Work under this task, “Design Detail Standard Sheets for Concrete Pavement Transition Area,” focused on the development of the transition detail sheets according to the transition types and locations identified under the task of the survey of best practices in accordance with Texas Department of Transportation (TxDOT) standards. Auto CAD is used to create the detail sheets from the analysis performed and the conclusions developed under the task of the design and construction transition guidelines for concrete pavement. These designs do not replace or supersede any previously used transition. The following 13 most frequently constructed types of concrete pavement transitions are introduced and some have optional alternative designs.

1. Continuously Reinforced Concrete (CRC) Pavement to CRC Pavement Thickness Transition.
2. CRC Pavement to CRC Pavement Construction Joint Transition.
3. CRC Pavement to Jointed Concrete (JC) Pavement Transition.
4. CRC Pavement to Flexible Pavement Transition.
5. JC Pavement to Flexible Pavement Transition.
6. JC Pavement to JC Pavement Transition.
7. CRC Pavement to Bridge Approach Slab Transition.
8. JC Pavement to Bridge Approach Slab Transition.
9. Intersection Transition.
10. Overlay-Unbonded, Bonded, Asphalt Concrete (AC) Overlays Transition.
11. CRC Bonded Overlay to CRC Pavement Transition.
12. Drop Inlet/Drainage Box.
13. Ramp/Gore Area Transition.

The sketches of the transition details are checked for consistency with the guidelines. The transition detail sheets will be evaluated by TxDOT for implementation.
DESIGN DETAIL STANDARD SHEETS FOR CONCRETE PAVEMENT TRANSITION AREA

by

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Texas Transportation Institute

and

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Texas Transportation Institute

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Project 0-5320
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Performed in cooperation with the
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and the
Federal Highway Administration

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The Texas A&M University System
College Station, Texas 77843-3135
DISCLAIMER

The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the Federal Highway Administration (FHWA) or the Texas Department of Transportation (TxDOT). This report does not constitute a standard, specification, or regulation. Its contents are not intended for construction, bidding, or permit purposes. The use and names of specific products or manufacturers listed herein does not imply endorsement of those products or manufacturers. The engineer in charge of the project was Dan G. Zollinger, Texas P.E. #67129.
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TRANSVERSE TYPE B (DB)

EXIST CRCP
NEW CRCP

① 25" LAP SPLICe

ALL STEEL IS IN SAME PLANE
9" MIN.

DRILL & EPOXY
12.5" 12.5"

18" WHEEL PATH ONLY

18" STEEL FOR T1

10' CENTER OF SPLICE

20' TRANSITION LENGTH

d2" STEEL FOR T2

SUBBASE (REFER TO TYPICAL SECTION)

CLASSIFICATION AND NOTATION OF JOINT

<table>
<thead>
<tr>
<th>TYPE</th>
<th>JOINT DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>CONTRACTION JOINT</td>
</tr>
<tr>
<td>B</td>
<td>CONSTRUCTION JOINT</td>
</tr>
<tr>
<td>C</td>
<td>ISOLATION JOINT</td>
</tr>
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</table>

MODIFIER

<table>
<thead>
<tr>
<th>WITH SMOOTH CONW</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>WITH FORGED BAR</td>
<td>TB</td>
</tr>
</tbody>
</table>

BAR SIZE | SPACING |
---------|---------|
6        | 0.75"   |
8        | 0.75"   |
10       | 0.75"   |
11       | 0.75"   |
12       | 0.75"   |
14       | 0.75"   |
18       | 0.75"   |

(CRCP PAVEMENT TO CRCP PAVEMENT)

THICKNESS TRANSITION

T1 = THICKNESS OF EXISTING CRCP PAVEMENT
T2 = THICKNESS OF NEW CRCP PAVEMENT

BASEMENT

CANCELLED

REVISIONS
12" FROM THE EDGE

EDGE OF CRC PAVEMENT OR LONGITUDINAL JOINT

WHEEL PATH: 36" WIDTH

AS A MINIMUM, PLACE ADDITION DEFORMED BARS (36" SAME DIA. & SPACING WITH LONGIT. STEEL) IN EACH WHEEL PATH FOR LOAD TRANSFER.

