Silicoflex Installation Procedure

Data Sheet

Silicoflex Seal on Wooden Reel

Silicoflex Locking Adhesive

P-200 Primer (A and B Components)

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Note

The minimum temperature in which you can install the Joint Seal is 40° F and rising ambient air temperature. The joint surface must be completely dry before installing the Joint Seal. The Joint Seal cannot be installed immediately after precipitation or if precipitation is forecasted for the day. Joint preparation and installation of Joint Seal must be done during the same day.

Silicoflex Installation Equipment Checklist

	Item	Use	Notes
	Air Compressor	For Sandblaster and pneumatic caulking gun	
	Sandblasting Equipment Do NOT Sandblast Galvanized Surfaces	For removal of contaminates, rust and debris to produce a rough profile on both inner joint faces.	This method is preferred to remove debris and produce a rough profile in which to bond the Silicoflex system.
	Clean Rags	To clean Silicoflex Seal, joint header, and galvanized steel surface	Galvanized steel must be cleaned twice
	Denatured Alcohol ONLY	To clean Silicoflex Seal, joint header, and clear all blooming on galvanized surface.	Not Isopropyl - this has oils in it. Galvanized Steel must be cleaned twice.
	Clean Empty Cans	To mix two-component Silicoflex P-200, or low viscosity P-53	One pound coffee can, or one quart pail works well
	Small Paint Brushes	To apply mixed Silicoflex Primer to joint header or galvanized surface	Small rollers may be used as well
	Caulking Gun (30 oz.)	To apply Silicoflex Locking Adhesive	Pneumatic or electric will make the job easier
	Compatible Fitting for Pneumatic Caulk Gun*	To connect pneumatic caulk gun to compressor hose	Verify prior to installation that you have the proper fitting
	Box Cutter or Knife	To cut the end of caulking tube	
	Locking Adhesive Poker	To break the thin plastic seal	
	Tongue Depressors	To smooth out top bead of adhesive	Small or large sized, depending on Silicoflex Seal size
	Foam Backer Rod*	To place in joint every 12” to stabilize Seal and set proper joint height	Only necessary when joint opening is on the wider side of the seal’s movement range or if there is no lower step in joint
	Disc Grinder* Do NOT Grind Galvanized Surfaces	To smooth out rough/jagged edges inside concrete joint header	Can be used instead of sandblasting if sandblasting is not permitted or available.
	Splicing Kit*	To cut angles for curbs, sidewalks, and skews	A miter box or wood frame with 45° and 90° angles, and a sharp knife to cut the seal

*Optional or if Necessary

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Surface Preparation

Galvanized Surfaces

Do not sandblast galvanized surfaces. Clean the surfaces at least twice with denatured alcohol only to be free and clear of all blooming.

Rehabilitation Surfaces

If using Silicoflex for strip seal rehab or road widening scenarios, the old steel must be prepared properly based on coating on the steel. The steel must be of sound condition, secured into the bridge deck.

Step One

Using oil and water-free compressed air, blow joint area clean of all sand and debris. Care must be taken to remove sand and debris from vicinity of the joint so that it doesn't enter the joint during installation.

Step Two

Using a clean rag saturated in denatured alcohol, wipe down both sides of the vertical face of the open joint to properly clean the bonding surface.

Mineral spirits and paint thinners are not to be used for cleaning the joint header.

Steel Surfaces

New primed or painted steel does not require sandblasting and can be cleaned with denatured alcohol only.

Uncoated steel surfaces must be sandblasted to a "near white" condition.

Concrete Surfaces

Concrete surface must be sandblasted to remove any and all unsound concrete and debris from exterior surfaces. There must be less than 12% moisture in substrate,

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Step Three

Mix the A and B components of R.J. Watson Silicoflex P-200 primer in a clean bucket until it becomes a uniform opaque color. The primer must then be applied to the vertical face of the joint interface with a clean brush or roller. Allow 30 minutes for the primer to dry prior to the installation of Silicoflex gland.

Traffic must not be allowed to pass over open joint after primer has been applied. Installation must be completed the same day as primer application.

Step Four

Unroll the silicone rubber gland and place adjacent to joint. Using a rag saturated in Denatured Alcohol, remove any dirt or talc, which may be on the bonding surface from the rounded edge to the top of the ridges on the preformed silicone gland.

