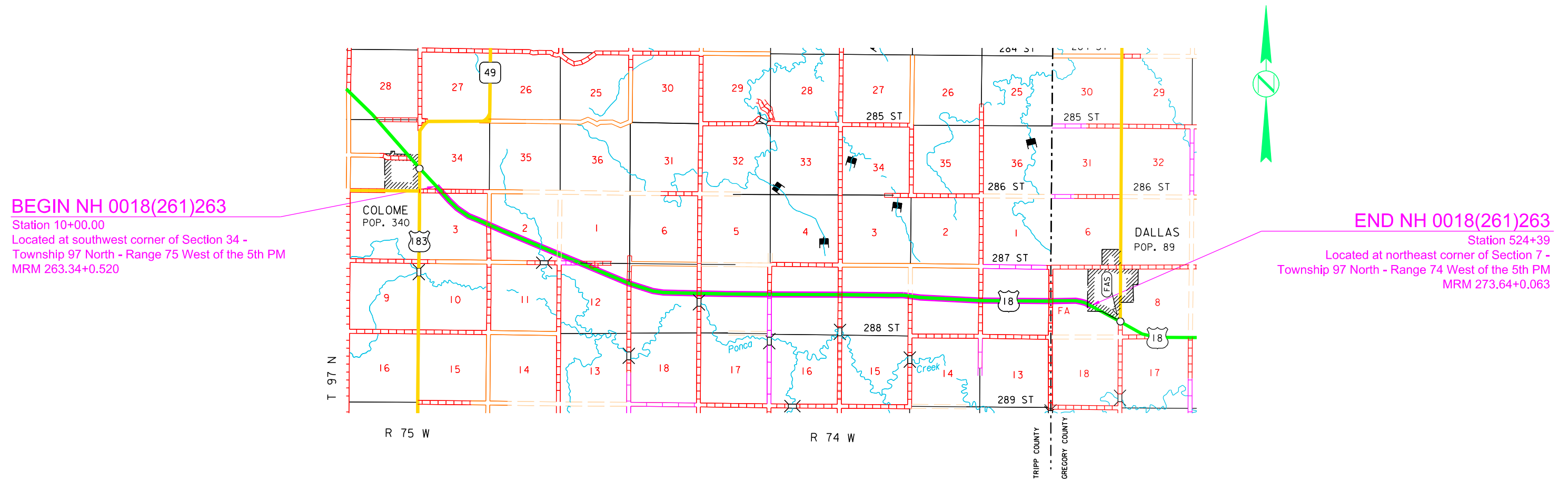


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F1	F52

F1	General Layout with Index
F2 - F9	Estimate of Quantities, Notes, Rates, and Tables
F10 - F11	Typical Surfacing Sections
F12 - F26	PCC Joint Layouts
F27	Surfacing Transition Details
F28 - F45	PCC Overlay Profiles
F46 - F52	Standard Plates



1:200
Plot Scale -

Plotted From -
TRPR18387

SECTION F – ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E1350	Restoration of Stockpile Site	Lump Sum	LS
009E3230	Grade Staking	9,970	Mile
009E3240	Graded Centerline Staking	9,742	Mile
009E3250	Miscellaneous Staking	9,742	Mile
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E3320	Checker	Lump Sum	LS
009E4300	Construction Schedule, Category III	Lump Sum	LS
110E1010	Remove Asphalt Concrete Pavement	4,000.0	SqYd
120E0100	Unclassified Excavation, Digouts	244	CuYd
120E6100	Water for Embankment	28.7	MGal
120E6200	Water for Granular Material	857.6	MGal
210E2000	Shoulder Shaping	19,500	Mile
210E3500	Heavy Roadway Shaping	0.227	Mile
260E1080	Base Course, Salvaged, State Furnished	25,954.3	Ton
260E2080	Gravel Cushion, Salvaged, State Furnished	7,307.0	Ton
260E2080	Gravel Cushion, Salvaged, State Furnished	3,499.7	Ton
* 270E0060	Salvage and Stockpile PCC Pavement	1,416.0	Ton
320E0032	PG 58H-34 Asphalt Binder	334.8	Ton
320E1070	Class HR Asphalt Concrete	10,072.6	Ton
320E3000	Compaction Sample	3	Each
330E0010	MC-70 Asphalt for Prime	92.9	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	18.5	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	14.5	Ton
330E1000	Blotting Sand for Prime	260.0	Ton
330E2000	Sand for Flush Seal	200.2	Ton
380E0050	8" Nonreinforced PCC Pavement	3,733.4	SqYd
380E1500	PCC Overlay, Furnish	35,009.6	CuYd
380E1580	8" PCC Overlay, Placement	157,543.4	SqYd
380E6000	Dowel Bar	94,706	Each
380E6110	Insert Steel Bar in PCC Pavement	56	Each
380E9010	Temporary Gravel Crossing	3	Each
600E0200	Type II Field Laboratory	1	Each

* - Denotes Non-Participating

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.

UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor will contact the Engineer to determine modifications that will be necessary to avoid utility impacts.

The Contractor will be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor will contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided elsewhere in the plans or bidding documents.

CONSTRUCTION HAUL ROAD - BOTH SIDES OF ROADWAY

Included in the Estimate of Quantities are 7,307 tons (750 tons of Gravel Cushion, Salvaged, State Furnished per mile), and 87.7 MGal (9 MGal of Water for Granular Material per mile) for haul road construction, strengthening the shoulder for traffic control, and constructability on both sides of the roadway. The Gravel Cushion, Salvaged, State Furnished material will be obtained from the stockpile site located on the north side of US18 at the DOT site in the NE 1/4 of Section 3, Township 97 North, Range 75 West of the 5th P.M, Tripp County on the East edge of Colome. There is approximately 17,526 tons of blended granular material in the Colome stockpile that has been stockpiled since the summer of 2024 from PCN 08RN.

The state furnished material was processed to meet the requirements of Section 884.2 D prior to stockpiling. No gradation testing will be required for the Gravel Cushion, Salvaged, State Furnished material.

The Gravel Cushion, Salvaged, State Furnished material is royalty free to the Contractor. The granular material used in the Construction Haul Road will be compacted to the specifications of Gravel Cushion, Salvaged.

All costs associated with construction of the haul road will be incidental to the “Gravel Cushion, Salvaged, State Furnished” and “Water for Granular Material” quantities provided.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F2	F52

Plotting Date: 10/16/2026

Revised: 10-16-2026 LLA

SHOULDER SHAPING

Prior to reshaping and recompacting the in-place granular material on the shoulder, the Construction Haul Road material will be bladed down the inslope at a slope no steeper than a 4:1. The Construction Haul Road material placed on the inslope will be shaped and compacted to the satisfaction of the Engineer.

After removing the Construction Haul Road material, and prior to paving the shoulder, the upper 4” of in-place granular material on the shoulders will be reshaped and compacted to the requirements of Base Course, Salvaged. The Contractor will ensure that no vegetation, topsoil, subgrade, or other foreign material is incorporated into the in-place granular material on the shoulders.

The topsoil will be replaced upon completion of the project according to Section D.

Included in the Estimate of Quantities are 19.5 miles of Shoulder Shaping for both shoulders.

Included in the Estimate of Quantities is 20.3 MGal of Water for Granular Material per mile for compaction of granular material associated with Shoulder Shaping.

All costs associated with the removal and shaping of the of the Construction Haul Road material on the inslope and shaping and recompacting the in-place granular material on the shoulders will be incidental to the contract unit price per mile for “Shoulder Shaping”.

TEMPORARY GRAVEL CROSSINGS

There are 3 locations to facilitate local traffic crossing the new PCCP at county roads. These select locations can be used for local traffic to cross once the concrete pavement has reached 2,000 psi. There are 195 tons of gravel cushion included to be used for this purpose. Care should be taken to protect the concrete from damage while placing and compacting the gravel needed to transition up to the new roadway elevation. The gravel top for the crossing should be 26’ wide and the transition slope will be 6:1.

File - ...\\p01\\p08G7\\Notes\\SectionF.dgn

1:200
Plot Scale -

Plotted From -
TRPR18387

REMOVE ASPHALT CONCRETE PAVEMENT

The Los Angeles Abrasion Loss value on the aggregate used for the in-place asphalt concrete was 21. This value was obtained from testing during construction of the in-place asphalt concrete.

An estimated **4,000** Square Yards (166.7 Cubic Yards) of the in-place asphalt concrete surfacing on top of the concrete pavement will be removed from the existing highway at the tie in locations and disposed of as directed by the Engineer.

The quantity of removed asphalt material is estimated from the in-place surfacing typical sections. This estimated quantity is not included in the unclassified excavation quantities.

EXISTING PCC PAVEMENT

The existing concrete is 8” Plain Jointed PCC Pavement. The existing transverse joints are skewed and are spaced at 15 feet. The aggregate in the existing Plain Jointed PCC Pavement is quartzite.

HEAVY ROADWAY SHAPING

Heavy Roadway Shaping will be performed in accordance with the Standard Specifications.

Included in the Estimate of Quantities are **0.227** miles of Heavy Roadway Shaping, **126.5** MGal of Water for Embankment per mile and **92.4** MGal of Water for Granular Material per mile for the tie-in locations at the beginning and ending of the project designated by the Engineer.

RESTORATION OF STOCKPILE SITE

The Contractor will be responsible for reshaping and smoothing out the stockpile site on the east side of Colome to the satisfaction of the Engineer prior to the project completion.

The Contractor will be responsible for reshaping and smoothing out the stockpile site near Iona to the satisfaction of the Engineer prior to the project completion.

All costs associated with this work will be incidental to the lump sum unit price bid for “Restoration of Stockpile Site”.

SALVAGE AND STOCKPILE PCC PAVEMENT

An estimated **1,416 tons** (24,000 Cubic Feet) of PCC Pavement will be salvaged from the existing highway according to the in-place surfacing typical sections and stockpiled on the north side of US18 at the DOT site in the NE 1/4 of Section 3, Township 97 North, Range 75 West of the 5th P.M, Tripp County on the East edge of Colome. The Contractor will have approval from the Engineer of the stockpile location prior to stockpiling the material. This quantity is based on a unit weight of 118 lbs. per cubic foot for the salvaged concrete pavement.

The salvaged concrete pavement will be crushed to meet the requirements of Section 884.2 D prior to stockpiling. The Contractor will ensure that no vegetation, topsoil, subgrade, or other foreign material is incorporated into the salvaged concrete material.

All in-place rebar will be separated and removed from the salvaged concrete pavement. The Contractor will dispose of the rebar at a site approved by the Engineer.

The quantity of salvaged concrete pavement may vary from the plans.

This estimated quantity is not included in the unclassified excavation quantities.

All cost to salvage, remove the reinforcing steel, crush, haul, and stockpile the concrete pavement will be incidental to the contract unit price per ton for “Salvage and Stockpile PCC Pavement”.

TABLE OF SALVAGE AND STOCKPILE PCC PAVEMENT

Location	Salvage and Stockpile PCC (Tons)
Mainline	
Sta. 10+00 to Sta. 16+00	708
Sta. 518+39 to Sta. 524+39	708
Total:	1,416

See Typical Sections and Driving Surface Transition Details located elsewhere in these plans for the limits of PCC to be salvaged and stockpiled.

TYPE II FIELD LABORATORY

The lab will be equipped with an internet connection such as DSL, cable modem, or other approved service. The internet connection will be provided with a multi-port wireless router. The internet connection will be a minimum speed of 5 Mbps unless limited by job location and approved by the DOT. Prior to installing the wireless router, the Contractor will submit the wireless router’s technical data to the Area Office to check for compatibility with the state’s computer equipment. The internet connection is intended for state personnel usage only. The Contractor’s personnel are prohibited from using the internet connection unless pre-approved by the Project Engineer. These items will be incidental to the contract unit price per each for “Type II Field Laboratory”.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F3	F52

Plotting Date: 10/16/2026

CHECKING SPREAD RATES

The Contractor will be responsible for checking the Gravel Cushion, Salvaged, State Furnished, Base Course, Salvaged, State Furnished and Class HR Asphalt Concrete spread rates and taking the weigh delivery tickets as the surfacing material arrives on the project and is placed onto the roadway.

The Contractor will compute the required spread rates for each typical surfacing section and create a spread chart prior to the start of material delivery and placement. The Engineer will review and check the Contractor’s calculations and spread charts. The station to station spread will be written on each ticket as the surfacing material is delivered to the roadway.

At the end of each day’s shift, the Contractor will verify the following:

- All tickets are present and accounted for,
- The quantity summary for each item is calculated,
- The amount of material wasted if any,
- Each day’s ticket summary is marked with the corresponding ‘computed by’,
- The ticket summary is initialed and certified that the delivered and placed quantity is correct.

All daily tickets and the summary by item will be given to the Engineer no later than the following morning.

If the checker is not properly and accurately performing the required duties, the Contractor will correct the problem or replace the checker with an individual capable of performing the duties to the satisfaction of the Engineer. Failure to do so will result in suspension of the work.

The Department will perform depth checks. The Contractor will be responsible for placement of material to the correct depth unless otherwise directed by the Engineer. If the placed material is not within a tolerance of ±1/2 inch of the plan shown depth, the Contractor will correct the problem at no additional cost to the Department. Excess material above the tolerance will not be paid for. Achieving the correct depth may require picking up and moving material or other action as required by the Engineer. All costs for providing the Contractor furnished checker and performing all related duties will be incidental to the contract lump sum price for the “Checker”. No allowances will be made to the contract lump sum price for Checker due to authorized quantity variations unless the quantities for the material being checked vary above or below the estimated quantities by more than 25 percent. Payment for the Checker will then be increased or decreased by the same proportion as the placed material quantity bears to the estimated material quantity.

File - ...\\pjt\\p08G7\\Notes\\SectionF.dgn

1:200
Plot Scale -
Plotted From - TRPR18387

UNCLASSIFIED EXCAVATION, DIGOUTS

The locations and extent of digout areas on the shoulders will be determined in the field by the Engineer. The backfilling material for the digouts will be Base Course, Salvaged, State Furnished.

Included in the Estimate of Quantities are **25** cubic yards of Unclassified Excavation, Digouts per mile for the removal of unstable material throughout the project.

Included in the Estimate of Quantities are **50** tons of Base Course, Salvaged, State Furnished per mile for backfill of Unclassified Excavation, Digouts.

The digouts will be extended through the shoulder and backfilled with granular material that will daylight to the inslope to allow water to escape the subsurface.

BASE COURSE, SALVAGED, STATE FURNISHED

Base Course, Salvaged, State Furnished estimated at **25,954** tons (for informational purposes only) will be obtained from the stockpile site located on the north side of US18 at the DOT site in the NE 1/4 of Section 3, Township 97 North, Range 75 West of the 5th P.M, Tripp County on the East edge of Colome or the stockpile site located on the west side of SD47 at the DOT site in the SE ¼ of Section 22, Township 101 North, Range 72 West of the 5th P.M., in Lyman County near Iona. There is approximately 17,526 tons of blended granular material in the Colome stockpile that has been stockpiled since the summer of 2024 from PCN 08RN. There is approximately 60,629 tons of blended granular material in the Iona stockpile that has been stockpiled since the summer of 2022 from PCN 04F4. Once the granular material has been used from the Colome stockpile site, the remainder of the Base Course, Salvaged, State Furnished will be obtained from the Iona stockpile.

The state furnished material was processed to meet the requirements of Section 884.2 D prior to stockpiling. 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.

GRAVEL CUSHION, SALVAGED, STATE FURNISHED

Gravel Cushion, Salvaged, State Furnished estimated at **3,499.7** tons (for informational purposes only) will be obtained from the stockpile site located on the north side of US18 at the DOT site in the NE 1/4 of Section 3, Township 97 North, Range 75 West of the 5th P.M, Tripp County on the East edge of Colome or the stockpile site located on the west side of SD47 at the DOT site in the SE ¼ of Section 22, Township 101 North, Range 72 West of the 5th P.M., in Lyman County near Iona. There is approximately 17,526 tons of blended granular material in the Colome stockpile that has been stockpiled since the summer of 2024 from PCN 08RN. There is approximately 60,629 tons of blended granular material in the Iona stockpile that has been stockpiled since the summer of 2022 from PCN 04F4. Once the granular material has been used from the Colome stockpile site the remainder of the Gravel Cushion, Salvaged, State Furnished will be obtained from the Iona stockpile.

The state furnished material was processed to meet the requirements of Section 884.2 D prior to stockpiling. No gradation testing will be required for the Gravel Cushion, Salvaged, State Furnished material.

The Gravel Cushion, Salvaged, State Furnished is royalty free to the Contractor.

All other requirements for Gravel Cushion, Salvaged will apply.

CLASS HR ASPHALT CONCRETE

Virgin mineral aggregate for Class HR Asphalt Concrete will conform to the requirements for Class E, Type 1. If the virgin mineral aggregate is limestone, it will consist of a minimum of 80 percent crushed limestone ledge rock.

An estimated **3,895** tons of RAP is needed for the Class HR mixture. The Class HR Asphalt Concrete will include 40 percent RAP in the mixture. RAP will be obtained from the stockpiled salvaged asphalt mix material produced from project PCN 05T4, estimated at 5,532 tons, located at the state-owned property site in the NW 1/4 of Section 3 – Township 104 North – Range 73 West of the 5th P.M., in Lyman County near Reliance. The RAP produced from PCN 05T4 was removed with micro-milling and stockpiled in 2024. The RAP was processed to meet the requirements of Section 884.2 C.1 prior to stockpiling. There is potential that some of the RAP has clumped or gummed together since the time it was processed and stockpiled. The Contractor may be required to re-process the material to meet the requirements of Section 884.2 C.1, prior to incorporating into the mixture. This determination will be made by the Engineer during construction. All costs to process the material will be incidental to “Class HR Hot Mixed Asphalt Concrete”.

When directed by the Engineer, the Contractor will saw and remove a total of three undamaged compaction cores per asphalt concrete lift from designated area(s) and repair the hole(s) to the satisfaction of the Engineer. All costs associated with the compaction cores will be incidental to the contract unit price per each for “Compaction Sample”.

All other requirements for Class HR Asphalt Concrete will apply.

BLOTTING SAND FOR PRIME

Included in the Estimate of Quantities are **10** tons of Blotting Sand for Prime to be used where necessary for maintenance of traffic as directed by the Engineer. (Rate = 10 pounds per square yard)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F4	F52

Plotting Date: 10/16/2026

COMPACTION

CLASS HR ASPHALT CONCRETE

Location	With Specified Density Compaction (Ton)	Without Specified Density Compaction (Ton)
Mainline – Both Shoulders		
Sta. 10+00.00 to Sta. 16+00	111.9	---
Mainline – Both Shoulders		
Sta. 16+00 to Sta. 518+39	8,868.0	---
Mainline – Both Shoulders		
Sta. 518+39 to Sta. 524+39	151.9	---
Intersecting Roads	---	940.8
Totals:	9,131.8	940.8

FLUSH SEAL

Application of flush seal will be completed within 10 working days following completion of the asphalt concrete surfacing.

Care will be taken by the Contractor to ensure that the application of flush seal does not drift on to the adjacent concrete mainline pavement. If pavement markings are installed and the visibility is affected by the flush seal, as determined by the Engineer, they will be replaced by the Contractor.

SAND FOR FLUSH SEAL

The sand application will be placed 4' wide on the shoulders.

TABLE OF SUPERELEVATION

Station to	Station	Remarks
10+00.00	14+77.18	Normal Crown Section
14+77.18	16+17.18	Superelevation Runoff
16+17.18	40+40.22	0.0300 Superelevation Rate
		01° 00'00" Curve Lt.
40+40.22	41+80.22	Superelevation Runoff
41+80.22	171+21.31	Normal Crown Section
171+21.31	172+61.31	Superelevation Runoff
172+61.31	194+04.07	0.0300 Superelevation Rate
		01° 00'00" Curve Lt.
194+04.07	195+44.07	Superelevation Runoff
195+44.07	491+80.30	Normal Crown Section
491+80.30	493+20.30	Superelevation Runoff
493+20.30	522+72.63	0.0300 Superelevation Rate
		00° 59'44" Curve Rt.
522+72.63	524+12.63	Superelevation Runoff
524+12.63	524+39.00	Normal Crown Section

1:200
Plot Scale -

Plotted From -
TRPR18387

8” PCC OVERLAY and 8” NONREINFORCED PCC PAVEMENT

The fine aggregate will be screened over a 1-inch square opening screen just prior to introduction into the concrete paving mix. The Contractor will screen all of the aggregate to prevent the incorporation of foreign materials (i.e. mud balls) into the concrete mix.

The concrete mix will conform to the Special Provision for Contractor Furnished Mix Design for PCC Pavement. The 8” PCC Overlay will conform to Section 380 of the Specifications and the Special Provision for PCCP Overlay (Thick).

A minimum of **04** pavement blockouts may be required at various locations on this project to facilitate traffic during the paving activity.

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. Trimming will be performed as required by Section 380.3 C of the Specifications.

A construction joint will be sawed whenever new concrete pavement is placed adjacent to existing concrete pavement. The transverse construction joints will be handled in accordance with Standard Plate 380.15.

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.

All driving surfaces of the mainline paving will be longitudinally tined from 6” each side of centerline pavement markings to 6” inside the outside pavement markings. All other areas will be textured as directed by the Engineer.

Rumble Strips will be placed 15 inches wide 3 inches from the outside edge of the pavement. Rumble strips will not be placed on the side where curb and gutter is located. Payment for forming rumble strips including labor, materials and incidentals will be incidental to the contract unit price per square yard for “8” PCC Overlay Pavement”. Rumble Strips for the shoulders shall be constructed as per Standard Plate 380.53.

The PCC/AC shoulder joint will not be sawed and sealed during this project but will be sealed on a future project.

The following locations will be tested for IRI pavement smoothness in accordance with Section 380.3 O.4 of the Specifications.

Sta. 10+00 to Sta. 524+39

FASTENING OF BASKETS TO THE EXISTING PAVEMENT

The in-place surfacing is composed of 1.5” of asphalt concrete on top of 8” of PCC Pavement. The baskets used for the placement of the reinforcing steel must be anchored down with anchor straps to the existing surfacing to prevent movement of the baskets during the PCC paving operation. Additional anchor straps may be needed beyond what is shown in the standard plate. All cost associated for furnishing and installing the additional anchor straps will be incidental to the contract unit price per SqYd for “8” PCC Overlay, Placement”.

BLOCKOUT AREAS

A minimum of **04** County Road blockouts may be required at various locations on this project to facilitate traffic during the paving activity. Additional locations may also be added by the Engineer.

County Road Blockouts			
Station	L or R	Description	Blockouts
218+65	L&R	327th Avenue	1
324+15	L&R	329th Avenue	1
429+80	L&R	331st Avenue	1
TBD	---	Location TBD	1
County Road Blockout Total:			4

TABLE OF PCC PAVEMENT

Mainline Location	8” Nonreinforced PCC Pavement SqYd	PCC Overlay, Furnish CuYd	8” PCC Overlay, Placement SqYd
Nonreinforced PCC Pavement			
Sta. 10+00 to Sta. 16+00	1,866.7	---	---
Sta. 518+39 to Sta. 524+39	1,866.7	---	---
PCC Overlay Pavement			
Sta. 16+00 to Sta. 518+39	---	35,009.6	157,543.4
Totals	3,733.4	35,009.6	157,543.4

TRANSVERSE CONTRACTION JOINTS

Unless specified otherwise in the PCC Pavement Joint Layout Sheets or elsewhere in the plans, the typical joint spacing for the 8” PCC Overlay Pavement will be 13’.

See Standard Plate 380.04 for placement of Dowel Bars.

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 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.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F5	F52

Plotting Date: 10/16/2026

Revised: 09-14-2026 LLA

TABLE OF DOWEL BARS

Location	1 1/4" Bars
Mainline	
Bars in Mainline Nonreinforced PCC- 12 bar	2,208
Bars in Mainline PCC Overlay- 12 bar	92,498
Total Dowel Bars:	94,706

STEEL BAR INSTALLATION

The Contractor shall install 1 ¼ inch x 18 inch epoxy coated plain round dowel bar.

The steel bars shall be cut to the specified length by sawing and shall be free from burring or other deformations. Shearing will not be permitted.

Epoxy coated plain round steel bars shall be installed on 12 inch centers in the transverse joint. The first steel bar shall be placed a minimum of 3 inches and a maximum of 6 inches from the outside edge of the slab.

Cost for the epoxy resin adhesive, steel bars, drilling of holes, applying the adhesive, installing the steel bars into the drilled holes and all other items incidental to the installation of the steel bars shall be incidental to the contract unit price per each for Insert Steel Bar in PCC Pavement.

