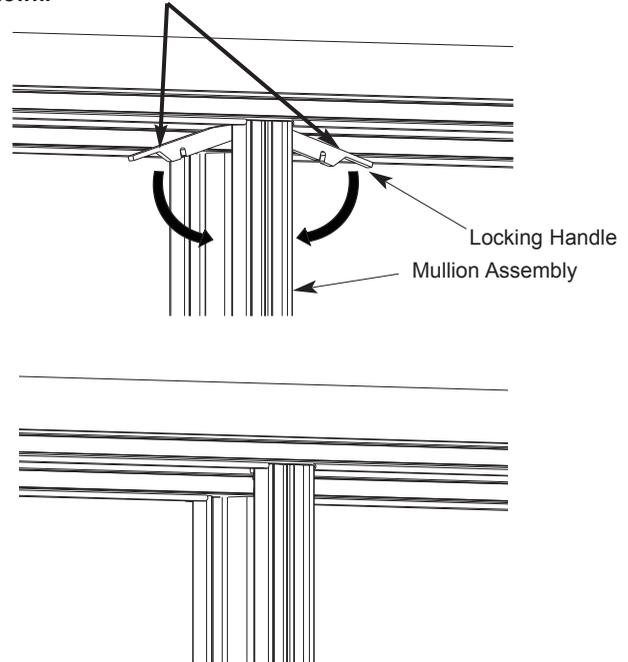
**87** Install the Sill Cover Plate using the screws provided with the Plate.

**PREPARE THE FIRE RATED DOOR FOR INSTALLATION CONTINUED**

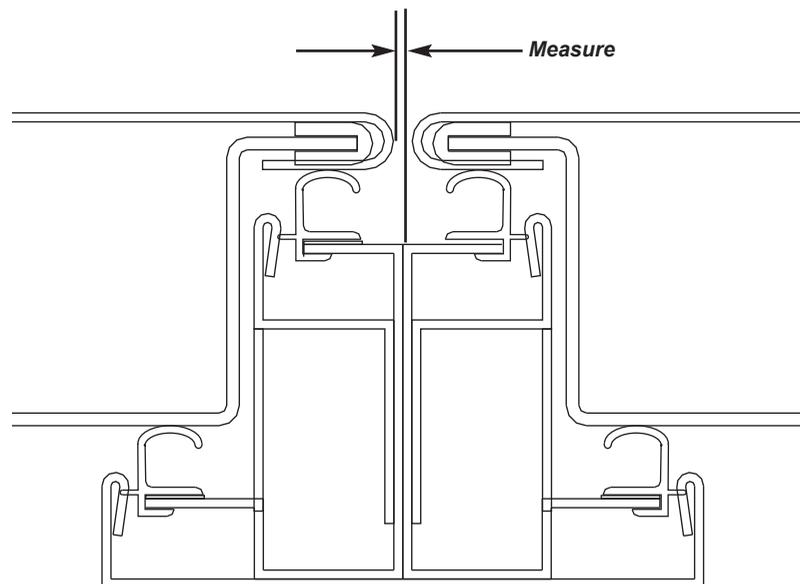
**88** Install the Mullion Assembly into the frame with the installation shim between the mullion and the frame. This assures the proper working clearance after the frame is installed into the wall. Align the tabs on the bottom of the mullion with the holes in the installation shim and in the bottom plate, and insert the tabs into the holes.



*Tighten the two nuts on the Frame after the Locking Handles are pushed completely down.*



**89** Go to Step 1 of Installing the Door instructions on page 13. At step 6 of these instructions, measure the distance from the center of the Mullion to the leaf, and then apply the shim chart as instructed.



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## WARRANTY

The Wenger Acoustical Door is guaranteed free of defects in materials and workmanship for five full years. Our guarantee assures you of either a full refund or repair or replacement of the defective materials or workmanship without charge, at the discretion of our Customer Service Department. Just call a Customer Service Representative at 1-800-887-7145 and state the reason you are dissatisfied. If a product return is necessary, your representative will issue a return authorization. This is your sole remedy for breach of this warranty.

Should you have a question or problem with any Wenger product, don't hesitate to call, even if the product is past warranty. It's important to us that all our customers be satisfied.

This is the sole warranty made by Wenger. Wenger disclaims all other warranties, including the warranties of merchantability and fitness for a particular purpose, as well as all liability for incidental, consequential, special, and indirect damage. Wenger liability for direct damages shall be limited to the amount you paid for the product involved. Wenger reserves the right to make product changes without obligation to incorporate such changes into products previously sold.

Some states do not allow the exclusion or limitation of damages or warranties, so the above may not apply to you. This warranty gives you specific legal rights. You may also have other rights which vary from state to state.