

# SECTION F: SURFACING PLANS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0013(158)126	F1	F27

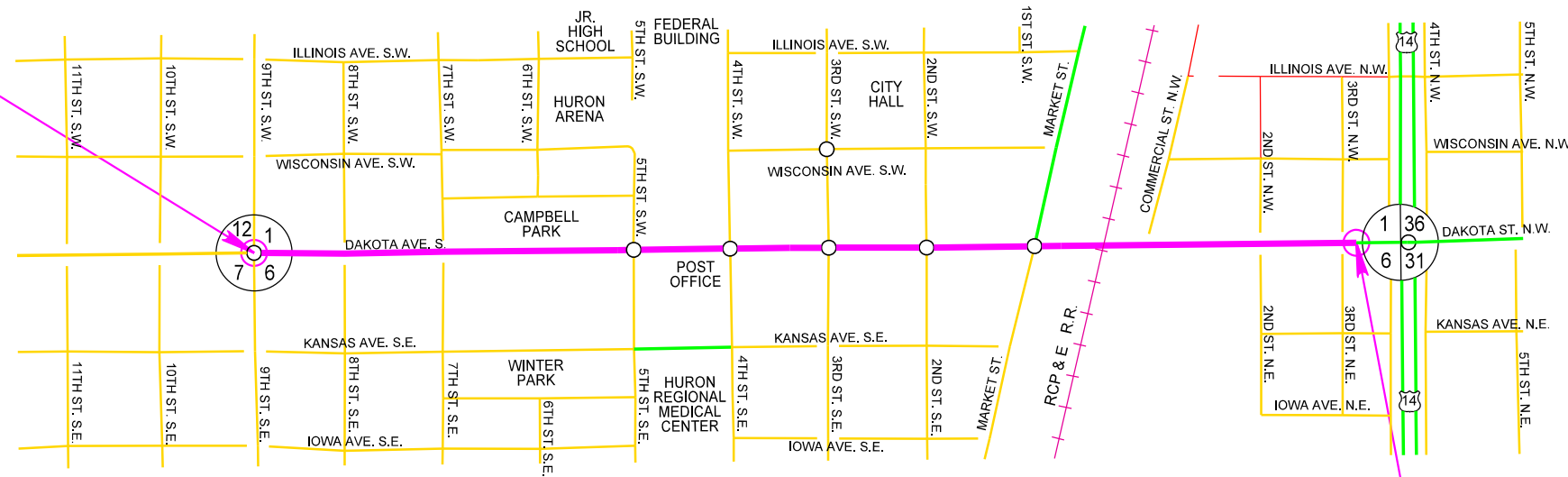
Plotting Date: 02/07/2024

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- F2 - F5 Estimate with General Notes & Tables
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- F10 - F18 PCC Pavement Layouts
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- F21 Manhole Box-Out Details
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BEGIN NH-CR 0037(158)126  
Station 9+32.27



END NH-CR 0037(158)126  
Station 58+84.30

# HURON

**SECTION F – ESTIMATE OF QUANTITIES**

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
120E6200	Water for Granular Material	370.0	MGal
260E1010	Base Course	10,989.1	Ton
260E1080	Base Course, Salvaged, State Furnished	19,846.7	Ton
320E1200	Asphalt Concrete Composite	514.0	Ton
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	0.2	Ton
330E3000	Sand for Fog Seal	3.8	Ton
380E0070	9" Nonreinforced PCC Pavement	32,405.8	SqYd
380E3020	6" PCC Driveway Pavement	171.4	SqYd
380E3040	8" PCC Driveway Pavement	404.6	SqYd
380E6000	Dowel Bar	19,311	Each
380E6110	Insert Steel Bar in PCC Pavement	307	Each

**SURFACING THICKNESS DIMENSIONS**

The plans shown spread rates will be applied even though the thickness may vary from that shown in the plans.

At those locations where material must be placed to achieve a required elevation, the depth/quantity may be varied to achieve the required elevation.

**EXISTING PCC PAVEMENT**

The existing concrete in Section 1 is 7" Plain Jointed PCC Pavement. The existing transverse joints are perpendicular and are spaced at 15 feet. The aggregate in the existing Plain Jointed PCC Pavement is Crushed Quartzite Ledge Rock. The longitudinal joints have 30" long #4 Deformed Tie Bars at a spacing of 48".

The existing concrete in Section 2 is 4" Fiber Reinforced PCC Pavement on top of 4.25" of wire mesh concrete. The existing transverse joints are perpendicular and are spaced at 12.5 feet within the fiber reinforced section and 20 ft within the wire mesh concrete. The aggregate in the existing PCC Pavement is Crushed Quartzite Ledge Rock.

The existing concrete in Section 3 is 6.5" Plain Jointed PCC Pavement. The aggregate in the existing Plain Jointed PCC Pavement is Crushed Quartzite Ledge Rock. The existing transverse joints have a spacing of 20' with 1 1/2" x 18" Plain Dowel Bars at a spacing of 12". The longitudinal joints have 20" long #4 Deformed Tie Bars at a spacing of 30".

**RECYCLED CONCRETE AGGREGATE (RCA)**

Portland cement concrete pavement (RCA) removed from the mainline within the project limits may be crushed and reused as granular material provided it meets the requirements for Base Course.

All in-place rebar will be separated and removed from the RCA.

There is an estimated 12,545 tons of PCC Pavement on this project that can be crushed and reused. This quantity is based on a unit weight of 118 lbs. per cubic foot for the recycled concrete aggregate.

The Contractor will dispose of the material (including existing rebar) not utilized on the project at a site approved by the Engineer.

Payment for the recycled concrete aggregate will be at the contract unit price per ton for Base Course.

**REINFORCEMENT FABRIC (MSE) For SOFT AND UNSTABLE AREAS**

If, in the opinion of the Engineer, the subgrade will not stabilize by being reworked and recompacted, Reinforcement Fabric (MSE) and granular material may be used. Contact the Geotechnical Engineering Activity (605-773-3725) for assistance should the use of Reinforcement Fabric (MSE) and additional granular material become necessary. See Section B for installation and specifications of Reinforcement Fabric (MSE).

An additional 1,481 tons. (80' x 500' x 1') of Base Course and 17.8 MGal of Water for Granular Material is included in the materials quantities for Section F. This quantity can be adjusted or eliminated by CCO, depending on field conditions.

**BASE COURSE, SALVAGED, STATE FURNISHED**

Base Course, Salvaged, State Furnished estimated at 19,846.7 tons of granular material will be obtained from the stockpile site located in the SE 1/4 of Section 36, Township 111 North, Range 62 West of the Black Hills Meridian, Beadle County, South Dakota at the East Huron Maintenance Yard. There is approximately 76,000 tons of material in the stockpile.

No gradation testing will be required for the Base Course, Salvaged, State Furnished material.

The Base Course, Salvaged, State Furnished is royalty free to the Contractor.

All other requirements for Base Course, Salvaged will apply.

**CURB AND GUTTER**

The curb and gutter cannot be placed monolithically with mainline pavement if the mainline lane is wider than 12 feet. If the mainline lane is wider than 12 feet, it must be placed with a separate operation according to Standard Plate 380.21.

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**ASPHALT CONCRETE COMPOSITE**

Asphalt Concrete Composite will include MC-70 Asphalt for Prime placed at the rate of 0.30 gallons per square yard. The Asphalt for Prime will be applied to the Base Course, Salvaged, State Furnished or Base Course for the full width of the bottom layer of Asphalt Concrete Composite plus one foot additional on the outside shoulder.

Asphalt for tack SS-1h or CSS-1h will be applied prior to each lift of Asphalt Concrete Composite. Asphalt for tack will be applied at a rate of 0.09 gallons per square yard on existing pavement or milled asphalt concrete surfaces and at a rate of 0.06 gallons per square yard on primed base course or new asphalt concrete pavement. The Asphalt for tack will be applied for the full width of the bottom layer of Asphalt Concrete Composite plus one-half foot additional on the outside shoulder. Asphalt for Flush Seal will be applied at a rate of 0.05 gallons per square yard. Sand for Flush Seal will be applied at a rate of 8.00 lbs. per square yard.

**FOG SEAL**

Prior to the application of the fog seal, the Contractor will be required to broom the application area. A CSS-1h or SS-1h emulsion will be used for the fog seal application. A water-to-emulsion rate of 1:1 should be used for the Fog Seal application. SS-1h or CSS-1h Asphalt for Fog Seal will be applied at a rate of 0.05 gallon per square yard.

The Contractor will apply fog seal to the entire parking lot at Sta. 25+61 Rt. Total quantity of Fog Seal is equal to 0.2 tons. The Contractor will plan the fog seal operation to allow adequate cure time for the fog seal before traffic is allowed on the surface.

The Contractor will apply sand to the entire parking lot receiving the fog seal. Sand applied will be broomed off the surface of the parking lot once the fog seal has sufficiently cured as determined by the Engineer. Sand for Fog Seal will conform to Section 879.1.B. Sand for Fog Seal will be applied at a rate of 8.0 lbs. per square yard. Total quantity of Sand for Fog Seal is equal to 3.8 tons.

Prior to hauling, Sand for Fog Seal will be screened to minimize segregation, eliminate oversize, and effectively breakup or discard material bonded into chunks. All costs for supplying, hauling, placing, and brooming the blotting sand will be incidental to the contract unit price per ton for "Sand for Fog Seal".

**PREPARATION FOR PARKING LOT & DRIVEWAY PAVEMENTS**

The foundation will be excavated, shaped, and compacted to a firm, uniform bearing surface. Unsuitable foundation material will be removed and replaced as directed by the Engineer. The foundation will be thoroughly moistened immediately prior to placing the PCC Pavement. Moisture will be applied without forming pools of water.

Granular material will be placed to the depth specified and satisfactorily compacted. Payment for any excavation will be incidental to the contract unit price of the surfacing material.

**9" NONREINFORCED PCC PAVEMENT**

The aggregate may require screening as determined by the Engineer.

The concrete mix will conform to the special provision for Contractor Furnished Mix Design for PCC Pavement.

In lieu of an automatic subgrader operating from a preset line, a motor grader or other suitable equipment may be used to trim the gravel cushion to final grade prior to placement of concrete. There will be no direct payment for trimming of the gravel cushion for PCC pavement. The trimming will be considered incidental to the related items required for PCC Pavement.

A construction joint will be sawed whenever new concrete pavement is placed adjacent to existing concrete pavement.

The surface of the mainline paving will be a heavy carpet drag. All other areas will be textured as directed by the Engineer. The surface of the mainline paving will receive a heavy carpet drag to within 2 or 3 feet of the face of the curb.

Unless specified otherwise in the PCC Pavement Joint Layout Sheets or elsewhere in the plans, the typical joint spacing for 9" Nonreinforced PCC Pavement will be 14'. Joint spacing in the PCC Shoulder Pavement will match adjacent mainline pavement.

See Standard Plate 380.01 and 380.04 for placement of Dowel Bars. The transverse construction joints will be handled in accordance with Standard Plate 380.15.

The transverse contraction joints will be perpendicular to the centerline. In multilane areas the transverse contraction joints will be perpendicular to the centerline and be in a straight line across the entire width of the pavement. In special situations the Engineer may pre-approve transverse contraction joints that do not meet these requirements. All nonconforming transverse contraction joints will be removed at the Contractor's expense. Any method of placement that cannot produce these requirements will not be allowed.

The location of joints, as shown and designated on the PCC Pavement Joint Layout(s) are only approximate locations to be used as a guide and to afford bidders a basis for estimating the construction cost of the joints. The final locations of the joints are to be designated by the Engineer during construction.

The mainline pavement Sta. 9+32.27 to Sta. 58+84.3 will be tested for smoothness with a Contractor furnished and operated 25-foot California style profilograph in accordance with the Special Provision for PI PCC Pavement Smoothness with 0.2 Blanking Band. The Engineer will designate areas not requiring the testing listed above.

**CURING OF CONCRETE**

Portland Cement Concrete Pavement, Concrete Curb & Gutter, Concrete Gutter, and Concrete Fillet will be cured with Linseed Oil Base Emulsion Compound. All costs for Curing of Concrete will be incidental to the contract unit price per various Portland Cement Concrete bid items.

**ALKALI SILICA REACTIVITY**

Fine aggregate will conform to Section 800.2 D Alkali Silica Reactivity (ASR) Requirements.

Below is a list of known fine aggregate sources and the average corresponding 14-day expansion values (as of 8-30-2023):

Source	Location	
Bachman	Winner, SD	0.335*
Bitterman	Delmont, SD	0.316*
Concrete Materials	Corson, SD	0.146
Concrete Materials - Vellek Pit	Yankton, SD	0.411**
Croell	Hot Springs, SD	0.089
Croell	Wasta, SD	0.212
Emme Sand & Gravel	Oneil, NE	0.217
Fisher S&G - Blair Pit	W of Vale, SD	0.171
Fisher S&G - Mickelson Pit	E of Nisland, SD	0.129
Fisher S&G - Vallery Pit	Nisland, SD	0.110
Fisher S&G	Rapid City, SD	0.092
Fisher S&G	Spearfish, SD	0.053
Fisher S&G	Wasta, SD	0.159
Fuchs	Pickstown, SD	0.275*
Henning - Tilstra Pit	Ash Creek, MN	0.199
Higman	Hudson, SD	0.187
Jensen	Herried, SD	0.276*
L.G. Everist	Akron, IA	0.257*
L.G. Everist	Brookings, SD	0.297*
L.G. Everist - Ode Pit	E Sioux Falls, SD	0.215
L.G. Everist - Nelson Pit	NE Sioux Falls, SD	0.156
L.G. Everist	Hawarden, IA	0.176
L.G. Everist	Summit, SD	0.184
Mark's S&G - Moerke Pit	Underwood, MN	0.165
Morris - Birdsall	Blunt, SD	0.229
Morris - Leesman	Blunt, SD	0.231
Morris - Richards Pit	Onida, SD	0.188
Morris - Shawn's Pit	E of Sturgis, SD	0.186
Northern Concrete Agg.	Rauville, SD	0.113
Northern Concrete Agg.	Luverne, MN	0.133
Opperman - Gunvordahl Pit	Burke, SD	0.363*
Opperman - Cahoy Pit	Herrick, SD	0.307*
Opperman - Jones Pit	Burke, SD	0.321*
Opperman - Randall Pit	Pickstown, SD	0.230
Pete Lien & Sons	Creston, SD	0.158
Pete Lien & Sons	Oral, SD	0.157
Pete Lien & Sons	Wasta, SD	0.226
Simon Materials - Beltline Pit	Scottsbluff, NE	0.277*
Thorpe Pit	Britton, SD	0.098
Wagner Building Supplies	Pickstown (Wagner), SD	0.251*
Winter Brothers- Whitehead Pit	Brookings, SD	0.197

\* These sources will require Type II cement with a fly ash content of 25% in the concrete mix.

\*\* These sources will not be used.

The Department will use the running average of the last three or fewer known expansion test results for determining acceptability of the source. These expansion results are reported in the preceding table. Additional testing, when requested by the Contractor, will be performed by the Department at the Contractor's expense.

The values listed in the table are intended for use in bidding. If a previously tested pit by SDDOT with a test value less than 0.250 is discovered after letting to be 0.250 or greater, then the Department will accept financial responsibility if higher costs are incurred due to higher percent of fly ash requirement.

Revised: 7Feb24, RML

**TABLE OF PCC PAVEMENT**

LOCATION			9" Nonreinforced PCC Pavement
Station		Station	SqYd
	<b>SD37</b>		
9+32.27	to	25+90.9	11,241.6
25+90.9	to	26+73.9	532.8
26+73.9	to	29+74.1	2,068.0
29+74.1	to	31+02.3	712.2
31+02.3	to	34+06.4	2,094.2
34+06.4	to	35+50.8	799.4
35+50.8	to	38+54.9	2,094.2
38+54.9	to	39+83.4	714.1
39+83.4	to	43+48.1	2,512.4
43+48.1	to	44+89.5	976.9
44+89.5	to	47+05.5	1,697.9
47+32.6	to	58+84.3	8,891.6
<b>Miscellaneous Areas</b>			
Intersecting Streets - 19 each			1,844.5
<b>TOTAL</b>			<b>32,405.8</b>

**TABLE OF DOWEL BARS**

LOCATION			1-1/4" Dowel Bars
Station		Station	Each
	<b>SD37</b>		
9+32.27	to	25+65.7	6,490
25+65.7	to	26+73.9	401
26+73.9	to	29+74.1	937
29+74.1	to	31+02.3	408
31+02.7	to	34+06.3	924
34+06.3	to	35+51.1	442
35+51.1	to	38+54.7	924
38+54.7	to	39+83.8	408
39+83.8	to	43+48.1	1,173
43+48.1	to	44+89.5	666
44+89.5	to	47+05.5	803
47+32.6	to	49+09.8	748
49+09.8	to	49+80.9	390
49+80.9	to	53+97.5	1650
53+97.5	to	54+82.8	510
54+82.8	to	57+66.7	1109
57+66.7	to	58+84.3	546
<b>Miscellaneous Areas</b>			
Intersecting Streets - 19 Each			782
<b>TOTAL</b>			<b>19,311</b>

Revised: 7Feb24, RML

### 8" and 6" PCC DRIVEWAY PAVEMENT

The concrete for the 8" and 6" PCC Driveway Pavement will comply with the requirements of the specifications for Class M6 Concrete, unless otherwise specified in the Plans. The mix design can meet either Class M6 Concrete specifications or conform to the Contractor Furnished Mix Design for PCC Pavements Special Provision.

