Illinois Tollway Standard Drawing Revisions

Section A  Roadway / Pavement

### Standard Modification Summary

<table>
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<th>Standard</th>
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<tr>
<td>A1</td>
<td>Concrete Pavement Repair Full Depth</td>
</tr>
<tr>
<td></td>
<td>Added the pavement thickness “t” dimension to Section C-C</td>
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<tr>
<td>A2</td>
<td>Asphalt Overlay Repair</td>
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<td>Revised reference in notes to Illinois Tollway special provision “Asphalt Patching of Mainline Overlays”</td>
</tr>
<tr>
<td>A4</td>
<td>Butt Joints and Temporary Asphalt Wedge</td>
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<td>Removed payment designation references from notes</td>
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<td>Revised Butt Joint Type 1 minimum length, minimum layer thicknesses and updated notes</td>
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<td>Revised Butt Joint Type 2 minimum length, minimum layer thicknesses and updated notes</td>
</tr>
<tr>
<td>A5</td>
<td>J.P.C. Pavement</td>
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<tr>
<td></td>
<td>Revised Title. Covers all thicknesses of JPC pavement.</td>
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<tr>
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<td>J.P.C. Pavement - 12” (RESERVED)</td>
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<tr>
<td></td>
<td>Combined with Standard A5 as there was no difference in the details provided other than the pavement thickness.</td>
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<tr>
<td>A7</td>
<td>Pavement Joints</td>
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<tr>
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<td>Added Transverse Expansion Joint (Jointed Plain Concrete Pavement) and Detail A</td>
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<td>Deleted previous note 1.</td>
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<td></td>
<td>Added new Note 4 regarding dowel bars for 13” thick PCC pavement.</td>
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<tr>
<td>A13</td>
<td>Jointing Plan Exit Ramp Terminal with Auxiliary Lane</td>
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<td></td>
<td>New Standard added (corresponds to the Roadway Design Criteria Figure 20).</td>
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<tr>
<td>A14</td>
<td>Jointing Plan Entrance Ramp Terminal</td>
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<tr>
<td>Sheet 1</td>
<td>Revised Note 1 to reflect the addition of the transverse expansion joint to Standard Drawing A7.</td>
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<td>Revised Note 2, deleting second sentence regarding cost.</td>
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<td>Sheet 2</td>
<td>Revised Note 2, deleting second sentence regarding cost.</td>
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<tr>
<td>A15</td>
<td>Jointing Plan Exit Ramp Terminal</td>
</tr>
<tr>
<td>Sheet 1</td>
<td>Revised Gore Recovery taper rate to 35:1 and adjusted the associated length dimensions.</td>
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<td>Revised Note 1 to reflect the addition of the transverse expansion joint to Standard Drawing A7.</td>
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<td>Revised Note 3, deleting second sentence regarding cost.</td>
</tr>
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<tr>
<td>A16</td>
<td>Jointing Plan Parallel Exit Ramp Terminal</td>
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<td>Sheet 1</td>
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<td>Revised Note 5, deleting second sentence regarding cost.</td>
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<td>Revised Note 3, deleting second sentence regarding cost.</td>
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<td>Revised left shoulder width on ramp to 6’.</td>
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<tr>
<td>A17</td>
<td>Jointing Plan Parallel Entrance Ramp Terminal</td>
</tr>
<tr>
<td>Sheet 1</td>
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<td>Revised Note 6, deleting second sentence regarding cost.</td>
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<td>Revised left shoulder width on ramp to 6’.</td>
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<tr>
<td>Sheet 2</td>
<td>Revised Note 5, deleting second sentence regarding cost.</td>
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<tr>
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<td>Revised left shoulder width on ramp to 6’.</td>
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New Sheet  Retired Standard
1. **Location of all overlay repair areas shall be determined by the Engineer.**
2. **Minimum dimensions shall be as shown in Typical Roadway Plan.**
3. **All asphalt overlay shall be removed to the top of the PCC pavement.**
4. **Several may be eliminated if milling equipment is used and vertical and stratigraphic sides are obtained.**
5. **Proposed asphalt overlay patch material shall be in accordance with Illinois Tollway Special Provision "Asphalt Patching of Mainline Overlays".**

**NOTES: Typical Asphalt Overlay Repair**

- **Section A-A & B-B**
- **Section C-C**
- **Proposed Asphalt Overlay Repair**
- **Typical Roadway Plan**
- **Legend**

**PROPOSED ASPHALT OVERLAY REPAIR**

**TYPICAL ROADWAY PLAN**

**ILLINOIS TOLLWAY**

**STANDARD A2-05**
DETAIL OF BUTT JOINT, TYPE 1

NOTES FOR BUTT JOINT, TYPE 1
1. The above work will be performed at the ends of all asphalt pavement.
2. Only approved scarifying or milling equipment shall be used to scarify the concrete pavement.
3. Regardless of type of surface mix used, number of thicknesses of courses or layers, the overlay thickness shall be based on 1"/20' and the minimum surface layer thickness shall be 1/2".
4. Scarification is used and vertical and straight sides are obtained.
5. Thickness of the surface course specified in the contract.
6. The thickness of the binder course specified in the contract.

DETAIL OF BUTT JOINT, TYPE 2

NOTES FOR BUTT JOINT, TYPE 2
1. The above work will be performed at the ends of all asphalt pavement.
2. Refer to the contract documents for the required binder and surface course materials. "t" is the thickness of the surface course specified in the contract.
3. "t" is the thickness of the binder course specified in the contract.
4. The above work will be performed at the ends of all asphalt pavement.
5. Taper rate = "/20' PER 1'-0" (H)
6. Losing, and straight sides are obtained.
7. Regardless of type of surface mix used, number of thicknesses of courses or layers, the overlay thickness transition length shall be based on 1"/20' and the minimum surface layer thickness shall be 1/2".