TRANSVERSE TYPE B (DB)
ALL STEEL IS IN SAME PLANE

REINFORCING STEEL

5'-6' (TYP)

1) 25" LAP SPLICE

CRC PAVEMENT TO CRC PAVEMENT
(HEADER JOINT - OPTION 2)
TRANSVERSE TYPE B (WF)

CRC PAVEMENT

REINFORCING STEEL

2" POLY FOAM COMPRESSION SEAL

PROFILE VIEW

CRC PAVEMENT

JOINTED CONCRETE SLAB

SUBBASE (REFER TO TYPICAL SECTION)

CRC PAVEMENT

JOINTED CONCRETE SLAB

JOINTED CONCRETE SLAB

TRANSVERSE TYPE A (SD)

JOINTED CONCRETE SLAB

DOWEL

STRAND CAPSED END

2" POLY FOAM COMPRESSION SEAL

PROFILE VIEW

CRC PAVEMENT

JOINTED CONCRETE SLAB

JOINTED CONCRETE SLAB

TRANSVERSE TYPE A (SD)

J OINTED CONCRETE SLAB

CRC PAVEMENT TO JOINTED CONCRETE PAVEMENT (OPTION 2)
CRCP 30% STEEL Transition Zone

Jointed Concrete Slab

Reinforcing Steel

Optional Dowel

Dowel Standard Cap

Dowel

Subbase (refer to typical section)

Profile View

Saw cuts or induced design crack

CRC Pavement

JC Pavement

Plan View

Place optional dowel through 30% steel transition zone if load transfer by aggregate interlocking only is insufficient based on current design slab length and thickness.

Classification and Notation of Joint

<table>
<thead>
<tr>
<th>Type</th>
<th>Joint Description</th>
<th>Modifier</th>
<th>Notation</th>
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<tbody>
<tr>
<td>A</td>
<td>Construction Joint</td>
<td>With Smooth Dowel</td>
<td>SD</td>
</tr>
<tr>
<td>B</td>
<td>Demolition Joint</td>
<td>Tied</td>
<td>Tied</td>
</tr>
<tr>
<td>C</td>
<td>Isolation Joint</td>
<td>Thinned</td>
<td>Thinned</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sleeper Slab</td>
<td>SS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expanded</td>
<td>Expanded</td>
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Longitudinal Steel Size and Spacing

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<tr>
<th>Thickness</th>
<th>Bar Size</th>
<th>Longitudinal Steel Spacing</th>
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<tbody>
<tr>
<td>6</td>
<td>0.4 (0.75)</td>
<td>6' 13.5' 27'</td>
</tr>
<tr>
<td>8</td>
<td>0.4 (0.75)</td>
<td>8' 15' 31'</td>
</tr>
<tr>
<td>10</td>
<td>0.4 (0.75)</td>
<td>10' 17.5' 35'</td>
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</tbody>
</table>

Dowels Requirements

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Dowels (Smooth Bar)</th>
<th>Dowels (Tied Bar)</th>
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<tbody>
<tr>
<td>6</td>
<td>1' x 16' 15'</td>
<td>1' x 16' 15'</td>
</tr>
<tr>
<td>8</td>
<td>1.25' x 16' 15'</td>
<td>1.25' x 16' 15'</td>
</tr>
<tr>
<td>10</td>
<td>1.5' x 16' 15'</td>
<td>1.5' x 16' 15'</td>
</tr>
<tr>
<td>11</td>
<td>1.75' x 16' 15'</td>
<td>1.75' x 16' 15'</td>
</tr>
</tbody>
</table>

CRC Pavement to Jointed Concrete Pavement (Option 3)
TRANSVERSE TYPE B (WF)  
TRANSVERSE TYPE B (TAPERED)

CRC PAVEMENT  
JOINTED SLAB  
FULL DEPTH HMA  
BEVELED EDGE

REINFORCING STEEL  
2" POLY FOAM COMPRESSION SEAL

1/4" DIA. X 8" STUDS @18" C.C.

