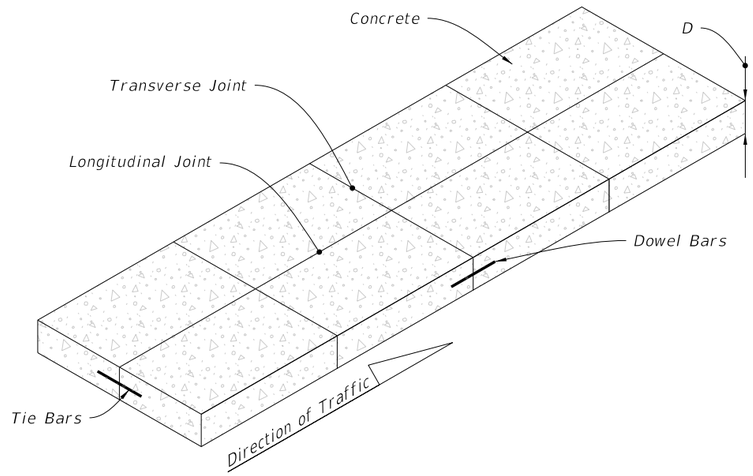
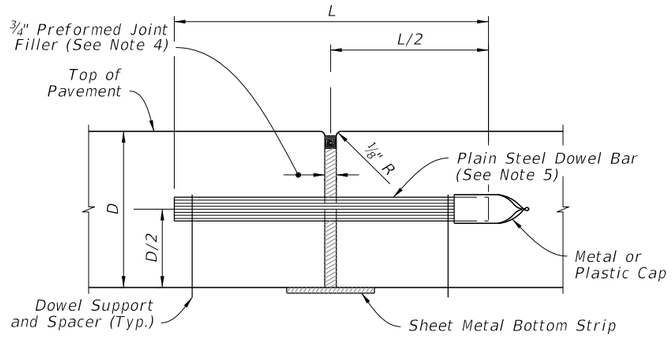
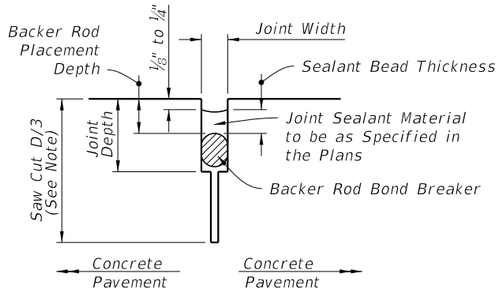




EXPANSION JOINT
(See General Notes 4 and 7)



NOTE:
(D=Conc. Pavt. Thick.) Not required for construction joints, existing joints, or cracks.

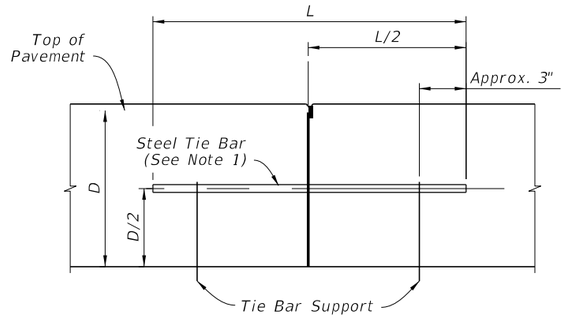
BACKER ROD BOND BREAKER (CONCRETE-CONCRETE JOINTS)

JOINT DIMENSIONS (INCHES)				
JOINT WIDTH	SEALANT BEAD THICKNESS	BACKER ROD DIA.	MINIMUM JOINT DEPTH	BACKER ROD PLACEMENT DEPTH
1/4	1/4	3/8	1	1/2
3/8	1/4	1/2	1 1/4	1/2

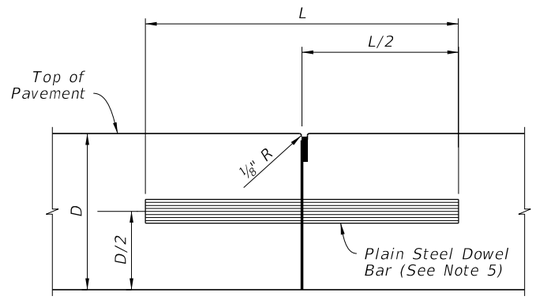
Unless otherwise indicated on the plans the joint width for new construction will be 1/4" for construction joints, 3/8" for all other joints.