The surface of the 8" and 6" PCC Driveway Pavement will have a maximum 10% slope and the tie-ins will match the existing and/or new adjoining PCC Approach Pavement.

Contraction joints in the 8" and 6" PCC Driveway Pavement will be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least ¼ the thickness of the approach pavement.

All costs for furnishing and placing the 8" and 6" PCC Driveway Pavement and constructing the expansion and contraction joints including labor, equipment, and materials (including the earthen backfill) will be incidental to the contract unit price per square yard for 8" and 6" PCC Driveway Pavement.

Payment for any excavation required for placing the 8" and 6" PCC Driveway Pavement and granular material will be incidental to the contract unit price of the surfacing material.

All costs for furnishing and placing the granular material will be incidental to the contract unit price per ton for Base Course, Salvaged, State Furnished.

#### TABLE OF PCC PAVEMENT

LOCATION		6" PCC Driveway Pavement	8" PCC Driveway Pavement
Station	Station	SqYd	SqYd
Driveways / Parking Lots - 12 each		171.4	
Driveways / Parking Lots - 6 each			404.6
TOTAL		171.4	404.6

### STEEL BAR INSERTION

The Contractor will insert the Steel Bars (1 ¼" x 18" Epoxy Coated Plain Round Steel Bars or No. 5 x 24" Epoxy Coated Deformed Tie Bars) into drilled holes in the existing concrete pavement. Anchoring of the steel bars in the drilled holes will conform to the Specifications. The steel bars will be cut to the specified length by sawing or shearing and will be free from burring or other deformations.

1 ¼" Epoxy Coated Plain Round Steel Bars will be inserted on 12-inch centers in the transverse joint. The first steel bar will be placed a minimum of 3 inches and a maximum of 6 inches from the outside edge of the slab.

No. 5 Epoxy Coated Deformed Steel Bars will be inserted on 30-inch centers in the longitudinal joint and will be placed a minimum of 15 inches from the existing transverse contraction joint.

#### TABLE OF STEEL BAR INSERTION

LOCATION		Transverse Joints	Longitudinal Joints
		1-¼" Dowel Bars	#5 Deformed Tie Bars
<b>SD37</b>			
Sta. 9+32.27	30.5' Lt. to 30.5' Rt.	61	
Sta. 58+26.7 to Sta. 58+84.3	29.1' Rt. to 31.5' Rt.		23
Sta. 58+43.7 to Sta. 58+84.3	32.9' Lt. to 34.1' Lt.		16
Sta. 58+84.3	34.1' Lt. to 31.5' Rt.	65	
Sta. 59+45.12	2.67' Lt. to 10.67' Lt.	8	
Sta. 59+45.12 to Sta. 60+31.12	2.67' Lt. to 2.31' Lt.		34
Sta. 59+45.12 to Sta. 60+31.12	10.67' Lt. to 10.31' Lt.		34
Sta. 60+31.12	2.31' Lt. to 10.31' Lt.	8	
Market Str. West		48	
3 <sup>RD</sup> Street NE			10
SUBTOTAL		190	117
TOTAL		307	

Revised: 7Feb24, RML

**RATES OF MATERIALS**

The Estimate of Surfacing Quantities is based on the following quantities of materials per **station**.

**SD37 MAINLINE**

**Sta. 9+32.27 to Sta. 25+90.9**

Base Course 168.79 tons (4" depth)

Water for Granular Material at the rate of 2.03 M Gallons

Base Course, Salvaged, State Furnished 337.59 tons (8" depth)

Water for Granular Material at the rate of 4.05 M Gallons

**SD37 MAINLINE**

**Sta. 26+26.2 to Sta. 43+93.3**

Base Course 171.13 tons (4" depth)

Water for Granular Material at the rate of 2.05 M Gallons

Base Course, Salvaged, State Furnished 342.25 tons (8" depth)

Water for Granular Material at the rate of 4.11 M Gallons

**SD37 MAINLINE**

**Sta. 44+46.2 to Sta. 46+49.7**

**Sta. 48+11.9 to Sta. 56+25.0**

Base Course 192.13 tons (4" depth)

Water for Granular Material at the rate of 2.31 M Gallons

Base Course, Salvaged, State Furnished 384.25 tons (8" depth)

Water for Granular Material at the rate of 4.61 M Gallons

**TABLE OF ADDITIONAL QUANTITIES**

LOCATION			WATER FOR GRANULAR MATERIAL	4" BASE COURSE	8" BASE COURSE, SALVAGED, STATE FURNISHED	BASE COURSE, SALVAGED, STATE FURNISHED	ASPHALT CONCRETE, COMPOSITE		
Station	to	Station	(MGal)	(Ton)	(Ton)	(Ton)	1st Lift (Ton)	2nd Lift (Ton)	Top Lift (Ton)
<b>TRANSITIONS</b>									
25+90.90	to	26+26.20	2.1	60.0	120.0				
43+93.30	to	44+46.20	3.3	90.1	180.2				
46+49.70	to	47+06.60	3.9	108.0	215.9				
47+31.60	to	48+11.90	5.4	151.5	303.0				
56+25.00	to	58+84.30	16.0	444.9	889.8				
<b>MISCELLANEOUS AREAS</b>									
Intersecting Str. - 1 each			2.4	68.5	136.9				
Intersecting Str. - 18 each			35.1	808.3	1616.5	497.9	210.5	210.5	
Driveways / Parking Lots -11 each			0.9			75.7			
Driveways / Parking Lots -7 each			0.8			65.5	57.9		
Driveways / Parking Lots -6 each			1.3			106.2			
Driveways / Parking Lots -12 each			0.5			45.0			
<b>RAILROAD TRANSITION</b>									
47+05.5	to	47+06.6				1.6	2.0	2.0	2.0
47+16.6	to	47+21.0	0.4			37.4	7.9	7.9	7.9
47+31.6	to	47+32.6				1.6	1.8	1.8	1.8
Subtotals =					3,762.3	830.9	280.1	222.2	11.7
Totals =			72.1	1,731.3	4,293.2		514.0		

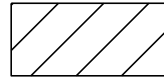
**INTERSECTING STREETS AND DRIVEWAYS / PARKING LOTS**

Intersecting Streets				Driveways / Parking Lots					
PCCP Only - 1 each		PCCP & AC - 18 each		Granular Material Only - 11 each		8" PCCP only - 6 each		6" PCCP Only - 12 each	
Sta. 44+14 Lt	Sta. 12+97 Lt.	Sta. 39+19 Lt.	Sta. 10+70 Lt.	Sta. 9+92 Lt.	Sta. 27+14 Lt.	Sta. 9+92 Rt.	Sta. 16+66 Rt.		
	Sta. 12+97 Rt.	Sta. 39+19 Rt.	Sta. 14+76 Lt.	Sta. 25+70 Rt.	Sta. 42+57 Rt.	Sta. 10+42 Rt.	Sta. 21+56 Rt.		
	Sta. 17+37 Lt.	Sta. 44+14 Rt.	Sta. 15+38 Lt.	Sta. 28+24 Lt.	Sta. 48+73 Lt.	Sta. 11+01 Rt.			
	Sta. 17+37 Rt.	Sta. 49+37 Lt.	Sta. 16+08 Lt.	Sta. 39+86 Rt.	Sta. 52+22 Lt.	Sta. 11+39 Rt.			
	Sta. 26+09 Lt.	Sta. 54+40 Lt.	Sta. 37+54 Rt.	Sta. 43+18 Lt.	Sta. 56+57 Lt.	Sta. 11+66 Rt.			
	Sta. 26+09 Rt.	Sta. 54+40 Rt.	Sta. 46+16 Rt.	Sta. 46+20 Lt.	Sta. 57+13 Rt.	Sta. 11+95 Lt.			
	Sta. 30+37 Lt.	Sta. 58+10 Lt.	Sta. 46+85 Lt.	Sta. 49+54 Rt.		Sta. 14+06 Rt.			
	Sta. 30+39 Rt.	Sta. 58+10 Rt.	Sta. 47+25 Rt.			Sta. 14+39 Rt.			
	Sta. 34+79 Lt.		Sta. 55+29 Lt.			Sta. 14+82 Rt.			
	Sta. 34+79 Rt.		Sta. 56+75 Rt.			Sta. 15+12 Rt.			

# IN PLACE TYPICAL SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0013(158)126	F6	F27

Plotting Date: 02/07/2024

 Remove PCC Pavement (See Section B)

PLOT SCALE - 1+6.00001

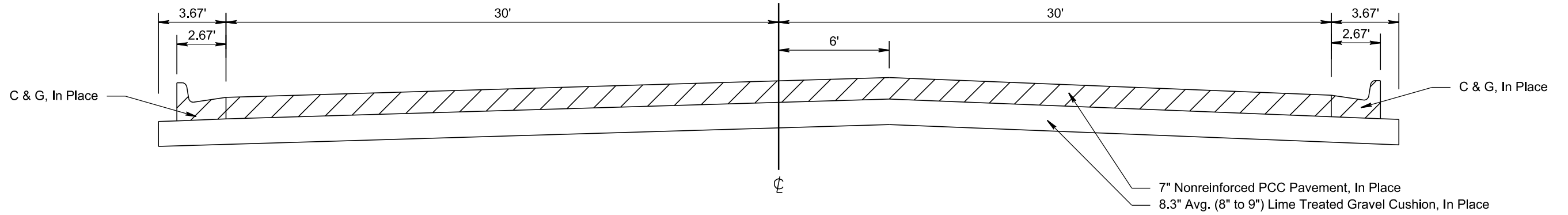
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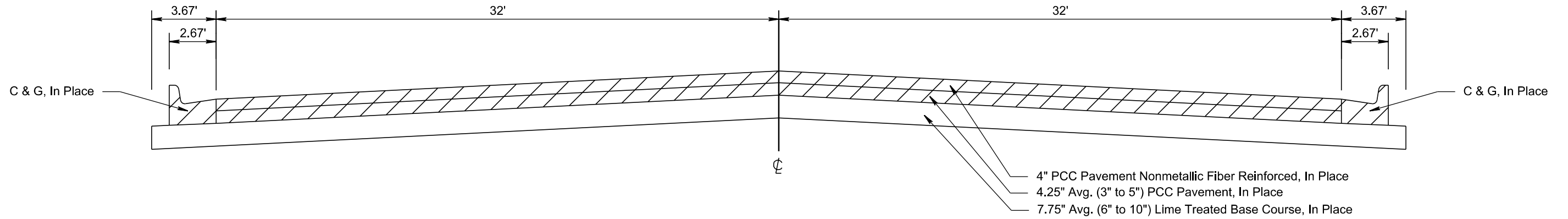
## Section 1

Sta. 9+32.27 to Sta. 26+08.5



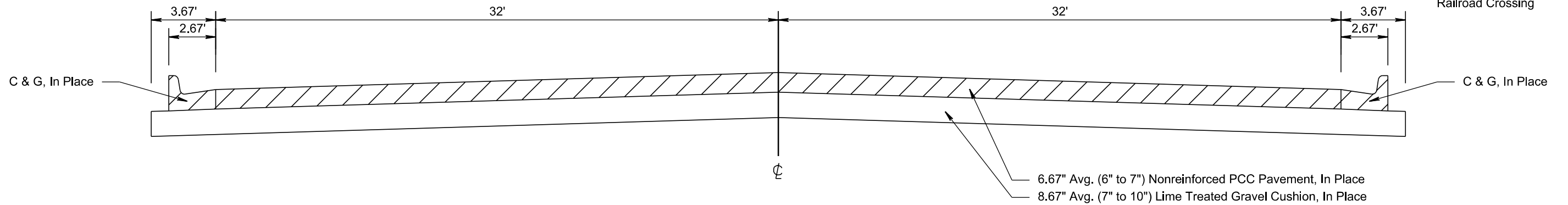
## Section 2

Sta. 26+08.5 to Sta. 44+13.8



## Section 3

Sta. 44+13.8 to Sta. 58+84.3

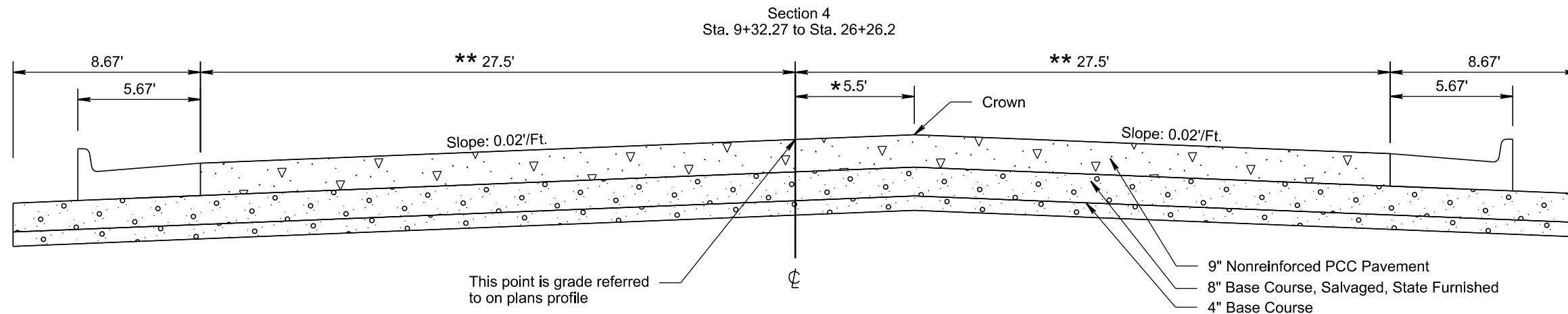


Exception:  
Sta. 47+06.6 to Sta. 47+31.6  
Railroad Crossing

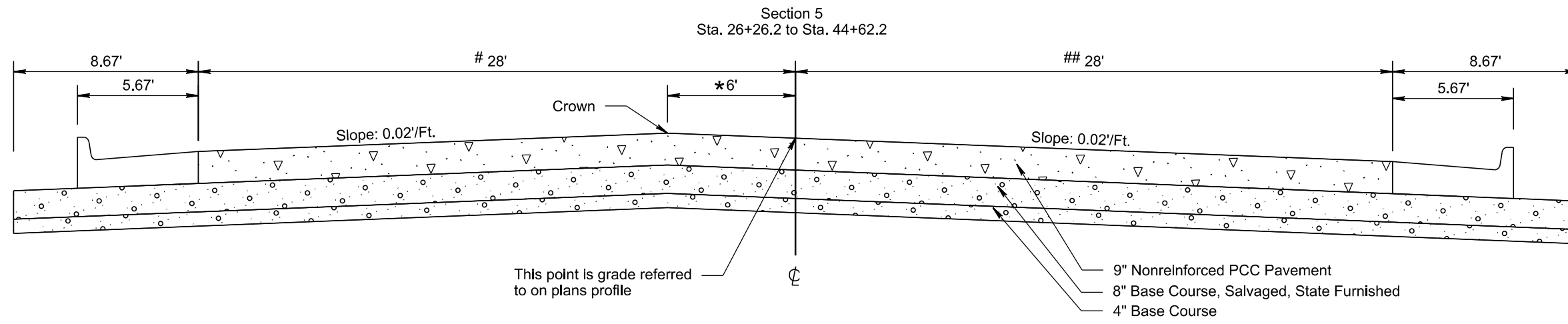
# TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0013(158)126	F7	F27

Plotting Date: 02/07/2024



Transitions:  
 Sta. 25+90.9 to Sta. 26+26.2  
 \*\* 27.5' to 28'  
 Sta. 25+65.7 to Sta. 26+46.2  
 \* Crown Pt - 5.5' Rt. to 6' Lt.



