STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193 P 0025(100)196	1	233

Plotting Date: 08/25/2025

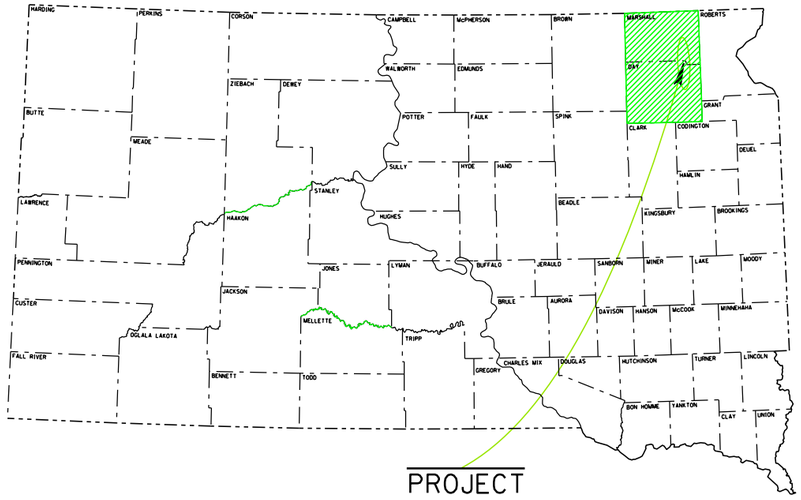
Revised: 04/30/2025 RTS

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
PROJECT
P 0025(103)193 & P 0025(100)196
SD HIGHWAY 25
DAY & MARSHALL COUNTIES

ASPHALT CONCRETE RESURFACING, PIPE WORK,
GRADING, ASPHALT CONCRETE SURFACING

PCN 08GH & 08D6

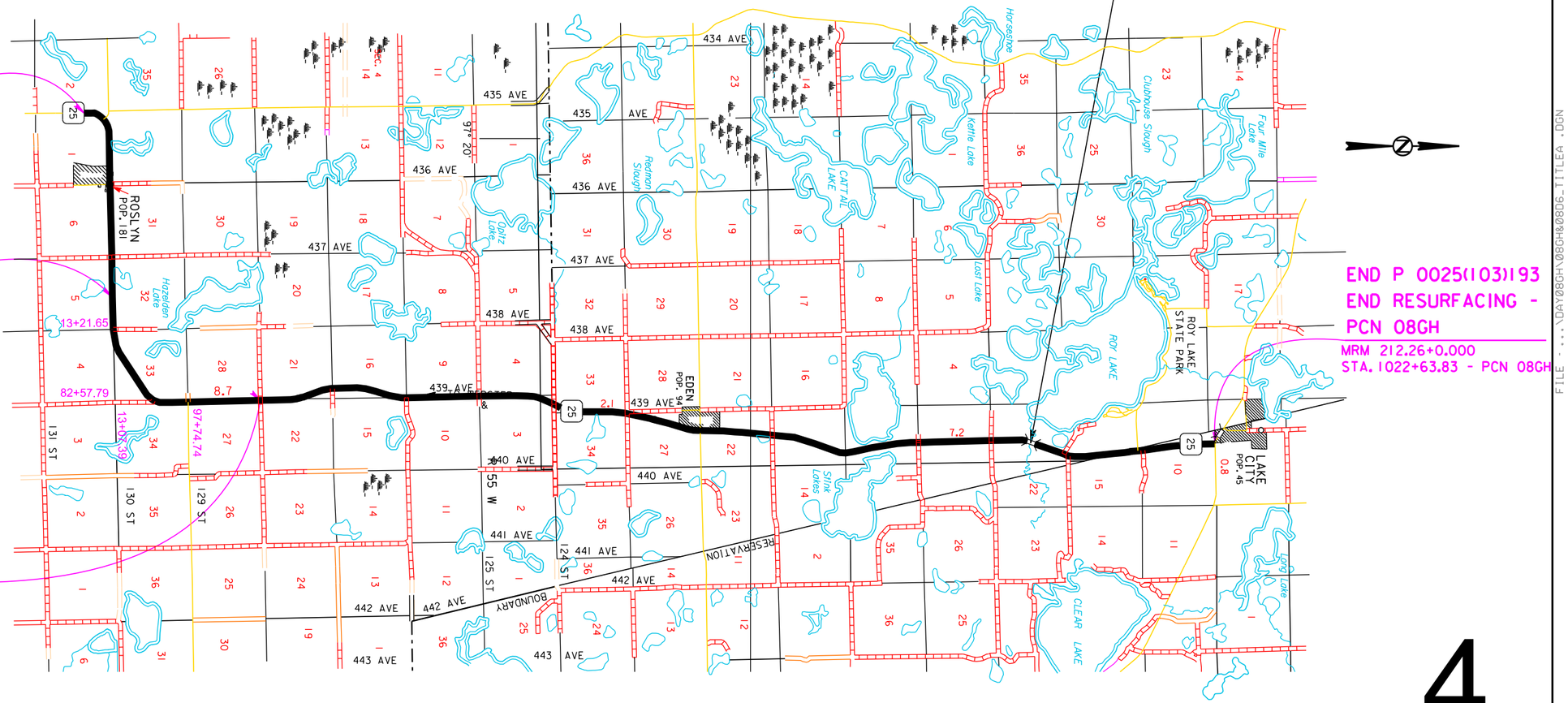


BEGIN P 0025(103)193
BEGIN RESURFACING - PCN 08GH
MRM 193.00+0.035
STA. 10+00 - PCN 08GH

BEGIN P 0025(100)196
BEGIN GRADING (PCN 08D6)
MRM 196.0+0.219
STA. 9+00 - PCN 08D6 =
STA. 177+03.57 - PCN 08GH

END P 0025(100)196
END GRADING (PCN 08D6)
MRM 198.0+0.300
STA. 115+00 - PCN 08D6 =
STA. 283+03.57 - PCN 08GH

STR. NO. 46-276-174
MRM 209.70
Sta. 886+41.43 to Sta. 887+46.66



END P 0025(103)193
END RESURFACING -
PCN 08GH
MRM 212.26+0.000
STA. 1022+63.83 - PCN 08GH

4

November 18, 2026

PLOT SCALE - 1.0000' / IN
PLOTTED FROM - TRPR13462
PLOT NAME - 1
FILE - ...\DAY\08GH\08GH&08D6_TITLEA.DGN

ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193 P 0025(100)196	2	233

Revised: 10-23-2026 LLA

08GH Section C - Traffic Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	1,320.0	Hour
634E0020	Pilot Car	500.0	Hour
634E0110	Traffic Control Signs	563.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0630	Temporary Pavement Marking	76.6	Mile
634E1002	Detour and Restriction Signing	1,824.0	SqFt

08GH Section D - Erosion and Sediment Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	4.0	CuYd
110E1693	Remove Erosion Control Wattle	438	Ft
230E0100	Remove and Replace Topsoil	Lump Sum	LS
730E0100	Cover Crop Seeding	25.0	Bu
730E0212	Type G Permanent Seed Mixture	670	Lb
731E0200	Fertilizing	12.90	Ton
732E0100	Mulching	51.6	Ton
734E0044	Soil Stabilizer	4.0	Acre
734E0154	12" Diameter Erosion Control Wattle	1,750	Ft
734E0165	Remove and Reset Erosion Control Wattle	438	Ft
734E0602	Low Flow Silt Fence	3,500	Ft
734E0604	High Flow Silt Fence	1,000	Ft
734E0610	Mucking Silt Fence	312	CuYd
734E0620	Repair Silt Fence	1,125	Ft
900E1320	Construction Entrance	2	Each

INDEX OF SHEETS

A1	08GH Estimate of Quantities for Sections C, D, F and M
A2 to A3	08D6 Estimate of Quantities for Sections B, C, D, F and S

08GH Section F - Surfacing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E4200	Construction Schedule, Category II	Lump Sum	LS
110E0500	Remove Pipe Culvert	7	Ft
110E0510	Remove Pipe End Section	16	Each
110E0595	Remove Cattle Pass End Section	2	Each
110E0730	Remove Beam Guardrail	525.0	Ft
110E1010	Remove Asphalt Concrete Pavement	1,286.0	SqYd
110E6300	Remove Rubrail for Reset	40.0	Ft
110E7500	Remove Pipe for Reset	296	Ft
110E7510	Remove Pipe End Section for Reset	38	Each
120E0100	Unclassified Excavation, Digouts	858	CuYd
120E0600	Contractor Furnished Borrow Excavation	760	CuYd
120E4100	Reprofiling Ditch	5.0	Sta
120E6100	Water for Embankment	9.9	MGal
120E6200	Water for Granular Material	95.8	MGal
260E1010	Base Course	8,211.1	Ton
320E0033	PG 58V-34 Asphalt Binder	3,180.4	Ton
320E1002	Class Q2 Hot Mixed Asphalt Concrete	55,140.6	Ton
320E1200	Asphalt Concrete Composite	834.0	Ton
320E4000	Hydrated Lime	541.0	Ton
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	37.6	Mile
320E7028	Grind Centerline Rumble Stripe in Asphalt Concrete	16.7	Mile
320E7030	Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete	2.5	Mile
320E7040	Grind 6" Transverse Rumble Strip in Asphalt Concrete	476.0	Ft
330E0010	MC-70 Asphalt for Prime	15.1	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	248.1	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	85.0	Ton
330E1000	Blotting Sand for Prime	56.7	Ton
330E2000	Sand for Flush Seal	1,051.9	Ton
332E0010	Cold Milling Asphalt Concrete	820	SqYd
450E0142	24" RCP Class 2, Furnish	6	Ft
450E0150	24" RCP, Install	6	Ft
450E2008	18" RCP Flared End, Furnish	11	Each
450E2009	18" RCP Flared End, Install	11	Each
450E2016	24" RCP Flared End, Furnish	4	Each
450E2017	24" RCP Flared End, Install	4	Each
450E5310	24" CMP Sloped End, Furnish	1	Each
450E5311	24" CMP Sloped End, Install	1	Each
450E9000	Reset Pipe	296	Ft
450E9001	Reset Pipe End Section	38	Each
462E0250	Cellular Grout	42.0	CuYd

08GH Section F – Surfacing - Continued

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
600E0300	Type III Field Laboratory	1	Each
630E0500	Type 1 MGS	100.0	Ft
630E1010	Straight Class A W Beam Guardrail with Wood Posts	50.0	Ft
630E1050	Straight Class B W Beam Guardrail with Wood Posts	50.0	Ft
630E1150	Straight Double Class B W Beam Guardrail with Wood Posts	50.0	Ft
630E2005	W Beam Guardrail to MGS Transition	4	Each
630E2018	MGS MASH Tangent End Terminal	4	Each
630E5220	Reset Rubrail	40.0	Ft
632E2220	Guardrail Delineator	18	Each
671E7010	Adjust Manhole	5	Each
700E0210	Class B Riprap	410.0	Ton
900E0010	Refurbish Single Mailbox	10	Each
900E1980	Storage Unit	1	Each

08GH Section M - Pavement Marking

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E1200	High Build Waterborne Pavement Marking Paint, White	864	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	541	Gal
633E1262	High Build Waterborne Pavement Marking Paint, 24" Yellow	212	Ft
633E1272	High Build Waterborne Pavement Marking Paint, Arrow	3	Each
633E5115	Grooving for Durable Pavement Marking, 24"	212	Ft
633E5125	Grooving for Durable Pavement Marking, Arrow	3	Each

ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193 P 0025(100)196	3	233

Revised: 10-23-2026 LLA

08D6 Section B - Grading

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	5	Each
009E3225	Reestablish Public Land Survey System Corner	33	Each
009E3230	Grade Staking	2.008	Mile
009E3245	Final Cross Section Survey	2.008	Mile
009E3250	Miscellaneous Staking	2.008	Mile
009E3280	Slope Staking	2.008	Mile
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E4200	Construction Schedule, Category II	Lump Sum	LS
110E0600	Remove Fence	3,800	Ft
110E1020	Remove Asphalt Concrete Pavement	715.6	CuYd
120E0010	Unclassified Excavation	190,048	CuYd
120E0600	Contractor Furnished Borrow Excavation	39,802	CuYd
120E1000	Muck Excavation	27,936	CuYd
120E2000	Undercutting	20,122	CuYd
120E6100	Water for Embankment	1,933.8	MGal
120E7000	Select Granular Backfill	1,294.7	Ton
250E0020	Incidental Work, Grading	Lump Sum	LS
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	30,652.3	Ton
450E0142	24" RCP Class 2, Furnish	278	Ft
450E0143	24" RCP Class 3, Furnish	66	Ft
450E0150	24" RCP, Install	344	Ft
450E2200	24" RCP Sloped End, Furnish	6	Each
450E2201	24" RCP Sloped End, Install	6	Each
450E4759	18" CMP 16 Gauge, Furnish	170	Ft
450E4760	18" CMP, Install	170	Ft
450E4768	24" CMP 14 Gauge, Furnish	170	Ft
450E4769	24" CMP 16 Gauge, Furnish	204	Ft
450E4770	24" CMP, Install	374	Ft
450E4779	30" CMP 16 Gauge, Furnish	122	Ft
450E4780	30" CMP, Install	122	Ft
450E4798	42" CMP 14 Gauge, Furnish	274	Ft
450E4800	42" CMP, Install	274	Ft
450E4808	48" CMP 14 Gauge, Furnish	102	Ft
450E4810	48" CMP, Install	102	Ft
450E4818	54" CMP 14 Gauge, Furnish	94	Ft
450E4820	54" CMP, Install	94	Ft
450E5227	42" CMP Flared End, Furnish	6	Each
450E5228	42" CMP Flared End, Install	6	Each
450E5231	48" CMP Flared End, Furnish	2	Each
450E5232	48" CMP Flared End, Install	2	Each
450E5235	54" CMP Flared End, Furnish	2	Each

08D6 Section B – Grading – Continued

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
450E5236	54" CMP Flared End, Install	2	Each
450E5310	24" CMP Sloped End, Furnish	2	Each
450E5311	24" CMP Sloped End, Install	2	Each
450E5406	18" CMP Safety End, Furnish	4	Each
450E5407	18" CMP Safety End, Install	4	Each
450E5410	24" CMP Safety End, Furnish	6	Each
450E5411	24" CMP Safety End, Install	6	Each
450E5414	30" CMP Safety End, Furnish	4	Each
450E5417	30" CMP Safety End, Install	4	Each
620E0020	Type 2 Right-of-Way Fence	3,847	Ft
620E0515	Type 1A Temporary Fence	2,674	Ft
620E1020	2 Post Panel	5	Each
620E1030	3 Post Panel	6	Each
700E0110	Class A Riprap	15,502.8	Ton
831E0110	Type B Drainage Fabric	18,364	SqYd
831E1010	Geogrid Reinforcement	1,405	SqYd
900E0010	Refurbish Single Mailbox	2	Each

08D6 Section C - Traffic Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1010	Remove Asphalt Concrete Pavement	280.0	SqYd
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	42	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	630	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	390	Gal
634E0010	Flagging	60.0	Hour
634E0020	Pilot Car	20.0	Hour
634E0110	Traffic Control Signs	925.9	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	35	Each
634E0630	Temporary Pavement Marking	4.0	Mile
634E1002	Detour and Restriction Signing	3,081.9	SqFt

08D6 Section D - Erosion and Sediment Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	0.5	CuYd
110E1700	Remove Silt Fence	649	Ft
230E0010	Placing Topsoil	18,638	CuYd
730E0100	Cover Crop Seeding	17.0	Bu
730E0212	Type G Permanent Seed Mixture	451	Lb
731E0200	Fertilizing	17.30	Ton
732E0100	Mulching	69.3	Ton
734E0103	Type 3 Erosion Control Blanket	2,674	SqYd
734E0104	Type 4 Erosion Control Blanket	1,449	SqYd
734E0154	12" Diameter Erosion Control Wattle	250	Ft
734E0165	Remove and Reset Erosion Control Wattle	63	Ft
734E0602	Low Flow Silt Fence	1,955	Ft
734E0604	High Flow Silt Fence	640	Ft
734E0610	Mucking Silt Fence	180	CuYd
734E0620	Repair Silt Fence	649	Ft
734E0630	Floating Silt Curtain	6,847	Ft
734E0635	Remove and Reset Floating Silt Curtain	1,712	Ft
734E5010	Sweeping	10	Hour
900E1320	Construction Entrance	2	Each

08D6 Section F - Surfacing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3320	Checker	Lump Sum	LS
120E6200	Water for Granular Material	386.9	MGal
260E1010	Base Course	2,000.0	Ton
260E1030	Base Course, Salvaged	30,243.4	Ton
320E0033	PG 58V-34 Asphalt Binder	366.5	Ton
320E1002	Class Q2 Hot Mixed Asphalt Concrete	6,392.7	Ton
320E1200	Asphalt Concrete Composite	325.0	Ton
320E4000	Hydrated Lime	62.0	Ton
330E0010	MC-70 Asphalt for Prime	58.5	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	12.2	Ton
330E1000	Blotting Sand for Prime	150.5	Ton

ESTIMATE OF QUANTITIES

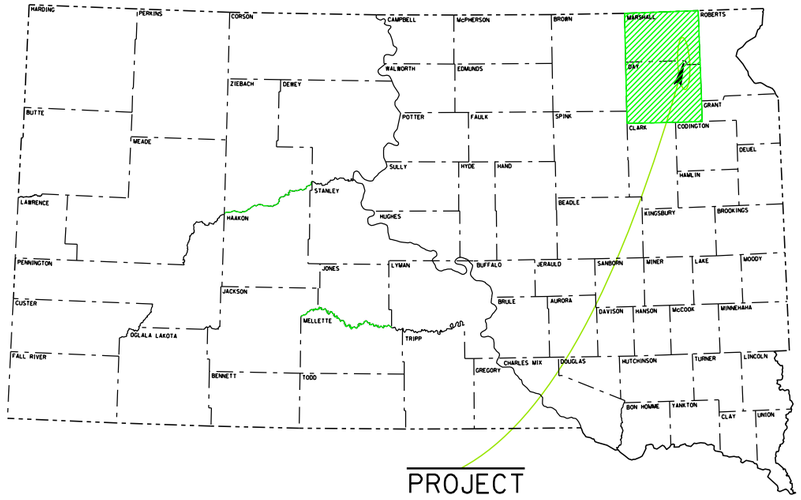
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193 P 0025(100)196	4	233

Revised: 08-27-2025 LLA

08D6 Section S – Permanent Signing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0130	Remove Traffic Sign	18	Each
110E7150	Remove Sign for Reset	6	Each
632E1320	2.0"x2.0" Perforated Tube Post	363.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	65.0	Ft
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	8	Each
632E2510	Type 2 Object Marker Back to Back	52	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	52.4	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	129.8	SqFt
632E3500	Reset Sign	6	Each

PLOT SCALE = 1.0000'/IN



STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

PROJECT
P 0025(103)193
SD HIGHWAY 25
DAY & MARSHALL COUNTIES

ASPHALT CONCRETE RESURFACING, PIPE WORK
PCN 08GH

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	1	95

Plotting Date: 08/25/2025

Revised: 04/30/2025 RTS

INDEX OF SECTIONS

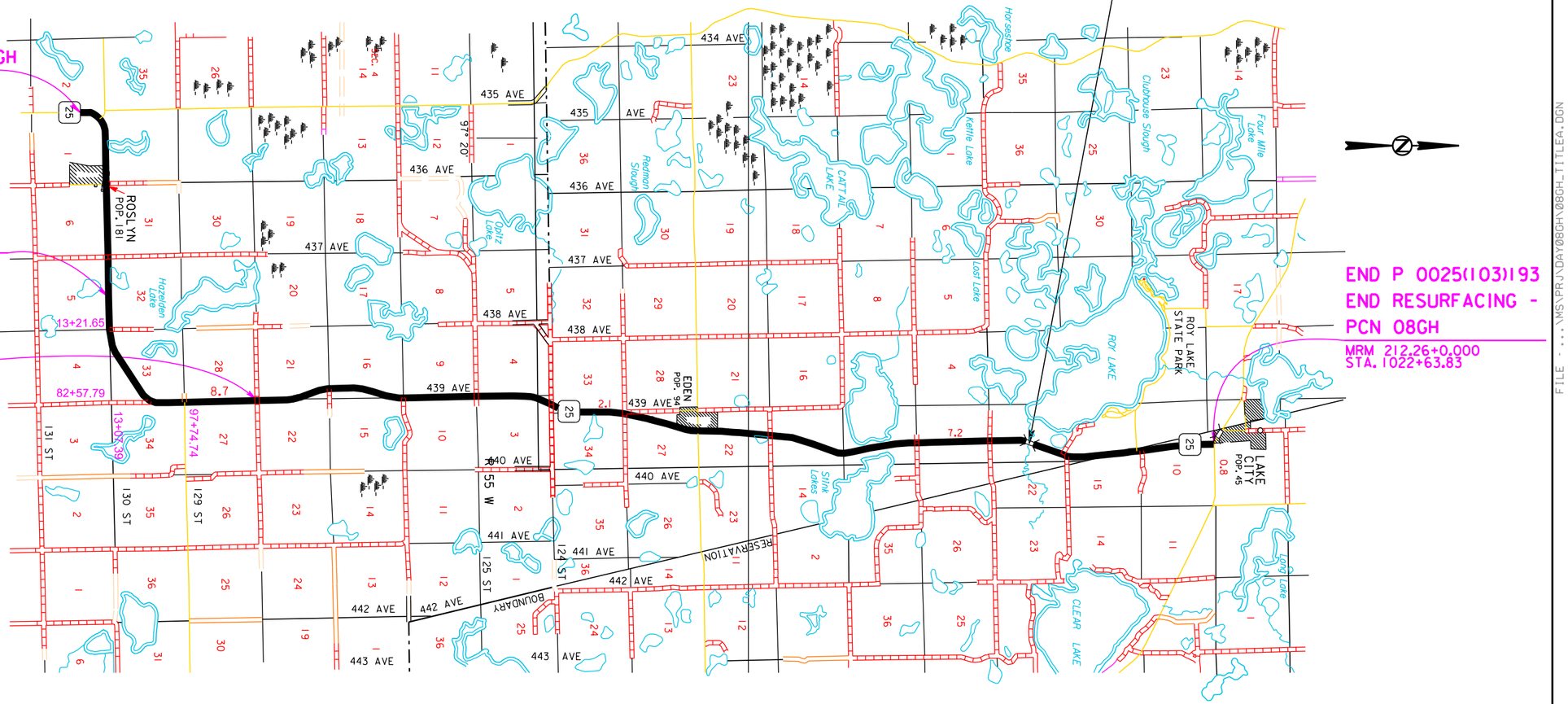
Section A: Estimate of Quantities and Environmental Commitments
Section C: Traffic Control Plans
Section D: Erosion and Sediment Control Plans
Section F: Surfacing Plans
Section M: Pavement Marking Plans

STR. NO. 46-276-174
MRM 209.70
Sta. 886+41.43 to Sta. 887+46.66

BEGIN P 0025(103)193
BEGIN RESURFACING - PCN 08GH
MRM 193.00+0.035
STA. 10+00

BEGIN GRADING (PCN 08D6)
MRM 196.0+0.219
STA. 9+00 - PCN 08D6 =
STA. 177+03.57 - PCN 08GH

END GRADING (PCN 08D6)
MRM 198.0+0.300
STA. 115+00 - PCN 08D6 =
STA. 283+03.57 - PCN 08GH



END P 0025(103)193
END RESURFACING - PCN 08GH
MRM 212.26+0.000
STA. 1022+63.83

DESIGN DESIGNATION SD HWY 25

ADT (2023)	610
ADT (2043)	846
DHV	94
D	50%
T DHV	11.6%
T ADT	25.5%
V	70 MPH

STORM WATER PERMIT

MAJOR STREAM - Tributaries to:
Roy Lake

ACRES DISTURBED - 25 Acres

PROJECT AREA - 101 Acres

LATITUDE = 45.4947 (Google Maps)

LONGITUDE = -97.5099 (Google Maps)

SD HIGHWAY 25

GROSS LENGTH	101,263.83 FEET	19.179 MILES
LENGTH OF EXCEPTIONS	105.23 FEET	0.020 MILES
NET LENGTH	101,158.60 FEET	19.159 MILES

PLOTTED FROM - TRPR13462

PLOT NAME - 1

FILE - ...\MS\PRJ\DAY08GH\08GH_TITLEA.DGN

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	A1	A4

Revised: 10-23-2026 LLA

Section C - Traffic Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	1,320.0	Hour
634E0020	Pilot Car	500.0	Hour
634E0110	Traffic Control Signs	563.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0630	Temporary Pavement Marking	76.6	Mile
634E1002	Detour and Restriction Signing	1,824.0	SqFt

Section D - Erosion and Sediment Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	4.0	CuYd
110E1693	Remove Erosion Control Wattle	438	Ft
230E0100	Remove and Replace Topsoil	Lump Sum	LS
730E0100	Cover Crop Seeding	25.0	Bu
730E0212	Type G Permanent Seed Mixture	670	Lb
731E0200	Fertilizing	12.90	Ton
732E0100	Mulching	51.6	Ton
734E0044	Soil Stabilizer	4.0	Acre
734E0154	12" Diameter Erosion Control Wattle	1,750	Ft
734E0165	Remove and Reset Erosion Control Wattle	438	Ft
734E0602	Low Flow Silt Fence	3,500	Ft
734E0604	High Flow Silt Fence	1,000	Ft
734E0610	Mucking Silt Fence	312	CuYd
734E0620	Repair Silt Fence	1,125	Ft
900E1320	Construction Entrance	2	Each

INDEX OF SHEETS

A1	Estimate of Quantities for Sections C, D, F and M
A2 to A4	Environmental Commitments

Section F - Surfacing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E4200	Construction Schedule, Category II	Lump Sum	LS
110E0500	Remove Pipe Culvert	7	Ft
110E0510	Remove Pipe End Section	16	Each
110E0595	Remove Cattle Pass End Section	2	Each
110E0730	Remove Beam Guardrail	525.0	Ft
110E1010	Remove Asphalt Concrete Pavement	1,286.0	SqYd
110E6300	Remove Rubrail for Reset	40.0	Ft
110E7500	Remove Pipe for Reset	296	Ft
110E7510	Remove Pipe End Section for Reset	38	Each
120E0100	Unclassified Excavation, Digouts	858	CuYd
120E0600	Contractor Furnished Borrow Excavation	760	CuYd
120E4100	Reprofiling Ditch	5.0	Sta
120E6100	Water for Embankment	9.9	MGal
120E6200	Water for Granular Material	95.8	MGal
260E1010	Base Course	8,211.1	Ton
320E0033	PG 58V-34 Asphalt Binder	3,180.4	Ton
320E1002	Class Q2 Hot Mixed Asphalt Concrete	55,140.6	Ton
320E1200	Asphalt Concrete Composite	834.0	Ton
320E4000	Hydrated Lime	541.0	Ton
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	37.6	Mile
320E7028	Grind Centerline Rumble Stripe in Asphalt Concrete	16.7	Mile
320E7030	Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete	2.5	Mile
320E7040	Grind 6" Transverse Rumble Strip in Asphalt Concrete	476.0	Ft
330E0010	MC-70 Asphalt for Prime	15.1	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	248.1	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	85.0	Ton
330E1000	Blotting Sand for Prime	56.7	Ton
330E2000	Sand for Flush Seal	1,051.9	Ton
332E0010	Cold Milling Asphalt Concrete	820	SqYd
450E0142	24" RCP Class 2, Furnish	6	Ft
450E0150	24" RCP, Install	6	Ft
450E2008	18" RCP Flared End, Furnish	11	Each
450E2009	18" RCP Flared End, Install	11	Each
450E2016	24" RCP Flared End, Furnish	4	Each
450E2017	24" RCP Flared End, Install	4	Each
450E5310	24" CMP Sloped End, Furnish	1	Each
450E5311	24" CMP Sloped End, Install	1	Each
450E9000	Reset Pipe	296	Ft
450E9001	Reset Pipe End Section	38	Each
462E0250	Cellular Grout	42.0	CuYd

Section F – Surfacing - Continued

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
600E0300	Type III Field Laboratory	1	Each
630E0500	Type 1 MGS	100.0	Ft
630E1010	Straight Class A W Beam Guardrail with Wood Posts	50.0	Ft
630E1050	Straight Class B W Beam Guardrail with Wood Posts	50.0	Ft
630E1150	Straight Double Class B W Beam Guardrail with Wood Posts	50.0	Ft
630E2005	W Beam Guardrail to MGS Transition	4	Each
630E2018	MGS MASH Tangent End Terminal	4	Each
630E5220	Reset Rubrail	40.0	Ft
632E2220	Guardrail Delineator	18	Each
671E7010	Adjust Manhole	5	Each
700E0210	Class B Riprap	410.0	Ton
900E0010	Refurbish Single Mailbox	10	Each
900E1980	Storage Unit	1	Each

Section M - Pavement Marking

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E1200	High Build Waterborne Pavement Marking Paint, White	864	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	541	Gal
633E1262	High Build Waterborne Pavement Marking Paint, 24" Yellow	212	Ft
633E1272	High Build Waterborne Pavement Marking Paint, Arrow	3	Each
633E5115	Grooving for Durable Pavement Marking, 24"	212	Ft
633E5125	Grooving for Durable Pavement Marking, Arrow	3	Each

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	A2	A4

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/media/3677d319/EnvironmentalProceduresManual.pdf>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT A: AQUATIC RESOURCES

COMMITMENT A1: WETLANDS

All efforts to avoid and minimize wetland impacts from the project have resulted in approximately 9.66 acres of wetlands (includes temporary and permanent) becoming impacted. Refer to Section B – Grading Plans for location and boundaries of the impacted wetlands.

