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- **New Sheet**
- **Retired Standard**

**Section A: Roadway Pavement**

**Standard** | **Modification Summary**
---|---
**A1-07** | CONCRETE PAVEMENT REPAIR FULL DEPTH
- Split note 3 into two notes. Dowels embedded 1/2 length, Tie bars embedded 1/3 length.
- Note 13 adjusted to remove IRI requirement and change to straight edge form of measurement.
- Updated note 6 for grammar.
- Updated and clarified note 7 intent.

**A2-06** | ASPHALT OVERLAY REPAIR
- Removed extra note.

**A12-00** | JOINTING PLAN ENTRANCE RAMP TERMINAL WITH AUXILIARY LANE SHEET 1 AND 2
- Add detail sheet similar to RDC manual.

**A13-02** | JOINTING PLAN EXIT RAMP TERMINAL WITH AUXILIARY LANE SHEET 1
- Updated Detail A and B to show min distance correctly.
- Updated taper rates for min and desired.

**A13-02** | JOINTING PLAN EXIT RAMP TERMINAL WITH AUXILIARY LANE SHEET 2
- Added sheet for PCC ramp adjacent to C.R.C. Mainline pavement.
- Updated Detail A and B to show min distance correctly.
- Updated taper rates for min and desired.

**A14-05** | JOINTING PLAN ENTRANCE RAMP TERMINAL SHEET 1
- Updated Detail A to show min distance correctly.
- Updated and clarified note 7 intent.

**A14-05** | JOINTING PLAN ENTRANCE RAMP TERMINAL SHEET 2
- Updated 11' min stub at gore.

**A15-05** | JOINTING PLAN EXIT RAMP TERMINAL SHEET 1
- Updated 11’ min stub at gore.
- Updated 11’ min stub at gore.

**A15-05** | JOINTING PLAN EXIT RAMP TERMINAL SHEET 2
- Updated 11’ min stub at gore.

**A16-05** | JOINTING PLAN PARALLEL EXIT RAMP TERMINAL SHEET 1
- Added 150’ taper to note 5 and taper note on plan view.
- Updated Detail A and B to show min distance correctly.

**A16-05** | JOINTING PLAN PARALLEL EXIT RAMP TERMINAL SHEET 2
- Added 150’ taper to note 5 and taper note on plan view.
- Updated Detail A and B to show min distance correctly.

**A17-05** | JOINTING PLAN PARALLEL ENTRANCE RAMP TERMINAL SHEET 1
- Updated gore area.

**A17-05** | JOINTING PLAN PARALLEL ENTRANCE RAMP TERMINAL SHEET 2
- Revised gore area.

**A18-05** | PRECAST PAVEMENT SLABS
- Deleted sheet 1, 9, 10 removed and added to a Specification
- Deleted sheets 13, 14, 15, 16. Limits dowel bar replacement options.
- Updated note 7 to refer to supplemental specs on sheet 4,5,6
- Updated note 3 to refer to supplemental specs on sheet 8
- Updated notes to refer to supplemental specs on sheet 11, 12

**A19-00** | Dowel Bar Retrofit
- Added sheet for Dowel bar retrofit.
PROPOSED ASPHALT OVERLAY REPAIR
TYPICAL ROADWAY PLAN

SECTION A-A & B-B
ASPHALT OVERLAY REPAIR

NOTES:

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. SAWCUT MAY BE ELIMINATED IF MILLING EQUIPMENT IS USED AND VERTICAL AND STRAIGHT SIDES ARE OBTAINED. TRANSVERSE SAWCUTS ARE ALWAYS REQUIRED.

5. PROPOSED ASPHALT OVERLAY PATCH MATERIAL SHALL BE IN ACCORDANCE WITH ILLINOIS TOLLWAY SPECIAL PROVISION "ASPHALT PATCHING OF MAINLINE OVERLAYS".
**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 resurfacings.
2. Only approved scarifying or milling equipment shall be used to scarify the concrete pavement.
3. Regardless of type of surface mix used, number or thickness of courses or layers, the overlay thickness transition length shall be based on 1" in 20' and the minimum surface layer thickness shall be 1/8".
4. 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, "b" is the thickness of the binder course specified in the contract.