TEMPORARY ASPHALT WEDGE - TRANSVERSE

TEMPORARY ASPHALT WEDGE - LONITUDINAL

NOTES FOR TEMPORARY ASPHALT WEDGE - LONITUDINAL
1. Upon removal of the footer, the surface course shall be sawcured parallel to the joint to provide a true vertical surface.
2. Refer to the contract documents for the required binder and surface course materials.

REVISIONS
DATE
PREREVISIONS
BUTT JOINTS AND TEMPORARY ASPHALT WEDGE
STANDARD A4-04

APPROVED
DATE
CHIEF ENGINEER

(SEE NOTE 3)
PAVEMENT CROSS - SECTION (2 LANES)

GENERAL NOTES:
1. DOWEL BASKET ASSEMBLIES, WHERE USED, SHALL BE SUPPORTED AND ANCHORED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
2. MATERIALS ARE PROJECT SPECIFIC, REFER TO PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS.
3. SEE ILLINOIS TOLLWAY STANDARD DRAWING A7 (PAVEMENT JOINTS) AND IDOT HIGHWAY STANDARD 420001 (PAVEMENT JOINTS) FOR DETAILS OF JOINTS AND TIE BARS NOT SHOWN.
4. PAVEMENT DESIGNS ARE PROJECT SPECIFIC, OTHER MATERIALS MAY BE SUBSTITUTED FOR ASPHALT STABILIZED SURFACE AND SUBGRADE AGGREGATE. REFER TO PROJECTS PLANS AND CONTRACT DOCUMENTS FOR DETAILS.
5. THE TIE BAR FOR THE LONGITUDINAL SAWED JOINT SHALL BE 15" FROM THE TRANSVERSE CONTRACTION JOINT.
6. THE 1'-6" WIDE ASPHALT STABILIZED SURFACE MAY BE REDUCED TO 1'-0" WHEN PAVING EQUIPMENT UTILIZED FOR CONSTRUCTION OF THE PCC PAVEMENT WILL ALLOW.

PAVEMENT PLAN
2 - LANE SECTION

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PAVEMENT CROSS - SECTION (2 LANES)
GENERAL NOTES:

1. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.
2. t: PAVEMENT THICKNESS
3. a 1/4" saw cut shall be provided for pavement crack control.
4. for 13" pavement use the following dowels:
   - 1-3/4" x 18" long smooth epoxy-coated dowel bars on 12" centers
   - 1-3/4" x 18" long smooth epoxy-coated dowel bars on 9" centers

EXPANSION CAPS SHALL BE INSTALLED ON THE EXPOSED END OF EACH DOWEL BAR ONCE THE HEADER HAS BEEN REMOVED.
NOTES:
1. All transverse construction and expansion pavement joints shall be detailed as shown in Illinois Tollway Standard Drawing No. 7-450. All other pavement joints shall be detailed as shown in Jointing Plan Standard A7. All other transverse construction and expansion pavement joints shall be detailed as shown on Illinois Tollway Standard 420001.
2. Joint lines shall be minimum dimensions as shown and aligned with a mainline transverse joint.
3. Joint line location shall be adjusted to be aligned with a transverse transverse joint.
4. The thickness of the jointed ramp pavement in the transverse construction shall match the mainline pavement.
5. Pavilion PCC Pavement Joint Spacing shall be 10'.
6. As additional ramp lanes are added, the maximum joint spacing shall be 15'. Typical spacing is 15' to 20' at various transverse joint locations in the main path shall be avoided.
7. Dimensions of lane shall be as shown on the plans.

DETAIL A

DETAIL B

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

P.C. RAMP PAVEMENT

P.C. MAINLINE PAVEMENT

2' MIN. STUB

35:1 TAPER RATE

PAVEMENT

EDGE OF MAINLINE

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

DATE

CHIEF ENGINEER

APPROVED

REVISIONS

DATE

STANDARD A13-00
NOTES:

1. ALL TRANSVERSE CONSTRUCTION AND EXPANSION PAVEMENT JOINTS SHALL BE DETAILLED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING AT ALL OTHER PAVEMENT JOINTS SHALL BE DETAILLED AS SHOWN ON IDOT HIGHWAY STANDARD 420001.

2. THE THICKNESS OF THE JOINTED RAMP PAVERS IN THE TANGENT AREA SHALL MATCH THE MAINLINE PAVER.

3. STUBS SHALL BE THE MINIMUM Dimension AS SHOWN AND ALIGNED WITH A MAINLINE TRANSVERSE JOINT.

4. 7' NOSE LOCATION SHALL BE ADJUSTED TO BE ALIGNED WITH A MAINLINE TRANSVERSE JOINT.

5. TYPICAL PCC PAVER JOINT SPACING SHALL BE 15'.

6. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 10' WIDE, TYPICAL SPACING IS 10' LONG BY 12' WIDE, LONGITUDINAL JOINT LOCATION IN THE WHEEL PATH SHALL BE MINIMIZED.

7. DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLAN.

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

CALENDAR DATE: 1-31-2015

APPROVED: CHIEF ENGINEER
JOINTED PCC RAMP ADJACENT TO JOINTED C.R.C. MAINLINE PAVEMENT

NOTES:
1. ALL PAVEMENT JOINTS SHALL BE DETAIL AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7 AND IDOT STANDARD 420001 SPECIAL PROVISION. BONDED PREFORMED JOINT SEAL SHALL BE AS DESCRIBED IN THE ILLINOIS TOLLWAY SPECIAL PROVISION. BONDED PREFORMED JOINT SEAL.
2. THE THICKNESS OF THE JOINTED RAMP PAVEMENT IN THE TANGENT AREA SHALL MATCH THE MAINLINE PAVEMENT.
3. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.
4. TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15'.
5. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 15' WIDE. TYPICAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
6. DIMENSIONS OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.
7. JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
8. JOINT SPACING IS 15' LONG BY 15' WIDE. TYPICAL JOINT SPACING SHALL BE 15'.
9. TO RAMP BASELINE.