SUBBASE (REFER TO TYPICAL SECTION)

CRC PAVEMENT TO FLEXIBLE PAVEMENT (OPTION 1 - WIDE FLANGE)

CLASSIFICATION AND NOTATION OF JOINT

<table>
<thead>
<tr>
<th>TYPE</th>
<th>JOINT DESCRIPTION</th>
<th>MODIFIER</th>
<th>ABBREVIATION</th>
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<tbody>
<tr>
<td>A</td>
<td>CONSTRUCTION JOINT</td>
<td>WITH SMOOTH DOWEL</td>
<td>SD</td>
</tr>
<tr>
<td>B</td>
<td>ISOLATION JOINT</td>
<td>WITH DEFORMED DOWEL</td>
<td>DD</td>
</tr>
<tr>
<td>C</td>
<td>TIE JOINT</td>
<td>TIED</td>
<td>T</td>
</tr>
<tr>
<td>D</td>
<td>THICKENED EDGE</td>
<td>TIED</td>
<td>TE</td>
</tr>
<tr>
<td>E</td>
<td>SLEEPER SLAB</td>
<td>TIED</td>
<td>SS</td>
</tr>
<tr>
<td>F</td>
<td>EXPANDED</td>
<td>TIED</td>
<td>EX</td>
</tr>
</tbody>
</table>

DOWEL REQUIREMENTS

<table>
<thead>
<tr>
<th>T No.</th>
<th>SIZE X LENGTH (LB/FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.5&quot; X 16&quot;</td>
</tr>
<tr>
<td>2</td>
<td>1.5&quot; X 16&quot;</td>
</tr>
<tr>
<td>3</td>
<td>1.5&quot; X 16&quot;</td>
</tr>
<tr>
<td>4</td>
<td>1.5&quot; X 16&quot;</td>
</tr>
<tr>
<td>5</td>
<td>1.5&quot; X 16&quot;</td>
</tr>
<tr>
<td>6</td>
<td>1.5&quot; X 16&quot;</td>
</tr>
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</table>

STEEL BEAM DETAIL

REVIEWS  
DRAFT  
REVISIONS
CRC PAVEMENT TO FLEXIBLE PAVEMENT (OPTION 2 - SLEEPER SLAB)

<table>
<thead>
<tr>
<th>CLASSIFICATION AND NOTATION OF JOINT</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
</tbody>
</table>

REINFORCING STEEL

STEEL BEAM (AASHTO M183M)

3/4" DIA. x 8" STUDS @ 18" C.C.

2" POLY FOAM COMPRESSION SEAL

BAR "A"

BAR "B"

MIN 1" AC BOND BREAKER

JOINTED SLAB

SUBBASE (REFER TO TYPICAL SECTION)

FLEXIBLE PAVEMENT (REFER TO TYPICAL SECTION)

TRANSVERSE TYPE C
(1" ELASTOMERIC CONCRETE)

CRC PAVEMENT

REFER TO TYPICAL SECTION
TRANSVERSE TYPE B (WF)

CRC PAVEMENT

REINFORCING STEEL

JOINTED SLAB

3/4" DIA. X 8" STUDS Ø18" C.C.