---

**DETAIL OF BUTT JOINT, TYPE 2**

**AT EXISTING OVERLAY AREAS**

**NOTES FOR BUTT JOINT, TYPE 2**

1. The above work will be performed at the ends of all asphalt resurfacings where butt joints exist.
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, "b" is the thickness of the binder course specified in the contract.
3. Scarification may be eliminated if holding equipment is used and vertical and straight sides are obtained.
4. Regardless of type of surface mix used, number or thickness of courses or layers, the overlay thickness transition length shall be based on 1" in 20' and the minimum surface layer thickness shall be 1/8".

---

**TEMPORARY ASPHALT WEDGE - TRANSVERSE**

**NOTES FOR TEMPORARY ASPHALT WEDGE - LONGITUDINAL**

1. Upon removal of the wedges, the surface course shall be sanded parallel to the joint to provide a true vertical surface.
2. Refer to the contract documents for the required binder and surface course materials.
PAVEMENT CROSS-SECTION (2 LANES)

**GENERAL NOTES:**

1. Dowel basket assemblies, where used, shall be supported and anchored in accordance with the Standard Specifications and Concrete Special Provision.

2. Materials are project specific, refer to project plans and contract documents for details.

3. See Illinois Tollway Standard Drawing at pavement joints and IDOT Highway Standard A500 (Pavement Design) for details of joints and tie bars not shown.

4. Pavement designs are project specific, other materials may be substituted for asphalt stabilized subbase and subgrade aggregate, refer to project plans for details and material quantities.

5. The tie bar for the longitudinal sawed joint shall be 15" from the transverse contraction joint.

6. The 1'-6" wide asphalt stabilized subbase may be reduced to 1'-0" when paving equipment utilized for construction of the PCC pavement will allow.

7. The 1'-0" typical transverse joint spacing (dimension shall be adjusted to 1'-0" and 1'-6" min.) when placed adjacent to existing PCC pavement structure so that the joints are in prolongation, adjust the tie bar spacing to maintain a clearance of 0.3808 from dowel bars.
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 12" pavement use the following dowels:
   - 1-1/2" x 18" long smooth epoxy coated dowel bars on 9" centers
   - 1-3/4" x 18" long smooth epoxy coated dowel bars on 12" centers

* Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed.

\( t = \text{Pavement Thickness} \)
NOTES:

1. ALL TRANSVERSE CONSTRUCTION AND EXPANSION JOINTS SHALL BE DETAILED AS SHOWN ON IDOT HIGHWAY STANDARD 420001. ALL OTHER JOINTS SHALL BE DETAILED AS SHOWN ON IDOT HIGHWAY STANDARD A00.

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

6. DIMENSION OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.
1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWINGS AT AND BELOW HIGHWAY STANDARD 420001, EXCEPT EXPANSION JOINT SEAL 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. TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15'.

4. 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. LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE PROVIDED.

5. DIMENSIONS OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.

NOTES:

1. ROAD RECOVERY TAPER PAVEMENT TYPE AND THICKNESS TO MATCH MAINLINE.

2. EDGE OF PAVEMENT PARALLEL TO MAINLINE NO. 7 LONGITUDINAL BARS.

3. EDGE OF PAVEMENT PERPENDICULAR TO MAINLINE NO. 4 TRANSVERSE BARS.

4. EDGE OF PAVEMENT PARALLEL TO MAINLINE NO. 7 LONGITUDINAL BARS.

5. EDGE OF PAVEMENT PERPENDICULAR TO MAINLINE NO. 4 TRANSVERSE BARS.

6. SEE DETAIL B.

7. DETAIL B.
JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT

NOTES:

1. All transverse construction and expansion pavement joints shall be detailed as shown on Illinois Tollway Standard Drawing A73. All other pavement joints shall be detailed as shown on Ilinois Tollway Standard A13.

