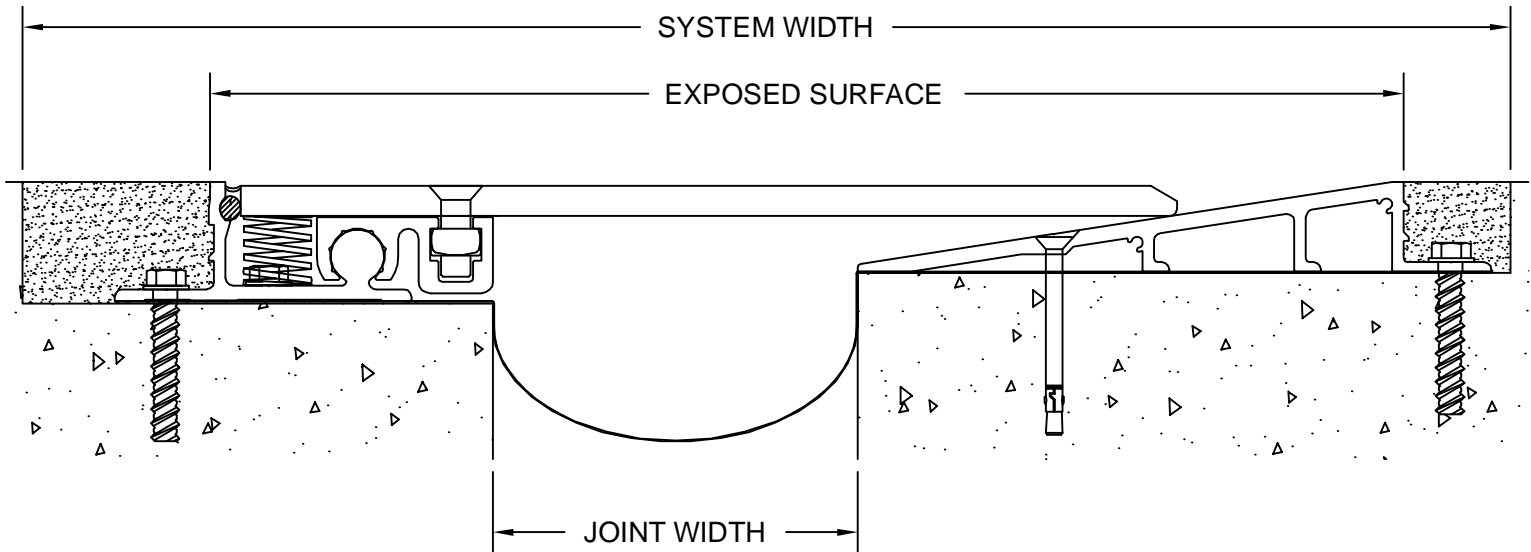


MODEL PTC AND PTCW INSTALLATION INSTRUCTIONS



IMPORTANT INFORMATION

Prior to the commencement of installation, all materials **MUST** be inspected for damage. Any damage must be reported to CONSTRUCTION SPECIALTIES, INC., as soon as possible, so that replacement materials may be furnished without delay.

All work must be completed as per Architect's Approved "Shop Drawings", and in accordance with these Installation Instructions. When installation is complete, all materials must be protected from damage until the Architect's FINAL INSPECTION.

All materials should be arranged in the order that they are to be installed. All hardware required for each portion of the work should be placed with the appropriate materials.

Please review all Approved Shop Drawings and this document to familiarize yourself with all the details and components of this assembly.

IMPORTANT:
READ THROUGH ALL INSTRUCTIONS PRIOR TO STARTING INSTALLATION

8/10/11



Construction Specialties™

6696 Route 405 Highway, Muncy PA 17756
(800) 233-8493 . Fax (570) 546-5169 . www.csgroup.com

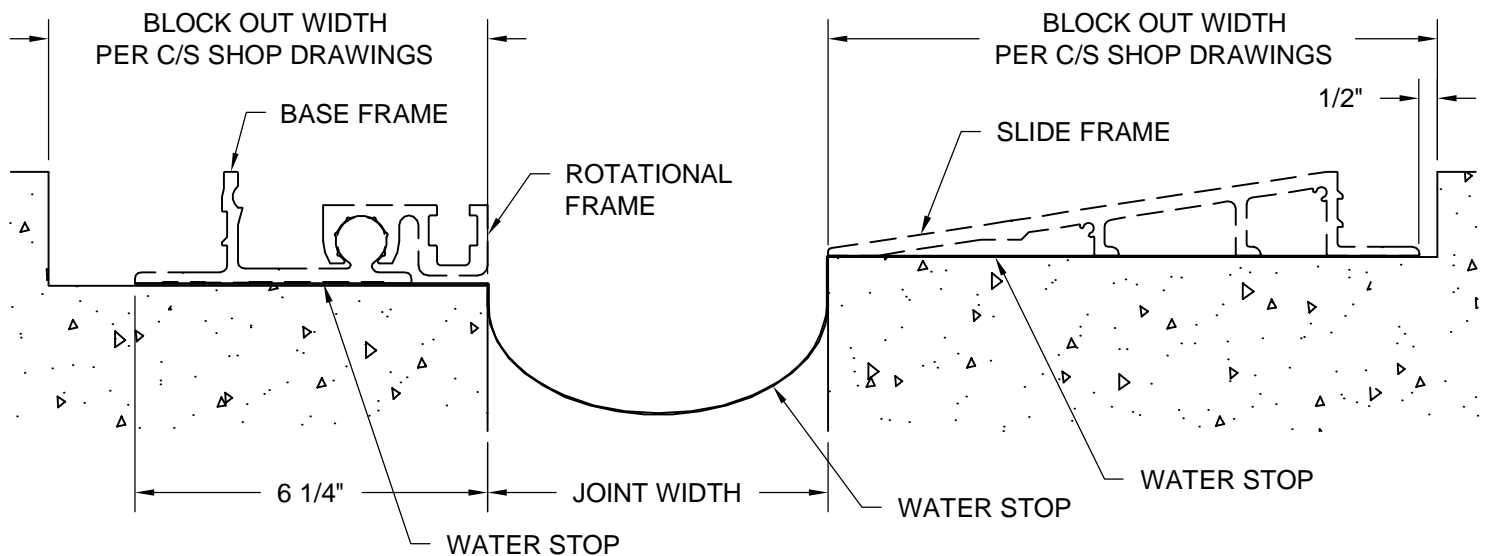
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GENERAL INSTALLATION NOTES:

1. Joint Width and Blockout sizes **must be** in accordance with the architectural details and C/S shop drawings before installation can begin.
2. Blockouts **must be** flat and level. All repairs to the mounting surfaces **must be** done prior to the installation of the joint cover system.
3. The installer should follow all safety instructions listed in these installation documents and/or listed on the MSD sheets provided.
4. The C/S shop drawings are required for use with these installation instructions. Many of the dimensions shown are variables that require the shop drawings to provide the correct number for each particular size and model.