Table of Impacted Wetlands

Wetland No.	Station	Perm. Impact Left (Acres)	Perm. Impact Right (Acres)	Temp. Impact Left (Acres)	Temp. Impact Right (Acres)	Total Impact (Acres)
Pipework	51+95.93 to 1014+73.83	0.000	0.000	0.022	0.020	0.042

Action Taken/Required:

Wetland mitigation for PCNs 08D6 and 08GH will happen as one action. SDDOT will acquire 22.22 credits from the Ducks Unlimited SD ILF wetland mitigation bank site to mitigate permanent impacts for both PCN 08D6 and 08GH.

Temporary impacts identified in the Table of Impacted Wetlands will not be mitigated as original contours and elevations will be re-established as designated in Section B – Grading Plans. Prior to initiating temporary work in wetlands, the Contractor will submit a plan to the Project Engineer in accordance with Section 7.21 D of the Specifications.

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:
< https://sdleastwanted.sd.gov/maps/default.aspx >

< South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species: https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04 >

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COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

This project may be in the vicinity of multiple streams and wetlands. These waters are considered waters of the state and are protected under Administrative Rules of South Dakota (ARSD) Chapter 74:51. Special construction measures may have to be taken to ensure that this water body is not impacted.

Action Taken/Required:

The Contractor is advised that the South Dakota Surface Water Quality Standards, administered by the South Dakota Department of Agriculture and Natural Resources (DANR), apply to this project. Special construction measures will be taken to ensure the above standard(s) of the surface waters are maintained and protected.

COMMITMENT D2: SURFACE WATER DISCHARGE

The DANR General Permit for Temporary Discharge is required for temporary dewatering and discharges to waters of the state. The effluent limit for total suspended solids will be 90 mg/L 30-day average. The effluent limit applies to discharges to all waters of the state except discharges to waters classified as cold water permanent fish life propagation waters according to the ARSD 74:51:01:45. For discharges to waters of the state classified as cold water permanent fish life propagation waters, the effluent limit for total suspended solids will be 53 mg/L daily maximum.

The permittee has the option of completing effluent testing or implementing a pollution prevention plan for compliance with this permit. If the permittee develops a pollution prevention plan instead of total suspended solids sampling, the plan must be developed and implemented prior to discontinuing total suspended solids sampling. Refer to Section 4.0 of the permit. If any pollutants are suspected of being discharged, a sample must be taken for those parameters listed in Section 3.4 of the permit.

Refer to Commitment D1: Surface Water Quality for stream classification.

Action Taken/Required:

If construction dewatering is required and this project is currently covered under a General Permit for Stormwater Discharges Associated with Construction Activities, the contractor will need to submit the dewatering information to the SDDANR using the following form:

< https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_AddTempInfoFillable.pdf >

The Contractor will provide a copy of the approved permit or the submitted dewatering information to the Project Engineer prior to proceeding with any dewatering activities. The approved permit or submitted dewatering information must be kept on-site and as part of the project records.

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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COMMITMENT D2: SURFACE WATER DISCHARGE - CONTINUED

Action Taken/Required:

Effluent monitoring, as a result of dewatering activities, will be summarized for each month and recorded on a separate Discharge Monitoring Report (DMR) and submitted to DANR monthly. Additional information can be found at:
< https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/swdpermitting/Ereporting.aspx >

COMMITMENT E: STORM WATER

Construction activities constitute 1 acre or more of earth disturbance and/or work in a waterway.

Action Taken/Required:

The DANR General Permit for Stormwater Discharges Associated with Construction Activities is required for construction activity disturbing one or more acres of earth and work in a waterway. One storm water permit will be obtained covering both PCNs 08D6 and 08GH. The SDDOT is the owner of this permit and will submit the NOI to DANR 15 days prior to project start in order to obtain coverage under the General Permit. Work can begin once the DANR letter of approval is received.

The Contractor must adhere to the "Special Provision Regarding Storm Water Discharges to Waters of the State."

The Contractor will complete the DANR Contractor Certification Form prior to the pre-construction meeting. The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the permit for this project. Work may not begin on this project until this form is signed and submitted to DANR.

The form can be found at:
< https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_CGPAppendixCCA2023Fillable.pdf > >

The Contractor is advised that permit coverage may also be required for off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

Storm Water Pollution Prevention Plan

The Storm Water Pollution Prevention Plan (SWPPP) will be developed prior to the submittal of the NOI and will be implemented for all construction activities for compliance with the permit. The SWPPP must be kept on-site and updated as site conditions change. Erosion control measures and best management practices will be implemented in accordance with the SWPPP.

The DOT 298 Form will be used for site inspections and to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents and retained for a minimum of three years.

The inspection will include disturbed areas of the construction site that have not been finally stabilized, areas used for storage materials, structural control measures, and locations where vehicles enter or exit the site. These areas will be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the SWPPP will be observed to ensure that they are operating correctly, and sediment is not tracked off the site.

Information on storm water permits and SWPPPs are available on the following websites:

SDDOT: < https://dot.sd.gov/doing-business/environmental/stormwater >

DANR:< https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/stormwater/default.aspx >

EPA: < https://www.epa.gov/npdes >

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Agriculture and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, "No Dumping Allowed".

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

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The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.
Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 150 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES - CONTINUED

Action Taken/Required:

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

COMMITMENT N: SECTION 404 PERMIT

The SDDOT has obtained a Section 404 Permit from the USACE for the permanent actions associated with this project. The 404 permit covers both PCNs 08D6 and 08GH.

Action Taken/Required:

The Contractor will comply with all requirements contained in the Section 404 Permit.

The Contractor will also be responsible for obtaining a Section 404 Permit for any dredge, excavation, or fill activities associated with material sources, storage areas, waste sites, and Contractor work sites outside the plan work limits that affect wetlands, floodplains, or waters of the United States.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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Plotting Date: 02/20/2025

Section C: Traffic Control Plans

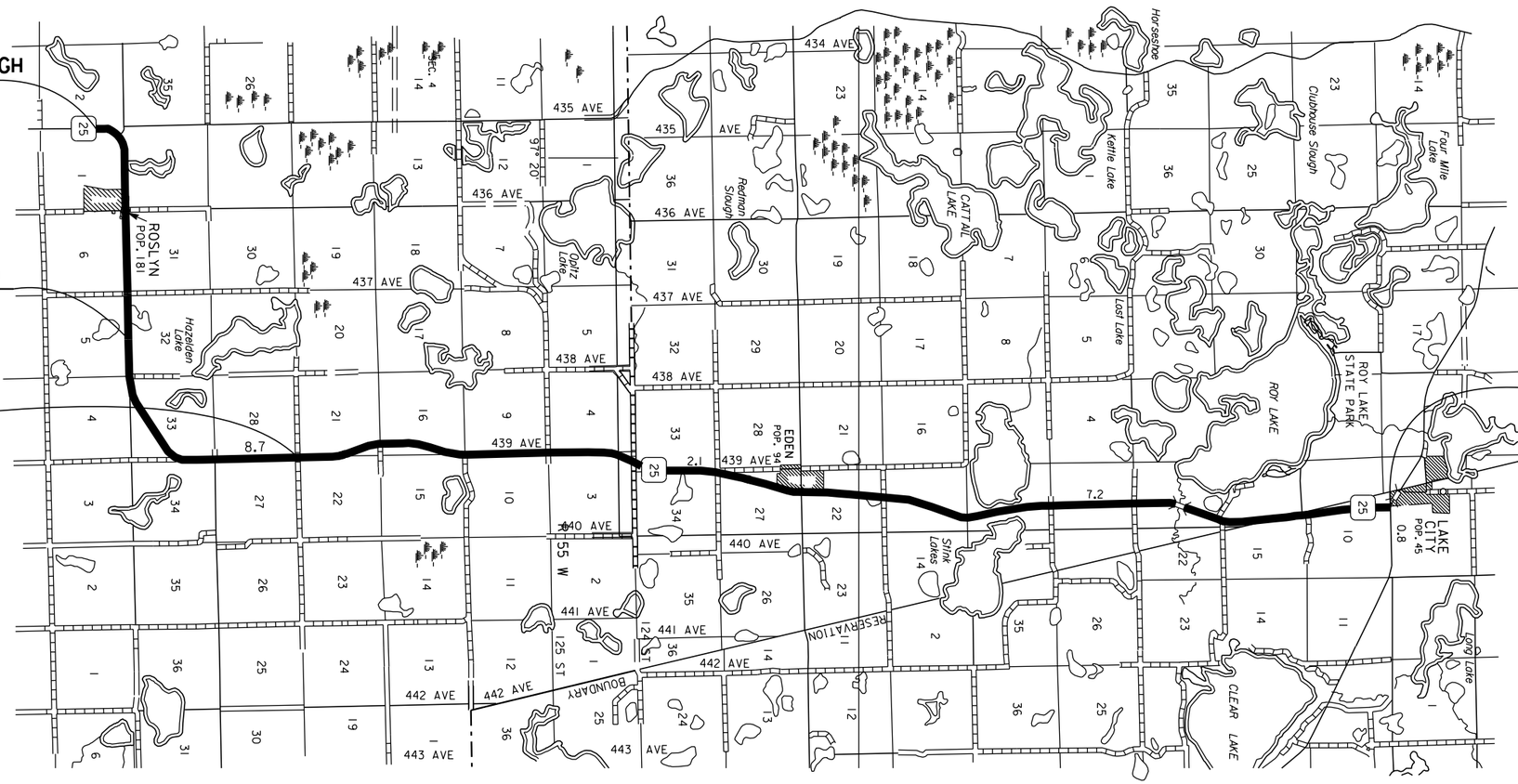
INDEX OF SHEETS

C1	General Layout with Index
C2 - C3	Estimate of Quantities, Notes
C4	Fixed Location Sign Layout
C5 - C7	Overwidth Sign Layout & Design
C8	Table of TC Signing
C9	Temp Pavement Marking Guides
C10 - C13	Standard Plates

BEGIN P 0025(103)193
BEGIN RESURFACING - PCN 08GH
MRM 193.00+0.035
STA. 10+00

BEGIN GRADING (PCN 08D6)
MRM 196.0+0.219
STA. 9+00 - PCN 08D6 =
STA. 177+03.57 - PCN 08GH

END GRADING (PCN 08D6)
MRM 198.0+0.300
STA. 115+00 - PCN 08D6 =
STA. 283+03.57 - PCN 08GH



END P 0025(103)193
END RESURFACING -
PCN 08GH
MRM 212.26+0.000
STA. 1022+63.83

SECTION C ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	1,320.0	Hour
634E0020	Pilot Car	500.0	Hour
634E0110	Traffic Control Signs	563.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0630	Temporary Pavement Marking	76.6	Mile
634E1002	Detour and Restriction Signing	1,824.0	SqFt

SEQUENCE OF OPERATIONS

Contractor requests to deviate from the sequence of operations will be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

1. Install overwidth restriction & fixed location construction signing.
2. Install erosion control BMPs.
3. Complete culvert work.
4. Replace topsoil, seed, apply final erosion BMPs for culvert work.
5. Pave asphalt concrete.
6. Grind rumble strips.
7. Flush seal.
8. Install permanent pavement markings.
9. Final cleanup, remove construction signing.

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, signposts, and breakaway bases will be removed within 7 calendar days following pavement marking.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

At no time will a vertical drop-off of greater than 3 inches be left overnight adjacent to the traveled way. The Contractor will utilize embankment material to ensure a 3-inch vertical drop-off is not exceeded. The slope of the embankment material will not be steeper than a 4:1 within 30 feet of the traveled way.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

The Contractor will furnish, install, maintain, and remove TRUCK CROSSING (W8-6) signs daily. The TRUCK CROSSING signs will be displayed always when haul vehicles are hauling material. When hauling conditions no longer exist, the signs will be covered or removed from view. The exact number and location will be determined during construction. Payment for additional signs will be based on the contract unit price per square foot for "Traffic Control Signs".

Included the Itemized list for Traffic Control Signs table is (W8-1) BUMP signs to used at areas were cold mill transitions occur as deemed necessary by the Engineer.

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

A mobile work operation will be allowed provided the rumble strip or rumble stripe grooving, flush sealing, and pavement marking can be completed satisfactorily by a continuously moving work operation. A mobile work operation will require approval by the Engineer.

OVERWIDTH RESTRICTION SIGNING

The Contractor will furnish and install the overwidth restriction signs as shown in these plans. Prior to installing the signs, the Contractor will mark the sign locations and review them with the Engineer. Overwidth restriction signs will be installed on fixed location, ground mounted, breakaway supports. It will be the responsibility of the Contractor to maintain and reinstall these signs during the project as required by the construction progress. Overwidth restrictions signs will only be in place during the paving operations phase of the project. Upon completion of the paving operations, the Contractor will remove the overwidth restriction signs.

All costs for furnishing the signs, posts, and mounting hardware, and for installing, maintaining, covering, and removing the overwidth restriction signs will be incidental to the contract unit price per square foot for "Detour and Restriction Signing".

FLAGGING

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

Additional flagger warning signs and flagger hours have been included in the Estimate of Quantities for use on intersecting roads. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours. Also included in the Estimate of Quantities are WAIT FOLLOW PILOT CAR signs for use on low volume intersecting roads as determined by the Engineer. WAIT FOLLOW PILOT CAR signs will not block the view of the stop sign.



It is required that the flaggers and pilot car operators be able to communicate with one another. If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for "Flagging".

TEMPORARY PAVEMENT MARKING

The total length of no passing zone on this project is estimated to be 9.1 miles.

It is estimated that 56 DO NOT PASS (R4-1) and 56 PASS WITH CARE (R4-2) signs will be required to mark the no passing zones, should the Contractor elect to use these signs.

Temporary Pavement Marking Paint will be used on leveling surfaces for centerlines, lane lines, skips, and as directed by the Engineer. The Temporary Pavement Marking Paint will be placed at the location of the existing pavement markings except that centerline will be double yellow the entire project length and will be offset 6-inches from centerline of the roadway. It will be the Contractor's responsibility to determine which direction to offset so that the markings do not get covered up when the first half of the roadway is paved. Any markings that get covered by the paving operation will be reestablished as directed by the Engineer at the Contractor's expense. The Contractor will be responsible for marking out those exact locations.

Temporary Flexible Vertical Markers (Tabs) will be used on the top lift of asphalt surfacing for centerline delineation, lane lines, skips, and as directed by the Engineer.

Temporary flexible vertical markers (tabs) will be installed on one side of the centerline rumble for the temporary pavement marking. No passing zones will be marked in accordance with Specifications. DO NOT PASS (R4-1) and PASS WITH CARE (R4-2) signs will also be used in addition to the temporary flexible vertical markers (tabs) placed per Specifications to mark no passing zones.

Temporary pavement marking paint will not be allowed on the final lift of asphalt surfacing. Temporary pavement marking paint will not be allowed on the flush seal. Temporary flexible vertical markers (tabs) must be used on the final lift of asphalt surfacing. The Contractor may use tabs with covers, uncovering them for the flush seal. As an alternative, the Contractor may install new tabs for the flush seal.

Covers on the tabs will be sufficiently secured to prevent traffic from dislodging the cover and when removed, the covers will be properly disposed of. The Contractor will remove and properly dispose of the tabs after permanent pavement marking is applied. Method of removal will be nondestructive to the road surface and will be accomplished within one week of completion of the permanent pavement marking.

Full reflectivity of all temporary flexible vertical markers (tabs) is required at all times. The Contractor will be required to replace any missing or non-reflective tabs after each installation as detailed below at no additional cost to the State.

Quantities of Temporary Pavement Markings consist of:

One pass on the leveling lift of asphalt concrete
One pass on top of the final lift of asphalt concrete
One pass prior to the flush seal, length as determined by the Engineer
One pass after the flush seal

If the Engineer determines that an additional pass prior to the flush seal is not required, this application of the temporary pavement marking will be eliminated. If the flush seal is eliminated for the project, the application of the temporary pavement marking on top of the flush seal as well as the additional pass prior to the flush seal will be eliminated.

No adjustment in the contract unit price for "Temporary Pavement Marking" will be made because of a variation in quantities.

In the absence of a signed lane closure or pilot car operation, FLAGGER (W20-7) symbol signs and flaggers, or a shadow vehicle with rotating yellow lights or strobe lights will be positioned on the shoulder in advance of workers for both directions of traffic during the installation and removal of the temporary flexible vertical markers (tabs). The traffic control device used will be moved intermittently to provide proper warning of the work operation. A ROAD WORK AHEAD (W20-1) sign, a WORKER (W21-1) symbol sign or a BE PREPARED TO STOP (W3-4) sign will be mounted on the rear of the shadow vehicle. The method of traffic control used by the Contractor for this work must be approved by the Engineer.

Prior to nightfall, tabs will be required to mark centerline on segments of roadway where existing centerline markings have been removed and new markings have not been installed.

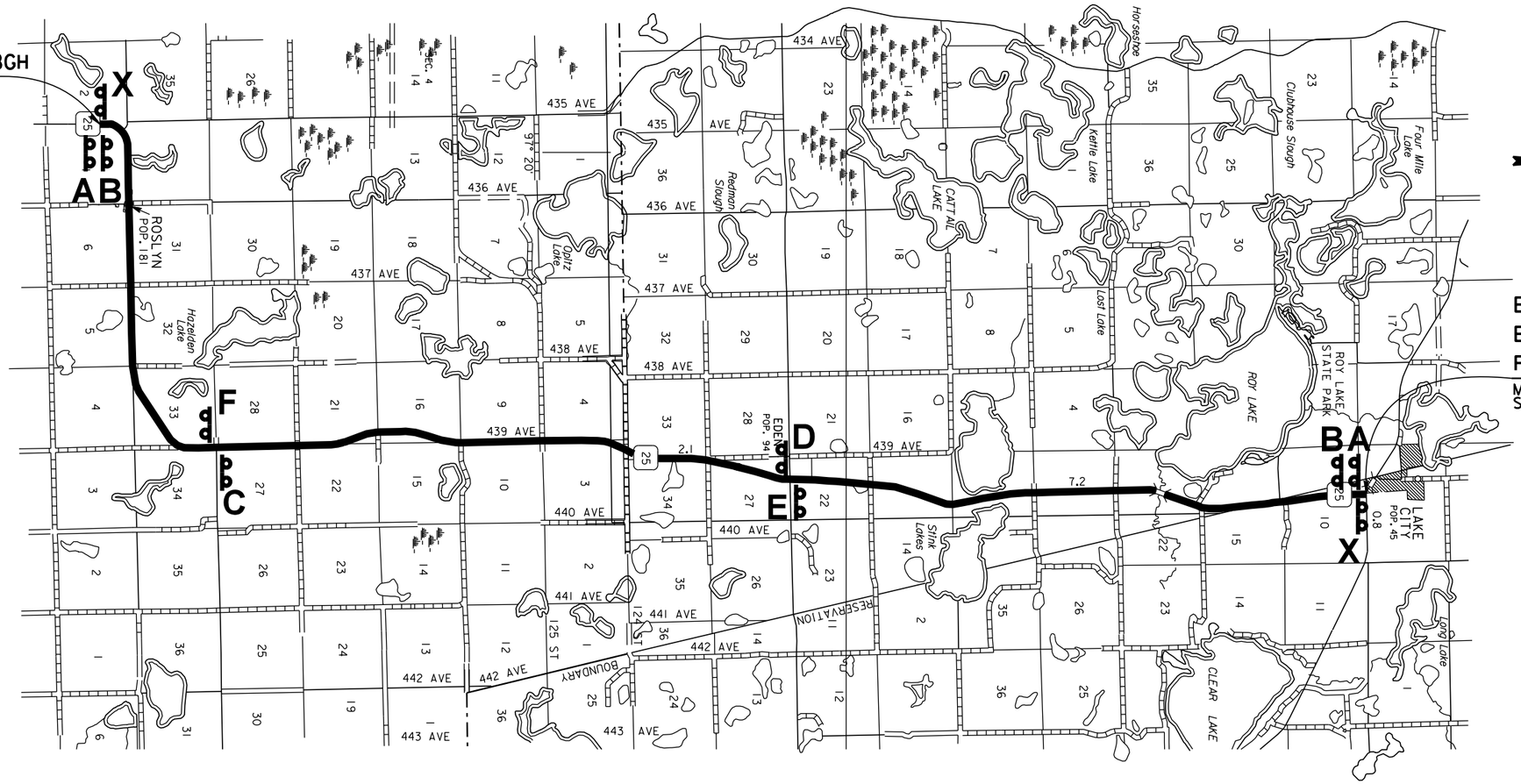
PRESS RELEASE ANNOUNCEMENTS

The SDDOT will prepare a press release to be released 5 days prior to any phase change or any other major change that affects traffic flow. The SDDOT will be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. The Contractor will provide the Engineer with pertinent information 7 days prior to any phase change or any other major change that affects traffic flow.

FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(103)193	C4	C13
Plotting Date: 02/20/2025			

BEGIN P 0025(103)193
BEGIN RESURFACING - PCN 08GH
MRM 193.00+0.035
STA. 10+00



END P 0025(103)193
END RESURFACING - PCN 08GH
MRM 212.26+0.000
STA. 1022+63.83

A



B

ROAD WORK NEXT 19 MILES
G20-1

C

ROAD WORK NEXT 15 MILES
G20-1

D

ROAD WORK NEXT 12 MILES
G20-1

E

ROAD WORK NEXT 7 MILES
G20-1

F

ROAD WORK NEXT 4 MILES
G20-1

X

END ROAD WORK
G20-2



W20-1 ROAD WORK AHEAD signs will be mounted on portable supports, and will be placed on intersecting roadways as directed by the Engineer. ROAD WORK AHEAD signs will be moved as necessary to keep current with the work activities.