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

3. A nose location shall be adjusted to be aligned with a mainline transverse joint.

4. Typical PCC pavement joint spacing shall be 0.

5. As additional ramp lanes are added, the minimum joint spacing shall be 0. Typical spacing is to be 0. Epoxy coated, longitudinal joint locations in the wheel path shall be hydrated.

6. Dimensions of lane 1 shall be as shown on the plans.
NOTES:

1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARDS DRAWING ST AND OTHER MANDATORY STANDARD DRAWINGS. EXCEPT EXPANSION JOINT SEAL, EACH JOINT SHALL BE AS DESCRIBED IN THE ILLINOIS TOLLWAY SPECIAL PROVISIONS, BONDED PREFORMED JOINT SEAL.

2. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REQUIREMENTS.

3. TYPICAL PCC PAVEMENT JOINT SPACING shall be 15'.

4. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 24" LONG BY 24" WIDE. TYPICAL JOINT SPACING IS 15' LONG BY 15' WIDE. LONGITUDINAL JOINTS shall be DETAIL C.

5. DIMENSIONS OF LANE 1 shall be as shown on the plans.
NOTES:

1. ALL TRANSVERSE CONSTRUCTION AND EXPANSION PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING NO. 70. IDOT HIGHWAY STANDARD 420001. ALL OTHER PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON IDOT HIGHWAY STANDARD OFFICIAL.

2. JOINTS SHALL BE THE MINIMUM DIMENSION AS SHOWN AND ALIGNED WITH A MAINTLINE TRANSVERSE JOINT.

3. TRANSVERSE JOINT SPACING SHALL BE 15'.

4. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM TRANSVERSE JOINT SPACING SHALL BE 15' LONG BY 15' WIDE. TYPICAL TRANSVERSE JOINT SPACING IS 15' LONG BY 15' WIDE.

5. EPOXY-COATED, JOINT LINE IS PARALLEL TO RAMP BASELINE. JOINT WITH NO. 6 TIE BARS 24" LONG AT 24" CTS., EPOXY COATED. JOINT LINE IS PARALLEL TO RAMP BASELINE.

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

JOINTED PCC RAMP ADJACENT TO JOINTED PCC MAINLINE PAVEMENT
NOTES:

1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING AT AND EPOXY COATED. EXPANSION JOINT SEAL WITH NO. 6 TIE BARS 24" LONG AT 24" CTS., EPOXY COATED.

2. SEE PROJECT PLANS AND CONTRACT DOCUMENTS FOR DETAILS OF PAVEMENT REINFORCEMENT.

3. TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15'.

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

5. DIMENSIONS OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.
LONGITUDINAL SAWED JOINT OR LONGITUDINAL CONSTRUCTION JOINTS WITH NO. 6 HEX BARS 24" LONG AT 24" CENTERS, EPOXY COATED. JOINT LINE IS PARALLEL TO RAMP BASELINE.

JOINTS SHALL BE ALIGNED WITH MAINLINE PAVEMENT JOINTS AND PERPENDICULAR TO MAINLINE PAVEMENT JOINTS.

CORE AND RECOVERY TAPER PAVEMENT TYPE AND THICKNESS TO MATCH MAINLINE.

NOTES:

1. ALL TRANSVERSE CONSTRUCTION AND EXPANSION PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A15-05. ALL OTHER PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ICDT HIGHWAY STANDARD 420001.

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

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

4. TYPICAL P.C.C. 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 SPACING IS 15' LONG BY 15' 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 PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7 AND IDOT HIGHWAY STANDARD 420001, 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. TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15' LONG AT 24" CENTERS, EPOXY COATED. JOINT LINE IS PARALLEL TO RAMP BASELINE.

4. 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 SHOULDER/PAVING SHALL BE MINIMIZED.

5. DIMENSIONS OF LANE 1 SHALL BE AS SHOWN ON THE PLANS.
NOTES:

1. ALL TRANSVERSE CONSTRUCTION AND EXPANSION PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7. ALL OTHER PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS 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 PCC PAVEMENT JOINT SPACING SHALL BE 15'.