STEP 1

PTC WATERSTOP INSTALLATION



The water stop should be installed in as long of runs as possible to reduce the number of splices. All sizes of water stop are provided in 100' rolls.

Specialized installation instructions are provided for splicing, drain installation and end closures. See these instructions if any of these conditions are required.

Step 1:

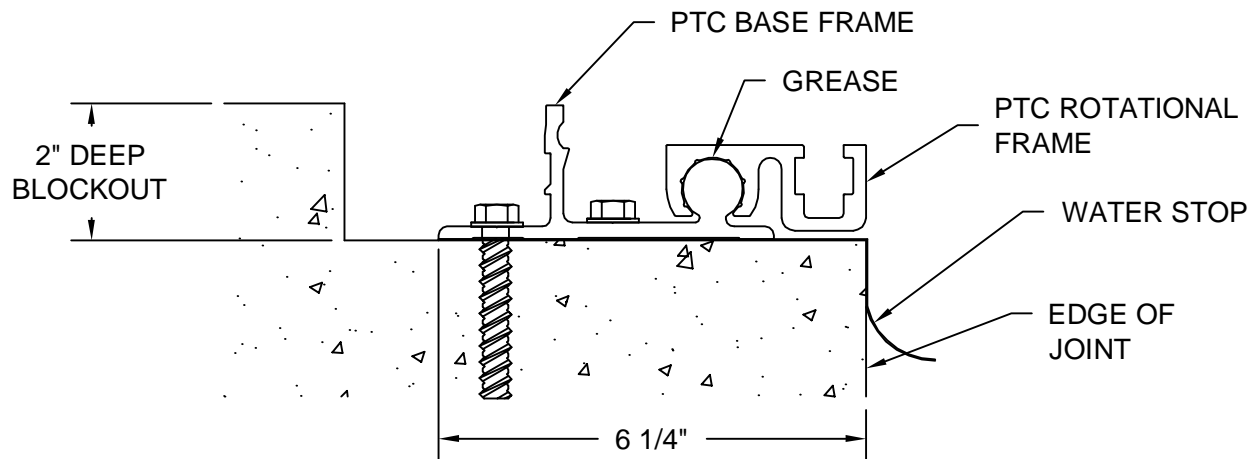
1. Place the water stop in the bottom of the blockout (Base/Rotational Frame Side) approximately 6 1/4" from the edge of the the joint and hold in place with duct tape (see detail above)
2. Place the water stop in the bottom of the blockout (Slide Frame side) leaving a 1/2" space between the edge of the water stop and the rear of the blockout on each side of the joint and hold in place with duct tape (see detail above).
3. Press the water stop material into the joint to create a drape. It may be necessary to place a small block of wood or a tool in the drape to hold it down into the joint until the installation of the frames is complete. This will simplify the rest of the installation. See Page 8 for PTCW Water Stop Installation Instructions.

The PTC Base Frame and the PTC Rotational Frame are to be assembled as a unit prior to installation. The ends of the frames should be aligned and abut the next frame section. This enables each 12' base/rotational frame assembly to operate individually during vertical displacement.

The frames should be installed continuously for the entire length of the run. If lateral shear movement is specified the cover plate will be installed to accommodate this type of movement.

STEP 2

PTC BASE AND ROTATIONAL FRAME INSTALLATION

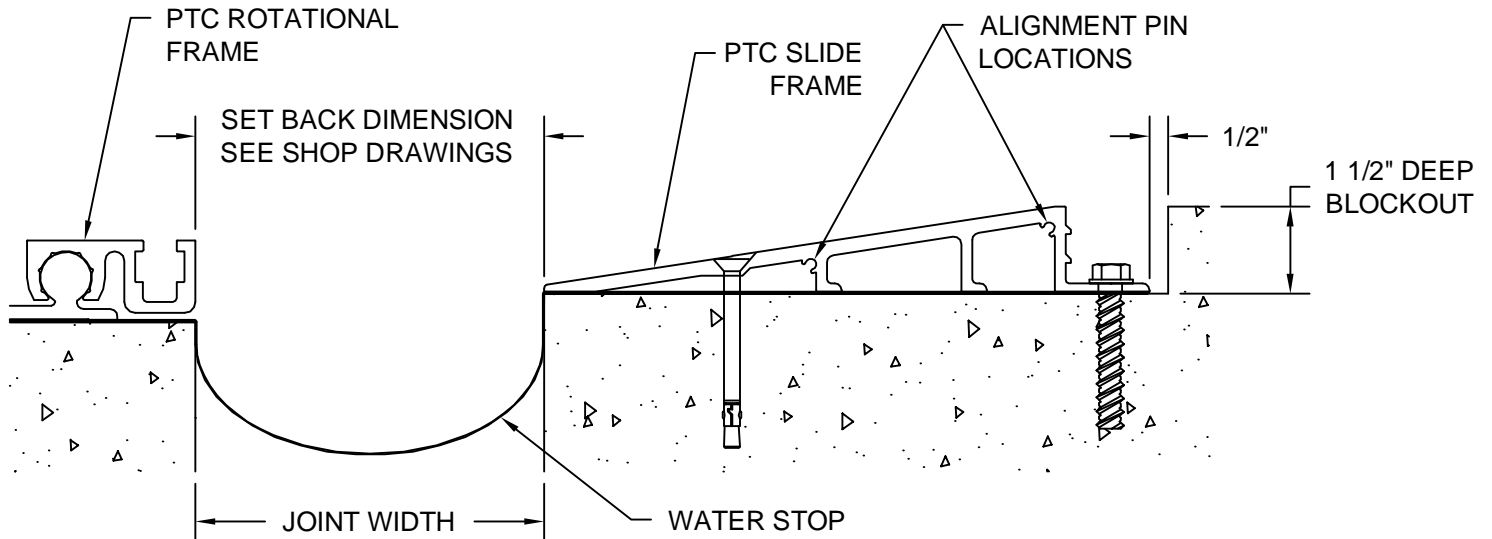


Step 2:

1. Place the PTC Base Frame in the 2" deep blockout, locate the back edge of the PTC Frame 6 1/4" back from the joint edge. Using the frame as a template mark the location of the mounting holes.
2. Remove the Base Frame and drill the holes with the appropriate bit for the fasteners indicated on the shop drawings.
3. Apply a liberal amount of lithium grease to the mating surfaces of the PTC Base Frame and the Rotational Frame. The entire surface should be covered prior to assembly.
4. Slide the PTC Rotational Frame onto the Base Frame, then place the Frame assembly into the blockout and fasten into place. The leading edge of the Rotational Frame should be aligned with the edge of the joint.