SUBBASE (REFER TO TYPICAL SECTION)

2" POLY FOAM COMPRESSION SEAL

TRANSVERSE TYPE C
(1" ELASTOMERIC CONCRETE)

FLEXIBLE PAVEMENT
(REFER TO TYPICAL SECTION)

REFER TO TYPICAL SECTION

CLASSIFICATION AND NOTATION OF JOINT

COWELS REQUIREMENTS

CRC PAVEMENT TO FLEXIBLE PAVEMENT (OPTION 2 - WIDE FLANGE)
TRANSVERSE TYPE A (SD)

TRANSVERSE TYPE C (1" ELASTOMERIC CONCRETE)

JC PAVEMENT

JOINTED SLAB

FLEXIBLE PAVEMENT (REFER TO TYPICAL SECTION)

SUBBASE (REFER TO TYPICAL SECTION)

CLASSIFICATION AND NOTATION OF JOINT

<table>
<thead>
<tr>
<th>TYPE</th>
<th>JOINT DESCRIPTION</th>
<th>MODIFIER</th>
<th>WITHIN JOINT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>CONTRACTION JOINT</td>
<td>TIE</td>
<td>TIE</td>
</tr>
<tr>
<td>B</td>
<td>CONSTRUCTION JOINT</td>
<td>TIE</td>
<td>TIE</td>
</tr>
<tr>
<td>C</td>
<td>ISOLATION JOINT</td>
<td>TIE</td>
<td>TIE</td>
</tr>
<tr>
<td>D</td>
<td>TYPICAL SECTION</td>
<td>TIE</td>
<td>TIE</td>
</tr>
</tbody>
</table>

DOWEL REQUIREMENTS

<table>
<thead>
<tr>
<th>THICKNESS</th>
<th>DOWEL SMOOTH BORE</th>
<th>SIZE &amp; LENGTH TIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1'</td>
<td>1/2&quot; X 1/8&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>1/2&quot; X 1/8&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>2&quot;</td>
<td>1/2&quot; X 1/8&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>3&quot;</td>
<td>1/2&quot; X 1/8&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>4&quot;</td>
<td>1/2&quot; X 1/8&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>5&quot;</td>
<td>1/2&quot; X 1/8&quot;</td>
<td>12&quot;</td>
</tr>
</tbody>
</table>

JC PAVEMENT TO FLEXIBLE PAVEMENT (OPTION 2)
TRANSVERSE TYPE B (SD)

DOWEL

STANDARD CAPPED END

15' (LESS THAN MAXIMUM JOINT SPACING)

TRANSVERSE TYPE B (SD)

DOWEL

STANDARD CAPPED END

CLASSIFICATION AND NOTATION OF JOINT

<table>
<thead>
<tr>
<th>TYPE</th>
<th>JOINT DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>CONSTRUCTION JOINT</td>
</tr>
<tr>
<td>B</td>
<td>ISOLATION JOINT</td>
</tr>
<tr>
<td>wSD</td>
<td>WITH SMOOTH DOWEL</td>
</tr>
<tr>
<td>wTB</td>
<td>WITH TIED DOWEL</td>
</tr>
<tr>
<td>wTE</td>
<td>WITH THICKENED EDGE</td>
</tr>
<tr>
<td>wWF</td>
<td>WIDE FLANGE</td>
</tr>
<tr>
<td>S</td>
<td>SLEEPER SLAB</td>
</tr>
<tr>
<td>T</td>
<td>TAPERED</td>
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DOWEL REQUIREMENTS

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<th>THICKNESS</th>
<th>MILLIMETERS</th>
<th>INCHES</th>
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<td>15</td>
<td>1/2</td>
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<td>28</td>
<td>1 1/4</td>
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<td>12</td>
<td>30</td>
<td>1 1/2</td>
</tr>
<tr>
<td>13</td>
<td>33</td>
<td>1 3/16</td>
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<tr>
<td>14</td>
<td>35</td>
<td>1 3/8</td>
</tr>
<tr>
<td>15</td>
<td>38</td>
<td>1 3/8</td>
</tr>
</tbody>
</table>