5. RAMP NARROWS FROM 21' TO 18' IN 150'.

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.
NOTES:

1. ALL PAVEMENT JOINTS SHALL BE DETAILLED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING AT AND BELOW HIGHWAY STANDARD 420001, EXCEPT EXPANSION JOINT SEAL 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. RAMP NARROWS FROM 21' TO 18' IN 150'.

4. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE 15' LONG BY 19' WIDE, TYPICAL SPACING IS 18' LONG BY 12' WIDE, LONGITUDINAL JOINT LOCATIONS IN THE WHEEL PATH SHALL BE ADVOCATED.

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

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

1. ALL TRANSVERSE CONSTRUCTION AND EXPANSION PAVEMENT JOINTS SHALL BE DETAILLED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING A7. ALL OTHER PAVEMENT JOINTS SHALL BE DETAILLED AS SHOWN ON IDOT HIGHWAY STANDARD A17-05.

2. STEPS 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' TO 16'.

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.

DETAIL A

- EDGE OF MAINLINE PAVEMENT
- TRANSVERSE EXPANSION JOINT
- MAINLINE PAVEMENT
- RAMP PAVEMENT
- ASPHALT SHOULDER (TYP.)
- RAMP BASELINE
- END RAMP BASELINE
- 250' TAPER (25:1 RATE)

REVISIONS

- DATE: 3-31-2016
- UPDATED NOTES & CALL-OUTS

- DATE: 3-11-2015
- TIE BARS 24" LONG AT 24" CTS., EPOXY COATED

- LONGITUDINAL CONSTRUCTION JOINT WITH NO. 6 TIE BARS 24" LONG AT 24" CENTERS, EPOXY COATED

- DATE: 3-01-2019
- ENTRANCE LAYOUT UPDATE

- DATE: 3-01-2018

- DATE: 1-8-2015

- DATE: 1-5-2015

- DATE: 1-31-2015

- STANDARD A17-05

- JOINTING PLAN PARALLEL
- ENTRANCE RAMP TERMINAL
- LOOP RAMP ONLY

- APPROVED DATE: 6-5-2013

- CHIEF ENGINEERING OFFICER
NOTES:

1. ALL PAVEMENT JOINTS SHALL BE DETAILED AS SHOWN ON ILLINOIS TOLLWAY STANDARD DRAWING AT AND BODY HIGHWAY STANDARD 420001, EXCEPT EXPANSION JOINT SEAL 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. TYPICAL PCC PAVEMENT JOINT SPACING SHALL BE 15'.

4. RAMP JOINTS SHALL BE AS SHOWN ON THE PLANS.

5. AS ADDITIONAL RAMP LANES ARE ADDED, THE MAXIMUM JOINT SPACING SHALL BE AS SHOWN ON THE PLANS.

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

REINFORCEMENT SECTION A-A

TYPICAL REINFORCEMENT DETAIL FOR STANDARD SLABS

REINFORCEMENT SECTION B-B

NOTE:

* MIN. CLEARANCE FOR TOP REINFORCEMENT SHALL BE ADJUSTED FOR PLATE SLABS TO FIT MIDDLE PLANT OR MIDDLE MIDDLE.
PRECAST PAVEMENT SLABS

TRAFFIC BEFORE GROUTING IS COMPLETED

SLABS GREATER THAN 6 FT. LONGITUDINAL LENGTH TO BE OPENED TO TRAFFIC BEFORE GROUTING IS COMPLETED.

TYPICAL REINFORCEMENT DETAIL FOR CUSTOM SLABS

REINFORCEMENT SECTION A-A

TYPICAL REINFORCEMENT DETAIL FOR CUSTOM SLABS

REINFORCEMENT SECTION A-A

NOTE:

ALL CUSTOM SLABS OF TRAPEZOID SHAPES, REINFORCEMENT SHALL BE Laid OUT IN A PERPENDICULAR GRID PATTERN, NOT SKEWED.

* MIN. CLEARANCE FOR TOP REINFORCEMENT Shall BE ADJUSTED FOR PLAZA SLAB TO FIT PRECAST PAVEMENT ON PRECAST MANHOLE.