STEP 3

PTC SLIDE FRAME INSTALLATION

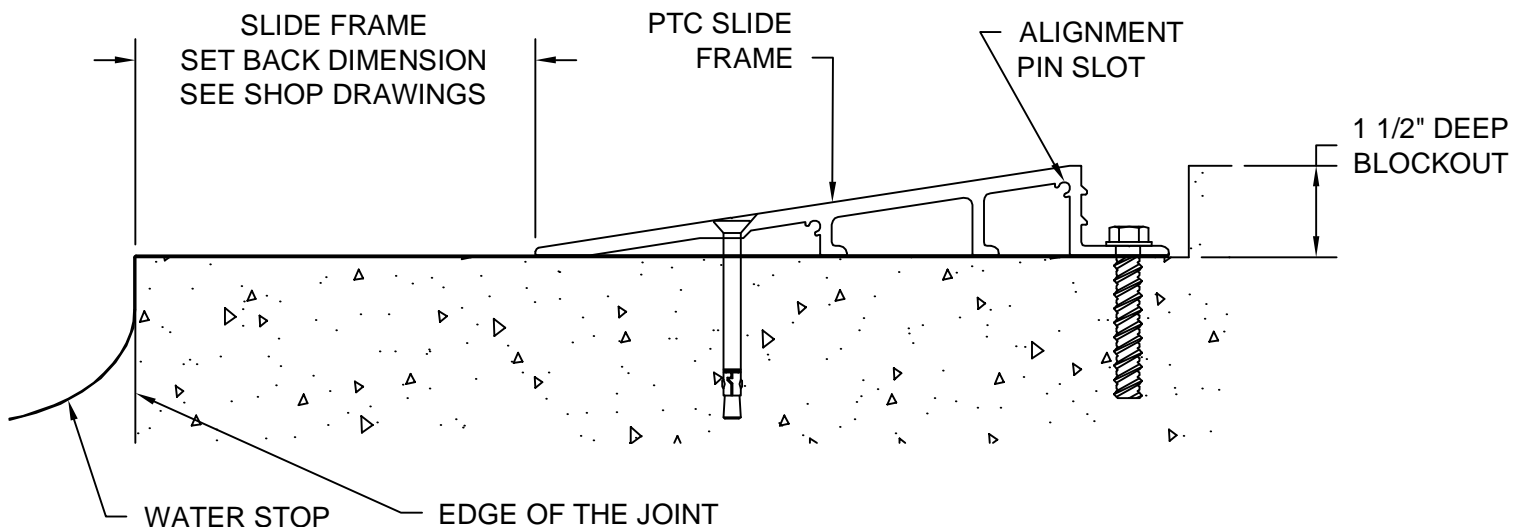


Step 3:

1. Place the PTC Slide Frame in the 1 1/2" deep blockout with the front edge of the Slide Frame set the distance indicated on the shop drawings back from the edge of the PTC Rotational Frame and parallel to the Base Frame. Once the Slide Frame has been placed, but not attached, set the Cover Plate in the correct position on the Rotational Frame. The Cover Plate should span the distance to the Slide Frame and sit level. This will indicate the Slide Frame is in the correct position.
2. Remove the Cover Plate and using the Slide Frame as a template mark the location of the mounting holes.
3. Remove the Slide Frame and drill the holes with the appropriate bit for the fasteners to be used. Be aware that different types and sizes of fasteners are used to mount this frame.
4. Place the Slide Frame back in the blockout, align with the mounting holes and fasten into place using the fasteners shown on the shop drawings.
5. Repeat this installation for the adjacent lengths of Slide Frame. Place Alignment Pins into the Alignment Pin Slots of the Slide Frames to ensure proper alignment of the sloped surface.

Note:

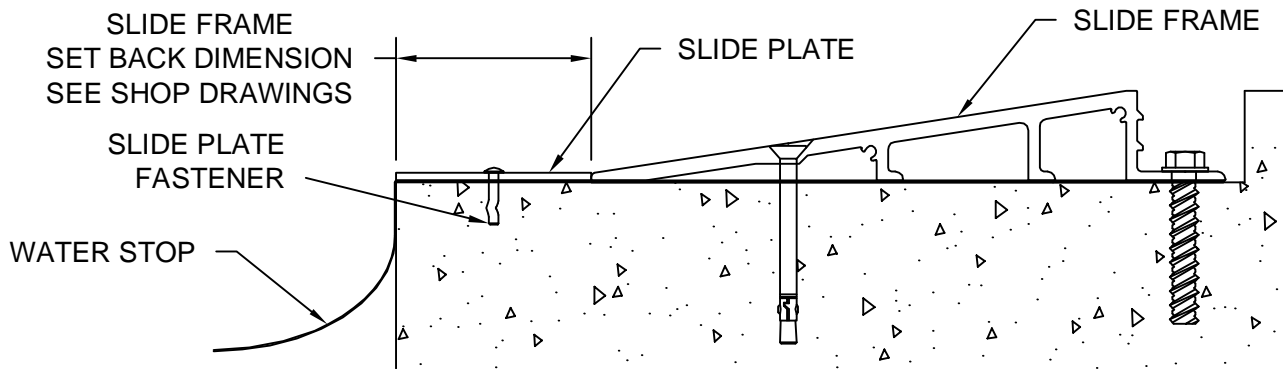
For larger seismic applications the PTC Slide Frame will not sit at the joint edge but will be set a particular distance back from the edge of the joint. This distance is indicated on the shop drawings as the Set Back dimension.