Mineral spirits and paint thinners are NOT to be used for cleaning the silicone rubber gland because it will leave an oily residue that will prevent proper adhesion between the adhesive & Gland.

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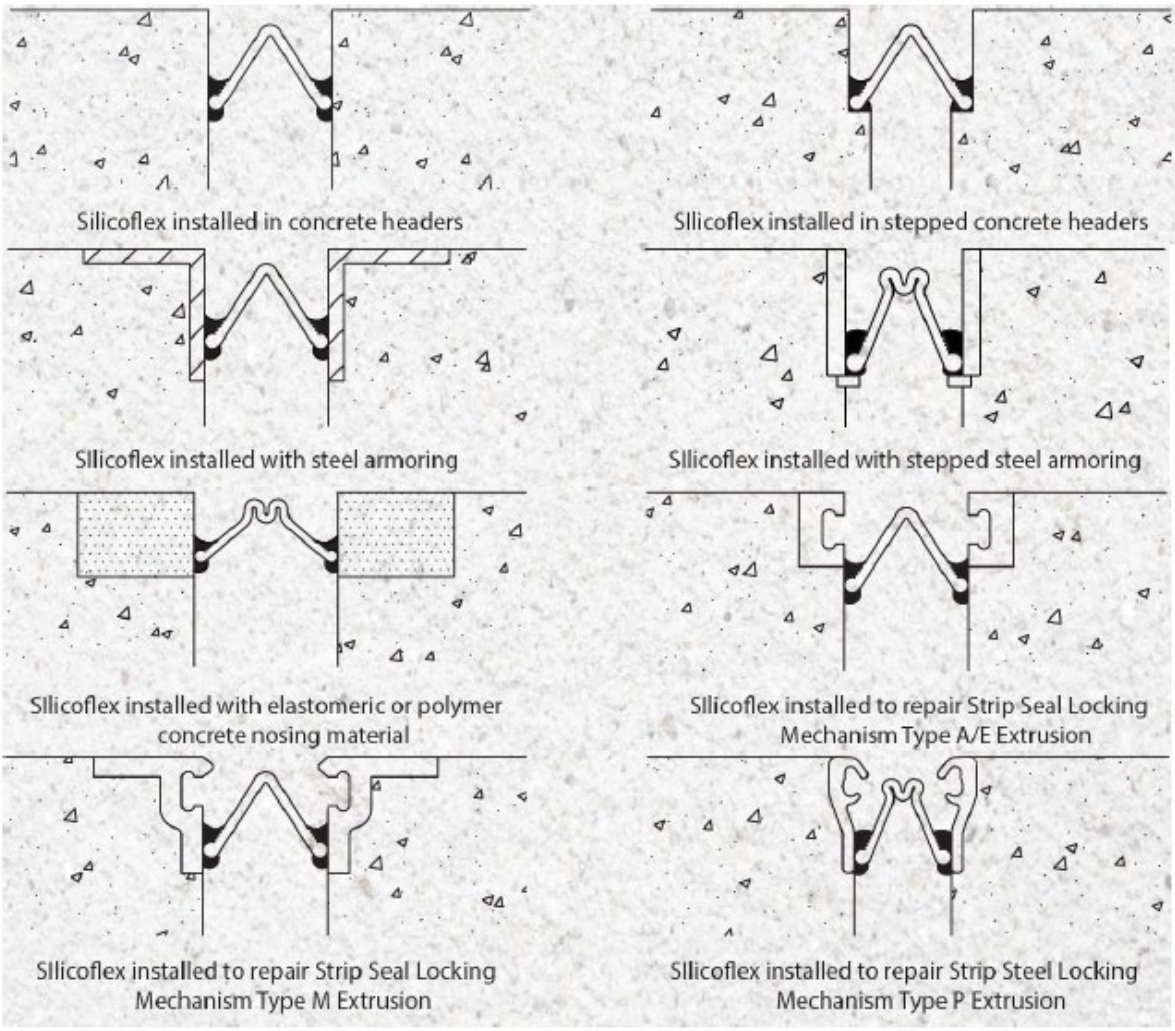
Installation Width and Depth for Each Size Seal