#5 @ 12" O.C.

#5 @ 12" O.C.
**NOTES:**

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

2. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 12'-6" IN WIDTH AND GREATER THAN 11'-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 PRE-DETERMINED BY THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.

3. SLAB THICKNESS SHALL BE 11'-6" ± 1/8".


5. IT SHALL BE THE CONTRACTOR'S OPTION TO REPLACE ANY EMBEDDED DOWEL BARS OR PREFORMED SLOTS AS SHOWN ON THESE DRAWINGS WITH FULLY RETROFITTED DOWEL BARS FIELD INSTALLED IN ACCORDANCE WITH THE DRAWINGS. 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. OVERTURNED PRESSED SANS SHALL BE USED TO MAKE SAW CUTS PERPENDICULAR TO THE TRANSVERSE UNDERSIDE RIM LINE TO ALLOW FOR DOWEL BARS PLACEMENTS WITHIN THE SPECIFIED TOLERANCES.

6. SEE SHEET 6 FOR SECTION DETAILS.

7. THE SLAB PAVEMENT SLABS CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING JOINTS. OTHERWISE, THE SLAB PAVEMENT SLABS MUST BE PRE-DETERMINED BY THE CONTRACTOR.

8. THE STANDARD PRECAST SLAB CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING LONGITUDINAL JOINTS. OTHERWISE, THE STANDARD PRECAST SLAB CAN BE FABRICATED AS A CUSTOM SLAB.

9. THE SLAB PAVEMENT SLABS CAN BE SLABBED AS A CUSTOM SLAB.

10. THE STANDARD PRECAST SLAB CAN BE SLABBED AS A CUSTOM SLAB.

11. THE STANDARD PRECAST SLAB CAN BE SLABBED AS A CUSTOM SLAB.

12. THE STANDARD PRECAST SLAB CAN BE SLABBED AS A CUSTOM SLAB.
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 SIDE LINE SLAB OPENINGS/PATCHES LESS THAN 15'-4" in width and greater than 12'-6" in width.

3. 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.

4. A FOAM BACKER ROD SHALL BE PLACED AROUND THE OUTSIDE PERIMETER OF THE SLAB AT THE BOTTOM OF THE JOINTS BEFORE THE SLAB HAS SET AND BEFORE BEDDING GROUT OR FLOWABLE FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELLED WITH FLOWABLE FILL.

5. SEE SPECIAL PROVISIONS LIFTING (TYP.)

6. IT SHALL BE THE CONTRACTOR'S OPTION TO REPLACE ANY EMBEDDED DOWEL BARS OR PREFORMED SLOTS AS SHOWN ON THESE DRAWINGS WITH FULLY RETROFITTED DOWEL BARS FIELD INSTALLED IN ACCORDANCE WITH SECTION 5 AND 6 OF SHEET 4. THE CONTRACTOR WILL USE AN APPROVED TEMPLATE TO LOCATE THE DOWEL CUTS REQUISITE FOR PROPER SPACING AND RETROFITTING OF THE DOWEL BARS IN ACCORDANCE WITH THESE DRAWINGS. DIAMOND BLADED GANG SAWS SHALL BE USED TO MAKE DOWEL BAR CUTS PARALLEL TO THE TRANSVERSE NONDEFORMABLE JOINT LINE TO ALLOW FOR DOWEL BAR PLACEMENTS WITHIN THE SPECIFIED TOLERANCES.

7. SEE PRECAST REPLACEMENT OF CONCRETE PAVEMENT SLABS ILLINOIS TOLLWAY SPECIAL PROVISION FOR LOADING BEDDING GROUT PORTS.

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

* FOR INTERNAL CONSECUTIVE SLABS, PREFORMED SLOTS IN ACCORDANCE WITH SECTION 5 AND 6 OF SHEET 4 MAY BE USED IN PLACE OF EMBEDDED DOWEL BARS OR FIELD RETROFITTED DOWEL BARS WITH SAWCUT SLOTS. ALL PREFORMED SLOTS MUST BE Filled BEFORE BEING OPENED TO TRAFFIC.
1. The width and length of produced slabs shall be the produced dimensions ± 1/16”.