STEP 4

SLIDE PLATE INSTALLATION

A Slide Plate is only required if the Slide Frame is set back from the joint edge and the Cover Plate will contact the bottom surface of the blockout during full movement. If the Slide Frame is mounted on or near the edge of the joint a Slide Plate is not required and installation should continue with the next step.



Step 4:

1. Place the PTC Slide Plate between the Slide Frame and the edge of the joint. The Slide Plate will butt up against the leading edge of the Slide Frame and align with the edge of the joint. See additional notes below for locating the slide plates lineally. Using the Slide Plate as a template mark the location of the mounting fastener.
2. Remove the Slide Plate and drill the holes with the appropriate bit for the fasteners indicated on the shop drawings.
3. Reposition the Slide Plate, align with the mounting holes and fasten into place with the appropriate fasteners.

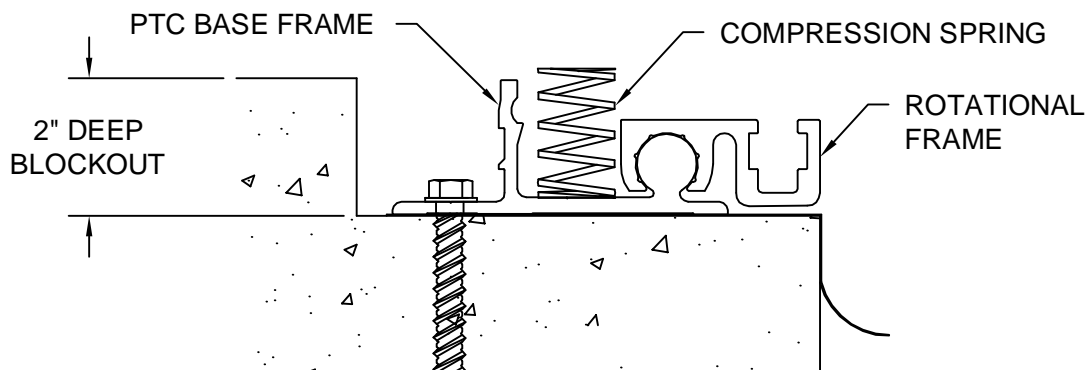
Note: A Slide Plate should be installed every 36" o.c. for the entire run. Locating the first and last slide plates 18" from the end of the aluminum plate will maintain 36" centers for a 12'-0" plate size. Please insure that at least two slide plates are installed on every run, even on runs with plate sizes of 3'-0" or less.

STEP 5

COMPRESSION SPRING INSTALLATION

The Compression Springs must be installed correctly in order for the PTC cover system to function. Once the cover plate is installed, the springs will be under compression and exert down force on the beveled end of the cover plate.

The Compression Springs will sit higher than the vertical leg of the Base Frame when initially installed but will be compressed during cover plate installation.

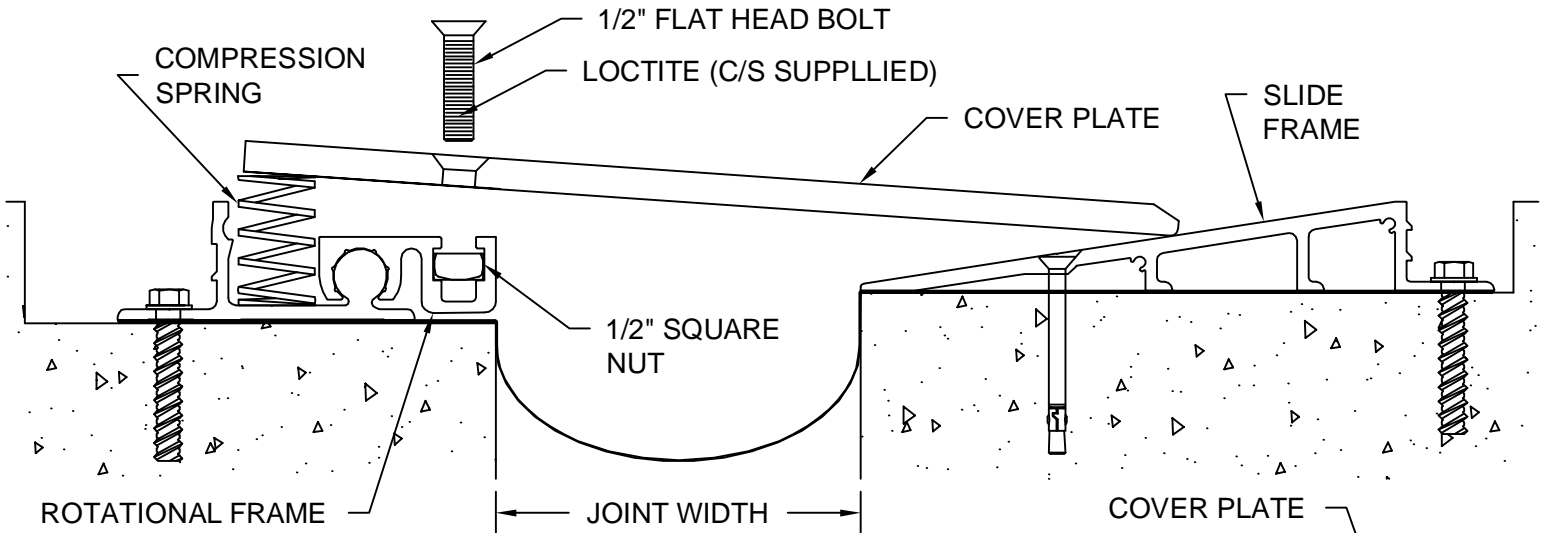


Step 5:

1. Place a Compression Spring between the vertical leg of the Base Frame and the Rotational Frame. The Compression Springs are located 18" on center and staggered between the fasteners that are located in this area.