JC PAVEMENT TO JC PAVEMENT
(THICKNESS TRANSITION)
1. If PCC pavement thickness is different with bridge approach slab, employ pavement thickness transition before the transition to bridge approach slab.
TRANSVERSE TYPE B (WF)  
CRC PAVEMENT  
REINFORCING STEEL  
3/4" X 8" STUDS 18" C.C.  
STANDARD CAPPED END  
DOWEL  
CRC PAVEMENT  
JOINTED CONCRETE SLAB  
SUBBASE (REFER TO TYPICAL SECTION)  
2" POLY FOAM COMPRESSION SEAL  
PROFILE VIEW  
CRC PAVEMENT  
JOINTED CONCRETE SLAB  
TRANSVERSE TYPE B (SD)  
BRIDGE APPROACH SLAB  
JOINTED CONCRETE SLAB  
BRIDGE APPROACH SLAB  
TRANSVERSE TYPE B (WF)  
PLAN VIEW  

NOTE: IF PCC PAVEMENT THICKNESS IS DIFFERENT WITH BRIDGE APPROACH SLAB, EMPLOY PAVEMENT THICKNESS TRANSITION BEFORE THE TRANSITION TO BRIDGE APPROACH SLAB.
TRANSVERSE TYPE A (DB)
TRANSVERSE TYPE B (SD)

CRCP 30% STEEL
TRANSITION ZONE

BRIDGE APPROACH SLAB

REINFORCING STEEL

12' 12'

CRCP 30" STEEL TRANSITION ZONE

OPTIONAL DOWEL
OPTIONAL DOWEL
STANDARD CAP

120'

CRCP PAVEMENT
BRIDGE APPROACH SLAB

PROFILE VIEW

SAW CUTS OR INDUCED DESIGN CRACK

CRC PAVEMENT
TRANSVERSE TYPE B (SD)

PLAN VIEW

IF PCC PAVEMENT THICKNESS IS DIFFERENT WITH BRIDGE APPROACH SLAB, EMPLOY PAVEMENT THICKNESS TRANSITION BEFORE THE TRANSITION TO BRIDGE APPROACH SLAB

PLACE OPTIONAL DOWEL THROUGH 30% STEEL TRANSITION ZONE IF LOAD TRANSFER BY AGGREGATE INTERLOCKING ONLY IS INSUFFICIENT BASED ON CURRENT DESIGN SLAB LENGTH AND THICKNESS

LONGITUDINAL STEEL, SIZE AND SPACING

THICKNESS 1/16" BAR SIZE LONGITUDINAL STEEL SPACING 1/16" STEEL ZONE 1/16" TRANSITION ZONE 1/16" TRANSITION ZONE 1/16" LONGITUDINAL STEEL SPACING

MODIFIER

THICKNESS 1/16" BAR SIZE LONGITUDINAL STEEL SPACING 1/16" STEEL ZONE 1/16" TRANSITION ZONE 1/16" TRANSITION ZONE 1/16" LONGITUDINAL STEEL SPACING

DOWELS REQUIREMENTS

THICKNESS 1/16" DOWEL (SMOOTH BAR)

FILE DATE JOB No.

COUNTY CONTROL SPEC JOB INFORMATION

REVISIONS

CRC PAVEMENT TO BRIDGE APPROACH SLAB (OPTION 3)
1. If PCC pavement thickness is different with Bridge Approach Slab, employ pavement thickness transition before the transition to Bridge Approach Slab.
LONGITUDINAL TYPE C (TE)
LONGITUDINAL TYPE B (TIED)

FRONTAGE ROAD CRCP

SPECIAL AREA: ROUTE TRAFFIC TO FACILITATE THE JOINTING PLAN, BUT AVOID ADDITIONAL TRANSVERSE (I.E. HEADER) JOINTS IN THIS REGION, IF POSSIBLE.

FRONTAGE ROAD CRCP

THE LENGTH BETWEEN LONGITUDINAL JOINT IS LARGER THAN 500 FT.

