

NOTES

GENERAL: All joints shall be constructed normal to the centerline of the pavement lane unless otherwise specified in the plans.
 All dowel holes shall be drilled by a mechanical device that will allow independent adjustment of all drill shafts in the horizontal and vertical direction. The device shall be capable of drilling a minimum of three holes at one time.
 All smooth dowels shall be coated with a thin layer of oil or other "bond-breaking" material after they have been installed in the existing pavement and just prior to placing the patch. All dowels shall be placed parallel to the pavement surface and the centerline of the pavement lane.
 This standard drawing is intended for use in repairing both concrete and composite pavements. For clarity, asphalt overlays are not shown.
 When Prefabricated Edge Drains are used, they shall be placed after joint repairs are completed.

TYPE N JOINT: Joints referred to as Type N joints on the plan shall be constructed as contraction joints as per Standard Drawing BP-2.2.

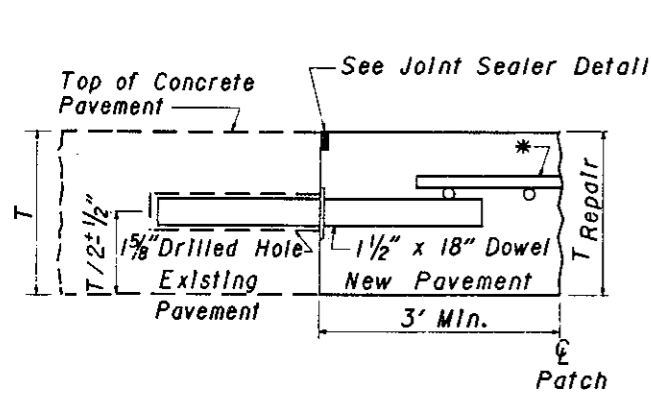
ADDITIONAL PAVEMENT REMOVAL: If, after the sawing and removal of the pavement from the area to be repaired, the face of the remaining pavement is spalled or deteriorated for a height greater than one-fourth (1/4) the thickness of the rigid pavement, an additional saw cut shall be made as shown and as directed by the Engineer. This additional work shall be measured for additional payment for full depth pavement sawing, rigid pavement removal and replacement.

LONGITUDINAL JOINT: For patches 10 feet or greater in length, the longitudinal joint shall be constructed as per standard drawing BP-2.1. Spacing of the tie bars or hook bolts shall be no more than 30" nor less than 24".

◆ Bars shall be placed 2 ft. from the tied longitudinal joint and continue across with a 1 ft. spacing to the edge of pavement or an untied longitudinal joint. Where lane widths are between two tied longitudinal joints, begin bars 2 ft. from each tied longitudinal joint and continue across with a 1 ft. spacing.

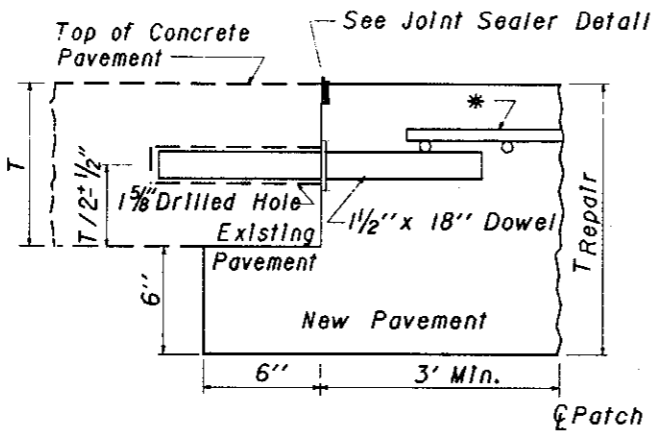
* Reinforcement will be required for all repairs greater than 10 feet in length or for repairs which will be opened to traffic within 24 hours of placement. The fabric shall consist of W8.5 or D8.5 longitudinal wires spaced 6" c/c and W4 or D4 transverse wires spaced 12" c/c. The clearance from the end of the wire fabric to the edge of pavement or new transverse joint shall be 4" ± 2".

⊗ Nylon or plastic grout retention discs shall be clear or white opaque color.



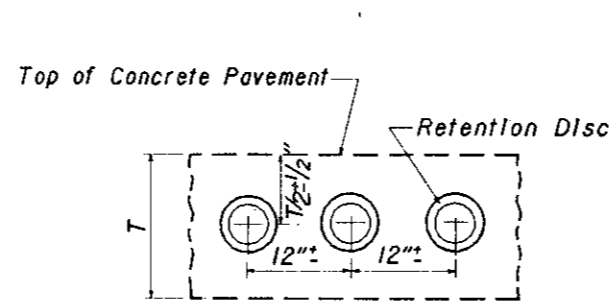
SECTION - TYPE Y

(Contraction)

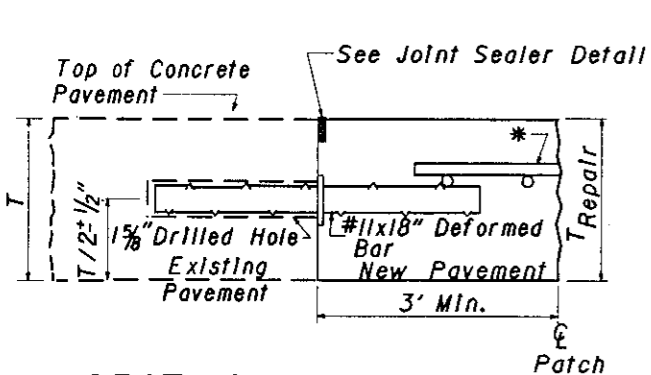


SECTION - TYPE YU

(Undercut : Contraction)

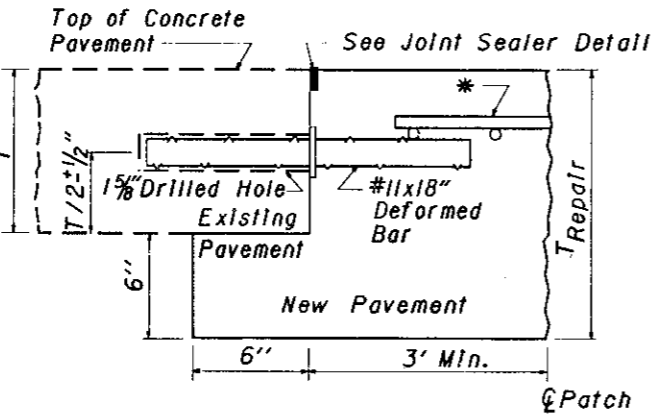


HOLE DRILLING DETAIL



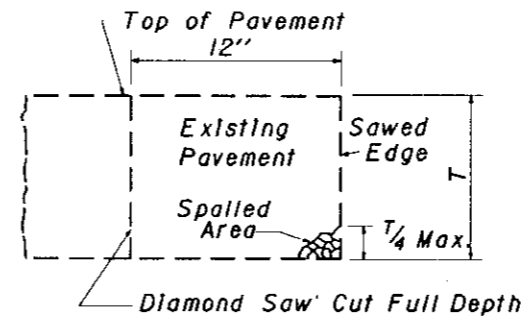
SECTION - TYPE T

(Tied)

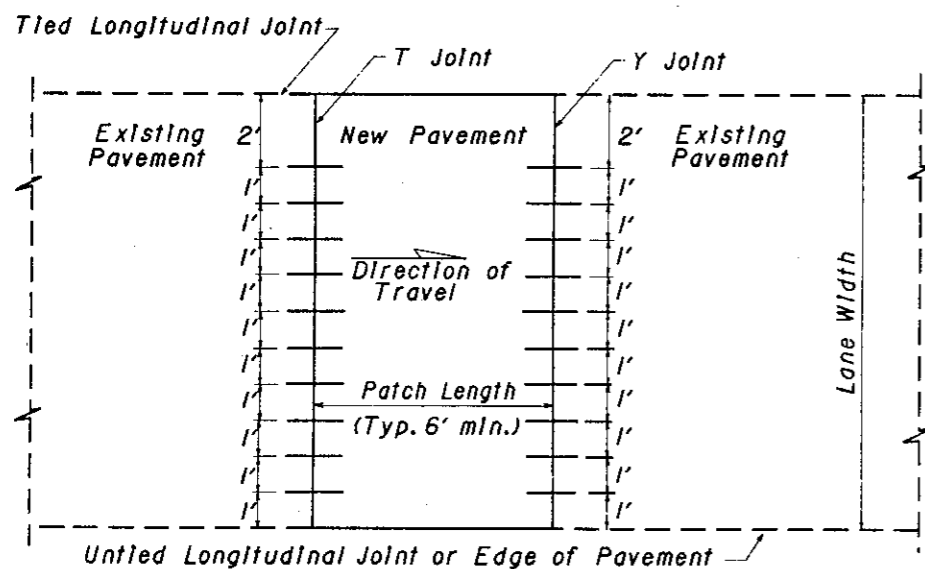


SECTION - TYPE TU

(Undercut : Tied)

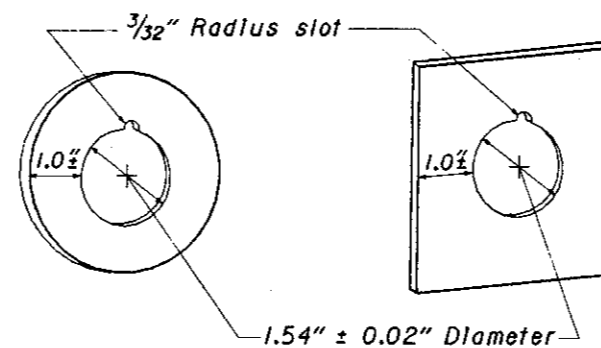


ADDITIONAL PAVEMENT REMOVAL



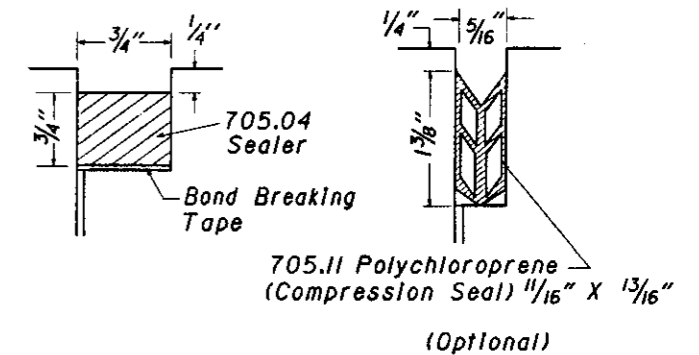
TIE / DOWEL BAR PLACEMENT DETAIL

(See Note ◆ for Bar Placement)



NYLON OR PLASTIC GROUT RETENTION DISCS FOR DOWEL/TIE BARS

(1/16" Min. Thickness)



JOINT SEALER DETAIL

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF TRANSPORTATION

RIGID REPLACEMENT

DATE
2-21-92

STANDARD CONSTRUCTION DRAWING

BP-2.5

APPROVED *D.K. Hulman* ENGR., L & D

NOTES

GENERAL: All joints shall be constructed normal to the centerline of the pavement lane unless otherwise specified in the plans.
 All dowel holes shall be drilled by a mechanical device that will allow independent adjustment of all drill shafts in the horizontal and vertical direction. The device shall be capable of drilling a minimum of three holes at a time.
 All smooth dowels shall be coated with a thin layer of oil or other "bond-breaking" material after they have been installed in the existing pavement and just prior to placing the patch. All dowels shall be placed parallel to the pavement surface and the centerline of the pavement lane.
 This standard drawing is intended for use in repairing both concrete and composite pavements. For clarity, asphalt overlays are not shown.
 When Prefabricated Edge Drains are used, they shall be placed after joint repairs are completed.