For rehabilitation projects the joint width will be shown on the plans or established by the Engineer based on field conditions.

CONCRETE-CONCRETE JOINTS



BUTT CONSTRUCTION JOINT



BUTT CONSTRUCTION JOINT
(Used At Discontinuance Of Work)

GENERAL NOTES:

1. For Longitudinal Joints:

   A. Tie bars are deformed #4 or #5 reinforcing steel bars meeting the requirements of Specification 931.

   B. Provide a tied joint with #4 bars 25" in length at 24" spacing or #5 bars 30" in length at 36" spacing.

2. Transverse joints are to be spaced at a maximum of 15'. Dowel Bars are required at all transverse joints unless otherwise noted in the plans.

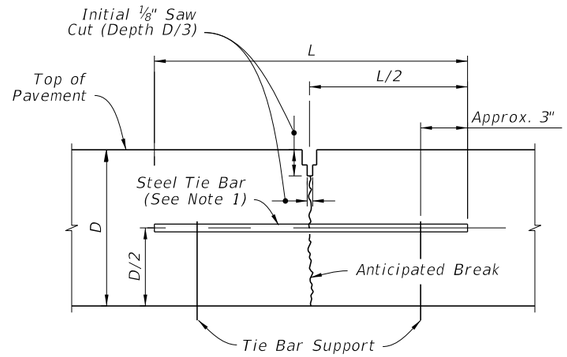
3. For bridge expansion joints, see Index 370-001.

4. Punch clean holes in preformed joint filler greater than bar diameter.

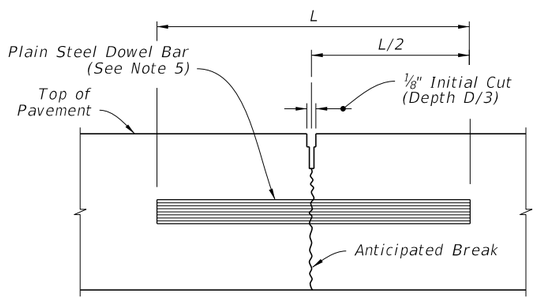
5. Coat plain steel dowel bars and welded wire basket assemblies in accordance with Specification 931. Lubricate dowel bars in accordance with Specification 350.

6. New and rehabilitation projects, backer rod bond breaker is required. Shoulder must be repaired if proper joint shape can not be attained.

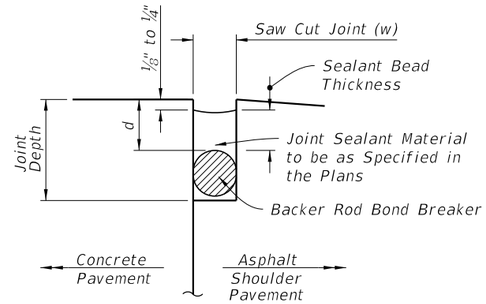
7. Sheet metal bottom strips in accordance with Specification 931. Not required with asphalt base.



LANE-TIE JOINT



CONTRACTION JOINT
(Sawed Method)



NOTE:
"d" and "w" = 3/4", unless specified in the Plans.

CONCRETE-ASPHALT SHOULDER JOINTS

LONGITUDINAL JOINTS

TRANSVERSE JOINTS

JOINT SEAL DIMENSIONS

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LAST REVISION	REVISION	DESCRIPTION:				
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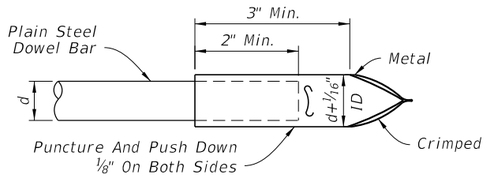
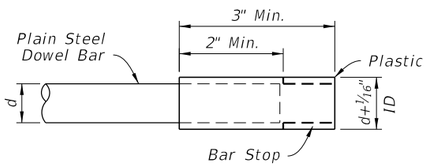
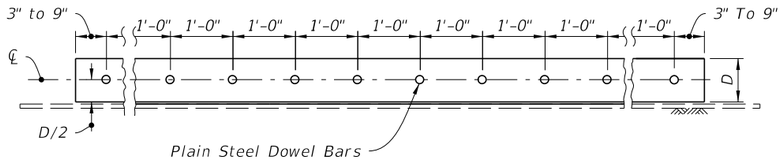