Transitions:  
 Sta. 41+60 to Sta. 42+95  
 \* Crown Pt - 6' to 2.5'  
 # 28' to 24.5'  
 ## 28' to 31.5'  
 Sta. 42+95 to Sta. 43+93.3  
 # 24.5'  
 ## 31.5'  
 Sta. 43+93.3 to Sta. 44+62.2  
 # 24.5' to 34'  
 ## 31.5' to 31'  
 Sta. 42+95 to Sta. 43+98  
 \* Crown Pt - 2.5'  
 Sta. 43+93.3 to Sta. 44+46  
 \* Crown Pt - 2.5' to 2'  
 Sta. 44+46 to Sta. 44+62.2  
 \* Crown Pt - 2'

PLOT SCALE - 1+6.00001

PLOTTED FROM - TRPR16032

PLOT NAME - 3

FILE - ... \06A2\_TYPICAL SECTIONS.DGN

# TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0013(158)126	SHEET F8	TOTAL SHEETS F27
-----------------------	-------------------------------	-------------	---------------------

Plotting Date: 02/07/2024

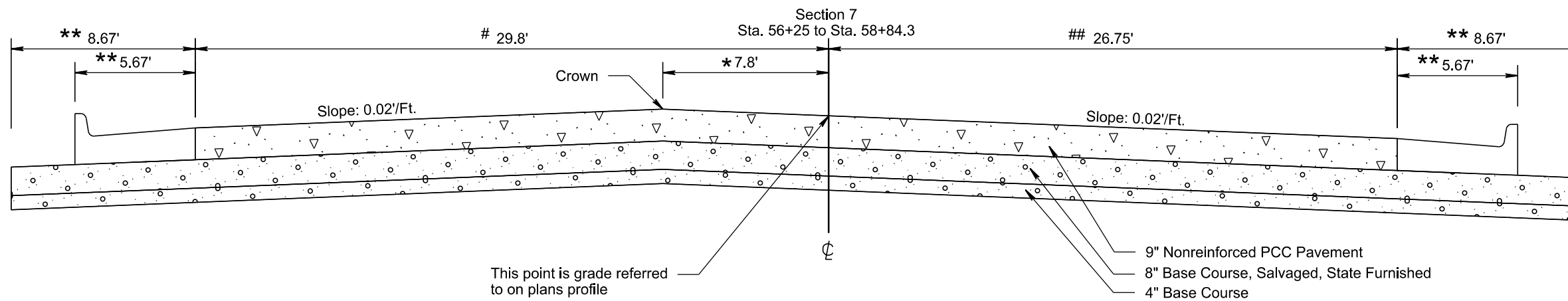
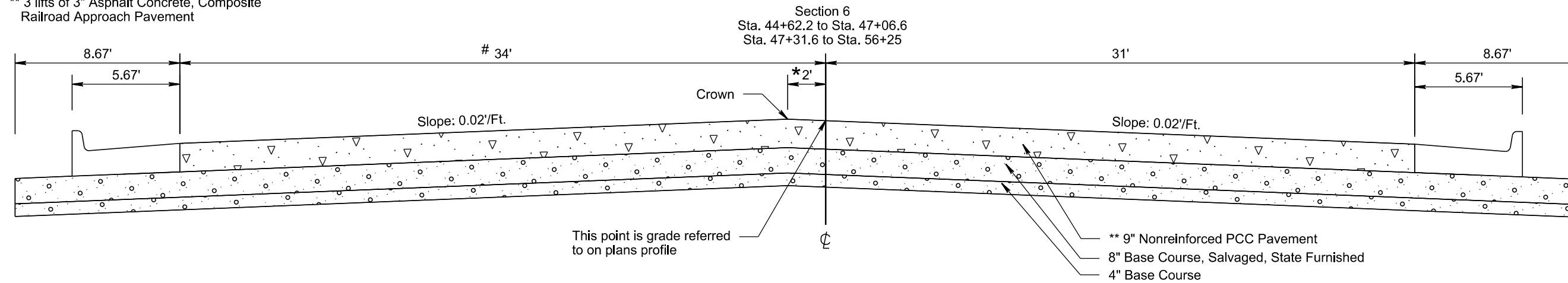
Surfacing Exception for Railroad Tracks: 47+06.6 to 47+31.6

Transitions:

Sta. 47+05.5 to Sta. 47+06.6  
 Sta. 47+16.6 to Sta. 47+21.0  
 Sta. 47+31.6 to Sta. 47+32.6  
 \*\* 3 lifts of 3" Asphalt Concrete, Composite  
 Railroad Approach Pavement

Transitions:

Sta. 46+49.7 to Sta. 46+99.7  
 # 34' to 32'  
 Sta. 46+99.7 to Sta. 47+06.6  
 Sta. 47+31.6 to Sta. 47+61.9  
 # 32'  
 Sta. 47+61.9 to Sta. 48+11.9  
 # 32' to 34'  
 Sta. 52+10 to Sta. 53+75  
 \* Crown Pt - 2' to 12'  
 Sta. 53+75 to Sta. 56+25  
 \* Crown Pt - 12'



Transitions:

Sta. 56+25 to Sta. 57+50  
 \* Crown Pt - 12' to 7.8'  
 # 34' to 29.8'  
 ## 31' to 26.75'  
 Sta. 57+93.3 to Sta. 58+26.6  
 # 29.8' to 29.3'  
 ## 26.75' to 26.1'  
 Sta. 58+26.6 to Sta. 58+84.3  
 \*\* 0'  
 # 29.3' to 31.1'  
 ## 26.1' to 28.5'  
 Sta. 58+43.4 to Sta. 58+84.3  
 \* Crown Pt - 7.8' to 9.1'

PLOT SCALE - 1:6,000

PLOTTED FROM - TRPR16032

PLOT NAME - 4

FILE - ... \06A2\_TYPICAL SECTIONS.DGN



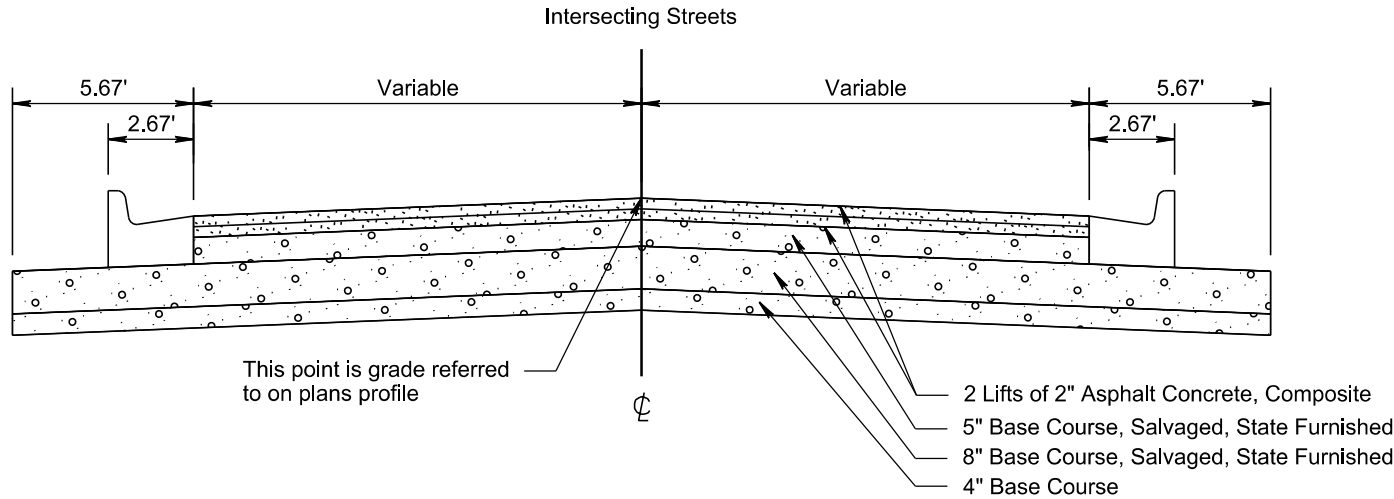
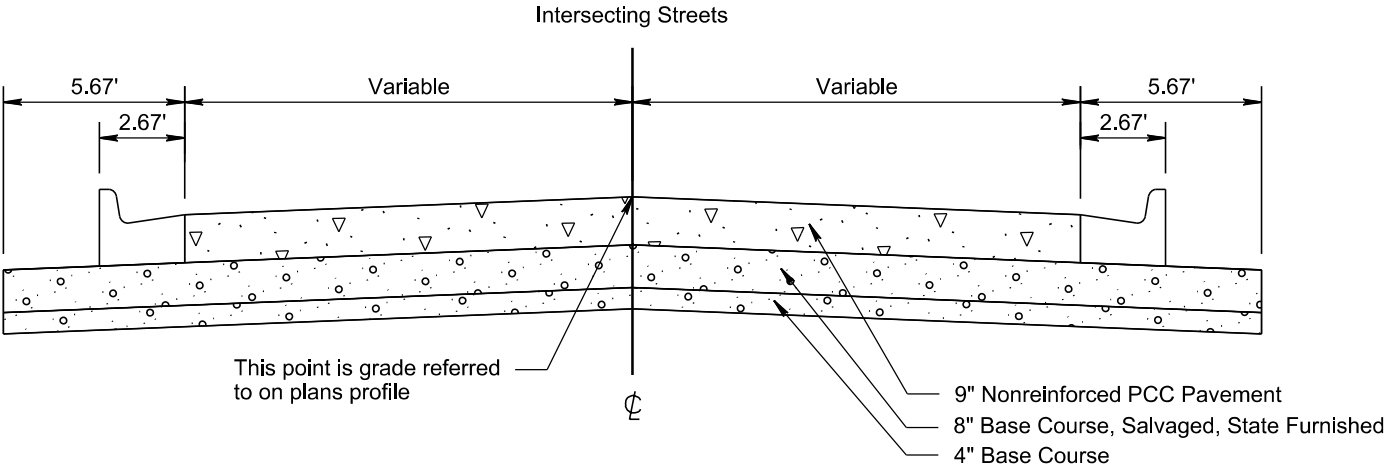
# TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0013(158)126	F9	F27

Plotting Date: 02/07/2024

PLOT SCALE - 1+6.00001

PLOT NAME - 5



PLOTTED FROM - IRPR16032

FILE - ... \0642\_TYPICAL SECTIONS.DGN

# PCC PAVEMENT JOINT LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0013(158)126	F10	F27

Plotting Date: 02/07/2024

Scale 1 Inch = 40 Feet  
Sheet 1 of 9 Sheets

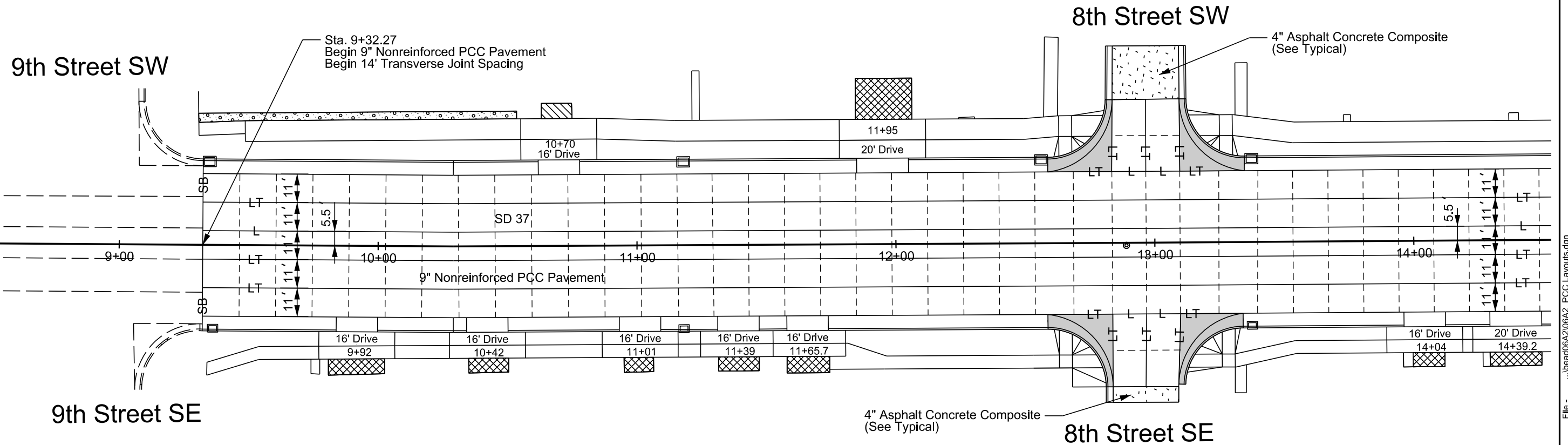
- 3" Asphalt Concrete Composite & 4" Base Course, Salvaged, State Furnished
- 6" Base Course, Salvaged, State Furnished
- 6" PCC Driveway Pavement & 5" Base Course, Salvaged, State Furnished
- Reinforced Fillet Area, See Section B for details.



Plot Scale - 1:40

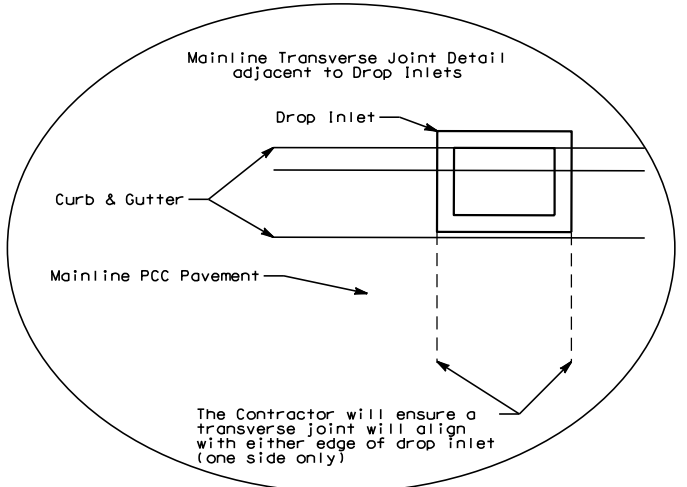
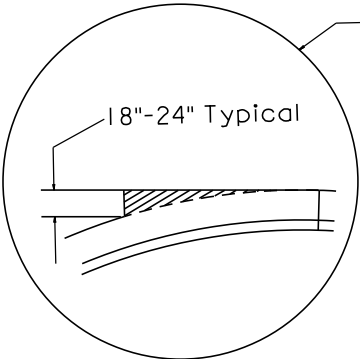
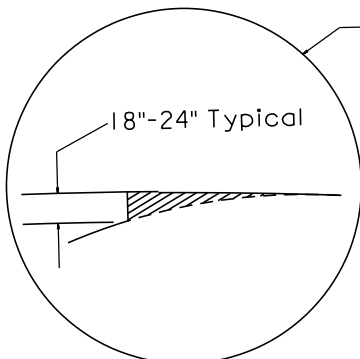
Plotted From - TRPR16032

File - ...:\bead06a2\06A2\_PCC Layouts.dgn



**LEGEND:**

- Longitudinal Joint Without Tie Bars (Construction or Sawed) ——— L ——— L ———
- Longitudinal Joint With Tie Bars (Construction or Sawed) ——— LT ——— LT ———
- Transverse Contraction Joint ——— ——— ———
- Steel Bar Installation in Longitudinal or Transverse Joint ——— SB ——— SB ———
- Areas to be poured monolithically with adjacent slab (See Detail A)
- Areas to be poured monolithically with adjacent curb and gutter (See Detail B)
- Transverse contraction joints within these areas will not have dowel bar assemblies. All other transverse contraction joints will have dowel bar assemblies.
- Manhole
- Drop Inlet






# PCC PAVEMENT JOINT LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0013(158)126	F11	F27

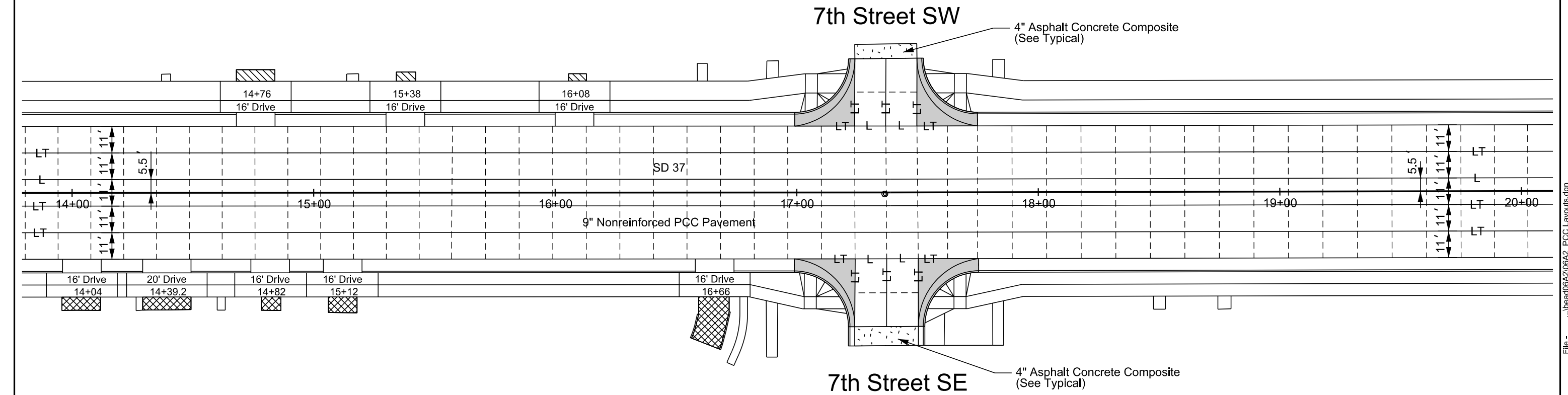
Plotting Date: 02/07/2024

Scale 1 Inch = 40 Feet  
Sheet 2 of 9 Sheets

-  6" Base Course, Salvaged, State Furnished
-  6" PCC Driveway Pavement & 5" Base Course, Salvaged, State Furnished
-  Reinforced Fillet Area, See Section B for details.