TYPE N JOINT: Joints referred to as Type N joints on the plan shall be constructed as contraction joints as per Std. Constr. Dwg. BP-2.2M.

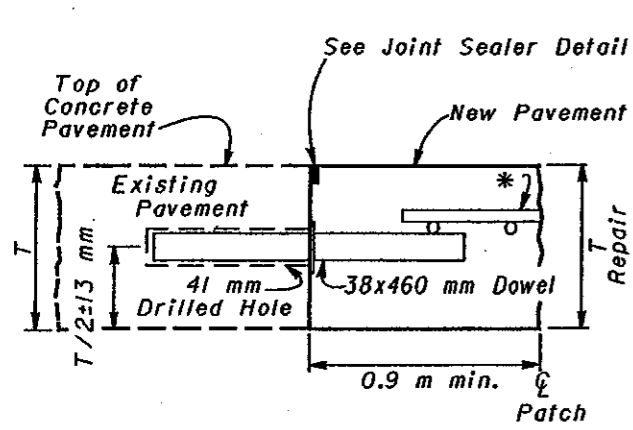
ADDITIONAL PAVEMENT REMOVAL: If, after the sawing and removal of the pavement from the area to be repaired, the face of the remaining pavement is spalled or deteriorated for a height greater than one-fourth (1/4) the thickness of the rigid pavement, an additional saw cut shall be made as shown and as directed by the Engineer. This additional work shall be measured for additional payment for full depth pavement sawing, rigid pavement removal and replacement.

LONGITUDINAL JOINT: For patches 3.0 meters or greater in length, the longitudinal joint shall be constructed as per BP-2.1M.
 Spacing of the tie bars or hook bolts shall be no more than 760 mm nor less than 610 mm.

◆ Bars shall be placed 600 mm from the tied longitudinal joint and continue across with a 300 mm spacing to the edge of pavement or an untied longitudinal joint. Where lane widths are between two tied longitudinal joints, begin bars 600 mm from each tied longitudinal joint and continue across with a 300 mm spacing.

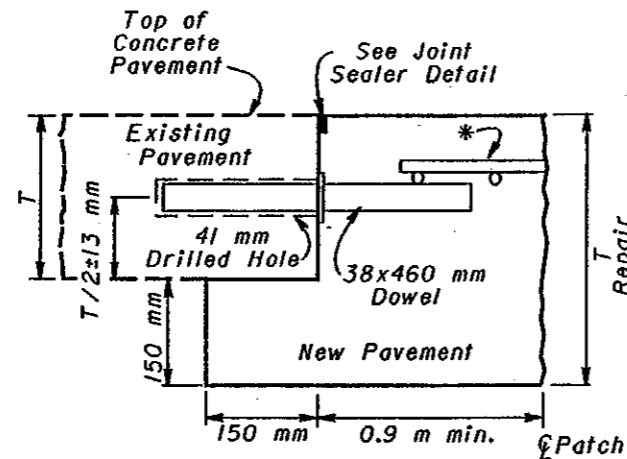
* Reinforcement will be required for all repairs greater than 3.0 m in length or for repairs which will be opened to traffic within 24 hours of placement. The fabric shall consist of MW55 or MD55 longitudinal wires spaced 152 mm c/c and MW26 or MD26 transverse wires spaced 305 mm c/c. The clearance from the end of the wire fabric to the edge of pavement or new transverse joint shall be 100±50 mm.

⊗ Nylon or plastic grout retention discs shall be clear or white opaque color.



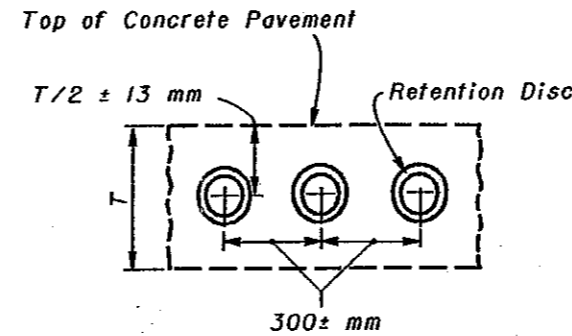
SECTION - TYPE Y

(Contraction)

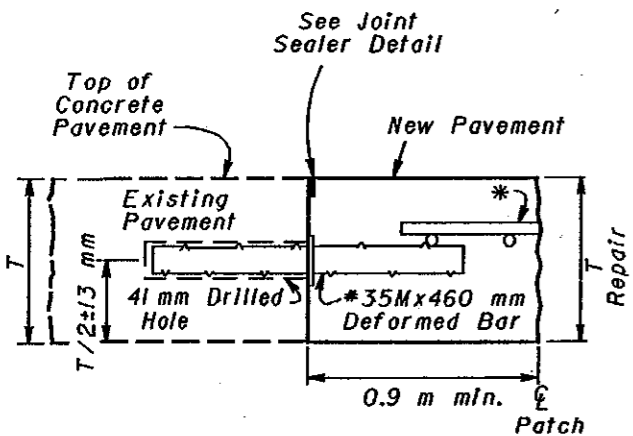


SECTION - TYPE YU

(Undercut + Contraction)

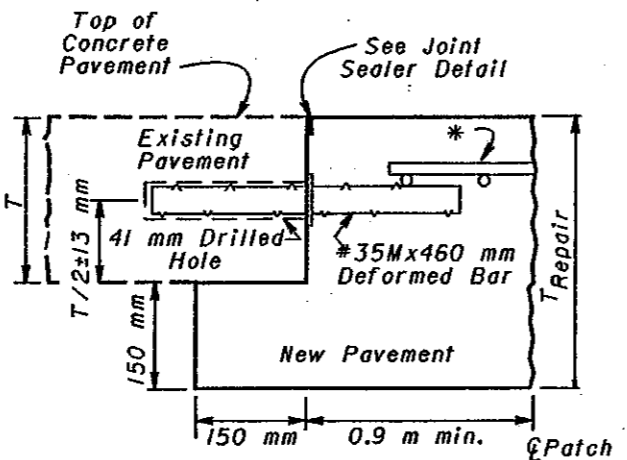


HOLE DRILLING DETAIL



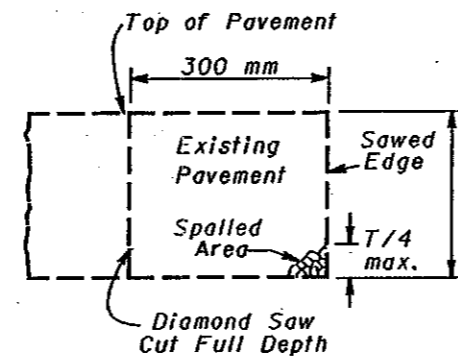
SECTION - TYPE T

(Tied)

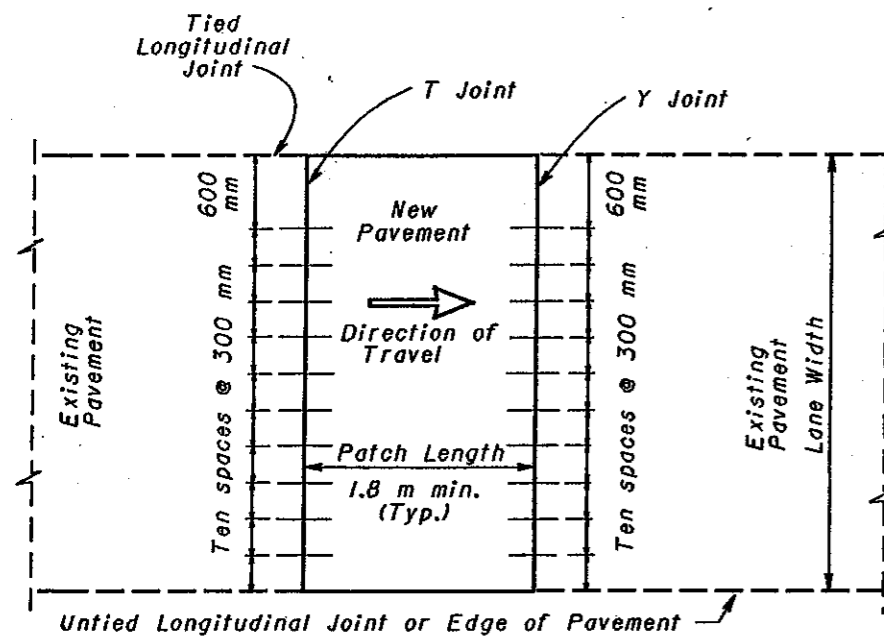


SECTION - TYPE TU

(Undercut + Tied)