METAL

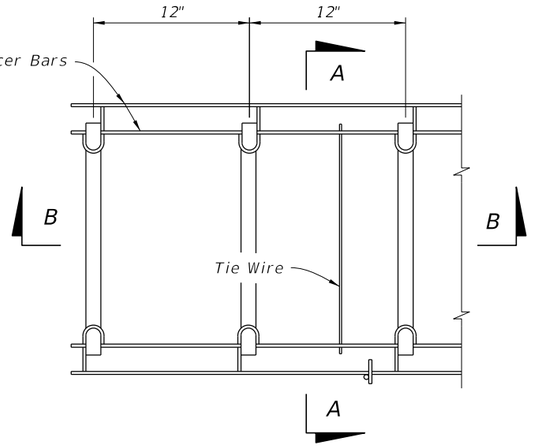


PLASTIC

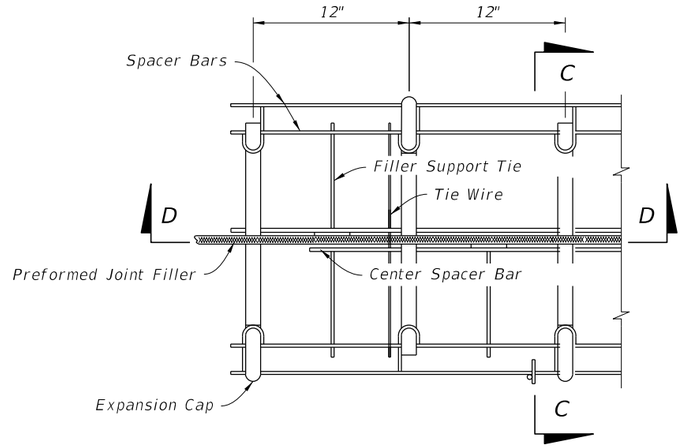
DOWEL BARS CAPS



DOWEL BAR LAYOUT

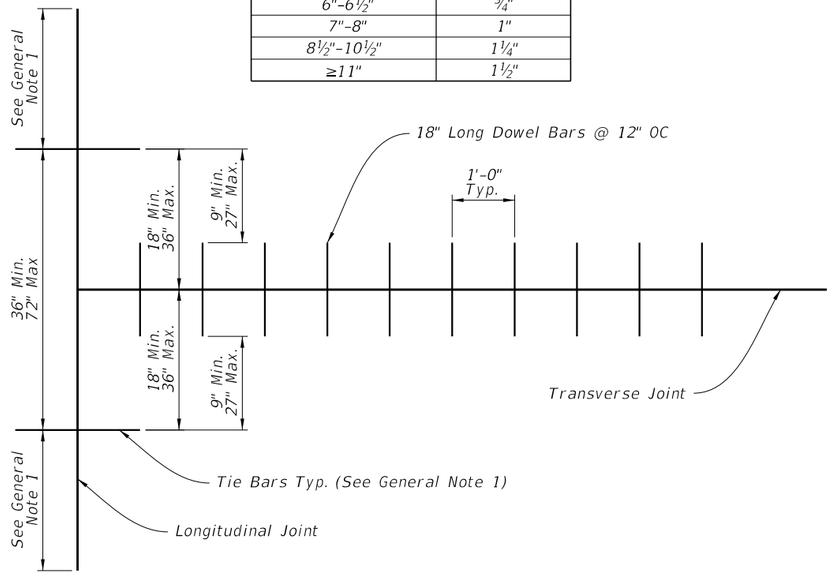


PLAN VIEW

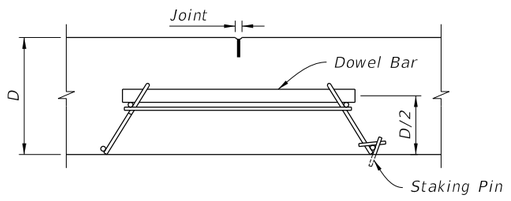


PLAN VIEW

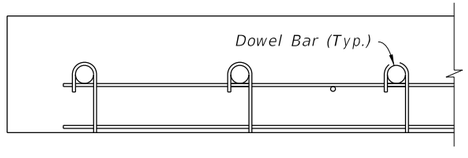
DOWEL BARS (LENGTH 18")	
Pavement Thickness "D"	Diameter
6"-6½"	¾"
7"-8"	1"
8½"-10½"	1¼"
≥11"	1½"