2. For middle lane slab openings/paties less than 12'-6" in width or greater than 13'-6" in width, the 13'-6" wide standard precast slab can be saw cut onsite 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/paties less than 13'-6" in width and greater than 12'-6" in width, the 12'-6" wide standard precast slab can be saw cut onsite 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 11½" ± 3/8".

5. A foam backer rod shall be placed around the outside perimeter of the slab at the bottom of the joint before the slab was been set and before locking contact or polymer-mastic joint fill is applied. The foam rod shall not be required when any slab is leveled with flowable fill.

6. See Sheet 6 for section details.

7. See precast replacement of concrete pavement slabs - Illinois tollway special provision for locating bedding graft 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 BEDDING GROUT OR POLYURETHANE LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELLED WITH A FLOWABLE FILL.

2. EITHER SINGLE DIAMOND BLADED SAWS OR DOUBLE DIAMOND BLADED GANG SAWS SHALL BE USED TO MAKE THE SAW CUTS PERPENDICULAR TO THE TRANSVERSE NON-SKEWED JOINT LINE TO ALLOW FOR SINGLE DOWEL BAR PLACEMENTS WITHIN THE SPECIFIED TOLERANCES.

3. SEE "PRECAST REPLACEMENT OF CONCRETE PAVEMENT SLABS" (ILLINOIS TOLLWAY) SPECIAL PROVISION FOR LOCATING BEDDING GROUT PORTS.

4. SEE SHEET 6 FOR SECTION DETAILS.
INSTALLATION OF ISOLATED STANDARD PRECAST SLABS

NOTE:

- For transverse joint of any precast slab, cannot be aligned with transverse joints of adjacent lanes. A minimum 2'-0" offset between joints shall be provided.
- For dowel bars, fully retrofitted in the field, refer to detail G on sheet 10.
- For dowel bars to be slid into pre-drilled holes in the field, refer to detail G on sheet 10.

DATE: 5-1-2009

CHIEF ENGINEERING OFFICER

ILLINOIS TOLLWAY SPECIAL PROVISION

REFER TO "PRECAST REPLACEMENT OF CONCRETE PAVEMENT SLABS"

STANDARD A18-05
PLACEMENT DETAIL FOR ISOLATED PRECAST PANELS

DETAIL G - NARROW MOUTH DOWEL BAR

PRECAST PAVEMENT SLABS

PLAN VIEW

SECTION G-G

SECTION L-L

MATERIAL

BACKFILL

CONCRETE

CONCRETE PAVEMENT

EXISTING PORTLAND CEMENT

CONCRETE PAVEMENT

EXISTING PORTLAND CEMENT

MATERIAL

CONCRETE BACKFILL

1" DOWEL BAR

NOTES:

FOR EACH INSERTED DOWEL BAR TO MAINTAIN ALIGNMENT TO THE THREADED ROD. AT LEAST ONE CLAMP WILL BE NEEDED

METAL RING MAY BE REPLACED WITH A STRONG MAGNET WELDED

SECTION M-M

SLABS IN PLACE OF FULL RETROFITS

(FOR OPTIONAL APPLICATION WITH ALL ISOLATED PRECAST PANELS)

AfTER PRECAST SLAB HAS BEEN SET

PRECAST CONCRETE SLAB

BACKFILL MATERIAL HAS SET

* (TYP.)

EXPANSION CAP

DOWEL BAR

FOR DOWEL BAR (NOTE 1)

DRILL 1" DIA. HOLE … FOAM CORE BOARD

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 EPOXYED NUT TO ADJUST VERTICAL

CONCRETE PAVEMENT PORTLAND CEMENT

TOP OF EXISTING DOWEL BAR

INSERTED

1" DOWEL BAR

(EPOXIED)

TOP OF METAL RING WELDED TO BOTTOM OF THREADED ROD

CURVED PIECE WELDED TO 2.0 IN. INSIDE 0.125 IN. THICK 0.5 IN. WIDE METAL RING:

CLAMP DETAIL FOR SLIDING DOWEL BAR SLOTS

DETAIL M - SLIDING DOWEL BAR SLOTS

PLACEMENT DETAIL FOR ISOLATED PRECAST PANELS

FILL Materials MAY BE REPLACED WITH A STRONG MAGNET WELDED TO THE THREADED ROD. AT LEAST ONE CLAMP WILL BE NEEDED FOR EACH INSERTED DOWEL BAR TO MAINTAIN ALIGNMENT.