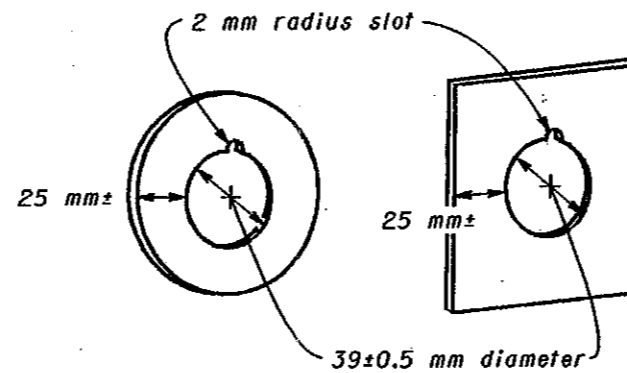


ADDITIONAL PAVEMENT REMOVALS

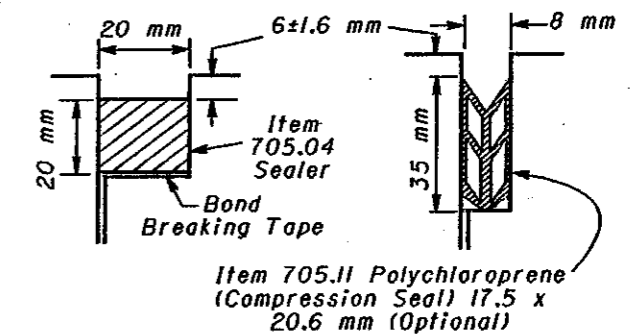


TIE / DOWEL BAR PLACEMENT DETAIL

(See Note ◆ for Bar Placement)



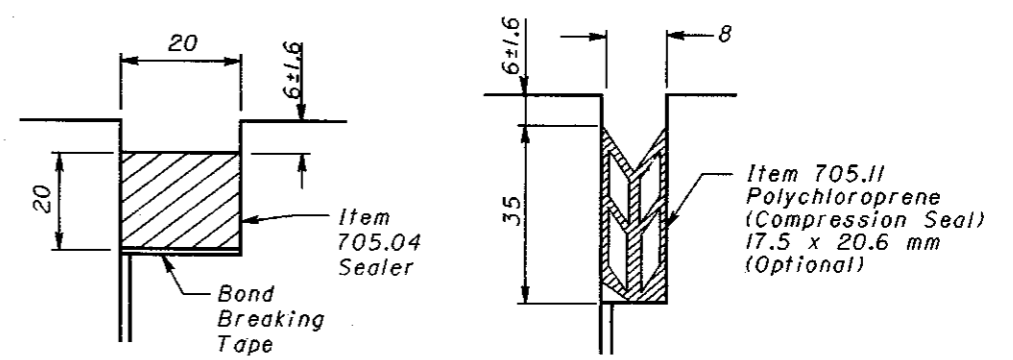
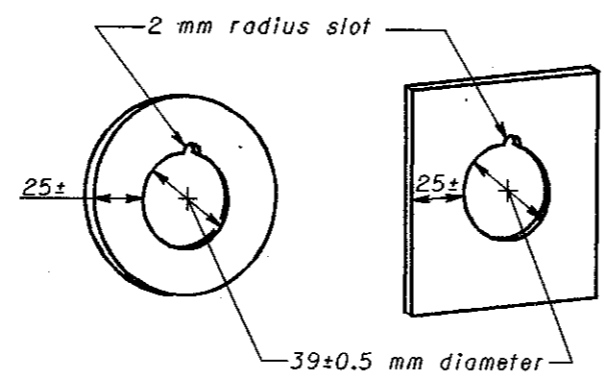
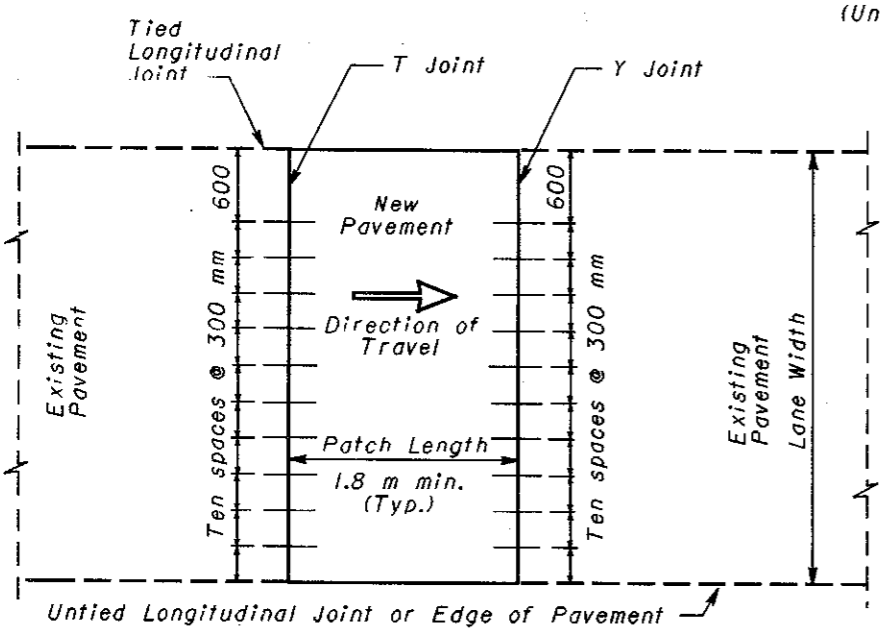
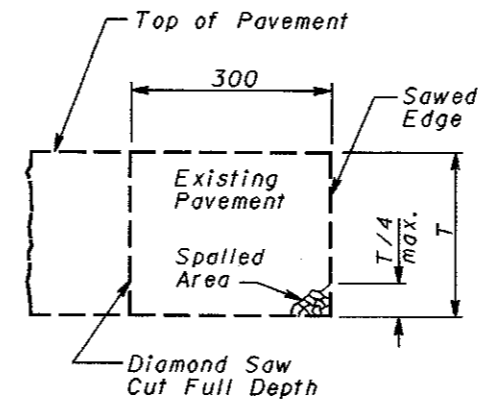
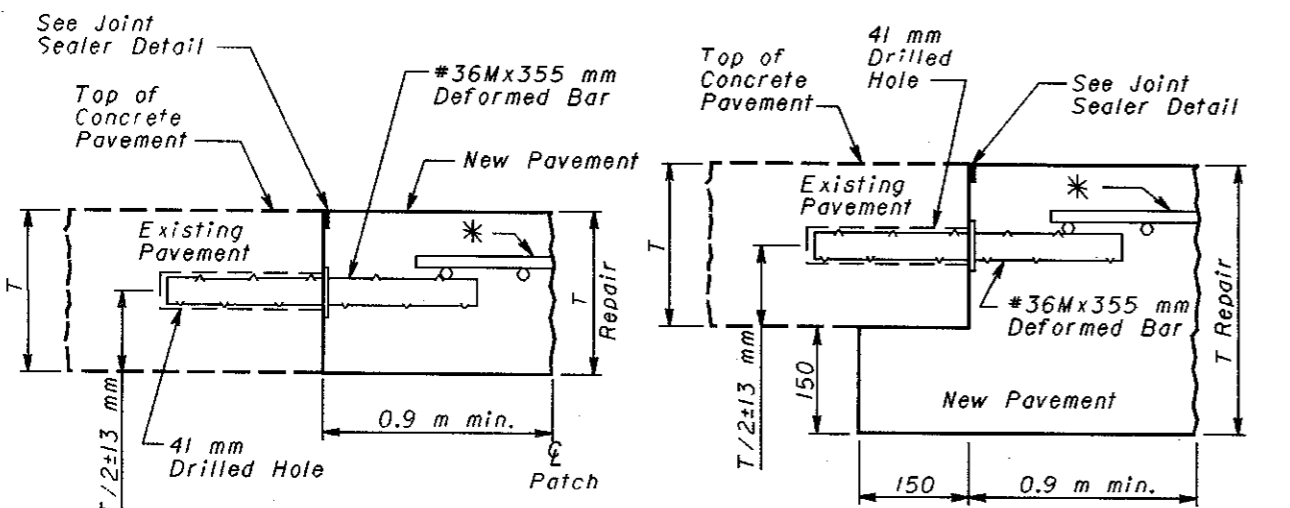
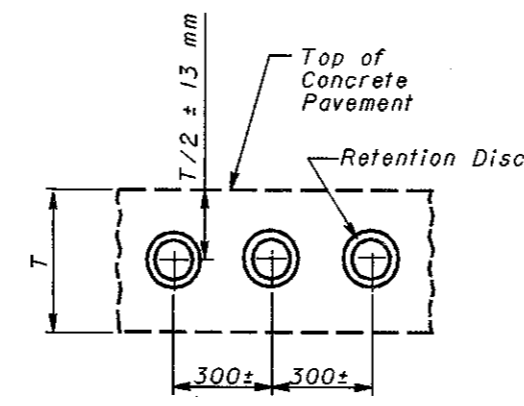
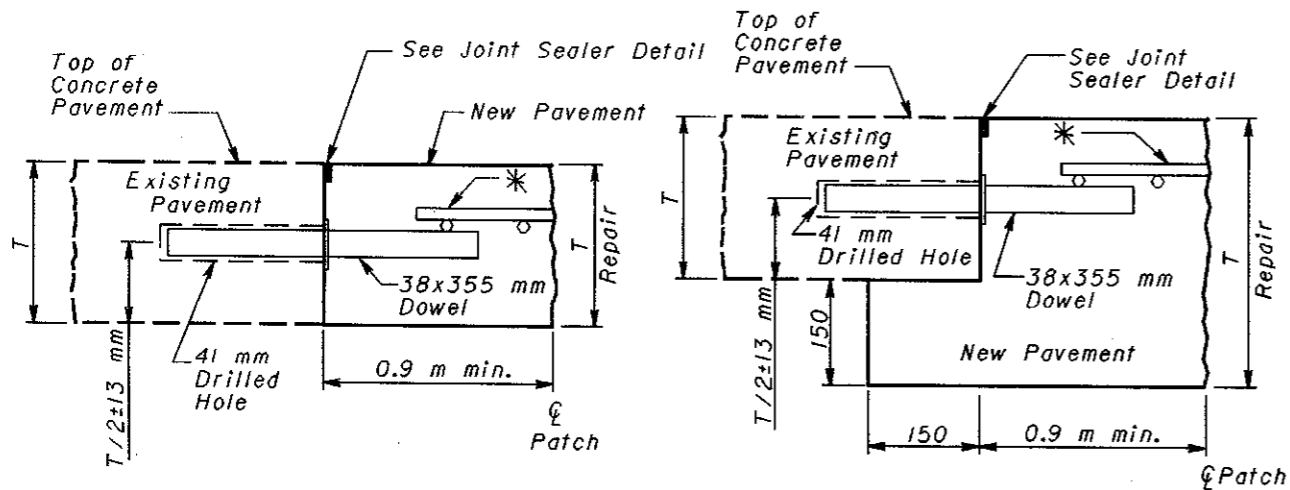
NYLON OR PLASTIC GROUT RETENSION DISCS FOR DOWEL/TIE BARS
 (1.6 mm min. thickness)



JOINT SEALER DETAIL



BUREAU OF LOCATION AND DESIGN OHIO DEPARTMENT OF TRANSPORTATION	
RIGID REPLACEMENT	DATE 10-28-94
STANDARD CONSTRUCTION DRAWING BP-2.5M	
APPROVED <i>W.K. Hulman</i>	ENGR., L & D



NOTES

GENERAL: All joints shall be constructed normal to the centerline of the pavement lane unless otherwise specified in the plans.
 All dowel holes shall be drilled by a mechanical device that will allow independent adjustment of all drill shafts in the horizontal and vertical direction. The device shall be capable of drilling a minimum of three holes at a time.
 All smooth dowels shall be coated with a thin layer of oil or other "bond-breaking" material after they have been installed in the existing pavement and just prior to placing the patch. All dowels shall be placed parallel to the pavement surface and the centerline of the pavement lane.
 This standard drawing is intended for use in repairing both concrete and composite pavements. For clarity, asphalt overlays are not shown.
 When Prefabricated Edge Drains are used, they shall be placed after joint repairs are completed.