	Silicoflex SF 150	Silicoflex SF 225	Silicoflex SF 325	Silicoflex SF 400	Silicoflex SF 500
Correct Joint Depth Needed for Each Seal Size →	2"	3"	3 1/2"	3 3/4"	4"
Maximum Opening	2"	3"	4"	5"	6 1/2"
Minimum Opening	1/2"	3/4"	3/4"	1"	1 1/2"
Maximum Installation Width	2"	3"	3 1/2"	4 1/2"	5 1/2"
Minimum Installation Width	1"	1 1/4"	1 1/4"	2 1/4"	2 3/4"

Typical Silicoflex Applications



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Step One

SF150 - Prior to installation of the Silicoflex seal, a bead of Silicoflex Locking Adhesive (approximately 3/8" diameter) should be applied to both vertical surfaces of the open joint, approximately 1-1/4" below the surface of the deck.

SF225 - Prior to installation of the Silicoflex seal, a bead of Silicoflex Locking Adhesive (approximately 3/8" diameter) should be applied to both vertical surfaces of the open joint, at a point approximately 2" down below the surface of the deck.

SF325 & SF400 - Prior to installation of the Silicoflex seal, a bead of Silicoflex Locking Adhesive (approximately 3/8" diameter) should be applied to both vertical surfaces of the open joint at a point approximately 2-½" down below the surface of the deck.

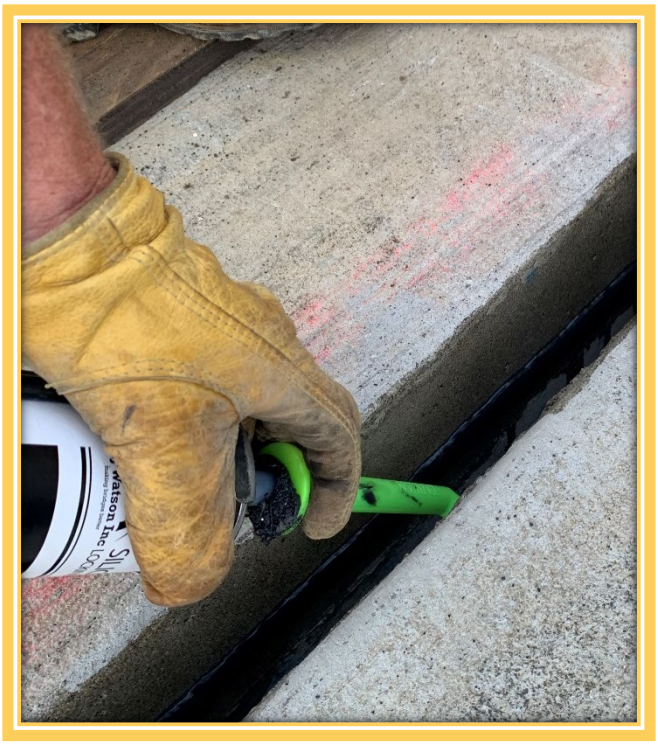
SF500 - Prior to installation of the Silicoflex seal, a bead of Silicoflex Locking Adhesive (approximately

3/8" diameter) should be applied to both vertical surfaces of the open joint approximately 3-1/4" down below the surface of the deck.

Note

Irregular joint openings or joints that are exceptionally wide and do not have a lower step, the use of a backer rod to properly position the seal at the recommended depth as well as stabilize the seal can be used during installation.

Directional changes (such as curbs, sidewalks, barriers and/or skews) in the line of the joint should be shown on the purchase order and discussed with our technical service representative. Depending on the difficulty they can either be prefabricated at our facility or cut and mitered in the field using the Silicoflex locking adhesive.