Plot Scale - 1:40



Plotted From - TRPR16032




File - ...:\bead06a2\06A2\_PCC Layouts.dgn

# PCC PAVEMENT JOINT LAYOUT

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0013(158)126	SHEET F12	TOTAL SHEETS F27
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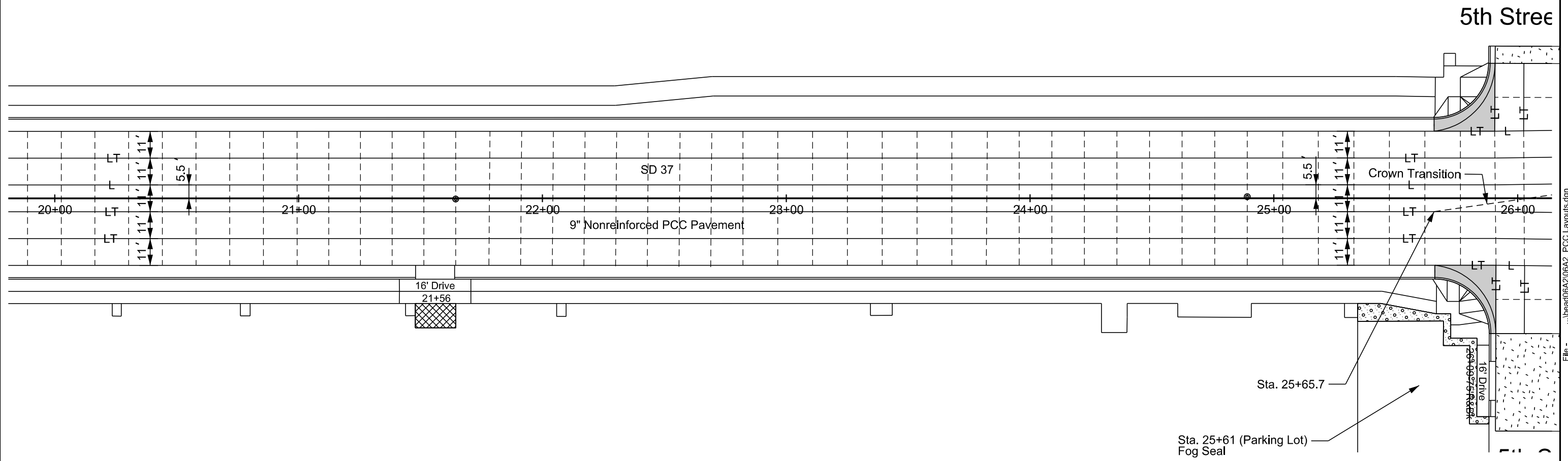
Plotting Date: 02/07/2024

Scale 1 Inch = 40 Feet  
Sheet 3 of 9 Sheets

-  3" Asphalt Concrete Composite & 4" Base Course, Salvaged, State Furnished
-  6" PCC Driveway Pavement & 5" Base Course, Salvaged, State Furnished
-  Reinforced Fillet Area, See Section B for details.



Plot Scale - 1:40



Plotted From - TRPR16032




File - ...:\bead06a2\06A2\_PCC Layouts.dgn

# PCC PAVEMENT JOINT LAYOUT

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0013(158)126	SHEET F13	TOTAL SHEETS F27
-----------------------	-------------------------------	--------------	---------------------

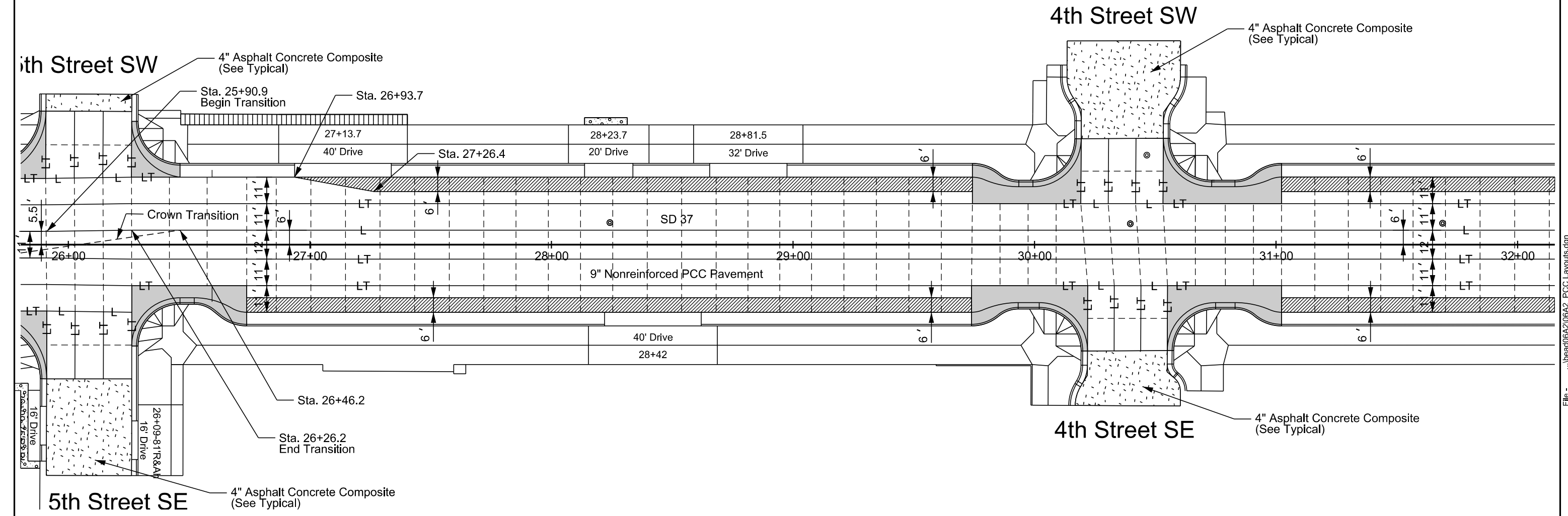
Plotting Date: 02/07/2024

Scale 1 Inch = 40 Feet  
Sheet 4 of 9 Sheets

-  3" Asphalt Concrete Composite & 4" Base Course, Salvaged, State Furnished
-  8" PCC Driveway Pavement & 5" Base Course, Salvaged, State Furnished
-  Reinforced Fillet Area, See Section B for details.



Plot Scale - 1:40



Plotted From: TRPR16032



File: ...:\bead06A2\06A2\_PCC Layouts.dgn

# PCC PAVEMENT JOINT LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0013(158)126	F14	F27

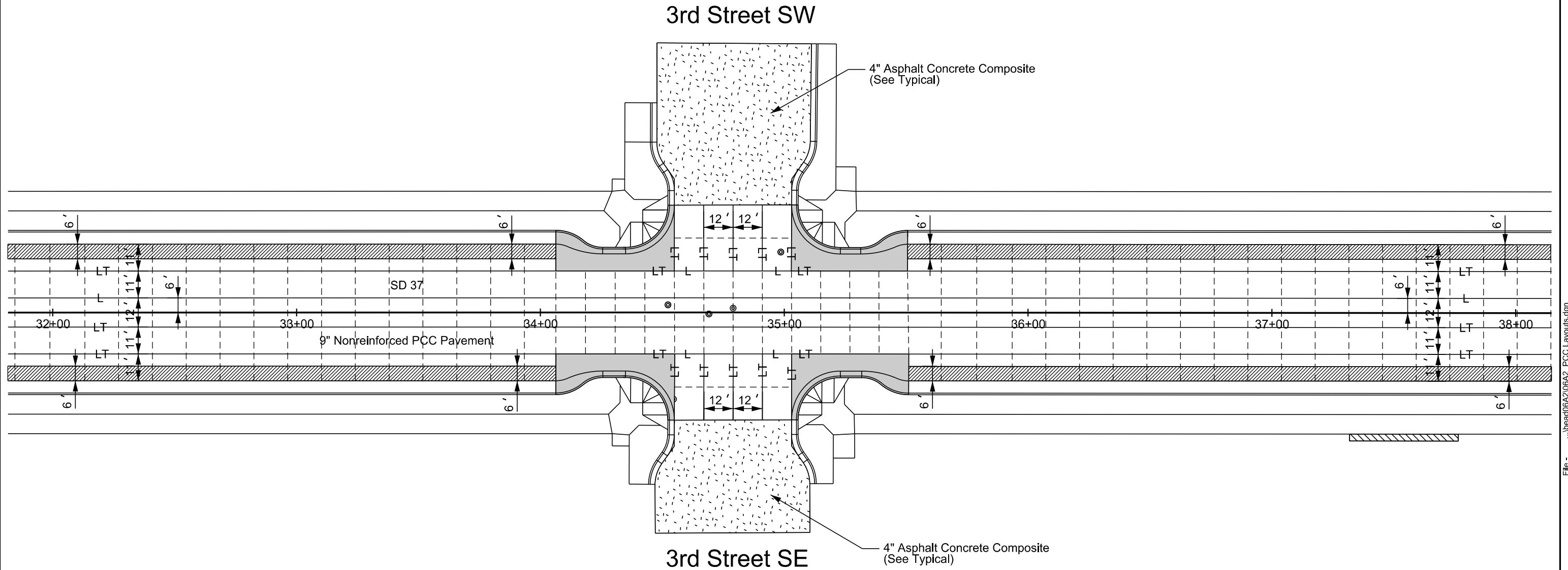
Plotting Date: 02/07/2024

Scale 1 Inch = 40 Feet  
Sheet 5 of 9 Sheets

-  6" Base Course, Salvaged, State Furnished
-  Reinforced Fillet Area, See Section B for details.



Plot Scale - 1:40



Plotted From - TRPR16032




File - ...:\beard06A2\06A2\_PCC Layouts.dgn

# PCC PAVEMENT JOINT LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0013(158)126	F15	F27

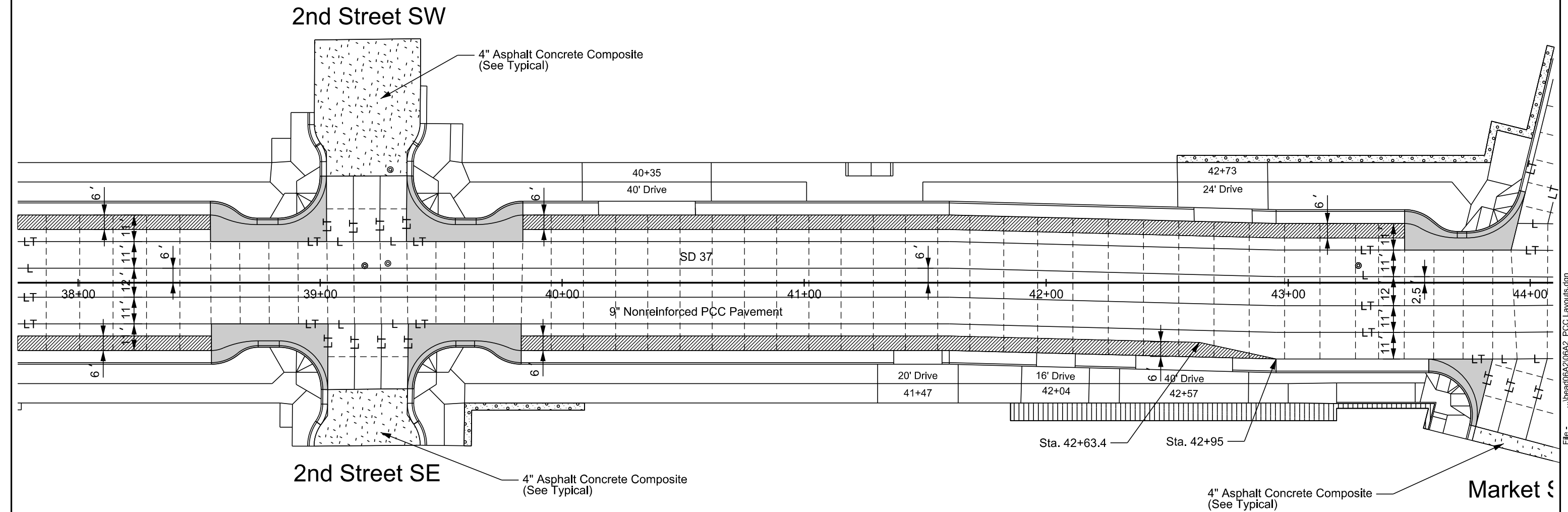
Plotting Date: 02/07/2024

Scale 1 Inch = 40 Feet  
Sheet 6 of 9 Sheets

-  3" Asphalt Concrete Composite & 4" Base Course, Salvaged, State Furnished
-  8" PCC Driveway Pavement & 5" Base Course, Salvaged, State Furnished
-  Reinforced Fillet Area, See Section B for details.



Plot Scale - 1:40



Plotted From - TRPR16032

File - ...:\bead06a2\06A2\_PCC Layouts.dgn






# PCC PAVEMENT JOINT LAYOUT

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0013(158)126	SHEET F16	TOTAL SHEETS F27
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Plotting Date: 02/07/2024

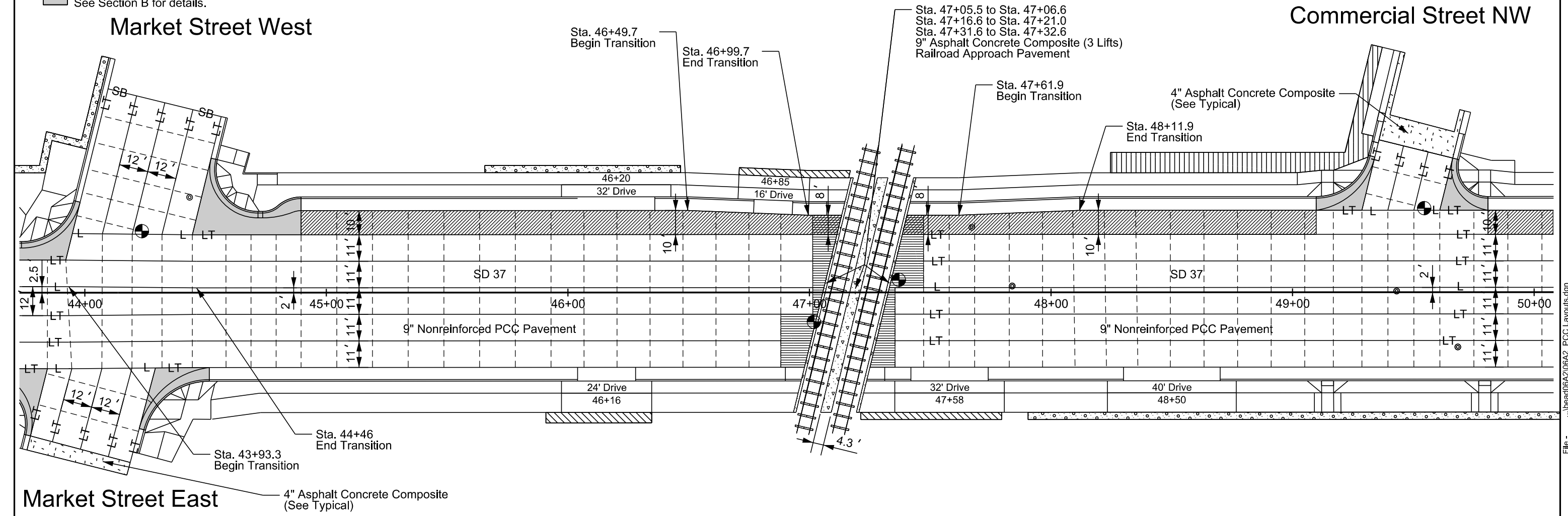
Revised: 7Feb24, RML

Scale 1 Inch = 40 Feet  
Sheet 7 of 9 Sheets

-  3" Asphalt Concrete Composite & 4" Base Course, Salvaged, State Furnished
-  6" Base Course, Salvaged, State Furnished
-  8" PCC Driveway Pavement & 5" Base Course, Salvaged, State Furnished
-  9" Asphalt Concrete Composite. Railroad Approach Pavement See Standard Plate 380.65
-  Railroad Approach Reinforcement See Detail Sheet
-  Reinforced Fillet Area, See Section B for details.