TYPE N JOINT: Joints referred to as Type N joints on the plan shall be constructed as contraction joints as per Std. Constr. Dwg. BP-2.2M.

ADDITIONAL PAVEMENT REMOVAL: If, after the sawing and removal of the pavement from the area to be repaired, the face of the remaining pavement is spalled or deteriorated for a height greater than one-fourth (1/4) the thickness of the rigid pavement, an additional saw cut shall be made as shown and as directed by the Engineer. This additional work shall be measured for additional payment for full depth pavement sawing, rigid pavement removal and replacement.

LONGITUDINAL JOINT: For patches 3.0 meters or greater in length, the longitudinal joint shall be constructed as per BP-2.1M.
 The tie bars or hook bolts shall be spaced at no more than 760 mm nor less than 610 mm on center.

◆ Bars shall be placed 600 mm from the tied longitudinal joint and continue across with a 300 mm spacing to the edge of pavement or an untied longitudinal joint. Where lane widths are between two tied longitudinal joints, begin bars 600 mm from each tied longitudinal joint and continue across with a 300 mm spacing.

* Reinforcement will be required for all repairs greater than 3.0 m in length or for repairs which will be opened to traffic within 24 hours of placement. The fabric shall consist of MW55 or MD55 longitudinal wires spaced 152 mm c/c and MW26 or MD26 transverse wires spaced 305 mm c/c. The clearance from the end of the wire fabric to the edge of pavement or new transverse joint shall be 100±50 mm.

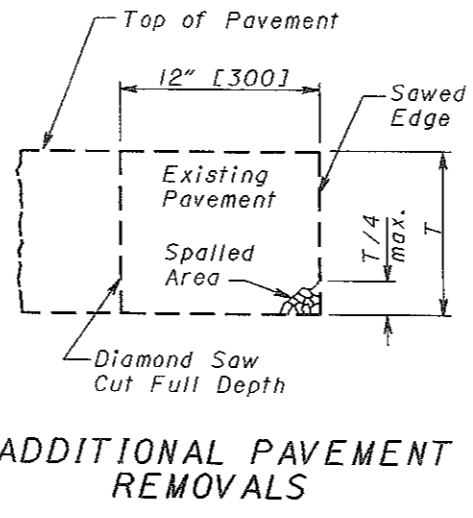
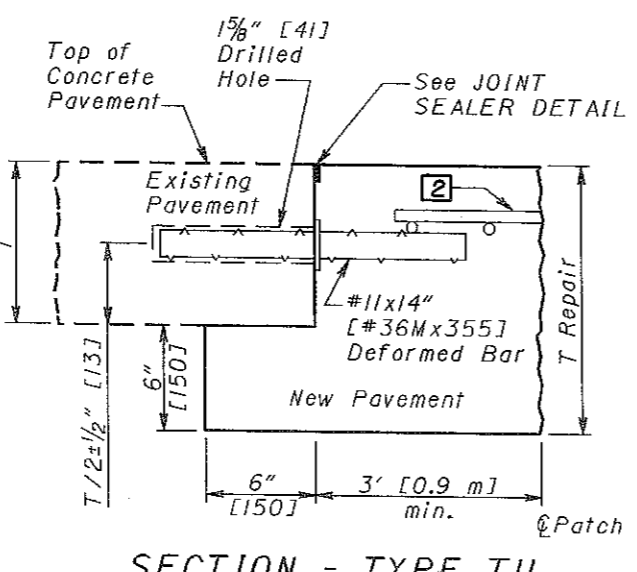
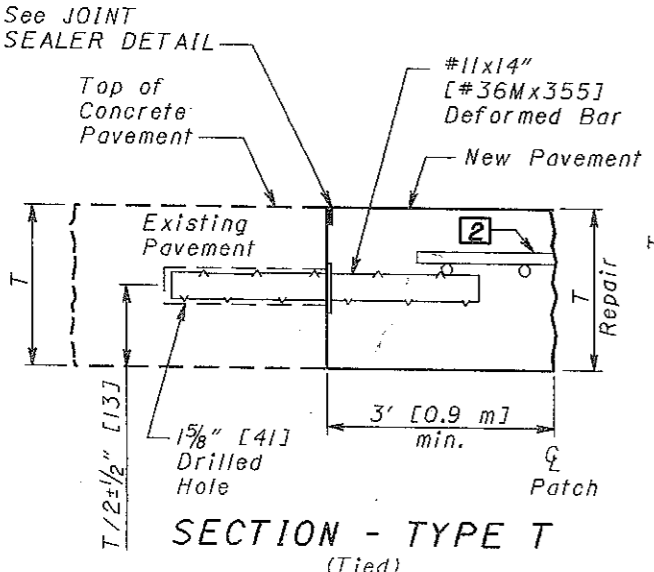
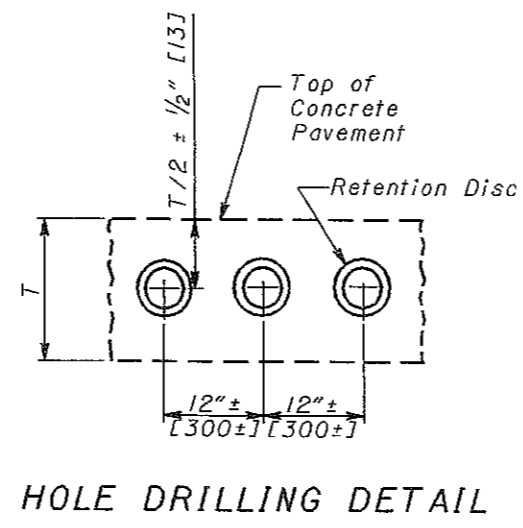
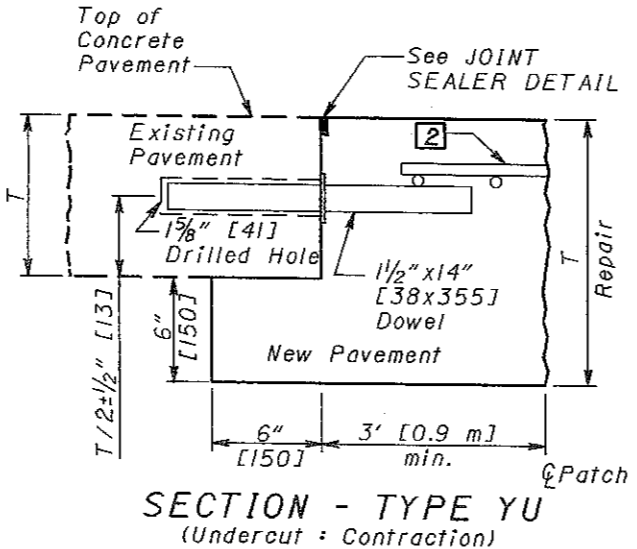
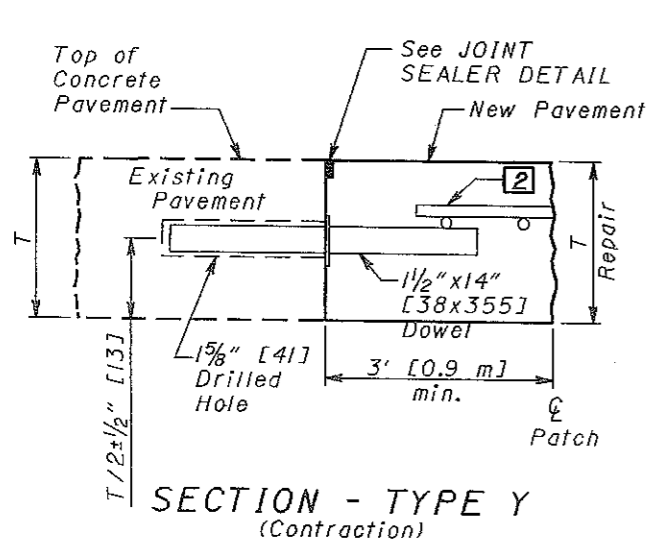
⊗ Nylon or plastic grout retention discs shall be clear or opaque white in color.

This Drawing Replaces BP-2.5.

OFFICE OF PLANNING OHIO DEPARTMENT OF TRANSPORTATION		DATE
RIGID REPLACEMENT		10-28-94 4-8-97
STANDARD CONSTRUCTION DRAWING BP-2.5M		
APPROVED <i>Kary F. Sutherland</i> ADMINISTRATOR		



All dimensions are in millimeters unless otherwise noted.