DETAIL B

EDGE OF PAVEMENT
PARALLEL TO MAINLINE

EDGE OF PAVEMENT
PERPENDICULAR TO MAINLINE

NO. 7 LONGITUDINAL BARS
PARALLEL TO MAINLINE

NO. 4 TRANSVERSE BARS
PERPENDICULAR TO MAINLINE

RAMP BASELINE

BARS IS PARALLEL TO RAMP BASELINE

BASELINE

NO. 7 LONGITUDINAL BARS

EDGE OF MAINLINE PAVEMENT

EDGE OF PAVEMENT

PERPENDICULAR TO MAINLINE

NO. 4 TRANSVERSE BARS

PERPENDICULAR TO MAINLINE

EDGE OF PAVEMENT

JOINTED PAVEMENT TYPE AND
THICKNESS TO MATCH
MAINLINE

LONGITUDINAL JOINT SPACING:

- No. 7 Longitudinal B.C.
- No. 4 Transverse B.C.

EXPANSION JOINT
TRANSVERSE
NO. 4 TRANSVERSE BARS
NO. 7 LONGITUDINAL BARS

EDGE OF MAINLINE PAVEMENT

100'-0"

RAMP BASELINE

600' MIN.

ASPHALT SHOULDER

EXPANSION JOINT
TRANSVERSE

150' TANGENT (MIN.)

RAMP BASELINE

50:1 TAPER RATE

RAMP BASELINE

BASELINE

NO. 4 TRANSVERSE BARS
PERPENDICULAR TO MAINLINE

NO. 7 LONGITUDINAL BARS
PARALLEL TO MAINLINE

EDGE OF PAVEMENT

PERPENDICULAR TO MAINLINE

NO. 4 TRANSVERSE BARS

PERPENDICULAR TO MAINLINE

EDGE OF PAVEMENT

RAMP BASELINE

NO. 7 LONGITUDINAL BARS
PARALLEL TO MAINLINE

EDGE OF MAINLINE PAVEMENT

EDGE OF PAVEMENT

PARALLEL TO MAINLINE
NOTES:
1. ALL PAVEMENT JOINTS SHALL BE DETAIL AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWINGS AT AND ROUTE WAY STANDARD 42000, EXCEPT EXPANSION JOINT SEALS SHALL BE AS DESCRIBED IN THE ILLINOIS TOLLWAY SPECIAL PROVISION, BONDED PREFORMED JOINT SEAL.
2. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.
3. THE THICKNESS OF THE JOINTED RAMP PAVEMENT IN THE TANGENT AREA SHALL MATCH THE MAINLINE PAVEMENT.
4. TYPICAL PCC, PAVEMENT JOINT SPACING SHALL BE 15'.
5. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 5' LONG BY 10' WIDE. TYPICAL SPACING IS 7' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
6. DIMENSIONS OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.
NOTES:

1. ALL TRANSVERSE CONSTRUCTION AND EXPANSION PAVEMENT JOINTS SHALL BE DETAIL AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7. ALL OTHER PAVEMENT JOINTS SHALL BE DETAIL AS SHOWN ON IDOT HIGHWAY STANDARD 420001.

2. STUBS SHALL BE THE MINIMUM DIMENSION AS SHOWN AND ALIGNED WITH A MAINLINE TRANSVERSE JOINT.

3. 4" NOSE LOCATION SHALL BE ADJUSTED TO BE ALIGNED WITH A MAINLINE TRANSVERSE JOINT.

4. TYPICAL P.C.C. PAVEMENT JOINT SPACING SHALL BE 15'.

5. THE THICKNESS OF THE JOINTED RAMP PAVEMENT SHALL MATCH THE MAINLINE PAVEMENT.

6. RAMP NARROWS FROM 21' TO 18'.

7. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 15', TYPICAL SPACING IS 35' LONG BY 12'. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.

8. DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.
NOTES:

1. ALL PAVEMENT JOINTS SHALL BE DETAINED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING AT AND IDOT HIGHWAY STANDARD 40000. EXCEPT EXPANSION JOINT SEALS SHALL BE AS DESCRIBED IN THE ILLINOIS TOLLWAY SPECIAL PROVISIONS, BONDED PREFORMED JOINT SEAL.

2. TYPICAL P.C.C. PAVEMENT JOINT SPACING SHALL BE 15'.

3. THE THICKNESS OF THE JOINTED RAMP PAVEMENT SHALL MATCH THE MAINLINE PAVEMENT.

4. RAMP NARROWS FROM 21' TO 18'.

5. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 12' WIDE. TYPICAL SPACING IS 12' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE WEIGHED.

6. DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.

7. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.
NOTES:

1. All transverse construction and expansion pavement joints shall be detailed as shown on Illinois Tollway standard drawings. All other pavement joints shall be detailed as shown on IDOT Highway Standard 420001.

2. Stubs shall be the minimum dimension as shown and aligned with a mainline transverse joint.

3. 6'-Nose location shall be adjusted to be aligned with a mainline transverse joint.

4. Typical PCC pavement joint spacing shall be 15'.

5. Ramp narrows from 18'-14'.

6. The thickness of the jointed ramp pavement shall match the mainline pavement.

7. As additional ramp lanes are added, the maximum joint spacing shall be 15'-long by 15'-wide. Typical spacing is 15'-long by 12'-wide. Conditional joint locations in the wheel path shall be minimized.