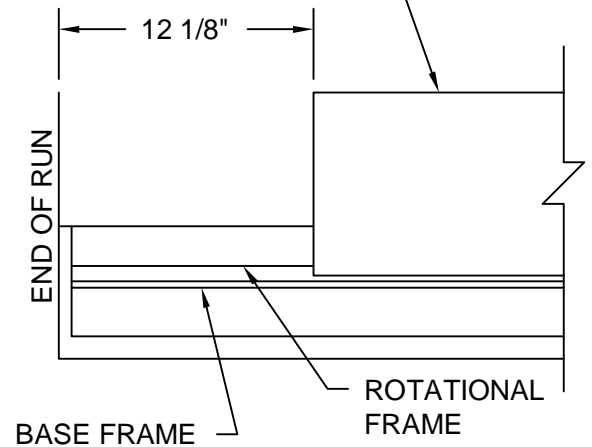
STEP 6

PTC COVER PLATE INSTALLATION



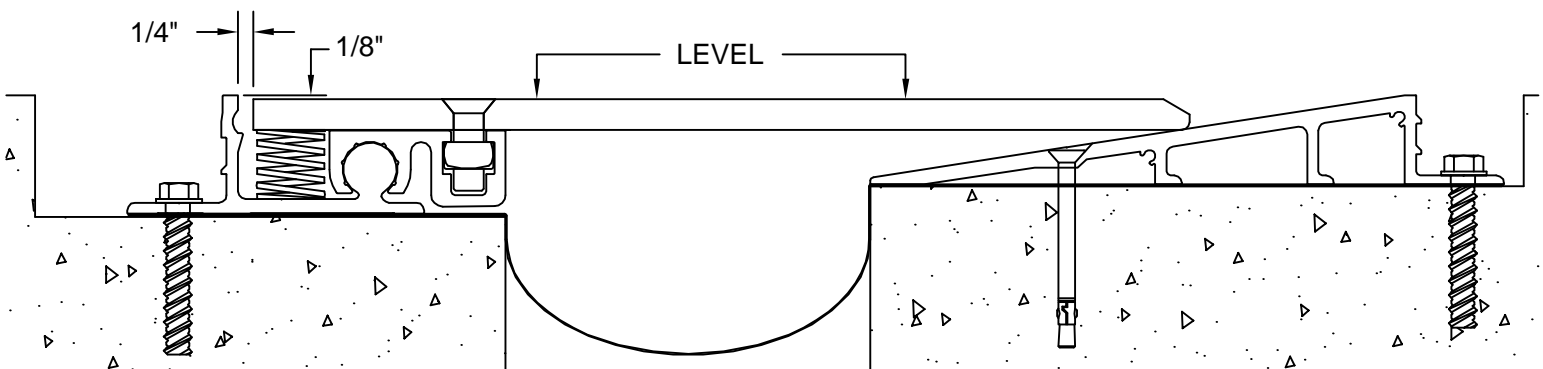
Step 6:

1. Slide enough 1/2" Square Nuts into the nut slot of the Rotational Frame for each of the holes in the Cover Plate.
2. Set the Cover Plate with the beveled edge on the Slide Frame and align it with the ends of the Rotational Frame. For conditions that require lateral shear the Cover Plate must be installed 12 1/8" from each end of the run. An End Plate will be installed in this location to accommodate the lateral shear movement.
3. Set the Cover Plate into position, 1/4" from the vertical leg of the Base Frame and atop the Compression Springs. The Cover Plate will be held up by the Compression Springs and will not contact the Rotational Frame.
4. Starting at one end of the Cover Plate, stand directly on the cover plate next to the countersunk hole and align the nut in the nut slot with the hole.
5. Apply C/S supplied loctite to flat head bolt and begin to thread the 1/2" Flat Head Bolt through the Cover Plate and into the nut. The bolt should be threaded by hand and care should be taken not to cross thread the nut. This should be done for each of the plate fasteners before proceeding to the next step.
6. Once all of the fasteners have been started by hand, again work back across the plate using an impact wrench to tighten the bolts. Even with the impact wrench each bolt must be tightened in succession in order to properly install the Cover Plate.
7. The surface of the Cover Plate will sit slightly (approximately 1/8") below the top of the vertical leg of the Base Frame and level across the joint once all of the bolts have been tightened.



Note:

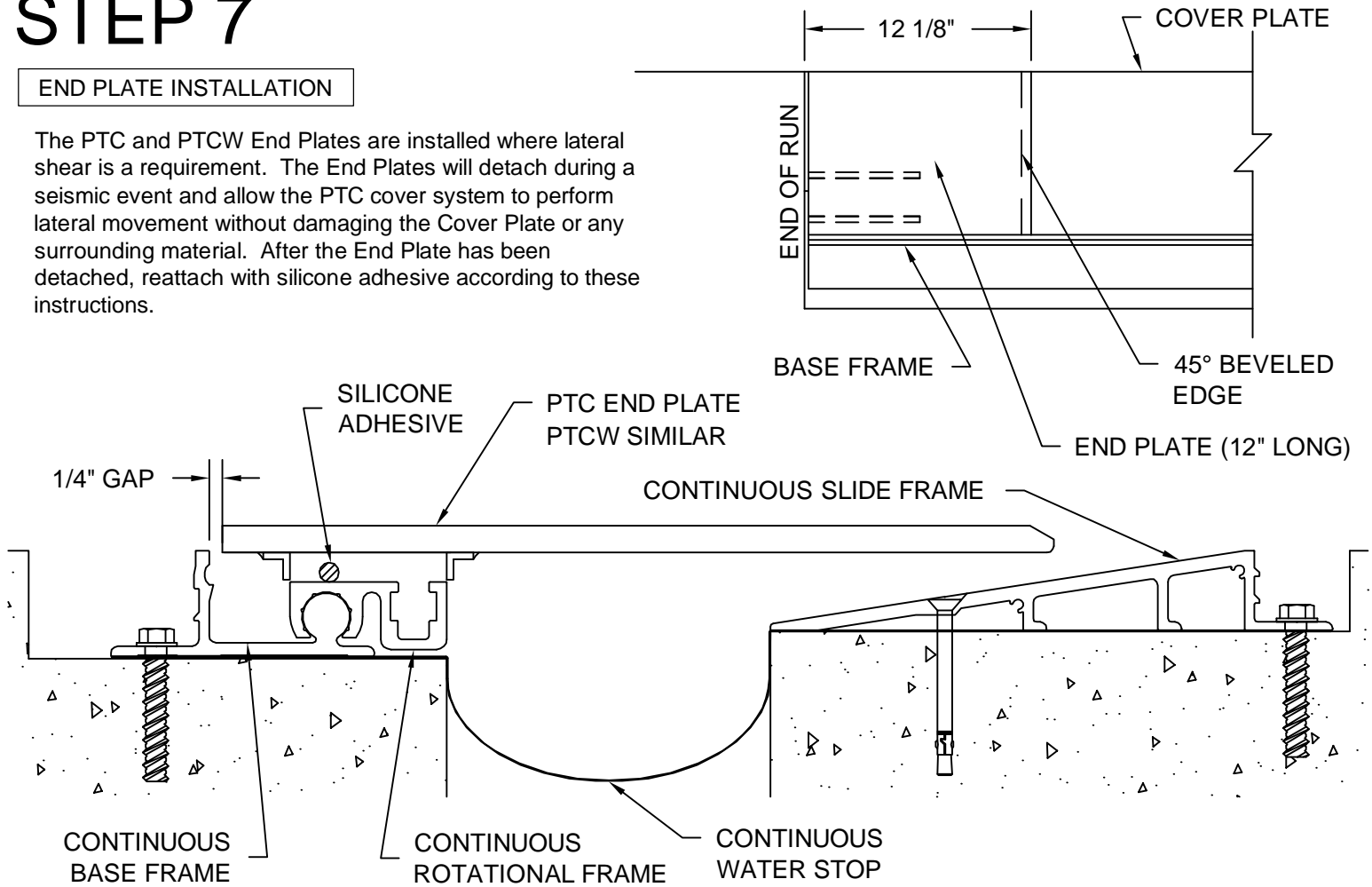
The atmospheric conditions at the time of installation affect the width of the joint. This may cause the Cover Plate to be out of level when installed.