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.

TOP OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT

CLAMP DETAIL FOR SLIDING DOWEL BAR SLOTS

TOP OF METAL RING TIGHTENING CLAMP MAILED TO TOP OF THREADED ROD

METAL RING 0.5" O.D. IN TROTH 0.25" THICK 0.062" THICK

THREADS MAILED TO TOP OF METAL RING

WELDED TO NUT OR PLATE

MATERIAL TO MAINTAIN JOINT … FOAM CORE BOARD FILLER

TRANSVERSE CONTRACTION JOINT

JOINT SEALING

PLAN VIEW

SECTION G-G

SECTION L-L

MATERIAL

BACKFILL

CONCRETE

CONCRETE PAVEMENT

EXISTING PORTLAND CEMENT

CONCRETE PAVEMENT

EXISTING PORTLAND CEMENT

MATERIAL

CONCRETE BACKFILL

1" DOWEL BAR

NOTES:

FOR EACH INSERTED DOWEL BAR TO MAINTAIN ALIGNMENT TO THE THREADED ROD. AT LEAST ONE CLAMP WILL BE NEEDED

METAL RING MAY BE REPLACED WITH A STRONG MAGNET WELDED

SECTION M-M

SLABS IN PLACE OF FULL RETROFITS

(FOR OPTIONAL APPLICATION WITH ALL ISOLATED PRECAST PANELS)

AfTER PRECAST SLAB HAS BEEN SET

PRECAST CONCRETE SLAB

BACKFILL MATERIAL HAS SET

* (TYP.)

EXPANSION CAP

DOWEL BAR

FOR DOWEL BAR (NOTE 1)

DRILL 1" DIA. HOLE … FOAM CORE BOARD

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 EPOXYED NUT TO ADJUST VERTICAL

CONCRETE PAVEMENT PORTLAND CEMENT

TOP OF EXISTING DOWEL BAR

INSERTED

1" DOWEL BAR

(EPOXIED)

TOP OF METAL RING WELDED TO BOTTOM OF THREADED ROD

CURVED PIECE WELDED TO 2.0 IN. INSIDE 0.125 IN. THICK 0.5 IN. WIDE METAL RING:

CLAMP DETAIL FOR SLIDING DOWEL BAR SLOTS

DETAIL M - SLIDING DOWEL BAR SLOTS

PLACEMENT DETAIL FOR ISOLATED PRECAST PANELS

FILL Materials MAY BE REPLACED WITH A STRONG MAGNET WELDED TO THE THREADED ROD. AT LEAST ONE CLAMP WILL BE NEEDED FOR EACH INSERTED DOWEL BAR TO MAINTAIN ALIGNMENT.

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.

TOP OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT

CLAMP DETAIL FOR SLIDING DOWEL BAR SLOTS

TOP OF METAL RING TIGHTENING CLAMP MAILED TO TOP OF THREADED ROD

METAL RING 0.5" O.D. IN TROTH 0.25" THICK 0.062" THICK

THREADS MAILED TO TOP OF METAL RING

WELDED TO NUT OR PLATE

MATERIAL TO MAINTAIN JOINT … FOAM CORE BOARD FILLER

TRANSVERSE CONTRACTION JOINT

JOINT SEALING

PLAN VIEW

SECTION G-G

SECTION L-L

MATERIAL

BACKFILL

CONCRETE

CONCRETE PAVEMENT

EXISTING PORTLAND CEMENT

CONCRETE PAVEMENT

EXISTING PORTLAND CEMENT

MATERIAL

CONCRETE BACKFILL

1" DOWEL BAR

NOTES:

FOR EACH INSERTED DOWEL BAR TO MAINTAIN ALIGNMENT TO THE THREADED ROD. AT LEAST ONE CLAMP WILL BE NEEDED

METAL RING MAY BE REPLACED WITH A STRONG MAGNET WELDED

SECTION M-M

SLABS IN PLACE OF FULL RETROFITS

(FOR OPTIONAL APPLICATION WITH ALL ISOLATED PRECAST PANELS)

AfTER PRECAST SLAB HAS BEEN SET

PRECAST CONCRETE SLAB

BACKFILL MATERIAL HAS SET

* (TYP.)

EXPANSION CAP

DOWEL BAR

FOR DOWEL BAR (NOTE 1)

DRILL 1" DIA. HOLE … FOAM CORE BOARD

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PAVEMENT SURFACE IS PARALLEL TO BOTTOM OF SLOT

ELEVATION OF DOWEL WHEN EPOXYED NUT TO ADJUST VERTICAL

CONCRETE PAVEMENT PORTLAND CEMENT

TOP OF EXISTING DOWEL BAR

INSERTED

1" DOWEL BAR

(EPOXIED)

TOP OF METAL RING WELDED TO BOTTOM OF THREADED ROD

CURVED PIECE WELDED TO 2.0 IN. INSIDE 0.125 IN. THICK 0.5 IN. WIDE METAL RING:
FOR NON-STANDARD SLABS, UPON COMPLETION BY THE CONTRACTOR A SLAB LAYOUT WILL BE ADDED WITH SLAB DIMENSIONS TO INCLUDE BUT NOT BE LIMITED TO THE TABLE SHOWN BELOW.

| Component | Station Number | Mainline Lane No. | Ramp Lane No. | Plaze Lane No. | Mark No. | Line No. | AC | FT | TC | CO | PI | P | I | T | R | E | F |
|-----------|----------------|-------------------|---------------|---------------|----------|---------|----|----|----|----|----|---|---|---|---|---|---
| CORRIDOR  |                |                   |               |               |          |         |    |    |    |    |    |   |   |   |   |   |   |

**NOTES:**
- **Legend**
  - RD = FIELD RETROFITTED DOWEL BARS
  - ST = SLOT OR HOLE FOR STITCHED TIE BAR
  - DS = DOWEL SLOT
  - DB = DOWEL BAR EMBEDDED

**Directions**
- Lane No. 1 is adjacent to median shoulder.
- Lane No. 1 is adjacent to the building.
- Ramp Lane No. 1 is adjacent to the building.
- Each panel shall be partially marked for correct placement.
- "PLAZA" in this column indicates plaza lane.
- "IN" in this column indicates inside lane.
- "MID" in this column indicates middle lane.
- "OUT" in this column indicates outside lane.

**Variables**
- See variable "P" for dowel bar quantity.
- See variable "T" for tie bar quantity.
- See variable "V" for tie bar quantity.
- See variable "W" for tie bar quantity.

**Diagonals (ft.)**
- See note 2 of sheet 1.

**Installation Detail for Custom Slabs**

**Notes:**
1. No stitching of deformed tie bars is required when precast slab is placed adjacent to main shoulder on plaza islands.
2. Retroweave and 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.

**Approved Date:** 5-1-2009

**Chief Engineering Officer:**

**Sheet 11 of 12**

**Precast Pavement Slabs**

**Standard A18-05**
**NOTES FOR TIE BAR STITCHING:**

1. Drill holes that are oriented at 40° | 5° angle to the pavement surface so they intersect the longitudinal crack or joint at about 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. Hole centerslines 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 vibratory powered drill. Select a drill diameter no more than 0.375 in. larger than the tie bar diameter, choose a gang-mounted drill if a higher productivity is needed.

4. Drill holes with no less than a 24 inch 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. Hole bottoms are 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 bar to occupy the hole. Leaving the adhesive is acceptable for small quantities.

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

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

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**DETAIL H - LONGITUDINAL TIE BAR STITCHING FOR PRECAST PANELS**

**SECTION A-A**