8. Dimension of lane 1 shall be as shown on the plans.

DETAIL A

Jointed PCC ramp adjacent to jointed PCC mainline pavement.

DETAIL A

Jointed PCC ramp adjacent to jointed PCC mainline pavement.
NOTES:
1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWINGS AT AND BORDERS PAVEMENT TYPE AND THICKNESS TO MATCH MAINLINE GORE AND RECOVERY TAPER PAVEMENT TYPE. SPECIAL PROVISION, BONDED PREFORMED JOINT SEAL.
2. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.
3. TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15'.
4. RAMP TAPERS FROM 18' TO 14'.
5. THE THICKNESS OF THE JOINTED RAMP PAVEMENT SHALL MATCH THE MAINLINE PAVEMENT.
6. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 12' WIDE. TYPICAL SPACING IS 15' LONG BY 12' WIDE. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE MINIMIZED.
7. DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.
MATERIALS:
A. EPOXY COATED DOWEL BARS USED SHALL COMPLY WITH ASTM A615 GRADE 60.

B. ALL EMBEDDED LIFTING HARDWARE USED SHALL BE GALVANIZED.

C. ALL FABRICATED SLABS: USE WITH CABLES AT AN ANGLE AND TWO OF THE FOUR DEVICES MUST BE CAPABLE OF CARRYING THE TOTAL LOAD WITH A 4:1 SAFETY FACTOR WHILE ADJUSTING FOR THE ANGLE OF THE CABLES AND THE STRENGTH OF THE CONCRETE OVER TIME. THE INSERT IS INSTALLED WITH A FULL SLAB PENETRATION, THE LIFTING INSERT SHOULD BE RECESSED A MINIMUM OF 1" UNLESS THE SLAB IS TO BE CARRIED BY CABLES AND SMOTHER THAN ONE 1" DIAMETER THREADED HOLE TO BE GROUTED AFTER SLAB INSTALLATION. THE OPENING IS AT LEAST 2" (|') WIDE AND AT LEAST 1" OF GROUT COVER.

D. FOR CUSTOM SLABS: INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATION INCLUDING MINIMUM EDGE DISTANCE AND SPACING REQUIREMENTS. ANY CUSTOM SLABS > 6 FT IN LENGTH THAT WILL BE OPENED TO TRAFFIC BEFORE ANY HARDWARE AND UNDERSLAB GROUTING OR FILLING OCCURS SHALL REQUIRE TWO LAYERS OF STEEL REINFORCEMENT AS NOTED ON SHEET 5.

E. FOR CUSTOM SLABS: INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATION AND HAVE A STANDARD 5:1 SAFETY FACTOR FOR THE ELEVATION OF ALL 4 CORNERS OF THE CUSTOM SLAB TO BE FLUSH OR LOWER THAN THE TIRED FINISH IN ACCORDANCE WITH ARTICLE 420.09(e)(1) OF THE STANDARD SPECIFICATIONS AS INDICATED IN THE PRECAST SLAB DESIGN SCHEDULE ON CONTRACT DRAWINGS.

F. ANY CUSTOM SLABS WITH WIDE OPEN SLOTS, THE DOWEL BARS SHALL BE FULLY RETROFITTED INTO ADJACENT PAVEMENT SLABS AT THE PRECAST PLANT OR WITH A STANDARD 5:1 SAFETY FACTOR WHILE ADJUSTING FOR THE ANGLE OF THE CABLES AND THE STRENGTH OF THE CONCRETE OVER TIME. THE INSERT IS INSTALLED WITH A FULL SLAB PENETRATION, THE LIFTING INSERT SHOULD BE RECESSED A MINIMUM OF 1" UNLESS THE SLAB IS TO BE CARRIED BY CABLES AND SMOTHER THAN ONE 1" DIAMETER THREADED HOLE TO BE GROUTED AFTER SLAB INSTALLATION. THE OPENING IS AT LEAST 2" (|') WIDE AND AT LEAST 1" OF GROUT COVER.

G. FOR ALL CUSTOM SLABS WITH WIDE OPEN SLOTS, THE DOWEL BARS SHALL BE FULLY RETROFITTED INTO ADJACENT PAVEMENT SLABS AT THE PRECAST PLANT OR WITH A STANDARD 5:1 SAFETY FACTOR WHILE ADJUSTING FOR THE ANGLE OF THE CABLES AND THE STRENGTH OF THE CONCRETE OVER TIME. THE INSERT IS INSTALLED WITH A FULL SLAB PENETRATION, THE LIFTING INSERT SHOULD BE RECESSED A MINIMUM OF 1" UNLESS THE SLAB IS TO BE CARRIED BY CABLES AND SMOTHER THAN ONE 1" DIAMETER THREADED HOLE TO BE GROUTED AFTER SLAB INSTALLATION. THE OPENING IS AT LEAST 2" (|') WIDE AND AT LEAST 1" OF GROUT COVER.
TYPICAL REINFORCEMENT DETAIL FOR STANDARD SLABS

**REINFORCEMENT SECTION A-A**

Two ways of reinforcement shall be for application to all custom slabs greater than 6 ft. Longitudinal length to be opened to traffic before grouting is completed.

All bars are trimmed to fit #5 bar.

Saw cuts off longitudinal edges shall be no more than 6" off the edges.

**REINFORCEMENT SECTION B-B**

Two ways of reinforcement shall be for application to all custom slabs greater than 6 ft. Longitudinal length to be opened to traffic before grouting is completed.

All bars are trimmed to fit #5 bar.