STEP 7

END PLATE INSTALLATION

The PTC and PTCW End Plates are installed where lateral shear is a requirement. The End Plates will detach during a seismic event and allow the PTC cover system to perform lateral movement without damaging the Cover Plate or any surrounding material. After the End Plate has been detached, reattach with silicone adhesive according to these instructions.



Step 7:

1. Apply a 1/2" bead of Silicone Adhesive to the top of the Rotational Frame left exposed at the end run.
2. Place the PTC End Plate on top of the Rotational Frame with the 45 degree beveled edge down and towards the standard run of PTC Cover Plate. Only a hairline gap should be left between the End Plate and the end of the standard Cover Plate.

Note:

No Compression Springs should be placed at the End Plate location.

All pedestrian and vehicular traffic should be restricted from crossing the End Plate until the adhesive has cured.

STEP 8

ELASTOMERIC CONCRETE INSTALLATION

NOTE:

C/S Elastomeric Concrete protects the exposed concrete edges at the back of the blockouts and provides a water tight seal between the frames and the concrete. Care should be taken to protect the surrounding surfaces from stains caused by the Elastomeric Concrete.

1. All surfaces of the joint cover system must be taped or covered to prevent contact with the elastomeric concrete. A strip of duct tape must be placed adjacent to each blockout to be filled with Elastomeric Concrete.
2. C/S Elastomeric Concrete should be mixed according to the instructions provided with the components of the system. The chemical compounds in the Elastomeric Concrete are moisture and temperature sensitive. Be sure to read all of the instructions carefully. Elastomeric Concrete will fill the remaining voids in the blockout and create a smooth driving surface.
3. Fill the voids between the Base Frame and Slide Frame and the edges of the blockout, then smooth with a trowel.
4. Allow the Elastomeric Concrete to harden before allowing traffic on the cover system.

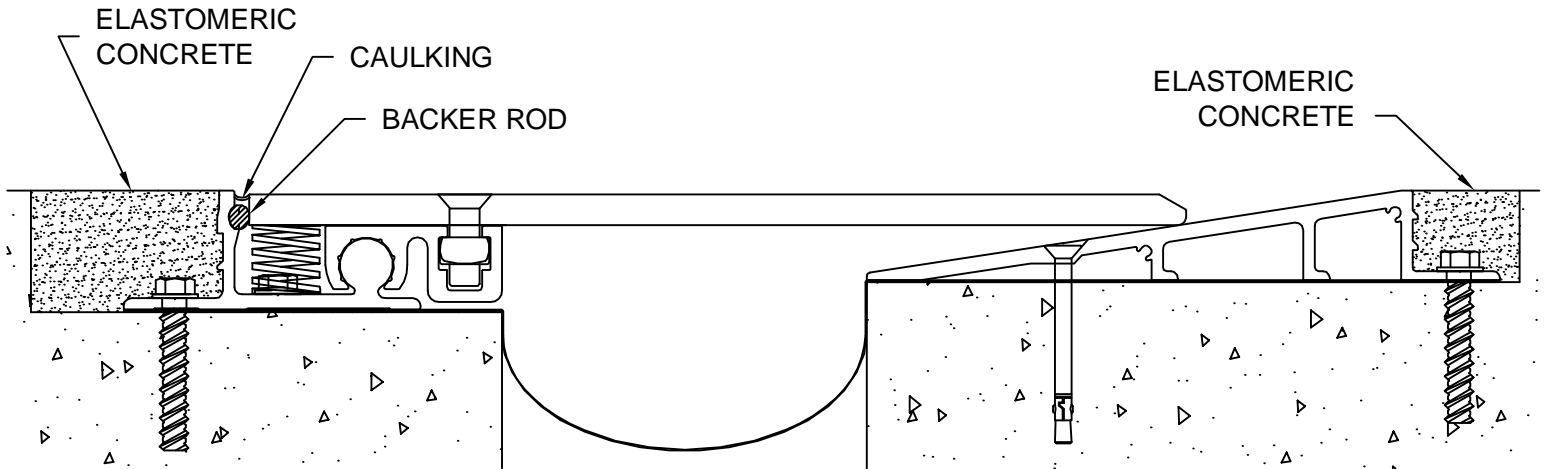
STEP 9

BACKER ROD & CAULK INSTALLATION

Backer Rod and Caulking are installed between the Cover Plate and the exposed edge of the Base Frame to prevent water and debris from collecting in the Compression Spring recess. The exposed metal surfaces on both edges of the joint to be caulked should be protected by duct tape prior to beginning the installation.

Step 9:

1. Place the 3/8" Backer Rod in the gap between the Cover Plate and the exposed edge of the Base Frame.
2. Push the Backer Rod into the gap with a screwdriver or similar tool until it snaps or expands into the receiver in the Base Frame.
3. Once the Backer Rod is in place, apply the caulk provided to the top of the Backer Rod sealing the joint.
4. Smooth the caulking with a trowel or similar tool.