TABLE OF STEEL BAR INSTALLATION

LOCATION*	1 ¼" x 18" Plain Round Dowel Bars
	each
US Highway 18	
Sta. 10+00	28
Sta. 524+39	28
TOTAL	56

File - ...pjt\tp08G7\Notes\SectionF.dgn

1:200
Plot Scale -
Plotted From -
TRPR18387

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 10-2-2025):

Source	Location	Expansion Value
Bachman	Winner, SD	0.335*
Bitterman	Delmont, SD	0.316*
Concrete Materials	Corson, SD	0.146
Concrete Materials - Vellek Pit	Yankton, SD	0.442**
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	0.222
L.G. Everist – Nelson Pit	NE Sioux Falls, SD	0.156
L.G. Everist	Hawarden, IA	0.211
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	0.154
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	0.250
Pete Lien & Sons	Creston, SD	0.158
Pete Lien & Sons	Oral, SD	0.157
Pete Lien & Sons	Wasta, SD	0.255*
Simon Materials - Beltline Pit	Scottsbluff, NE	0.277*
Thorpe Pit	Britton, SD	0.098
Valley S&G – Van Beek Pit	Rock Valley, IA	0.228
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.

CURING OF CONCRETE

Portland Cement Concrete Pavement will be cured with poly-alpha methylstyrene (AMS) membrane curing compound. All costs for Curing of Concrete will be incidental to the contract unit price per various Portland Cement Concrete bid items.

PCC OVERLAY CENTERLINE PROFILE

The PCC Overlay centerline profile will be constructed with a minimum of 8 inches of PCC at all locations.

The PCC Overlay, Furnished, quantity shown in these plans will be used for bidding purposes only.

The Contractor will create a PCC Overlay centerline profile in accordance with the Special Provision for Contractor Staking.

INTERSECTING STREETS & ROADS	
28’ Intersecting Roads	40’ Intersecting Roads
(18 each)	(4 each)
Sta. 50+83 Lt	Sta. 23+30 Lt
Sta. 51+39 Rt	Sta. 134+81 Lt
Sta. 107+66 Lt	Sta. 324+14 Lt & Rt
Sta. 108+40 Rt	
Sta. 126+71 Rt	
Sta. 164+70 Lt	
Sta. 165+29 Rt	
Sta. 218+63 Lt & Rt	
Sta. 271+31 Lt & Rt	
Sta. 376+84 Rt	
Sta. 429+80 Lt & Rt	
Sta. 482+50 Lt & Rt	
Sta. 507+92 Lt	
Sta. 521+78 Lt	

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F6	F52

Plotting Date: 10/16/2026

FARM ENTRANCES
24’ Farm Entrances
(37 each)
Sta. 22+30 Rt
Sta. 30+17 Lt
Sta. 63+15 Lt & Rt
Sta. 85+84 Lt & Rt
Sta. 111+88 Lt
Sta. 130+92 Lt
Sta. 135+30 Rt
Sta. 143+86 Lt & Rt
Sta. 183+10 Lt & Rt
Sta. 200+52 Lt
Sta. 202+56 Rt
Sta. 235+17 Lt
Sta. 244+50 Lt & Rt
Sta. 257+70 Lt & Rt
Sta. 287+06 Lt & Rt
Sta. 302+61 Lt
Sta. 312+56 Rt
Sta. 349+15 Lt & Rt
Sta. 362+71 Lt
Sta. 364+51 Rt
Sta. 376+84 Lt
Sta. 403+23 Rt
Sta. 449+68 Lt
Sta. 451+50 Rt
Sta. 459+57 Rt
Sta. 407+15 Lt
Sta. 500+43 Lt
Sta.501+49 Rt
Sta. 515+89 Rt

1:200
Plot Scale -

Plotted From -
TRPR18387

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F7	F52

Plotting Date: 10/16/2026

RATES OF MATERIALS

(Rates quantities are included in the Table of Materials Quantities)

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

US 18 - Mainline

Sta. 16+00.00 to Sta. 518+39.00

Each Shoulder
Base Course, Salvaged, State Furnished 1,269 tons

Water for Granular Material at the rate of 15.2 MGal

MC-70 Asphalt for Prime at the Rate of 4.5 ton applied 6.5 feet wide
(Rate = 0.30 gallon per square yard).

Blotting Sand for Prime at the rate of 12 tons/mile applied 4 feet wide
(Rate = 10 lbs. per square yard).

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of 0.9 tons applied 6 feet wide (Rate = 0.06 gallon per square yard).

CLASS HR ASPHALT CONCRETE

Crushed Aggregate	270 tons
Salvaged Asphalt Concrete	180 tons
PG 58H-34 Asphalt Binder	<u>15 tons</u>
Total	465 tons

The exact proportions of these materials will be determined on construction.

FLUSH SEAL

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal at the rate of 0.7 tons/mile applied 5.5 feet wide (Rate = 0.05 gallon per square yard).

Sand for Flush Seal at the rate of 9.4 tons/mile applied 4 feet wide
(Rate = 8 lbs. per square yard).

The exact proportions of these materials will be determined on construction.

File - ...hp\trp08G7\Notes\SectionF.dgn

1:200
Plot Scale -

Plotted From -
TRPR18387

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F8	F52

Plotting Date: 10/16/2026
Revised: 10-16-2026 LLA

TABLE OF CONSTRUCTION STAKING
(See Special Provision for Contractor Staking)

Roadway and Description	Begin Station	End Station	Number of Lanes	Grade Staking					Miscellaneous Staking Quantity (Mile)	Graded Centerline Staking Quantity (Mile)
				Length (Ft)	Length (Mile)	Lane Factor	*Sets of Stakes	**Grade Staking Quantity (Mile)		
US Highway 18 Mainline	10+00.00	16+00.00	2	600.00	0.114	1	2	0.2280	0.114	0.114
US Highway 18 Mainline	16+00.00	518+39.00	2	50,239.00	9.514	1	1	9.5140	9.514	9.514
US Highway 18 Mainline	518+39.00	524+39.00	2	600.00	0.114	1	2	0.2280	0.114	0.114
							Totals:	9.970	9.742	9.742

- * 2 = Blue Top and Paving Hub Stakes (PCC Pavement)
- * 1 = Paving Hub Stakes (PCC Overlay Pavement)
- ** Grade Staking Quantity = (Length) x (Lane Factor) x (Sets of Stakes)

1:200
Plot Scale -
Plotted From -
TRPR18387

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F9	F52

Plotting Date: 10/16/2026
Revised: 10-15-2026 LLA

TABLE OF MATERIALS QUANTITIES

LOCATION Station to Station	WATER FOR GRANULAR MATERIAL (MGal)	WATER FOR EMBANKMENT (MGal)	BASE COURSE, SALVAGED, STATE FURNISHED (Ton)	GRAVEL CUSHION, SALVAGED, STATE FURNISHED (Ton)	GRAVEL CUSHION, SALVAGED, STATE FURNISHED (Ton)	CLASS HR ASPHALT CONCRETE (Ton)	PG 58H-34 ASPHALT BINDER (Ton)	ASPHALT FOR PRIME (Ton)	BLOTTING SAND FOR PRIME (Ton)	ASPHALT FOR TACK (Ton)	ASPHALT FOR FLUSH SEAL (Ton)	SAND FOR FLUSH SEAL (Ton)
Mainline - Nonreinforced PCC, Both Shoulders - Transitions												
10+00.00 to 11+40.00	0.6		50.3			30.6	1.0	0.2	0.6			0.5
520+54.00 to 524+39.00	2.1		173.1			113.9	3.8	0.7	1.7	0.1	0.1	1.4
Mainline - Nonreinforced PCC, Both Shoulders												
11+40.00 to 16+00.00	1.7		142.2			81.3	2.7	0.8	2.0	0.2	0.1	1.6
518+39.00 to 520+54.00	0.8		66.5			38.0	1.3	0.4	0.9	0.1	0.1	0.8
Mainline - Nonreinforced PCC												
11+40.00 to 16+00.00	7.6			637.2								
518+39.00 to 520+54.00	3.6			297.8								
Mainline - 8" PCC Overlay, Both Shoulders												
16+00.00 to 518+39.00	290.2		24,149.1			8,868.0	295.0	85.6	218.8	17.1	13.3	178.9
28' Intersecting Streets & Roads (18 each)												
	7.2		630.0			670.5	22.1	3.6	18.0	0.7	0.7	12.1
40' Intersecting Streets & Roads (4 each)												
	3.2		256.0			270.3	8.9	1.6	8.0	0.3	0.2	4.9
24' Farm Entrances (37 each)												
	18.5			1,591.0								
Mainline - Nonreinforced PCC - Transitions												
10+00.00 to 11+40.00	2.4			199.8								
520+54.00 to 524+39.00	6.9			578.9								
Maintenance of Traffic												
									10.0			
Heavy Roadway Shaping - 0.227 miles												
	21.0	28.7										
Shoulder Shaping - 19.5 miles												
	395.9											
Unclassified Excavation, Digouts - 9.742 miles												
	5.8		487.1									
Construction Haul Road – Materials for Both Sides of Roadway												
	87.7				7,307.0							
Temporary Gravel Crossings (3)												
	2.4			195.0								
Rates Totals:	857.6	28.7	25,954.3	3,499.7	7,307.0	10,072.6	334.8	92.9	260.0	18.5	14.5	200.2

File - ...pjt\tp08G7\Notes\SectionF.dgn

IN PLACE TYPICAL SECTIONS

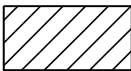
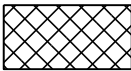
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F10	F52

Plotting Date: 10/16/2026

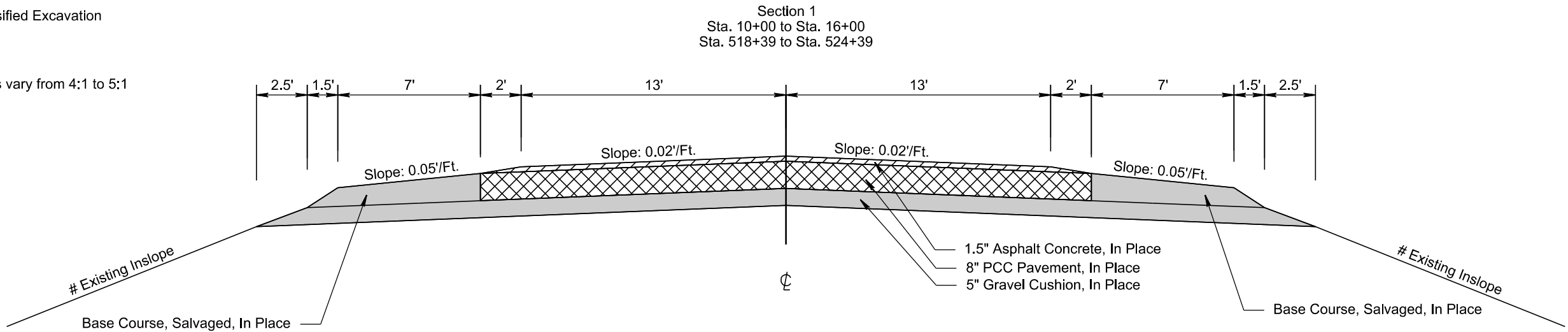
PLOT SCALE - 1+6.00001

PLOT NAME - 10

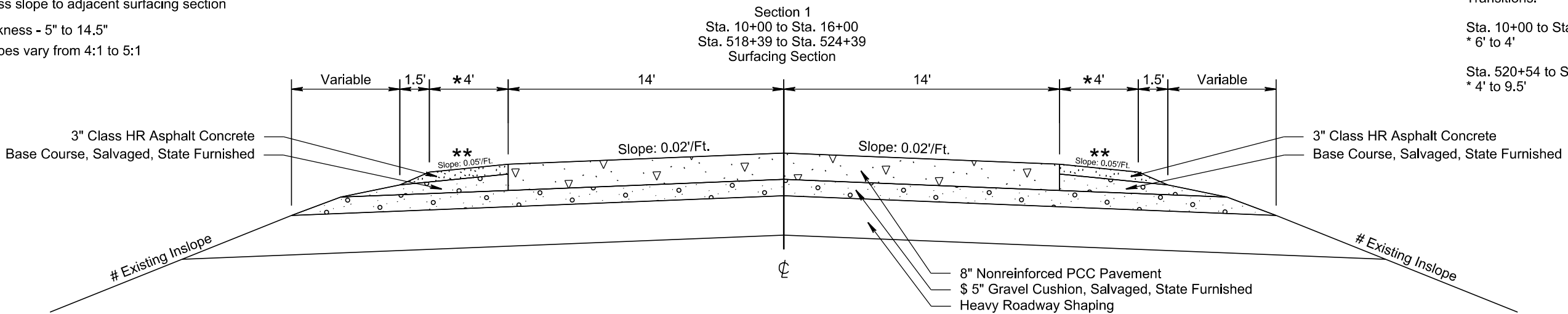
FILE - ... \0807_TYPICAL SECTIONS.DGN

-  Remove Asphalt Concrete Pavement
-  Remove Concrete Pavement
-  Unclassified Excavation

Existing Inslopes vary from 4:1 to 5:1



- * Transition shoulder width to adjacent surfacing section
- ** Transition cross slope to adjacent surfacing section
- \$ Variable Thickness - 5" to 14.5"
- # Existing Inslopes vary from 4:1 to 5:1



Transitions:

Sta. 10+00 to Sta. 11+40
* 6' to 4'

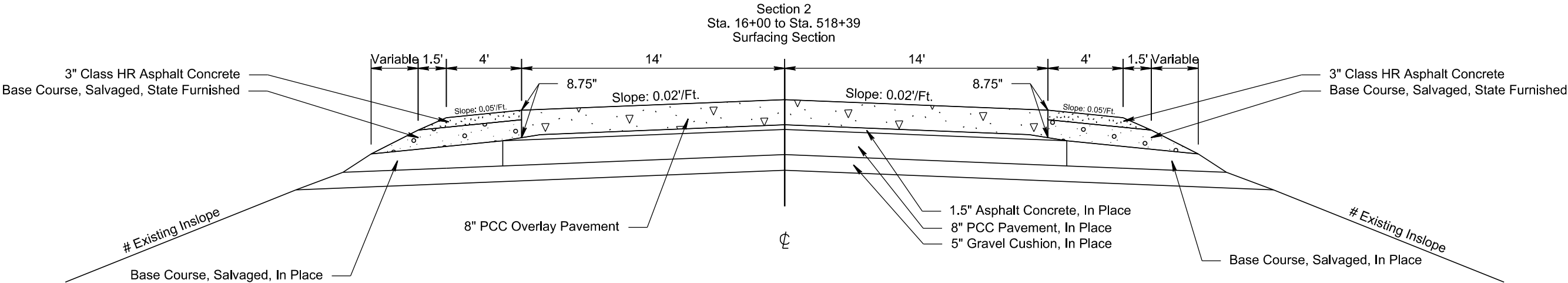
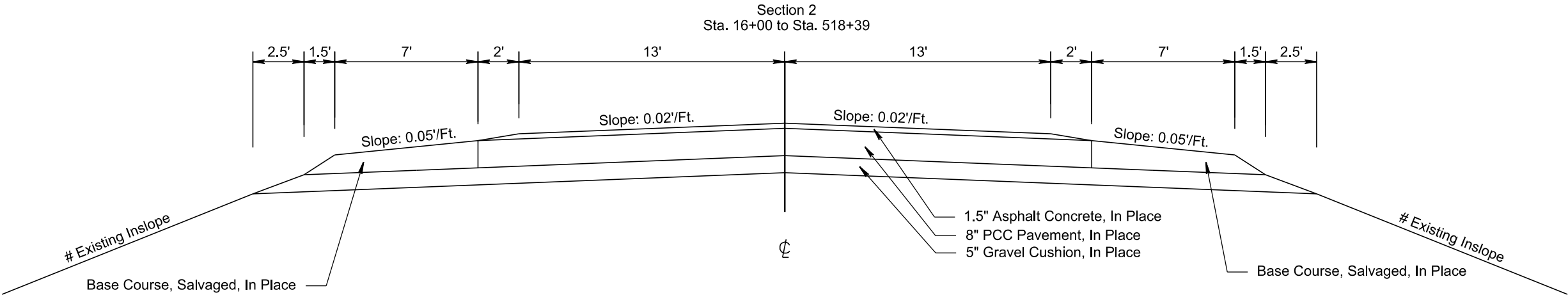
Sta. 520+54 to Sta. 524+39
* 4' to 9.5'

PLOTTED FROM - TRPR18387

TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F11	F52

Plotting Date: 10/16/2026



PLOT SCALE - 1+6.00001

PLOTTED FROM - TRPR18387

PLOT NAME - 11

FILE - ... \0807_TYPICAL SECTIONS.DGN

Plotted From - TRPR18387 Plot Scale - 1:40 File - ...\\trp08g7108g7_PCC Layouts.dgn

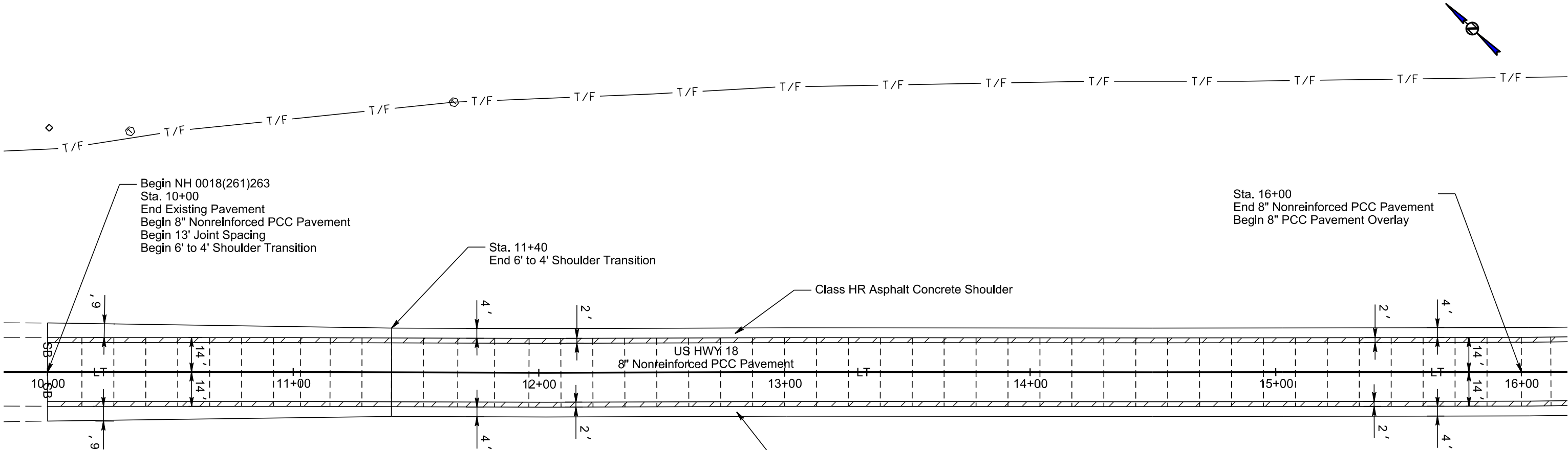
PCC PAVEMENT JOINT LAYOUT

Scale 1 Inch = 40 Feet
Sheet 1 of 15 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F12	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS



LEGEND:

- Longitudinal Joint With Tie Bars (Construction or Sawed) ——— LT ——— LT ———
- Transverse Contraction Joint — — — — —
- Steel Bar Installation in Longitudinal or Transverse Joint ——— SB ——— SB ———

 Transverse contraction joints within these areas will not have dowel bar assemblies. All other transverse contraction joints will have dowel bar assemblies.

PCC PAVEMENT JOINT LAYOUT

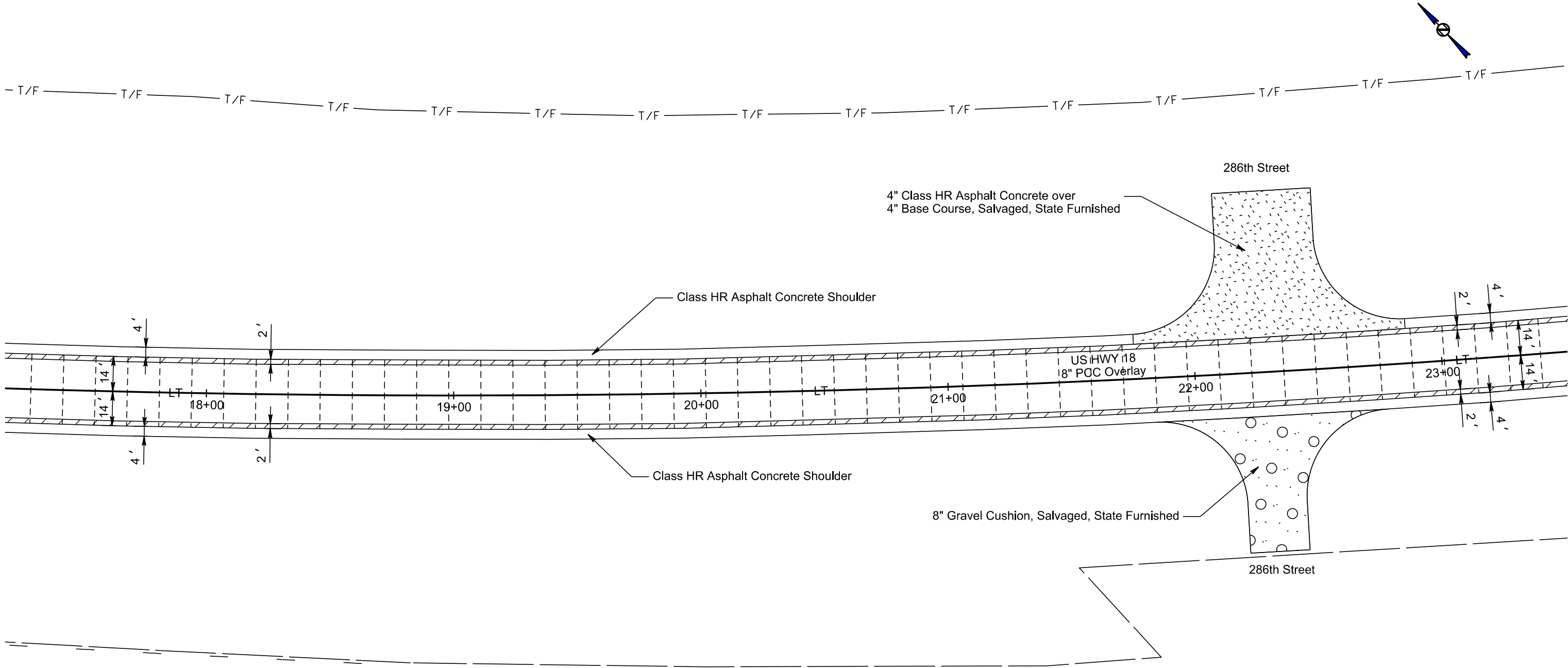
Scale 1 Inch = 40 Feet
Sheet 2 of 15 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F13	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS

Plot Scale - 1:40



Plotted From - TRPR18387

Plotted From -

File - ...\\trp08g708g7_PCC Layouts.dgn

PCC PAVEMENT JOINT LAYOUT

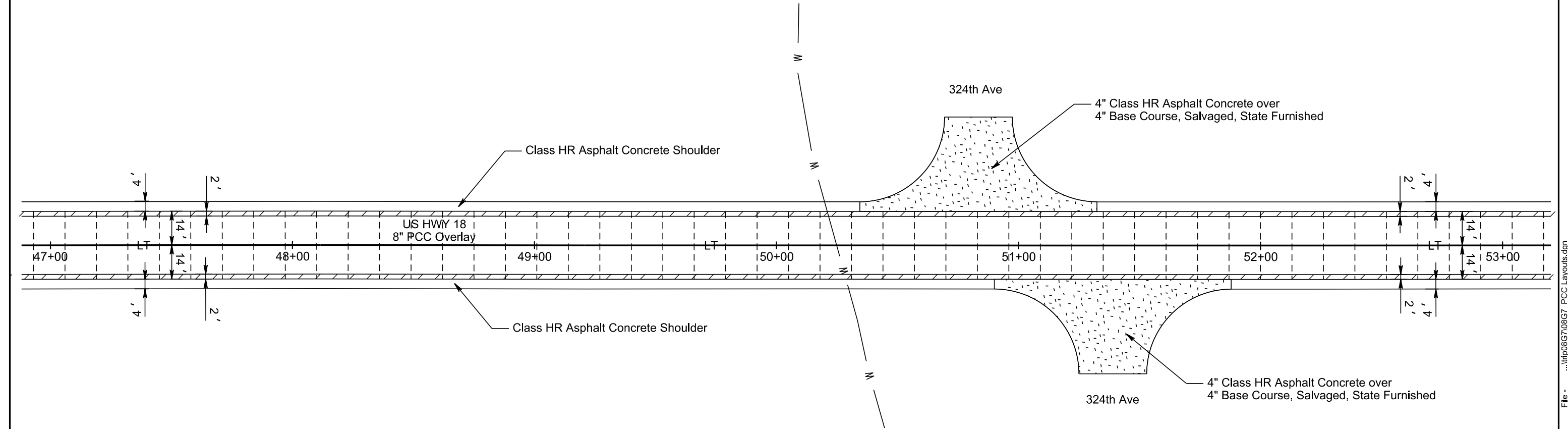
Scale 1 Inch = 40 Feet
Sheet 3 of 15 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F14	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS

Plot Scale - 1:40



Plotted From - TRPR18387

File - ...\\trp08g708g7_PCC Layouts.dgn

PCC PAVEMENT JOINT LAYOUT

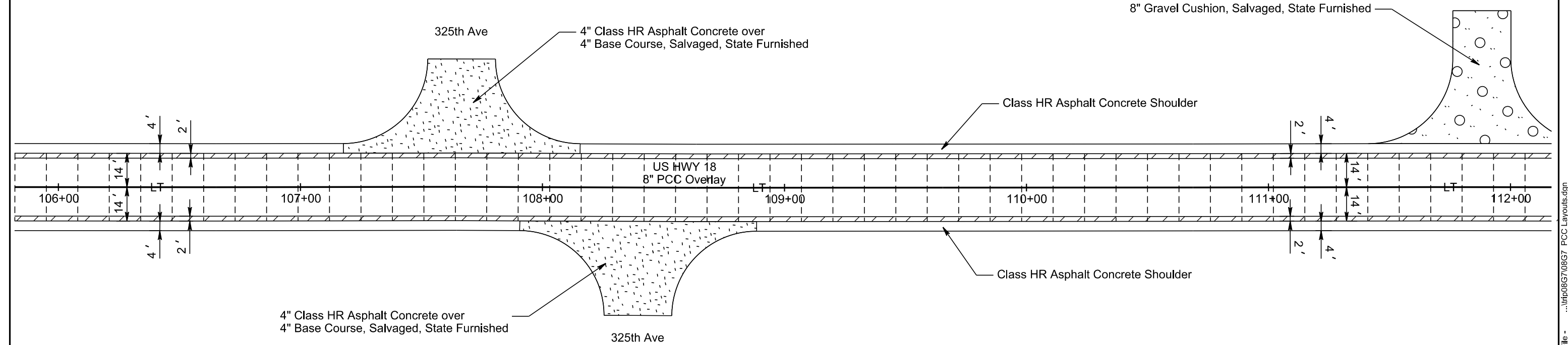
Scale 1 Inch = 40 Feet
Sheet 4 of 15 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F15	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS

Plot Scale - 1:40



Plotted From - TRPR18387

File - ...\\trp08g7108g7_PCC Layouts.dgn

PCC PAVEMENT JOINT LAYOUT

Scale 1 Inch = 40 Feet
Sheet 5 of 15 Sheets

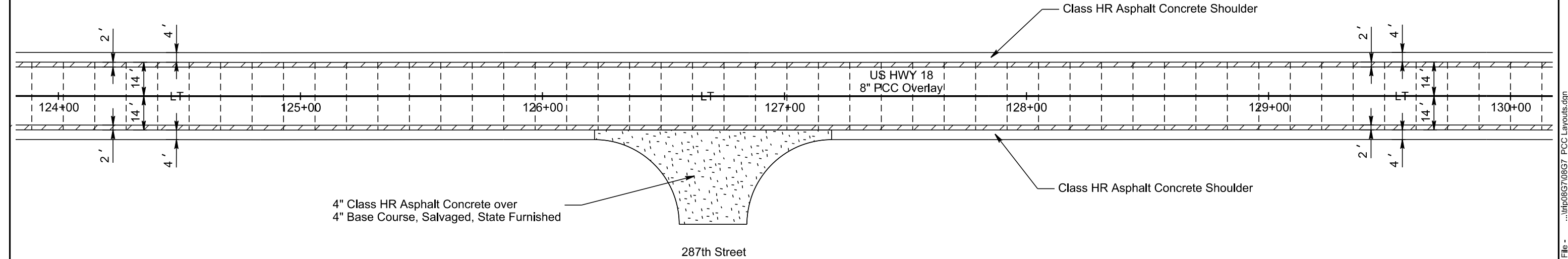
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F16	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS



Plot Scale - 1:40

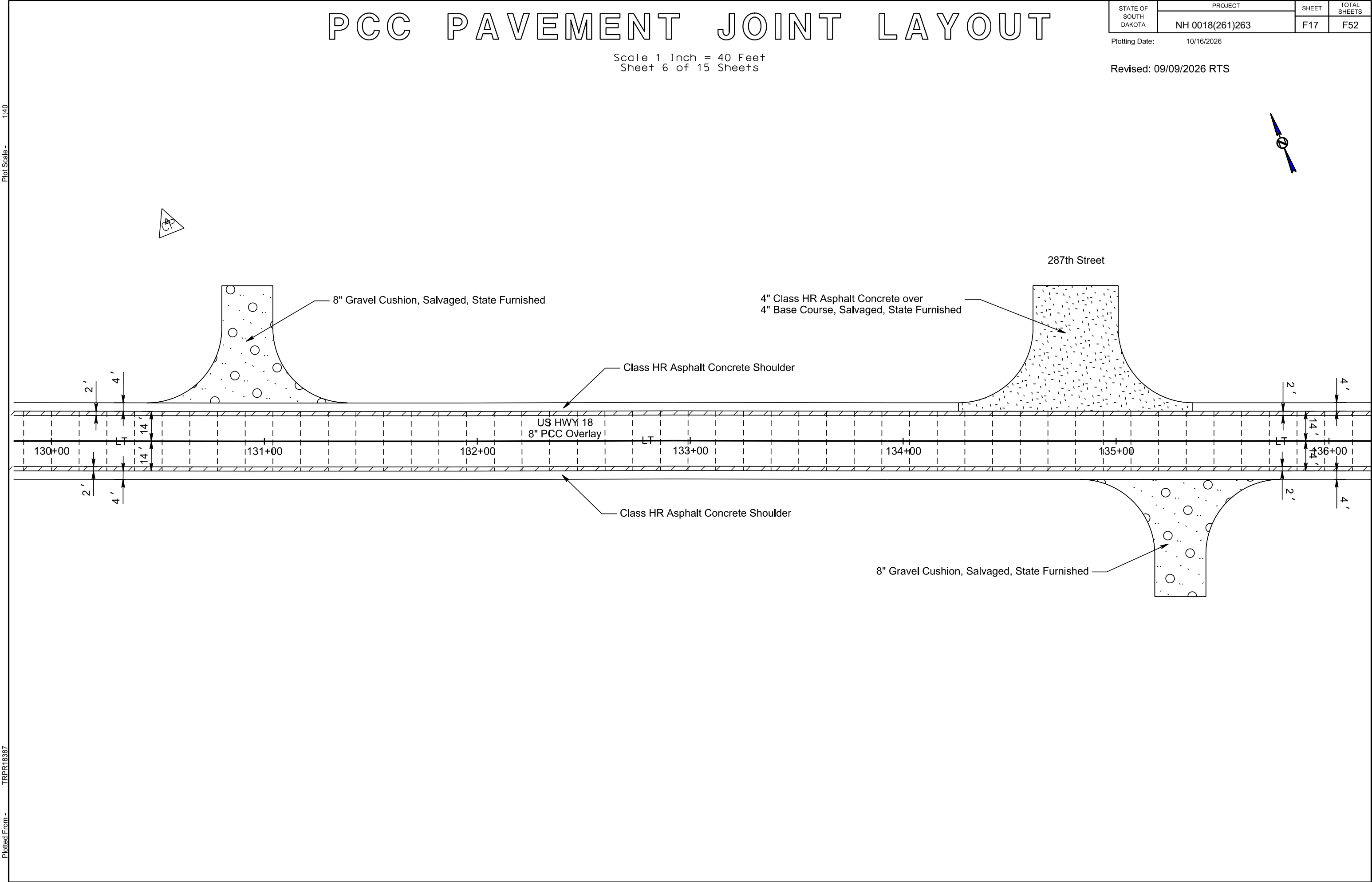


Plotted From - TRPR18387

File - ...\\trp08g708g7_PCC Layouts.dgn

Plot Scale - 1:40

Plotted From - TRPR18387



PCC PAVEMENT JOINT LAYOUT

Scale 1 Inch = 40 Feet
Sheet 7 of 15 Sheets

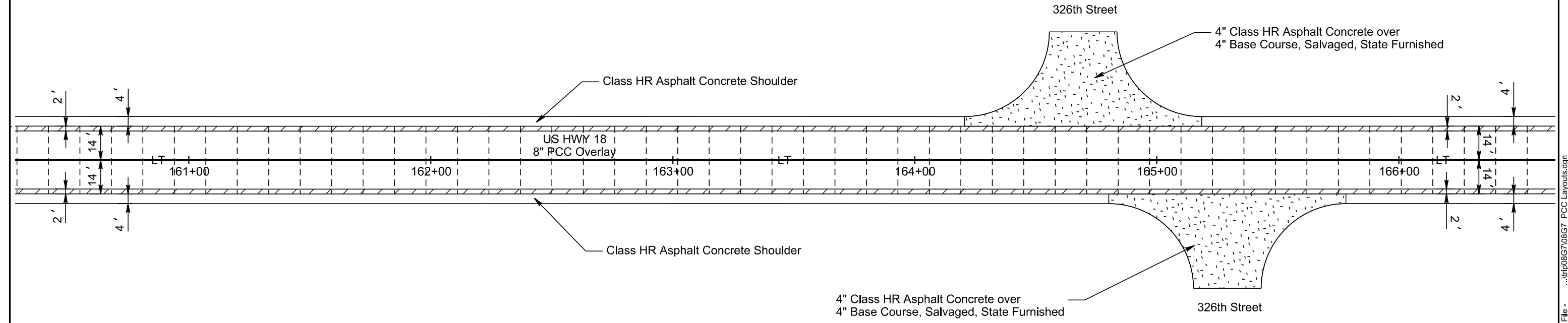
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F18	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS



Plot Scale - 1:40



Plotted From - TRPR18387

File - ...\\trp08g708g7_PCC Layouts.dgn

Plot Scale - 1:40

Plotted From - TRPR18387

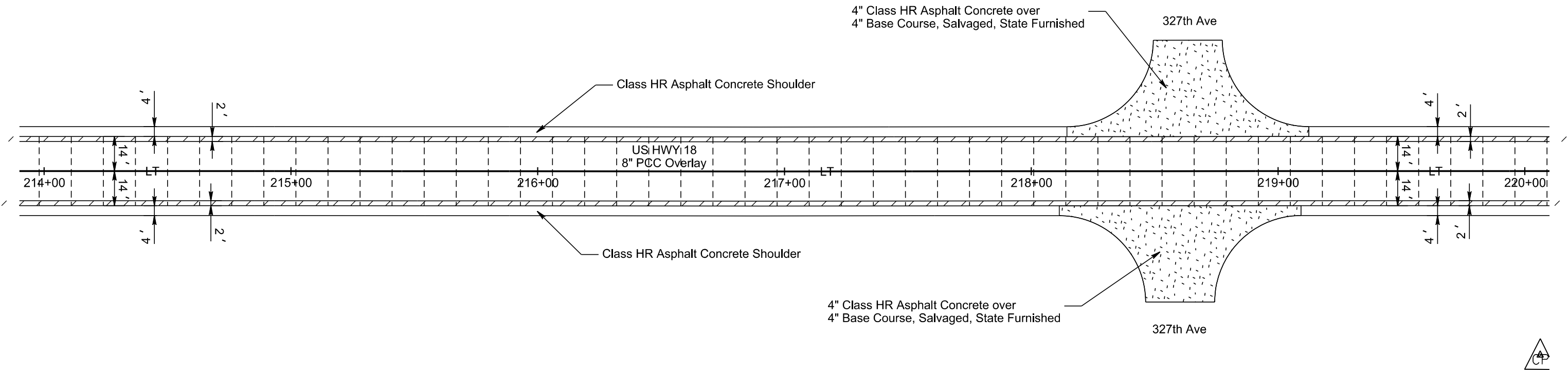
PCC PAVEMENT JOINT LAYOUT

Scale 1 Inch = 40 Feet
Sheet 8 of 15 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F19	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS



File - ...\\trp08g708g7_PCC Layouts.dgn

PCC PAVEMENT JOINT LAYOUT

Scale 1 Inch = 40 Feet
Sheet 9 of 15 Sheets

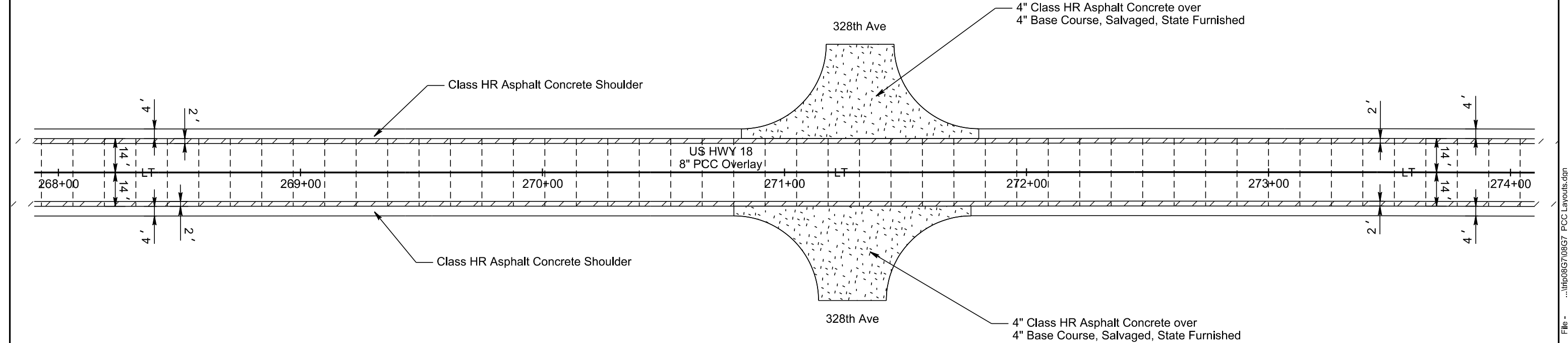
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F20	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS

Plotted From -
1:40

Plotted From -
TRPR18387



PCC PAVEMENT JOINT LAYOUT

Scale 1 Inch = 40 Feet
Sheet 10 of 15 Sheets

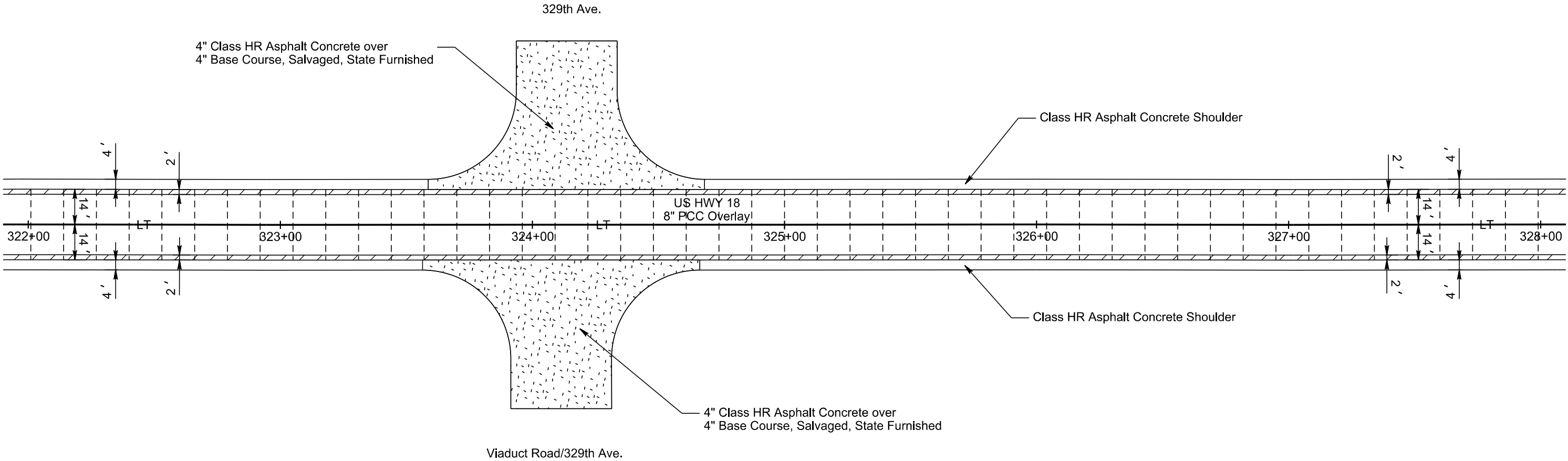
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F21	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS

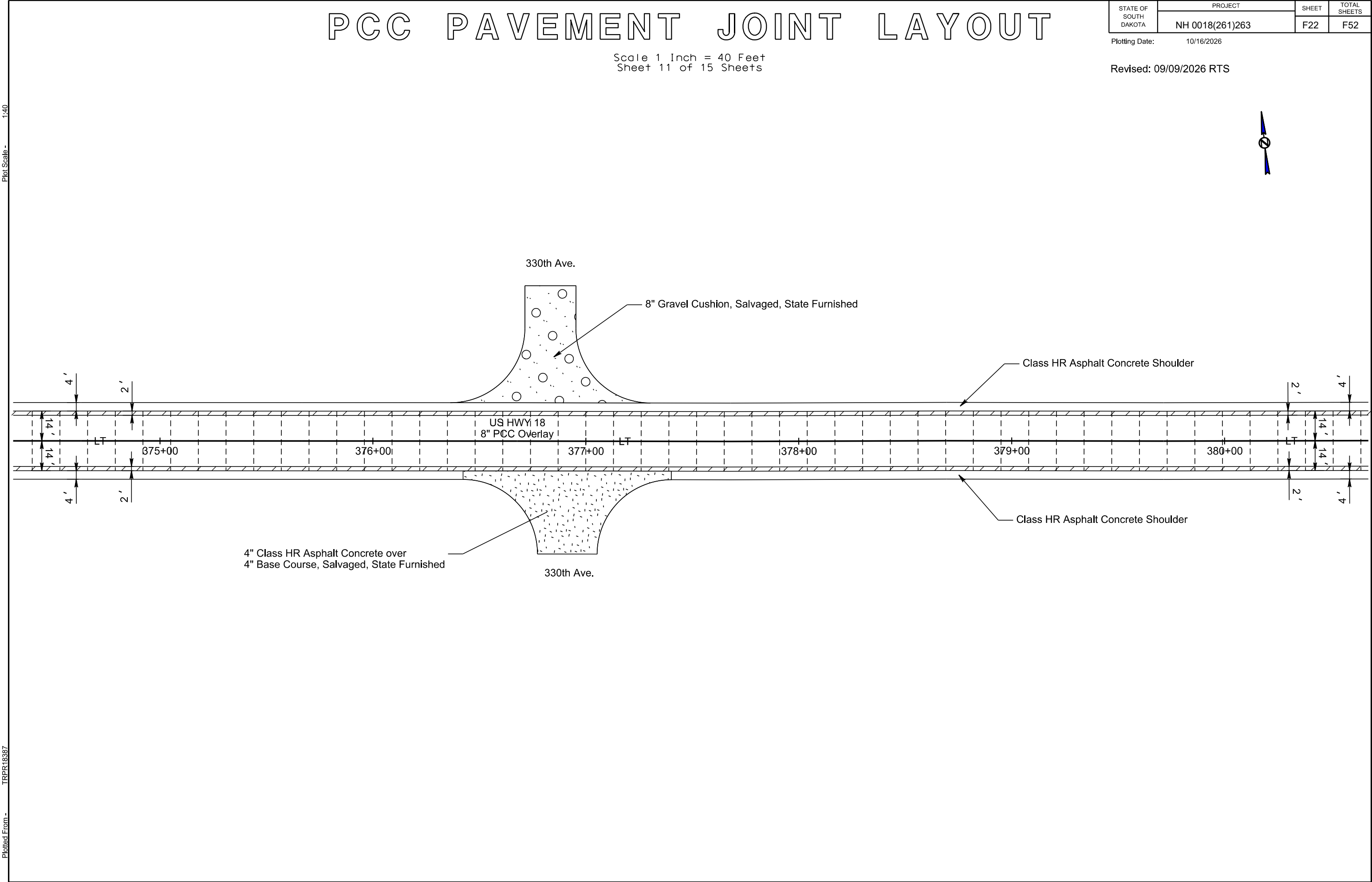
Plot Scale - 1:40

Plotted From - TRPR18387



Plotted From -
TRPR18387

Plot Scale -
1:40



PCC PAVEMENT JOINT LAYOUT

Scale 1 Inch = 40 Feet
Sheet 11 of 15 Sheets

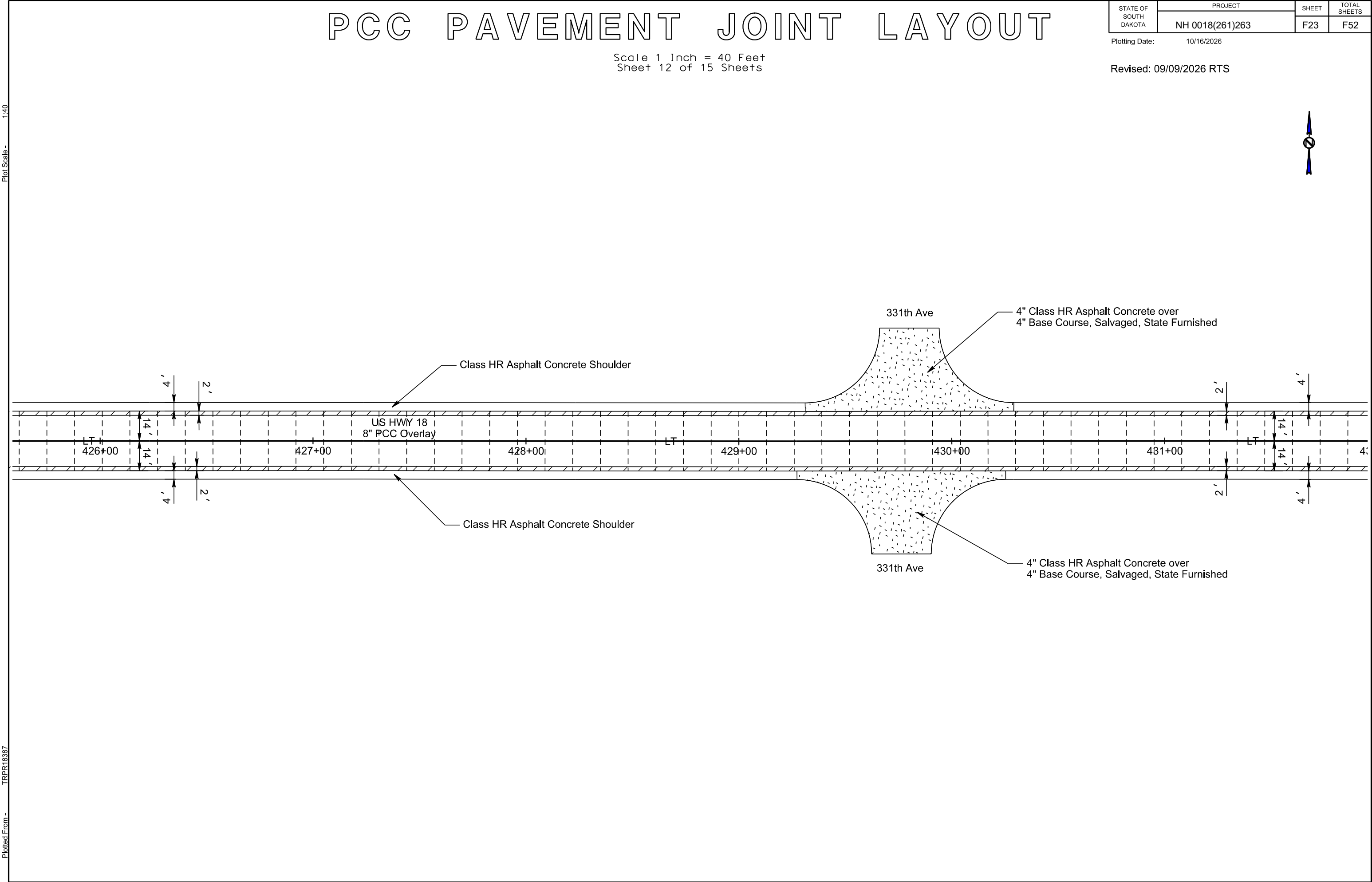
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F22	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS

Plotted From -
TRPR18387

Plot Scale -
1:40



PCC PAVEMENT JOINT LAYOUT

Scale 1 Inch = 40 Feet
Sheet 13 of 15 Sheets

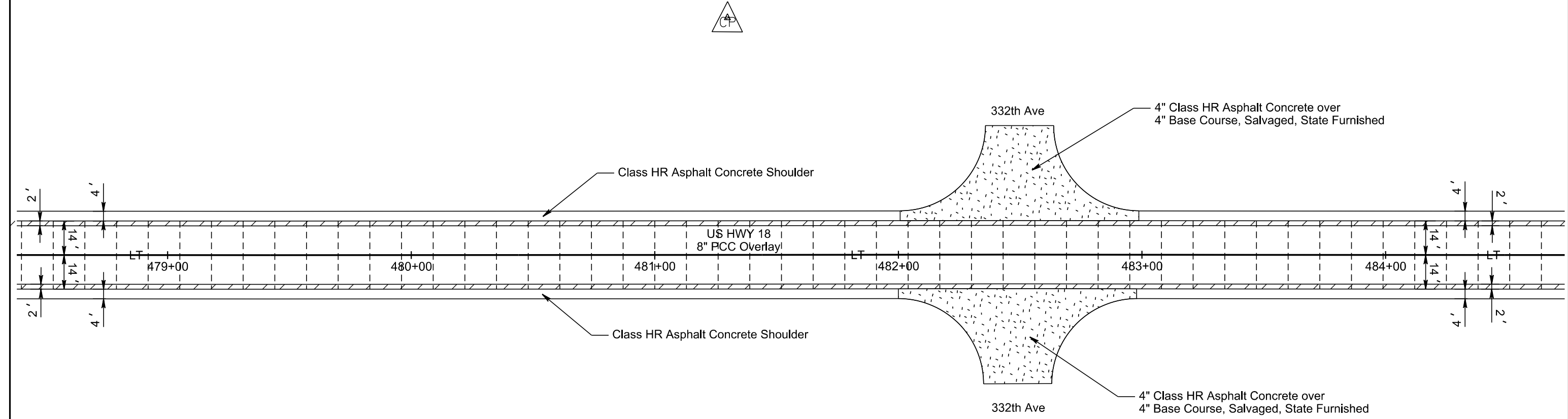
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F24	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS

Plotted From -
1:40

TRPR18387



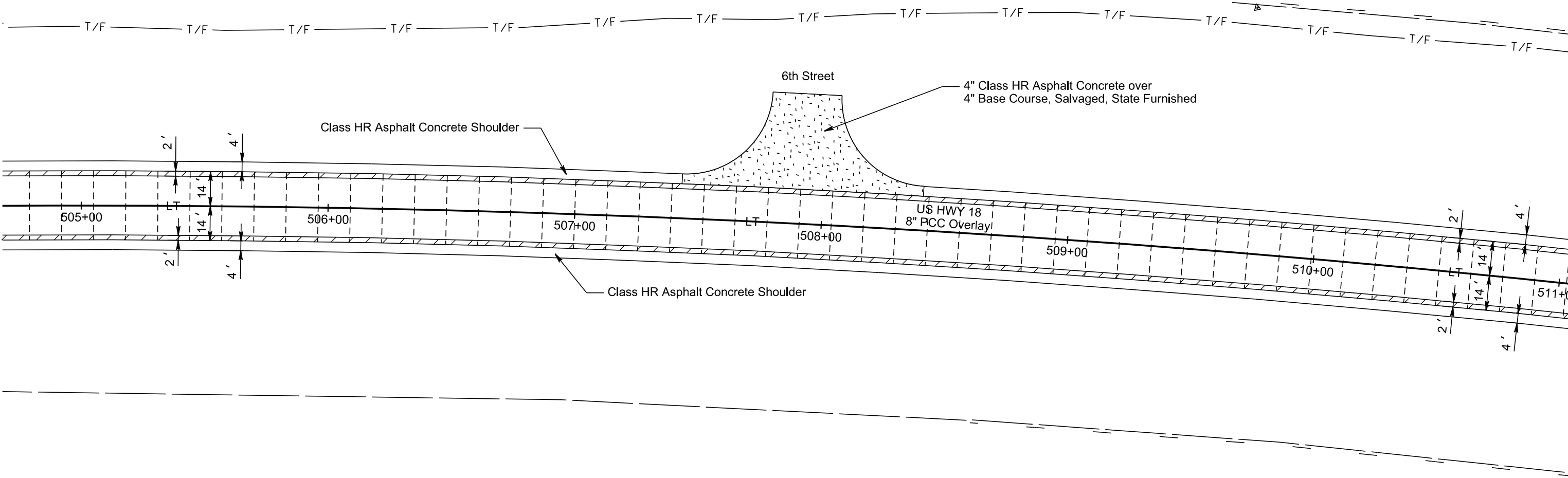
PCC PAVEMENT JOINT LAYOUT

Scale 1 Inch = 40 Feet
Sheet 14 of 15 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F25	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS



Plot Scale - 1:40

Plotted From - TRPR18387

File - ...\\tp086700G7_PCC Layouts.dgn

PCC PAVEMENT JOINT LAYOUT

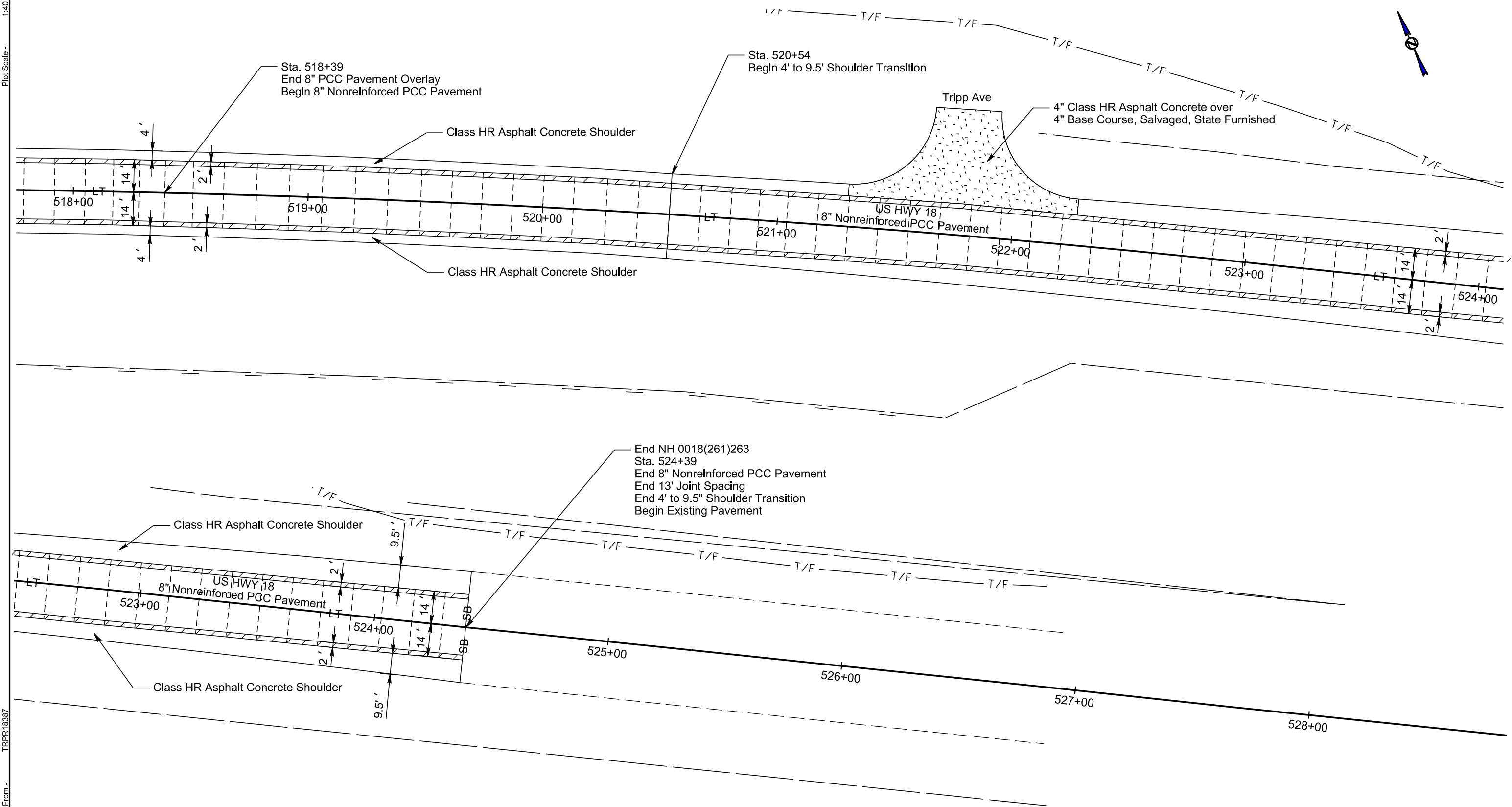
Scale 1 Inch = 40 Feet
Sheet 15 of 15 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F26	F52

Plotting Date: 10/16/2026

Revised: 09/09/2026 RTS

Plot Scale - 1:40



Plotted From - TRPR18387

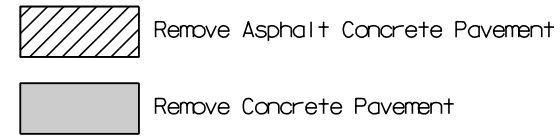
File - ...\\trp0807108G7_PCC Layouts.dgn

DRIVING SURFACE TRANSITION DETAILS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F27	F52

Plotting Date: 10/16/2026

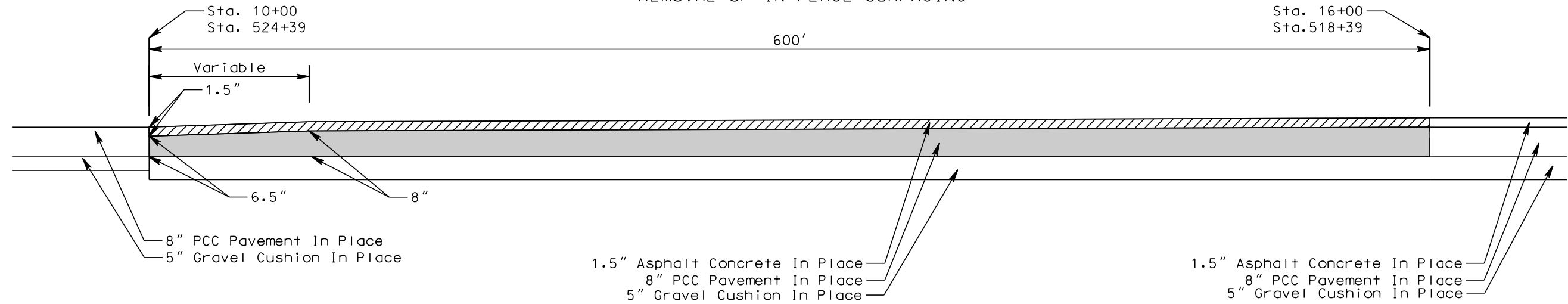
Sheet 1 of 1 Sheets
NOT TO SCALE



See Typical Surfacing Sections for additional details for removal and Surfacing.

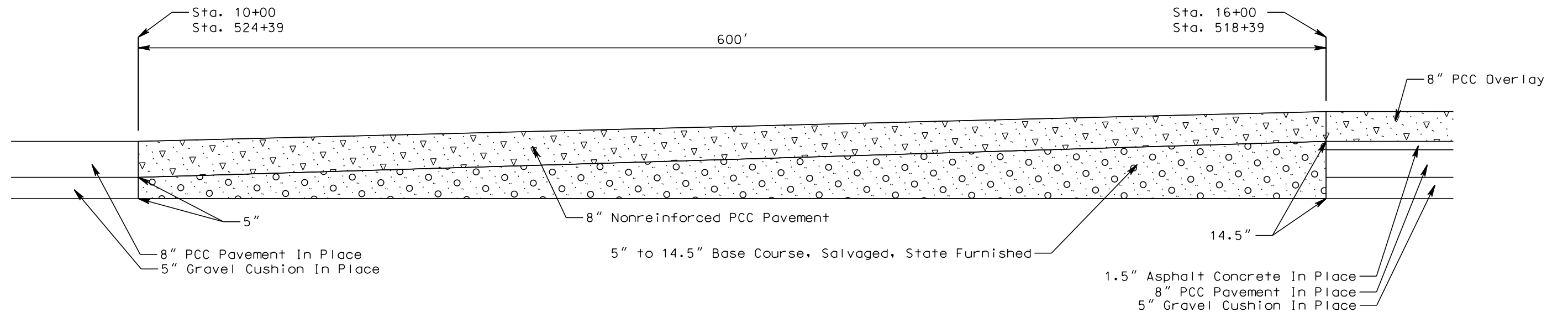
STA. 10+00 TO STA. 16+00
STA. 518+39 TO STA.524+39

LONGITUDINAL SECTION AT BEGIN AND END OF PROJECT
REMOVAL OF IN PLACE SURFACING



STA. 10+00 TO STA. 16+00
STA. 518+39 TO STA.524+39

LONGITUDINAL SECTION AT BEGIN AND END OF PROJECT
SHOWING SURFACING

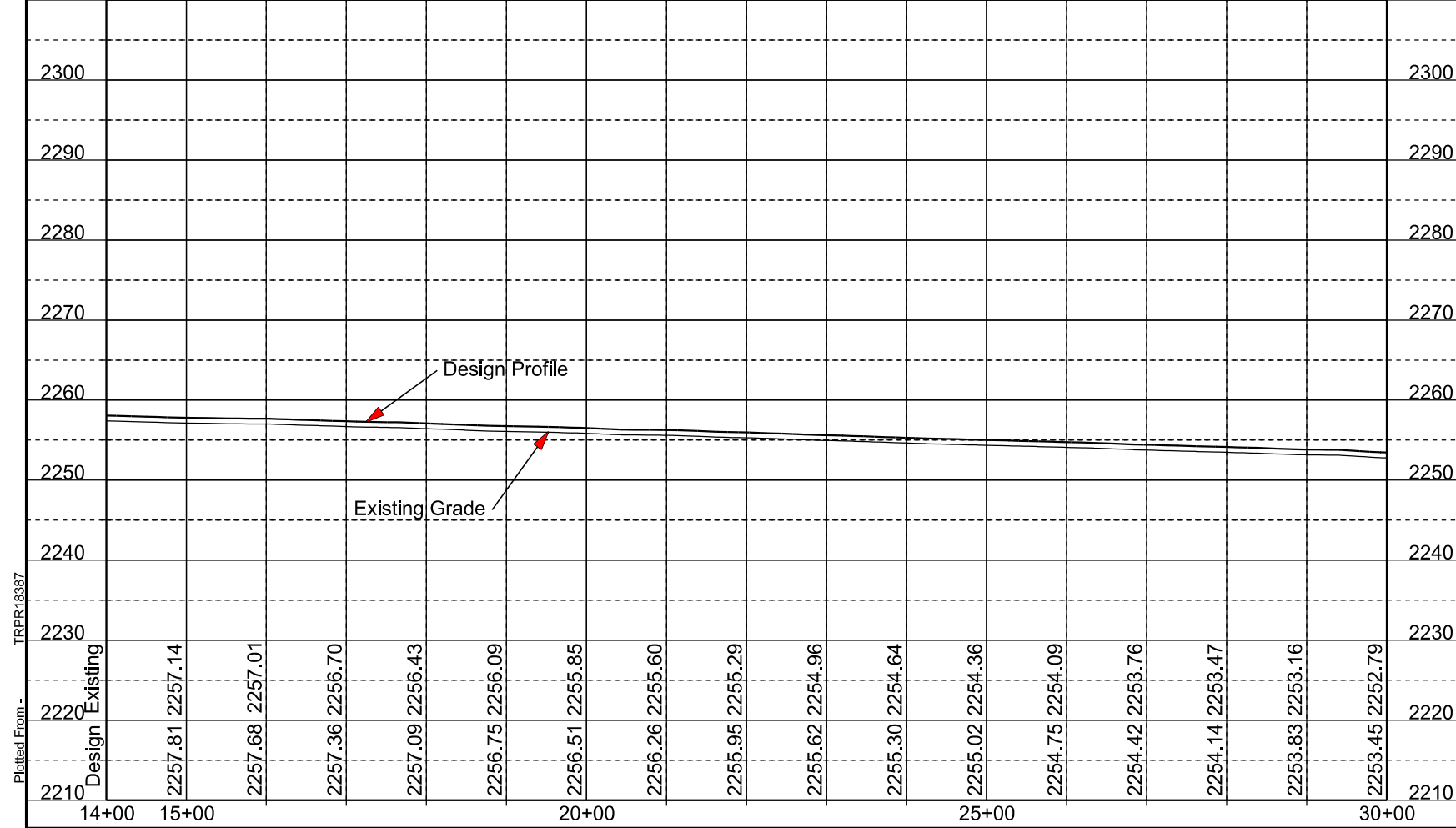


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F28	F52

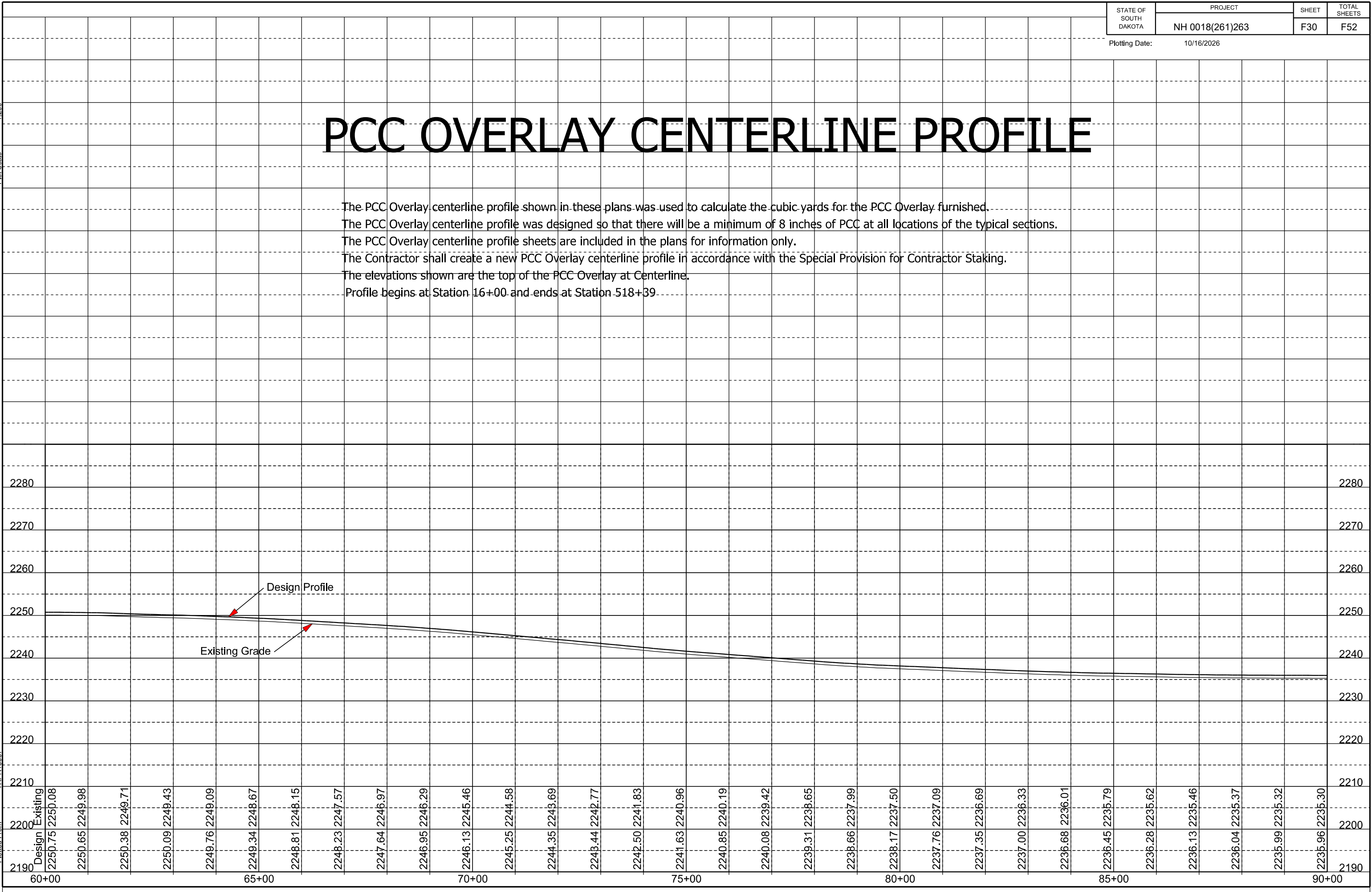
Plotting Date: 10/16/2026

PCC OVERLAY CENTERLINE PROFILE

The PCC Overlay centerline profile shown in these plans was used to calculate the cubic yards for the PCC Overlay furnished.
The PCC Overlay centerline profile was designed so that there will be a minimum of 8 inches of PCC at all locations of the typical sections.
The PCC Overlay centerline profile sheets are included in the plans for information only.
The Contractor shall create a new PCC Overlay centerline profile in accordance with the Special Provision for Contractor Staking.
The elevations shown are the top of the PCC Overlay at Centerline.
Profile begins at Station 16+00 and ends at Station 518+39.