**REINFORCEMENT SECTION C-C**

One way of reinforcement shall be for application to all standard slabs and for any custom slabs greater than 6 ft. Longitudinal length to be opened to traffic only after grouting is completed.

All bars are trimmed to fit #5 bar.

Saw cuts off longitudinal edges shall be no more than 6" off the edges.

**REINFORCEMENT SECTION D-D**

One way of reinforcement shall be for application to all standard slabs and for any custom slabs greater than 6 ft. Longitudinal length to be opened to traffic only after grouting is completed.

All bars are trimmed to fit #5 bar.

**NOTE:**

All bars shall be adjusted for clearance for top reinforcement.

Plaza slab to fit treadle frame or inserted hardware.

*NOTE:*

All bars shall be adjusted for clearance for top reinforcement.
Traffic before grouting is completed shall be opened to two mats of reinforcement. All standard slabs and for any custom slabs greater than 6 ft. longitudinal length to be opened to traffic before grouting is completed.

All bars are trimmed to fit #5 bar.

NOTE:
- For all custom slabs of trapezoid shapes, reinforcement shall be laid out in a perpendicular grid pattern, not skewed.
- Minimal clearance for top reinforcement shall be adjusted for placing slab to fit precise grades or inverted parabolas.
**NOTES:**

1. The width and length of produced slabs shall be the indicated dimensions ± 1/8".

2. For single lane slab openings/pitches less than 12'-6" in width and greater than 12'-6" in width, the standard precast slabs can be saw cut opposite to the opening and to maintain alignment with existing longitudinal joints. Otherwise, the slab patch location must be established by the contractor and the slab fabricated as a custom slab.

3. Slab thickness shall be 11'-0" ± 1/8".

4. A foam backer rod shall be placed around the outside perimeter of the slab at the bottom of the joint. The foam backer rod shall be placed above and before bedding grout or polyurethane leveling fill is applied. The backer rod shall not be secured when any slab is leveled with flowable fill.

5. See Section 7 for section details.

6. It shall be the contractor's option to replace any embedded dowels or preformed slots as shown on these drawings with fully retrofitted dowel bars if installed in accordance with Table C of sheet 1. The contractor shall use an approved template to locate the saw cuts required for proper spacing and retrofitting of the dowel bars in accordance with these drawings. Diamond-bladed saws shall be used to make saw cuts perpendicular to the transverse nonsewered joint line to allow for dowel bar placements within the specified tolerances.

7. See Note 8 on Sheet 1 for locating bedding group ports.

8. Preformed slots in place of embedded dowels or of sequence of sheet 4 may be used in place of embedded dowels on or field retrofitted dowel bars with standard slots. All preformed slots must be filled before being opened to traffic.

**STANDARD 12'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT**

WITH EMBEDDED DOWELS FOR PRECUT WIDE MOUTH

SLOTS IN ADJACENT PAVEMENT

**STANDARD 12'-6" WIDE PANEL LAYOUT FOR CONSECUTIVE PLACEMENT**

*For internal consecutive slabs, preformed slots in accordance with Section 4 of Sheet 4 may be used in place of embedded dowels on or field retrofitted dowel bars with standard slots. All preformed slots must be filled before being opened to traffic.
STANDARD A18-03

PRECAST PAVEMENT SLABS

APPROVED DATE

CHIEF ENGINEER

5-1-2009

SHEET 5 OF 19

STANDARD 13'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH EMBEDDED DOWELS FOR PRECUT WIDE MOUTH SLOTS IN ADJACENT PAVEMENT.

NOTES:

1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS ± 1/8".

2. FOR SHORT-LINE SLAB SPACINGS/MATCHES LESS THAN 15'-6" IN WIDTH AND GREATER THAN 14'-6" IN WIDTH, THE STANDARD PRECAST SLAB CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING LONGITUDINAL JOINTS. OTHERWISE, THE SLAB PATCH LOCATION MUST BE PREPARED BY THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.

3. SLAB THICKNESS SHALL BE ± 1/8" ± 1/8".


5. SEE SHEET 7 FOR SECTION DETAILS.

6. IT SHALL BE THE CONTRACTOR'S OPTION TO REPLACE ANY EXISTING DOWEL BARS OR PREFORMED SLOTS AS SHOWN ON THESE DRAWINGS WITH PRECUT WIDE MOUTH SLOTS IN ACCORDANCE WITH THESE DRAWINGS. DIAMOND-BLADED GANG SAWS SHALL BE USED TO MAKE SAWS Cuts PARALLEL TO THE TRANSVERSE NONDEFORMED JOINT LINE TO ALLOW FOR DOWEL BAR PLACEMENTS WITHIN THE SPECIFIED TOLERANCE.

7. SEE NOTE 8 ON SHEET 1 FOR LOCATING BEDDING GROUT PORTS.

STANDARD 13'-6" WIDE PANEL LAYOUT FOR CONSECUTIVE PLACEMENT

* FOR INTERNAL CONSECUTIVE SLABS, PREFORMED SLOTS MUST BE USED IN PLACE OF EMBEDDED DOWELS OR OF FIELD RETROFITTED DOWEL BARS WITH SAWCUT SLOTS. ALL PREFORMED SLOTS MUST BE FILLED BEFORE BEING OPENED TO TRAFFIC.
STANDARD 12'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH NARROW MOUTH
PREFORMED DOWEL SLOTS TO ALIGN WITH PREDRILLED HOLES IN ADJACENT PAVEMENT.

STANDARD 13'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH NARROW MOUTH
PREFORMED DOWEL SLOTS TO ALIGN WITH PREDRILLED HOLES IN ADJACENT PAVEMENT.