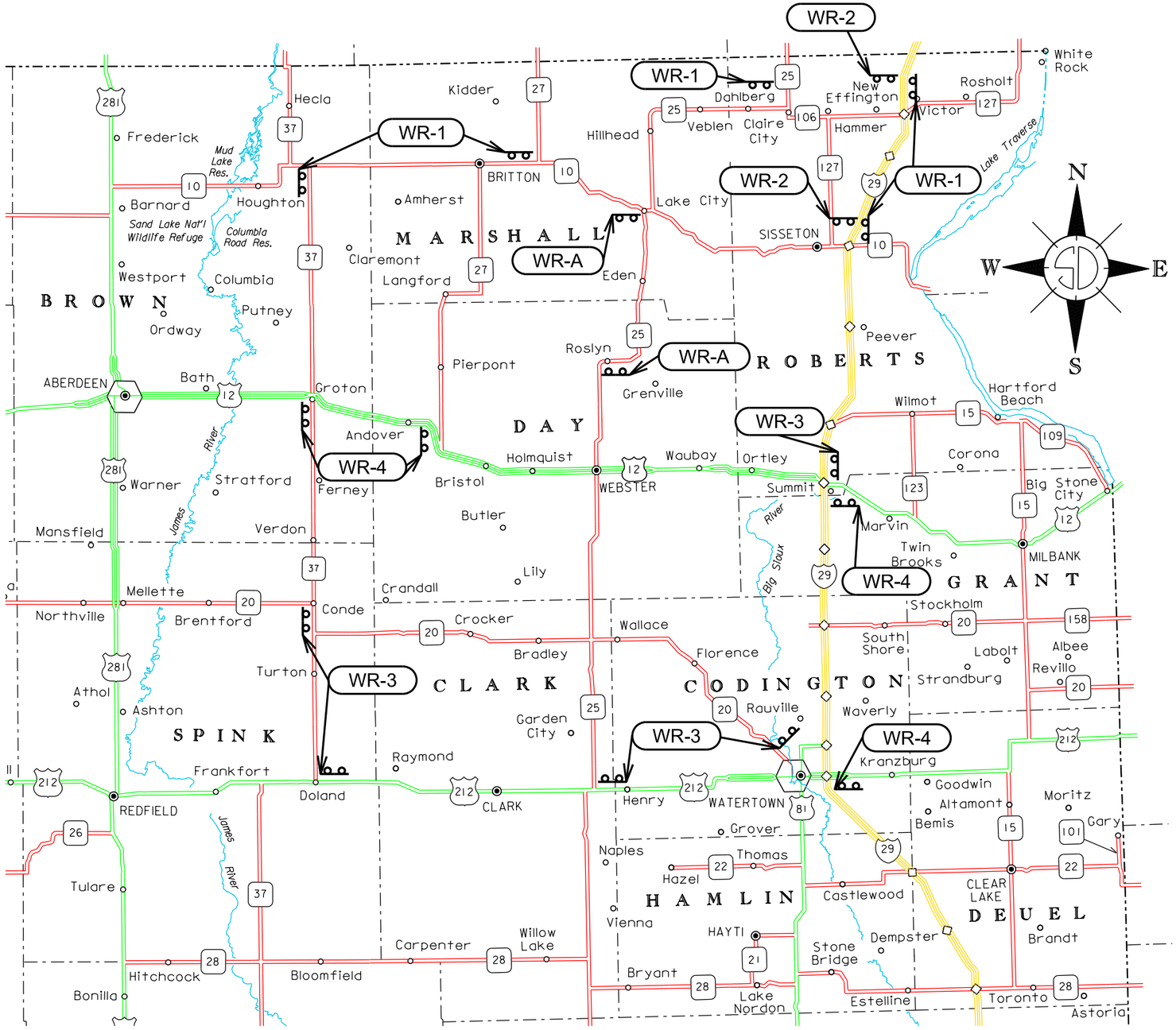
EXACT LOCATION OF SIGNS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

PLOT SCALE - 1.8599.5
PLOTTED FROM - TRAB12222
PLOT NAME - 2
FILE - ...\DAY08GH\08GH_FIXED SIGNING.DGN

OVERWIDTH SIGN LAYOUT

(FIXED LOCATION GROUND MOUNTED, BREAKAWAY SUPPORTS)

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(103)193	C5	C13
Plotting Date: 02/20/2025			



WR-1

WIDTH RESTRICTION
12 FT MAX
25
LAKE CITY TO ROSLYN
USE ALT ROUTE

WR-2

WIDTH RESTRICTION
12 FT MAX
25
LAKE CITY TO ROSLYN
USE ALT ROUTE

WR-3

WIDTH RESTRICTION
12 FT MAX
25
ROSLYN TO LAKE CITY
USE ALT ROUTE

WR-4

WIDTH RESTRICTION
12 FT MAX
25
ROSLYN TO LAKE CITY
USE ALT ROUTE

WR-A

NO VEHICLES OVER 12 FT WIDE

PLOT SCALE - 1:64000

PLOTTED FROM - TRAB12222

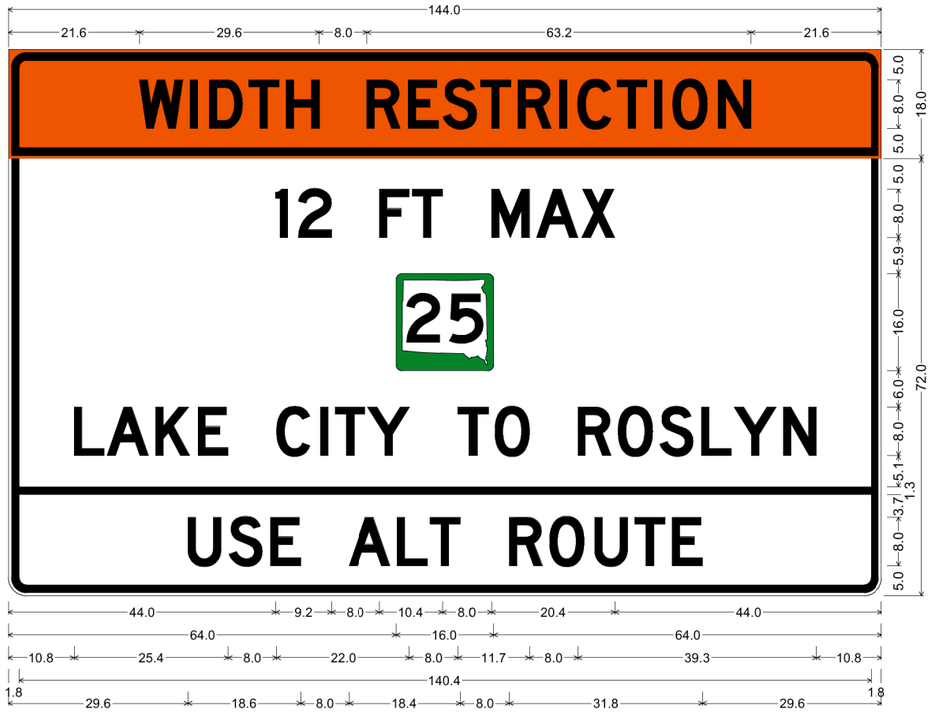
PLOT NAME - 3

FILE - ...\06GH_OVERWIDTH SIGNING.DGN

OVERWIDTH SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(103)193	C6	C13
Plotting Date: 02/20/2025			

WR-1

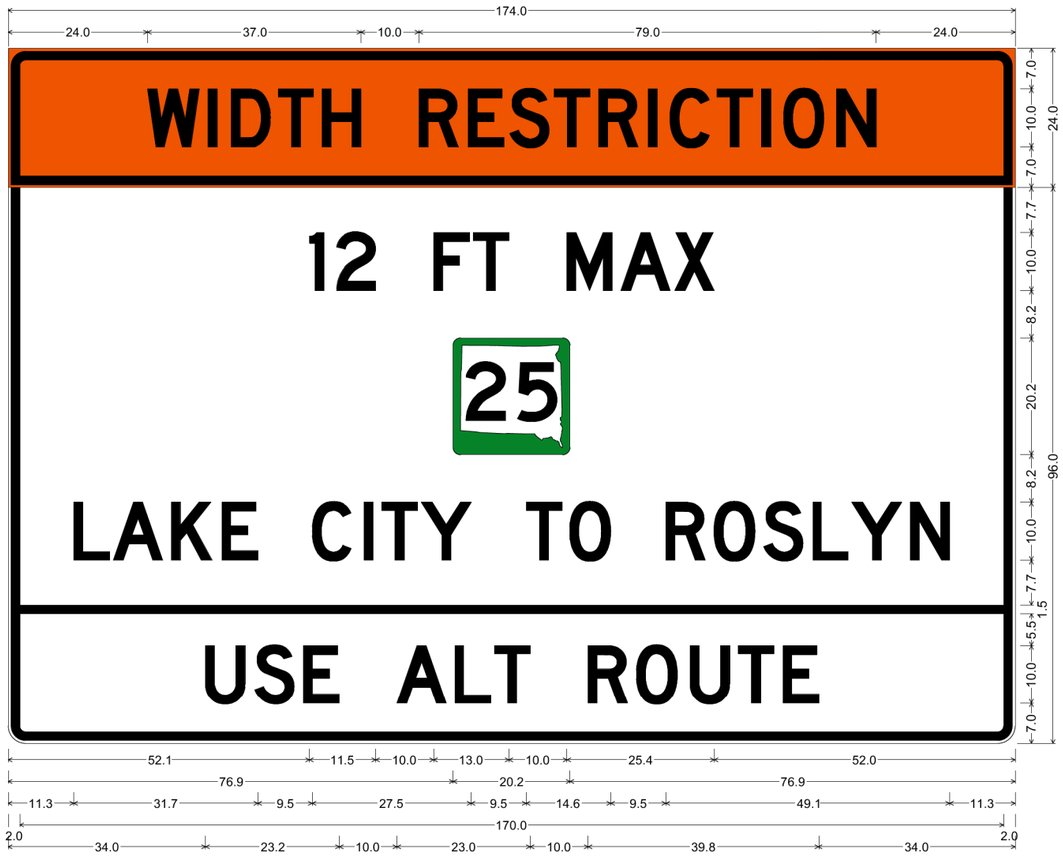


3.0" Radius, 1.3" Border, 0.5" Indent, Black on Orange;
"WIDTH RESTRICTION", D 2K;

3.0" Radius, 1.3" Border, 0.5" Indent, Black on White;
"12 FT MAX", D 2K; "LAKE CITY TO ROSLYN", D 2K; "USE ALT ROUTE", D 2K;
Table of letter and object lefts

W	I	D	T	H	R	E	S	T	R	I	C	T	I	O	N	
21.6	29.9	33.1	39.6	45.8	59.2	66.0	71.8	77.8	84.0	90.8	93.8	100.3	106.5	109.5	117.0	
1	2	F	T	M	A	X										
44.0	47.8	61.2	66.7	79.6	87.1	94.5										
25																
64.0																
L	A	K	E	C	I	T	Y	T	O	R	O	S	L	Y	N	
10.8	16.3	24.3	31.2	44.2	51.4	53.9	59.3	74.2	80.2	93.9	100.5	107.4	114.2	119.6	127.7	
—																
1.8																
U	S	E	A	L	T	R	O	U	T	E						
29.6	36.4	43.2	56.2	64.2	69.6	82.6	89.2	96.6	103.3	109.4						

WR-2



3.0" Radius, 1.5" Border, 0.5" Indent, Black on Orange;
"WIDTH RESTRICTION", D 2K;

3.0" Radius, 1.5" Border, 0.5" Indent, Black on White;
"12 FT MAX", D 2K; "LAKE CITY TO ROSLYN", D 2K; "USE ALT ROUTE", D 2K;
Table of letter and object lefts

W	I	D	T	H	R	E	S	T	R	I	C	T	I	O	N	
24.0	34.4	38.4	46.5	54.2	71.0	79.5	86.7	94.3	102.0	110.5	114.3	122.4	130.1	133.9	143.2	
1	2	F	T	M	A	X										
52.1	56.8	73.6	80.4	96.6	105.9	115.2										
25																
76.9																
L	A	K	E	C	I	T	Y	T	O	R	O	S	L	Y	N	
11.3	18.1	28.1	36.8	52.5	61.5	64.6	71.4	89.5	97.0	113.6	121.9	130.5	139.0	145.8	155.9	
—																
2.0																
U	S	E	A	L	T	R	O	U	T	E						
34.0	42.5	51.0	67.2	77.2	84.0	100.2	108.5	117.8	126.1	133.8						

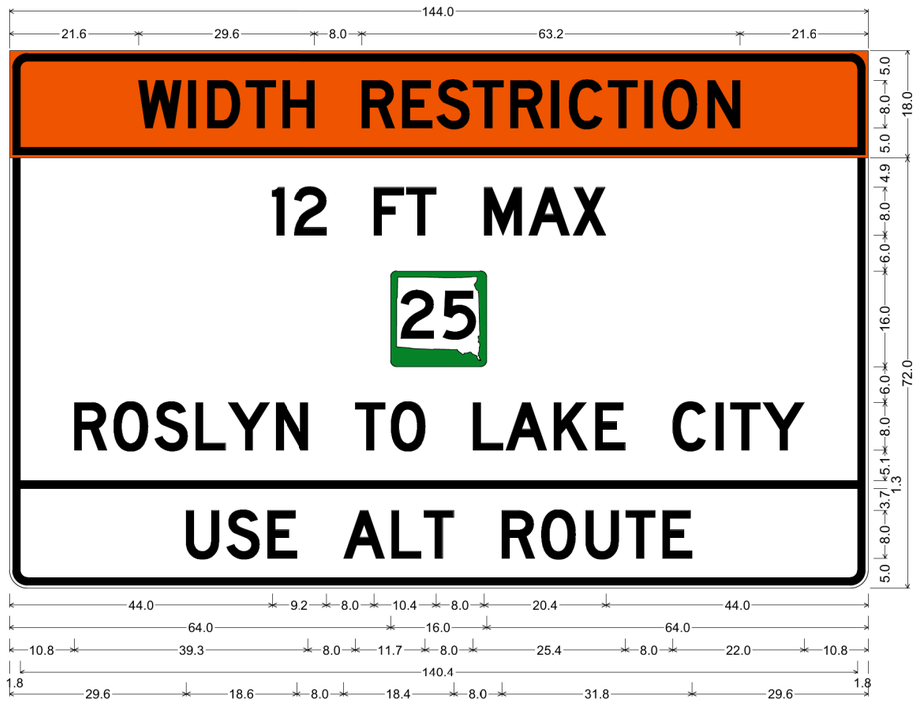
PLOT SCALE - 1:64000
PLOTTED FROM - TRAB12222
PLOT NAME - 4
FILE - ...\06GH_OVERWIDTH SIGNING.DGN

OVERWIDTH SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(103)193	C7	C13
Plotting Date: 02/20/2025			

PLOT SCALE - 1:64000

WR-3

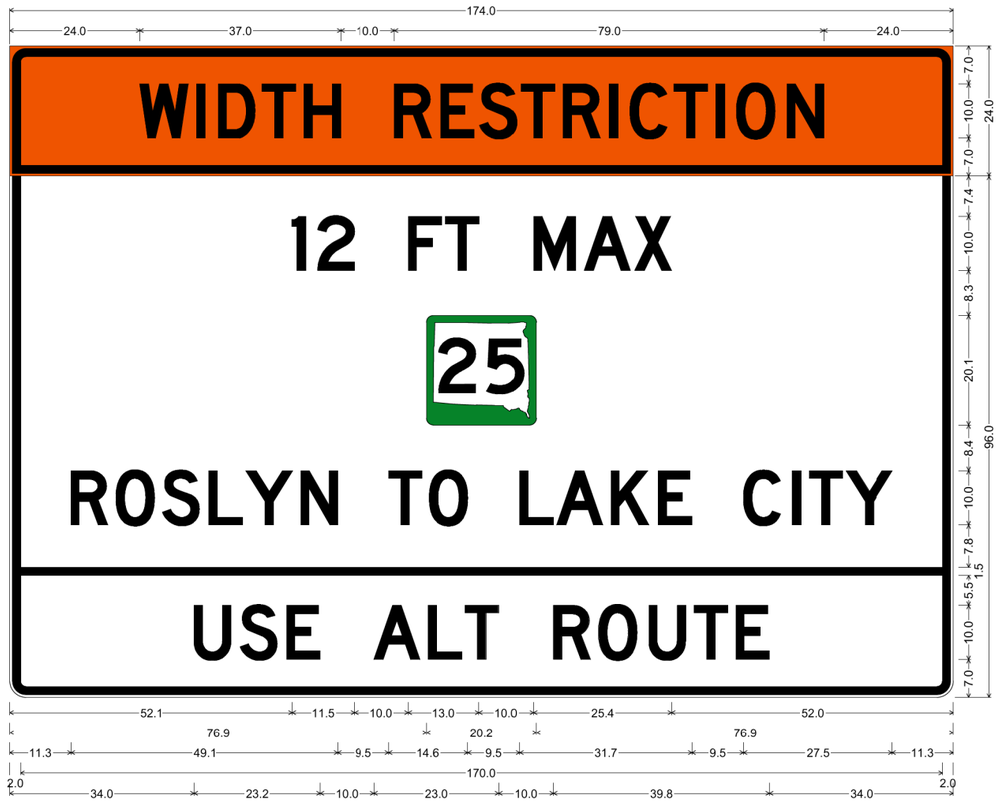


3.0" Radius, 1.3" Border, 0.5" Indent, Black on Orange;
"WIDTH RESTRICTION", D 2K;

3.0" Radius, 1.3" Border, 0.5" Indent, Black on White;
"12 FT MAX", D 2K; "ROSLYN TO LAKE CITY", D 2K; "USE ALT ROUTE", D 2K;
Table of letter and object lefts

W 21.6	I 29.9	D 33.1	T 39.6	H 45.8	R 59.2	E 66.0	S 71.8	T 77.8	R 84.0	I 90.8	C 93.8	T 100.3	I 106.5	O 109.5	N 117.0	
1 44.0	2 47.8	F 61.2	T 66.7	M 79.6	A 87.1	X 94.5										
25 64.0																
R 10.8	O 17.5	S 24.4	L 31.2	Y 36.6	N 44.7	T 58.1	O 64.1	L 77.8	A 83.2	K 91.2	E 98.2	C 111.2	I 118.4	T 120.8	Y 126.3	
— 1.8																
U 29.6	S 36.4	E 43.2	A 56.2	L 64.2	T 69.6	R 82.6	O 89.2	U 96.6	T 103.3	E 109.4						

WR-4

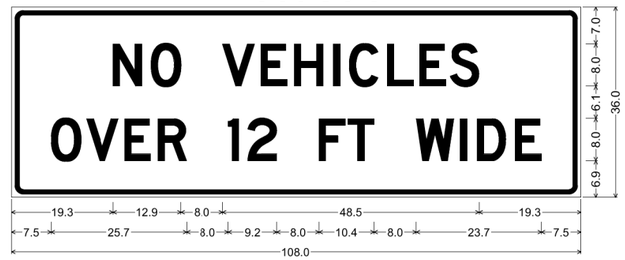


3.0" Radius, 1.5" Border, 0.5" Indent, Black on Orange;
"WIDTH RESTRICTION", D 2K;

3.0" Radius, 1.5" Border, 0.5" Indent, Black on White;
"12 FT MAX", D 2K; "ROSLYN TO LAKE CITY", D 2K; "USE ALT ROUTE", D 2K;
Table of letter and object lefts

W 24.0	I 34.4	D 38.4	T 46.5	H 54.2	R 71.0	E 79.5	S 86.7	T 94.3	R 102.0	I 110.5	C 114.3	T 122.4	I 130.1	O 133.9	N 143.2	
1 52.1	2 56.8	F 73.6	T 80.4	M 96.6	A 105.9	X 115.2										
25 76.9																
R 11.3	O 19.6	S 28.2	L 36.7	Y 43.5	N 53.6	T 69.9	O 77.4	L 94.0	A 100.8	K 110.8	E 119.5	C 135.2	I 144.2	T 147.3	Y 154.1	
— 2.0																
U 34.0	S 42.5	E 51.0	A 67.2	L 77.2	T 84.0	R 100.2	O 108.5	U 117.8	T 126.1	E 133.8						

WR-A



2.3" Radius, 0.9" Border, 0.6" Indent, Black on White;
"NO VEHICLES", D 2K; "OVER 12 FT WIDE", D 2K;
Table of letter and object lefts

N 19.3	O 26.5	V 40.2	E 47.4	H 53.8	I 61.1	C 64.2	L 71.4	E 77.5	S 83.3
O 7.5	V 14.2	E 21.5	R 27.8	1 41.2	2 45.0	F 58.4	T 63.9	W 76.8	I 85.2	D 88.4	E 95.6

PLOTTED FROM - TRAB12222
PLOT NAME - 5
FILE - ...\06CH_OVERWIDTH SIGNING.DGN

ITEMIZED LIST FOR DETOUR AND RESTRICTION SIGNING

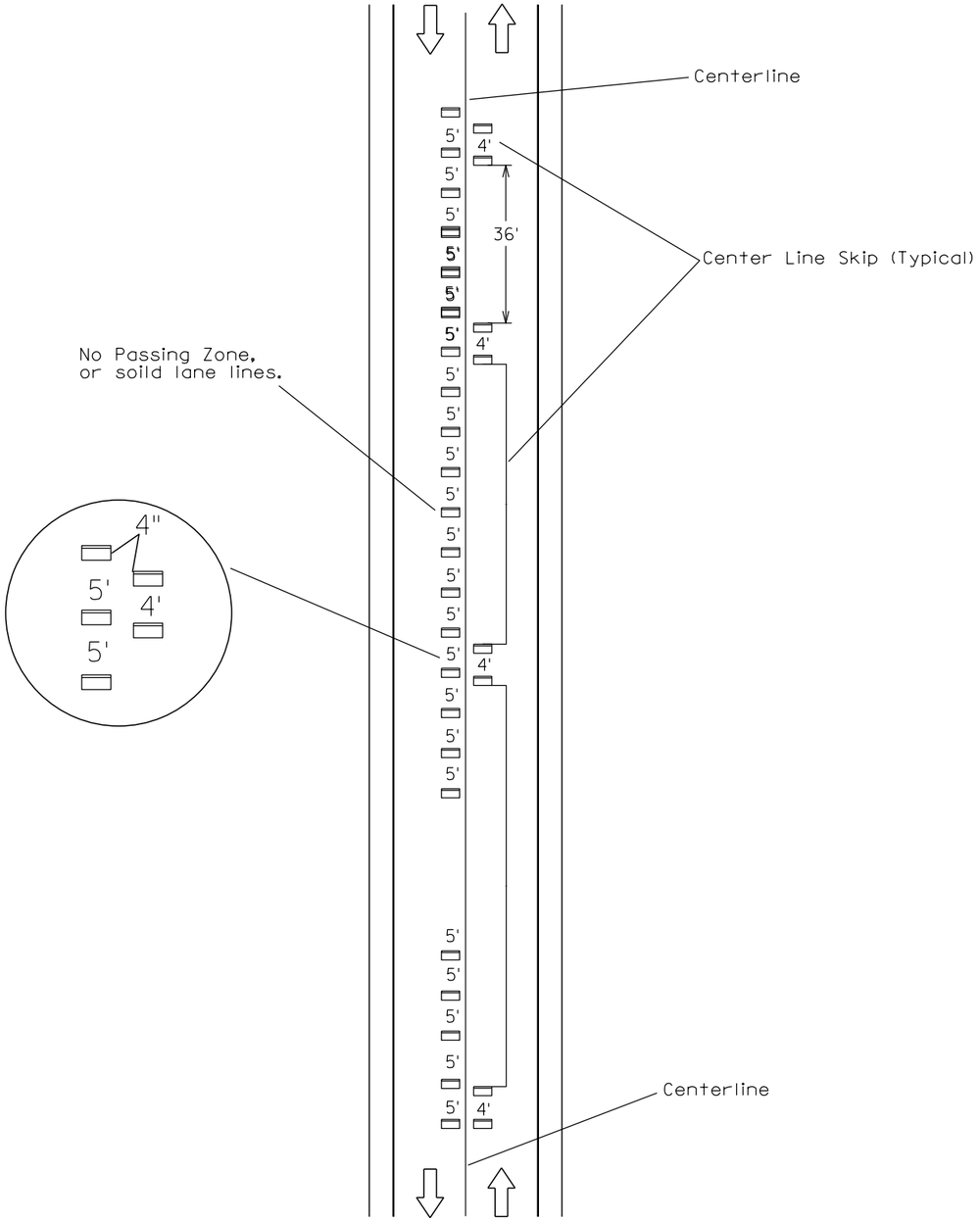
SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD NUMBER	CONVENTIONAL ROAD SIGN SIZE	CONVENTIONAL ROAD SQFT PER SIGN	CONVENTIONAL ROAD SQFT	EXPRESSWAY / INTERSTATE NUMBER	EXPRESSWAY / INTERSTATE SIGN SIZE	EXPRESSWAY / INTERSTATE SQFT PER SIGN	EXPRESSWAY / INTERSTATE SQFT
SPECIAL	WIDTH RESTRICTION NO VEHICLES OF 12 FT WIDE (WR-A)	2	108" x 36"	27.0	54.0		108" x 36"	27.0	
SPECIAL	WIDTH RESTRICTION 12 FT WIDE (Lake City to Roslyn)(WR-1)	5	144" x 90"	90.0	450.0		144" x 90"	90.0	
SPECIAL	WIDTH RESTRICTION 12 FT WIDE (Lake City to Roslyn)(WR-2)		174" x 120"	145.0		2	174" x 120"	145.0	290.0
SPECIAL	WIDTH RESTRICTION 12 FT WIDE (Roslyn to Lake City)(WR-3)	5	144" x 90"	90.0	450.0		144" x 90"	90.0	
SPECIAL	WIDTH RESTRICTION 12 FT WIDE (Roslyn to Lake City)(WR-4)		174" x 120"	145.0		4	174" x 120"	145.0	580.0
		CONVENTIONAL ROAD DETOUR AND RESTRICTION SIGNING SQFT			**954.0**	EXPRESSWAY / INTERSTATE DETOUR AND RESTRICTION SIGNING SQFT			**870.0**

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

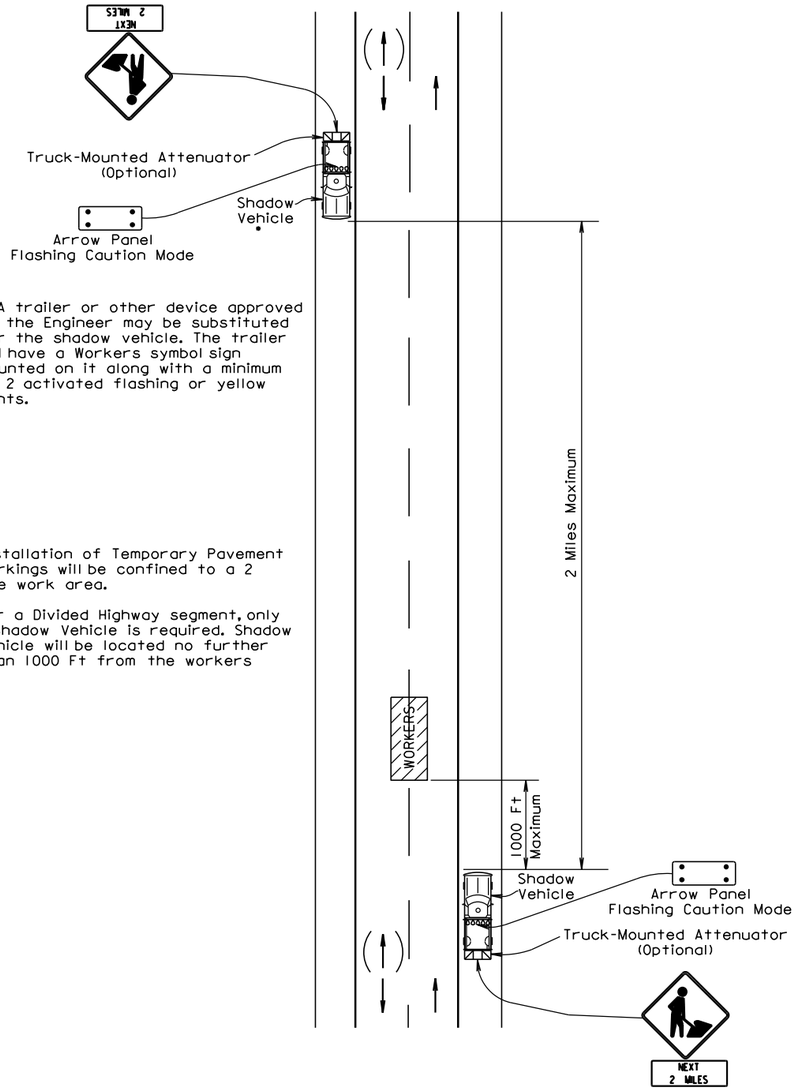
SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD NUMBER	CONVENTIONAL ROAD SIGN SIZE	CONVENTIONAL ROAD SQFT PER SIGN	CONVENTIONAL ROAD SQFT
W8-1	BUMP	4	48" x 48"	16.0	64.0
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-11	UNEVEN LANES	6	48" x 48"	16.0	96.0
W20-1	ROAD WORK AHEAD	6	48" x 48"	16.0	96.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	6	48" x 48"	16.0	96.0
W21-1	WORKERS (symbol)	2	48" x 48"	16.0	32.0
W21-2	FRESH OIL	2	48" x 48"	16.0	32.0
W21-5	SHOULDER WORK	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	4	30" x 18"	3.8	15.2
G20-1	ROAD WORK NEXT 4 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 7 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 12 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 15 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 19 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			**563.2**

PLOT SCALE - 1:64000
PLOTTED FROM - TRAB12222
PLOT NAME - 6
FILE - ...\06GH_OVERWIDTH SIGNING.DGN

GUIDES FOR TRAFFIC CONTROL DEVICES TEMPORARY ROAD MARKER INSTALLATION



GUIDES FOR TRAFFIC CONTROL DEVICES APPLICATION OF TEMPORARY PAVEMENT MARKING TABS



* A trailer or other device approved by the Engineer may be substituted for the shadow vehicle. The trailer will have a Workers symbol sign mounted on it along with a minimum of 2 activated flashing or yellow lights.