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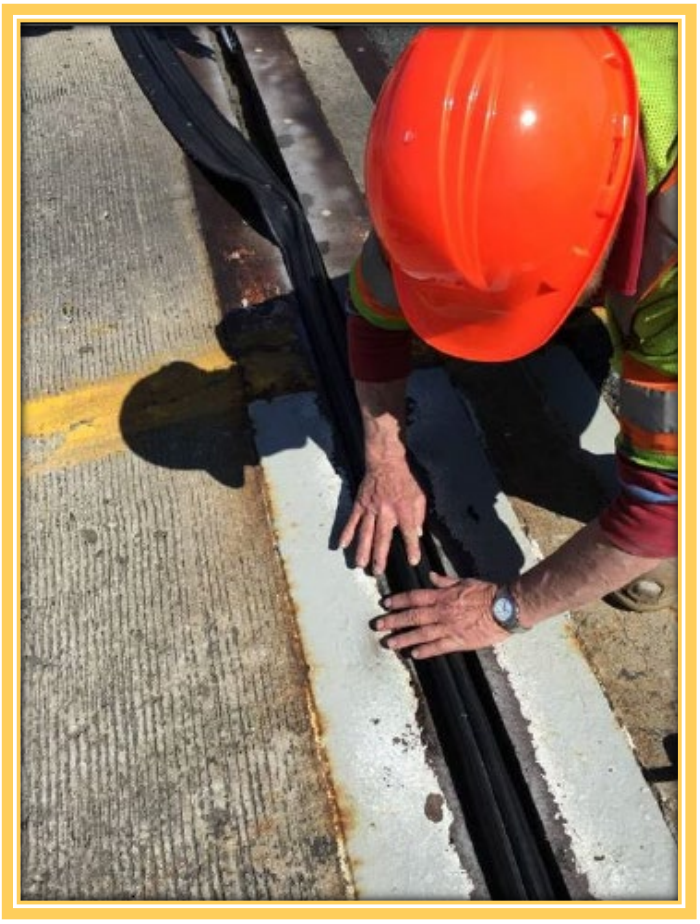
Step Two

Tool locking adhesive to ensure contact with both vertical surfaces prior to inserting joint seal.



Step Three

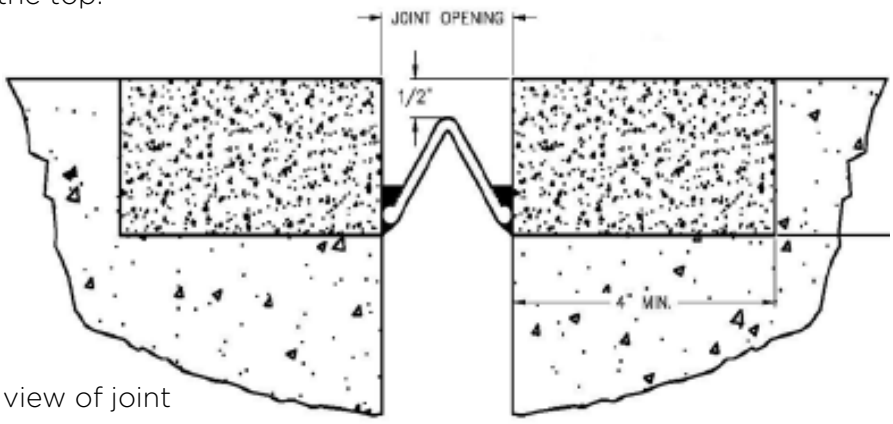
Insert the seal into the joint in an inverted "V" shape with the point of the "V" pointing upward.

Step Four

The depth of the preformed silicone seal must be continually checked and adjusted by hand so that the very top of seal is between ½" and 1" below the road surface at full closure as depicted in the cross-sectional view at the bottom of this page.

Note

SF400 & SF500, have a double fold at the top and SF150 Shown, SF225, & SF325 have a single fold at the top.