NOTES:
1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS ± 3/8".
2. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 12'-6" IN WIDTH AND GREATER THAN 11'-6" IN WIDTH, THE 12'-6" WIDE STANDARD PRECAST PANEL CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING LONGITUDINAL JOINTS. OTHERWISE, THE SLAB PATCH LOCATION MUST BE PRESURVEYED BY THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.
3. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 12'-6" IN WIDTH AND GREATER THAN 11'-6" IN WIDTH, THE 13'-6" WIDE STANDARD PRECAST PANEL CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING LONGITUDINAL JOINTS. OTHERWISE, THE SLAB PATCH LOCATION MUST BE PRESURVEYED BY THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.
4. SLAB THICKNESS SHALL BE 11 3/4".
5. A FOAM BACKER ROD SHALL BE PLACED AROUND THE OUTSIDE PERIMETER OF THE SLAB AT THE BOTTOM OF THE JOINTS BEFORE THE SLAB HAS BEEN SET AND BEFORE BEDDING GROUT OR POLYURETHANE LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELED WITH FLOWABLE FILL.
6. SEE SHEET 7 FOR SECTION DETAILS.
7. SEE NOTE 8 ON SHEET 1 FOR LOCATING BEDDING GROUT PORTS.
NOTES:
1. A FOAM BACKER ROD SHALL BE PLACED AROUND THE OUTSIDE PERIMETERS OF THE SLAB AT THE BOTTOM OF THE JOINTS BEFORE THE SLAB HAS BEEN SET AND BEFORE TYPICAL CURB OR POLYURETHANE LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELED WITH A FLOWABLE FILL.
2. EITHER SINGLE DIAMOND BLADED SAWS OR DIAMOND BLADED GANG SAWS SHALL BE USED TO MAKE THE SAW Cuts PERPENDICULAR TO THE TRANSVERSE (NON-SKEWED) JOINT LINE TO ALLOW FOR SINGLE BAR PLACEMENTS WITHIN THE SPECIFIED TOLERANCES.
3. SEE NOTE 2 ON SHEET 1 FOR LOCATING RETICULAR CURB CUTTING POINTS.
4. SEE SHEET 7 FOR SECTION DETAILS.
ACCORDANCE WITH ARTICLE 442.06(a)(2) OF THE STANDARD SPECIFICATIONS WITH RETENTION
OF THE LEVELING SAND LAYER SHALL BE APPROXIMATELY 1/2 INCH WITH A MAXIMUM
THICKNESS OF 1'-6" FROM ANY EXISTING TRANSVERSE JOINT OR FROM THE
CORNER OF THE PRECAST SLAB OR ADJOINING CONCRETE

ACCORDANCE WITH THE ILLINOIS TOLLWAY SPECIAL PROVISION FOR “DOWEL BAR RETROFIT”.
THE BACKER ROD USED AS A SEAL RESERVOIR GASKET AROUND THE PERIMETER OF A SLAB, NEAR THE
ROADWAY CENTERLINE, REGARDLESS OF TRANSVERSE JOINT SKEW. THE MANUFACTURER SHALL PROVIDE DOCUMENTATION THAT THE LOT(S) OF FOAM MEETS THE

INSTALLATION GENERAL NOTES

B. THE LEVELING SAND LAYER SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ANY
PLACEMENT.
C. THE MANUFACTURER SHALL PROVIDE DOCUMENTATION THAT THE LOT(S) OF FOAM MEETS THE

MATERIALS

EQUIPMENT:

17. STITCHED TIES SHALL BE INSERTED AT THE FACE OF THE ADJACENT SLAB.

1. THE MANUFACTURER SHALL PROVIDE DOCUMENTATION THAT THE LOT(S) OF FOAM MEETS THE

4. PRIOR TO THE PLACEMENT OF AN ISOLATED STANDARD PRECAST SLAB IN A MIDDLE LANE, THE

2. THE CONTRACTOR'S WIDTH MEASUREMENTS SHALL BE USED TO DETERMINE THE
PREREQUIRED MATERIALS REQUIRED FOR DOWEL BAR RETROFITTING SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SPECIAL PROVISION FOR “DOWEL BAR RETROFIT”.
THE MANUFACTURER SHALL PROVIDE DOCUMENTATION THAT THE LOT(S) OF FOAM MEETS THE

1. THE MANUFACTURER SHALL PROVIDE DOCUMENTATION THAT THE LOT(S) OF FOAM MEETS THE

PRECAST REPAIR GREATER THAN 20 FT IN LENGTH OR WITH ANY PRECAST REPAIR THAT
THAT LONGITUDINAL TIES SHALL BE REQUIRED FOR ANY CLASS B FULL DEPTH REPAIR AND

D. FOR PRECAST SLABS SUPPORTED AND BURIED BY PRECAST LIGHT PANELS PLACED UNDER SLAB
INSTALLATION, THE NON-DISTURBANCE SLAB SHALL BE BURIED TO AN ELEVEN INCH DEEP FOR MAKING A WATER
PROOF BASEMENT, THE INERTIA SECOND MOMENT PROPERTY OF THE FOUNDATION AND THE FOUNDATION

1. WHEN THE TRANSVERSE JOINTS OF ANY PRECAST SLAB CANNOT BE ALLOWED TO EXPAND
ALONG ANY VISIBLY VISIBLE TRANSVERSE JOINTS IN A DEFORMED LENS, A MINIMUM 2'-0" OFFSET BETWEEN TRANSVERSE JOINTS SHALL BE PROVIDED.

2. THE CONTRACTOR SHALL SUBMIT THE PROPOSED MIX DESIGN FOR UNDERSEALING GROUT TO
THE ENGINEER FOR APPROVAL PRIOR TO ANY USE.