Installation of Temporary Pavement Markings will be confined to a 2 Mile work area.

For a Divided Highway segment, only 1 Shadow Vehicle is required. Shadow Vehicle will be located no further than 1000 Ft from the workers

PLOT SCALE - 1:28000
PLOTTED FROM - TRAB12222
PLOT NAME - 7
FILE - ...\DAY08GH\08GH_TEMPMARKERS.DGN

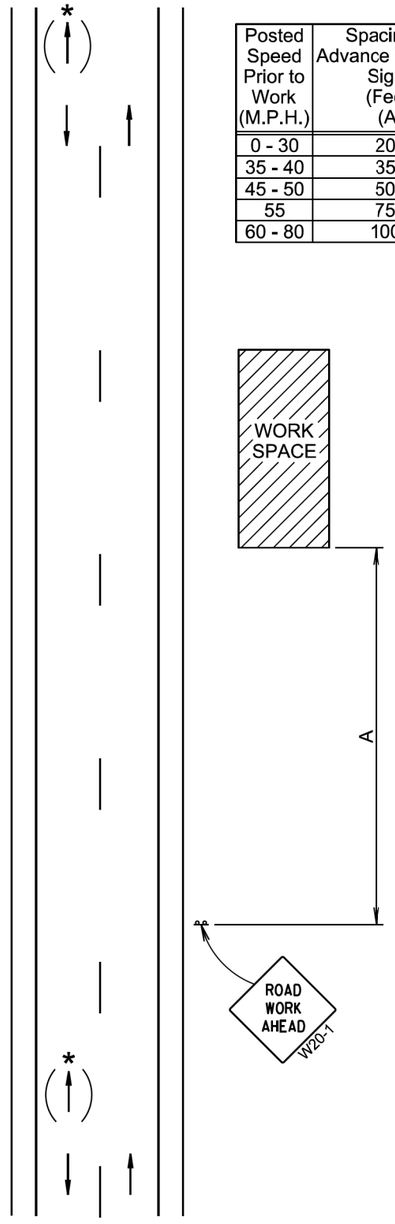
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated will be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

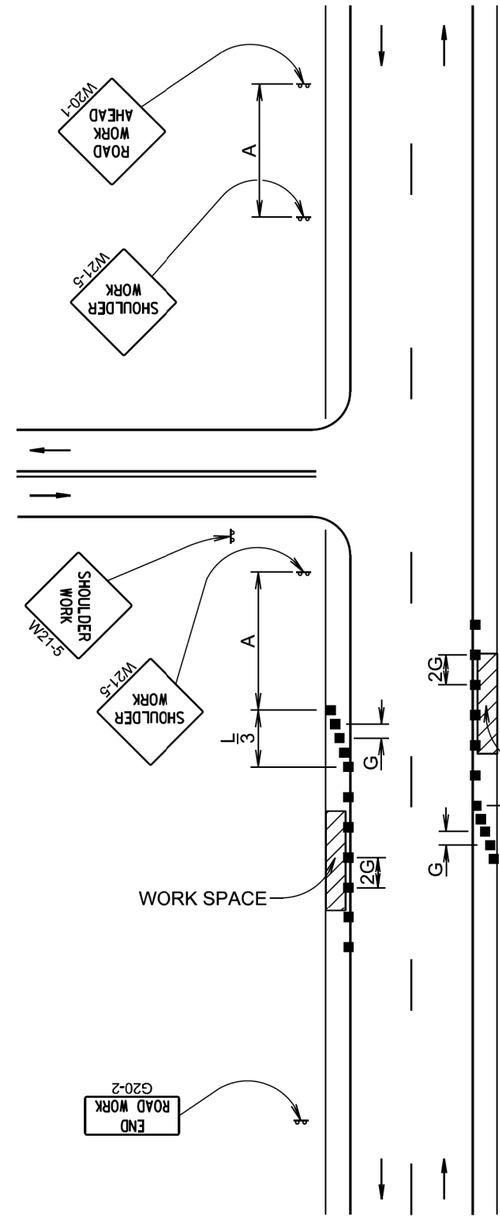
For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 80	1000

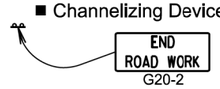
January 22, 2021

Published Date: 2025	SDDOT	WORK BEYOND THE SHOULDER	PLATE NUMBER 634.01
			Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50
55	750	660	50
60 - 65	1000	780	50

■ Channelizing Device



The channelizing devices will be drums or 42" cones if traffic control must remain overnight.

For short duration operations (1 hour or less) all channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

Worker signs (W21-1 or W21-1a) may be used instead of SHOULDER WORK signs.

A SHOULDER WORK sign should be placed on the left side of a divided or one-way roadway only if the left shoulder is affected.

The SHOULDER WORK sign on an intersecting roadway is not required if drivers emerging from that roadway will encounter another advance warning sign before they reach a work activity area.

January 22, 2021

Published Date: 2025	SDDOT	WORK ON SHOULDERS	PLATE NUMBER 634.03
			Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 8
FILE - ...\PRJ\DAY08GH\63401_&_63403.DGN
-PLOTTED FROM - TRAB12222

*In situations where multiple work locations in a limited distance make it practical to place stationary signs, the distance between the advance warning sign and the work should not exceed 5 miles.

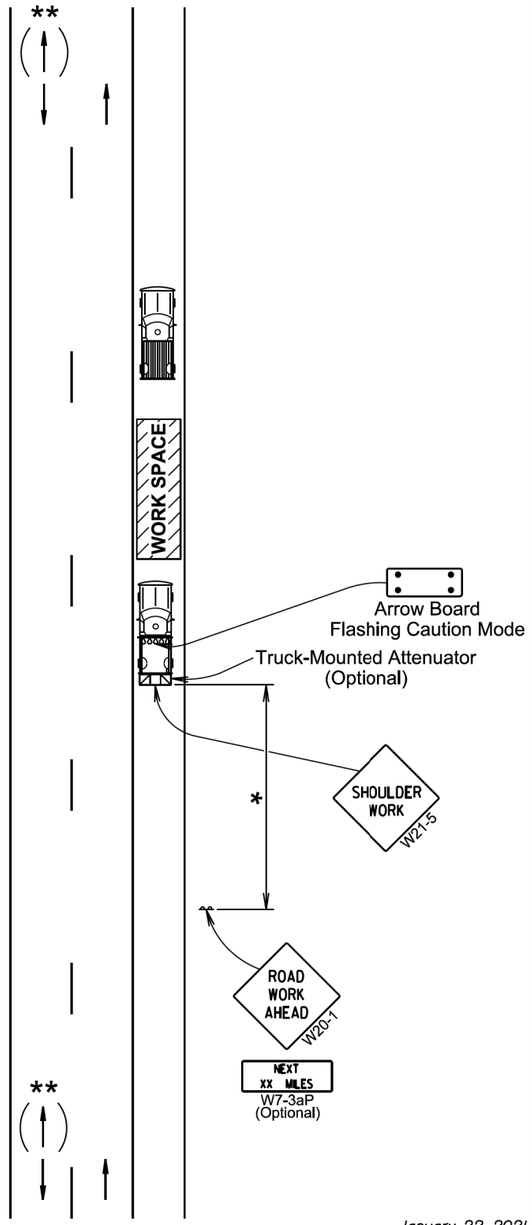
The ROAD WORK NEXT xx MILES sign may be used instead of the ROAD WORK AHEAD sign if the work locations occur over a distance of more than 2 miles.

Arrow board is required for intermittently and continuously moving mobile operations when work exceeds 1 hour.

**If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

In situations where the distance between the advance warning signs and the work is 2 miles to 5 miles, a Supplemental Distance plaque should be used with the ROAD WORK AHEAD sign.

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".



January 22, 2021

Published Date: 2025	SDDOT	MOBILE OPERATIONS ON SHOULDERS	PLATE NUMBER 634.04
			Sheet 1 of 1

* Messages on signs will vary depending on the operation being conducted.

Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

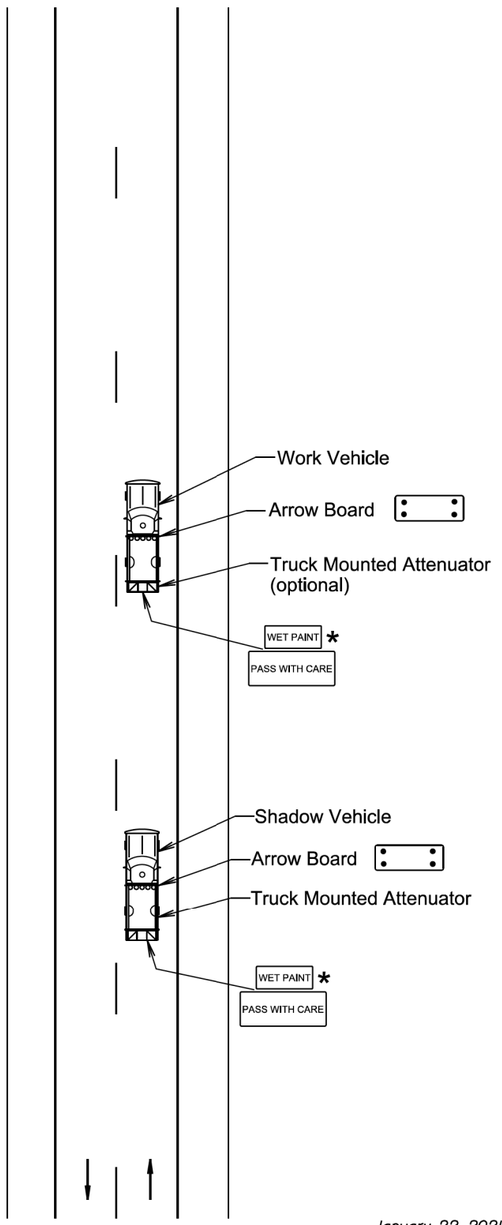
Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

Vehicle hazard warning signals will not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

When an arrow board is used, it will be used in the caution mode. Marching Diamonds are acceptable.

Arrow boards will, as a minimum, be Type B, with a size of 60" x 30".

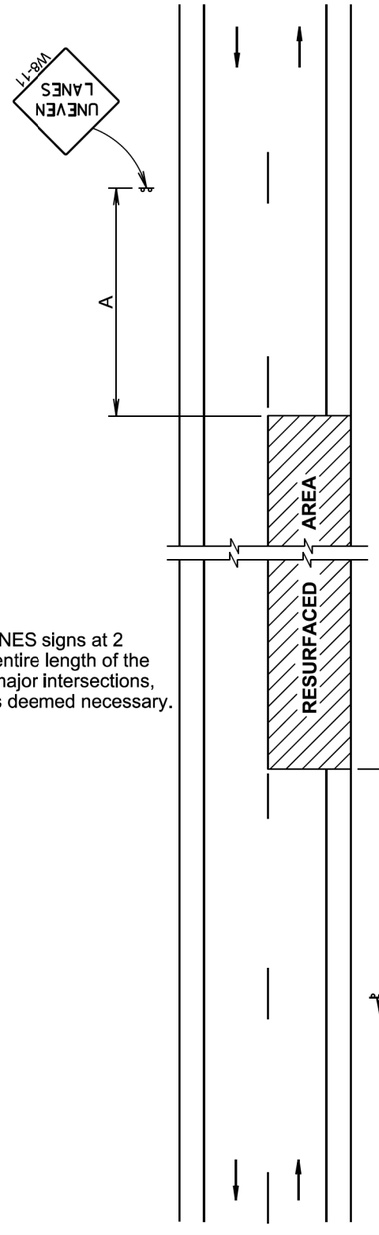
All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for “Traffic Control, Miscellaneous”.



January 22, 2021

Published Date: 2025	SDDOT	MOBILE OPERATIONS ON 2-LANE ROAD	PLATE NUMBER 634.06
			Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 9
FILE - ...\PRJ\DAY08GH\63404_&_63406.DGN
-PLOTTED FROM - TRAB12222



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 75	1000

Install additional UNEVEN LANES signs at 2 mile intervals throughout the entire length of the uneven area and at affected major intersections, edge of towns, and other sites deemed necessary.

January 22, 2021

Published Date: 2025	SDDOT	UNEVEN ROAD SURFACE	PLATE NUMBER 634.22
			Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45	500	25
50	500	50
55	750	50
60 - 65	1000	50

Flagger

Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

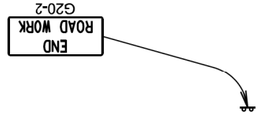
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) will be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

The channelizing devices will be drums or 42" cones.

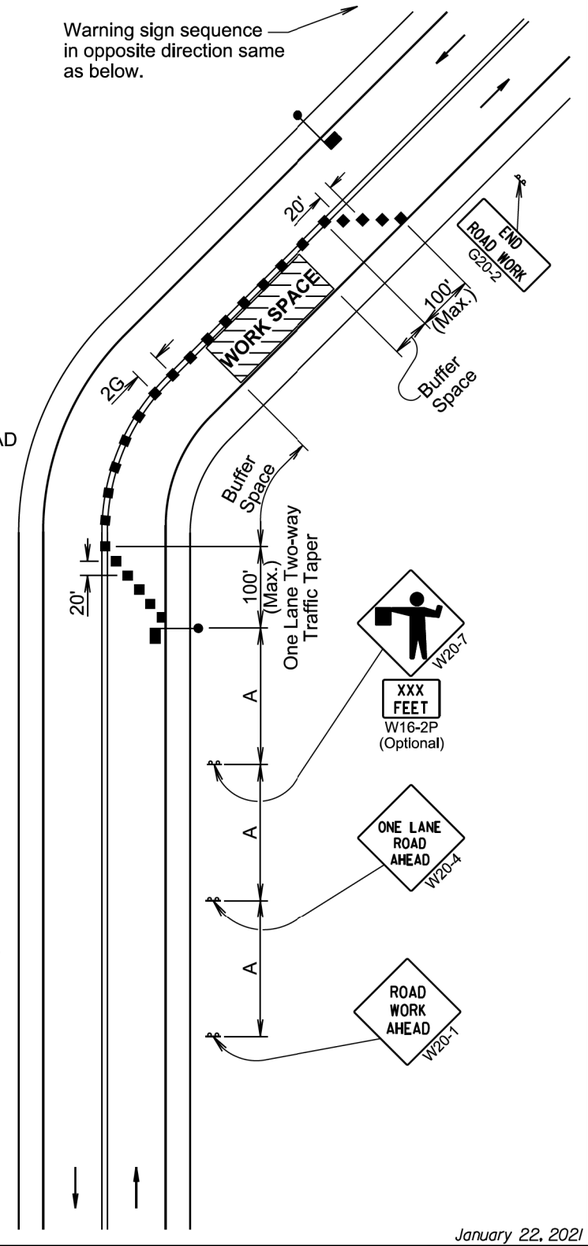
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.



Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

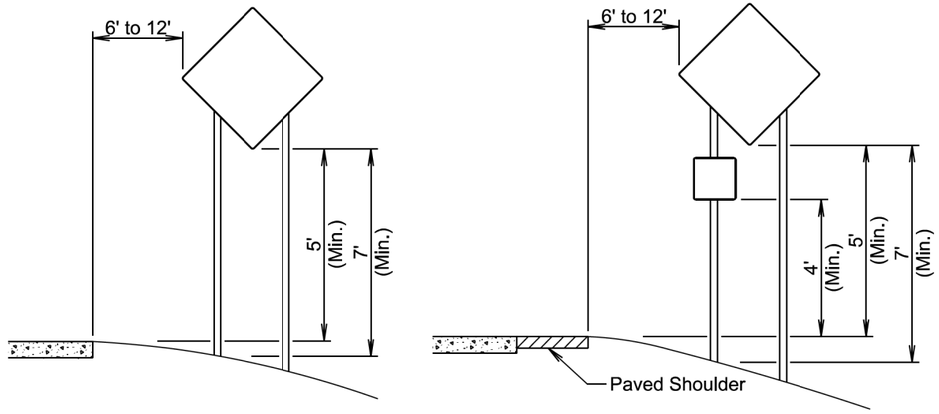
The length of A may be adjusted to fit field conditions.



January 22, 2021

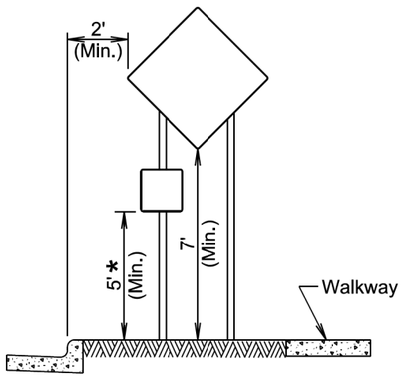
Published Date: 2025	SDDOT	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 10
FILE - ...\PRJNDAY08GH\63422_&_63423.DGN
-PLOTTED FROM - TRAB12222

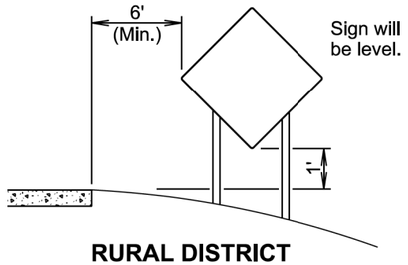


RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

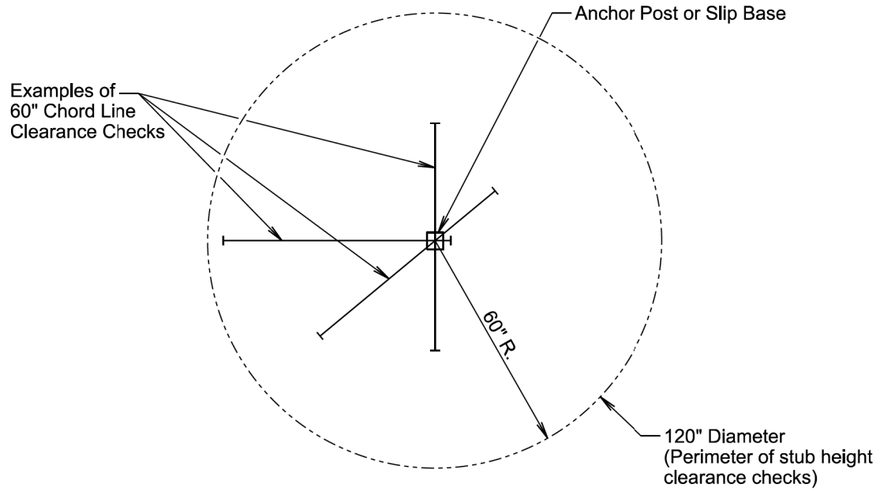


RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

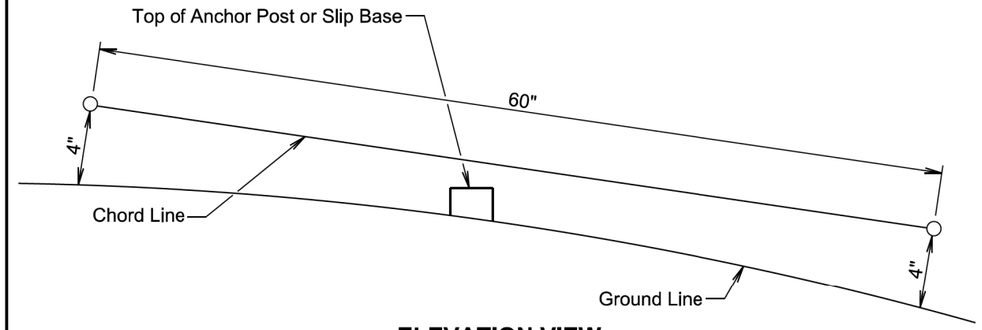
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2025	SDDOT	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

Published Date: 2025	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 11
FILE - ...\PRJ\DAY08GH\63485_&_63499.DGN
-PLOTTED FROM - TRAB12222

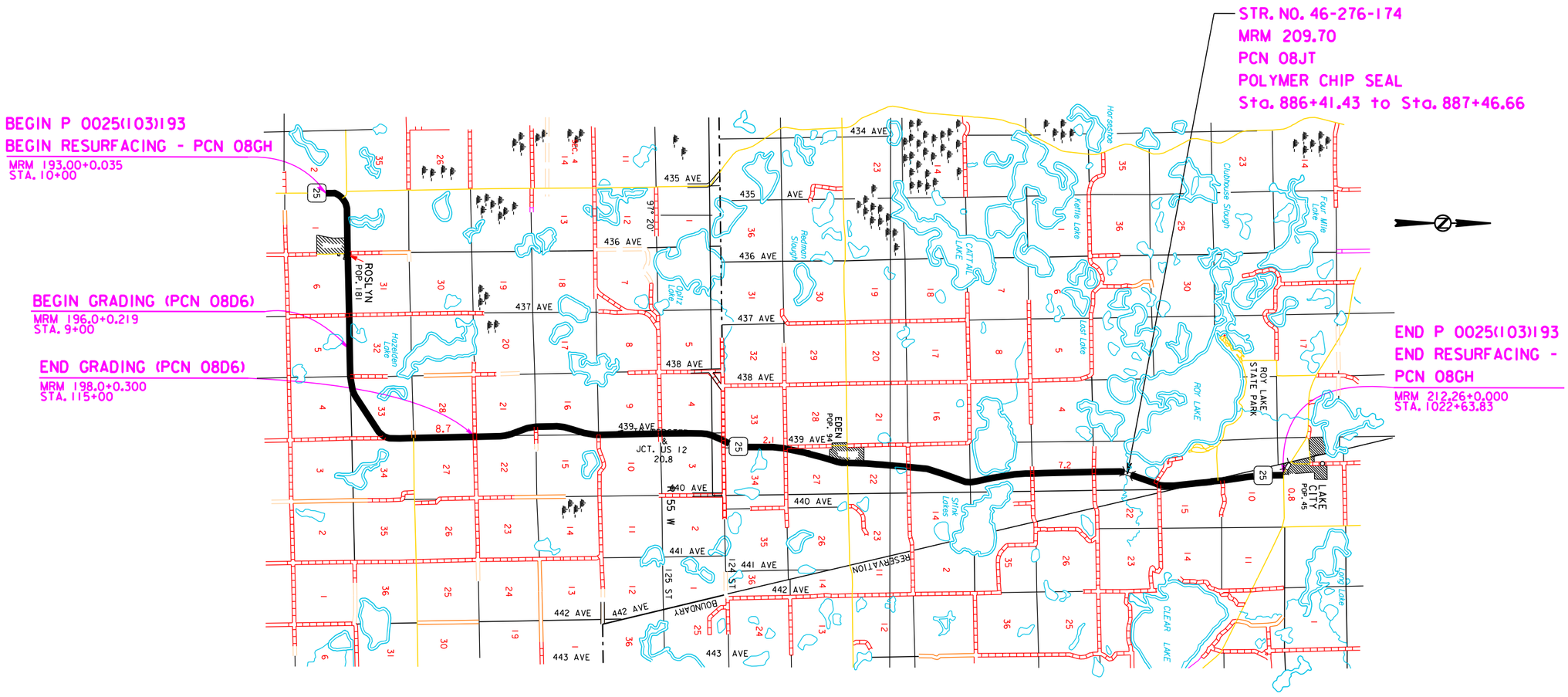
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	D1	D12

Plotting Date: 04/28/2025

SECTION D: EROSION AND SEDIMENT CONTROL PLANS

INDEX OF SHEETS

D1	General Layout with Index
D2-D3	Estimate with General Notes and Tables
D4-D7	Stormwater Pollution Prevention Plan Checklist
D8	Dewatering and Sediment Collection System Details
D9	SDDOT Construction Entrance Details
D10-D12	Standard Plates



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SECTION D ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	4.0	CuYd
110E1693	Remove Erosion Control Wattle	438	Ft
230E0100	Remove and Replace Topsoil	Lump Sum	LS
730E0100	Cover Crop Seeding	25.0	Bu
730E0212	Type G Permanent Seed Mixture	670	Lb
731E0200	Fertilizing	12.90	Ton
732E0100	Mulching	51.6	Ton
734E0044	Soil Stabilizer	4.0	Acre
734E0154	12" Diameter Erosion Control Wattle	1,750	Ft
734E0165	Remove and Reset Erosion Control Wattle	438	Ft
734E0602	Low Flow Silt Fence	3,500	Ft
734E0604	High Flow Silt Fence	1,000	Ft
734E0610	Mucking Silt Fence	312	CuYd
734E0620	Repair Silt Fence	1,125	Ft
900E1320	Construction Entrance	2	Each

REMOVE AND REPLACE TOPSOIL

Prior to beginning resurfacing operations, a 4” depth of topsoil will be bladed down the respective inslope and left in a windrow 5’+/- from the subgrade shoulder. Following completion of resurfacing operations, topsoil will be bladed back up the inslope to the point indicated on the typical section.