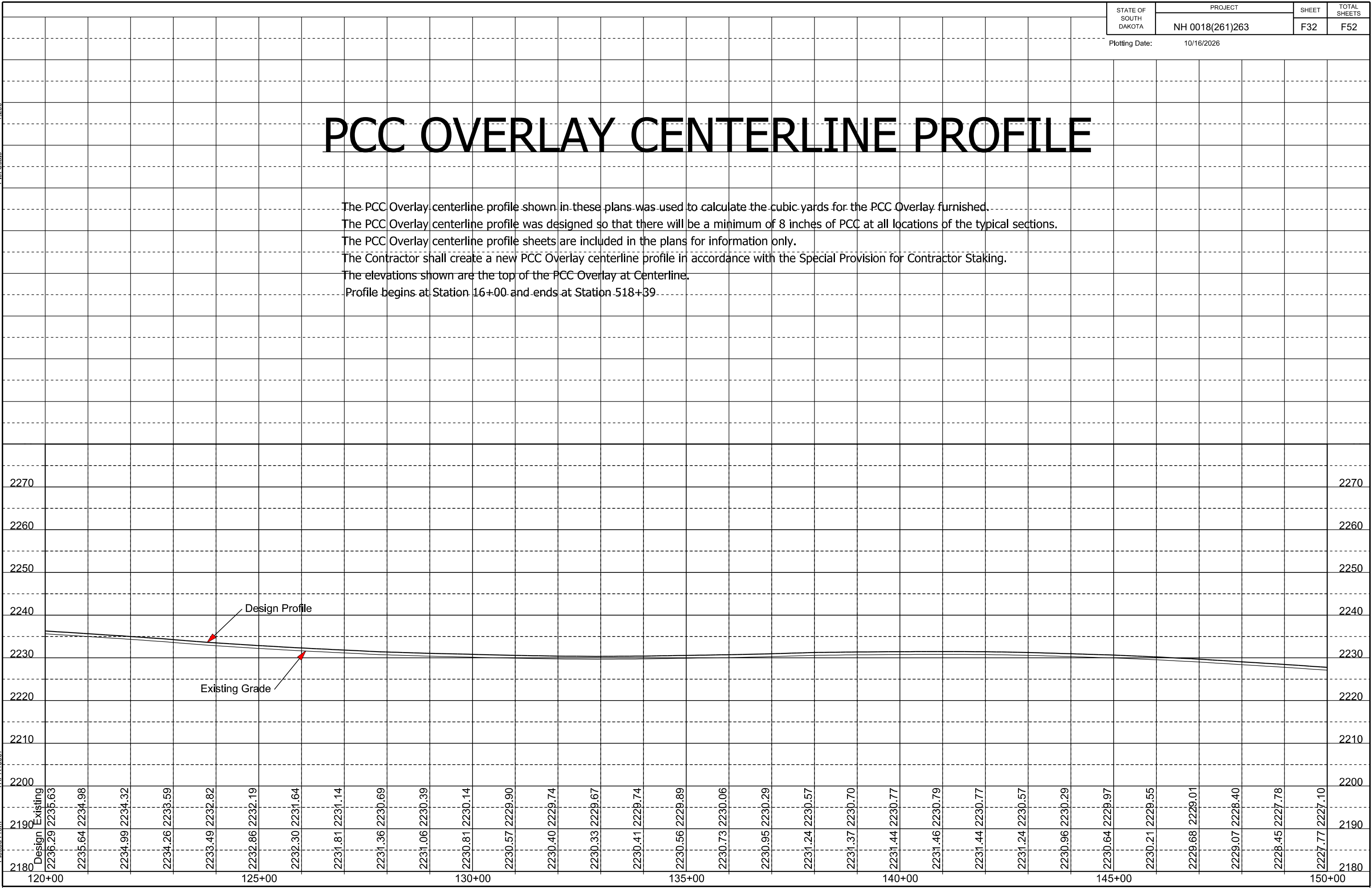


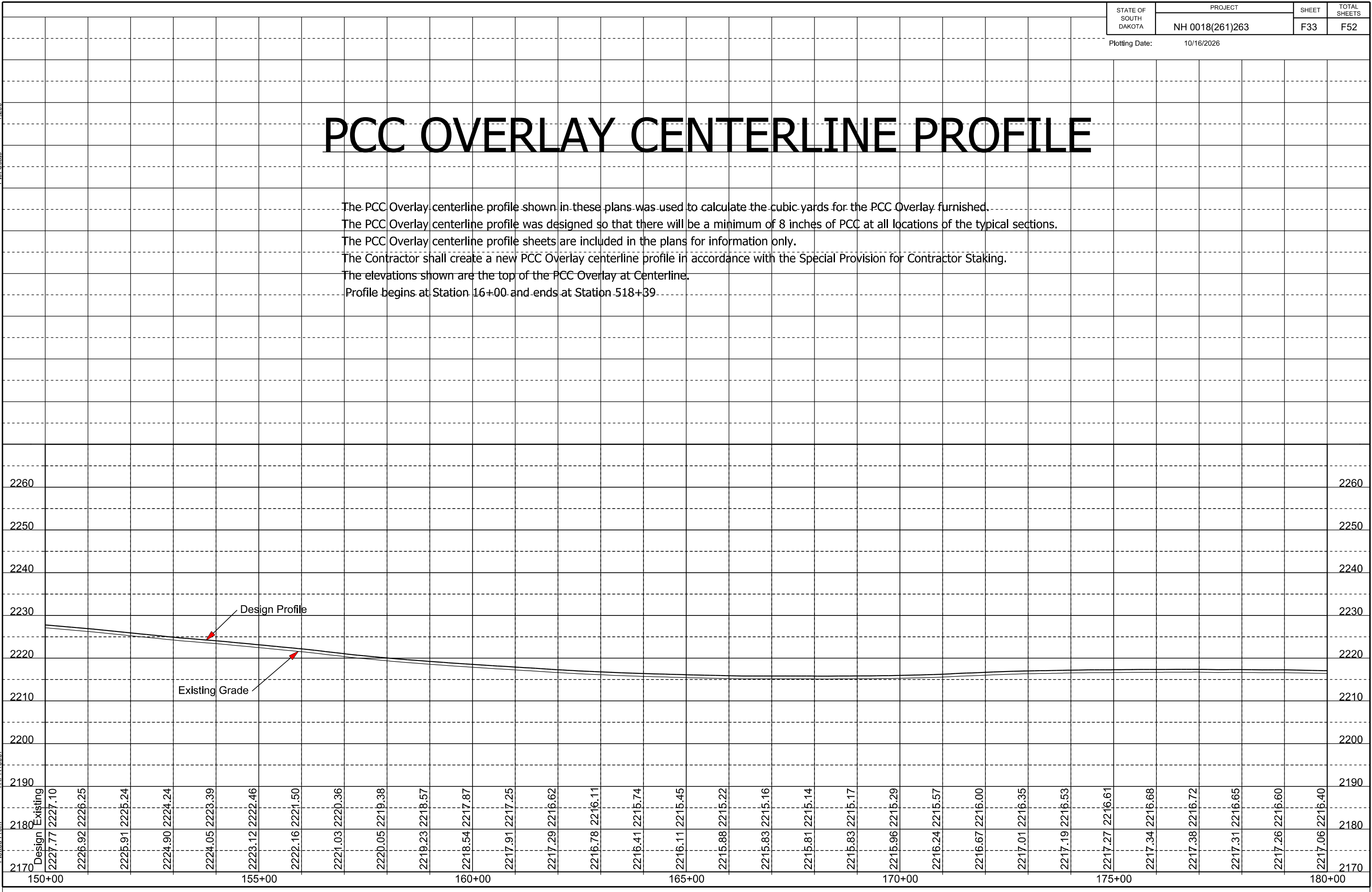
1. $\frac{1}{2}$ 2. $\frac{1}{3}$ 3. $\frac{1}{4}$ 4. $\frac{1}{5}$ 5. $\frac{1}{6}$ 6. $\frac{1}{7}$ 7. $\frac{1}{8}$ 8. $\frac{1}{9}$ 9. $\frac{1}{10}$ 10. $\frac{1}{11}$ 11. $\frac{1}{12}$ 12. $\frac{1}{13}$ 13. $\frac{1}{14}$ 14. $\frac{1}{15}$ 15. $\frac{1}{16}$ 16. $\frac{1}{17}$ 17. $\frac{1}{18}$ 18. $\frac{1}{19}$ 19. $\frac{1}{20}$ 20. $\frac{1}{21}$ 21. $\frac{1}{22}$ 22. $\frac{1}{23}$ 23. $\frac{1}{24}$ 24. $\frac{1}{25}$ 25. $\frac{1}{26}$ 26. $\frac{1}{27}$ 27. $\frac{1}{28}$ 28. $\frac{1}{29}$ 29. $\frac{1}{30}$ 30. $\frac{1}{31}$ 31. $\frac{1}{32}$ 32. $\frac{1}{33}$ 33. $\frac{1}{34}$ 34. $\frac{1}{35}$ 35. $\frac{1}{36}$ 36. $\frac{1}{37}$ 37. $\frac{1}{38}$ 38. $\frac{1}{39}$ 39. $\frac{1}{40}$ 40. $\frac{1}{41}$ 41. $\frac{1}{42}$ 42. $\frac{1}{43}$ 43. $\frac{1}{44}$ 44. $\frac{1}{45}$ 45. $\frac{1}{46}$ 46. $\frac{1}{47}$ 47. $\frac{1}{48}$ 48. $\frac{1}{49}$ 49. $\frac{1}{50}$ 50. $\frac{1}{51}$ 51. $\frac{1}{52}$ 52. $\frac{1}{53}$ 53. $\frac{1}{54}$ 54. $\frac{1}{55}$ 55. $\frac{1}{56}$ 56. $\frac{1}{57}$ 57. $\frac{1}{58}$ 58. $\frac{1}{59}$ 59. $\frac{1}{60}$ 60. $\frac{1}{61}$ 61. $\frac{1}{62}$ 62. $\frac{1}{63}$ 63. $\frac{1}{64}$ 64. $\frac{1}{65}$ 65. $\frac{1}{66}$ 66. $\frac{1}{67}$ 67. $\frac{1}{68}$ 68. $\frac{1}{69}$ 69. $\frac{1}{70}$ 70. $\frac{1}{71}$ 71. $\frac{1}{72}$ 72. $\frac{1}{73}$ 73. $\frac{1}{74}$ 74. $\frac{1}{75}$ 75. $\frac{1}{76}$ 76. $\frac{1}{77}$ 77. $\frac{1}{78}$ 78. $\frac{1}{79}$ 79. $\frac{1}{80}$ 80. $\frac{1}{81}$ 81. $\frac{1}{82}$ 82. $\frac{1}{83}$ 83. $\frac{1}{84}$ 84. $\frac{1}{85}$ 85. $\frac{1}{86}$ 86. $\frac{1}{87}$ 87. $\frac{1}{88}$ 88. $\frac{1}{89}$ 89. $\frac{1}{90}$ 90. $\frac{1}{91}$ 91. $\frac{1}{92}$ 92. $\frac{1}{93}$ 93. $\frac{1}{94}$ 94. $\frac{1}{95}$ 95. $\frac{1}{96}$ 96. $\frac{1}{97}$ 97. $\frac{1}{98}$ 98. $\frac{1}{99}$ 99. $\frac{1}{100}$ 100. $\frac{1}{101}$ 101. $\frac{1}{102}$ 102. $\frac{1}{103}$ 103. $\frac{1}{104}$ 104. $\frac{1}{105}$ 105. $\frac{1}{106}$ 106. $\frac{1}{107}$ 107. $\frac{1}{108}$ 108. $\frac{1}{109}$ 109. $\frac{1}{110}$ 110. $\frac{1}{111}$ 111. $\frac{1}{112}$ 112. $\frac{1}{113}$ 113. $\frac{1}{114}$ 114. $\frac{1}{115}$ 115. $\frac{1}{116}$ 116. $\frac{1}{117}$ 117. $\frac{1}{118}$ 118. $\frac{1}{119}$ 119. $\frac{1}{120}$ 120. $\frac{1}{121}$ 121. $\frac{1}{122}$ 122. $\frac{1}{123}$ 123. $\frac{1}{124}$ 124. $\frac{1}{125}$ 125. $\frac{1}{126}$ 126. $\frac{1}{127}$ 127. $\frac{1}{128}$ 128. $\frac{1}{129}$ 129. $\frac{1}{130}$ 130. $\frac{1}{131}$ 131. $\frac{1}{132}$ 132. $\frac{1}{133}$ 133. $\frac{1}{134}$ 134. $\frac{1}{135}$ 135. $\frac{1}{136}$ 136. $\frac{1}{137}$ 137. $\frac{1}{138}$ 138. $\frac{1}{139}$ 139. $\frac{1}{140}$ 140. $\frac{1}{141}$ 141. $\frac{1}{142}$ 142. $\frac{1}{143}$ 143. $\frac{1}{144}$ 144. $\frac{1}{145}$ 145. $\frac{1}{146}$ 146. $\frac{1}{147}$ 147. $\frac{1}{148}$ 148. $\frac{1}{149}$ 149. $\frac{1}{150}$ 150. $\frac{1}{151}$ 151. $\frac{1}{152}$ 152. $\frac{1}{153}$ 153. $\frac{1}{154}$ 154. $\frac{1}{155}$ 155. $\frac{1}{156}$ 156. $\frac{1}{157}$ 157. $\frac{1}{158}$ 158. $\frac{1}{159}$ 159. $\frac{1}{160}$ 160. $\frac{1}{161}$ 161. $\frac{1}{162}$ 162. $\frac{1}{163}$ 163. $\frac{1}{164}$ 164. $\frac{1}{165}$ 165. $\frac{1}{166}$ 166. $\frac{1}{167}$ 167. $\frac{1}{168}$ 168. $\frac{1}{169}$ 169. $\frac{1}{170}$ 170. $\frac{1}{171}$ 171. $\frac{1}{172}$ 172. $\frac{1}{173}$ 173. $\frac{1}{174}$ 174. $\frac{1}{175}$ 175. $\frac{1}{176}$ 176. $\frac{1}{177}$ 177. $\frac{1}{178}$ 178. $\frac{1}{179}$ 179. $\frac{1}{180}$ 180. $\frac{1}{181}$ 181. $\frac{1}{182}$ 182. $\frac{1}{183}$ 183. $\frac{1}{184}$ 184. $\frac{1}{185}$ 185. $\frac{1}{186}$ 186. $\frac{1}{187}$ 187. $\frac{1}{188}$ 188. $\frac{1}{189}$ 189. $\frac{1}{190}$ 190. $\frac{1}{191}$ 191. $\frac{1}{192}$ 192. $\frac{1}{193}$ 193. $\frac{1}{194}$ 194. $\frac{1}{195}$ 195. $\frac{1}{196}$ 196. $\frac{1}{197}$ 197. $\frac{1}{198}$ 198. $\frac{1}{199}$ 199. $\frac{1}{200}$ 200. $\frac{1}{201}$ 201. $\frac{1}{202}$ 202. $\frac{1}{203}$ 203. $\frac{1}{204}$ 204. $\frac{1}{205}$ 205. $\frac{1}{206}$ 206. $\frac{1}{207}$ 207. $\frac{1}{208}$ 208. $\frac{1}{209}$ 209. $\frac{1}{210}$ 210. $\frac{1}{211}$ 211. $\frac{1}{212}$ 212. $\frac{1}{213}$ 213. $\frac{1}{214}$ 214. $\frac{1}{215}$ 215. $\frac{1}{216}$ 216. $\frac{1}{217}$ 217. $\frac{1}{218}$ 218. $\frac{1}{219}$ 219. $\frac{1}{220}$ 220. $\frac{1}{221}$ 221. $\frac{1}{222}$ 222. $\frac{1}{223}$ 223. $\frac{1}{224}$ 224. $\frac{1}{225}$ 225. $\frac{1}{226}$ 226. $\frac{1}{227}$ 227. $\frac{1}{228}$ 228. $\frac{1}{229}$ 229. $\frac{1}{230}$ 230. $\frac{1}{231}$ 231. $\frac{1}{232}$ 232. $\frac{1}{233}$ 233. $\frac{1}{234}$ 234. $\frac{1}{235}$ 235. $\frac{1}{236}$ 236. $\frac{1}{237}$ 237. $\frac{1}{238}$ 238. $\frac{1}{239}$ 239. $\frac{1}{240}$ 240.

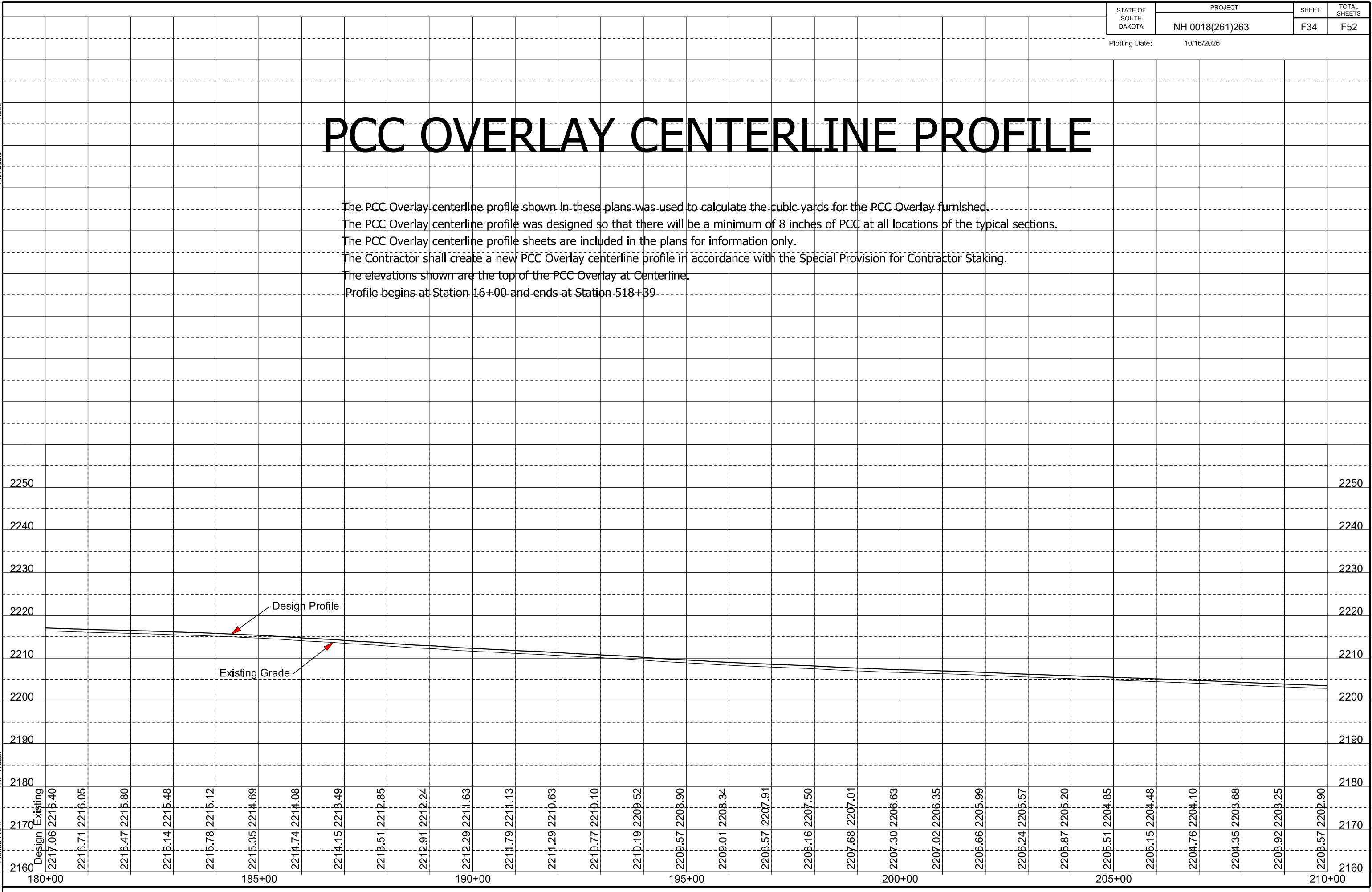


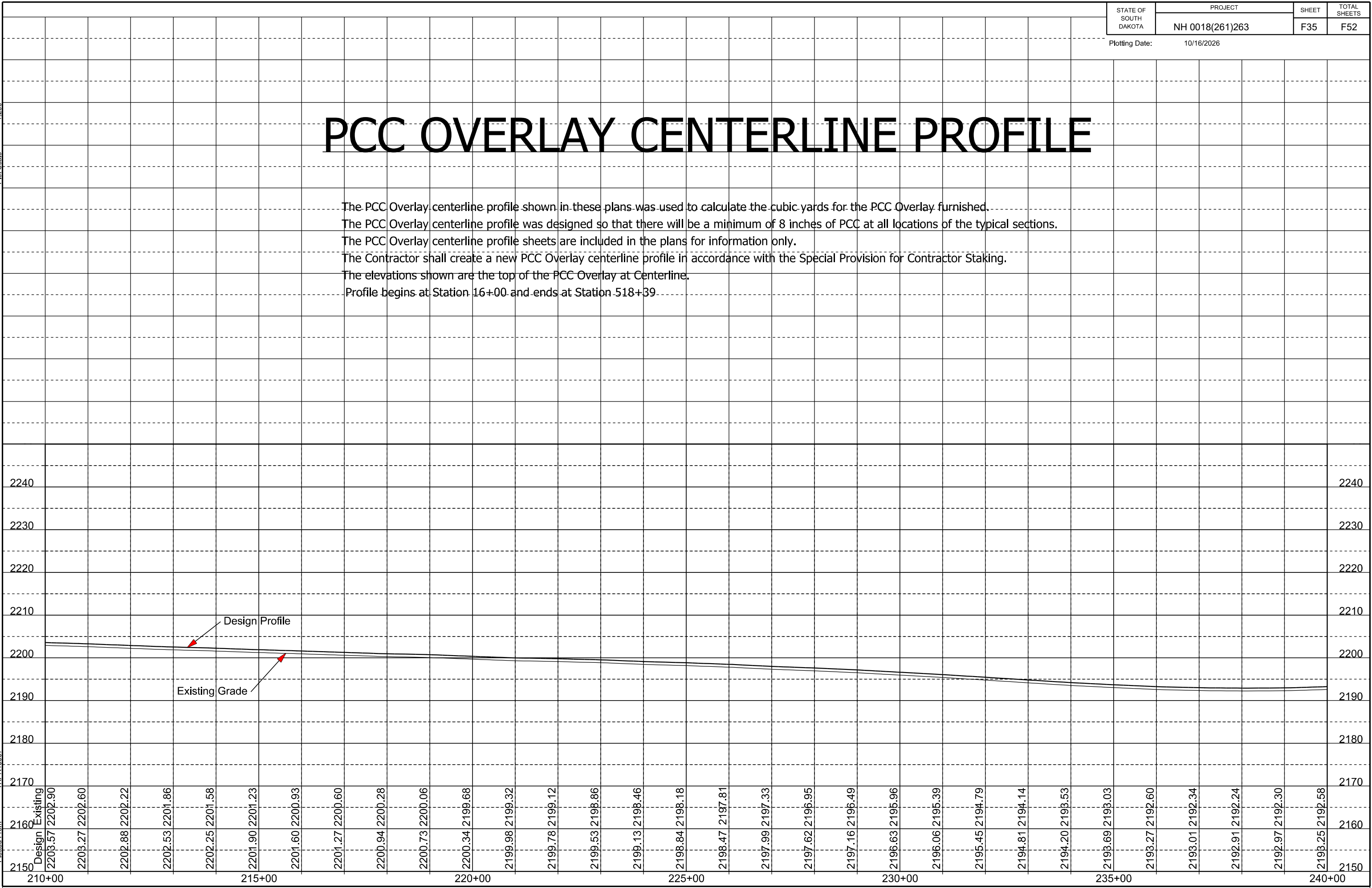
PCC OVERLAY CENTERLINE PROFILE

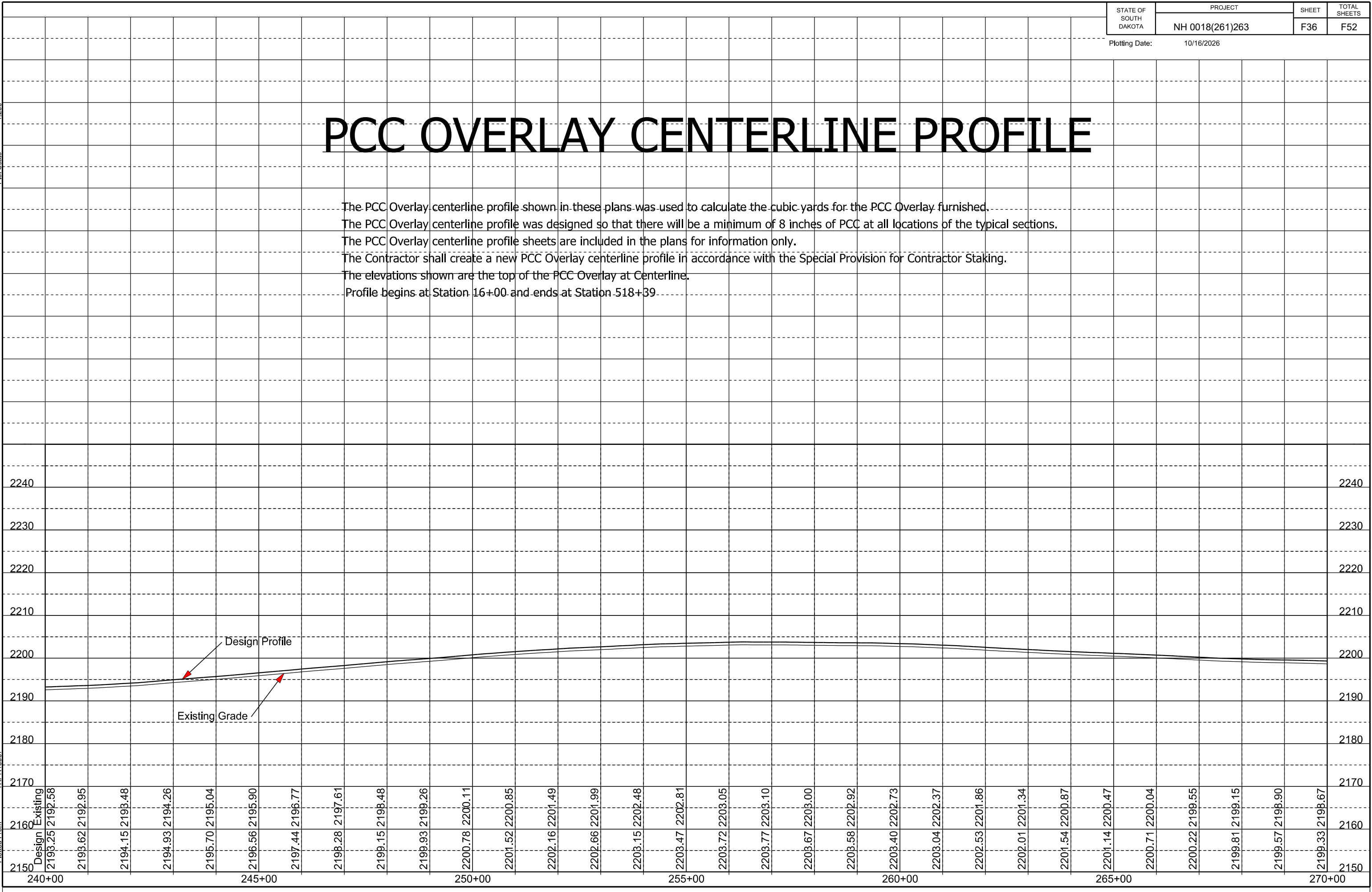
The PCC Overlay centerline profile shown in these plans was used to calculate the cubic yards for the PCC Overlay furnished.
The PCC Overlay centerline profile was designed so that there will be a minimum of 8 inches of PCC at all locations of the typical sections.
The PCC Overlay centerline profile sheets are included in the plans for information only.
The Contractor shall create a new PCC Overlay centerline profile in accordance with the Special Provision for Contractor Staking.
The elevations shown are the top of the PCC Overlay at Centerline.
Profile begins at Station 16+00 and ends at Station 518+39.