This completes the linear installation of the PTC Model. The following instructions are for the installation of Corner conditions.

STEP 10

CORNER CONDITION INSTALLATION

These instructions are for the installation of Inside, Outside, and Odd Angle Corners. The end of each frame and cover plate have to be miter cut to fit the corner condition and allow for at least a 1/4" gap between the Cover Plates and Rotational Frames.

Step 10:

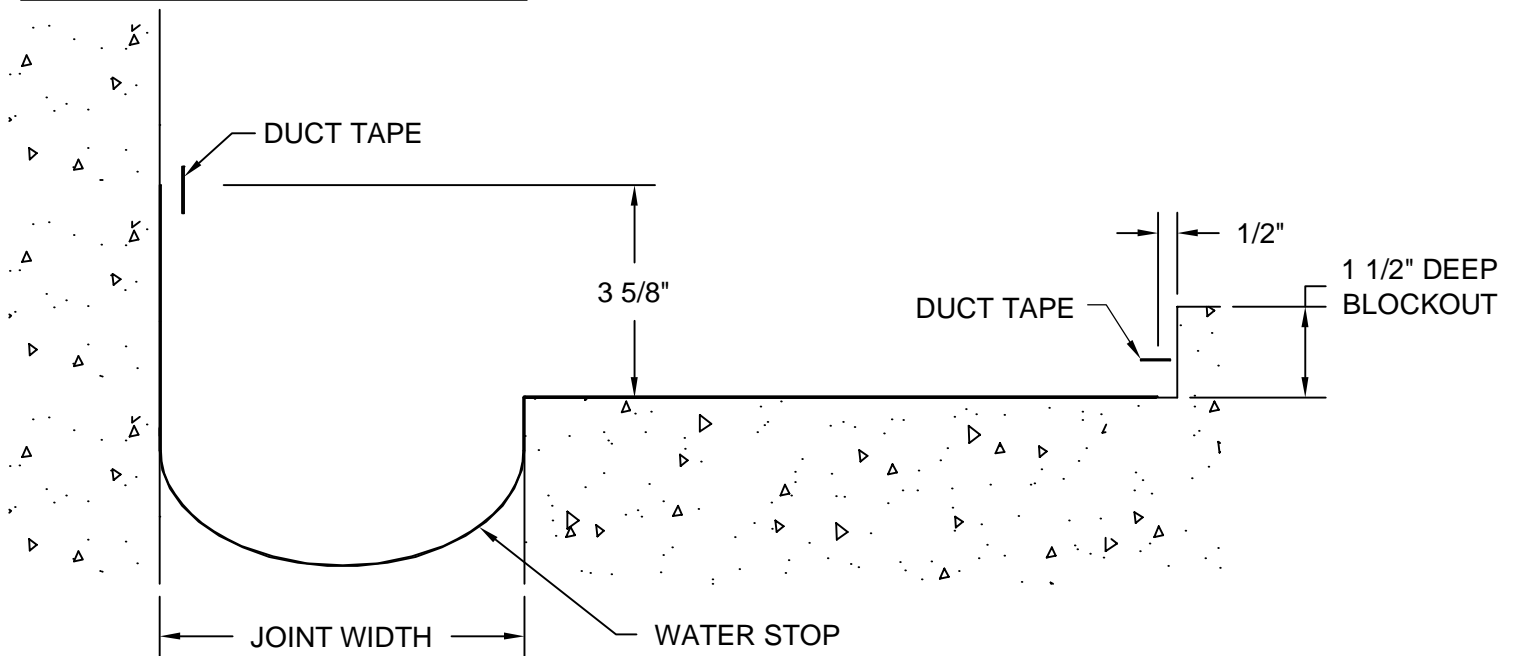
1. Miter cut the end of each Base Frame and install as normal leaving only a hairline space between the frame sections.
2. Miter cut the Rotational Frames and install as normal leaving at least a 1/4" gap between the frame sections.
3. For a PTC installation where lateral shear is not a requirement, the ends of the Cover Plates should be miter cut, aligned with the ends of the Rotational Frames, allowing for the 1/4" gap, and attached as normal.
4. For a PTC installation where lateral shear is a requirement, an End Plate must be installed on either side of the corner miter. The End Plates must be miter cut, aligned with the end of the Rotational Frame, allowing for the 1/4" gap, and attached with Silicone Adhesive as normal.

Note:

The 1/4" gap between the Cover or End Plates in the lateral shear installation can be filled with caulking if desired or required by the project.