NOTES

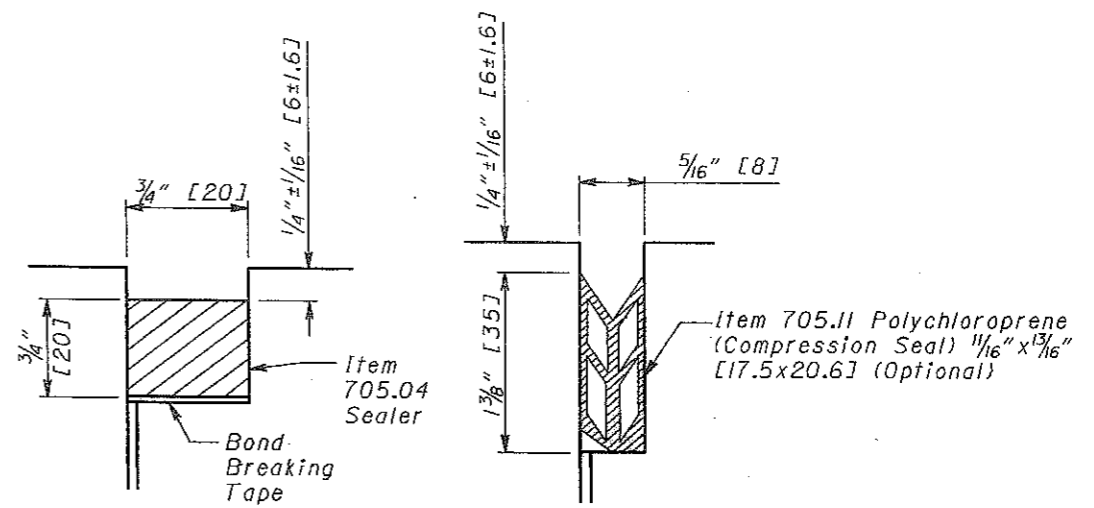
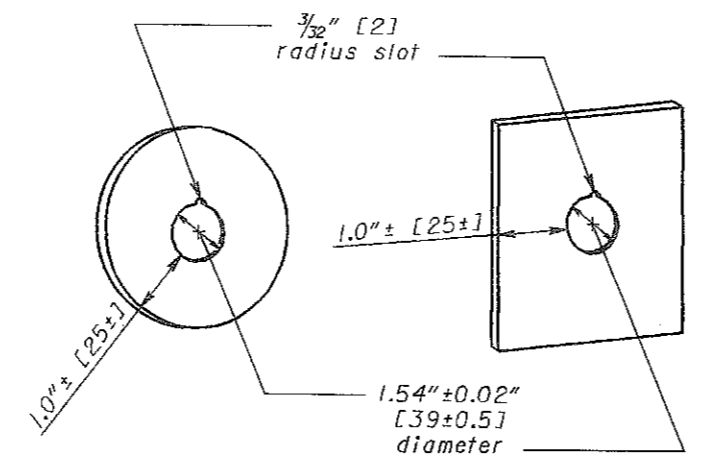
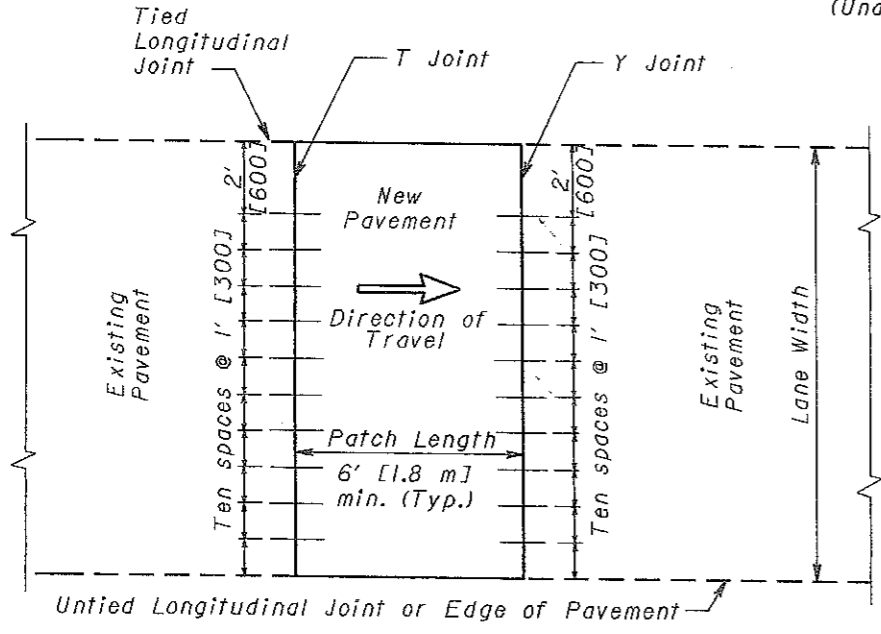
GENERAL: All joints shall be constructed normal to the centerline of the pavement lane unless otherwise specified in the plans.
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 When Prefabricated Edge Drains are used, they shall be placed after joint repairs are completed.

TYPE N JOINT: Joints referred to as Type N joints on the plan shall be constructed as contraction joints per **SCD BP-2.2**.

ADDITIONAL PAVEMENT REMOVAL: If, after the sawing and removal of the pavement from the area to be repaired, the face of the remaining pavement is spalled or deteriorated for a height greater than one-fourth (1/4) the thickness of the rigid pavement, an additional saw cut shall be made as shown and as directed by the Engineer. This additional work shall be measured for additional payment for full depth pavement sawing, rigid pavement removal and replacement.

LONGITUDINAL JOINT: For patches 10' [3.0 m] or greater in length, the longitudinal joint shall be constructed per **SCD BP-2.1**.
 The tie bars or hook bolts shall be spaced at no more than 30" [760] nor less than 24" [610] on center.

- ### LEGEND
- 1 Bars shall be placed 2' [600] from the tied longitudinal joint and continue across with a 1' [300] spacing to the edge of pavement or an untied longitudinal joint. Where lane widths are between two tied longitudinal joints, begin bars 2' [600] from each tied longitudinal joint and continue across with a 1' [300] spacing.
 - 2 Reinforcement will be required for all repairs greater than 10' [3.0 m] in length or for repairs that will be opened to traffic within 24 hours of placement. The fabric shall consist of W8.5 or D8.5 [MW55 or MD55] longitudinal wires spaced 6" [150] c/c and W4 or D4 [MW26 or MD26] transverse wires spaced 12" [300] c/c. The clearance from the end of the wire fabric to the edge of pavement or new transverse joint shall be 4" +/- 2" [100 +/- 50].
 - 3 Nylon or plastic grout retention discs shall be clear or opaque white in color.

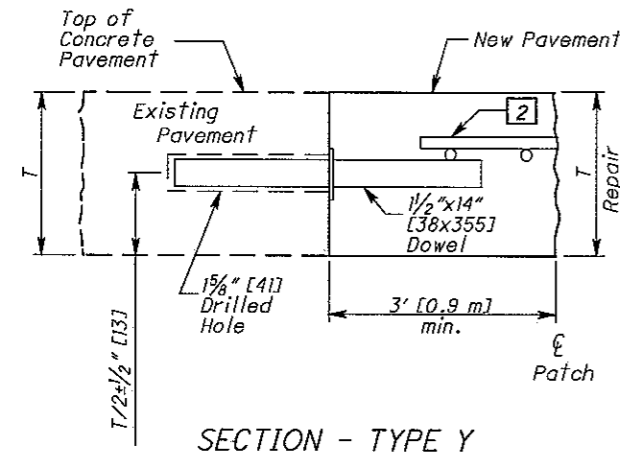


TIE / DOWEL BAR PLACEMENT DETAIL
 (See 1 for Bar Placement)

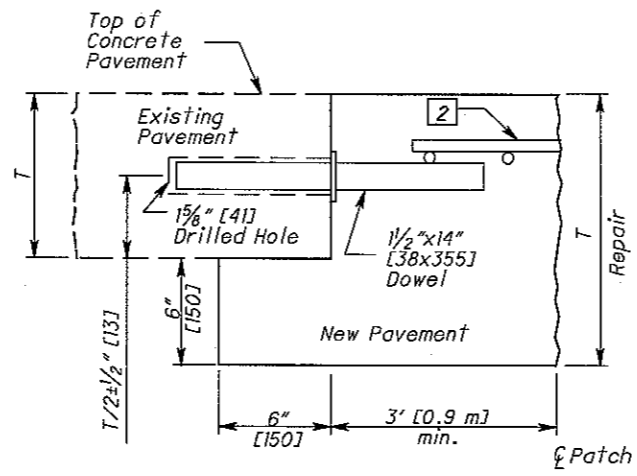
NYLON OR PLASTIC GROUT RETENTION DISCS FOR DOWEL/TIE BARS 3
 (1/16" [1.6] min. thickness)

JOINT SEALER DETAIL

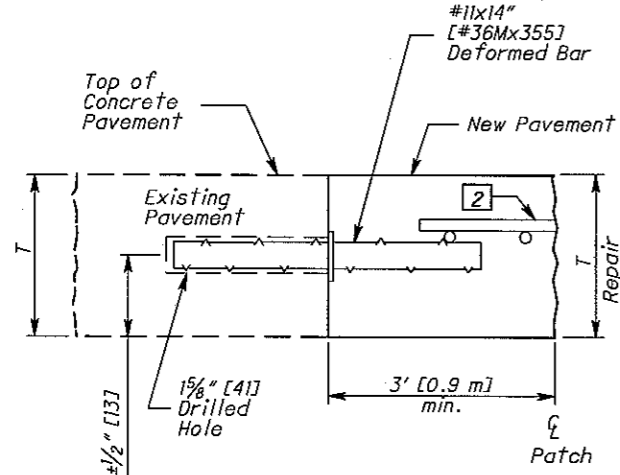
THIS DRAWING REPLACES BP-2.5M DATED 4-8-97.
 STANDARD ROADWAY CONSTRUCTION DRAWING
 ROADWAY ENGINEERING SERVICES
 RIGID REPLACEMENT
 NUMBER BP-2.5
 REVISIONS: M. EVANS, D. FOCKE
 TRANSPORTATION: RAY T. SUTHERLAND
 DATE: 7-28-00