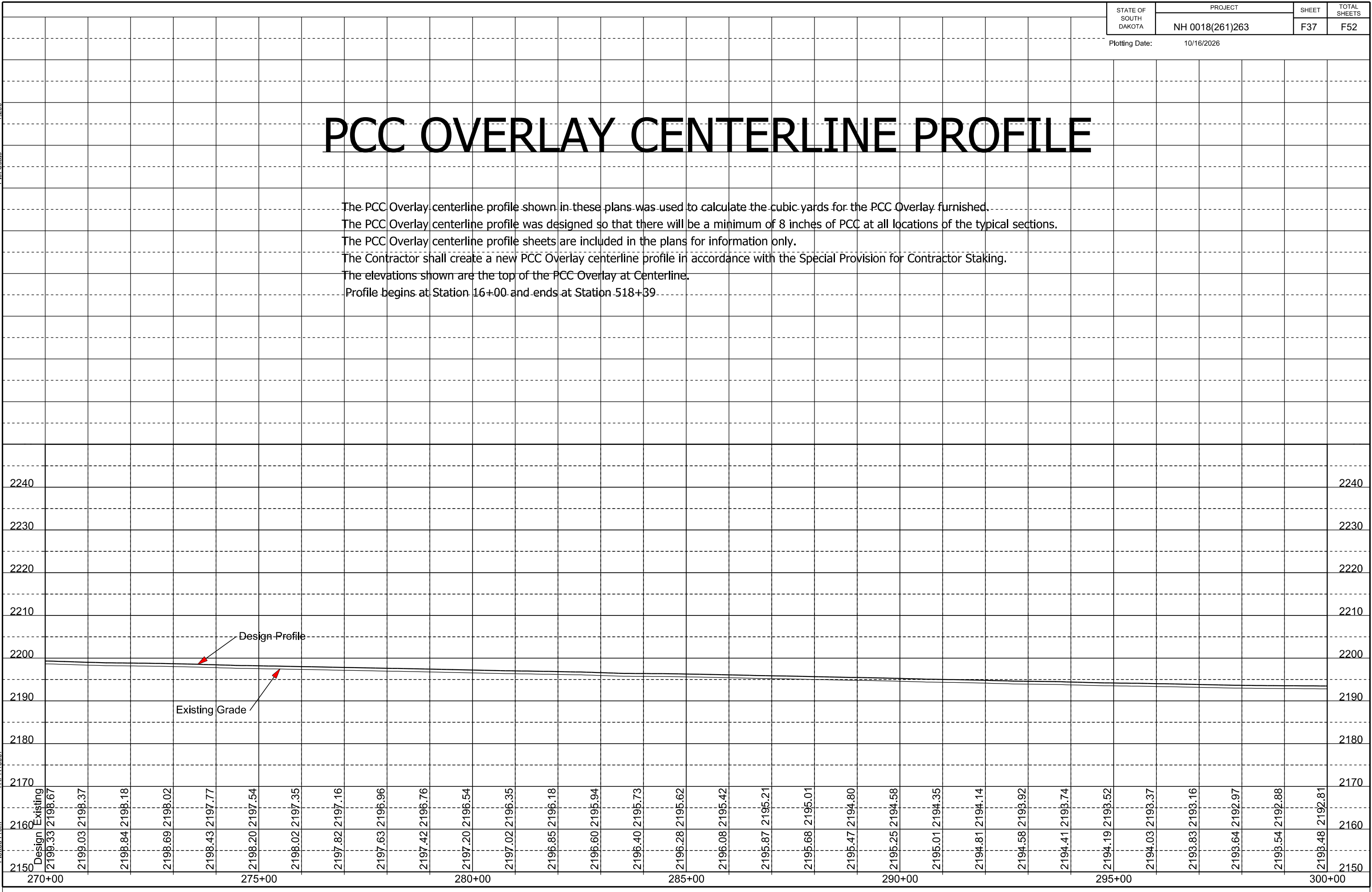


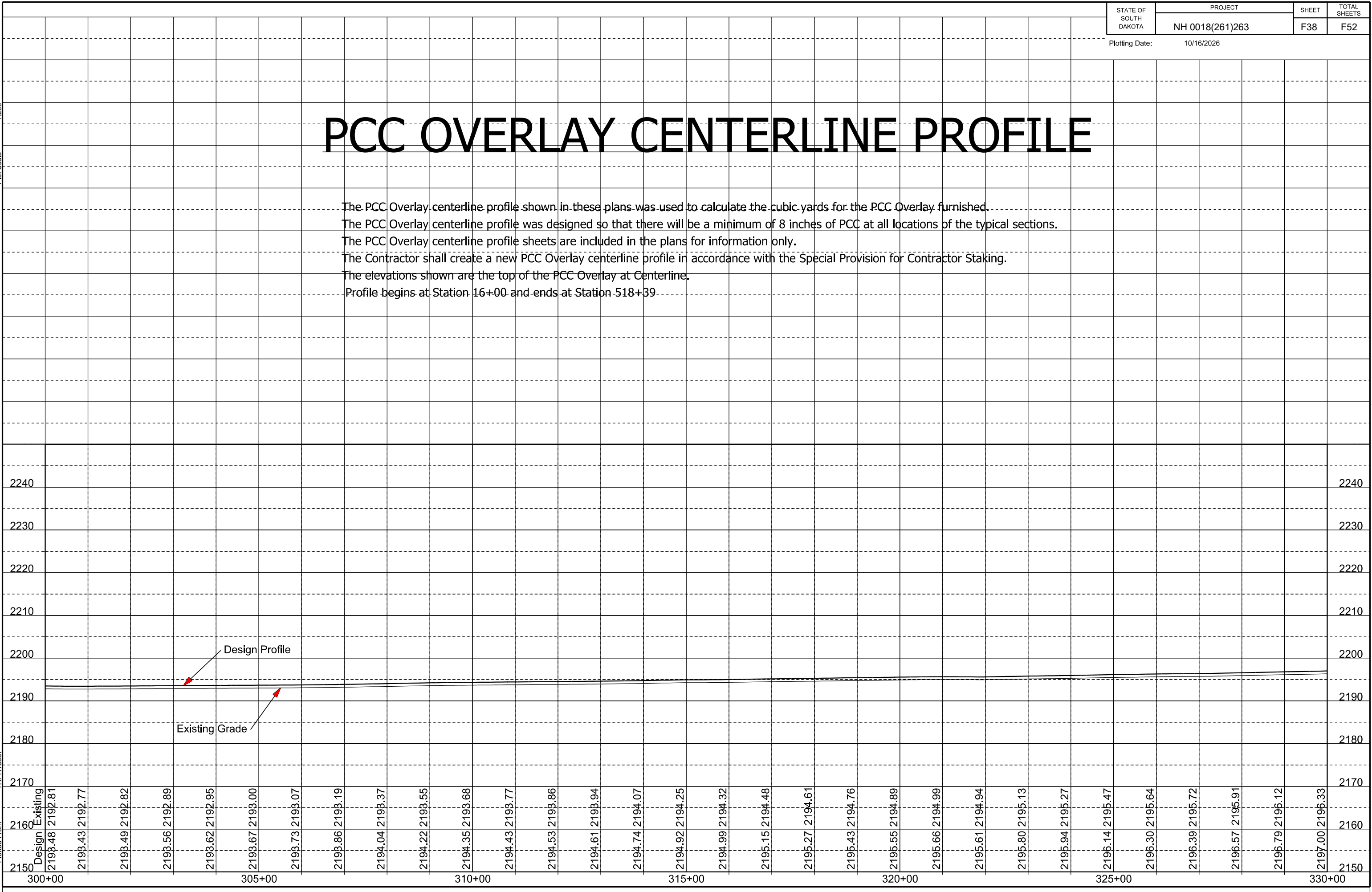


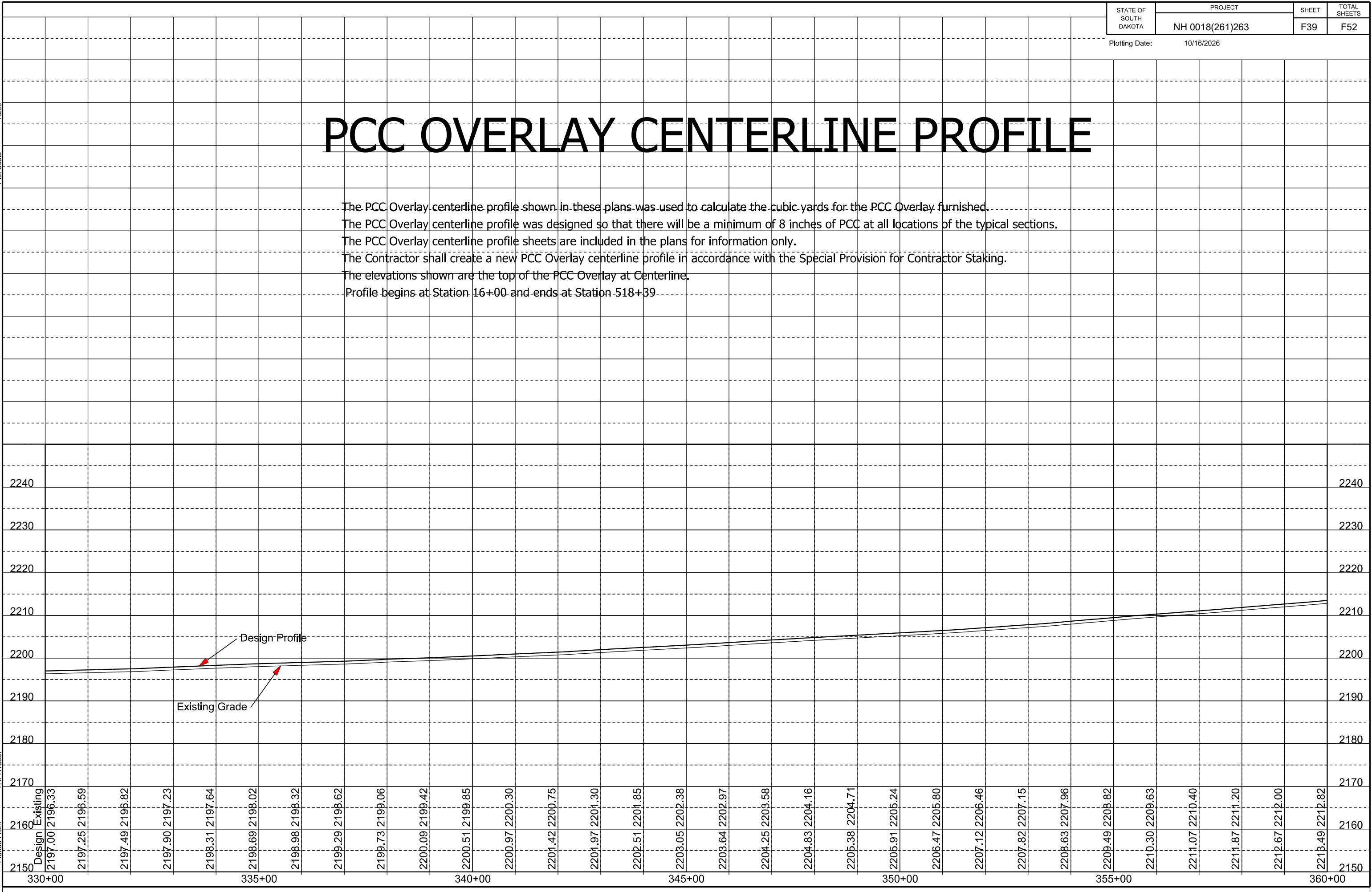


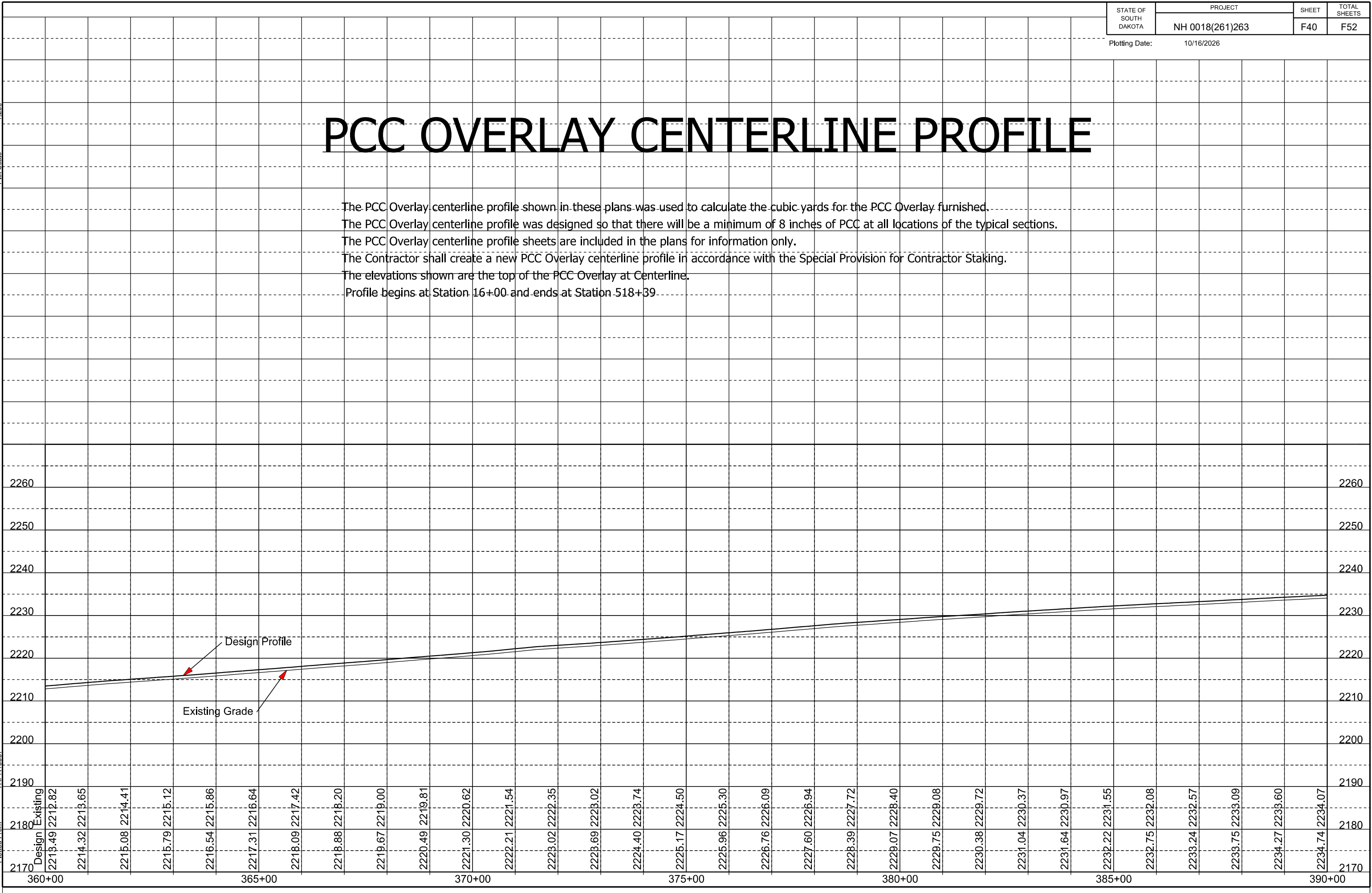


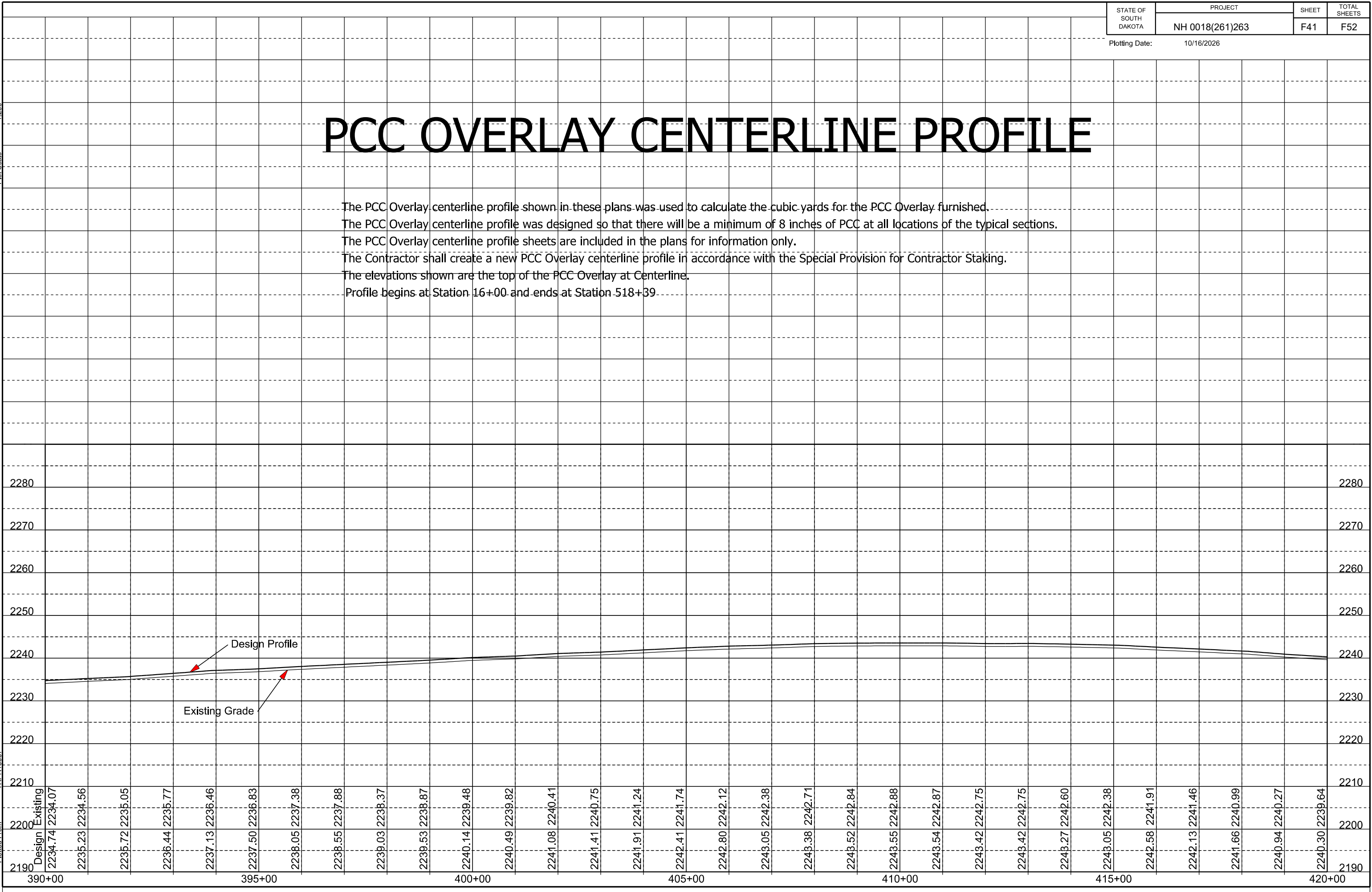


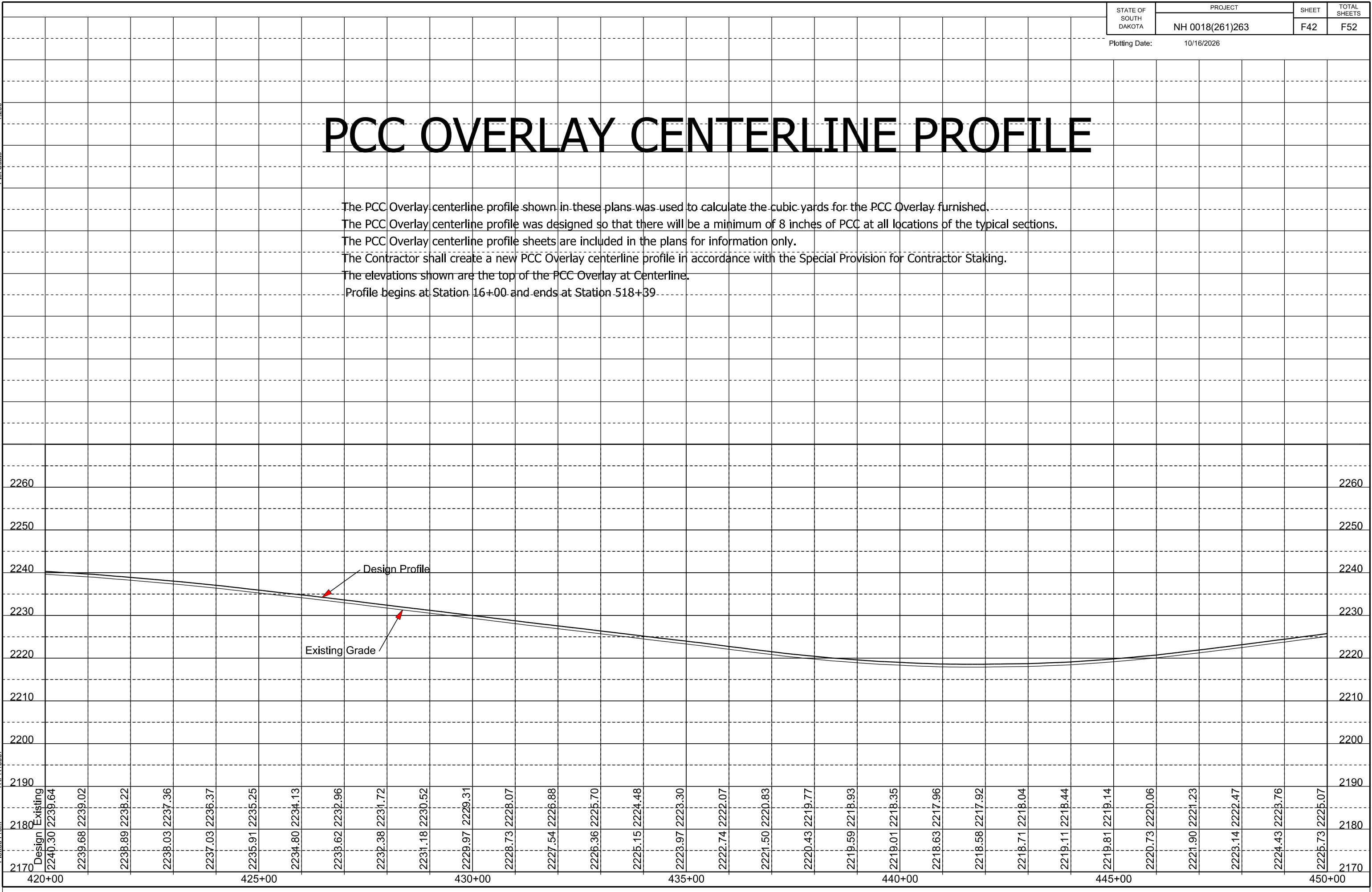


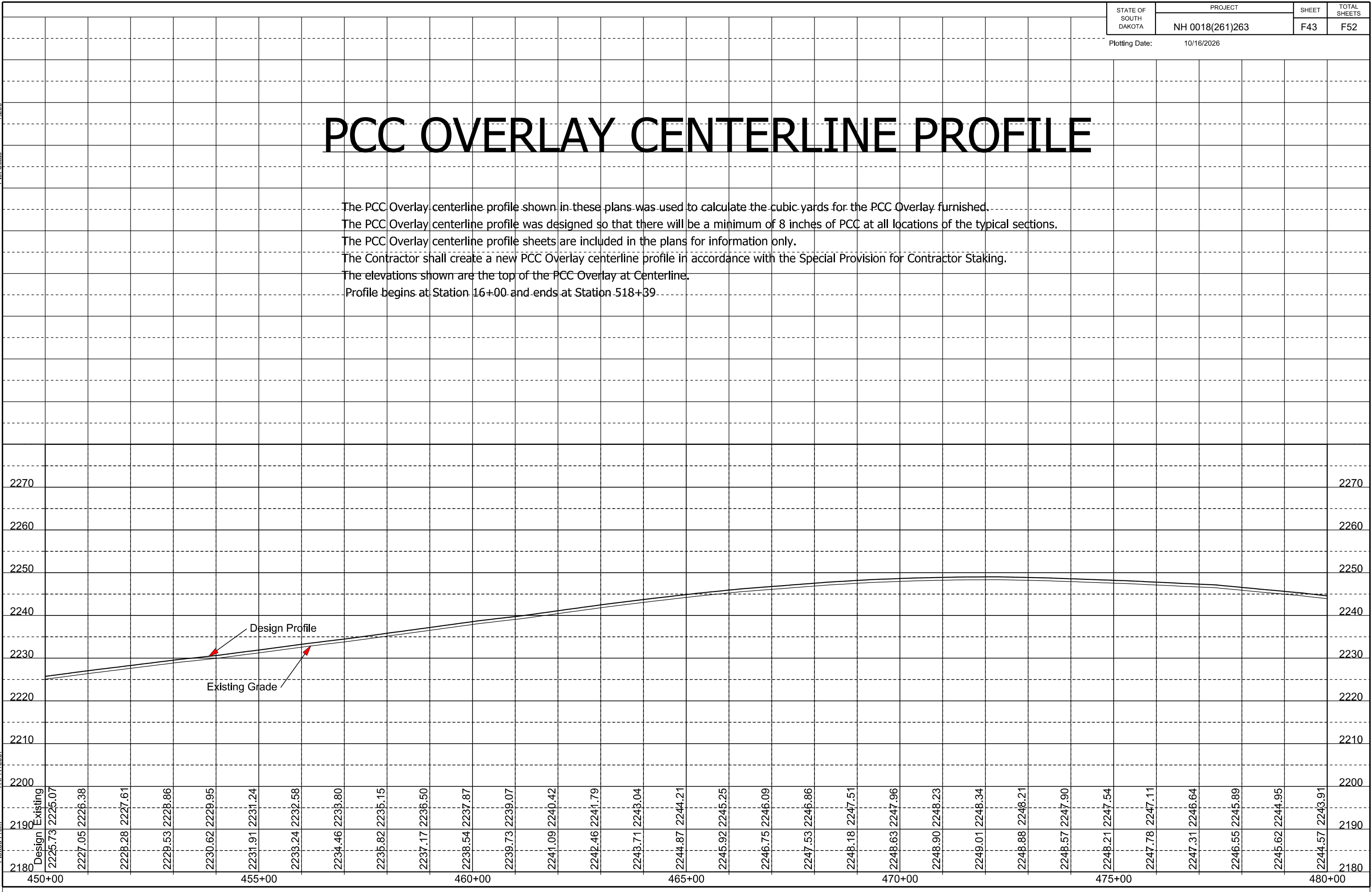


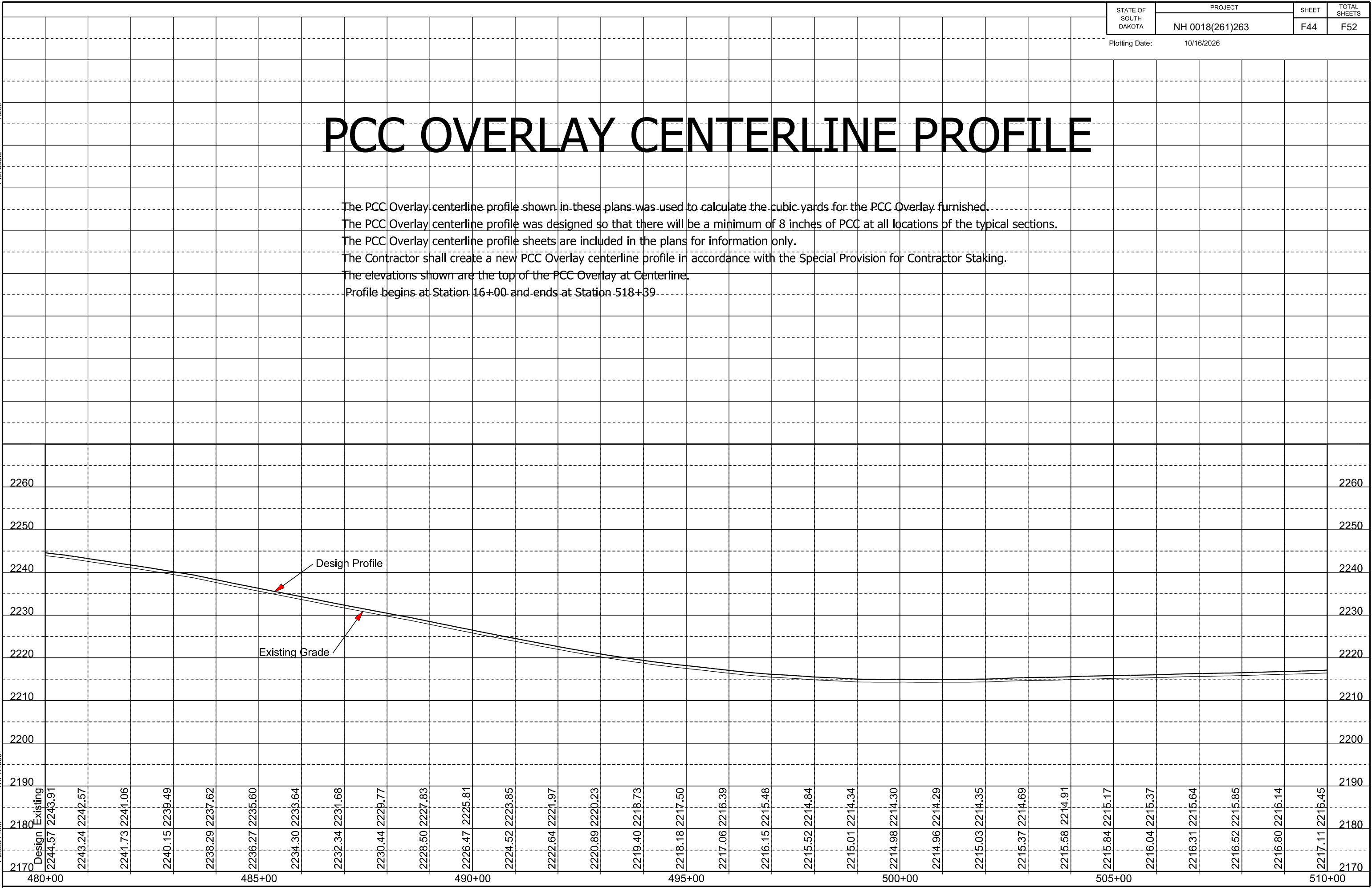










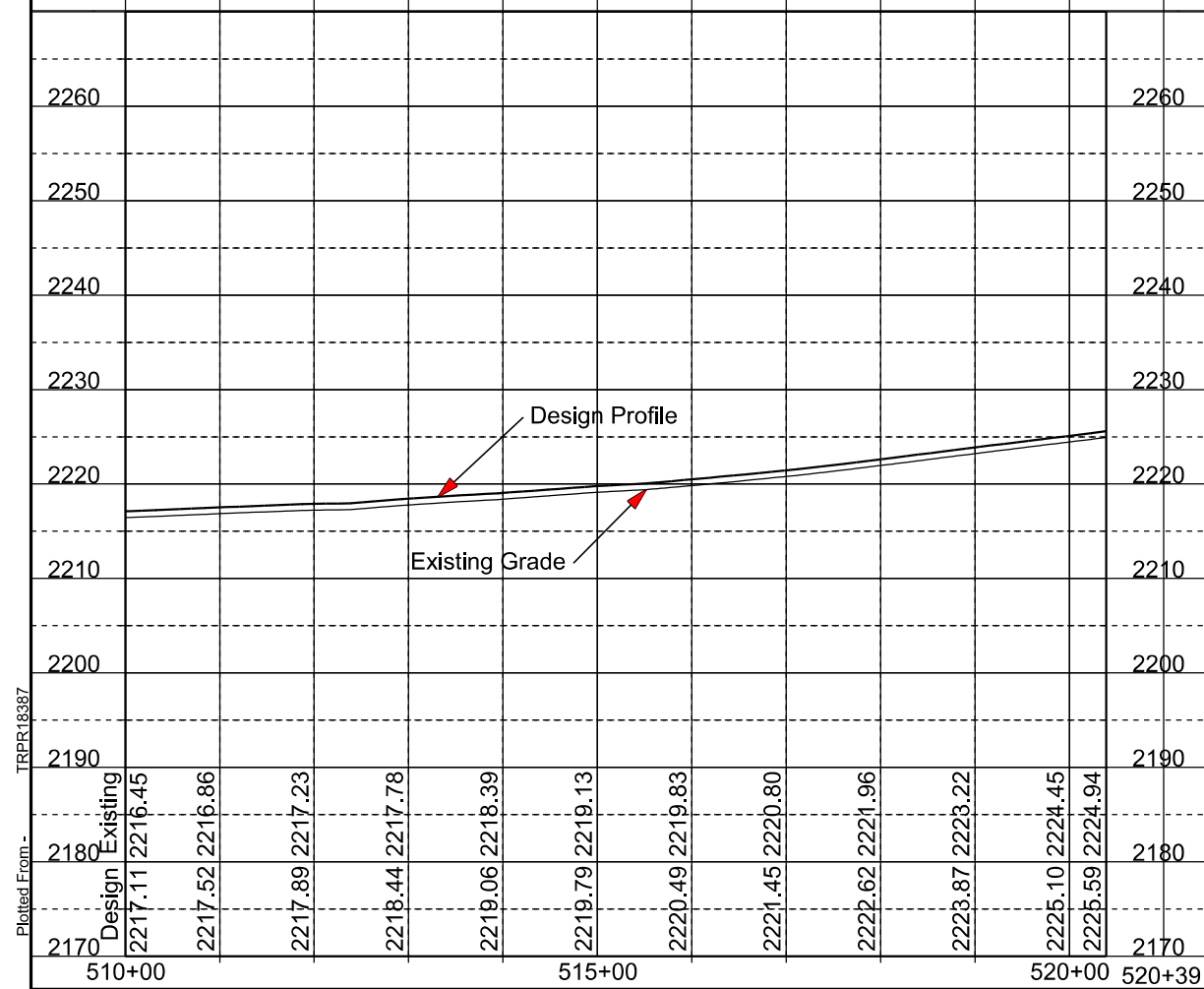


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F45	F52

Plotting Date: 10/16/2026

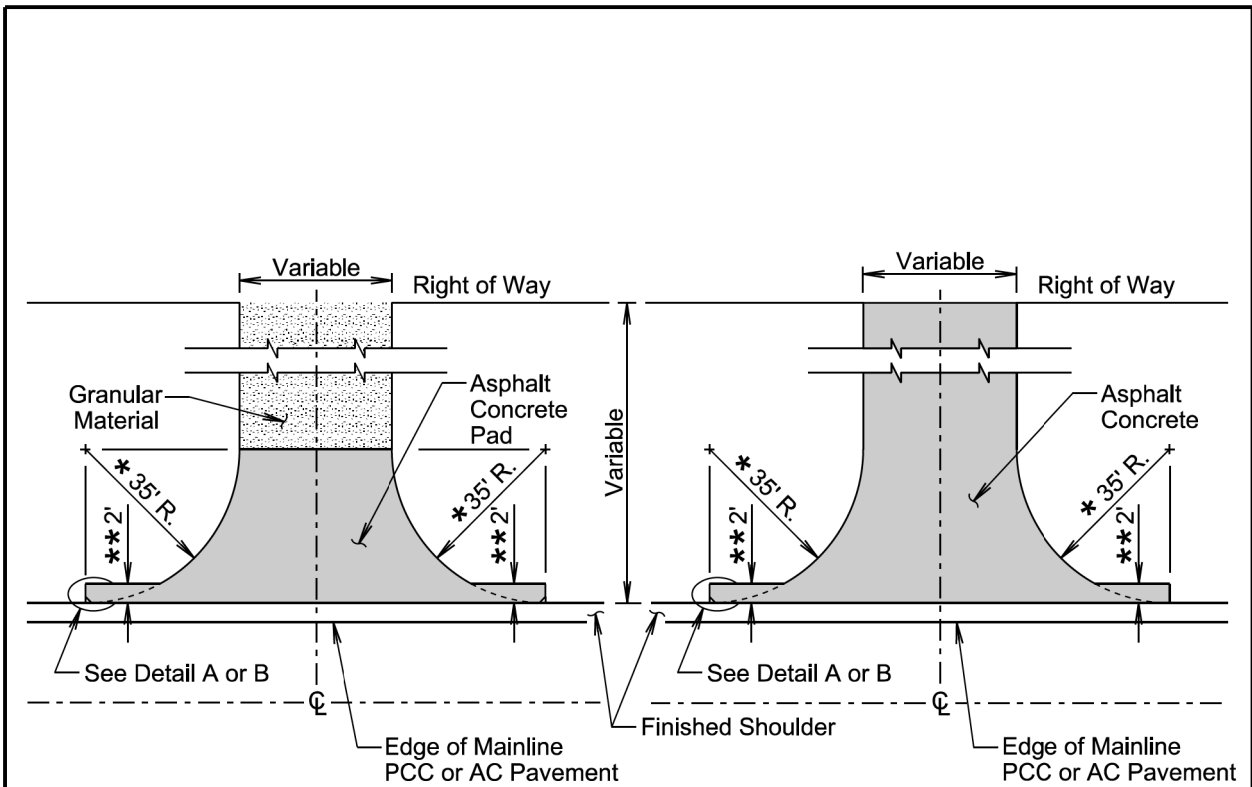
PCC OVERLAY CENTERLINE PROFILE

The PCC Overlay centerline profile shown in these plans was used to calculate the cubic yards for the PCC Overlay furnished.
The PCC Overlay centerline profile was designed so that there will be a minimum of 8 inches of PCC at all locations of the typical sections.
The PCC Overlay centerline profile sheets are included in the plans for information only.
The Contractor shall create a new PCC Overlay centerline profile in accordance with the Special Provision for Contractor Staking.
The elevations shown are the top of the PCC Overlay at Centerline.
Profile begins at Station 16+00 and ends at Station 518+39.



STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0018(261)263	F46	F52

Plotting Date: 10/16/2026



PLAN VIEW
(Intersecting Road)
(No Asphalt Concrete Surfacing
Beyond Right of Way)

PLAN VIEW
(Intersecting Road)
(Asphalt Concrete Surfacing
Beyond Right of Way)

GENERAL NOTES:

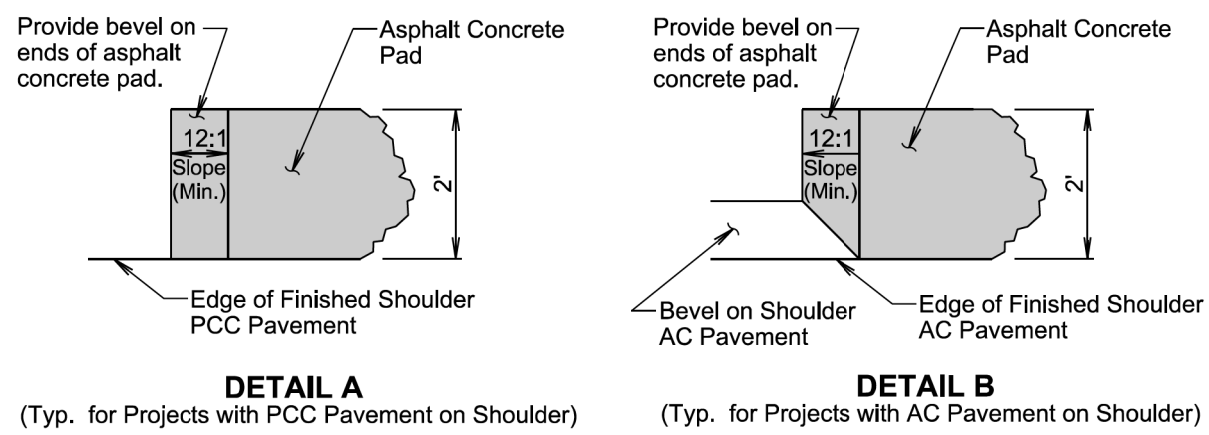
The precise construction limits for situations other than shown above will be determined by the Engineer during construction.

* For new construction, 35' radius typical or as specified in the plans. For resurfacing projects, radius is variable depending on existing conditions.