RELATION OF TIE BARS TO DOWEL BARS

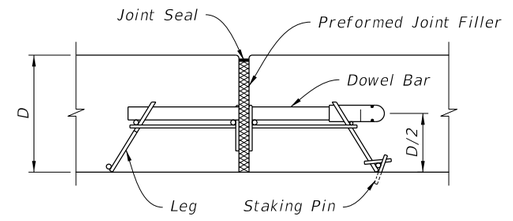


SECTION A-A

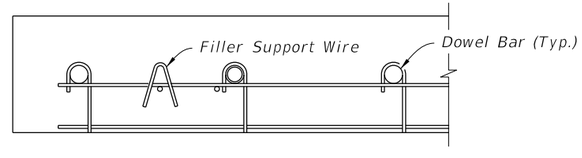


SECTION B-B

CONTRACTION ASSEMBLY



SECTION C-C



SECTION D-D

EXPANSION ASSEMBLY

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LAST REVISION	REVISION	DESCRIPTION:				
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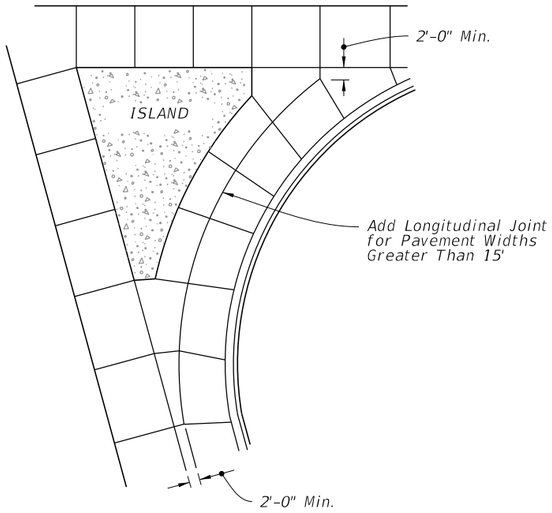
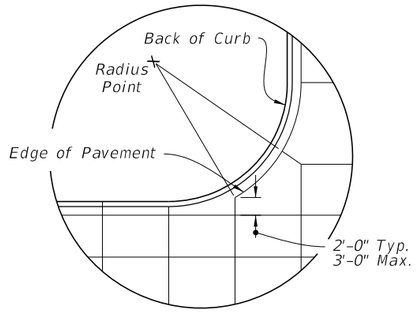
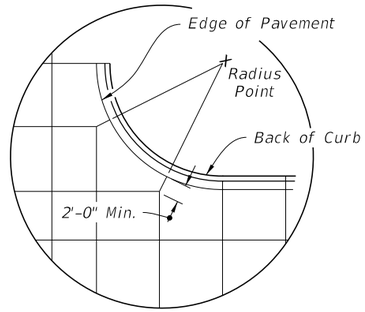


LARGE RIGHT TURN



DETAIL "A"



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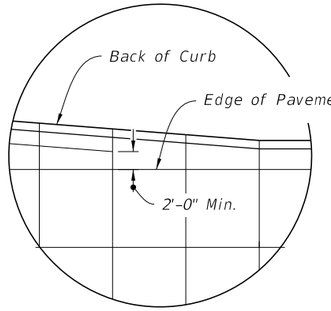
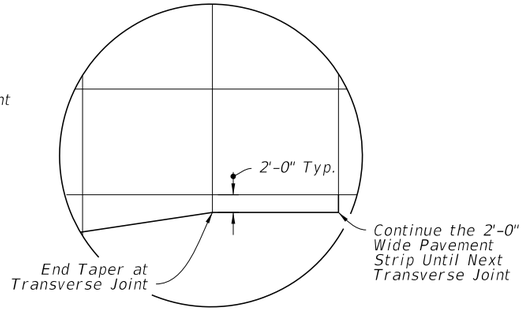