EMPLOY LONGITUDINAL TYPE C (WF OR SS OR TE)

CLASSIFICATION AND NOTATION OF JOINT

<table>
<thead>
<tr>
<th>TYPE</th>
<th>JOINT DESCRIPTION</th>
<th>MODIFIER</th>
<th>ABBREVIATION</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>CONTRACTION JOINT</td>
<td>WITH SMOOTH DOWEL</td>
<td>SD</td>
</tr>
<tr>
<td>B</td>
<td>CONSTRUCTION JOINT</td>
<td>WITH DEPRESSED BAR</td>
<td>DB</td>
</tr>
<tr>
<td>C</td>
<td>ISOLATION JOINT</td>
<td>TIED</td>
<td>TIED</td>
</tr>
<tr>
<td>D</td>
<td>THICKENED EDGE</td>
<td>TE</td>
<td>TE</td>
</tr>
<tr>
<td>E</td>
<td>HEADED FLANGE</td>
<td>WF</td>
<td>WF</td>
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<tr>
<td>F</td>
<td>EJECTION BOLT</td>
<td>EB</td>
<td>EB</td>
</tr>
<tr>
<td>G</td>
<td>TAPERED</td>
<td>TAPERED</td>
<td>TAPERED</td>
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DOWEL REQUIREMENTS

<table>
<thead>
<tr>
<th>THICKNESS</th>
<th>SIZE &amp; LENGTH SPACING</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1 1/4 X 1 1/8 1 1/2</td>
</tr>
<tr>
<td>8</td>
<td>1 1/4 X 1 1/8 1 1/2</td>
</tr>
<tr>
<td>10</td>
<td>1 1/4 X 1 1/8 1 1/2</td>
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<td>12</td>
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<td>14</td>
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</tr>
<tr>
<td>16</td>
<td>1 1/4 X 1 1/8 1 1/2</td>
</tr>
</tbody>
</table>

INTERSECTION (OPTION 1 - JOINT DISTANCE > 500 FT)
FRONTAGE ROAD CRCP

LONGITUDINAL TYPE C (TE)

LONGITUDINAL TYPE B (TIED)

FRONTAGE ROAD CRCP

SPECIAL AREA: ROUTE TRAFFIC TO FACILITATE THE JOINTING PLAN, BUT AVOID ADDITIONAL TRANSVERSE (I.E., HEADER) JOINTS IN THIS REGION, IF POSSIBLE.

FRONTAGE ROAD CRCP

CROSS ROAD CRCP

LONGITUDINAL TYPE C (WF OR SS OR TE)

LONGITUDINAL TYPE C (WF OR SS OR TE)

LONGITUDINAL TYPE A OR TYPE B (TIED)

LONGITUDINAL TYPE C (WF OR SS OR TE)

CONTRACTION DESIGN: THE LENGTH BETWEEN LONGITUDINAL JOINT IS LESS THAN 500 FT.

CROSS ROAD CRCP

EMPLOY LONGITUDINAL TYPE C (1" ELASTOMERIC CONCRETE) WHEN CROSS ROAD TYPE IS FLEXIBLE PAVEMENT

INTERSECTION (OPTION 2 - JOINT DISTANCE < 500 FT)
LONGITUDINAL TYPE C (TIED)
LONGITUDINAL TYPE B (TE)

FRONTAGE ROAD CRCP

1) LONGITUDINAL TYPE C
   (WF OR SS OR TE)

SPECIAL AREA: ROUTE TRAFFIC TO FACILITATE
THE JOINTING PLAN,
BUT AVOID ADDITIONAL
TRANSVERSE (I.E., HEADER)
JOINTS IN THIS REGION,
IF POSSIBLE.

FRONTAGE ROAD CRCP

1) LONGITUDINAL TYPE C
   (WF OR SS OR TE)

THE LENGTH BETWEEN
TRANSVERSE JOINT IS
LARGER THAN 500 FT.