5. THE MANUFACTURER SHALL PROVIDE DOCUMENTATION THAT THE LOT(S) OF FOAM MEETS THE

E. THE EMBEDDED DOWEL BARS OF ISOLATED STANDARD PRECAST SLABS SHALL BE
FULLY RETROFITED INTO EXISTING CONCRETE PAVEMENT IN ACCORDANCE WITH DETAIL
D (SEE SHEET 16), OR PARTIALLY RETROFIT AN EMBEDDED DOWEL BAR OF
THE EMBEDDED DOWEL BARS OF ISOLATED STANDARD PRECAST SLABS SHALL BE
FULLY RETROFITED INTO EXISTING CONCRETE PAVEMENT IN ACCORDANCE WITH DETAIL
D (SEE SHEET 16), OR PARTIALLY RETROFIT AN EMBEDDED DOWEL BAR OF
THE EMBEDDED DOWEL BARS OF ISOLATED STANDARD PRECAST SLABS SHALL BE
FULLY RETROFITED INTO EXISTING CONCRETE PAVEMENT IN ACCORDANCE WITH DETAIL
D (SEE SHEET 16), OR PARTIALLY RETROFIT AN EMBEDDED DOWEL BAR OF
THE EMBEDDED DOWEL BARS OF ISOLATED STANDARD PRECAST SLABS SHALL BE
FULLY RETROFITED INTO EXISTING CONCRETE PAVEMENT IN ACCORDANCE WITH DETAIL
D (SEE SHEET 16), OR PARTIALLY RETROFIT AN EMBEDDED DOWEL BAR OF
THE EMBEDDED DOWEL BARS OF ISOLATED STANDARD PRECAST SLABS SHALL BE
FULLY RETROFITED INTO EXISTING CONCRETE PAVEMENT IN ACCORDANCE WITH DETAIL
D (SEE SHEET 16), OR PARTIALL
20. ALL SLURRY FROM SAW CUTTING OPERATIONS SHALL BE THOROUGHLY SCRAPED AND DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.


27. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

28. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

29. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

30. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

31. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

32. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

33. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

34. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

35. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

36. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

37. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

38. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

39. PERFORMANCE OF ALL TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.
INSTALLATION OF ISOLATED STANDARD PRECAST SLABS

NOTE:
When transverse joints of any precast slab cannot be aligned with transverse joints in adjacent lanes, a minimum 2'-0" offset between joints shall be provided.

- For dowel bars to be slid into pre-drilled holes in the field, refer to detail C on sheet 11.
- For dowel bars to be fully retrofitted in the field, refer to detail G on sheet 17.

Sheets 11-14 of 19

PRECAST PAVEMENT SLABS

STANDARD A18-03
NOTE:

* For dowel bars fully retrofitted in the field, refer to detail C on sheet 11.

INSTALLATION OF CONSECUTIVE STANDARD PRECAST SLABS

SEE DETAIL D ON SHEET 14

SEE DETAIL E ON SHEET 15

SEE DETAIL F# ON SHEET 16

SEE DETAIL G ON SHEET 14

SEE DETAIL H ON SHEET 15

MIN. 2'-0"
DETAIL D - WIDE MOUTH DOWEL BAR PLACEMENT

FOR APPLICATION WITH ALL ISOLATED STANDARD PRECAST SLABS AND WITH INITIAL PLACEMENT OF CONSECUTIVE STANDARD SLABS

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PATCH.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.
NOTE:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BBACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

DETAIL E - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR CONSECUTIVE STANDARD PRECAST PANELS

NOTES:
1. PLACE FOAM CORE BOARDS TO THE
   TOP OF PAVEMENT
2. UPON COMPLETION, THE FINISHED
   SURFACE OF THE CONCRETE
   BACKFILL MATERIAL SHALL NOT BE
   BELOW EXISTING CONCRETE SURFACE.
PRECAST PAVEMENT SLABS

TRANSFER JOINT OF CONSECUTIVELY PLACED STANDARD PRECAST PANELS

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

SECTION F-F

DETAIL F - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR THE LAST TRANSFER JOINT OF CONSECUTIVELY PLACED STANDARD PRECAST PANELS

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

SECTION F-F

DETAIL F - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR THE LAST TRANSFER JOINT OF CONSECUTIVELY PLACED STANDARD PRECAST PANELS

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

PLAN VIEW

SECTION F-F

DETAIL F - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR THE LAST TRANSFER JOINT OF CONSECUTIVELY PLACED STANDARD PRECAST PANELS

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

SECTION N-N

CHAIR DETAIL

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

SECTION F-F

DETAIL F - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR THE LAST TRANSFER JOINT OF CONSECUTIVELY PLACED STANDARD PRECAST PANELS

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

SECTION N-N

CHAIR DETAIL

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

SECTION F-F

DETAIL F - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR THE LAST TRANSFER JOINT OF CONSECUTIVELY PLACED STANDARD PRECAST PANELS

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

SECTION N-N

CHAIR DETAIL

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

SECTION F-F

DETAIL F - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR THE LAST TRANSFER JOINT OF CONSECUTIVELY PLACED STANDARD PRECAST PANELS

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

SECTION N-N

CHAIR DETAIL

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

SECTION F-F

DETAIL F - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR THE LAST TRANSFER JOINT OF CONSECUTIVELY PLACED STANDARD PRECAST PANELS

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

SECTION N-N

CHAIR DETAIL

NOTES:
1. PLACE FOAM CORE BOARDS TO THE TOP OF PAVEMENT.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.
PLACEMENT DETAIL FOR ISOLATED PRECAST PANELS