STEP 11

PTCW WATER STOP INSTALLATION

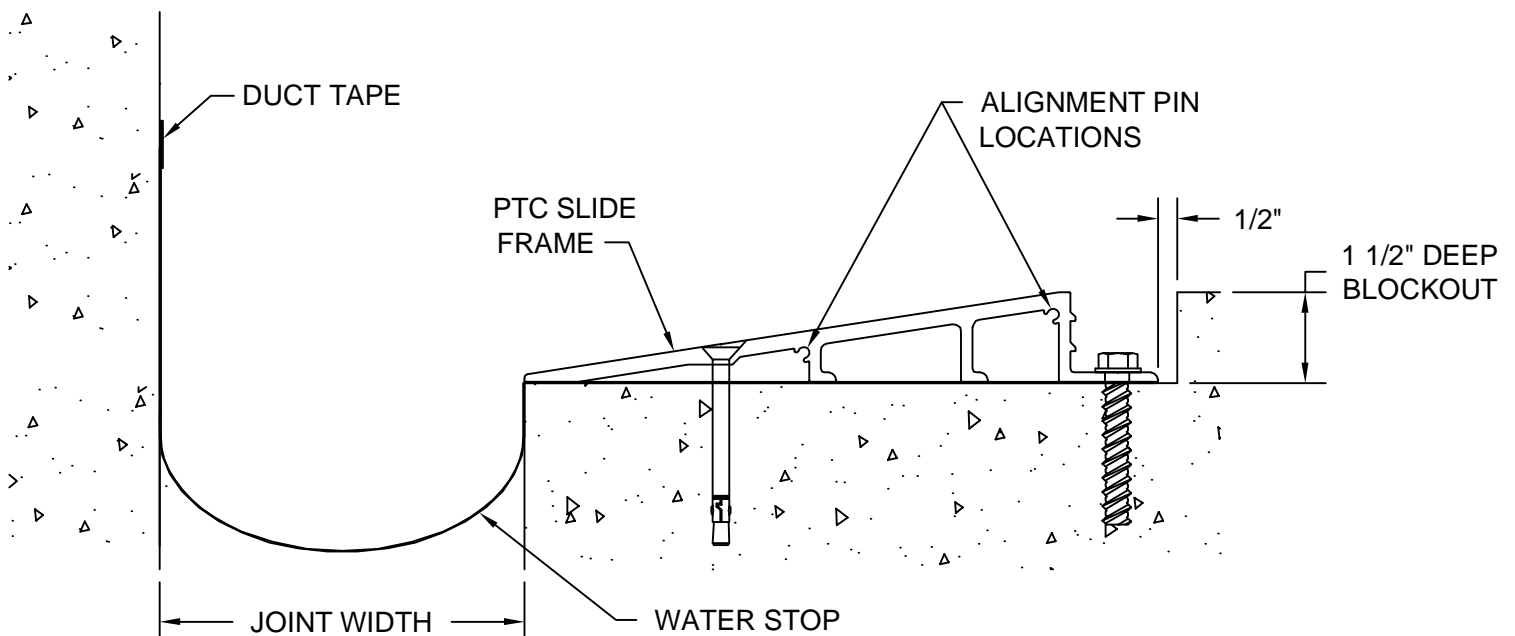


Step 11:

1. Place the water stop in the bottom of the blockout leaving a 1/2" space between the edge of the water stop and the rear of the blockout and hold in place with duct tape. Attach the other end of the water stop 3 5/8" above the base of the blockout with duct tape.
2. Press the water stop material into the joint to create a drape. It may be necessary to place a small block of wood or a tool in the drape to hold it down into the joint until the installation of the frames is complete. This will simplify the rest of the installation.

STEP 12

PTCW SLIDE FRAME INSTALLATION

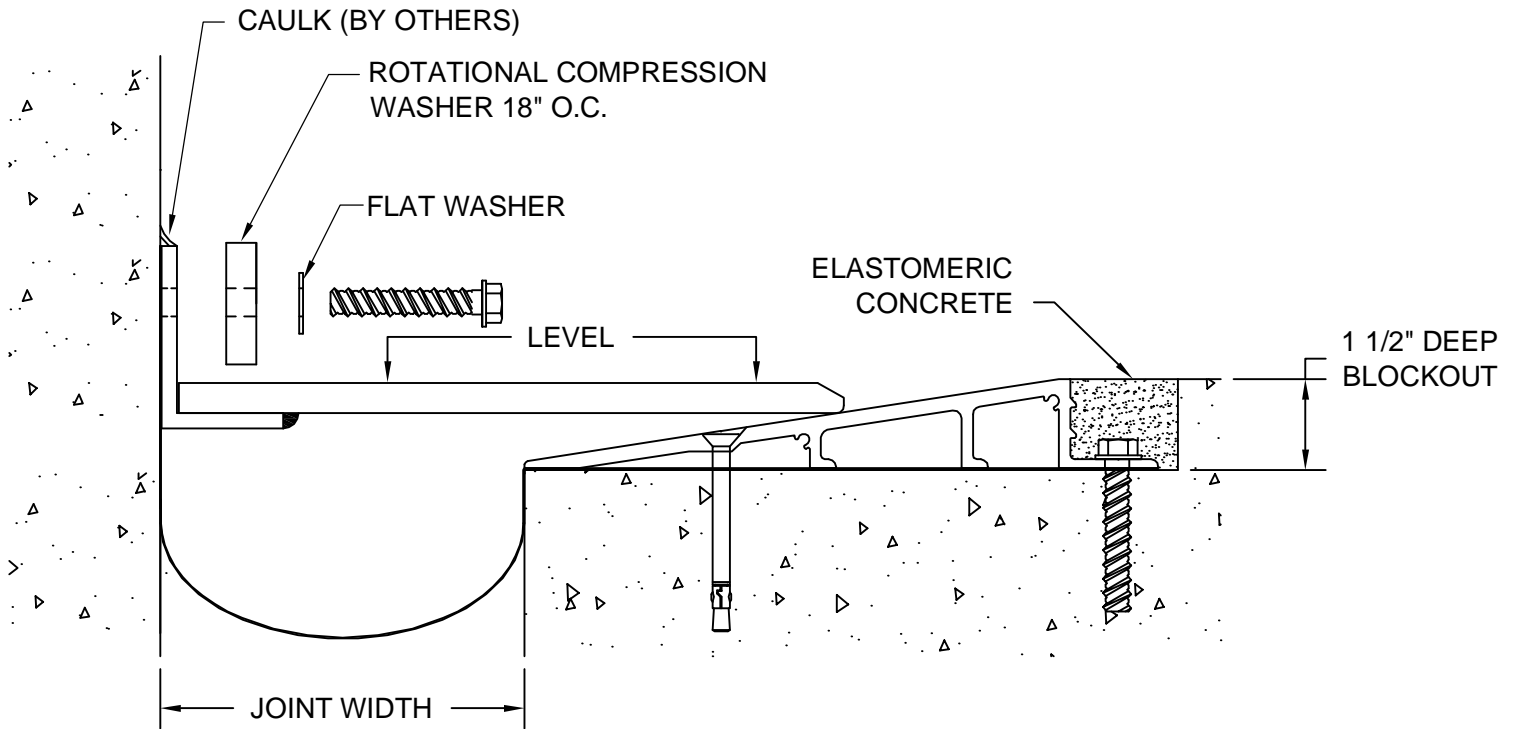


Step 12:

1. See PTC Slide Frame Installation Instructions for set back dimensions (if applicable) and mounting procedures for anchoring the Slide Frame to the blockout.

STEP 13

PTCW COVER PLATE INSTALLATION



Step 13:

1. Position the PTCW Cover Plate against the wall or column and mark the location of the mounting holes. Be sure the Cover Plate is level with the Slide Frame. Remove the Cover Plate and drill the holes with the appropriate bit for the fasteners to be used.
2. Place the Cover Plate into position, install the Rotational Compression Washer and Flat Washer and install the anchors.
3. Caulk the top of the Cover Plate.
4. The Elastomeric Concrete is installed according to the instructions provided with the components of the system.