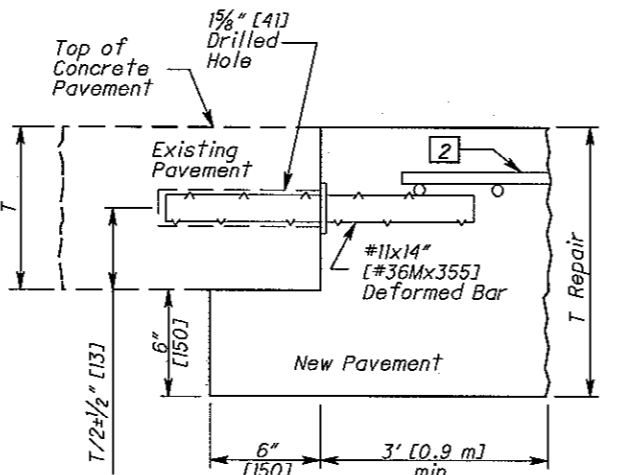
SECTION - TYPE Y
(Contraction)



SECTION - TYPE YU
(Undercut : Contraction)



SECTION - TYPE T
(Tied)



SECTION - TYPE TU
(Undercut : Tied)

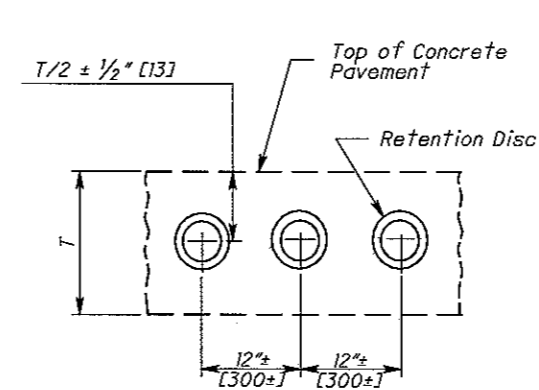
NOTES

GENERAL: All joints shall be constructed normal to the centerline of the pavement lane unless otherwise specified in the plans.
 All dowel holes shall be drilled by a mechanical device that will allow independent adjustment of all drill shafts in the horizontal and vertical direction. The device shall be capable of drilling a minimum of three holes at a time.
 All smooth dowels shall be coated with a bond breaking material conforming to 451.08.B after they have been installed in the existing pavement and just prior to placing the patch. All dowels shall be placed parallel to the pavement surface and the centerline of the pavement lane.
 This standard drawing is intended for use in repairing both concrete and composite pavements. For clarity, asphalt overlays are not shown.
 When Prefabricated Edge Drains are used, they shall be placed after joint repairs are completed.

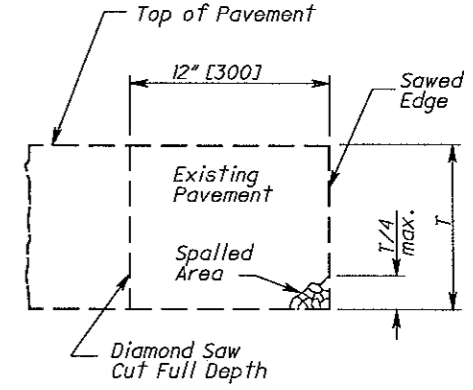
TYPE N JOINT: Joints referred to as Type N joints on the plan shall be constructed as contraction joints per SCD BP-2.2.

ADDITIONAL PAVEMENT REMOVAL: If, after the sawing and removal of the pavement from the area to be repaired, the face of the remaining pavement is spalled or deteriorated for a height greater than one-fourth (1/4) the thickness of the rigid pavement, an additional saw cut shall be made as shown and as directed by the Engineer. This additional work shall be measured for additional payment for full depth pavement sawing, rigid pavement removal and replacement.

LONGITUDINAL JOINT: For patches 10' [3.0 m] or greater in length, the longitudinal joint shall be constructed per SCD BP-2.1. The tie bars or hook bolts shall be spaced according to SCD BP-2.1.



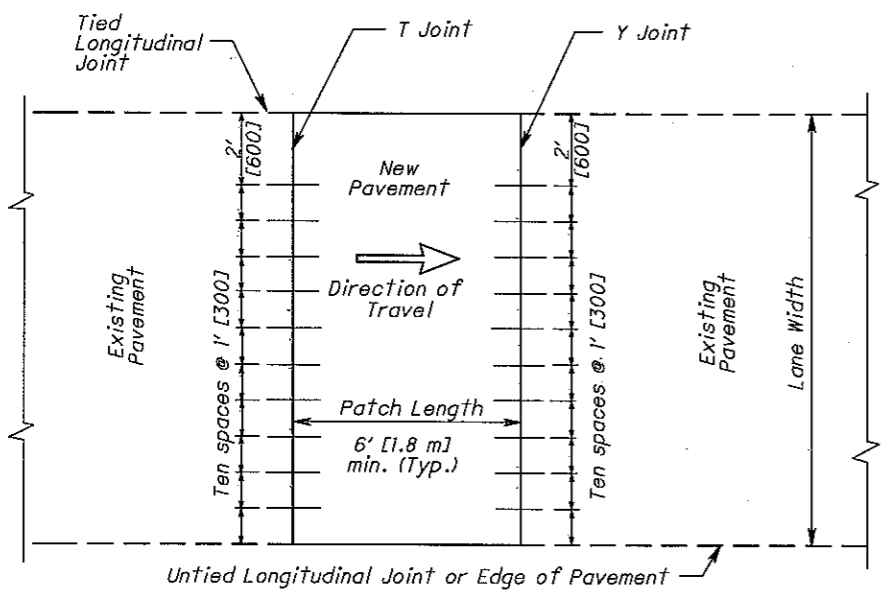
HOLE DRILLING DETAIL



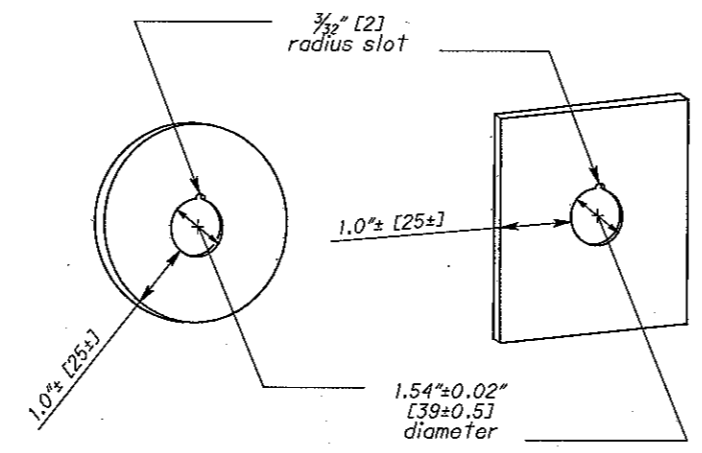
ADDITIONAL PAVEMENT REMOVALS

LEGEND

- 1** Bars shall be placed 2' [600] from all tied longitudinal joints and continue across with a 1' [300] spacing to the edge of pavement or an untied longitudinal joint. Where lane widths are between two tied longitudinal joints, begin bars 2' [600] from each tied longitudinal joint and continue across with a 1' [300] spacing.
- 2** Reinforcement will be required for all repairs greater than 10' [3.0 m] in length or for Class FS repairs that will be opened to traffic within 24 hours of placement. The fabric shall consist of W8.5 or D8.5 [MW55 or MD55] longitudinal wires spaced 6" [150] c/c and W4 or D4 [MW26 or MD26] transverse wires spaced 12" [300] c/c. The clearance from the end of the wire fabric to the edge of pavement or new transverse joint shall be 4"x2" [100x50].
- 3** Nylon or plastic grout retention discs shall be clear or opaque white in color.

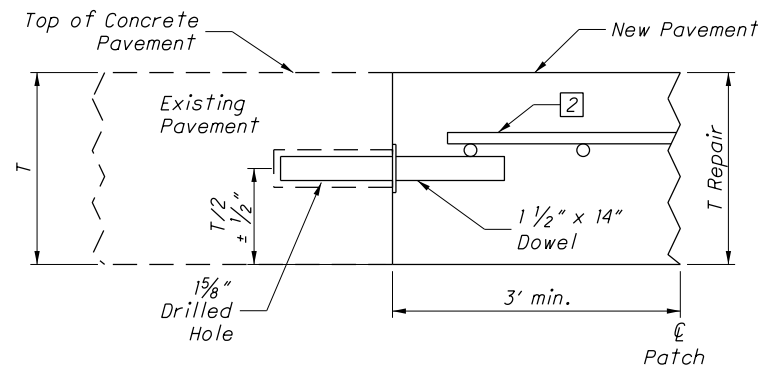


TIE / DOWEL BAR PLACEMENT DETAIL
(See **1** for Bar Placement)

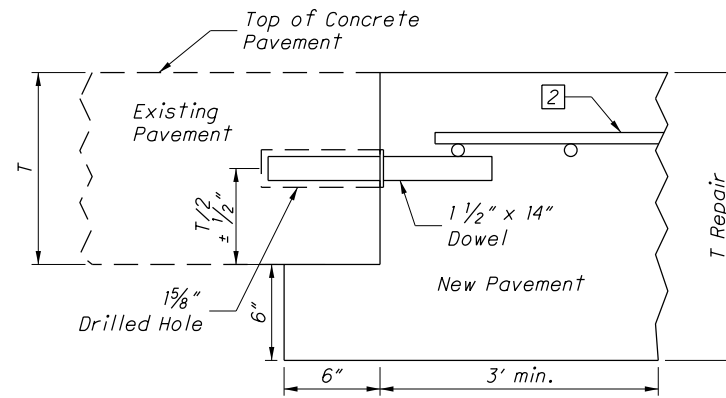


NYLON OR PLASTIC GROUT RETENTION DISCS FOR DOWEL/TIE BARS **3**
(1/16" [1.6] min. thickness)

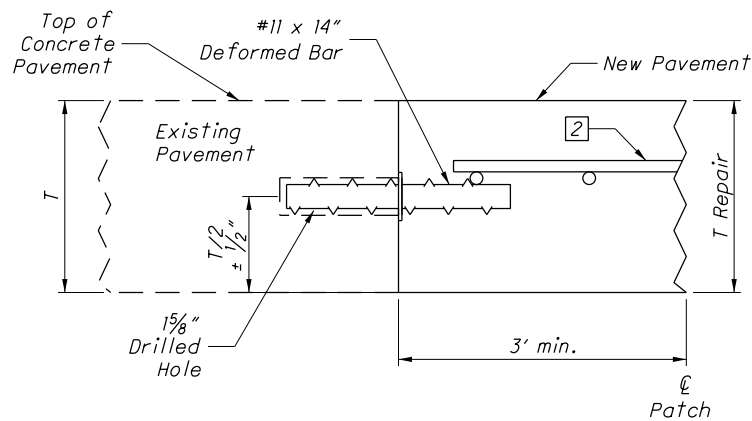
STATE OF OHIO DEPARTMENT OF TRANSPORTATION PAWMENT ENGINEERING ADMINISTRATOR	7-18-08 DATE
D. Miller DESIGN ENGR.	D. Miller DESIGN ENGR.
ALL METRIC DIMENSIONS (IN BRACKETS []) ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.	
OFFICE OF ROADWAY ENGINEERING	
STANDARD ROADWAY CONSTRUCTION DRAWING	
RIGID REPLACEMENT	
SCD NUMBER BP-2.5	THIS DRAWING REPLACES BP-2.5 DATED 7-28-00.
1 / 1	



