CONTRACTION JOINT
UNDOWELED - TRANSVERSE and UNTIED - LONGITUDINAL

See sawed or formed joint sealing details

Dowel bar @ 12" c-c

T/2

9"
9"

Fixed end

Grease free end

CONTRACTION JOINT
DOWELED - TRANSVERSE

See sawed or formed joint sealing details

Tie bar @ 30" c-c

16" 16"

CONTRACTION JOINT
TIED - LONGITUDINAL

Dowel cap

See isolation joint sealing details

T/2

9"
9"

Dowel bar @ 12" c-c

ISOLATION/EXPANSION JOINT
DOWELED - TRANSVERSE

See isolation joint sealing details

Fixture or structure

1/2" typ.

CONSTRUCTION JOINT
PLAIN - TRANSVERSE or LONGITUDINAL

See construction joint sealing details

Dowel bar @ 12" c-c

T/2

9"
9"

CONSTRUCTION JOINT
DOWELED BUTT - TRANSVERSE

See construction joint sealing details

Tie bar @ 30" c-c

18" 18"

CONSTRUCTION JOINT
TIED BUTT - LONGITUDINAL

See construction joint sealing details

#8 Tie bar @ 12" c-c

18" 18"

CONSTRUCTION JOINT
TIE KEYWAY - LONGITUDINAL

See construction joint sealing details

T/3 x 1½" keyway

18" 18"

ISOLATION JOINT
UNDOWELED - LONGITUDINAL

See isolation joint sealing details

1/2" typ.

ISOLATION JOINT
UNDOWELED - TRANSVERSE

Preformed joint filler

Joint sealant

Backer rod

MINOR CONCRETE PAVEMENT JOINT SEALING DETAILS

NOTES:
1. Use epoxy-coated material for all tie bars, dowels, and other steel used in the construction of concrete pavement.
2. Deformed reinforcing bars or hook bolts may be used for tie bars.
3. Do not place tie bars within 15 inches of transverse joints.
4. Install isolation joints when abutting a fixed structure. Use expansion joint material extending the full depth and length of the concrete surface.
5. Transverse and longitudinal construction joints are not included in the joint layout plan. Use transverse and longitudinal construction joints sparingly. Submit planned construction joint locations for approval.
6. For construction joints, if tie bars and dowels are not set into concrete during placement, drill and anchor the tie bars and dowels into the existing concrete construction with epoxy resin.
7. Maintain joint sealant shape factor of 1:1; except when silicone sealant is used, maintain the width to depth shape factor of 2:1 or as recommended by sealant manufacturer.
8. See Section 712 for joint material requirements.
9. See Detail ET 501-1 or ET 502-1 for reinforcement details.

BAR SIZES

<table>
<thead>
<tr>
<th>PAVEMENT THICKNESS (T) (IN)</th>
<th>TIE BAR</th>
<th>DOWEL BAR DIAMETER (IN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T ≤ 8</td>
<td>#5</td>
<td>1</td>
</tr>
<tr>
<td>8 &lt; T ≤ 10</td>
<td>#5</td>
<td>1½</td>
</tr>
<tr>
<td>10 &lt; T ≤ 12</td>
<td>#6</td>
<td>1½</td>
</tr>
</tbody>
</table>

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL AIDS HIGHWAY DIVISION

U.S. CUSTOMARY DETAIL

MINOR CONCRETE PAVEMENT JOINTS