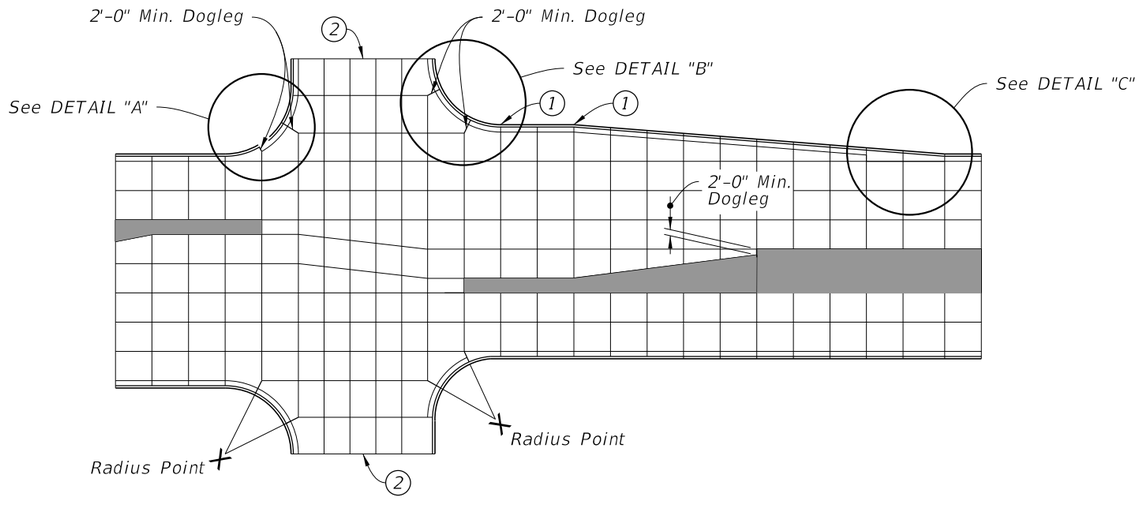
DETAIL "C"



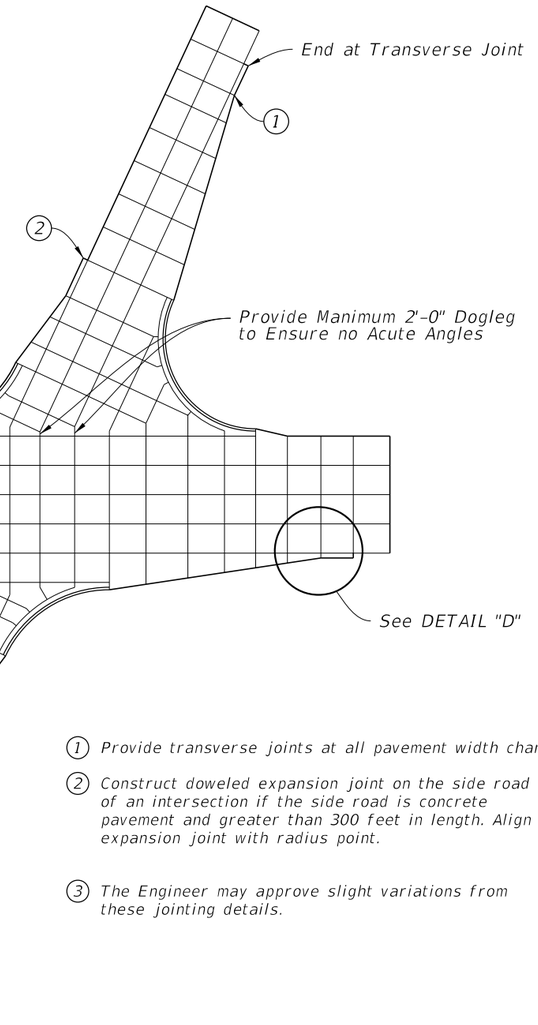
DETAIL "D"

NOTES:

1. The primary roadway controls the transverse joint pattern.
2. Align new joints with existing joints or cracks.
3. Construct transverse joints perpendicular to the roadway.
4. Adjust transverse joints to align with utility fixtures (e.g., manholes and inlets) in the pavement structure when possible.
5. Avoid slabs less than 2 feet wide or greater than 15 feet wide.
6. Avoid angles less than 60° by doglegging joints through curve radius points. Use 90° angles when possible.
7. Correlate longitudinal joints with lane lines when possible.
8. Longitudinal joints are not required for single lane pavement 14' or less in width. For entrance and exit ramp joint details, see sheet 5.