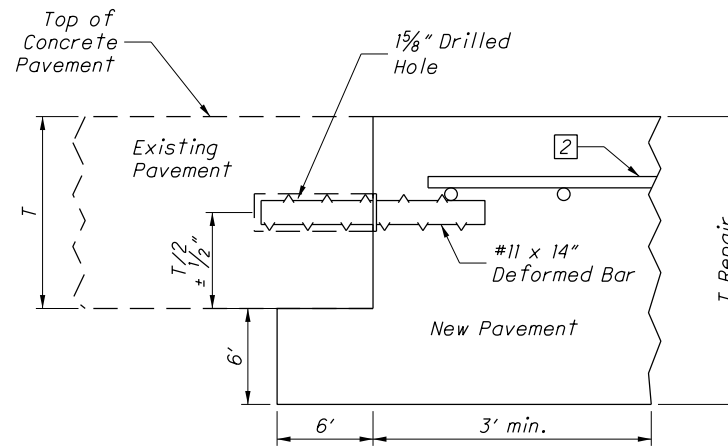
SECTION - TYPE Y
(Contraction)



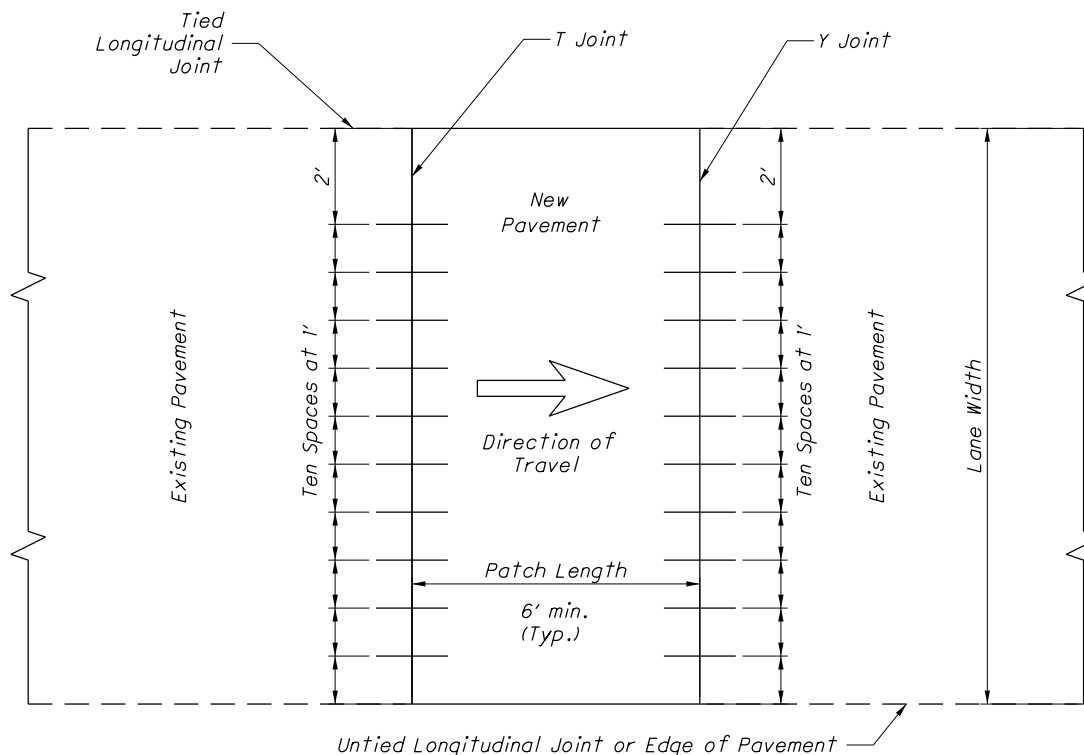
SECTION - TYPE YU
(Undercut : Contraction)



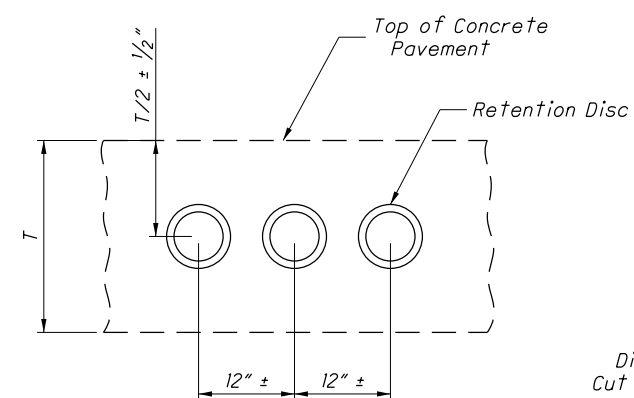
SECTION - TYPE T
(Tied)



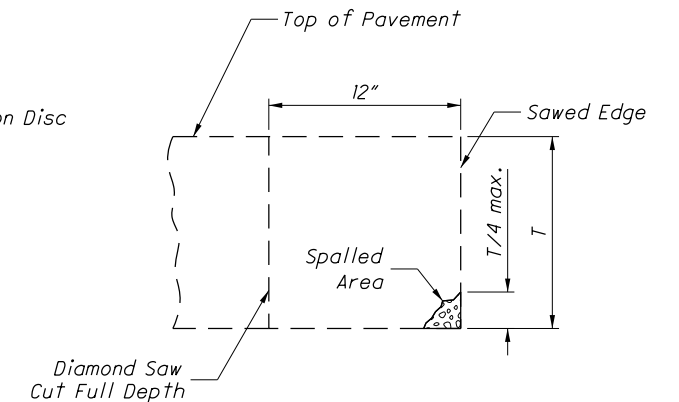
SECTION - TYPE TU
(Undercut : Tied)



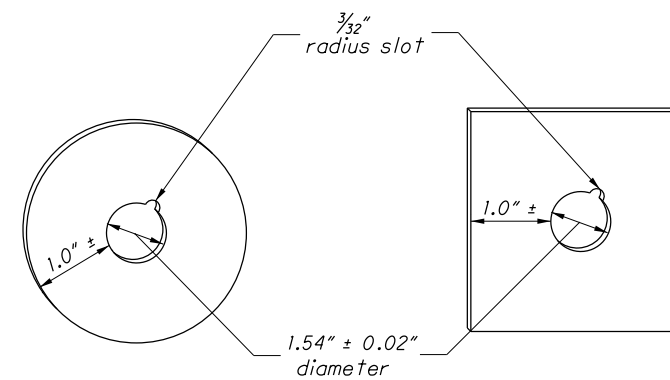
**TIE/DOWEL BAR
PLACEMENT DETAIL**
(See [1] for Bar Placement)



HOLE DRILLING DETAILS



**ADDITIONAL PAVEMENT
REMOVALS**



**NYLON OR PLASTIC
GROUT RETENTION DISCS
FOR DOWEL/TIE BARS [3]**
(1/16" min. thickness)

NOTES

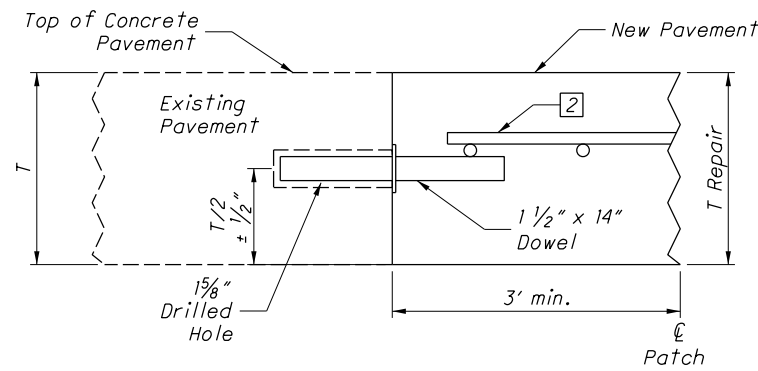
GENERAL: All joints shall be constructed normal to the centerline of the pavement lane unless otherwise specified in the plans.
All dowel holes shall be drilled by a mechanical device that will allow independent adjustment of all drill shafts in the horizontal and vertical direction. The device shall be capable of drilling a minimum of three holes at a time.
All smooth dowels shall be coated with a bond breaking material conforming to 451.09 B after they have been installed in the existing pavement and just prior to placing the patch. All dowels shall be placed parallel to the pavement surface and the centerline of the pavement lane.
This standard drawing is intended for use in repairing both concrete and composite pavements. For clarity, asphalt overlays are not shown.
When Prefabricated Edge Drains are used, they shall be placed after joint repairs are completed.

TYPE N JOINT: Joints referred to as Type N joints on the plan shall be constructed as contraction joints per SCD BP-2.2.

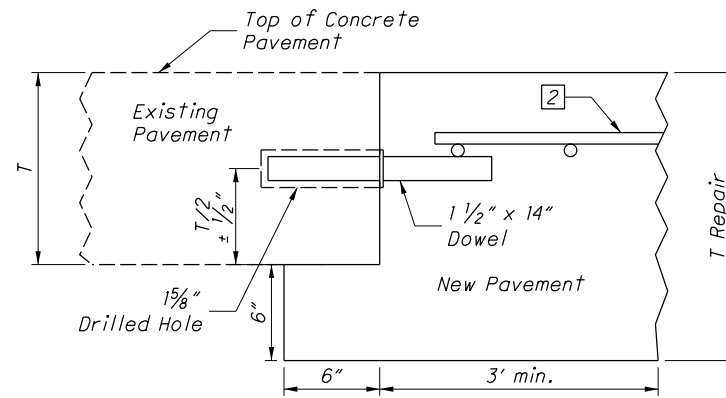
ADDITIONAL PAVEMENT REMOVAL: If, after the sawing and removal of the pavement from the area to be repaired, the face of the remaining pavement is spalled or deteriorated for a height greater than one-fourth the thickness of the rigid pavement, an additional saw cut shall be made as shown and as directed by the Engineer. This additional work shall be measured for additional payment for full depth pavement sawing, rigid pavement removal and replacement.

