1. Construct the expansion joints, V-Grooves and face of coping plumb.
2. Provide Class II concrete for slightly aggressive environments or Class IV for moderate or extremely aggressive environments.
3. Dowel Load Transfer Devices will be hot-dip galvanized ASTM A 36 smooth round bar, or GFRP smooth round bars with a minimum shear strength of 23 ksi in accordance with ASTM D7617. Install Dowel Load Transfer Devices in accordance with Specification Section 350.
4. Construct 1/2" Expansion Joints in junction slabs and C-I-P copings plumb and perpendicular or radial to the Gutter Line. Provide at 90'-0" maximum intervals as shown. Provide 3 x 3" Mortar plugs in open joints at the base of Concrete Barriers to contain runoff.
5. Shear Keys in junction slab are required when GFRP bars are used for Dowel Transfer Devices and are optional with steel dowel bars. Tongue Slope on Shear Key must be constant and between 5" to 45" from horizontal.
6. Provide and Install Preformed Expansion Joint Filler in accordance with Specification Section 932.
7. Construct 1/2" V-Grooves in junction slabs and C-I-P copings at 30'-0" maximum intervals as shown. Approach Slab Top of Gutter Line to coincide with V-Groove locations in the Concrete Barrier.
8. Shoulder or Roadway Pavement is required on top of the junction slab for its entire length on the traffic side of the Concrete Barrier. See Typical Sections on Sheets 2 and 3 for details.
9. Spacing shown is along the Gutter Line.
10. For Precast Coping only, provide Dowel Bars 4D embedded 1'-0" and extended 9" above the top of MSE wall panels. Field cut as necessary to maintain 2" minimum cover to the top of the build-up concrete. See Wall Company Drawings for number and spacing of Dowel Bars 4D.
11. The following Indexes contain details of the intersection of the retaining wall at approach slabs:
   - Index 400-090 - Approach Slabs (Flexible Pavement Approaches)
   - Index 400-091 - Approach Slabs (Rigid Pavement Approaches)

**CROSS REFERENCE:** For Detail "A", see Sheet 2.

**EXPANSION JOINT DETAIL**
(Junction Slab expansion joints are to coincide with 1/2" open joints in Concrete Barrier)

**PARTIAL ELEVATION VIEW**
(Precast Coping and Junction Slab Reinforcing Not Shown for Clarity)
(Precast Coping Shown, C-I-P Coping Similar) (Concrete Barrier not Shown for Clarity)

**PARTIAL PLAN VIEW FOR 36" SINGLE-SLOPE CONCRETE BARRIER**
(Skewed Approach Slab Shown, Perpendicular Approach Slab Similar)
(Precast Coping Shown, C-I-P Coping Similar) (Concrete Barrier not Shown for Clarity)

**INDEX**

- **521-610**
  - *Concrete Barrier/Junction Slab (Wall Coping)*

**STANDARD PLANS**

- **FY 2020-21**

**LAST REVISION**

- **01/01/19**

**DESCRIPTION**

- **Coping Open Joints in Concrete Barrier**
**DESCRIPTION:**

**SHEET**

**REVISION**

**LAST REVISION**

**STANDARD PLANS**

**FY 2020-21**

**INDEX**

**SHEET**

**PRECAST COPING**

**DETAIL "A"**

(Showing Locations of ½ V-Grooves and ½ Preformed Expansion Joint Filler)

**C-I-P COPING**

**TYPICAL SECTION THRU PRECAST 36" SINGLE-SLOPE CONCRETE BARRIER AND COPING WITH C-I-P JUNCTION SLAB**

**NOTES:**

1. Match Cross Slope of Travel Lane or Shoulder.
2. Vary Junction Slab slope based on roadway cross slope to maintain a minimum 6" asphalt depth at the edge of the slab as shown.
3. For Rigid Pavement (Concrete), Junction Slab may be thickened to match finished grade. Vary the Junction Slab slope to maintain a minimum 1'-6" thickness at the edge of the slab.
4. See Roadway Plans for asphalt shoulder, roadway pavement and overbuild.
5. Minimum length of Junction Slab between expansion joints is 30'-0".
6. At the Contractor's option, mechanical couplers may be used to splice reinforcing. Provide mechanical couplers in accordance with Specification Section 415. Mechanical couplers shall develop 125% of the bar yield strength.
7. Contractor to maintain stability of precast coping/Concrete Barrier prior to junction slab completion. In the Shop Drawings, show reinforcement for optional extension required for stability, shipping and handling. Maintain 2" minimum concrete cover.
8. When the air gap between the precast coping extension and retaining wall exceeds 2½" fill gap with full depth Expanded Polystyrene to provide a maximum 2½" air gap.
9. Angle varies ~ 0° min., 25° max.

**PARTIAL END VIEW OF CONCRETE BARRIER END TRANSITION FOR GUARDRAIL ATTACHMENT**

(Precast Coping Shown, C-I-P Coping Similar)