The estimated amount of topsoil to be removed and replaced is 13,850 CuYd.

All costs associated with removing and replacing the topsoil along areas to be resurfaced will be incidental to the contract lump sum price for “Remove and Replace Topsoil”.

MYCORRHIZAL INOCULUM

Mycorrhizal inoculum will consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier will provide certification of the fungal species claimed and the live propagule count. The inoculum will include a minimum 25% the fungal species *Rhizophagus intraradices*. The remaining 75% may include other endomycorrhizal fungal species.

All seed will be inoculated by the seed supplier with a minimum of 100,000 live propagules of mycorrhizal fungi per acre. All costs of inoculating the seed will be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

The Mycorrhizal Inoculum provided will be from the approved product list. The approved product list may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

COVER CROP SEEDING

Cover crop seeding may be used on this project as a temporary erosion control measure. The actual limits and use of cover crop seeding will be determined by the Engineer during construction.

FERTILIZING

The Contractor will apply an all-natural slow-release fertilizer prior to seeding or placing sod. The all-natural fertilizer will have a minimum guaranteed analysis of 4-4-4 and be USDA Certified BioBased. It should provide a minimum of 4% (N) nitrogen with a minimum water insoluble nitrogen (WIN) fraction of 2.07%, a minimum of 4% (P2O5) available phosphate, a minimum of 4% (K2O) soluble potash, and a maximum carbon to nitrogen ratio (C:N ratio) of 5:1. The all-natural fertilizer will be free of weed-seed and pathogens accomplished through thermophilic composting, and not mechanical or chemical sterilization, to assure presence of beneficial soil microbiology. The fertilizer will have a near neutral pH, a low salt index, a low biological oxygen demand, contain organic humic and fulvic acids, and have high aerobic organism counts. The fertilizer will also be stable, free of bad odors, and be unattractive as a food source for animals. It should also be in a granular form that is easily spread.

The fertilizer will be applied at a rate of 1,000 pounds per acre in accordance with the manufacturer’s recommended method of application.

The Fertilizer provided will be from the approved product list. The approved product list may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits except for the top of roadways and temporary easements under cultivation.

Type G Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	7
Switchgrass	Dacotah, Forestburg, Nebraska 28, Pathfinder, Summer, Sunburst, Trailblazer	3
Indiangrass	Holt, Tomahawk, Chief, Nebraska 54	3
Big Bluestem	Bison, Bonilla, Champ, Sunnyview, Rountree, Bonanza	3
Oats or Spring Wheat: April through May; Winter Wheat: August through November		10
	Total:	**26**

MULCHING (GRASS HAY OR STRAW)

If the Contractor uses a no-till drill, mulch may be applied prior to seeding and the mulch can then be punched into the soil by the no-till drill. If the Contractor uses this process, the no-till drill seeding will be completed immediately following the mulch application and the mulch will be punched into the soil at a 3-inch depth.

SOIL STABILIZER

An estimated quantity of 4 acres of soil stabilizer has been included in the Estimate of Quantities. The soil stabilizer will be applied on permanently seeded areas and areas deemed necessary by the Engineer.

The Contractor will apply soil stabilizer in accordance with the manufacturer’s application instructions and at the rate specified in the list of approved soil stabilizers.

Wood fiber mulch that contains a green dye will be mixed with the soil stabilizer to be used as a tracer when the soil stabilizer is applied hydraulically. Wood fiber mulch will be added at a rate of 300 pounds per acre to all of the approved soil stabilizers listed in the table except for the Pam-12 Plus product. The wood fiber mulch will be a 100% wood fiber product and does not need to contain a tackifier.

All costs for furnishing and applying the soil stabilizer including wood fiber mulch, hauling, materials, equipment, labor, and incidentals necessary will be paid for at the contract unit price per Acre for “Soil Stabilizer”.

The Soil Stabilizer provided will be from the approved product list. The approved product list may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

EROSION CONTROL WATTLE

Erosion control wattles for restraining the flow of runoff and sediment will be installed at locations determined by the Engineer during construction. Refer to Standard Plate 734.06 for details.

The Contractor will provide certification that the erosion control wattles do not contain noxious weed seeds.

Erosion control wattles will remain on the project to decompose.

An additional quantity of 12” Diameter Erosion Control Wattles has been added to the Estimate of Quantities for temporary erosion and sediment control in highway ditch channels and as an alternative to low flow or high flow silt fence at wetland areas adjacent to the highway.

The erosion control wattle provided will be from the approved product list. The approved product list for erosion control wattle may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

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LOW FLOW SILT FENCE

The low flow silt fence fabric provided will be from the approved product list. The approved product list for low flow silt fence may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

Low flow silt fence will be placed at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.04 for details.

An additional quantity of Low Flow Silt Fence has been added to the Estimate of Quantities for temporary sediment control.

HIGH FLOW SILT FENCE

The high flow silt fence fabric provided will be from the approved product list. The approved product list for high flow silt fence may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

High flow silt fence will be placed at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.05 for details.

An additional quantity of high flow silt fence has been added to the Estimate of Quantities for temporary sediment control.

DEWATERING AND SEDIMENT COLLECTING

The Contactor has the option to treat sediment laden water trapped within the project limits or the Contractor may elect to transport sediment laden water off the project. Refer to the OPTIONS FOR DEWATERING AND SEDIMENT COLLECTING detail sheet for more information.

Water transported off the project limits will not be disposed of in an area where it can enter a waterway. The disposal site must be approved by the Engineer.

The Dewatering and Sediment Control products provided will be from the from the approved products list. The approved products list may be viewed on the Dewatering and Sediment Collection Standard Plate, or at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

Separate payment will not be made for any Dewatering and Sediment Collection efforts. All costs involved with necessary Dewatering and Sediment Collection efforts will be incidental to other contract items

CONSTRUCTION ENTRANCE

The Contractor will install a Construction Entrance at locations where there is a potential for mud tracking and sediment flow from the construction site and work area onto a paved public roadway.

It is the Contractor's option to use the SDDOT Construction Entrance (See SDDOT Construction Entrance notes and details), a product from the list provided in these notes, or other products or processes as approved by the Engineer during construction.

If the Contractor elects to use one of the products listed in the table, then the Contractor will install the construction entrance product in accordance with the manufacturer's installation instructions or as directed by the Engineer.

The Contractor will maintain the construction entrance such that mud tracking and sediment flow will not enter the roadway or adjacent drainage areas. The construction entrance will be routinely inspected, and the Contractor will repair or replace material as deemed necessary by the Engineer.

All costs for furnishing, installing, maintaining, and removal of the construction entrance including equipment, labor, materials, and incidentals will be included in the contract unit price per each for "Construction Entrance".

The Construction Entrance provided will be from the approved product list. The approved product list may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

SDDOT CONSTRUCTION ENTRANCE

If the SDDOT Construction Entrance is utilized, then the Contractor will install the SDDOT Construction Entrance in accordance with these notes and the detail drawings.

Pit run material will be obtained from a granular source and will conform to the following gradation:

Sieve Size	Percent Passing
6"	100%
#4	0-60%
#200	0-20%

The pit run material will be compacted to the satisfaction of the Engineer.

The aggregate for the granular material will conform to the following gradation requirements:

Sieve Size	Percent Passing
3"	100%
2 ½"	90-100%
1 ½"	25-60%
¾"	0-10%
½"	0-5%

The granular material will be placed in 6" maximum lifts.

It is anticipated that the granular material will need to be periodically removed and replaced as it becomes inundated with mud and sediment.

The Reinforcement Fabric (MSE) will be in conformance with Section 831 of the Specifications. The Reinforcement Fabric (MSE) will be on the Approved Products List for this material or will be certified by the supplier to meet this specification prior to installation.

The Reinforcement Fabric (MSE) should be kept as taut as possible prior to placing.

Equipment will not be allowed on the Reinforcement Fabric (MSE) until the first lift of granular material is in place.

All seams in the Reinforcement Fabric (MSE) will be overlapped at least 2' and shingled.

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STORMWATER POLLUTION PREVENTION PLAN CHECKLIST

*(The numbers left of the title headings are **reference numbers** to the GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES (Stormwater Permit))*

5.3 (2): STAFF TRAINING/SWPPP IMPLEMENTATION

To promote stormwater management awareness specific for this project, the Contractor's Erosion Control Supervisor should provide correspondence of how the SWPPP will be implemented. The Contractor's Erosion Control Supervisor is responsible for providing this information at the preconstruction meeting, and subsequently completing an attendance log, which should identify site-specific implementation of the SWPPP and the names of the personnel who attended the preconstruction meeting. Documentation of the preconstruction meeting will be filed with the SWPPP documents.

5.3 (3): DESCRIPTION OF CONSTRUCTION ACTIVITIES

- **5.3 (3a): Project Limits** (See Title Sheet)
- **5.3 (3a): Project Description** (See Title Sheet)
- **5.3 (4): Site Map(s)** (See Title Sheet and Plans)
- **Major Soil Disturbing Activities** (check all that apply)
  - ☐ Clearing and grubbing
  - ☐ Excavation/borrow
  - ☐ Grading and shaping
  - ☐ Filling
  - ☒ Other (describe): Resurfacing and Pipework
- **5.3 (3b): Total Project Area** 101 Acres
- **5.3 (3b): Total Area to be Disturbed** 25 Acres
- **5.3 (3c): Maximum Area Disturbed at One Time**
- **5.3 (3d): Existing Vegetative Cover (%)** 90
- **5.3 (3d): Description of Vegetative Cover** Native and Introduced vegetation
- **5.3 (3e): Soil Properties:** Soil Series Classification, Silt, Clay Loam
- **5.3 (3f): Name of Receiving Water Body/Bodies** Tributaries to Roy Lake
- **5.3 (3g): Location of Construction Support Activity Areas**

5.3 (3h): ORDER OF CONSTRUCTION ACTIVITIES

- **Special sequencing requirements (**see Section C).

The Contractor will enter the Estimated Start Date.

Description	Estimated Start Date
Install stabilized construction entrance(s).	
Install perimeter protection where runoff may exit site.	
Install perimeter protection around stockpiles.	
Clearing and grubbing.	
Remove and stockpile topsoil.	
Stabilize disturbed areas.	
Complete Pipe Repair	
Final grading.	
Final paving.	
Removal of protection devices.	
Reseed areas disturbed by removal activities.	

5.3 (5): DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES

All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report. Include the technical reasoning for selecting each control. (Check all that apply)

Perimeter Controls (See Detail Plan Sheets)

Description	Estimated Start Date
☐ Natural Buffers (within 50 ft of Waters of State)	
☐ Silt Fence	
☐ Erosion Control Wattles	
☐ Temporary Berm / Windrow	
☐ Floating Silt Curtain	
☐ Stabilized Construction Entrances	
☐ Entrance/Exit Equipment Tire Wash	
☐ Other:	

Structural Erosion and Sediment Controls

Description	Estimated Start Date
☐ Silt Fence	
☐ Temporary Berm/Windrow	
☐ Erosion Control Wattles	
☐ Temporary Sediment Barriers	
☐ Erosion Bales	
☐ Temporary Slope Drain	
☐ Turf Reinforcement Mat	
☐ Riprap	
☐ Gabions	
☐ Rock Check Dams	
☐ Sediment Traps/Basins	
☐ Culvert Inlet Protection	
☐ Transition Mats	
☐ Median/Area Drain Inlet Protection	
☐ Curb Inlet Protection	
☐ Interceptor Ditch	
☐ Concrete Washout Facility	
☐ Work Platform	
☐ Temporary Water Barrier	
☐ Temporary Water Crossing	
☐ Permanent Stormwater Ponds	
☐ Permanent Open Vegetated Swales	
☐ Natural Depressions to allow for Infiltration	
☐ Sequential Systems that combine several practices	
☐ Other:	

Dust Controls

Description	Estimated Start Date
☐ Tarps & Wind impervious fabrics	
☐ Watering	
☐ Stockpile location/orientation	
☐ Dust Control Chlorides	
☐ Other	

Dewatering BMPs

Description	Estimated Start Date
☐ Sediment Basins	
☐ Dewatering bags	
☐ Weir tanks	
☐ Temporary Diversion Channel	
☐ Other:	

Stabilization Practices (See Detail Plan Sheets)

(Stabilization measures will begin the following work day whenever earth disturbing activity on any portion of the site has temporarily or permanently ceased. Temporary stabilization will be completed as soon as practicable but no later than 14 days after initiating soil stabilization activities (**3.18**))

Description	Estimated Start Date
☐ Vegetation Buffer Strips	
☐ Temporary Seeding (Cover Crop Seeding)	
☒ Permanent Seeding	
☐ Sodding	
☐ Planting (Woody Vegetation for Soil Stabilization)	
☒ Mulching (Grass Hay or Straw)	
☐ Fiber Mulching (Wood Fiber Mulch)	
☐ Soil Stabilizer	
☐ Bonded Fiber Matrix	
☐ Fiber Reinforced Matrix	
☐ Erosion Control Blankets	
☐ Surface Roughening (e.g. tracking)	
☐ Other:	

Wetland Avoidance

Will construction and/or erosion and sediment controls impinge on regulated wetlands? Yes ☐ No ☒ If yes, the structural and erosion and sediment controls have been included in the total project wetland impacts and have been included in the 404 permit process with the USACE.

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5.3 (6): PROCEDURES FOR INSPECTIONS

- Inspections will be conducted at least once every 7 days.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Silt fence will be inspected for depth of sediment and for tears to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches $^1/_3$ of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.
- Check dams will be inspected for stability. Sediment will be removed when depth reaches ½ the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Inspection and maintenance reports will be prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
- The SDDOT Project Engineer and Contractor's Erosion Control Supervisor are responsible for inspections. Maintenance and repair activities are the responsibility of the Contractor. The SDDOT Project Engineer will complete the inspection and maintenance reports and distribute copies per the distribution instructions on DOT 298.

5.3 (7): POST CONSTRUCTION STORMWATER MANAGEMENT

Stormwater management will be handled by temporary controls outlined in "DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES" above, and any permanent controls needed to meet permanent stormwater management needs in the post construction period will be shown in the plans and noted as permanent.

5.3 (8): POLLUTION PREVENTION PROCEDURES

5.3 (8a): Spill Prevention and Response Procedures

➢ **Material Management**

- Housekeeping
  - Only needed products will be stored on-site by the Contractor.
  - Except for bulk materials the contractor will store all materials under cover and/or in appropriate containers.
  - Products must be stored in original containers and labeled.
  - Material mixing will be conducted in accordance with the manufacturer's recommendations.
  - When possible, all products will be completely used before properly disposing of the container off-site.
  - The manufacturer's directions for disposal of materials and containers will be followed.
  - The Contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.
  - Dust generated will be controlled in an environmentally safe manner.

- Hazardous Materials
  - Products will be kept in original containers unless the container is not resealable and provide secondary containment as applicable.
  - Original labels and material safety data sheets will be retained in a safe place to relay important product information.
  - If surplus product must be disposed of, manufacturer's label directions for disposal will be followed.
  - Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants will be conducted on an impervious surface and under cover during wet weather to prevent the release of contaminants onto the ground.
  - Wheel wash water will be collected and allowed to settle out suspended solids prior to discharge. Wheel wash water will not be discharged directly into any stormwater system or stormwater treatment system.
  - Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, residuals from concrete saw cutting (either wet or dry), and mixer washout waters will be collected on site and managed to prevent contamination of stormwater runoff.

➢ **Spill Control Practices**

In addition to the previous housekeeping and management practices, the following practices will be followed for spill prevention and cleanup if needed.

- For all hazardous materials stored on site, the manufacturer's recommended methods for spill cleanup will be clearly posted. Site personnel will be made aware of the procedures and the locations of the information and cleanup supplies.
- Appropriate cleanup materials and equipment will be maintained by the Contractor in the materials storage area on-site. As appropriate, equipment and materials may include items such as brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for cleanup purposes.
- All spills will be cleaned immediately after discovery and the materials disposed of properly.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- After a spill a report will be prepared describing the spill, what caused it, and the cleanup measures taken. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring, as well as clean up instructions in the event of reoccurrences.
- The Contractor's site superintendent, responsible for day-to-day operations, will be the spill prevention and cleanup coordinator.

➢ **Spill Response**

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into stormwater runoff and conveyance systems. If the release has impacted on-site stormwater, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens stormwater or surface water at the site, the spill response procedures outlined below must be implemented in a timely manner to prevent the release of pollutants.

- The Contractor's site superintendent will be notified immediately when a spill or the threat of a spill is observed. The superintendent will assess the situation and determine the appropriate response.
- If spills represent an imminent threat of escaping erosion and sediment controls and entering receiving waters, personnel will be directed to respond immediately to contain the release and notify the superintendent after the situation has been stabilized.
- Spill kits containing appropriate materials and equipment for spill response and cleanup will be maintained by the Contractor at the site.
- If oil sheen is observed on surface water (e.g. settling ponds, detention ponds, swales), action will be taken immediately to remove the material causing the sheen. The Contractor will use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
- If a spill occurs the superintendent or the superintendent's designee will be responsible for completing the spill reporting form and for reporting the spill to SDDANR.
- Personnel with primary responsibility for spill response and cleanup will receive training by the Contractor's site superintendent or designee. The training must include identifying the location of the spill kits and other spill response equipment and the use of spill response materials.
- Spill response equipment will be inspected and maintained as necessary to replace any materials used in spill response activities.

5.3 (8b): WASTE MANAGEMENT PROCEDURES

➢ **Waste Disposal**

- All liquid waste materials will be collected and stored in approved sealed containers. All trash and construction debris from the site will be deposited in the approved containers. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill. All onsite personnel will be instructed in the proper procedures for waste disposal and notices stating proper practices will be posted. The Contractor is responsible for ensuring waste disposal procedures are followed.

➢ **Hazardous Waste**

- All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Site personnel will be instructed in these practices, and the Contractor will be responsible for seeing that these practices are followed.

➢ **Sanitary Waste**

- Portable sanitary facilities will be provided on all construction sites. Sanitary waste will be collected from the portable units which must be secured to prevent tipping and serviced in a timely manner by a licensed waste management Contractor or as required by any local regulations.

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5.3 (9): CONSTRUCTION SITE POLLUTANTS

The following materials or substances are expected to be present on the site during the construction period. These materials will be handled as noted under the heading “POLLUTION PREVENTION PROCEDURES” (check all that apply).

- ☒ Concrete and Portland Cement
- ☐ Detergents
- ☒ Paints
- ☒ Metals
- ☐ Bituminous Materials
- ☒ Petroleum Based Products
- ☒ Diesel Exhaust Fluid
- ☐ Cleaning Solvents
- ☐ Wood
- ☐ Cure
- ☐ Texture
- ☐ Chemical Fertilizers
- ☐ Other:

Product Specific Practices

- **Petroleum Products**
  All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled.

- **Fertilizers**
  Fertilizers will be applied only in the amounts specified by the SDDOT. Once applied, fertilizers will be worked into the soil to limit the exposure to stormwater. Fertilizers will be stored in an enclosed area. The contents of partially used fertilizer bags will be transferred to sealable containers to avoid spills.

- **Paints**
  All containers will be tightly sealed and stored when not required for use. The excess will be disposed of according to the manufacturer’s instructions and any applicable state and local regulations.

- **Concrete Trucks**
  Contractors will provide designated truck washout facilities on the site. These areas must be self-contained and not connected to any stormwater outlet of the site. Upon completion of construction, the area at the washout facility will be properly stabilized.

5.3 (10): NON-STORMWATER DISCHARGES

The following non-stormwater discharges are anticipated during the course of this project (check all that apply).

- ☐ Discharges from water line flushing.
- ☐ Pavement wash-water, where no spills or leaks of toxic or hazardous materials have occurred.
- ☐ Uncontaminated ground water associated with dewatering activities.

5.3 (11): INFEASIBILITY DOCUMENTATION

If it is determined to be infeasible to comply with any of the requirements of the Stormwater Permit, the infeasibility determination must be thoroughly documented in the SWPPP.

7.0: SPILL NOTIFICATION

In the event of a spill, the Contractor’s site superintendent will make the appropriate notification(s), consistent with the following procedures:

- A release or spill of a regulated substance (includes petroleum and petroleum products) must be reported to SDDANR immediately **if any one of the following** conditions exists:
  - The release or spill threatens or is able to threaten waters of the state (surface water or ground water)
  - The release or spill causes an immediate danger to human health or safety
  - The release or spill exceeds 25 gallons
  - The release or spill causes a sheen on surface water
  - The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01
  - The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:51:01
  - The release or spill of any substance that harms or threatens to harm wildlife or aquatic life
  - The release or spill is required to be reported according to Superfund Amendments and Reauthorization Act (SARA) Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.

- To report a release or spill, call SDDANR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231. Reporting the release to SDDANR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, you must also contact local authorities to determine the local reporting requirements for releases. A written report of the unauthorized release of any regulated substance, including quantity discharged, and the location of the discharge will be sent to SDDANR within 14 days of the discharge.

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5.4: SWPPP CERTIFICATIONS

➢ **Certification of Compliance with Federal, State, and Local Regulations**

The Storm Water Pollution Prevention Plan (SWPPP) for this project reflects the requirements of all local municipal jurisdictions for storm water management and sediment and erosion control as established by ordinance, as well as other state and federal requirements for sediment and erosion control plans, permits, notices or documentation as appropriate.

➢ **South Dakota Department of Transportation**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Authorized Signature (See the General Permit, Section 7.4 (1))

➢ **Prime Contractor**

This section is to be executed by the General Contractor after the award of the contract. This section may be executed any time there is a change in the Prime Contractor of the project.

I certify under penalty of law that this document and all attachments will be revised or maintained under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signature

CONTACT INFORMATION

The following personnel are duly authorized representatives and have signatory authority for modifications made to the SWPPP:

➢ **Contractor Information**:

- Prime Contractor Name: _____
- Contractor Contact Name: _____
- Address: _____
- _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **Erosion Control Supervisor**

- Name: _____
- Address: _____
- _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **SDDOT Project Engineer**

- Name: _____
- Business Address: _____
- Job Office Location: _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **SDDANR Contact Spill Reporting**
- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231

➢ **SDDANR Contact for Hazardous Materials.**
- (605) 773-3153

➢ **National Response Center Hotline**
- (800) 424-8802.

➢ **SDDANR Stormwater Contact Information**
- SDDANR Stormwater (800) 737-8676
- Surface Water Quality Program (605) 773-3351

5.5: REQUIRED SWPPP MODIFICATIONS

➢ **5.5 (1): Conditions Requiring SWPPP Modification**

The SWPPP must be modified, including the site map(s), in response to any of the following conditions:

- When a new operator responsible for implementation of any part the SWPPP begins work on the site.
- When changes to the construction plans, sediment and erosion control measures, or any best management practices on site that are no longer accurately reflected in the SWPPP. This includes changes made in response to corrective actions triggered by inspections.
- To reflect areas on the site map where operational control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.
- If inspections by site staff, local officials, SDDANR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with the Stormwater Permit.
- To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the site.
- If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, age rates, different areas, or methods of application.

➢ **5.5 (2): Deadlines for SWPPP Modification**

Any required revisions to the SWPPP must be completed within 7 calendar days following any of the items listed above.

➢ **5.5 (3): Documentation of Modifications to the Plan**

All SWPPP modification records are required to be maintained showing the dates of when the modification occurred. The records must include the name of the person authorizing each change and a brief summary of all changes.

➢ **5.5 (4): Certification Requirements**

All modifications made to the SWPPP must be signed and certified as required in Section 7.4.

➢ **5.5 (5): Required Notice to Other Operators**

If there are multiple operators at the site, the Contractor's Erosion Control Supervisor must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

When modifications as described above occur, the SWPPP will be modified to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP using the DOT 298 form and drawings on the plan will be modified to reflect the needed changes. Copies of the DOT 298 forms and the SWPPP will be retained on site in a designated place for review throughout the course of the project. A copy of the DOT 298 form will be given to the Contractor Erosion Control Supervisor and a copy will be emailed to the SDDOT Environmental Section in accordance with the DOT 298 Form.

Plot Scale - 1:200
Plotted From - trpt17200
File - ...\prj\Day06GH\NotesSectionD.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	D8	D12

Plotting Date: 04/28/2025

OPTIONS FOR DEWATERING AND SEDIMENT COLLECTING

OPTIONS ARE NOT LIMITED TO WHAT IS SHOWN ON THIS SHEET

NO MATTER THE SYSTEM OR METHOD USED, THE CONTRACTOR MUST MEET THE TERMS OF THE TEMPORARY DISCHARGE PERMIT AND THE STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES.

Various systems, devices, and products are shown on this sheet to give the Contractor ideas of what may be used for water treatment. Other systems, devices, and products are available and can be used with approval from the Engineer.

The Contractor may elect to block a portion of storm sewer near the outfall with sand bags and pump the water out to be treated with a flocculent or allow the water to set in a lined dumpster until sediment to falls out of suspension before discharging the water. Drop inlet protection devices could also be used as part of a treatment train. The Contractor may pump dirty water into a hydroseeder and mix it with a flocculent, and spray the mixture back onto a sediment pond.