DETAIL G - NARROW MOUTH DOWEL BAR

PLAN VIEW

SECTION G-G

MATERIAL

BACKFILL

CONCRETE

CONCRETE PAVEMENT

EXISTING PORTLAND CEMENT

CONCRETE PAVEMENT

EXISTING PORTLAND CEMENT

NOTES:

1. FOR EACH INSERTED DOWEL BAR TO MAINTAIN ALIGNMENT.

2. TO THE THREADED ROD. AT LEAST ONE CLAMP WILL BE NEEDED

METAL RING MAY BE REPLACED WITH A STRONG MAGNET WELDED

MATERIAL TO MAINTAIN JOINT... FOAM CORE BOARD FILLER

CAULKING FILLER

TRANSVERSE CONTRACTION JOINT

JOINT SEALING

AND BEFORE BACKFILLING

DEPTH AFTER 1" SAW CUT

PAVEMENT SURFACE IS PARALLEL TO BOTTOM OF SLOT

ELEVATION OF DOWEL WHEN EPOXIED

NUT TO ADJUST VERTICAL CONCRETE PAVEMENT

PORTLAND CEMENT

TOP OF EXISTING DOWEL BAR INSERTED

1"}

2"} WASHER

3"

4"

DOWEL BAR

1"}

THREADED ROD

TOP OF METAL RING

WELDED TO NUT OR PLATE

OVERRIDE NUT MOUNTED TO 1/2" DOWEL BAR

TOP OF METAL RING

2.0 IN. INSIDE

0.125 IN. THICK

0.5 IN. WIDE

METAL RING:

CLAMP DETAIL FOR SLIDING DOWEL BAR SLOTS

SECTION M-M

SLABS IN PLACE OF FULL RETROFITS)

FOR OPTIONAL APPLICATION WITH ALL ISOLATED

AFTER PRECAST SLAB HAS BEEN SET

(TYP.)

EXPANSION CAP

DOWEL BAR

PRECAST CONCRETE SLAB

BACKFILL MATERIAL HAS SET

* (TYP.)

PLACE FOAM CORE BOARDS TO THE TOP OF

DOWEL BAR (NOTE 1)

DRILL 1" DIA. HOLE

"... FOAM CORE BOARD

FILL 1/2" DIA. HOLE FOR DOWEL BAR (NOTE 1)

The concrete backfill material shall not

upon completion, the finished surface of

the concrete backfill material shall not

be below existing concrete surface.

2. Upon completion, the finished surface of

the concrete backfill material shall not

be below existing concrete surface.

ELEVATION OF DOWEL WHEN EPOXIED

NUT TO ADJUST VERTICAL CONCRETE PAVEMENT

PORTLAND CEMENT

TOP OF EXISTING DOWEL BAR INSERTED

1"}

THREADED ROD

TOP OF METAL RING

WELDED TO NUT OR PLATE

OVERRIDE NUT MOUNTED TO 1/2" DOWEL BAR

TOP OF METAL RING

2.0 IN. INSIDE

0.125 IN. THICK

0.5 IN. WIDE

METAL RING:

CLAMP DETAIL FOR SLIDING DOWEL BAR SLOTS

SECTION M-M

SLABS IN PLACE OF FULL RETROFITS)

FOR OPTIONAL APPLICATION WITH ALL ISOLATED

AFTER PRECAST SLAB HAS BEEN SET

(TYP.)

EXPANSION CAP

DOWEL BAR

PRECAST CONCRETE SLAB

BACKFILL MATERIAL HAS SET

* (TYP.)

PLACE FOAM CORE BOARDS TO THE TOP OF

DOWEL BAR (NOTE 1)

DRILL 1" DIA. HOLE

"... FOAM CORE BOARD

FILL 1/2" DIA. HOLE FOR DOWEL BAR (NOTE 1)

The concrete backfill material shall not

upon completion, the finished surface of
Installation detail for custom slabs

NOTES:
1. No stitching of deformed tie bars is required when precast slab is placed adjacent to HMA shoulder or plaza island.
2. The bar stitching shall be required when the repair area length exceeds 20 ft. or when more than 3 precast slabs are placed in sequence.
3. Shop drawings shall be required for all custom plaza slabs.

LEGEND
- DOWEL BAR EMBEDDED
- DOWEL SLOT
- FIELD RETROFITTED DOWEL BARS
- SLOT OR HOLE FOR STITCHED TIE BAR

DIAGRAM
NOTES FOR TIE BAR STITCHING:

1. Holes drilled at 40° ± 5° angle to the existing pavement surface so they intersect the longitudinal crack or joint at mid-depth. It is important to start drilling the hole at a consistent distance from the joint, in order to consistently cross at the mid-depth of the slab.

2. Holes centerlines are perpendicular to the joint (in plan view) at each location being drilled.

3. Select a drill that minimizes damage to the concrete surface, such as a minimum powered drill, select a drill diameter no more than 0.125 in. larger than the tie bar diameter. Choose a gang-mounted drill if higher productivity is needed.

4. Holes with no less than a 24 in. bar spacing, adjacent holes are drilled in opposite directions across the joint, the holes and inserted tie bars shall be no less than 24 inches from any existing transverse joint or any precast or repair transfer joint.

5. Holes bottoming no more than 1 inch from the slab bottom.

6. Air blow the holes to remove dust and debris after drilling.

7. Inject adhesive into the hole leaving some volume for the tie bar to occupy the hole. This adhesive is acceptable for small quantities.

8. Remove No. 6 epoxy coated tie bar from the hole leaving about 1 in. from the top of bar to the pavement surface. No. 6 bars shall be epoxy coated.

9. Remove excess adhesive and finish flush with the pavement surface.

DETAIL H - LONGITUDINAL TIE BAR STITCHING FOR PRECAST PANELS

SECTION A-A