Plot Scale - 1:40



Plotted From - TRPR16032

File - ...:\bead06a2\06A2\_PCC Layouts.dgn



# PCC PAVEMENT JOINT LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0013(158)126	F17	F27

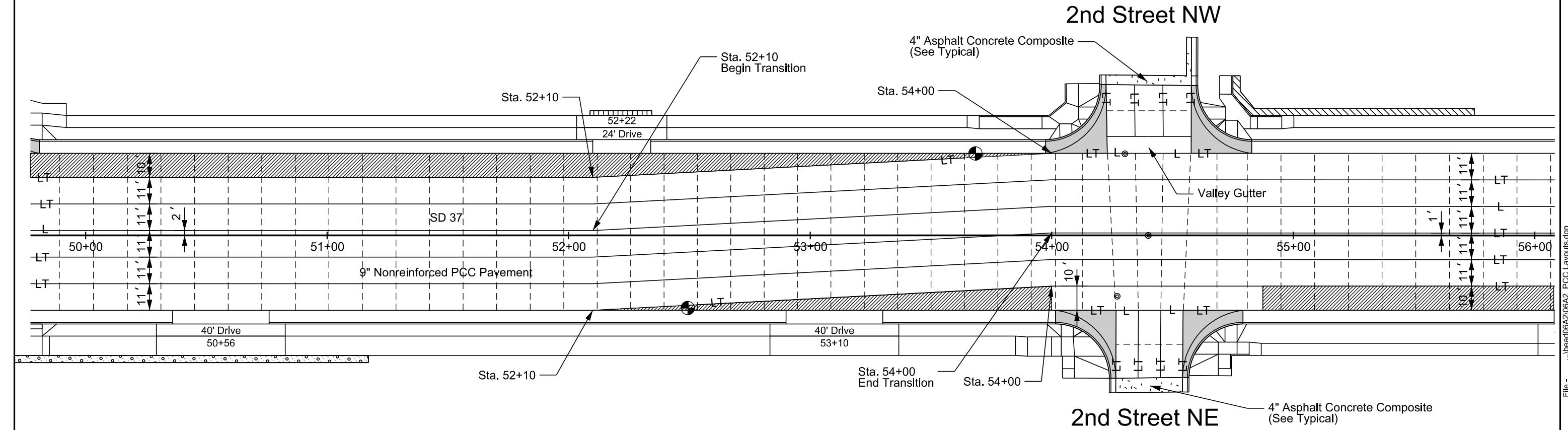
Plotting Date: 02/07/2024

Scale 1 Inch = 40 Feet  
Sheet 8 of 9 Sheets

- 
- 
- 
- 
- 
- 



Plot Scale - 1:40






Plotted From - TRPR16032

File - ...:\bead06a2\06A2\_PCC Layouts.dgn

# PCC PAVEMENT JOINT LAYOUT

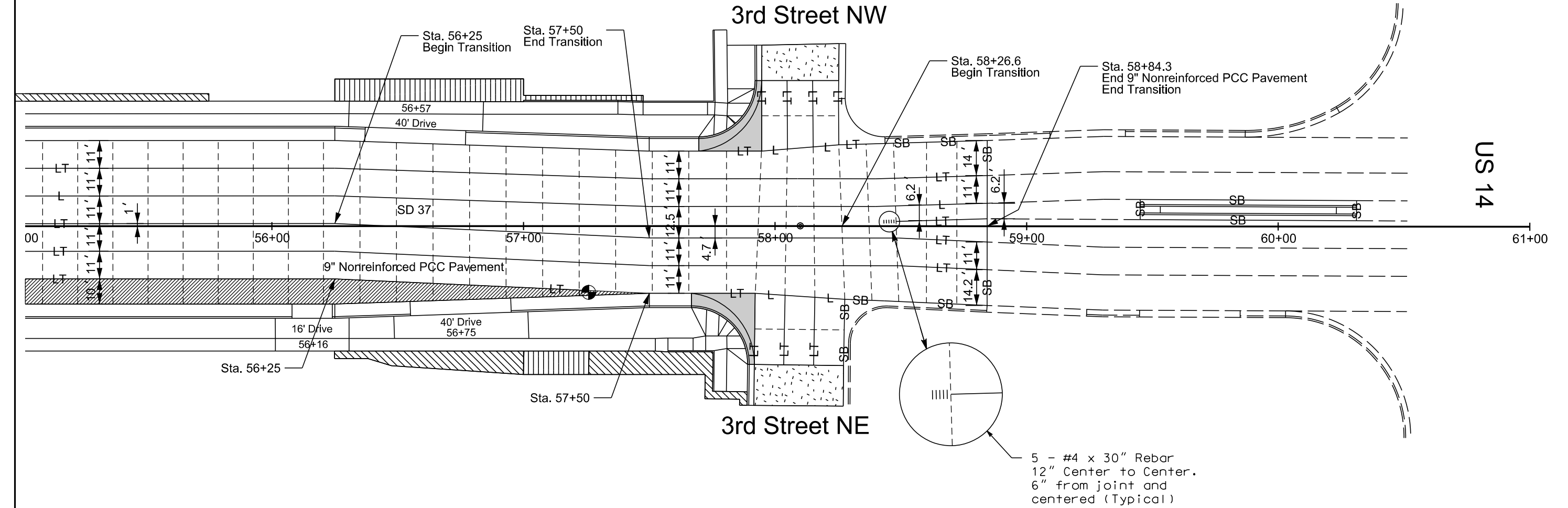
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0013(158)126	F18	F27
Plotting Date:		02/07/2024	

Scale 1 Inch = 40 Feet  
Sheet 9 of 9 Sheets

-  6" Base Course, Salvaged, State Furnished
-  8" PCC Driveway Pavement & 5" Base Course, Salvaged, State Furnished
-  Reinforced Fillet Area, See Section B for details.



Plot Scale - 1:40



Plotted From - TRPR16032

File - ...:\bead06a2\06A2\_PCC Layouts.dgn

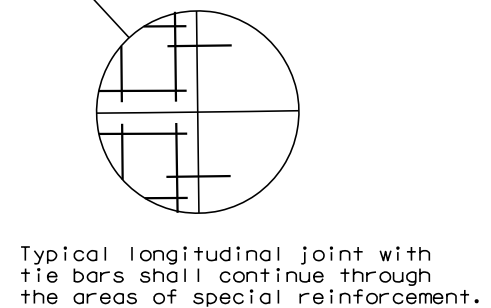
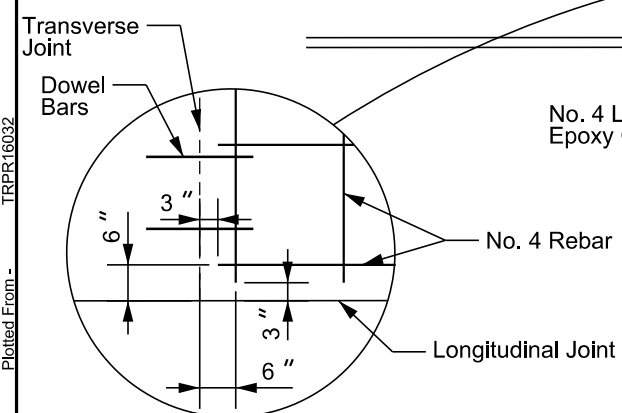
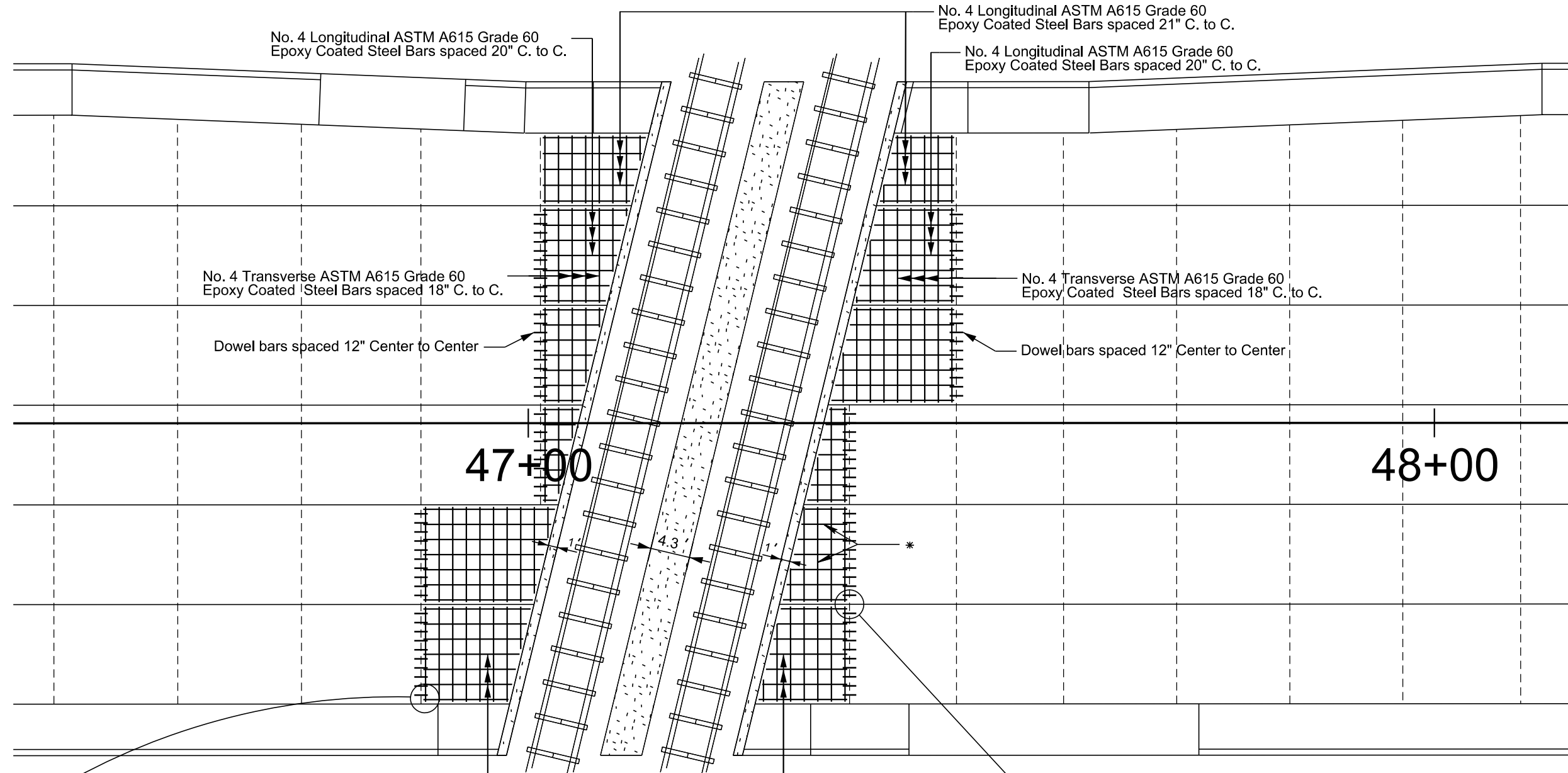
# RAILROAD APPROACH REINFORCEMENT

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0013(158)126	SHEET F19	TOTAL SHEETS F27
-----------------------	-------------------------------	--------------	---------------------

Plotting Date: 02/07/2024

NOT TO SCALE  
Sheet 1 of 2 Sheets

 9" Asphalt Concrete Composite.  
Railroad Approach Pavement  
See Standard Plate 380.65



**\* NOTE:**

The Length of the ASTM A615 Grade 60 Epoxy Coated steel bars may vary +/- 2 inches

Top of longitudinal bars shall be located at 1/2 depth of PCC Pavement slab +/- 1/2"

The rebar mat may rest on top of the dowel basket assemblies.

Cost of additional reinforcement will be incidental to the cost of 9" Nonreinforced PCC Pavement.

Plot Scale - 1:40

Plotted From - TRPR16032

File - ...lbeard06A2\06A2\_PCC Layouts.dgn

# RAILROAD APPROACH

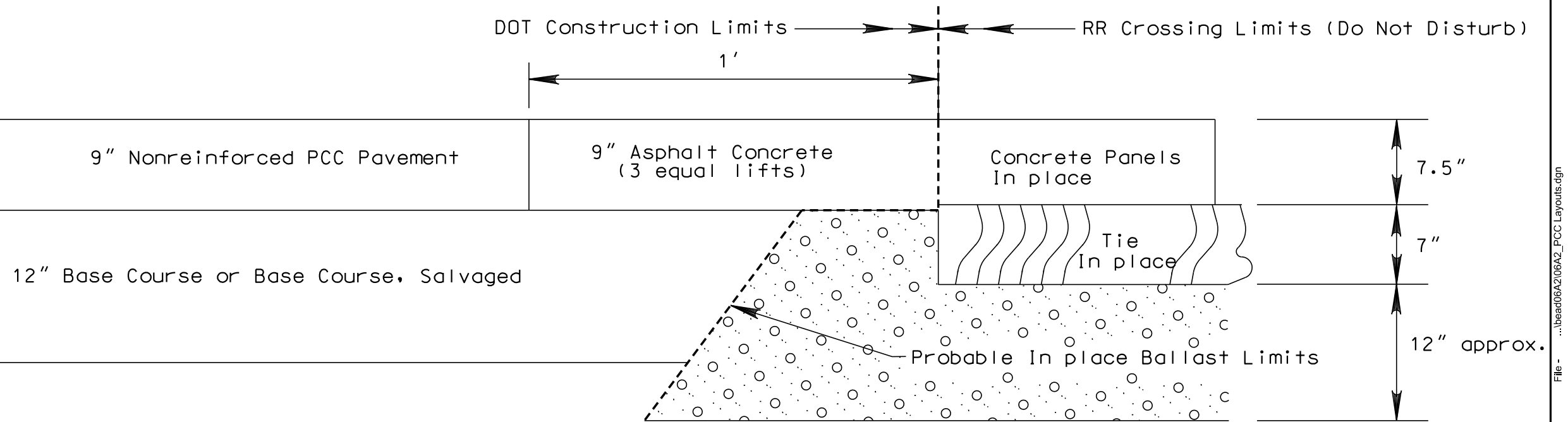
NOT TO SCALE  
Sheet 2 of 2 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0013(158)126	F20	F27

Plotting Date: 02/07/2024

Revised: 16Jan24, RML

## ROADWAY PROFILE



Note: Care shall be taken to not disturb the existing railroad ballast.

Plot Scale - 1:40

Plotted From - TRPR16032

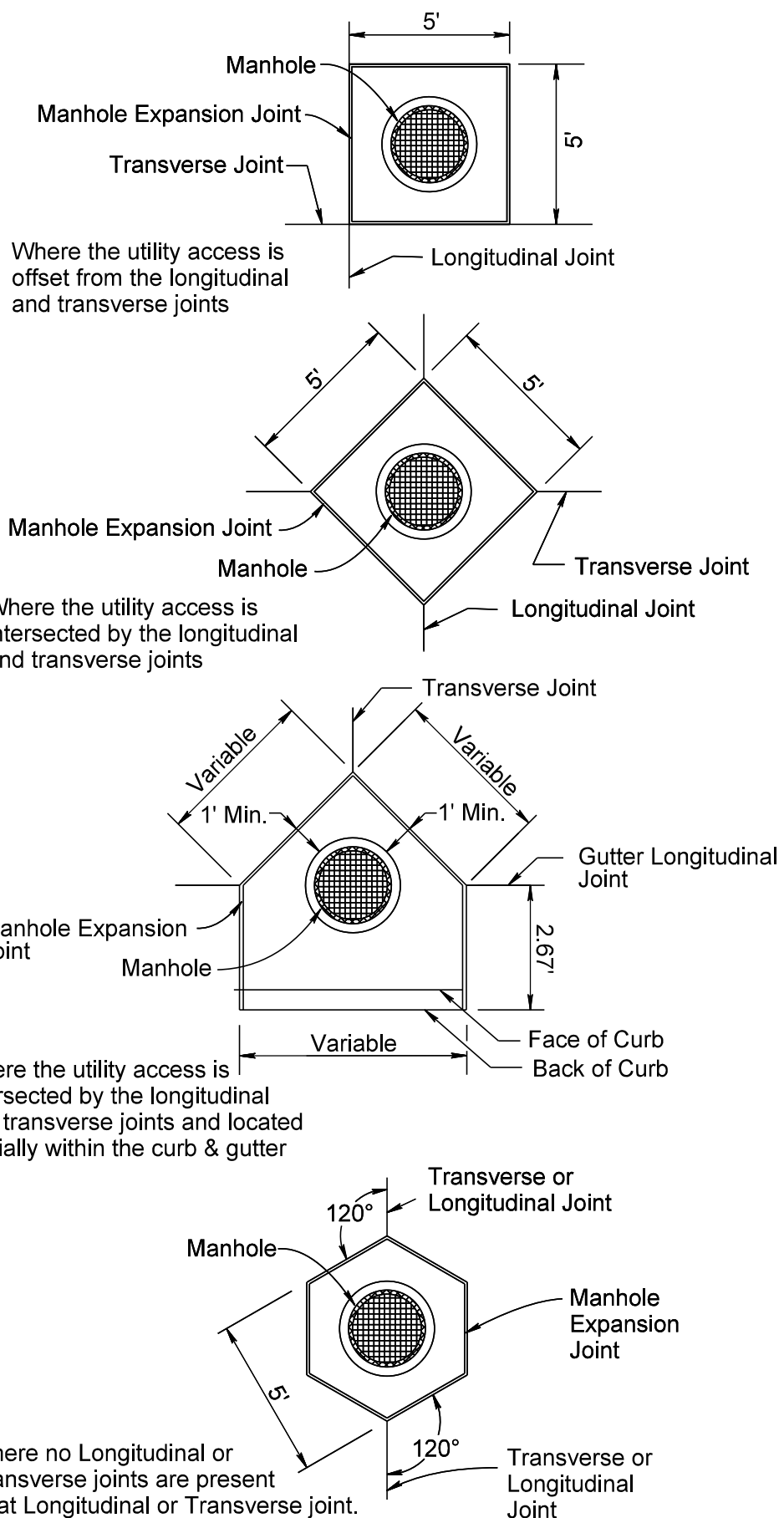
File - ...lbead06A2\06A2\_PCC Layouts.dgn