STANDARD INTERSECTION



1 Provide transverse joints at all pavement width changes.

2 Construct doweled expansion joint on the side road of an intersection if the side road is concrete pavement and greater than 300 feet in length. Align expansion joint with radius point.

3 The Engineer may approve slight variations from these jointing details.

SKEWED INTERSECTION

JOINT LAYOUTS FOR INTERSECTIONS

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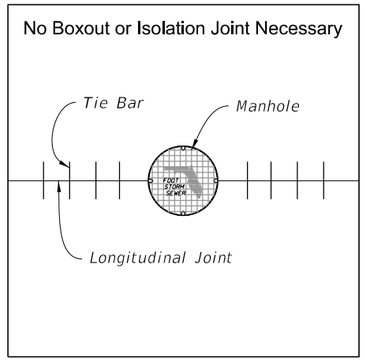
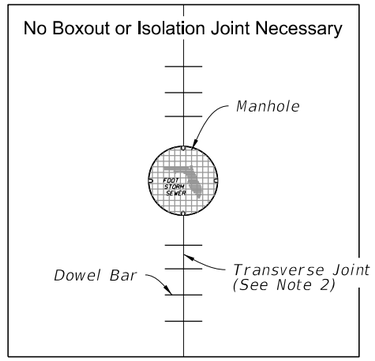
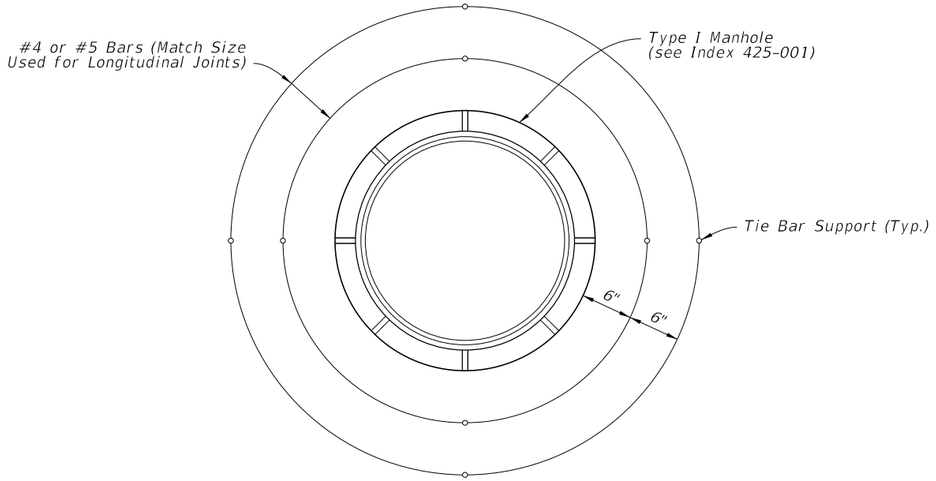
LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/22			FY 2023-24 STANDARD PLANS	CONCRETE PAVEMENT JOINTS	350-001	3 of 5



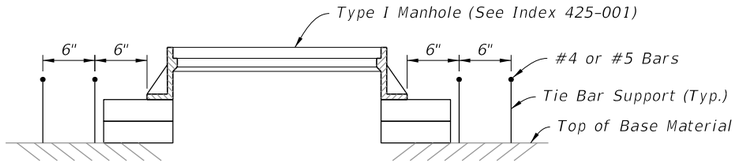
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT

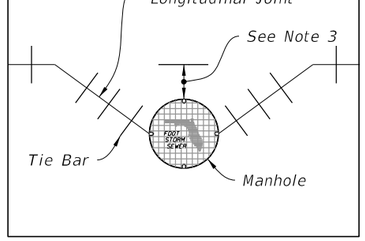


PLAN

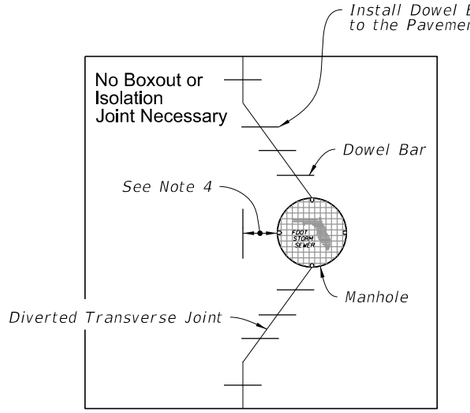


ELEVATION

MANHOLE REINFORCEMENT
(See Notes 3 and 4)



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

NOTES:

1. Use boxouts when utility structure is in the path of construction joints. Provide a 1 foot minimum clearance between the exterior limit of the structure to the diamond boxout.

2. Adjust transverse joint to intersect manhole, if possible.

3. If distance between the longitudinal joint and the edge of manhole is 2 feet or less, divert the longitudinal joint at a 2:1 taper rate to the center of the manhole. If the distance is greater than 2 feet, do not divert the joint, saw as normal, and place reinforcement rebar around the manhole.

4. If the distance from the edge of the manhole to the nearest transverse joint is 4 feet or less, redirect joint at 2:1 taper to intersect the center of the manhole. If distance is greater than 4 feet, do not divert the joint, saw as normal, and place reinforcement rebar around the manhole.

5. Align transverse joint with one edge of inlet when practical.

6. All manholes, meter boxes and other projections into the pavement shall be boxed-in with ½" preformed expansion joint material.

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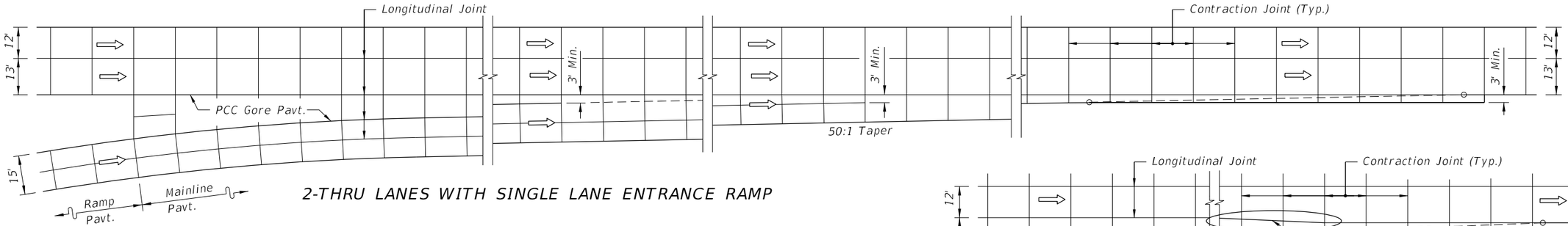
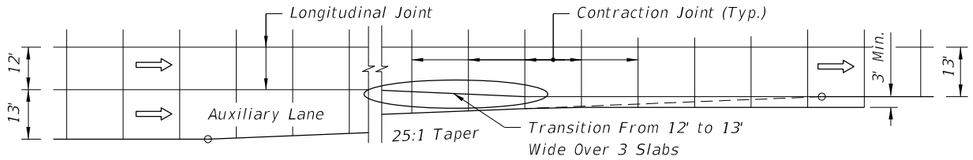
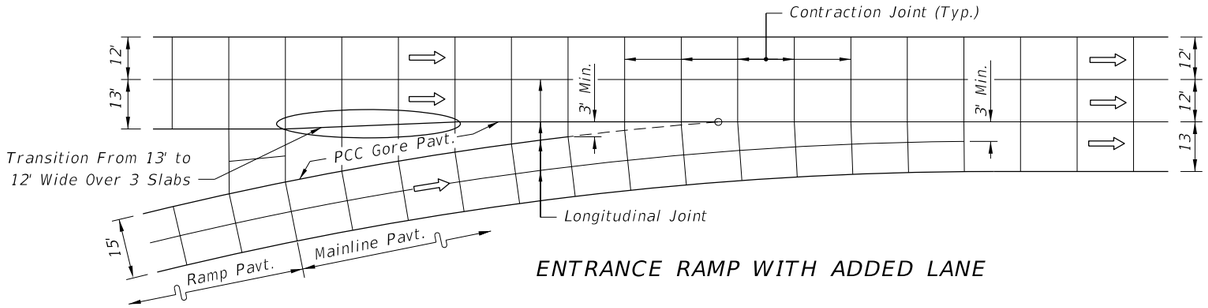
ISOLATION JOINT DETAILS