Cross sectional view of joint

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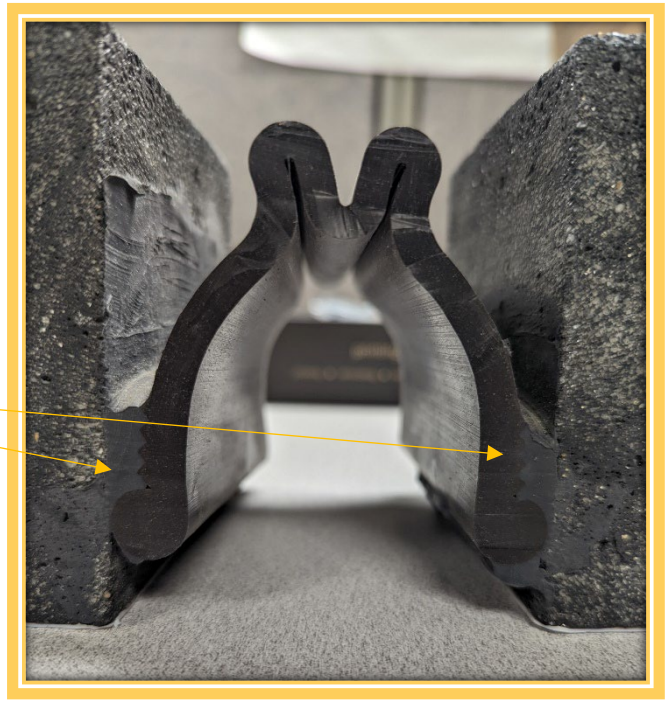
Step Five

A final bead of Silicone Locking Adhesive (approximately 3/8" diameter) is to be applied to each side of the seal which should be in contact with the joint header. This final bead shall be placed to the top of the ridges on the seal, and no higher.



Step Six

The adhesive should then be tooled at least twice to make sure that there is proper contact with the vertical edges of the joint and to be sure that the sealant has seated firmly into the seal serrations. A wooden tongue depressor can serve as a tool.

Note

Silicoflex is a moisture curing single component adhesive. At 75F and 50% humidity, it tacks over in a few minutes and cures in approximately 24 hours under these conditions. It can be opened to traffic one hour after installation.

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Silicoflex Splicing Procedure

Step One

Use a miter box and a long, sharp knife used to maintain a straight and accurate cut.

Step Two

After all cuts have been made, dry-fit them together with your main section of seal as an assembly to ensure proper fit throughout the entire joint section.

Step Three

Prepare the joint by sandblasting both sides of the joint opening first, then clean the joint opening and all spliced pieces thoroughly using denatured alcohol only.

Step Four

Apply the first bead of Silicoflex Locking Adhesive to both sides of the primed joint opening starting at one of the upturn or spliced ends.

Step Five

Apply Silicoflex Locking Adhesive to both spliced edges that have been cut and will be bonded together.

Step Six

Then insert each spliced piece one at a time into the joint just above the beads of adhesive so that both cut ends meet to either form a straight splice or the desired angle-(Example: 45° or 90°angle).

Step Seven

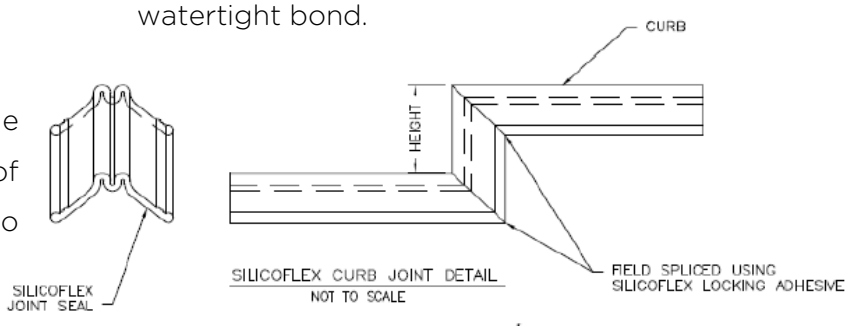
Then lightly push them both down into the joint holding the two splices together, to where the very top of the seal is at least 1/2" below the road surface and or barrier wall. This process should be performed concurrently for the entire length of the joint you are installing.

Step Eight

Next apply a bead of Silicoflex Locking Adhesive to both sides of the inserted seal assembly not to exceed the top of the ribs on both sides of the seal. Then using a wooden tongue depressor, tool both beads of Silicoflex Locking Adhesive which will produce a smooth finished watertight seal on both sides.

Step Nine

Across the top of all splices, apply a 3/8" bead of Silicoflex Locking Adhesive and using a wooden tongue depressor, tool and feather the bead smooth to ensure a watertight bond.