# TYPICAL MANHOLE BOX-OUT DETAILS FOR PCC PAVEMENT

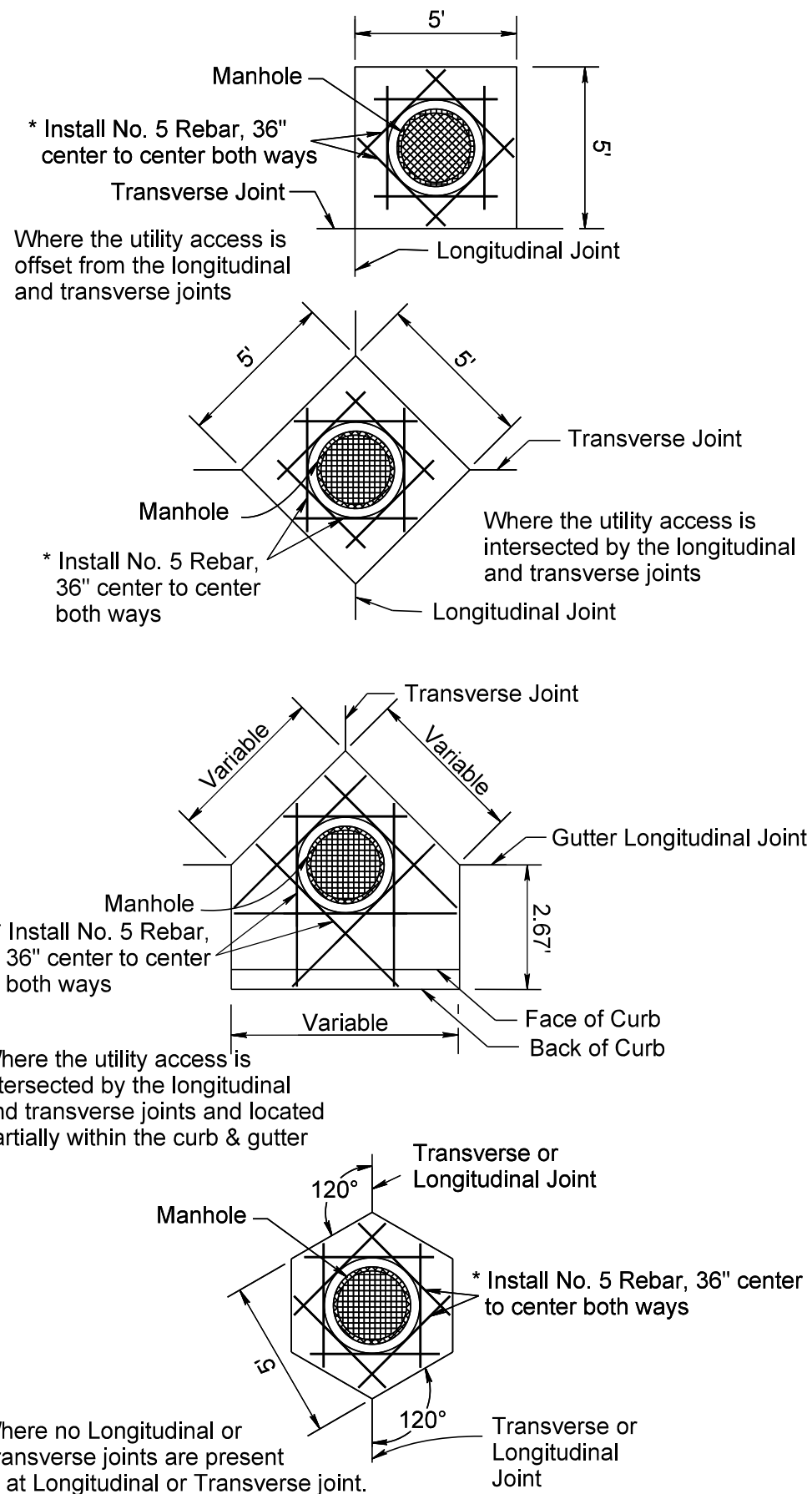
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0013(158)126	F21	F27

Plotting Date: 02/07/2024

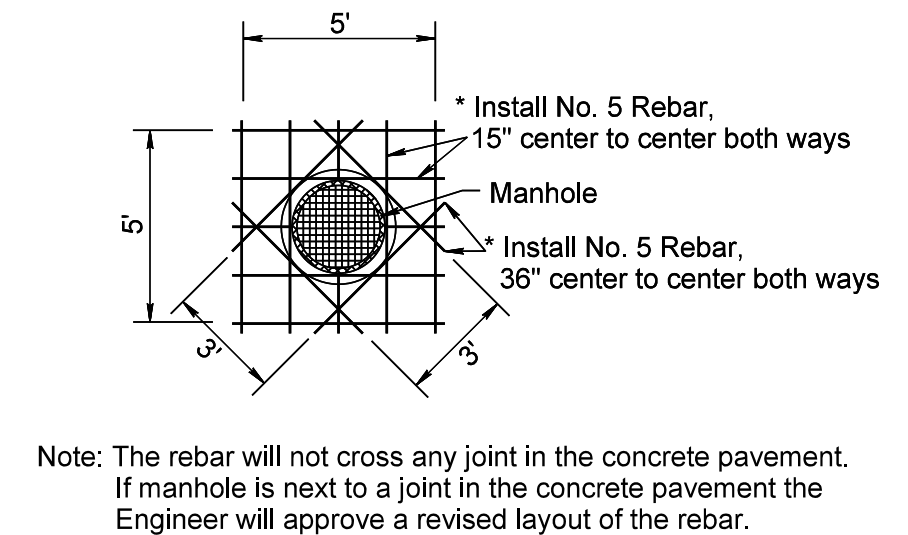
## BOX-OUT DETAIL IN PCC PAVEMENT



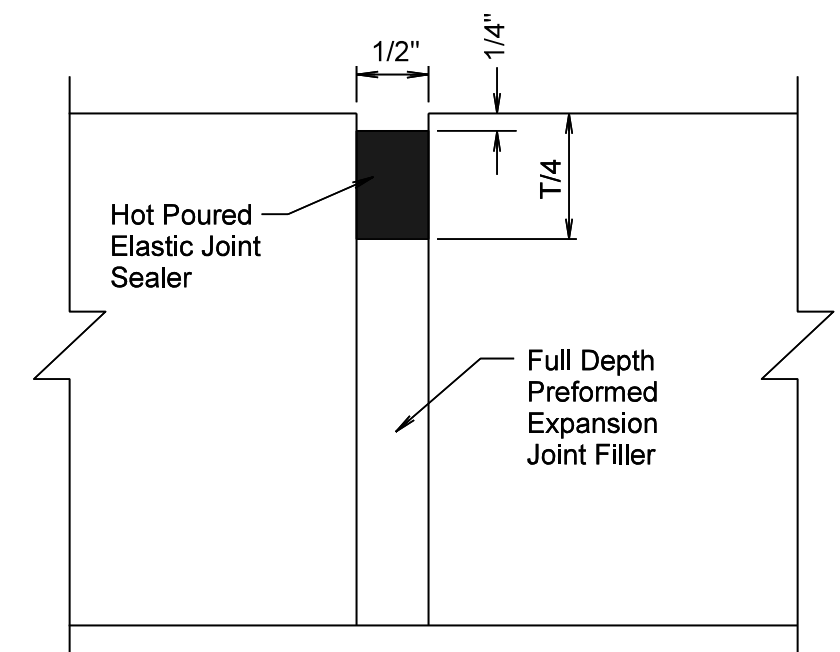
## REBAR LAYOUTS IN PCC PAVEMENT WITH BOX-OUTS



## REBAR LAYOUT IN PCC PAVEMENT WITHOUT BOX-OUT



## MANHOLE EXPANSION JOINT DETAIL



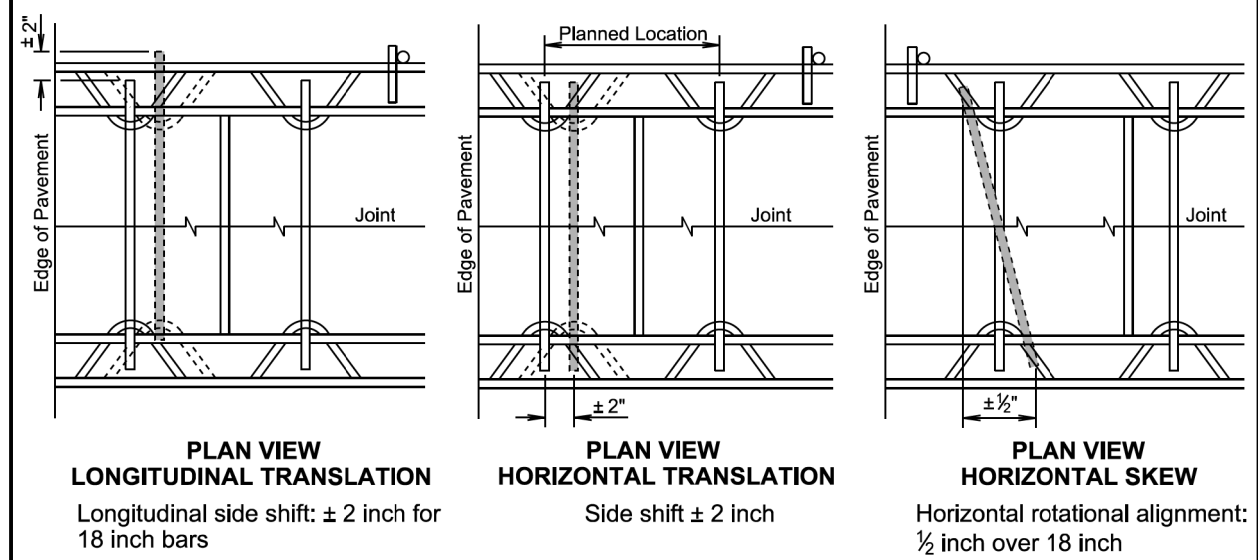
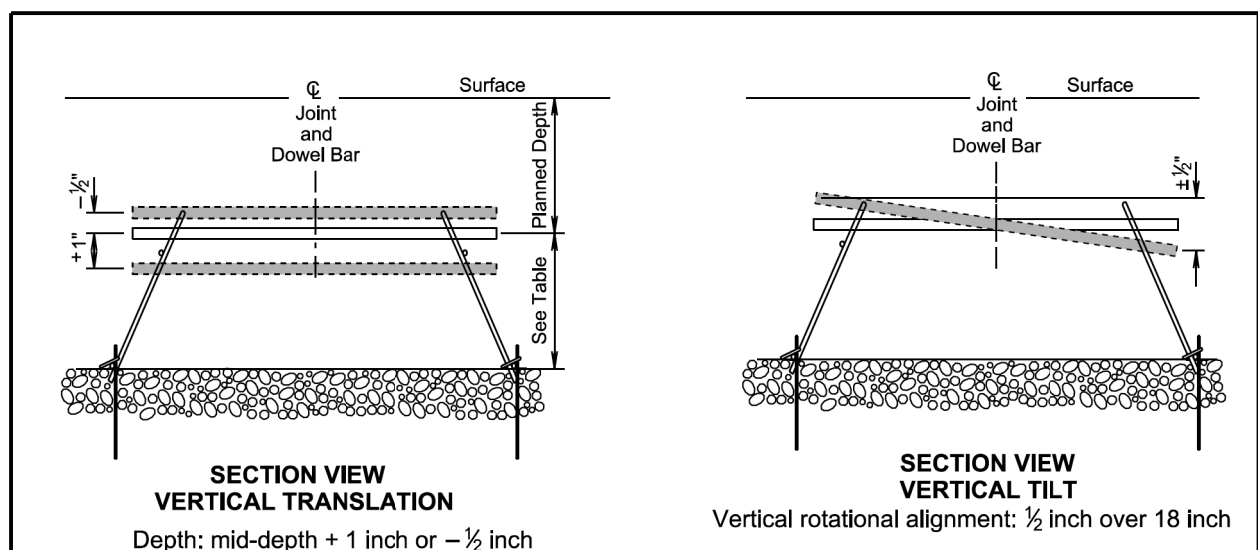
\* Rebar will be placed at the midpoint depth of the PCC Pavement. Cost for furnishing & installing rebar and constructing box-outs will be incidental to the contract unit price per square yard for Nonreinforced PCC Pavement.

Plot Scale - 1:6

Plotted From - TRPR16032

File - ...:\bead06a2\manhole\_detail.dgn

Plot Scale - 1:200

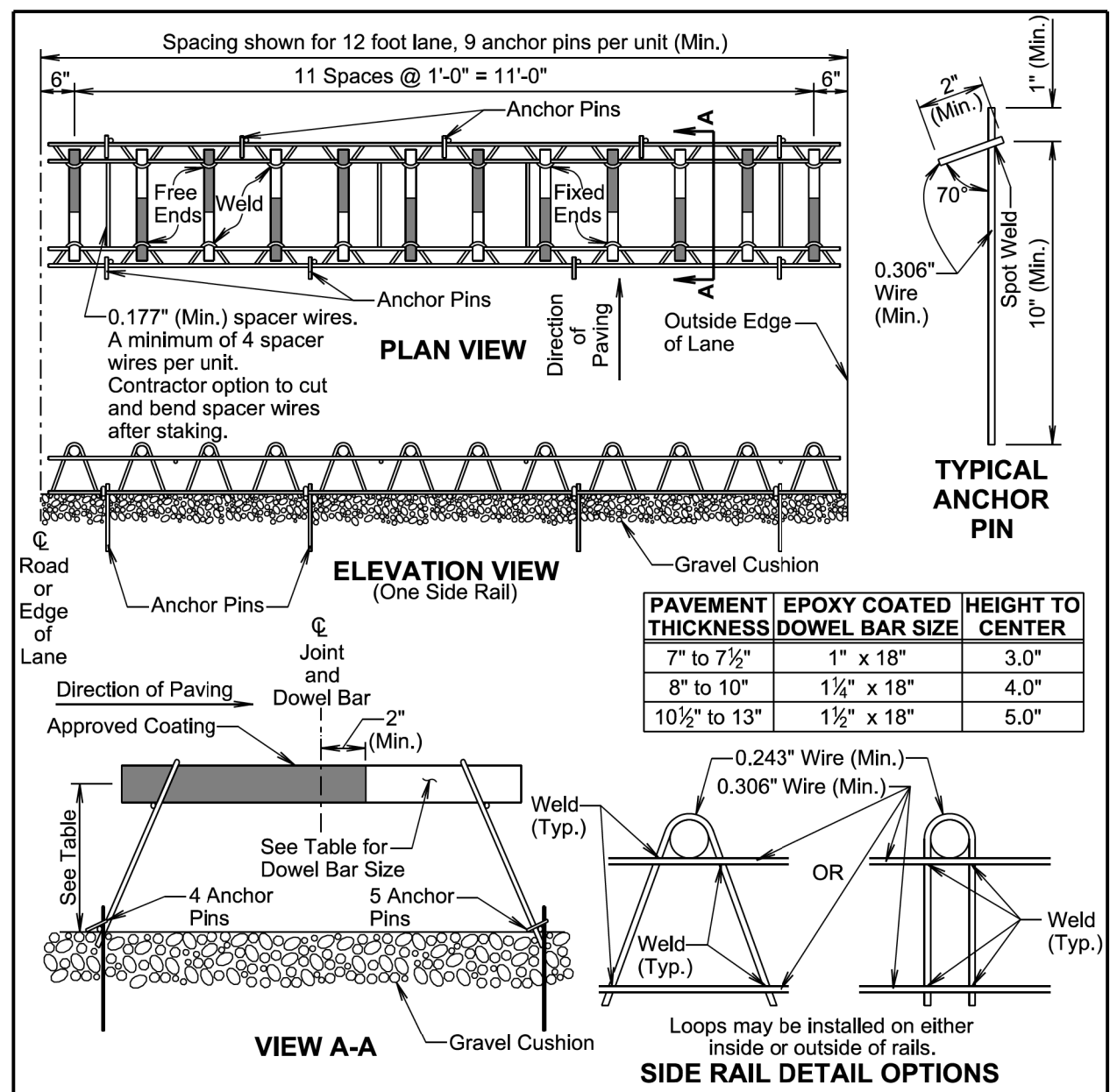


PAVEMENT THICKNESS	EPOXY COATED DOWEL BAR SIZE	HEIGHT TO CENTER
7" to 7 1/2"	1" x 18"	3.0"
8" to 10"	1 1/4" x 18"	4.0"
10 1/2" to 13"	1 1/2" x 18"	5.0"

**GENERAL NOTE:**  
The tolerances shown above represent the maximum deviation for acceptance of dowel bar placement.

November 19, 2022

<b>S D D O T</b>	<b>PCC PAVEMENT DOWEL BAR ALIGNMENT TOLERANCES</b>	PLATE NUMBER 380.01
	Published Date: 2024	Sheet 1 of 1



PAVEMENT THICKNESS	EPOXY COATED DOWEL BAR SIZE	HEIGHT TO CENTER
7" to 7 1/2"	1" x 18"	3.0"
8" to 10"	1 1/4" x 18"	4.0"
10 1/2" to 13"	1 1/2" x 18"	5.0"

**GENERAL NOTES:**

Longitudinal joint tie bars will be placed a minimum of 15 inches from the transverse contraction joint.

The transverse contraction joints will be sawed perpendicular to the centerline of the roadway. The transverse sawed joint will be centered over the dowel bars.

Supporting devices as shown on this sheet, or equivalent as approved by the Engineer, will be used to maintain proper horizontal and vertical alignment of the dowel bars.