PURPOSE

The purpose of a dewatering and sediment collection system is to collect turbid storm water on the project, treat it with flocculents as needed, and capture the sediment that falls out of suspension before the water is discharged into “Waters of the US” or “Waters of the State”. Refer to the Environmental Commitments for the specific requirements for each body of water on this project.

The Contractor will need to create a Pollution Prevention Plan (PPP) for dewatering and sediment collection if the Contractor choses to discharge the water into "Waters of the US" or "Waters of the State" instead of disposing of the water off-site, using it for irrigation, or using it for hydroseeding. The Contractor will also need to obtain a Temporary Discharge Permit from the South Dakota Department of Agriculture & Natural Resources (DANR) on all projects outside of Indian Reservation boundaries.

Suggestions for dewatering and sediment collection may be shown on the plan sheets. It is the Contractor's responsibility to dewater and collect sediment. The Contractor will have to intercept and treat the stormwater before storm sewer outfalls into "Waters of the US" or "Waters of the State". The Contractor may need more than one dewatering and sediment collection system to capture and treat stormwater at multiple outfalls and/or locations simultaneously during each phase of the project.

PAYMENT

No additional payment will be made for Dewatering and Sediment Collecting. Dewatering and Sediment Collecting will be incidental to other items on the project.

DEWATERING BAGS AND SOCKS capture sediment and should be placed on pavement, vegetated areas, or gravel.

Dandy Dewatering Bag
Dandy Products, Inc.
Powell, OH
Phone: 1.800.591.2284
www.dandyproducts.com

Non-woven Sediment Filter Bags
Indian Valley Industries, Inc.
Johnson City, NY
Phone: 1.800.659.5111
www.iviindustries.com

Taurus Dewatering Bags/Socks
SolHuTec Group, Inc.
Sebastian, FL
Phone: 1.888.703.9889
www.solhutec.com

Ultra-Dewatering Bag
UltraTech International, Inc
Jacksonville, FL
Phone: 1.800.764.9563
www.spillcontainment.com

Heavy Duty Dirtbag 55
ACF Environmental
Richmond, VA
Phone: 1.800.223.9021
www.acfenvironmental.com

Pump-It Tube
Flo-Water, LLC
West Des Moines, IA
Phone: 1.515.577.6763
www.flo-water.net

FLOCCULENTS listed below are considered to be safe for the environment, if used as directed:

APS 700 Series Floc Logs
Applied Polymer Systems, Inc.
Woodstock, GA
Phone: 1.866.200.9868
http://www.siltstop.com

Floc, Floc Soc, Floc Bag
Innovative Turf Solutions Products
Cincinnati, OH
Phone: 1.513.317.8311
http://www.innovativeturfsolutions.com

Biostar CH
Hild & Associates, Inc.
Stillwater, MN
Phone: 1.715.426.5131
www.biostar-ch.com

Terra-Tubes
ACF Environmental
Buffalo Grove, IL
Phone: 1.800.366.1180
www.terratubes.com

FI-3500 Tablets
JRM Chemical, Inc.
Cleveland, OH
Phone: 1.216.475.8488
http://www.soilmoist.com

Tigerfloc
Floc Systems Inc.
Surrey, British Columbia
Phone: 1.604.343.2046
www.flocsystems.com

PORTABLE FLOCCULENT SYSTEMS

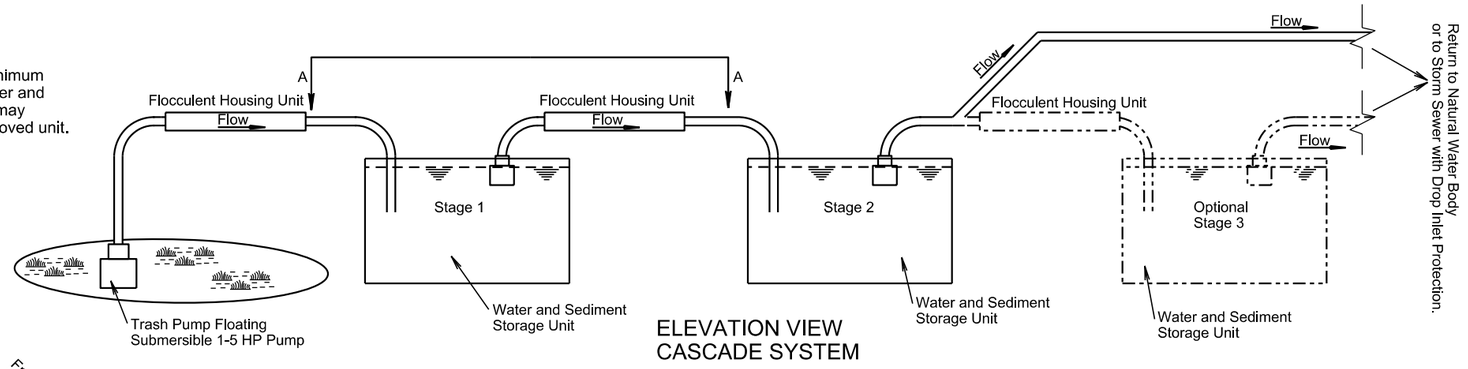
Eco Pond Rescue Water Wagon
Eco Pond Rescue LLC
Seminole, Florida
Phone: 1.727.412.4323
www.ecopondrescue.com

WTS2000 Portable Sediment Tank
Aqualete Industries, LLC
Ocean, New Jersey
Phone: 1.732.695.6336
http://aqualeteindustries.com

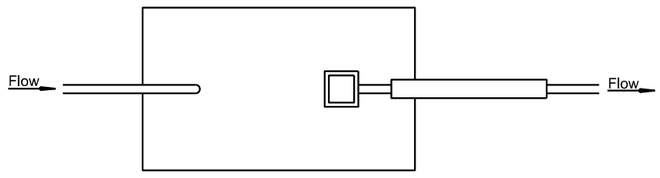
Dry Flocculent Mixing System
Innovative Equipment Solutions
Hot Springs, Arkansas
Phone: 1.501.525.8484
http://www.neptunewash.com

THE CASCADE SYSTEM

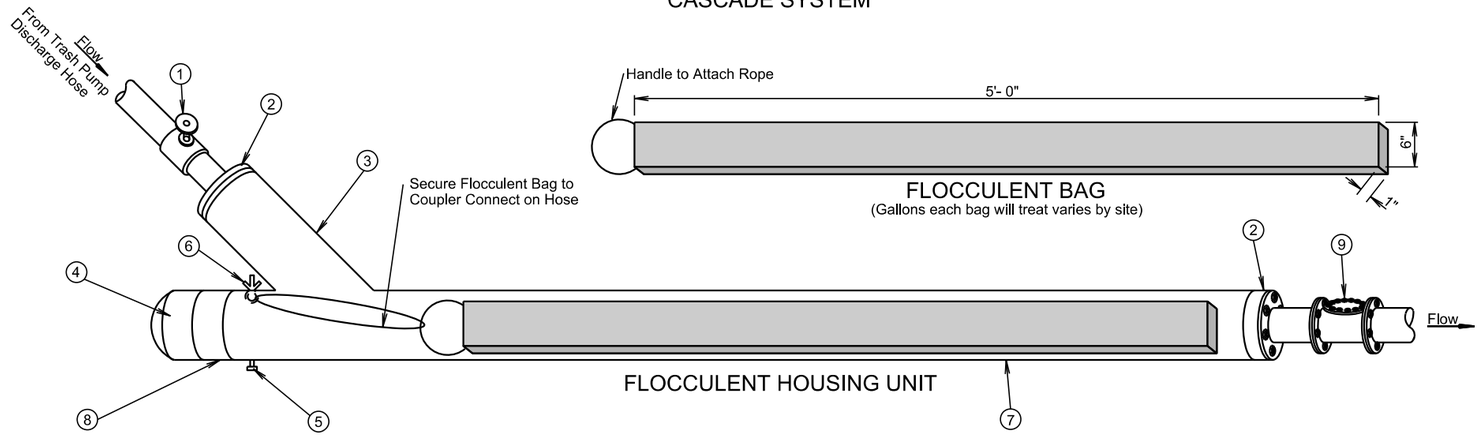
The cascade system is shown below and to the right for conceptual purposes only; however, the cascade system will at a minimum incorporate the use of 2 flocculent housing units and 2 water and sediment storage units. Design and construction of the water and sediment storage units are project site specific and will be the Contractor's responsibility. A water and sediment storage unit may consist of a storage bin lined with plastic, the bed of a dump truck lined with plastic, a sediment basin, or other Engineer approved unit. The treatment flocculent bag may be from the list or an approved equal.



ELEVATION VIEW
CASCADE SYSTEM



VIEW A-A



FLOCCULENT BAG
(Gallons each bag will treat varies by site)

FLOCCULENT HOUSING UNIT

FLOCCULENT HOUSING UNIT
(estimated quantities for information only)

NO.	DESCRIPTION	QUANTITY	UNIT
1	4" or 6" Dia. Sch. 40 Gate Valve	1	Each
2	4" X 6" or 6" X 8" Sch. 40 PVC Bushing	2	Each
3	6" or 8" Dia. Sch. 40 PVC "Y"	1	Each
4	6" or 8" Dia. Sch. 40 PVC Female Threaded Cap	1	Each
5	1" Dia. Sch. 80 PVC Drain Valve	1	Each
6	1/2" Eye Bolt with Wing Nut and Rubber Gromets	1	Each
7	6" or 8" Dia. Sch. 40 PVC Pipe	10	Ft.
8	6" or 8" Dia. Sch. 40 PVC Male Adapter	1	Each
9	4" or 6" Dia. Sch. 40 PVC Swing Check Valve	1	Each

FLOW RATE ESTIMATE

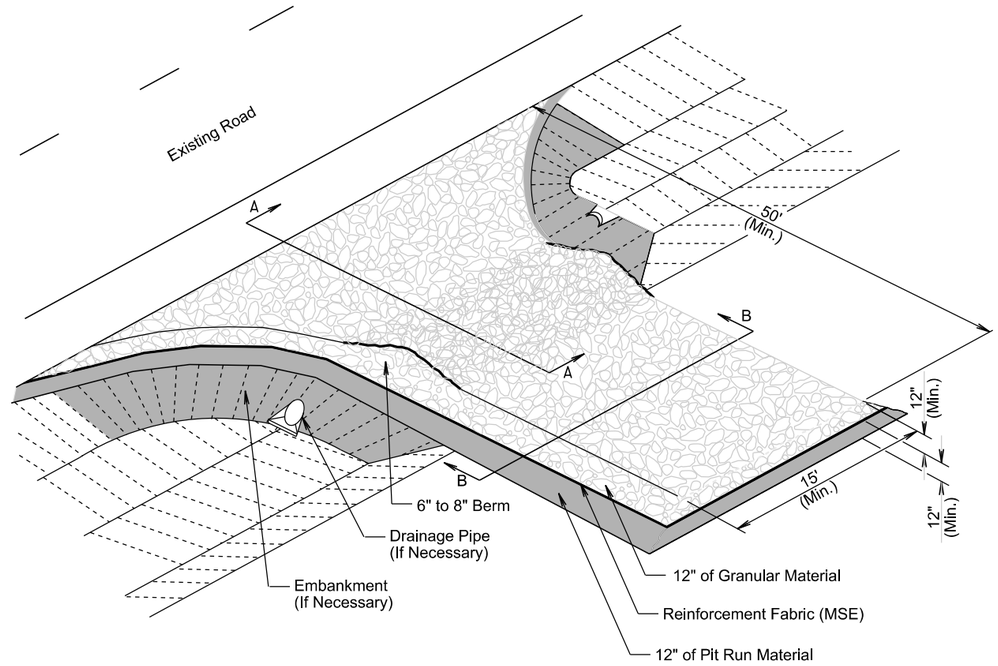
Pump Type	Flow Rate (gpm)
2"	50-250
3" Gas	250-350
4" Diesel	500-750
6" Diesel	750-1000

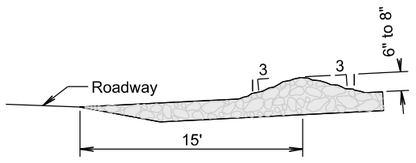
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SDDOT CONSTRUCTION ENTRANCE

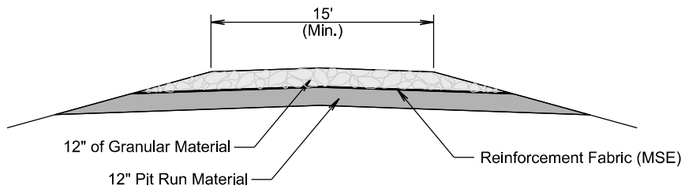
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	D9	D12

Plotting Date: 04/28/2025





SECTION A-A



SECTION B-B

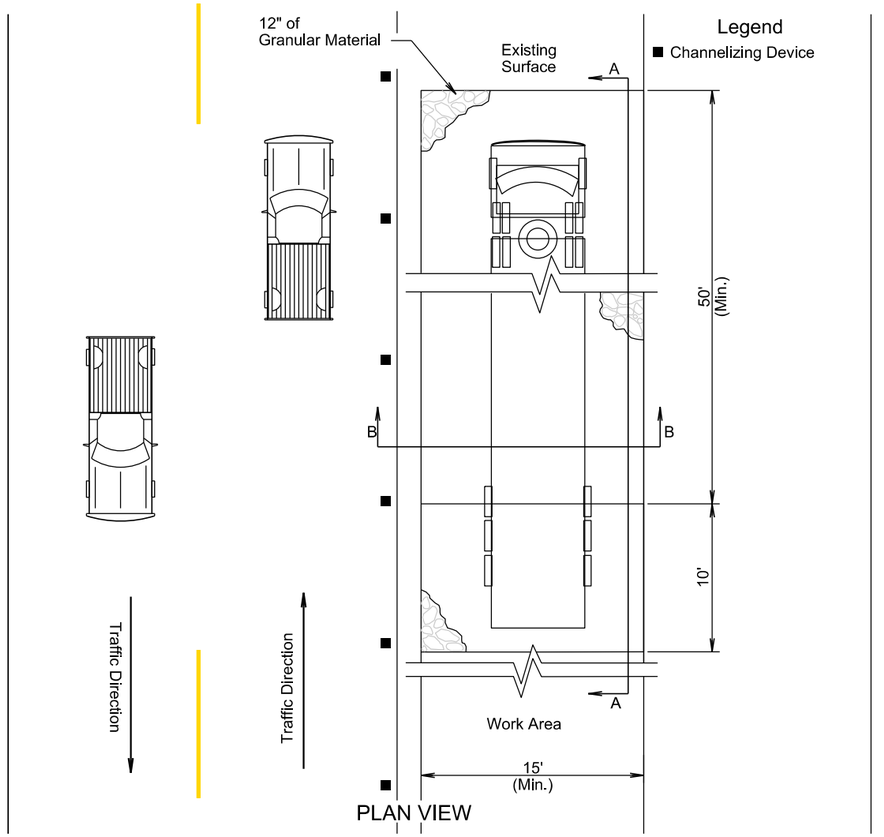
GENERAL NOTES:

If the grade of the entrance slopes down to the roadway, a berm of extra rock will be used to prevent sediment or mud from being deposited on the roadway. See SECTION A-A.

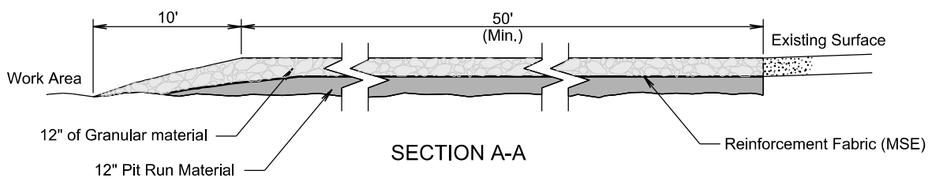
If a drainage pipe is necessary the size and type will be determined by the Contractor to meet field conditions. All cost will be incidental to the various contract items.

If embankment is necessary it will be pit run material.

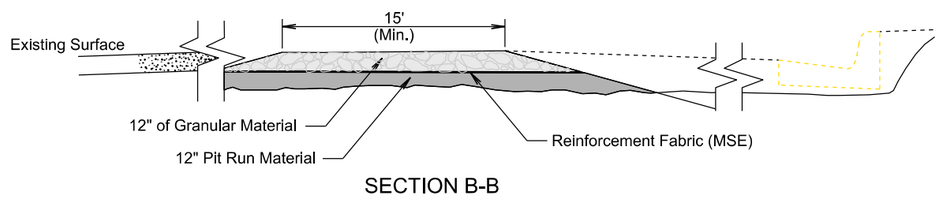
TRANSVERSE TO ROADWAY



PLAN VIEW



SECTION A-A



SECTION B-B

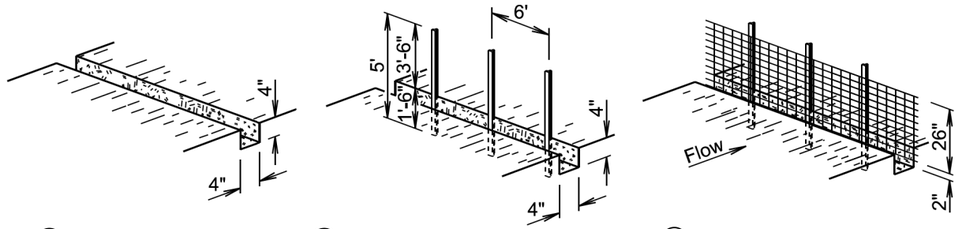
PARALLEL TO ROADWAY

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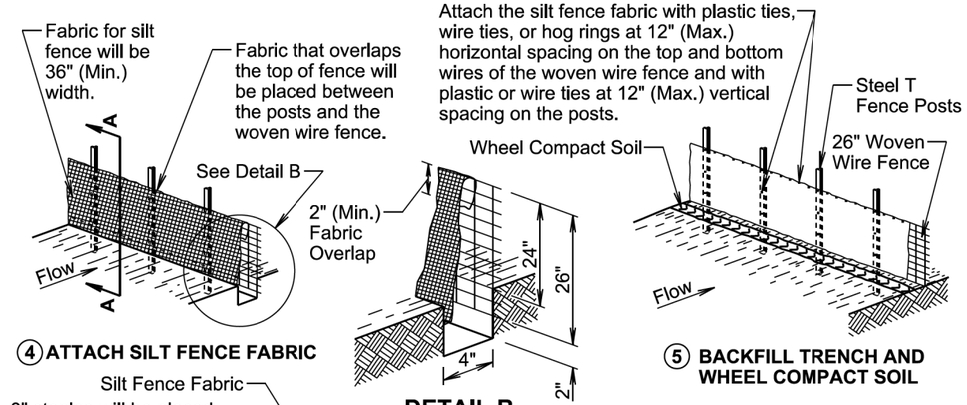
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	D10	D12

Plotting Date: 04/28/2025

MANUAL LOW FLOW SILT FENCE INSTALLATION

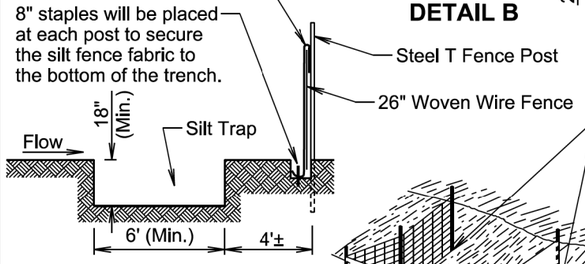


① EXCAVATE TRENCH ② DRIVE STEEL T FENCE POSTS ③ ATTACH 26" WOVEN WIRE FENCE TO POSTS

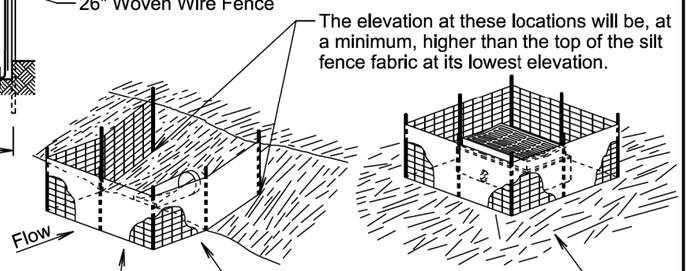


④ ATTACH SILT FENCE FABRIC ⑤ BACKFILL TRENCH AND WHEEL COMPACT SOIL

DETAIL B



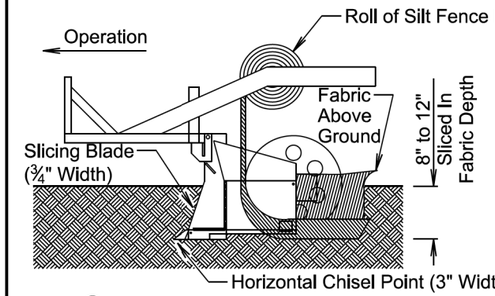
SECTION A-A



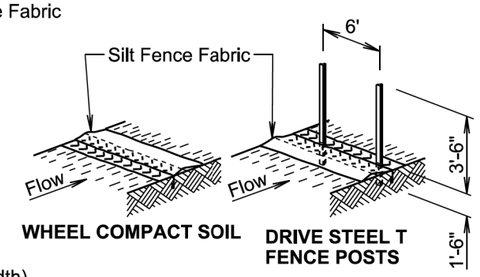
February 14, 2020

Published Date: 2025	SDDOT	LOW FLOW SILT FENCE AND SILT TRAP	PLATE NUMBER 734.04
			Sheet 1 of 2

MACHINE SLICED LOW FLOW SILT FENCE INSTALLATION

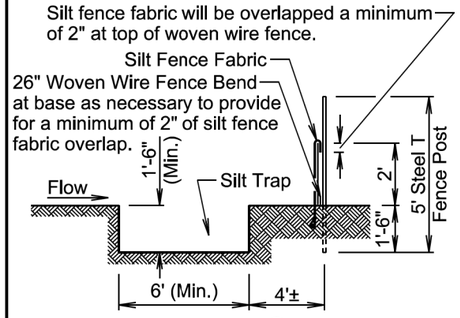


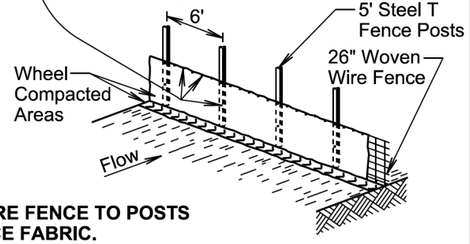
① INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.



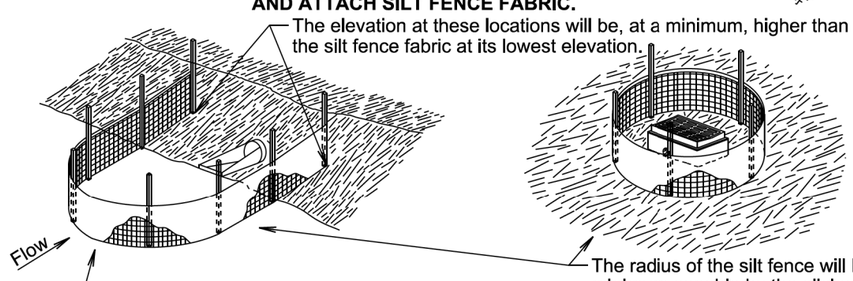
WHEEL COMPACT SOIL DRIVE STEEL T FENCE POSTS

② WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.





③ ATTACH 26" WOVEN WIRE FENCE TO POSTS AND ATTACH SILT FENCE FABRIC.



GENERAL NOTES:

A silt trap will be provided when specified by a plan note. All costs for constructing the silt trap will be incidental to the contract unit price per cubic yard for "Silt Trap".

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

February 14, 2020

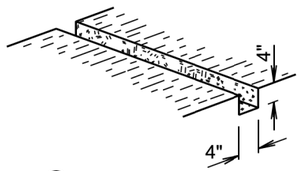
Published Date: 2025	SDDOT	LOW FLOW SILT FENCE AND SILT TRAP	PLATE NUMBER 734.04
			Sheet 2 of 2

Plot Scale - 1:200
Plotted From - trpr17200
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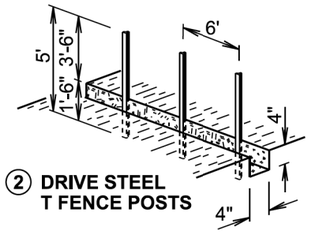
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	D11	D12

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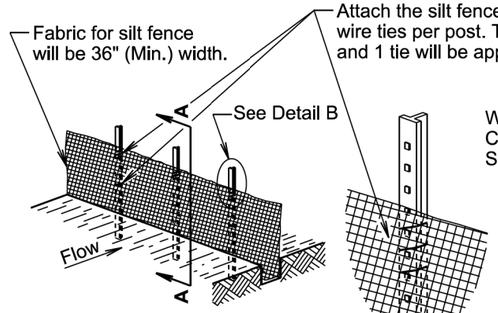
MANUAL HIGH FLOW SILT FENCE INSTALLATION



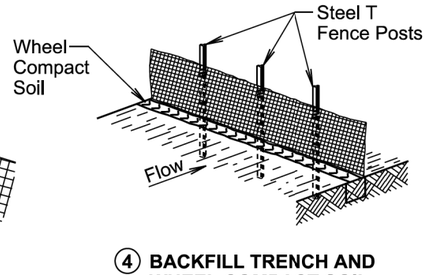
① EXCAVATE TRENCH



② DRIVE STEEL T FENCE POSTS

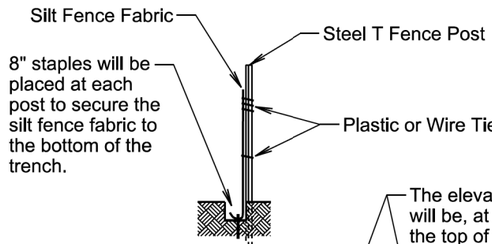


③ ATTACH SILT FENCE FABRIC

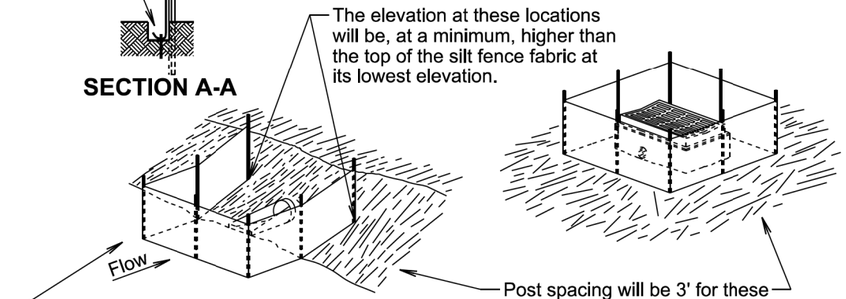


DETAIL B

④ BACKFILL TRENCH AND WHEEL COMPACT SOIL



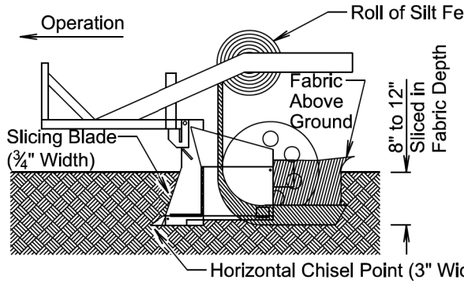
SECTION A-A



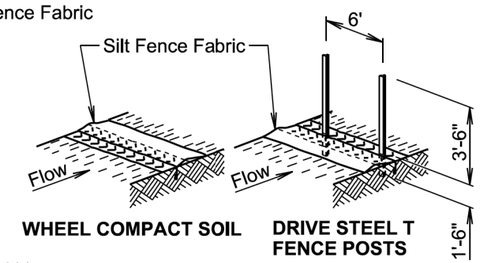
February 14, 2020

Published Date: 2025	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 1 of 2

MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION



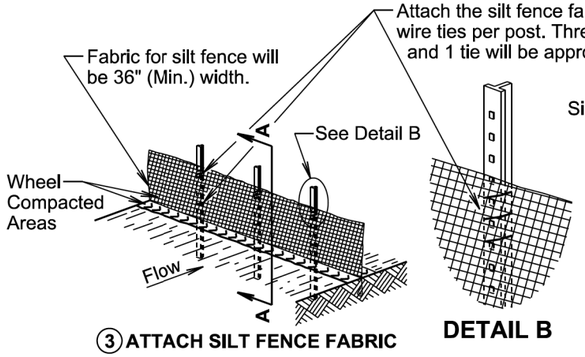
① INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.



