**INSTALLATION DETAIL**

The design of the seismic joint (Type I, Half Channel) is a critical component in the construction sequence of the bridge. The joint is designed to transfer forces and moments between the bridge deck and support plate. The following steps outline the installation process:

1. **Clean Joint Blockout, Place Forms and Reinforcement.**
   - Ensure the joint blockout is clean and free of debris. Place forms and reinforcement around the joint area to prepare for the installation of the joint assembly.

2. **Set Joint Modules into Place so the Face of the Joint Opening at 70°F.**
   - Set the joint modules into place so that the face of the joint opening is aligned with the channel assembly. Ensure the joint opening is at 70°F for correct expansion and contraction.

3. **Release Joint and Remove Temporary Stainless Steel Supports.**
   - Once the joint modules are in place, release the temporary stainless steel supports to allow for the joint to settle into its correct position.

4. **Pour SCC below Support Plates.**
   - Once the joint modules are in place and the temporary supports are removed, pour SCC (Self-Compacting Concrete) below the support plates. Let the SCC develop a minimum 1500 psi strength before proceeding to the next step.

5. **Align and Secure All Joint Modules Together to Correct Position.**
   - Align the joint modules to the correct position relative to the deck and support plate. Secure the joint modules together to maintain their alignment.

6. **Fill Deck Holes and Joint with Silicone Joint Seal.**
   - Fill any remaining holes in the deck with silicone joint seal. This ensures a watertight seal around the joint and prevents water from entering the joint area.

**NOTES:**

- Not all reinforcement and joint details are shown for clarity.
- Pipe nipples are optional. Extend pipe nipple holes and locations at deck and support plates. Use of pipes must be determined prior to seismic joint fabrication.
- After joint installation fill all deck plate holes with silicone joint seal and pipe nipple holes. Use, with threaded steel plugs, if used.
- Place deck plate, support plate and channel assembly so that full bearing is achieved between I) deck, support plate and II) deck plate and channel assembly.
- It is the joint opening at installation and is the joint opening at 70°F.

**CONSTRUCTION SEQUENCE:**

**PHASE 1 (ELEVATION) NO SCALE**

1. Clean joint blockout, place forms and reinforcement.
2. Set joint modules into place so the face of the joint opening is aligned with the support plate. Support joint modules temporarily on timber to correct position.\[\]
3. Release joint and remove temporary stainless steel supports.
4. Pour SCC below support plates. Let SCC develop a minimum 1500 psi strength before proceeding to the next step.
5. Align and secure all joint modules together to correct position, remove temporary timber supports.
6. Fill joint holes and joint with silicone joint seal.

**PHASE 2 (ELEVATION) NO SCALE**

1. Change the pin support of the temporary frame to roller. Release deck plate from support plate. Slide deck plate and channel assembly together so the face of the joint opening is aligned with the channel assembly. Change the roller support of the temporary frame to pin. Place support plate, channel assembly side, to the correct pin location and pin to final position.
2. Pour SCC around the channel assembly. Let SCC develop a minimum 1500 psi strength before proceeding to the next step.
3. Remove pipes, bolts, forms and clean surfaces.
4. Place SSJSA to the correct minimum joint opening "W." Place polyester concrete between the SSJSA and the bridge deck.
5. If pipe nipples used, plug pipe nipple holes with threaded steel plugs; fill deck holes and joint with silicone joint seal.

**STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION DIVISION OF ENGINEERING SERVICES CONSTRUCTION SEQUENCE**

**SEISMIC JOINT (TYPE I, HALF CHANNEL)**

**BRIEF DESCRIPTION**

The seismic joint assembly consists of the channel assembly, and the deck and support plate. The joint is designed to accommodate vertical and horizontal movements between the bridge deck and support plate. The joint assembly is a critical component in the bridge's ability to transfer forces and moments between the two structural elements.