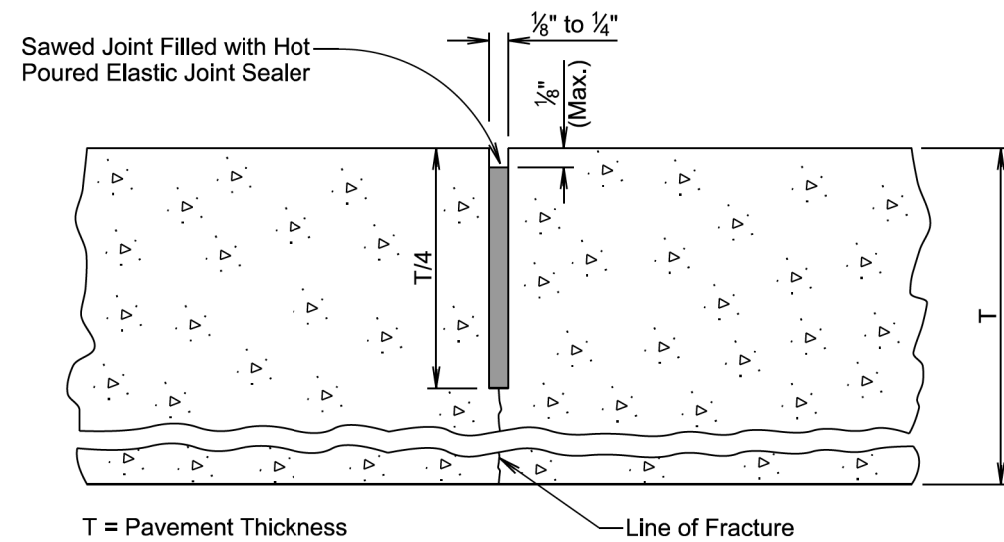
All dowel bar alignment tolerances will be as shown in the PCC Pavement Dowel Bar Alignment Tolerances standard plate.

November 19, 2022

<b>S D D O T</b>	<b>PCC PAVEMENT DOWEL BAR ASSEMBLY FOR TRANSVERSE CONTRACTION JOINTS 12 Bar Assembly on Granular Base Material</b>	PLATE NUMBER 380.04
	Published Date: 2024	Sheet 1 of 1

Plotted From: - TRPR16032

File - ...StdPlateSection 06A2.dgn



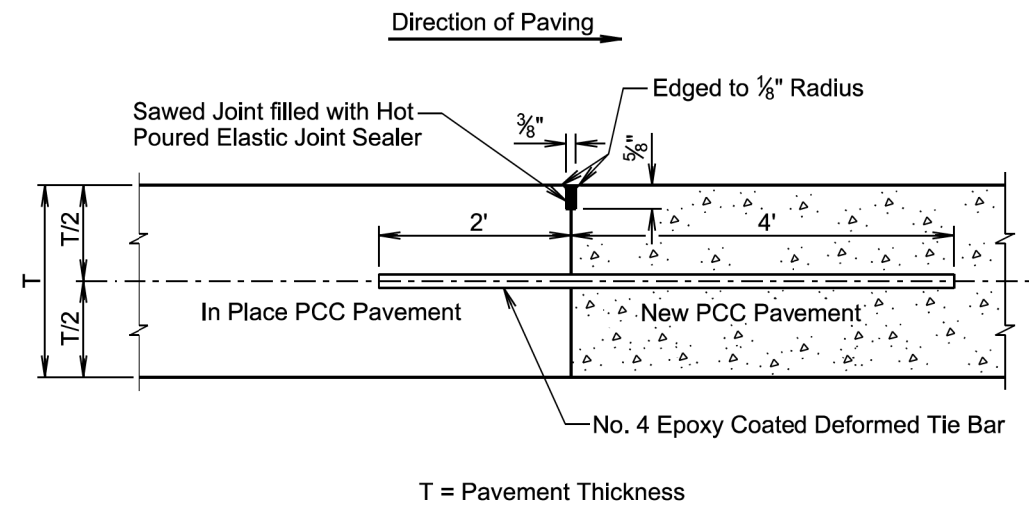
**GENERAL NOTES:**

If an early entrance saw cut does not develop the full transverse crack, then the saw cut to control cracking will be a minimum 1/4 of the thickness of the pavement.

All hot poured elastic joint sealer material spilled on the surface of the concrete pavement will be removed as soon as the material has cooled. The extent of removal of material will be to the satisfaction of the Engineer. All costs for removal of the spilled joint sealer material will be borne by the Contractor.

November 19, 2022

<i>Published Date: 2024</i>	S D D O T	<b>PCC PAVEMENT TRANSVERSE CONTRACTION JOINT WITH OR WITHOUT DOWEL BAR ASSEMBLY</b>	PLATE NUMBER 380.12
			Sheet 1 of 1



**GENERAL NOTES:**

No. 4 epoxy coated deformed tie bars will be spaced 12 inches center to center and will be a minimum of 3 inches and a maximum of 6 inches from the pavement edges.

The minimum distance between a transverse construction joint with tie bars and an adjacent transverse contraction joint will be 5 feet.

When a transverse construction joint is made, paving will not be allowed in this area for 12 hours.

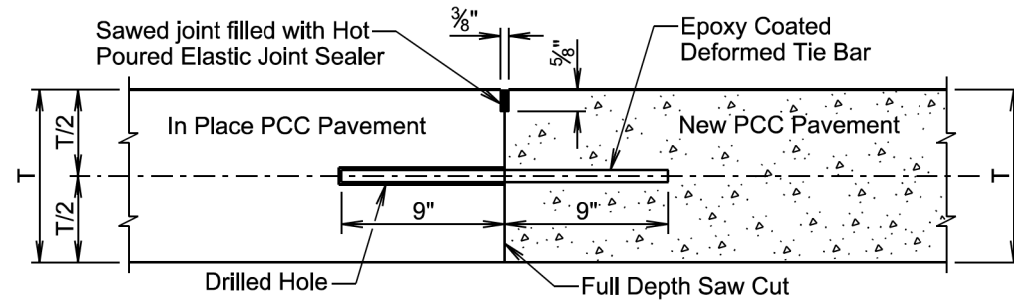
A transverse construction joint may be placed in lieu of the transverse contraction joint when shown in the plans.

The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on the current project.

November 19, 2022

<i>Published Date: 2024</i>	S D D O T	<b>PCC PAVEMENT MID PANEL TRANSVERSE CONSTRUCTION JOINT</b>	PLATE NUMBER 380.14
			Sheet 1 of 1

### DETAIL A TRANSVERSE CONSTRUCTION JOINT WITH TIE BARS



T = In Place PCC Pavement and New PCC Pavement Thickness

#### GENERAL NOTES:

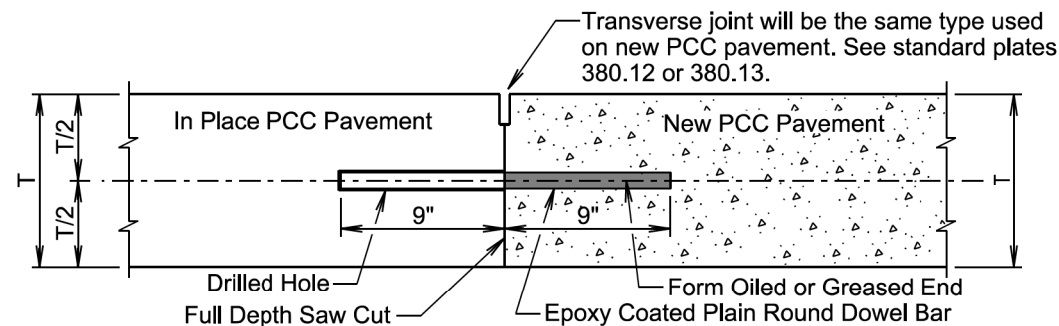
The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on a previous project.

See sheet 2 of 2 of this standard plate to determine if Detail A will be used.

The tie bars will be embedded a minimum depth of 9 inches into the in place PCC pavement and anchored with an epoxy resin adhesive or a non-shrink grout.

No. 9 epoxy coated deformed tie bars will be used in 10 inch thickness and less PCC Pavement and No. 11 epoxy coated deformed tie bars will be used in 10.5 inch thickness and greater PCC Pavement. The tie bar spacing will be 18 inches center to center and will be a minimum of 3 inches and a maximum of 9 inches from the pavement edges.

### DETAIL B TRANSVERSE CONSTRUCTION JOINT WITH DOWEL BARS



T = In Place PCC Pavement and New PCC Pavement Thickness

#### GENERAL NOTES:

The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on a previous project or current project.

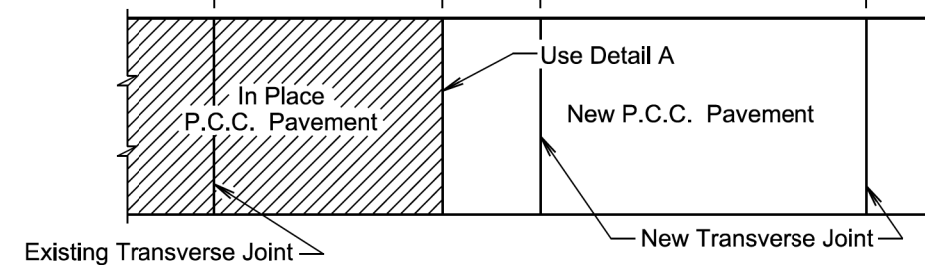
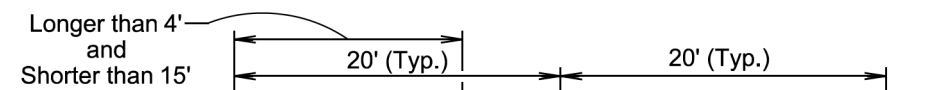
See sheet 2 of 2 of this standard plate to determine if Detail B will be used.

The plain round dowel bars will be embedded a minimum depth of 9 inches into the in place PCC pavement and anchored with an epoxy resin adhesive or a non-shrink grout.

The epoxy coated plain round dowel bar size, number, and spacing will be the same as detailed on the corresponding dowel bar assembly standard plate (380.04, 380.05, 380.06, or 380.07). The epoxy coated plain round dowel bars will be a minimum of 3 inches and a maximum of 6 inches from the pavement edges.

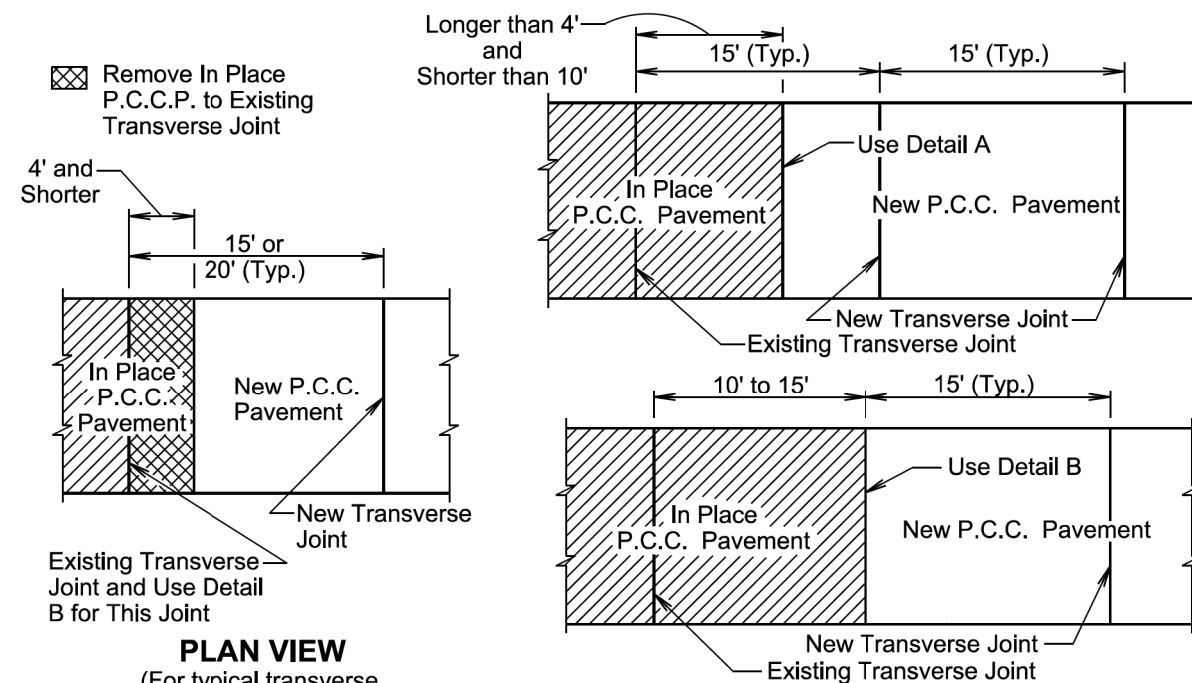
January 22, 2023

<b>Published Date: 2024</b>	<b>S D D O T</b>	<b>PCC PAVEMENT TRANSVERSE CONSTRUCTION JOINTS WITH TIE BARS OR DOWEL BARS</b>	<b>PLATE NUMBER</b> 380.15
			Sheet 1 of 2



#### PLAN VIEW

(For typical transverse joint spacing of 20' on the current project)



#### PLAN VIEW

(For typical transverse joint spacing of 15' or 20' on the current project)

#### PLAN VIEW

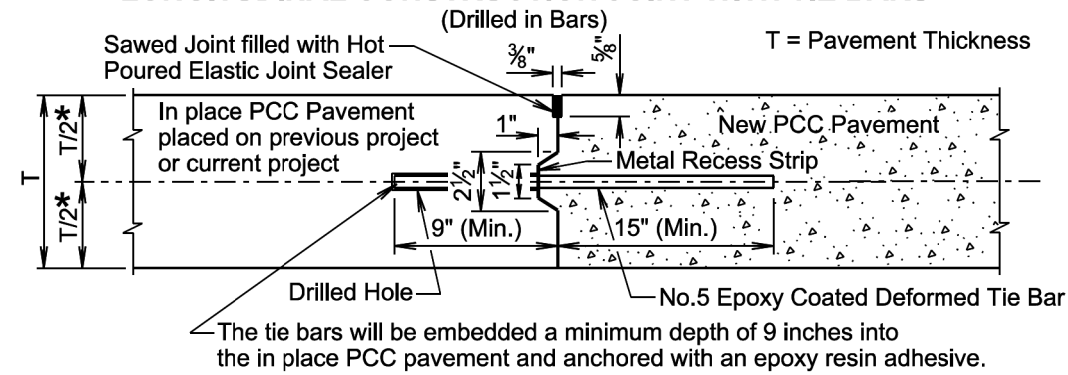
(For typical transverse joint spacing of 15' on the current project)

January 22, 2023

<b>Published Date: 2024</b>	<b>S D D O T</b>	<b>PCC PAVEMENT TRANSVERSE CONSTRUCTION JOINTS WITH TIE BARS OR DOWEL BARS</b>	<b>PLATE NUMBER</b> 380.15
			Sheet 2 of 2

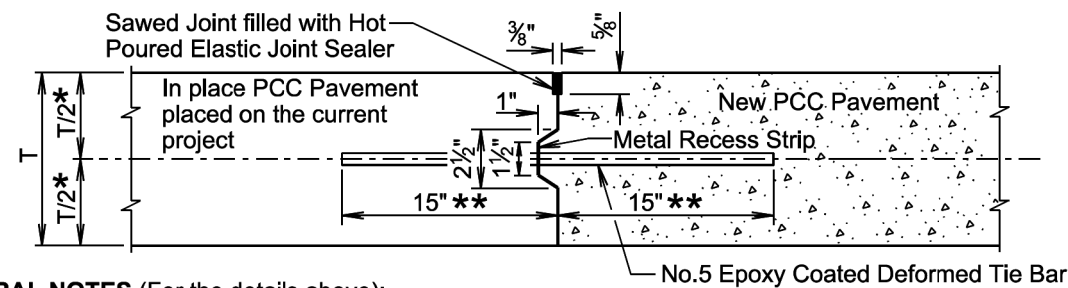


### LONGITUDINAL CONSTRUCTION JOINT WITH TIE BARS



### LONGITUDINAL CONSTRUCTION JOINT WITH TIE BARS

(Inserted or Formed in Bars)



#### GENERAL NOTES (For the details above):

The epoxy coated deformed tie bars will be spaced in accordance with the following tables:

TIE BAR SPACING 48" MAXIMUM	
Transverse Contraction Joint Spacing	Number of Tie Bars
6.5' to 10'	2
10.5' to 14'	3
14.5' to 18'	4
18.5' to 22'	5

TIE BAR SPACING 30" MAXIMUM	
Transverse Contraction Joint Spacing	Number of Tie Bars
5' to 7'	2
7.5' to 9.5'	3
10' to 12'	4
12.5' to 14.5'	5
15' to 17'	6
17.5' to 19.5'	7
20' to 22'	8

The tie bars will be placed a minimum of 15 inches from transverse contraction joints.

The required number of tie bars as shown in the table will be uniformly spaced within each panel. The uniformly spaced tie bars will be spaced a maximum of 48 inches center to center for a female keyway and will be spaced a maximum of 30 inches center to center for a vertical face and male keyway. The maximum tie bar spacing will apply to tie bars within each panel.