WHEEL COMPACT SOIL

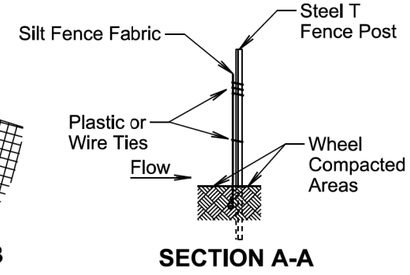
DRIVE STEEL T FENCE POSTS

② WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.

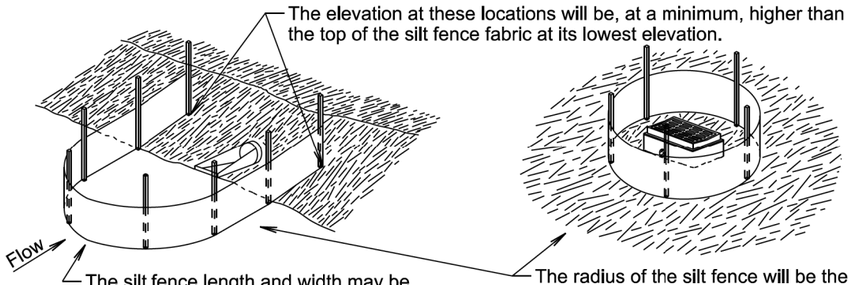


③ ATTACH SILT FENCE FABRIC

DETAIL B



SECTION A-A



GENERAL NOTE:

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

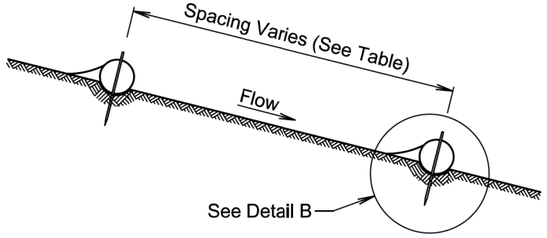
February 14, 2020

Published Date: 2025	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 2 of 2

Plot Scale - 1:200
• Plotted From - top17200
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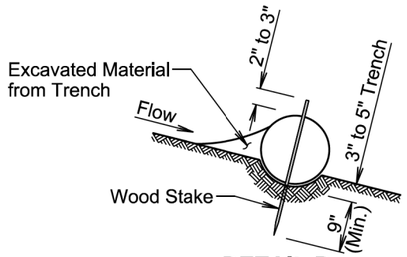
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	D12	D12

Plotting Date: 04/28/2025

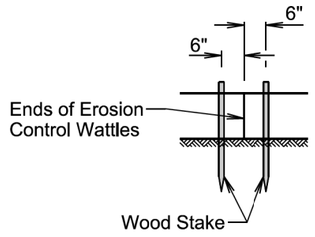


ELEVATION VIEW
(Cut or Fill Slope Installation)

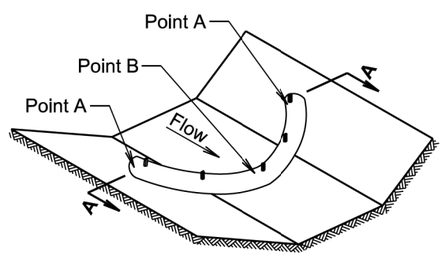
CUT OR FILL SLOPE INSTALLATION	
Slope	Spacing (Ft.)
1:1	10
2:1	20
3:1	30
4:1	40



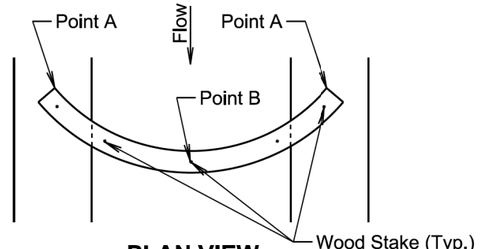
DETAIL B
(Typical of All Installations)



DETAIL C
(See General Notes)

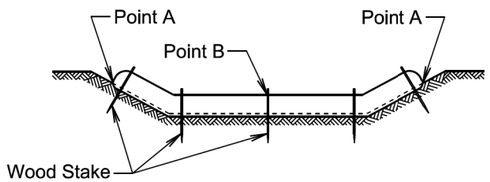


ISOMETRIC VIEW
(Ditch Installation)



PLAN VIEW
(Ditch Installation)

DITCH INSTALLATION	
Grade	Spacing (Ft.)
2%	150
3%	100
4%	75
5%	50



SECTION A-A

February 14, 2020

Published Date: 2025	SDDOT	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 1 of 2

GENERAL NOTES:

At cut or fill slope installations, wattles will be installed along the contour and perpendicular to the water flow.

At ditch installations, point A must be higher than point B to ensure that water flows over the wattle and not around the ends.

The Contractor will dig a 3" to 5" trench, install the wattle tightly in the trench so that daylight can not be seen under the wattle, and then compact the soil excavated from the trench against the wattle on the uphill side. See Detail B.

The stakes will be 1"x2" or 2"x2" wood stakes, however, other types of stakes such as rebar may be used only if approved by the Engineer. The stakes will be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles will be 3' to 4'.

Where installing running lengths of wattles, the Contractor will butt the second wattle tightly against the first and will not overlap the ends. See Detail C.

The Contractor and Engineer will inspect the erosion control wattles in accordance with the storm water permit. The Contractor will remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

Sediment removal, disposal, or necessary shaping will be as directed by the Engineer. All costs for removing accumulated sediment, disposal of sediment, and necessary shaping will be incidental to the contract unit price per cubic yard for "Remove Sediment".

All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials will be incidental to the contract unit price per foot for the corresponding erosion control wattle contract item.

All costs for removing the erosion control wattle from the project including labor, equipment, and materials will be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

February 14, 2020

Published Date: 2025	SDDOT	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 2 of 2

Plot Scale - 1:200
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Section F: Surfacing Plans

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F1	F60

Plotting Date: 10/23/2026

INDEX OF SHEETS

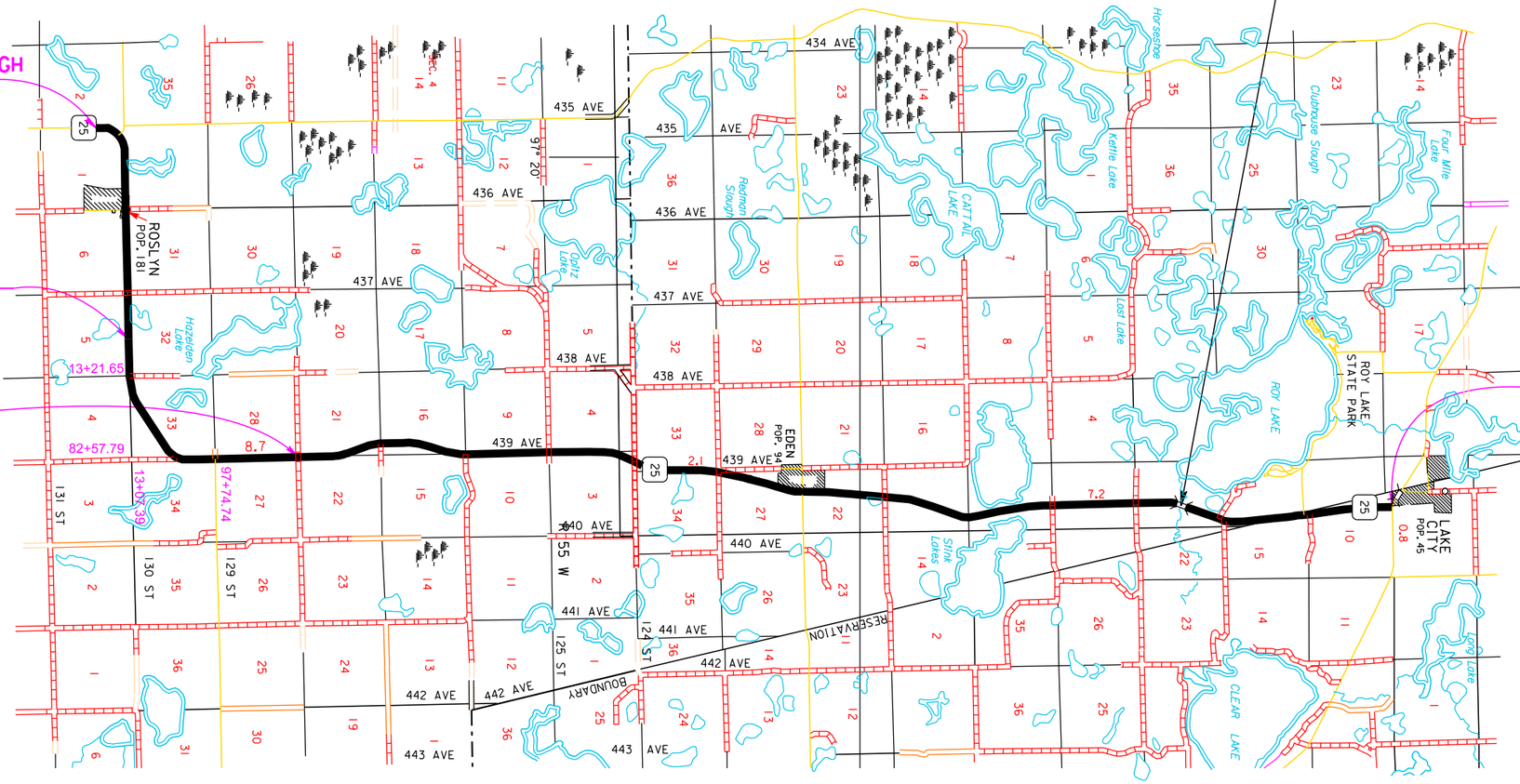
F1	General Layout with Index
F2 - F13	Estimate of Quantities, Notes, Rates, and Tables
F14 - F16	Typical Surfacing Sections
F17 - F32	Asphalt Concrete Layouts
F33 - F34	Guardrail Layouts
F35	Guardrail Post Spacing Detail
F36 - F38	Cold Milling Transition Layout
F39	Plug Existing RC Box Culvert Detail
F40 - F60	Standard Plates

STR. NO. 46-276-174
MRM 209.70
Sta. 886+41.43 to Sta. 887+46.6

BEGIN P 0025(103)193
BEGIN RESURFACING - PCN 08GH
MRM 193.00+0.035
STA. 10+00

BEGIN GRADING (PCN 08D6)
MRM 196.0+0.219
STA. 9+00 - PCN 08D6 =
STA. 177+03.57 - PCN 08GH

END GRADING (PCN 08D6)
MRM 198.0+0.300
STA. 115+00 - PCN 08D6 =
STA. 283+03.57 - PCN 08GH



END P 0025(103)193
END RESURFACING - PCN 08GH
MRM 212.26+0.000
STA. 1022+63.83

Revised: 10-23-2026 LLA

SECTION F ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E4200	Construction Schedule, Category II	Lump Sum	LS
110E0500	Remove Pipe Culvert	7	Ft
110E0510	Remove Pipe End Section	16	Each
110E0595	Remove Cattle Pass End Section	2	Each
110E0730	Remove Beam Guardrail	525.0	Ft
110E1010	Remove Asphalt Concrete Pavement	1,286.0	SqYd
110E6300	Remove Rubrail for Reset	40.0	Ft
110E7500	Remove Pipe for Reset	296	Ft
110E7510	Remove Pipe End Section for Reset	38	Each
120E0100	Unclassified Excavation, Digouts	858	CuYd
120E0600	Contractor Furnished Borrow Excavation	760	CuYd
120E4100	Reprofiling Ditch	5.0	Sta
120E6100	Water for Embankment	9.9	MGal
120E6200	Water for Granular Material	95.8	MGal
260E1010	Base Course	8,211.1	Ton
320E0033	PG 58V-34 Asphalt Binder	3,180.4	Ton
320E1002	Class Q2 Hot Mixed Asphalt Concrete	55,140.6	Ton
320E1200	Asphalt Concrete Composite	834.0	Ton
320E4000	Hydrated Lime	541.0	Ton
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	37.6	Mile
320E7028	Grind Centerline Rumble Stripe in Asphalt Concrete	16.7	Mile
320E7030	Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete	2.5	Mile
320E7040	Grind 6" Transverse Rumble Strip in Asphalt Concrete	476.0	Ft
330E0010	MC-70 Asphalt for Prime	15.1	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	248.1	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	85.0	Ton
330E1000	Blotting Sand for Prime	56.7	Ton
330E2000	Sand for Flush Seal	1,051.9	Ton
332E0010	Cold Milling Asphalt Concrete	820	SqYd
450E0142	24" RCP Class 2, Furnish	6	Ft
450E0150	24" RCP, Install	6	Ft
450E2008	18" RCP Flared End, Furnish	11	Each
450E2009	18" RCP Flared End, Install	11	Each
450E2016	24" RCP Flared End, Furnish	4	Each
450E2017	24" RCP Flared End, Install	4	Each
450E5310	24" CMP Sloped End, Furnish	1	Each
450E5311	24" CMP Sloped End, Install	1	Each
450E9000	Reset Pipe	296	Ft
450E9001	Reset Pipe End Section	38	Each
462E0250	Cellular Grout	42.0	CuYd

SECTION F ESTIMATE OF QUANTITIES - CONTINUED

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
600E0300	Type III Field Laboratory	1	Each
630E0500	Type 1 MGS	100.0	Ft
630E1010	Straight Class A W Beam Guardrail with Wood Posts	50.0	Ft
630E1050	Straight Class B W Beam Guardrail with Wood Posts	50.0	Ft
630E1150	Straight Double Class B W Beam Guardrail with Wood Posts	50.0	Ft
630E2005	W Beam Guardrail to MGS Transition	4	Each
630E2018	MGS MASH Tangent End Terminal	4	Each
630E5220	Reset Rubrail	40.0	Ft
632E2220	Guardrail Delineator	18	Each
671E7010	Adjust Manhole	5	Each
700E0210	Class B Riprap	410.0	Ton
900E0010	Refurbish Single Mailbox	10	Each
900E1980	Storage Unit	1	Each

SURFACING THICKNESS DIMENSIONS

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

CONTRACTOR FURNISHED BORROW EXCAVATION

The Contractor will provide a suitable site for Contractor furnished borrow excavation material. The Contractor is responsible for obtaining all required permits and clearances for the borrow site. The borrow material will be approved by the Engineer. Compaction of the Contractor furnished borrow excavation will be to the satisfaction of the Engineer. The plans quantity for “Contractor Furnished Borrow Excavation” as shown in the Table of Pipe and Related Items added to an estimated 440 cubic yards of Contractor Furnished Borrow Excavation that will be needed for the guardrail embankment at Str. No. 46-276-174 will be the basis of payment for this item.

Restoration of the Contractor furnished borrow excavation site will be the responsibility of the Contractor.

COLD MILLING ASPHALT CONCRETE

The Los Angeles Abrasion Loss value on the aggregate used for the in-place asphalt concrete was unknown.

Cold milling will be used to tie the Class Q2 Hot Mixed Asphalt Concrete into the elevation of the adjacent surfacing.

The salvaged asphalt concrete material will become the property of the Contractor for disposal.

IRI ASPHALT PAVEMENT SMOOTHNESS

All sections, not excluded by the Section 320.3 H.3 will be evaluated as two opportunities in accordance with Section 320.3 H.3.

UNCLASSIFIED EXCAVATION, DIGOUTS

The locations and extent of digout areas will be determined in the field by the Engineer. The backfilling material for the digouts will be Asphalt Concrete Composite and Base Course. The depth of asphalt will match the in-place thickness.

Included in the Estimate of Quantities are 50 cubic yards of Unclassified Excavation, Digouts and 75 square yards of Remove Asphalt Concrete Pavement per mile for the removal of asphalt and unstable material for the length of the project with an exception through the grading limits of PCN 08D6.

Included in the Estimate of Quantities are 100 tons of Base Course and 25 tons of Asphalt Concrete Composite 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.

TYPE III FIELD LABORATORY

The Contractor will provide high-speed broadband internet connection to the field lab. The multiport internet connection may be hardwired, through a cellular method, or other approved service that allows Wi-Fi connection. Prior to obtaining the internet connection, the Contractor will submit the internet connection’s technical data to the Area Office to check for compatibility with the state’s computer equipment. The Contractor’s personnel are prohibited from using the internet connection unless pre-approved by the Project Engineer. The internet service will be incidental to the contract unit price per each for “Type III Field Laboratory”.

Plot Scale - 1:200

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Revised: 10-23-2026LLA

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 or Base Course for the full width of the bottom layer of Asphalt Concrete Composite plus one foot additional on the outside shoulder. Blotting sand for prime required for maintenance of traffic will be applied at a rate of 10 pounds per square yard.

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.

The asphalt binder used in the mixture can be PG 58H-34 or PG 58V-34 Asphalt Binder.

CLASS Q2 ASPHALT CONCRETE LEVELING LIFT

The Asphalt Concrete Leveling Lift will be compacted by the Specified Roller Coverage Method.

All remaining requirements for Class Q2 Hot Mixed Asphalt Concrete will apply.

SPOT LEVELING MATERIALS

Provide 100 tons of Class Q2 Hot Mixed Asphalt Concrete, 1.0 tons of Hydrated Lime, and 5.8 tons of PG 58V-34 Asphalt Binder per mile for spot leveling, strengthening, and repair of the existing surface for the entire project excluding the limits of PCN 08D6. Provide 4.3 tons of SS-1h or CSS-1h Emulsified Asphalt for Tack (Rate = 0.09 Gal./SqYd) for repair and leveling areas throughout the project. (See Table of Materials Quantities.)

FLUSH SEAL

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

Application of flush seal may be eliminated by the Engineer. If the paved surface remains tight, the Engineer will notify the Contractor as soon as possible that the flush seal is unnecessary.

SAND FOR FLUSH SEAL

The sand application will be placed 11' wide in each lane, leaving 12" on center line and 6" on each edge line free of sand.

ASPHALT CONCRETE SUMMARY TABLE

LOCATION	Class Q2 With Specified Density Compaction (Ton)	Class Q2 Without Specified Density Compaction (Ton)
Mainline		
Sta. 10+00.00 to Sta. 11+50.00	56.0	20.6
Sta. 11+50.00 to Sta. 17+65.00	230.1	105.4
Sta. 17+65.00 to Sta. 23+65.00	279.0	101.5
Sta. 23+65.00 to Sta. 28+05.00	246.7	75.4
Sta. 28+05.00 to Sta. 34+05.00	279.0	101.5
Sta. 34+05.00 to Sta. 41+20.00	267.4	122.5
Sta. 41+20.00 to Sta. 42+70.00	56.0	20.6
Sta. 42+70.00 to Sta. 43+08.73	14.3	4.2
Sta. 43+08.73 to Sta. 129+20.93	3,221.4	939.6
Sta. 129+20.93 to Sta. 129+85.93	23.8	10.2
Sta. 129+85.93 to Sta. 177+03.57	1,764.7	823.8
Sta. 177+03.57 to Sta. 178+33.57	29.2	43.7
Sta. 178+33.57 to Sta. 281+08.57	2,306.0	3,781.0
Sta. 281+08.57 to Sta. 283+03.57	43.7	62.6
Sta. 283+03.57 to Sta. 485+74.93	7,582.6	2,211.4
Sta. 485+74.93 to Sta. 486+34.93	22.1	9.4
Sta. 486+34.93 to Sta. 499+61.93	496.3	231.8
Sta. 499+61.93 to Sta. 500+26.93	23.8	8.6
Sta. 500+26.93 to Sta. 534+34.93	1,274.9	371.8
Sta. 534+34.93 to Sta. 738+65.33	7,645.4	2,229.4
Sta. 738+65.33 to Sta. 807+71.13	2,583.1	753.4
Sta. 807+71.13 to Sta. 886+41.43	2,945.4	858.6
Sta. 887+46.66 to Sta. 1022+63.83	5,058.8	1,474.6
Intersecting Streets and Roads		2,134.0
Farm Entrances		480.2
Materials for Spot Leveling		1,715.1
Grand Total:	55,140.6	

STORAGE UNIT

The Contractor will provide a storage unit such as a portable storage container or a semi-trailer meeting the minimum size requirements from the table below:

Project Total Asphalt Concrete Tonnage	Minimum Internal Size (Cu Ft)	Minimum External Size (L x W x H)
Less than 50,000 ton	1,166	20’ x 8’ x 8.6’ std
More than 50,000 ton	2,360	40’ x 8’ x 8.6’ std
All Gyratory Controlled QC/QA Projects	2,360	40’ x 8’ x 8.6’ std

The storage unit is intended for use only by the Engineer for the duration of the project. The QC lab personnel or the Contractor will not be allowed to use the storage container while it is on the project, without permission of the Engineer.

The storage unit will be on site and operational prior to asphalt concrete production. Upon completion of asphalt concrete production, the Engineer will notify the Contractor when the storage unit can be removed from the project. The storage unit use will not exceed 30 calendar days from the completion of asphalt concrete production. The storage unit will remain the property of the Contractor.

The storage unit will be weather proof and will be set in a level position. The storage unit will be able to be locked with a padlock.

The storage unit will be placed adjacent to the QA lab, as approved by the Engineer.

The following will apply when the storage unit provided on the project is a portable storage container:

1. The portable storage container will be constructed of steel.
2. The portable storage container will be set such that it is raised above the surrounding ground level to keep water from ponding under or around the storage container.

The following will apply when the storage unit provided on the project is a semi-trailer:

1. A set of steps and hand railings will be provided at the exterior door.
2. If the floor of the semi-trailer is 18 inches or more above the ground, a landing will be constructed at the exterior door. The minimum dimensions for the landing will be 4 feet by 5 feet. The top of the landing will be level with the threshold or opening of the doorway.
3. The semi-trailer may be connected to the QA lab by a stable elevated walkway. The walkway will be a minimum of 48 inches wide and contain handrails installed at 32 inches above the deck of the walkway. The walkway will be constructed such that it is stable and the deck does not deform during use and allows for proper door operation. Walkway construction will be approved by the Engineer.

All cost for furnishing, maintaining, and removing the storage unit including labor, equipment, and materials including any necessary walkways, landings, stairways, and handrails will be included in the contract unit price per each for “Storage Unit”.

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PLUG EXISTING BOX CULVERT

The existing box culvert(cattle pass) at Sta. 960+55 will be plugged by pressure filling with Cellular Grout. The box culvert will be plugged after the box culvert flared end sections are removed, as specified in the plans. Contractor Furnished Borrow Excavation material will be used to construct a 4:1 roadway embankment over the ends of the plugged box culvert and match the existing roadway inslopes to the satisfaction of the Engineer. The box culvert will be plugged according to the "Plug Existing RC Box Culvert Detail". Sufficient pressure will be applied to force the cellular grout to fill the entire volume of the existing box culvert length and voids around the existing joints.

Prior to plugging, the Contractor will clean the existing box culvert of all debris, silt, and obstructions to ensure that the grout will flow to all voids. Cleaning will be accomplished by the use of jet rodding equipment or other approved methods.

Bulkheads will be constructed at each end of the box culvert. Each bulkhead will be constructed to withstand the pressure of the grouting operation. The bulkhead will extend from the end of the existing box culvert inward a minimum depth of 18 inches. The bulkhead will be free from leaks and the exterior surface will be given a smooth trowel finish.

The grout will be a cellular grout (grout with pre-generated foam) with a minimum 28 day compressive strength of 100 pounds per square inch. If water is not present within the existing box culvert, a low density grout with a minimum of 30 pounds per cubic foot wet density may be used. When it is not possible to dewater the existing box culvert during grouting, a high density grout with a minimum of 70 pounds per cubic foot will be used which may include approved sand. The foaming agent used will meet the requirements of ASTM C869 when tested in accordance with ASTM C796.

Both cellular grout mix designs will be submitted to the SDDOT Concrete Engineer for approval prior to use. The mix design submittal will include the base cement slurry mix per cubic yard, expansion factor from the foaming agent, and the cellular grout wet density (pounds per cubic foot).

The Contractor will install a bypass valve adjacent to the location where the pressure grouting hose is attached for obtaining samples to be checked for wet density. The wet density of the cellular grout will be checked by the Contractor to verify the proper minimum wet density before the cellular grout filling operations begin and at a minimum once every two hours during production. The SDDOT will document the results of the density checks.

Cellular grout will be wasted until the cellular grout meets the minimum wet density required; however, if 0.5 cubic yards or more of base cement slurry is wasted trying to meet density requirements, then that quantity will not be included for payment.