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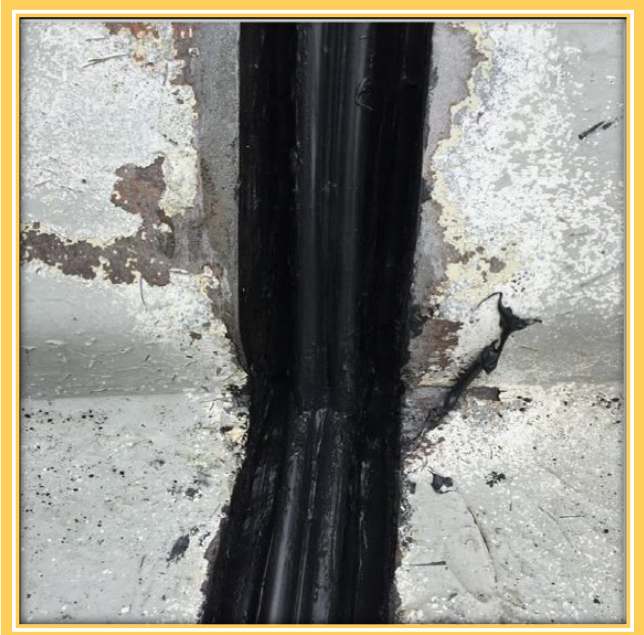
Here are four typical directional change sections completely installed

SF500 seal spliced to transition from road, up curb, and into sidewalk

SF225 seal spliced to accommodate a skew



SF400 seal spliced to turn up a barrier wall

SF225 seal “T-spliced” into SF400 seal

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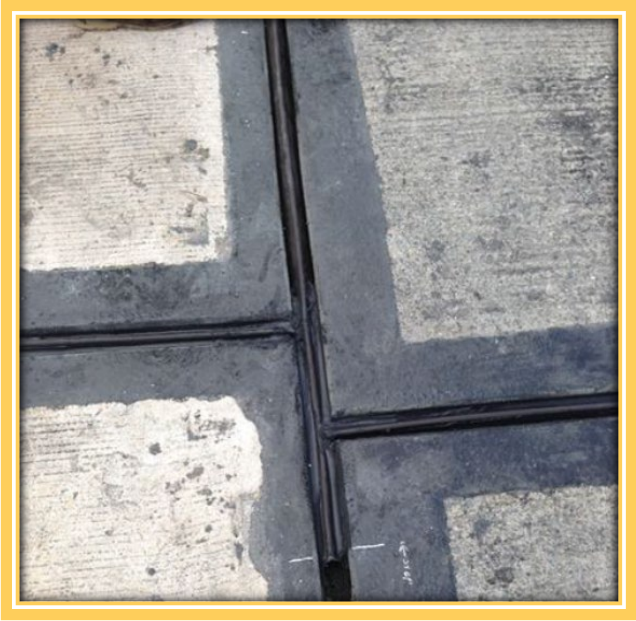
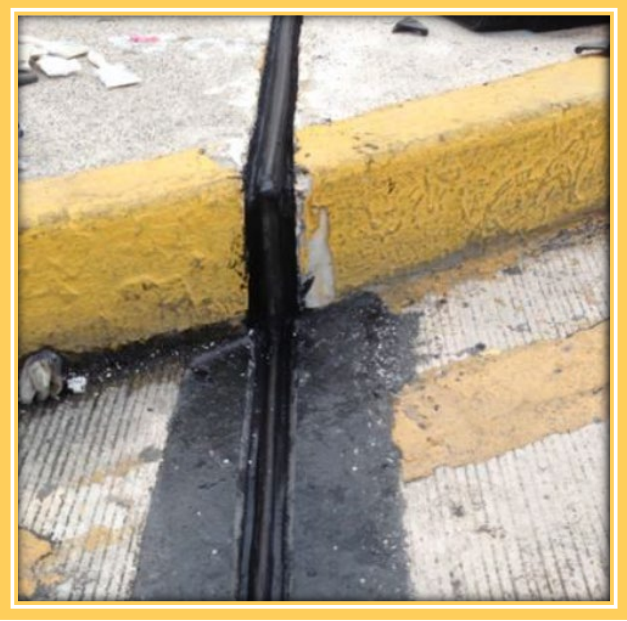
Additional directional changes that can be made with Silicoflex

Intersection template with SF225 seal



Multi-intersection installed



SF225 installed through barrier