The keyway illustrated in the above details depict a female keyway.

The keyway is optional and is not required. When concrete pavement is formed and a keyway is provided, a metal recess strip will be used. When concrete pavement is slip formed, a metal recess strip is not required.

- \* The vertical placement tolerance for any part of the tie bar will be  $\pm T/6$ .
- \*\* The transverse placement (side shift) tolerance will be  $\pm 3$  inches when measured perpendicular to the longitudinal joint line.

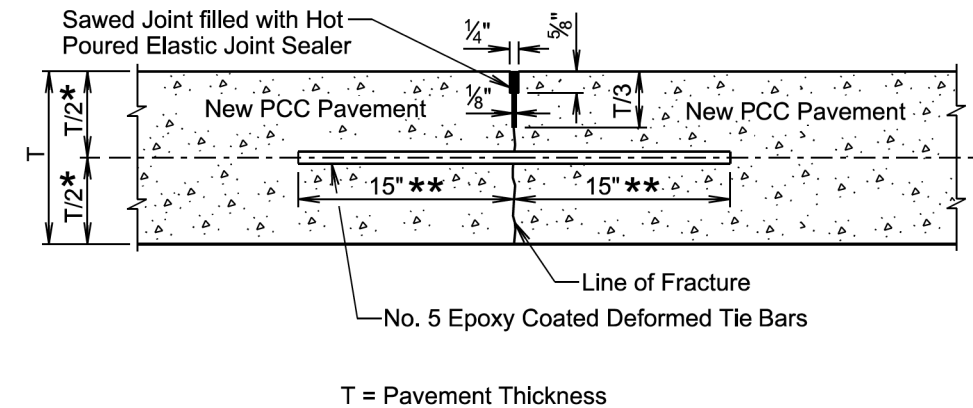
November 19, 2022

<b>S D D O T</b>	<b>PCC PAVEMENT LONGITUDINAL JOINTS WITH TIE BARS</b>	PLATE NUMBER 380.20
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### SAWED LONGITUDINAL JOINT WITH TIE BARS

(Poured Monolithically)



#### GENERAL NOTES (For the detail above):

The epoxy coated deformed tie bars will be spaced in accordance with the following table:

TIE BAR SPACING 48" MAXIMUM	
Transverse Contraction Joint Spacing	Number of Tie Bars
6.5' to 10'	2
10.5' to 14'	3
14.5' to 18'	4
18.5' to 22'	5

The tie bars will be placed a minimum of 15 inches from the transverse contraction joints.

The required number of tie bars as shown in the table will be uniformly spaced within each panel with a maximum space of 48 inches center to center. The maximum tie bar spacing will apply to tie bars within each panel.

The first saw cut to control cracking will be a minimum of 1/3 the thickness of the pavement. Additional sawing for widening the saw cut to provide the width for the installation of the hot poured elastic joint sealer is necessary.

- \* The vertical placement tolerance for any part of the tie bar will be  $\pm T/6$ .
- \*\* The transverse placement (side shift) tolerance will be  $\pm 3$  inches when measured perpendicular to the longitudinal joint line.

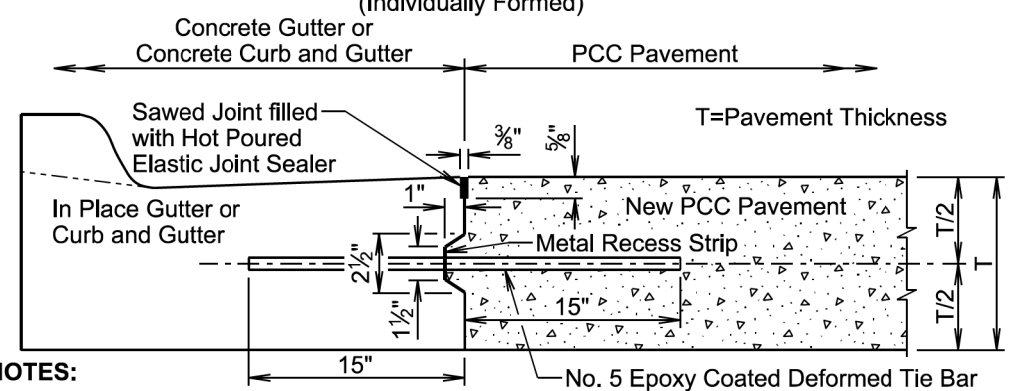
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<b>S D D O T</b>	<b>PCC PAVEMENT LONGITUDINAL JOINTS WITH TIE BARS</b>	PLATE NUMBER 380.20
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Plot Scale - 1:200

### LONGITUDINAL CONSTRUCTION JOINT WITH TIE BARS (Individually Formed)



**GENERAL NOTES:**

No. 5 epoxy coated deformed tie bars will be spaced 48 inches center to center. The keyway shown above is a female keyway.

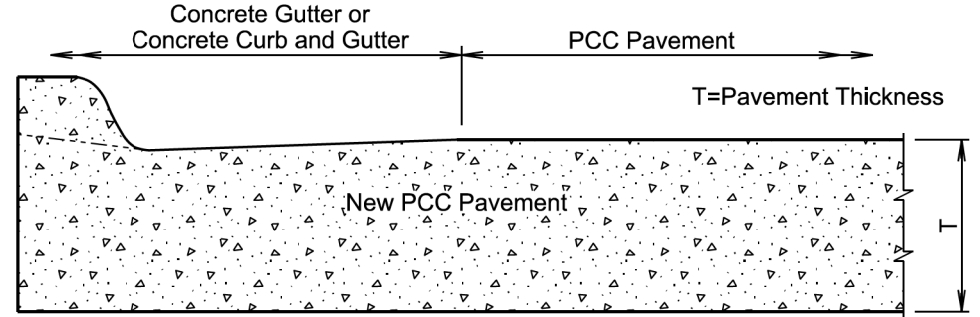
The tie bars will be placed a minimum of 15 inches from existing transverse contraction joints.

The keyway is optional and is not required. When concrete pavement is formed and a keyway is provided, a metal recess strip will be used. When concrete pavement is slip formed, a metal recess strip is not required.

The transverse contraction joints in the concrete gutter or concrete curb and gutter will be placed at each mainline PCC pavement transverse contraction joint. The transverse contraction joints in the concrete gutter or the concrete curb and gutter will be 1½ inches deep if formed in fresh concrete using a suitable grooving tool. If a saw is used to cut the transverse contraction joints, then the depth of the joint will be at least ¼ the thickness of the concrete gutter or concrete curb and gutter.

The term "In Place Gutter or Curb and Gutter" in the above drawing indicates that the in place concrete gutter and concrete curb and gutter was placed on the current project.

### POURED MONOLITHICALLY



**GENERAL NOTES:**

The mainline curb and gutter may be placed monolithically with the PCC pavement if the mainline lane width is less than or equal to 12 feet. If this method of construction is used, the tie bars and the sawed joint between the curb and gutter and the PCC pavement will be eliminated.

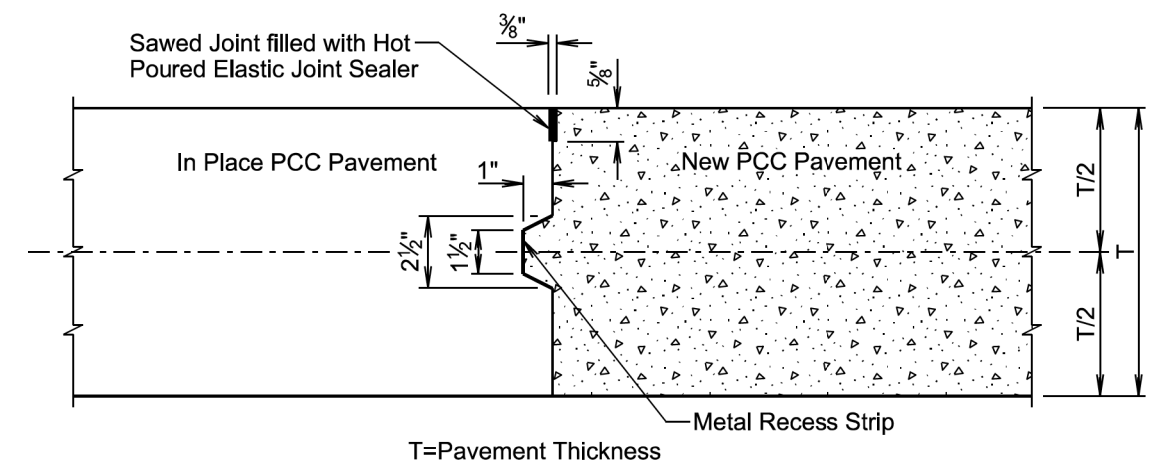
The gutter or curb and gutter will be sawed transversely at each mainline transverse contraction joint. The transverse contraction joints in the gutter or curb and gutter will be sawed and sealed same as the transverse contraction joints in the PCC pavement.

The slope of the gutter will be the slope designated for the type of gutter or curb and gutter to be constructed. The bottom slope of the gutter or curb and gutter will be constructed at the same slope as the mainline concrete pavement.

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### LONGITUDINAL CONSTRUCTION JOINT WITHOUT TIE BARS

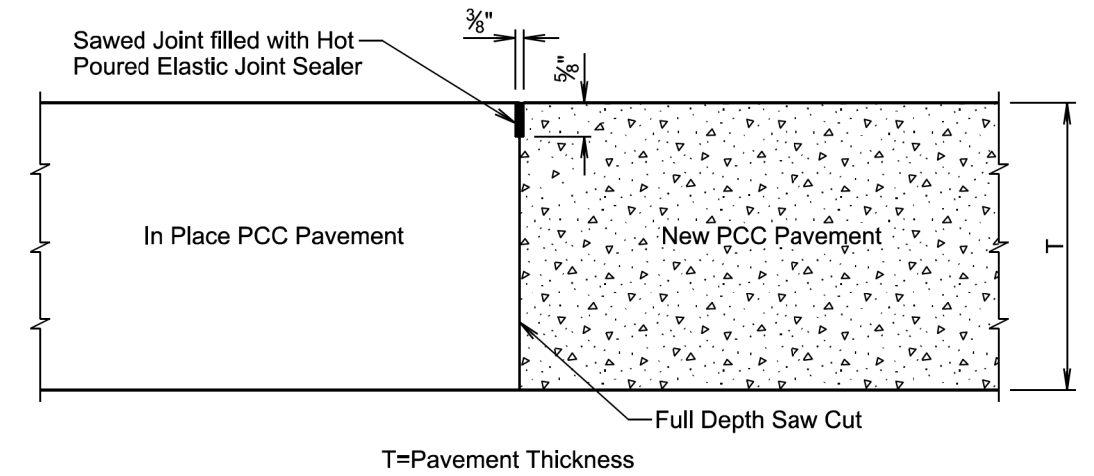


**GENERAL NOTES:**

When concrete pavement is formed and a keyway is provided, a metal recess strip will be used. When concrete pavement is slip formed, a metal recess strip is not required.

The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on the current project.

### LONGITUDINAL CONSTRUCTION JOINT WITHOUT TIE BARS



**GENERAL NOTE:**

The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on a previous project.

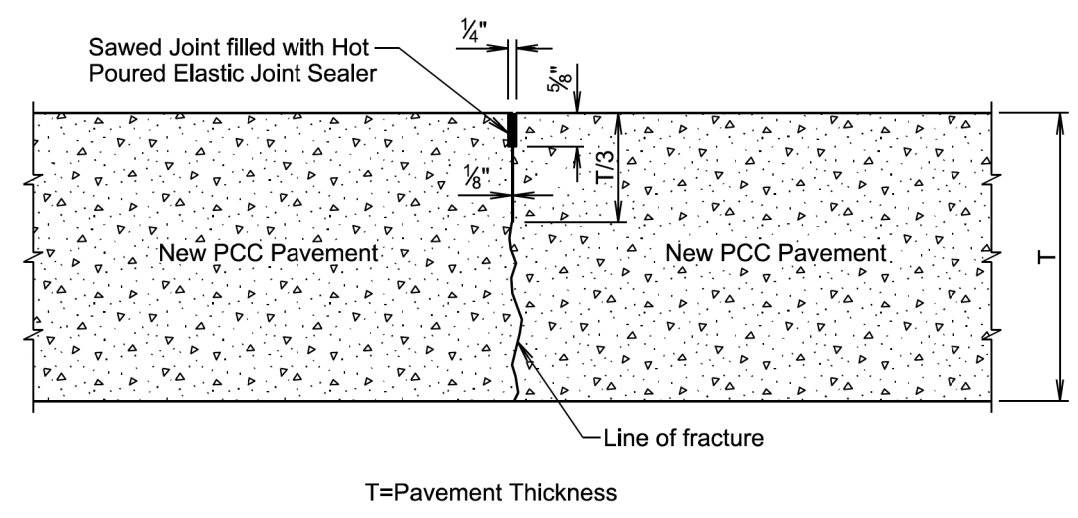
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Plotted From - TRPR16032

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### SAWED LONGITUDINAL JOINT WITHOUT TIE BARS



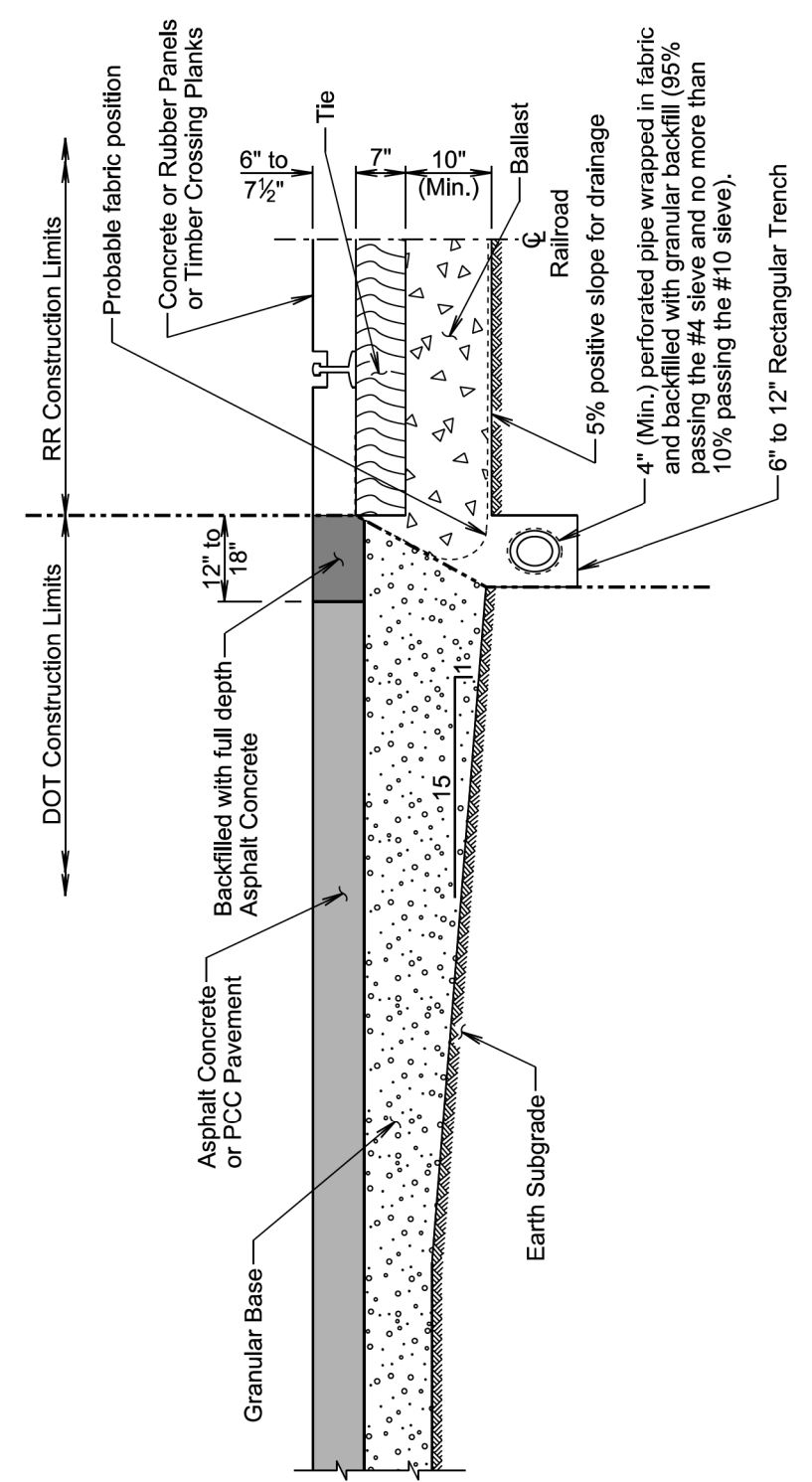
**GENERAL NOTE:**

The first saw cut to control cracking will be a minimum of 1/3 the thickness of the pavement. Additional sawing for widening the saw cut to provide the width for the installation of the hot poured elastic joint sealer will be necessary.

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<b>S D D O T</b>	<b>TYPICAL RAILROAD APPROACH</b>	PLATE NUMBER <b>380.65</b>
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