** The Contractor may adjust the screed of the paver during mainline paving operations to provide the 2-foot asphalt concrete pad or the Contractor may provide the 2-foot asphalt concrete pad during paving of the intersecting roads as shown above. The Engineer may eliminate the 2-foot asphalt concrete pads if the Engineer, in the Engineer's sole discretion, determines the pads are infeasible to construct due to site specific reasons including, but not limited to; existing inslope configuration, borrow and material availability, and right-of-way constraints.

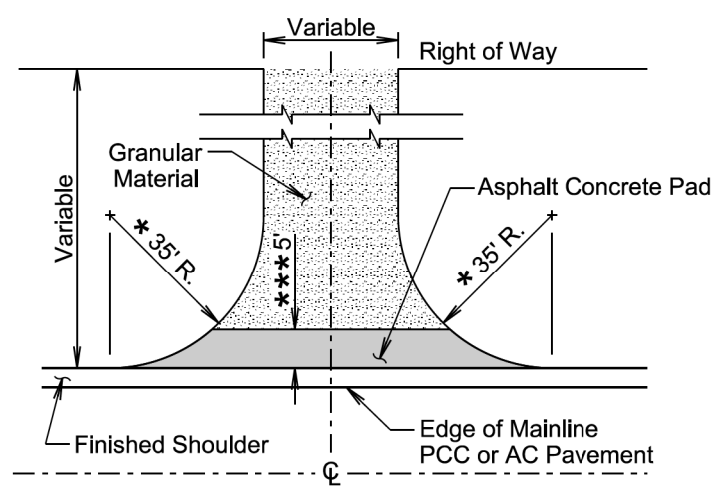
August 27, 2020

Published Date: 2027	S D D O T	SURFACING OR RESURFACING OF INTERSECTING ROADS AND ENTRANCES (MAINLINE AND SHOULDERS: PCC OR AC PAVEMENT)	PLATE NUMBER 320.04
			Sheet 1 of 2



DETAIL A
(Typ. for Projects with PCC Pavement on Shoulder)

DETAIL B
(Typ. for Projects with AC Pavement on Shoulder)

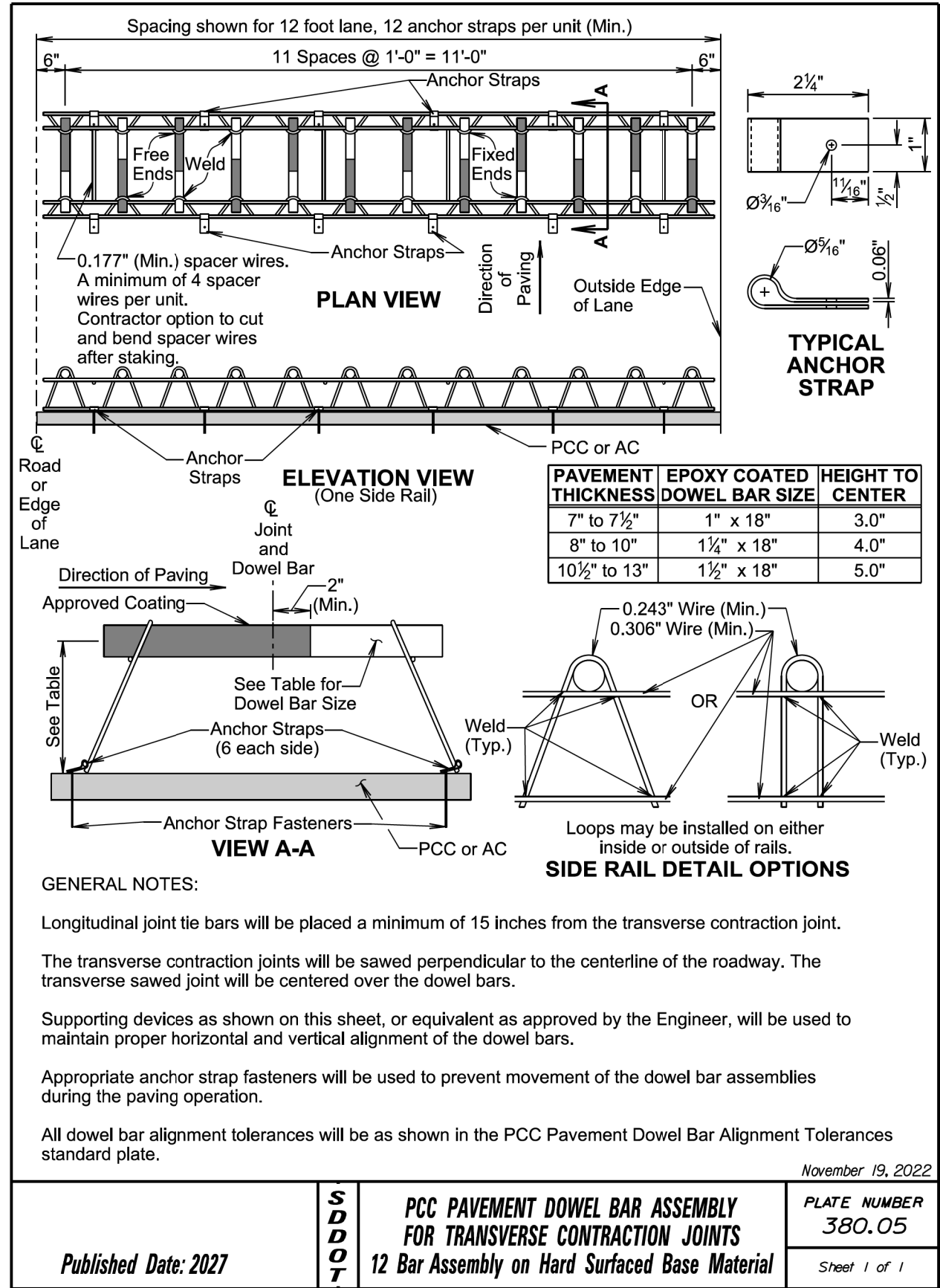
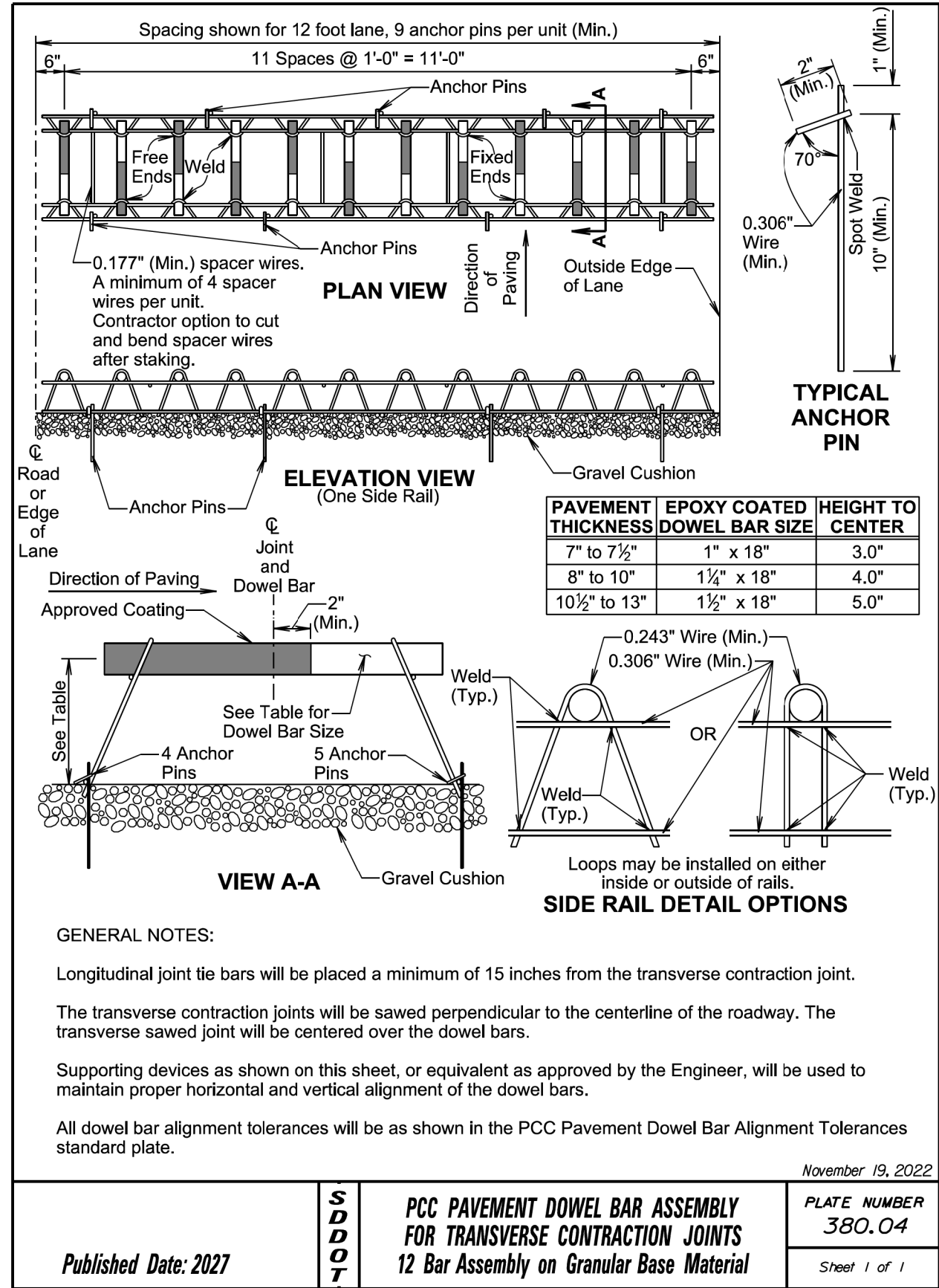


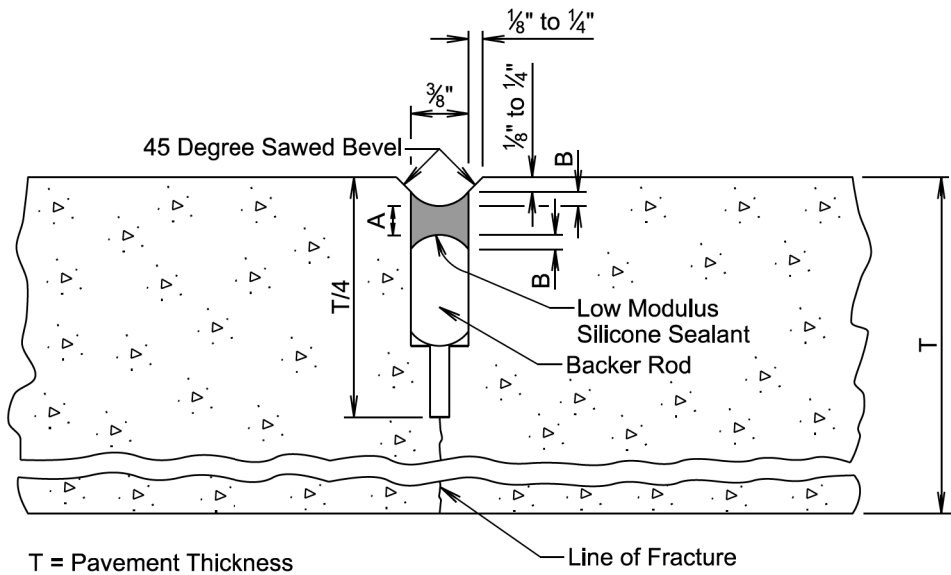
PLAN VIEW
(Entrance)

*** Not required if finished shoulder width is 4' or greater.

August 27, 2020

Published Date: 2027	S D D O T	SURFACING OR RESURFACING OF INTERSECTING ROADS AND ENTRANCES (MAINLINE AND SHOULDERS: PCC OR AC PAVEMENT)	PLATE NUMBER 320.04
			Sheet 2 of 2





T = Pavement Thickness

LOW MODULUS SILICONE SEALANT ALLOWABLE CONSTRUCTION TOLERANCES			
A (Min.) (in.)	A (Max.) (in.)	B (Min.) (in.)	B (Max.) (in.)
3/16	5/16	1/8	1/4

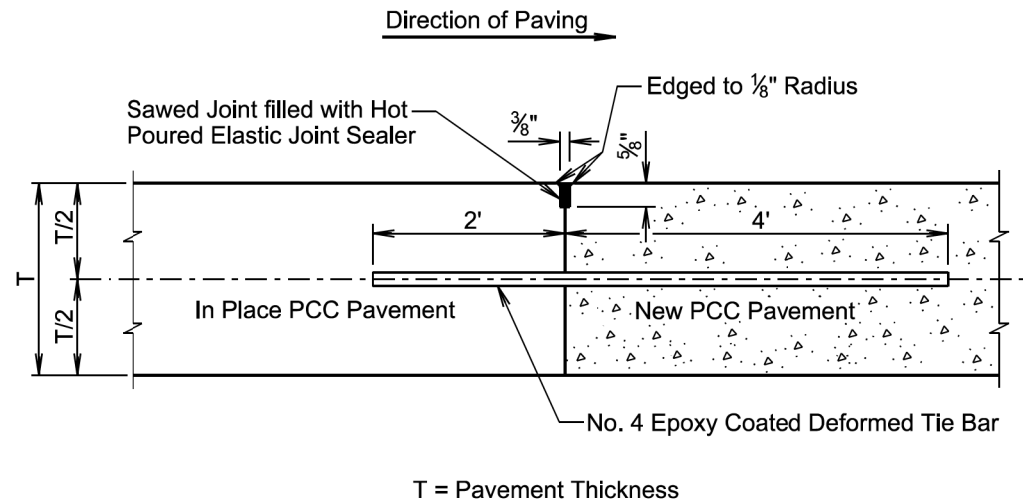
GENERAL NOTES:

The first saw cut to control cracking will be a minimum of 1/4 the thickness of the pavement. Additional sawing for widening the saw cut to provide the width for the installation of the low modulus silicone joint sealant will be necessary.