INTERSECTION (OPTION 3)

EMPLOY LONGITUDINAL TYPE C
(1" ELASTOMERIC CONCRETE)
WHEN FRONTAGE ROAD TYPE IS
FLEXIBLE PAVEMENT
TACK COAT

AC OVERLAY

① TAPERED OVERLAY

PCC SLAB

CRACK RESISTANT LIFT OF HOT MIX OR HOT RUBBER SEAL COAT

BONDED AC OVERLAY GRADE TRANSITION

TRANSVERSE TYPE B

MIN. 3'

CRC PAVEMENT

MIN. 1" AC BOND BREAKER (UNBONDED)

THIS DETAIL ALSO APPLIES TO UNBONDED OVERLAYS

OVERLAY - UNBONDED, BONDED, AC OVERLAYS
MINIMUM 33d" LAP SPlice
(25" BASED ON #6 BAR)

STeEL BAR (DESIGN OPTION)

LAP SPlice SHALL BE IN SAME PLANE

BENT STEEL

DRILL & EPOXY

BONDED CONCRETE OVERLAY

MAXIMUM 5'

EXISTING CRC PAVEMENT

CRC PAVEMENT

SUBBASE (REFER TO TYPICAL SECTION)
MINIMUM 33d" LAP SPLICE (25° BASED ON #6 BAR)

TRANSVERSE TYPE B (DB)

MAXIMUM 5'

STEEL BAR (DESIGN OPTION)

BONDED CONCRETE OVERLAY

LAP SPLICE SHALL BE IN SAME PLANE

EXISTING CRC PAVEMENT

DRILL & EPOXY

BENT STEEL

CRC PAVEMENT

SUBBASE (REFER TO TYPICAL SECTION)
TRANSVERSE TYPE B (SD)

TRANSVERSE TYPE B

MIN. 1'

TRANSVERSE TYPE B (SD)

SAW CUT MATCH JOINT PATTERN, IF FEASIBLE

DIRECTION OF PAVING

MIN. 2'

TRANSVERSE TYPE B

CLASSIFICATION AND NOTATION OF JOINT

<table>
<thead>
<tr>
<th>TYPE</th>
<th>JOINT DESCRIPTION</th>
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<tbody>
<tr>
<td>A</td>
<td>CONSTRUCTION JOINT</td>
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<tr>
<td>B</td>
<td>CONSTRUCTION JOINT</td>
</tr>
<tr>
<td>C</td>
<td>ISOLATION JOINT</td>
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MODIFIER / APPLICATION

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<tr>
<td>6</td>
<td>WITH SMOOTH DOWEL</td>
</tr>
<tr>
<td>7</td>
<td>WITH MODIFIED BAR</td>
</tr>
<tr>
<td>8</td>
<td>TIED</td>
</tr>
<tr>
<td>9</td>
<td>THICKENED EDGE</td>
</tr>
<tr>
<td>10</td>
<td>WIDE FLANGE</td>
</tr>
<tr>
<td>11</td>
<td>SLEEPER SLAB</td>
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<td>TAPERED</td>
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DOWEL REQUIREMENTS

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<tr>
<th>THICKNESS</th>
<th>DOWEL (SMOOTH BAR)</th>
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<td>7</td>
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</tr>
<tr>
<td>8</td>
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</tr>
<tr>
<td>9</td>
<td>1.5' x 18'</td>
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</tbody>
</table>

DROP INLET/DRAINAGE BOX
MAIN LANE TRAFFIC

2' (MINIMUM)
TIED LONGITUDINAL TYPE B

RAMP TRAFFIC

RAMP GORE AREA PLAN VIEW

TIED TRANSVERSE TYPE A OR TYPE B (DB)

RAMP PROFILE VIEW

STEEL FOR RAMP

STEEL FOR MAIN ROAD

10' CENTER OF SPlice

20' TRANSITION LENGTH

SUBBASE (REFER TO TYPICAL SECTION)

RAMP/GOBE AREA TRANSITION

CLASSIFICATION AND NOTATION OF JOINT

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LONGITUDINAL STEEL SIZE AND SPACINGS

<table>
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<tr>
<th>THICKNESS</th>
<th>BAR SIZE</th>
<th>SPACING</th>
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<td>#8 (0.78&quot;)</td>
<td>8.5&quot;</td>
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<tr>
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<tr>
<td>13</td>
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<td>8.5&quot;</td>
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REVISIONS

COUNTY CONTROL SHEET JOB NUMBER