LONGITUDINAL JOINT: For patches 10' or greater in length, the longitudinal joint shall be constructed per SCD BP-2.1. The tie bars or hook bolts shall be spaced according to SCD BP-2.1.

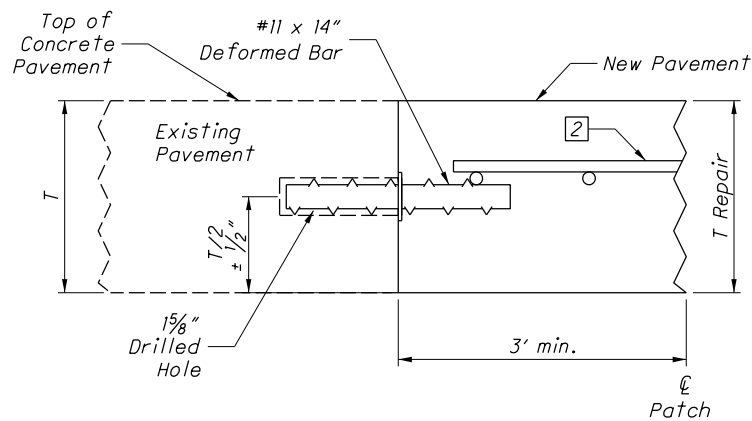
- LEGEND**
- [1] Bars shall be placed 2' from all tied longitudinal joints and continue across with a 1' spacing to the edge of pavement or an untied longitudinal joint. Where lane widths are between two tied longitudinal joints, begin bars 2' from each tied longitudinal joint and continue across with a 1' spacing.
 - [2] Reinforcement will be required for all repairs greater than 10' in length or for Class FS repairs that will be opened to traffic within 24 hours of placement. The fabric shall consist of W8.5 or D8.5 longitudinal wires spaced 6" c/c and W4 or D4 transverse wires spaced 12" c/c. The clearance from the end of the wire fabric to the edge of pavement or new transverse joint shall be 4" ± 2".
 - [3] Nylon or plastic grout retention discs shall be clear or opaque white in color.



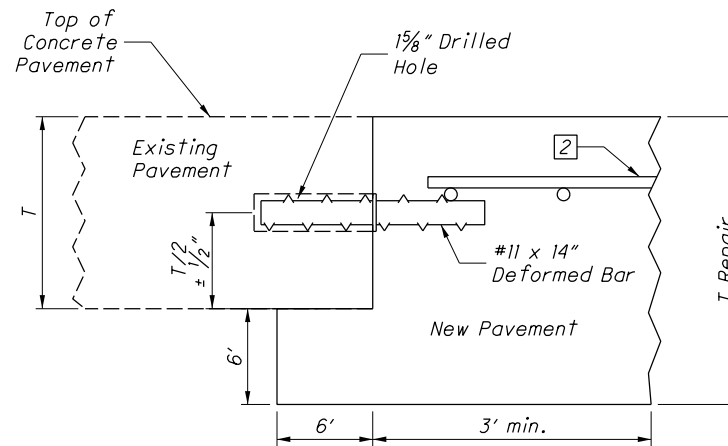
SECTION - TYPE Y
(Contraction)



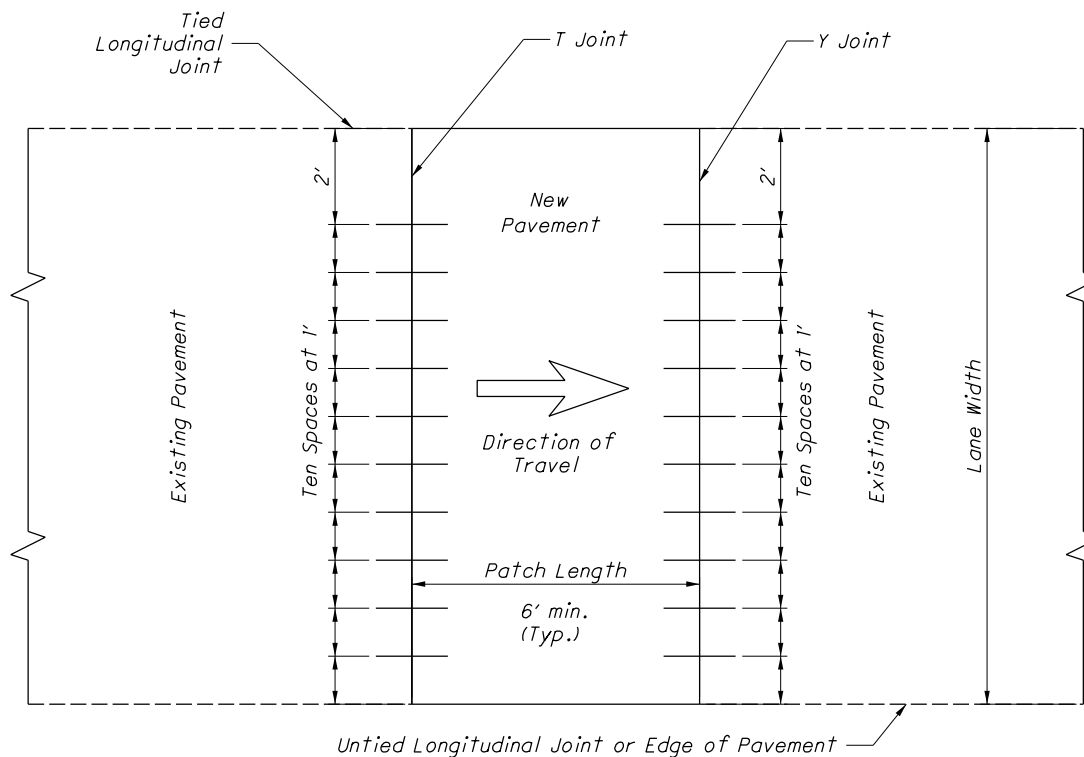
SECTION - TYPE YU
(Undercut : Contraction)



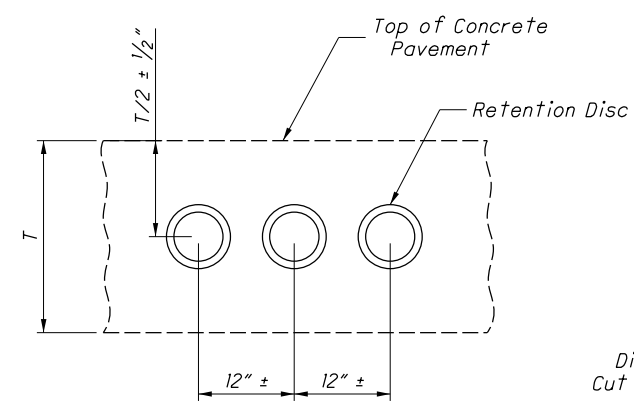
SECTION - TYPE T
(Tied)



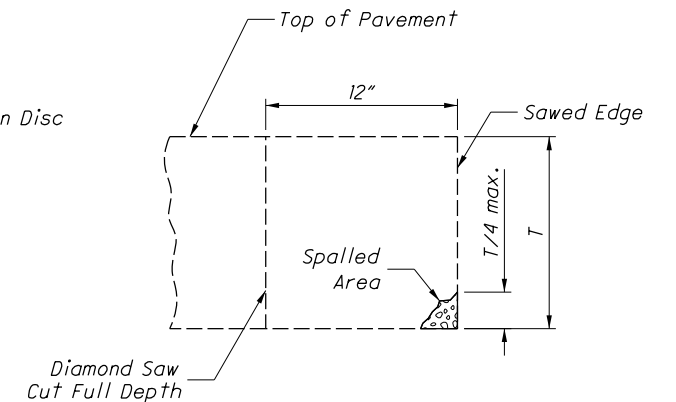
SECTION - TYPE TU
(Undercut : Tied)



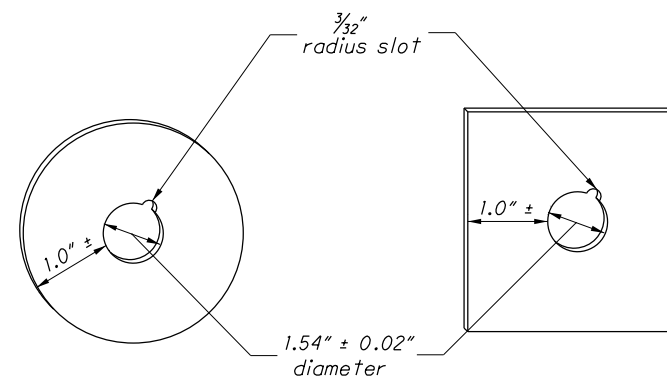
**TIE/DOWEL BAR
PLACEMENT DETAIL**
(See [1] for Bar Placement)



HOLE DRILLING DETAILS



**ADDITIONAL PAVEMENT
REMOVALS**



**NYLON OR PLASTIC
GROUT RETENTION DISCS
FOR DOWEL/TIE BARS [3]**
(1/16" min. thickness)

NOTES

GENERAL: All joints shall be constructed normal to the centerline of the pavement lane unless otherwise specified in the plans.
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 All smooth dowels shall be coated with a bond breaking material conforming to 451.09 B after they have been installed in the existing pavement and just prior to placing the patch. All dowels shall be placed parallel to the pavement surface and the centerline of the pavement lane.
 This standard drawing is intended for use in repairing both concrete and composite pavements. For clarity, asphalt overlays are not shown.
 When Prefabricated Edge Drains are used, they shall be placed after joint repairs are completed.

TYPE N JOINT: Joints referred to as Type N joints on the plan shall be constructed as contraction joints per SCD BP-2.2.

ADDITIONAL PAVEMENT REMOVAL: If, after the sawing and removal of the pavement from the area to be repaired, the face of the remaining pavement is spalled or deteriorated for a height greater than one-fourth the thickness of the rigid pavement, an additional saw cut shall be made as shown and as directed by the Engineer. This additional work shall be measured for additional payment for full depth pavement sawing, rigid pavement removal and replacement.

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LEGEND

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