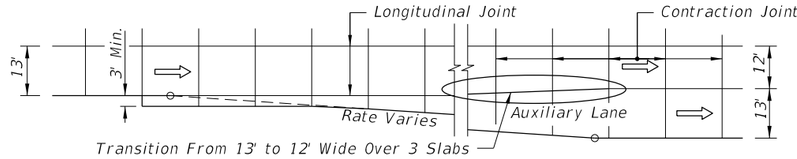
2-THRU LANES WITH SINGLE LANE ENTRANCE RAMP



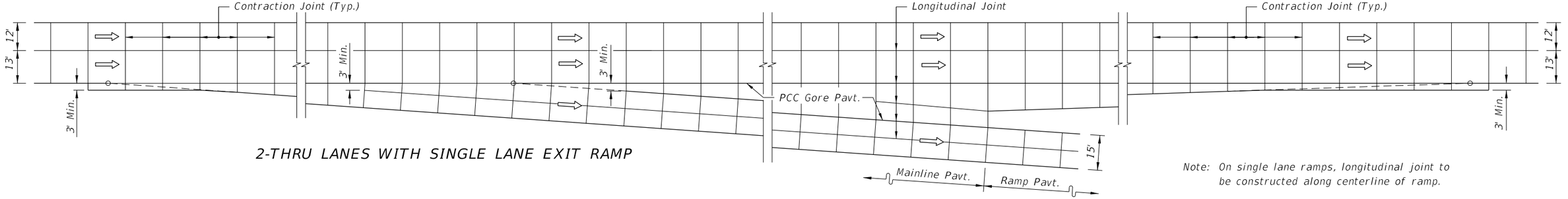
ENTRANCE TAPER WITH AUXILIARY LANE



ENTRANCE RAMP WITH ADDED LANE

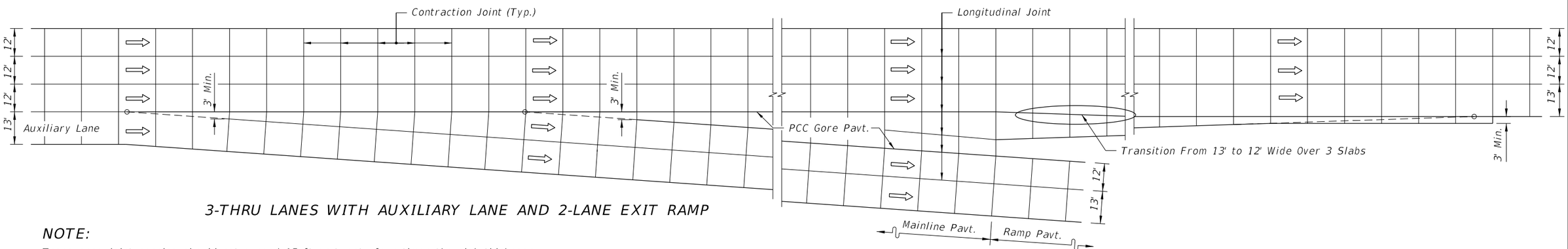


EXIT TAPER WITH AUXILIARY LANE



2-THRU LANES WITH SINGLE LANE EXIT RAMP

Note: On single lane ramps, longitudinal joint to be constructed along centerline of ramp.



3-THRU LANES WITH AUXILIARY LANE AND 2-LANE EXIT RAMP

NOTE:

Transverse joint spacing should not exceed 15-ft or twenty-four times the slab thickness, whichever is less. Construct a longitudinal joint in the center of single-lane ramps.

JOINT LAYOUT AT ENTRANCE AND EXIT RAMP TERMINALS

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