The backer rod will be a non-moisture absorbing resilient material approximately 25% larger in diameter than the width of the joint to be sealed.

November 19, 2022

Published Date: 2027	S D D O T	PCC PAVEMENT BEVELED TRANSVERSE CONTRACTION JOINT WITH OR WITHOUT DOWEL BAR ASSEMBLY	PLATE NUMBER 380.13
			Sheet 1 of 1



T = Pavement Thickness

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.

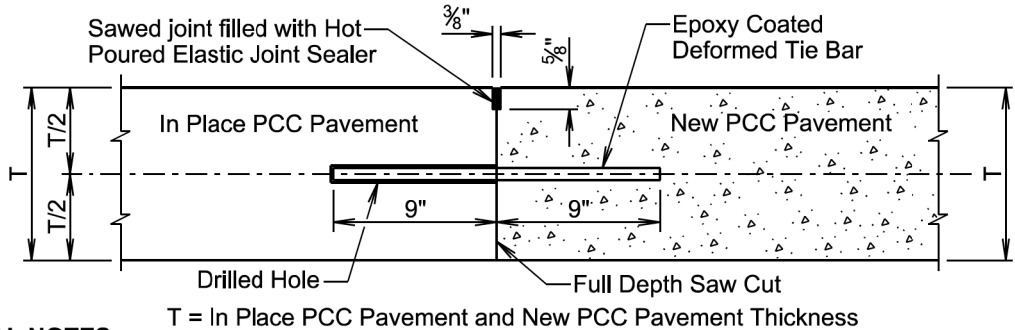
When a transverse construction joint is made, paving will not be allowed in this area for 12 hours.

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

March 31, 2024

Published Date: 2027	S D D O T	PCC PAVEMENT MID PANEL TRANSVERSE CONSTRUCTION JOINT	PLATE NUMBER 380.14
			Sheet 1 of 1

DETAIL A
TRANSVERSE CONSTRUCTION JOINT WITH TIE BARS



GENERAL NOTES:

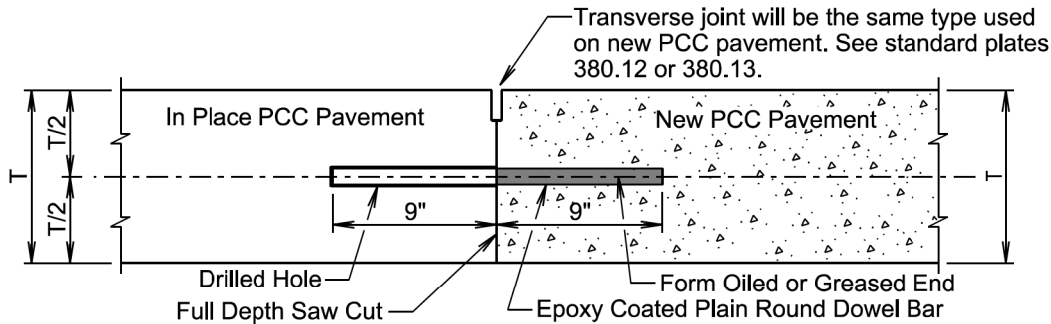
The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on a previous project.

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



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

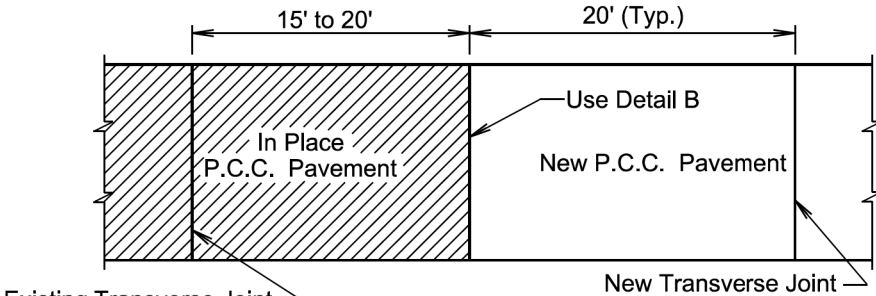
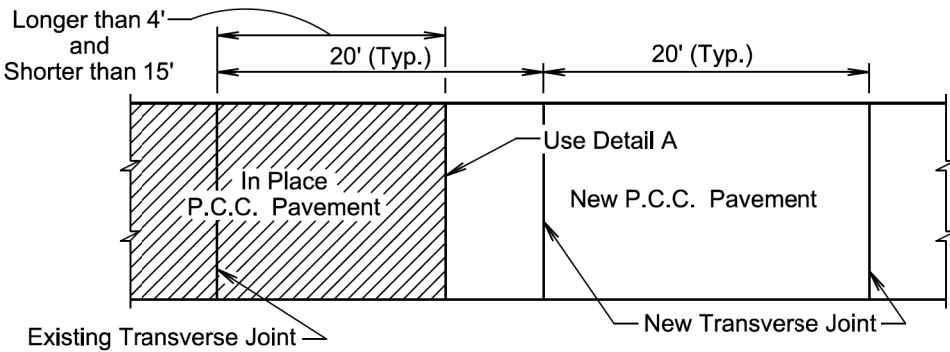
Published Date: 2027

**S
D
D
O
T**

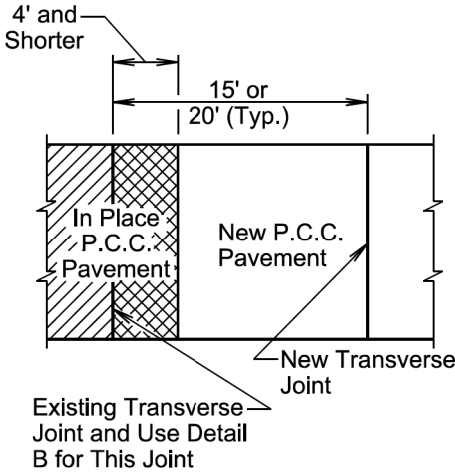
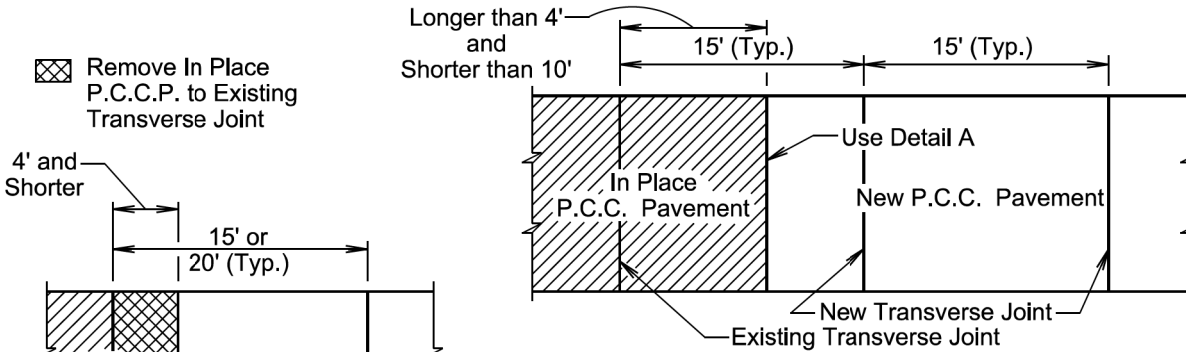
**PCC PAVEMENT TRANSVERSE CONSTRUCTION
JOINTS WITH TIE BARS OR DOWEL BARS**

PLATE NUMBER
380.15

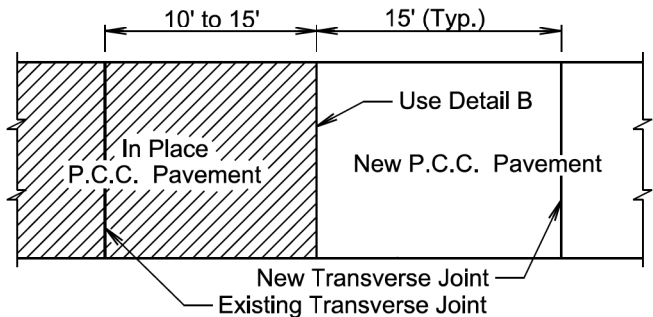
Sheet 1 of 2



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

Published Date: 2027

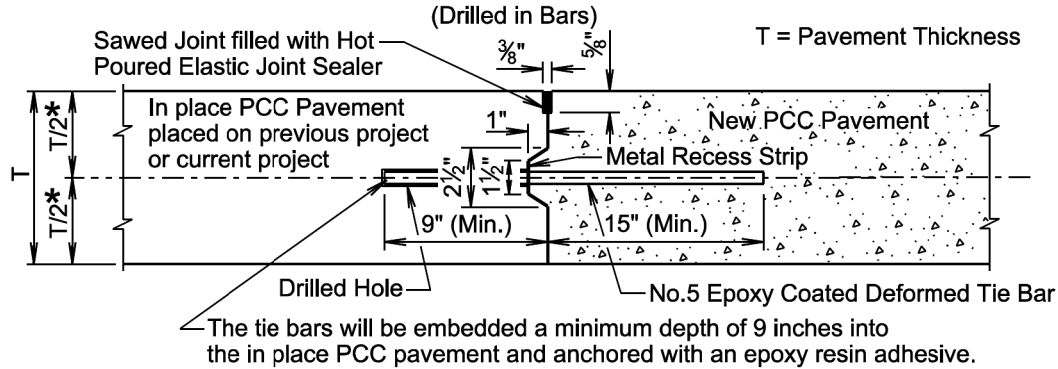
**S
D
D
O
T**

**PCC PAVEMENT TRANSVERSE CONSTRUCTION
JOINTS WITH TIE BARS OR DOWEL BARS**

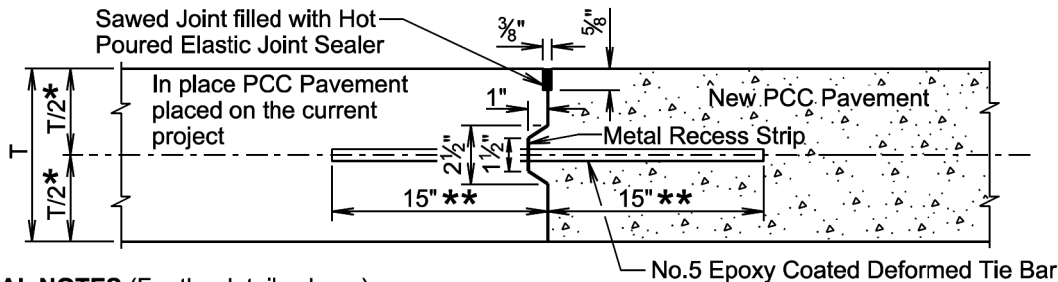
PLATE NUMBER
380.15

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.

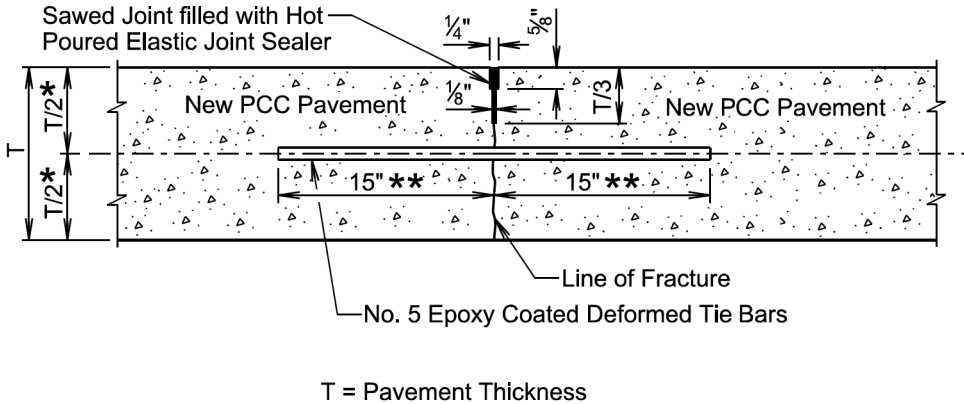
* The vertical placement tolerance for any part of the tie bar will be $\pm T/6$.

** The transverse placement (side shift) tolerance will be ± 3 inches when measured perpendicular to the longitudinal joint line.

November 19, 2022

Published Date: 2027	S D D O T	PCC PAVEMENT LONGITUDINAL JOINTS WITH TIE BARS	PLATE NUMBER 380.20
			Sheet 1 of 2

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.

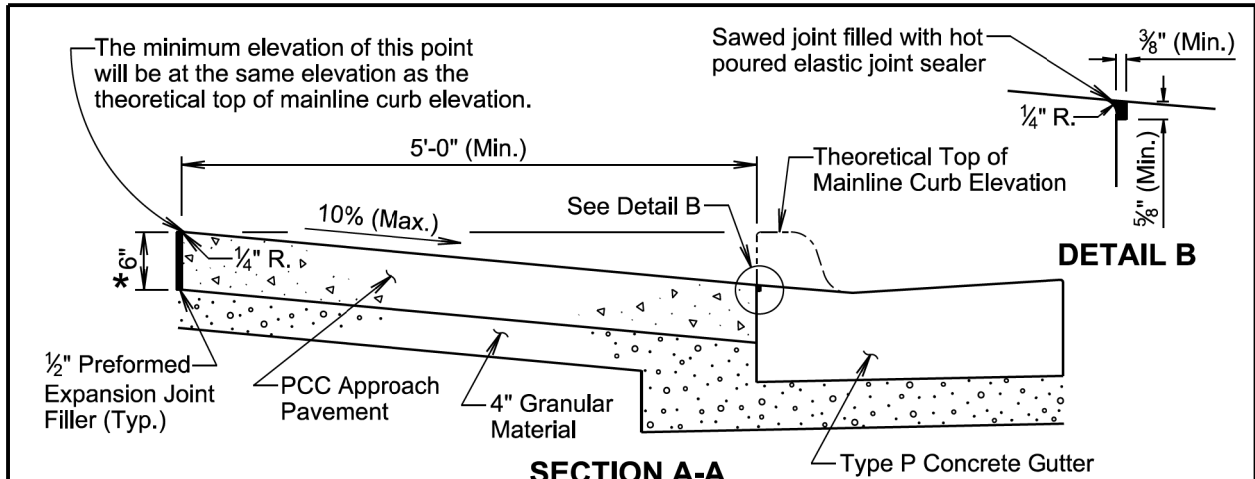
The first saw cut to control cracking will be a minimum of 1/3 the thickness of the pavement. Additional sawing for widening the saw cut to provide the width for the installation of the hot poured elastic joint sealer is necessary.

* The vertical placement tolerance for any part of the tie bar will be $\pm T/6$.

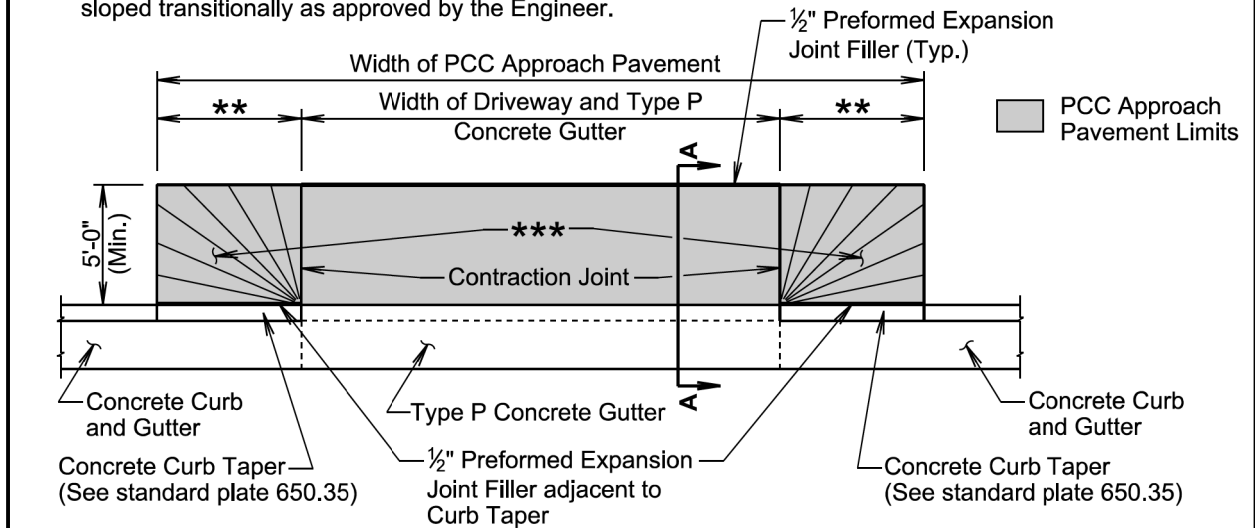
** The transverse placement (side shift) tolerance will be ± 3 inches when measured perpendicular to the longitudinal joint line.

November 19, 2022

Published Date: 2027	S D D O T	PCC PAVEMENT LONGITUDINAL JOINTS WITH TIE BARS	PLATE NUMBER 380.20
			Sheet 2 of 2



- * 8" at Commercial Approaches
- ** Width for 6" high curb is 6' (See standard plate 650.35)
- *** Within these areas, the surface of the type A PCC approach pavement will be sloped transitionally as approved by the Engineer.



GENERAL NOTES:

The concrete for the type A PCC approach pavement and adjacent driveway will comply with the requirements of the Specifications for class M6 concrete unless otherwise stated in the plans.

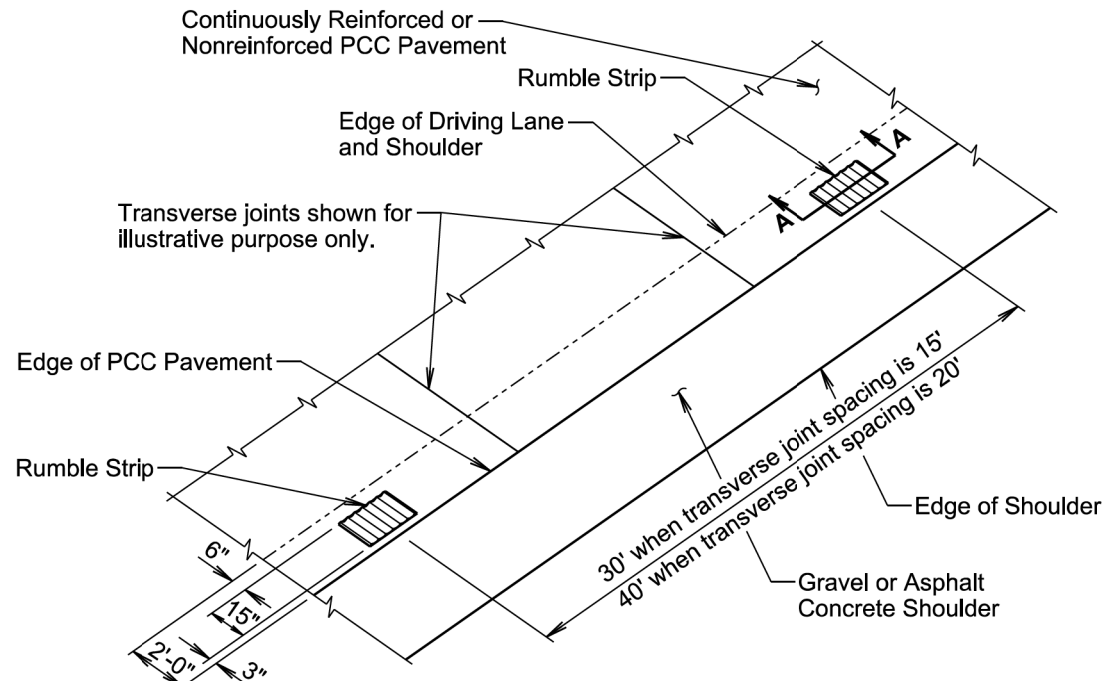
Contraction joints in the type A PCC approach pavement will be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least ¼ the thickness of the approach pavement. Additional contraction joints not shown in the Plan View will be spaced as follows:

- One joint at the center of the approach for driveways 16 feet to 24 feet wide.
- Two joints spaced at equal intervals for driveways greater than 24 feet to 40 feet wide.

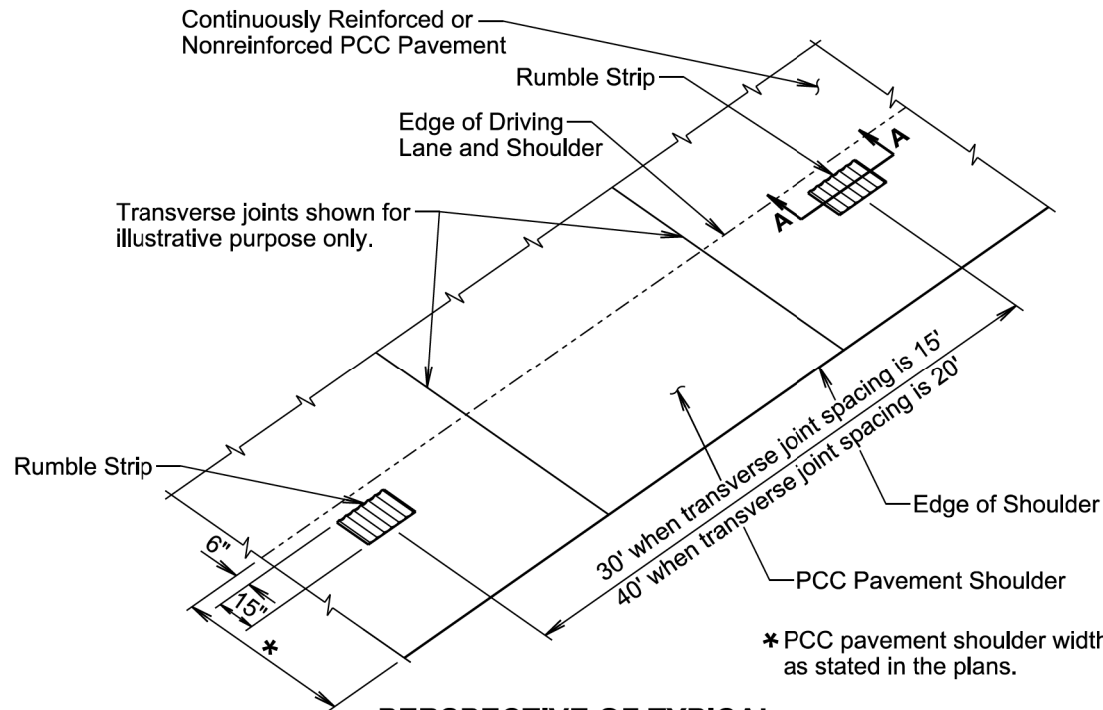
All costs for furnishing and placing the type A PCC approach pavement and constructing the expansion and contraction joints including labor, equipment, excavation, and materials including the earthen backfill and granular material, will be incidental to the contract unit price per square yard for the corresponding PCC Approach Pavement contract item.

April 17, 2026

Published Date: 2027	S D D O T	TYPE A PCC APPROACH PAVEMENT	PLATE NUMBER 380.40
			Sheet 1 of 1



PERSPECTIVE OF TYPICAL RUMBLE STRIPS ON PCC PAVEMENT SHOULDER ADJACENT TO GRAVEL OR ASPHALT CONCRETE SHOULDER



PERSPECTIVE OF TYPICAL RUMBLE STRIPS ON PCC PAVEMENT SHOULDER

November 19, 2022

Published Date: 2027	S D D O T	RUMBLE STRIP ON PCC PAVEMENT SHOULDER	PLATE NUMBER 380.53
			Sheet 1 of 2