If grout holes are utilized, cylindrical wooden plugs or other approved plugs will be inserted to plug holes until the grout has set. After the plugs are removed the holes will be filled with concrete.

The quantity of cellular grout was estimated based on void quantity of the existing box culvert, and an additional quantity if necessary was estimated for the void volume outside the existing box culvert.

The quantity of base cement slurry ordered will be approved by the Engineer. The quantity of base cement slurry needed will be calculated to the nearest tenth of a cubic yard using the approved mix design, expansion factor of the foaming agent, and estimated amount of cellular grout. The quantity for payment to the nearest tenth of a cubic yard of "Cellular Grout" is a calculated quantity based on the amount of base cement slurry used on the project to the nearest tenth of a cubic yard, expansion factor of the foaming agent, and approved mix design.

All work necessary to remove the box culvert end sections including labor, materials, equipment and disposal will be incidental to the contract unit price of the bid item for "Remove Cattle Pass End Section".

All costs for furnishing and installing the cellular grout including bulkhead construction, inlet bevel construction, and incidentals necessary to satisfactorily complete the work will be included in the contract unit price per cubic yard for "Cellular Grout".

All work necessary to plug the box culvert including labor, materials and equipment will be incidental to the contract unit price of the respective bid items for "Contractor Furnished Borrow Excavation" and "Cellular Grout".

TABLE OF PLUG EXISTING BOX CULVERT WORK

Station	Description	Remove Cattle Pass End Section (Each)	Cellular Grout (CuYd)	Contractor Furnished Borrow Excavation (CuYd)
960+55	Plug 4'x6' - 47' RC Cattle Pass	2	42	30
	Totals:	2	42	30

Note: The quantity of Contractor Furnished Borrow Excavation from this table is included in other tables to total the items for the project.

OBJECT MARKERS

At locations shown in the Table for Pipe and Related Items, where Object Markers will be removed for reset, cost to remove and reset Culvert Markers will be incidental to the various culvert contract items.

TABLE OF SUPERELEVATION

Station	to	Station	Remarks
10+00.00		11+63.26	Normal Crown Section
11+63.26		13+86.26	Superelevation Runoff
13+86.26		38+89.61	0.060 Superelevation Rate
			90° 01'31" Curve Rt.
38+89.61		41+12.61	Superelevation Runoff
41+12.61		179+72.55	Normal Crown Section
179+72.55		181+45.55	Superelevation Runoff
181+45.55		202+18.17	0.042 Superelevation Rate
			32° 07'29" Curve Lt.
202+18.17		203+91.17	Superelevation Runoff
203+91.17		228+44.03	Normal Crown Section
228+44.03		230+62.03	Superelevation Runoff
230+62.03		250+17.76	0.058 Superelevation Rate
			57° 22'41" Curve Lt.
250+17.76		252+35.76	Superelevation Runoff
252+35.76		335+84.71	Normal Crown Section
335+84.71		337+46.71	Superelevation Runoff
337+46.71		352+87.27	0.038 Superelevation Rate
			08° 03'38" Curve Lt.
352+87.27		354+49.27	Superelevation Runoff
354+49.27		357+02.66	Normal Crown Section
357+02.66		358+64.66	Superelevation Runoff
358+64.66		374+06.33	0.038 Superelevation Rate
			21° 21'53" Curve Rt.
374+06.33		375+68.33	Superelevation Runoff
375+68.33		388+19.79	Normal Crown Section
388+19.79		389+81.79	Superelevation Runoff
389+81.79		405+39.86	0.038 Superelevation Rate
			21° 34'59" Curve Rt.
405+39.86		407+01.86	Superelevation Runoff
407+01.86		409+33.89	Normal Crown Section
409+33.89		410+95.89	Superelevation Runoff
410+95.89		427+07.38	0.038 Superelevation Rate
			32° 07'29" Curve Lt.
427+07.38		428+69.38	Superelevation Runoff
428+69.38		511+46.03	Normal Crown Section
511+46.03		513+19.03	Superelevation Runoff
513+19.03		531+19.81	0.042 Superelevation Rate
			28° 02'46" Curve Rt.
531+19.81		532+92.81	Superelevation Runoff
532+92.81		536+78.45	Normal Crown Section
536+78.45		538+51.45	Superelevation Runoff
538+51.45		557+06.98	0.042 Superelevation Rate
			28° 52'08" Curve Lt.
557+06.98		558+79.98	Superelevation Runoff

Plot Scale - 1:200

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TABLE OF SUPERELEVATION - CONTINUED

558+79.98	574+83.13	Normal Crown Section
574+83.13	576+23.13	Superelevation Runoff
576+23.13	589+82.69	0.030 Superelevation Rate
		14° 09'17" Curve Rt.
589+82.69	591+22.69	Superelevation Runoff
591+22.69	614+06.16	Normal Crown Section
614+06.16	615+46.16	Superelevation Runoff
615+46.16	621+15.26	0.030 Superelevation Rate
		06° 15'02" Curve Rt.
621+15.26	622+55.26	Superelevation Runoff
622+55.26	624+83.31	Normal Crown Section
624+83.31	626+23.31	Adjusted Superelevation Runoff
626+23.31	635+22.45	0.030 Superelevation Rate
		09° 33'02" Curve Lt.
635+22.45	635+50.45	Superelevation Runoff
635+50.45	635+50.53	Normal Crown Section
635+50.53	635+79.53	Adjusted Superelevation Runoff
635+79.53	645+47.88	0.032 Superelevation Rate
		10° 19'00" Curve Lt.
645+47.88	646+92.88	Superelevation Runoff
646+92.88	652+83.74	Normal Crown Section
652+83.74	654+23.74	Superelevation Runoff
654+23.74	658+90.44	0.030 Superelevation Rate
		05° 13'36" Curve Rt.
658+90.44	660+30.44	Superelevation Runoff
660+30.44	705+50.88	Normal Crown Section
705+50.88	706+90.88	Superelevation Runoff
706+90.88	722+77.54	0.030 Superelevation Rate
		16° 25'31" Curve Rt.
722+77.54	724+17.54	Superelevation Runoff
724+17.54	741+89.07	Normal Crown Section
741+89.07	744+12.07	Superelevation Runoff
744+12.07	752+24.73	0.060 Superelevation Rate
		32° 17'43" Curve Lt.
752+24.73	754+47.73	Superelevation Runoff
754+47.73	875+03.29	Normal Crown Section
875+03.29	877+26.29	Superelevation Runoff
877+26.29	883+92.44	0.060 Superelevation Rate
		21° 38'21" Curve Rt.
883+92.44	886+15.44	Superelevation Runoff
886+15.44	912+62.85	Normal Crown Section
912+62.85	914+52.85	Superelevation Runoff
914+52.85	927+25.65	0.048 Superelevation Rate
		25° 45'27" Curve Lt.
927+25.65	929+15.65	Superelevation Runoff
929+15.65	1001+65.52	Normal Crown Section
1001+65.52	1003+05.52	Superelevation Runoff
1003+05.52	1009+93.31	0.030 Superelevation Rate
		07° 26'14" Curve Rt.
1009+93.31	1011+33.31	Superelevation Runoff
1011+33.31	1022+63.83	Normal Crown Section

GRIND RUMBLE STRIPES IN ASPHALT CONCRETE

Asphalt concrete rumble stripes will be constructed on the shoulders. Rumble stripes will be paid for at the contract unit price per mile for “Grind 12” Rumble Strip or Stripe in Asphalt Concrete”. It is estimated that 37.6 miles of asphalt concrete rumble stripes will be required.

Rumble stripe installation will be completed prior to application of the flush seal and permanent pavement markings. In the event the flush seal is eliminated from the contract, the Contractor will still be required to apply a flush seal to the newly installed 12” rumble stripes at a width of 18” and at the same rate as specified in this plan set. No adjustment in payment will be made and SS-1h or CSS-1h Asphalt for Flush Seal will be paid at the contract unit price per ton.

CENTERLINE RUMBLE STRIPES – ASPHALT FOR FLUSH SEAL

Asphalt for Flush Seal will be applied after the centerline rumble stripes have been installed and prior to the application of permanent pavement markings. The application width will extend 1 ft beyond the centerline of the roadway in each direction to create a total application rate of 0.10 Gal/SqYd on the centerline rumble stripes.

In the event the flush seal is eliminated from the contract, the Contractor will still be required to apply asphalt for flush seal to the newly installed centerline rumble stripes at a width of 24” and a rate of 0.10 Gal/SqYd. No adjustment in payment will be made and SS-1h or CSS-1h Asphalt for Flush Seal will be paid at the contract unit price per ton.

GRIND SINUSOIDAL CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE

Sinusoidal rumble stripes will be constructed on the centerline, as detailed in the plan set. Sinusoidal rumble stripes will be paid for at the contract unit price per mile for “Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete”. It is estimated that 2.5 miles of sinusoidal rumble stripes will be required.

Sinusoidal rumble stripe installation will be completed prior to application of the flush seal and permanent pavement markings. In the event the flush seal is eliminated from the contract, the Contractor will still be required to apply a flush seal to the newly installed sinusoidal rumble stripes at a width of 24” and a rate of 0.10 gal./SqYd No adjustment in payment will be made and SS-1h or CSS-1h Asphalt for Flush Seal will be paid at the contract unit price per ton.

TABLE OF SINUSOIDAL CENTERLINE RUMBLE STRIPES

Sta	to	Sta.	Length (Mile)
53+50	to	59+58	0.1
101+50	to	112+50	0.2
267+50	to	280+50	0.2
301+00	to	314+00	0.2
453+50	to	465+00	0.2
513+00	to	525+50	0.2
620+50	to	662+00	0.8
902+50	to	931+50	0.5
1018+18	to	1022+64	0.1
		Total =	2.5

GRIND 6” TRANSVERSE RUMBLE STRIP IN ASPHALT CONCRETE

Advance intersection warning transverse rumble strips will be constructed on the mainline pavement, as detailed in the plan set. Transverse rumble strips will be paid for at the contract unit price per foot for “Grind 6” Transverse Rumble Strip in Asphalt Concrete”. It is estimated that 476 feet of transverse rumble strips will be required.

Transverse rumble strips will be completed prior to application of the flush seal and permanent pavement markings. In the event the flush seal is eliminated from the contract, the Contractor will still be required to apply a flush seal to the newly installed transverse rumble strips at a width that extends 3” beyond the perimeter of the total area of the transverse rumble strips and at the same rate as specified in this plan set. No adjustment in payment will be made and SS-1h or CSS-1h Asphalt for Flush Seal will be paid at the contract unit price per ton.

ADJUSTMENT OF MANHOLES

The Contractor shall adjust manholes to the extent necessary on this project. Adjusting the manholes may consist of removing the upper course of brick or the concrete walls, replacing the removed materials with brick or Class M6 concrete, placing adjusting rings if necessary, and resetting the manhole frame and lid. The elevation of the lid shall be set at the same elevation of the adjacent new pavement or surrounding surfacing. Manholes shall be adjusted to the satisfaction of the Engineer.

The Contractor shall note all broken frames, lids, and rings and contact the City of Roslyn before replacement work begins. All manhole frames, lids, and rings that are cracked or broken due to carelessness of the Contractor shall be replaced by the Contractor at no expense to the State or the City of Roslyn.

All costs associated with adjusting the manholes shall be incidental to the contract unit price per each for “Adjust Manhole”.

TABLE OF MANHOLE ADJUSTMENT

Station (Approx.)	Feet (Approx.)	L/R	Quantity (Each)
56+79.36	10	L	1
60+54.36	7	L	1
64+27.36	7	L	1
69+30.36	2	R	1
73+50.36	0	R	1
		Total:	5

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CORRUGATED METAL PIPE

Corrugated metal pipes will have 2 ⅔-inch x ½-inch corrugations for 42-inch and smaller round pipe and 48-inch and smaller arch pipe unless otherwise stated in the plans. Corrugated metal pipes will have 3-inch x 1-inch or 5-inch x 1-inch corrugations for 48-inch and larger round pipe and 54-inch and larger arch pipe unless otherwise stated in the plans.

The gauge of the corrugated metal ends will match the thickest gauge of corrugated metal pipe it is connected to.

RCP AND CMP CULVERTS

The Contractor is encouraged to thoroughly investigate the culvert repair and replacement sites prior to bidding. Prior to working on the sites that are inundated with water, a complete dewatering plan will be submitted for approval to the Engineer. No separate payment for dewatering will be made.

All pipe and end treatments designated for removal will become the property of the Contractor for his disposal.

All safety ends will be without bars unless otherwise noted in the table of “Slope Flattening of Approaches and Culvert Extensions”.

Tie bolts will be installed at all joint locations where existing pipe sections and end treatments are being reset or installed new. This may require drilling holes into the existing pipe sections and end treatments. Tie bolts will be installed in accordance with Standard Plate No. 450.18. New RCP culvert installations will have all the joint locations tied together with tie bolts.

On approaches, tie bolts will be installed at all locations where the RCP Safety End is attached to new RCP culvert. Only the RCP Safety End and the newly installed end section will be tied. Tie bolts will be installed in accordance with Standard Plate No. 450.18.

When necessary to remove end sections of CMP culverts, they may be cut with a torch. If the culvert is cut the damaged area will be painted with a galvanizing paint approved by the Engineer. All costs associated with cutting and painting will be incidental to the contract unit price per foot for “Remove Pipe Culvert”.

The Contractor is advised of the risk of lead exposure when cutting galvanized paint. The Contractor should plan his/her operations accordingly and inform employees of hazards of lead exposure.

Culvert barrel and culvert end treatments that are to be removed and reset will be cleaned prior to resetting. There will be no payment of the contract item Cleanout Pipe Culvert to clean sections of culverts that are removed and reset.

MAILBOXES

The Contractor will reset the existing mailboxes on new posts with the necessary support hardware for single mailbox assemblies. The local Postmaster will determine the recommended mounting height of the mailboxes throughout the project. The Contractor will coordinate with the Engineer on the proper postal representative to contact.

All costs for removing existing mailboxes, providing temporary mailboxes, and resetting mailboxes with new posts and necessary support hardware will be incidental to the contract unit price per each for “Refurbish Single Mailbox”.

Single mailboxes will be refurbished as listed in the Table of Refurbish Mailbox. This table does not include the 2 mailboxes within the Grading portion of PCN 08D6. See PCN 08D6 Section B plans for more information.

TABLE OF REFURBISH MAILBOX

MRM	+Displ	LT/RT	Comments
194	0.25	Rt	Single Mailbox on east edge of driveway.
194	0.88	Rt	Single Mailbox on west edge of approach.
195	0.05	Lt	Single Mailbox on west side of approach located at radius point.
205	0.12	Rt	Single Box on north side of approach
205	0.17	Rt	Single Box on north side of approach
205	0.26	Rt	Single Box on north side of approach
205	0.29	Rt	Single Box on north side of approach
208	0.31	Rt	Single Mailbox on south side of approach located at radius point.
210	0.50	RT	Single Mailbox along edge of roadway with small mailbox pullout.
210	0.03	Rt	Single box on north side of Interesting Road.

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RATES OF MATERIALS – See Table of Materials

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

SD 25 MAINLINE

Sta. 11+50 to Sta. 17+65
Sta. 34+05 to Sta. 41+20

SS-1h or CSS-1h Asphalt for Tack at the rate of 0.16 tons applied 37 feet Wide (Rate = 0.09 gallon per square yard).

CLASS Q2 LEVELING LIFT ASPHALT CONCRETE

Crushed Aggregate	20.36	tons
PG 58V-34 Asphalt Binder	1.25	tons
Total Mix	21.61	tons
Hydrated Lime	0.22	tons
Total Mix with Hydrated Lime	21.83	tons

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

SS-1h or CSS-1h Asphalt for Tack at the rate of 0.10 tons applied 37 feet Wide (Rate = 0.06 gallon per square yard).

CLASS Q2 HOT MIXED ASPHALT CONCRETE

Crushed Aggregate	30.53	tons
PG 58V-34 Asphalt Binder	1.88	tons
Total Mix	32.41	tons
Hydrated Lime	0.32	tons
Total Mix with Hydrated Lime	32.73	tons

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

FLUSH SEAL

SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 0.09 ton applied 36 feet wide (Rate = 0.05 gallon per square yard).

Sand for Flush Seal at the rate of 0.98 ton applied 22 feet wide (Rate = 8.0 pounds per square yard).

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

SD 25 MAINLINE

Sta. 43+08.73 to Sta. 129+20.93
Sta. 283+03.57 to Sta. 485+74.93
Sta. 500+26.93 to Sta. 886+41.43
Sta. 887+46.66 to Sta. 1022+63.83

SS-1h or CSS-1h Asphalt for Tack at the rate of 7.4 tons applied 33 feet Wide (Rate = 0.09 gallon per square yard).

CLASS Q2 LEVELING LIFT ASPHALT CONCRETE

Crushed Aggregate	953	tons
PG 58V-34 Asphalt Binder	59	tons
Total Mix	1012	tons
Hydrated Lime	10	tons
Total Mix with Hydrated Lime	1022	tons

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

SS-1h or CSS-1h Asphalt for Tack at the rate of 4.9 tons applied 33 feet Wide (Rate = 0.06 gallon per square yard).

CLASS Q2 HOT MIXED ASPHALT CONCRETE

Crushed Aggregate	1428	tons
PG 58V-34 Asphalt Binder	88	tons
Total Mix	1516	tons
Hydrated Lime	15	tons
Total Mix with Hydrated Lime	1531	tons

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

FLUSH SEAL

SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 4.0 ton applied 32 feet wide (Rate = 0.05 gallon per square yard).

Sand for Flush Seal at the rate of 52 ton applied 22 feet wide (Rate = 8.0 pounds per square yard).

SD 25 MAINLINE

Sta. 129+85.93 to Sta. 177+03.57
Sta. 486+34.93 to Sta. 499+61.93

SS-1h or CSS-1h Asphalt for Tack at the rate of 8.3 tons applied 37 feet Wide (Rate = 0.09 gallon per square yard).

CLASS Q2 LEVELING LIFT ASPHALT CONCRETE

Crushed Aggregate	1126	tons
PG 58V-34 Asphalt Binder	69	tons
Total Mix	1195	tons
Hydrated Lime	12	tons
Total Mix with Hydrated Lime	1207	tons

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

SS-1h or CSS-1h Asphalt for Tack at the rate of 5.5 tons applied 37 feet Wide (Rate = 0.06 gallon per square yard).

CLASS Q2 HOT MIXED ASPHALT CONCRETE

Crushed Aggregate	1564	tons
PG 58V-34 Asphalt Binder	96	tons
Total Mix	1660	tons
Hydrated Lime	17	tons
Total Mix with Hydrated Lime	1677	tons

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

FLUSH SEAL

SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 4.5 ton applied 36 feet wide (Rate = 0.05 gallon per square yard).

Sand for Flush Seal at the rate of 52 ton applied 22 feet wide (Rate = 8.0 pounds per square yard).

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F8	F60

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SD 25 MAINLINE

Sta. 178+33.57 to Sta. 281+08.57

SS-1h or CSS-1h Asphalt for Tack at the rate of 6.1 tons applied 41 feet Wide (Rate = 0.06 gallon per square yard).

CLASS Q2 LEVELING LIFT ASPHALT CONCRETE

Crushed Aggregate	1167	tons
PG 58V-34 Asphalt Binder	72	tons
Total Mix	1239	tons
Hydrated Lime	12	tons
Total Mix with Hydrated Lime	1251	tons

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

SS-1h or CSS-1h Asphalt for Tack at the rate of 6.1 tons applied 41 feet Wide (Rate = 0.06 gallon per square yard).

CLASS Q2 HOT MIXED ASPHALT CONCRETE

Crushed Aggregate	1748	tons
PG 58V-34 Asphalt Binder	108	tons
Total Mix	1856	tons
Hydrated Lime	19	tons
Total Mix with Hydrated Lime	1875	tons

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

FLUSH SEAL

SS-1h or CSS-1h Asphalt for Flush Seal at the rate of 5.0 ton applied 40 feet wide (Rate = 0.05 gallon per square yard).

Sand for Flush Seal at the rate of 52 ton applied 22 feet wide (Rate = 8.0 pounds per square yard).

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F9	F60

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TABLE OF MATERIALS QUANTITIES

LOCATION	WATER FOR GRANULAR MATERIAL	BASE COURSE	ASPHALT CONCRETE COMPOSITE	CLASS Q2 HOT MIXED ASPHALT CONCRETE		PG 58V-34 ASPHALT BINDER		ASPHALT FOR PRIME	BLOTTING SAND FOR PRIME	HYDRATED LIME		ASPHALT FOR TACK		ASPHALT FOR FLUSH SEAL	SAND FOR FLUSH SEAL
				Leveling Lift	Top Lift	Leveling Lift	Top Lift			Leveling Lift	Top Lift	Leveling Lift	Top Lift		
Station to Station	(MGal)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)	(Ton)
Mainline															
10+00.00 to 11+50.00				30.6	46.0	1.8	2.6			0.3	0.4	0.2	0.1	0.1	1.5
11+50.00 to 17+65.00				134.2	201.3	7.7	11.6			1.4	2.0	1.0	0.6	0.6	6.0
17+65.00 to 23+65.00				152.2	228.3	8.8	13.1			1.5	2.3	1.1	0.7	0.6	7.3
23+65.00 to 28+05.00				128.8	193.3	7.4	11.1			1.3	1.9	0.9	0.6	0.5	6.5
28+05.00 to 34+05.00				152.2	228.3	8.8	13.1			1.5	2.3	1.1	0.7	0.6	7.3
34+05.00 to 41+20.00				156.0	233.9	8.9	13.4			1.6	2.3	1.1	0.7	0.6	7.0
41+20.00 to 42+70.00				30.6	46.0	1.8	2.6			0.3	0.4	0.2	0.1	0.1	1.5
42+70.00 to 43+08.73				7.4	11.1	0.4	0.6			0.1	0.1	0.1	0.1	0.1	0.4
43+08.73 to 129+20.93				1,665.4	2,495.6	96.2	143.5			16.3	24.5	12.1	8.0	6.5	84.8
129+20.93 to 129+85.93				13.6	20.4	0.8	1.2			0.1	0.2	0.1	0.1	0.1	0.6
129+85.93 to 177+03.57				1,035.6	1,552.9	59.9	89.4			9.8	15.2	7.4	4.9	4.0	46.5
177+03.57 to 178+33.57				29.2	43.7	1.7	2.5			0.3	0.4	0.1	0.1	0.1	1.3
178+33.57 to 281+08.57				2,434.4	3,652.6	140.1	210.2			23.4	37.0	11.9	11.9	9.7	101.2
281+08.57 to 283+03.57				42.5	63.8	2.4	3.7			0.4	0.6	0.2	0.2	0.2	1.9
283+03.57 to 485+74.93				3,919.9	5,874.1	226.5	337.9			38.4	57.6	28.4	18.8	15.4	199.6
485+74.93 to 486+34.93				12.6	18.9	0.7	1.1			0.1	0.2	0.1	0.1	0.1	0.6
486+34.93 to 499+61.93				291.3	436.8	16.8	25.1			2.8	4.3	2.1	1.4	1.1	13.1
499+61.93 to 500+26.93				13.6	18.8	0.8	1.1			0.1	0.2	0.1	0.1	0.1	0.6
500+26.93 to 534+34.93				659.1	987.6	38.1	56.8			6.5	9.7	4.8	3.2	2.6	33.6
534+34.93 to 738+65.33				3,950.7	5,924.1	228.3	340.5			38.7	58.0	28.6	19.0	15.5	201.2
738+65.33 to 807+71.13				1,335.4	2,001.1	77.2	115.1			13.1	19.6	9.7	6.4	5.2	68.0
807+71.13 to 886+41.43				1,521.9	2,282.1	87.9	131.2			14.9	22.4	11.0	7.3	6.0	77.5
887+46.66 to 1022+63.83				2,613.9	3,919.5	151.0	225.3			25.6	38.4	18.9	12.5	10.2	133.1
Materials for Main. of Traffic and Pipe Work	0.1	10.0	327.0												
Intersecting Streets and Roads															
28' Intersecting Rd - 2.5" AC Composite - 35 each *	21.0	1,750.0			1,848.0		105.0	10.5	35.0		17.5		3.5	3.5	35.0
40' Intersecting Roads - 4 each	3.2	268.0			286.0		16.4	1.6	8.0		2.8		0.4	0.4	4.0
*Surfaced within limits of PCN 08D6															
Farm Entrances															
24' Farm Entrances - 95 each *	47.5	4,180.0			465.5		28.5	2.9	13.3		4.8		1.0	1.0	11.4
40' Farm Entrances - 3 each	2.4	201.0			14.7		0.9	0.1	0.4		0.2		0.1	0.1	0.4
*Surfaced within limits of PCN 08D6															
Guardrail Surfacing - 2.5" AC Composite															
Str. No. 46-276-174 - all 4 corners	1.0	87.0	78.0												
Materials for backfilling of digouts	20.6	1,715.1	429.0												
Materials for spot leveling					1,715.1		102.9				17.2		4.3		
Rates Totals:	95.8	8,211.1	834.0	55,140.6		3,180.4		15.1	56.7	541.0		248.1		85.0	1,051.9

Application Rates: MC-70 Asphalt for Prime rate = 0.30 gallon per square yard
SS-1h or CSS-1h Asphalt for Tack rate = 0.09(initial) and 0.06(final) gallon per square yard.
SS-1h or CSS-1h Asphalt for Flush Seal rate = 0.05 gallon per square yard.

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LOCATION OF INTERSECTING ROADS AND FARM ENTRANCES

INTERSECTING STREETS & ROADS		
28' Intersecting Roads (34 each)		40' Intersecting Roads (4 each)
Sta. 65+76 Rt.	Sta. 534+30 Rt. - 124th St.	Sta. 27+88 Lt. - 1st St.
Sta. 75+67 Lt. - 3rd St.	Sta. 534+30 Lt. - 124th St.	Sta. 67+08 Lt.
Sta. 75+67 Rt. - 3rd St.	Sta. 534+30 Rt. - 124th St.	Sta. 69+11 Rt. - Main St.
Sta. 128+43 Lt. - 437th Ave.	Sta. 588+23+30 Lt. - 123rd St.	Sta. 73+89 Rt.
Sta. 128+43 Rt. - 437th Ave.	Sta. 588+23+30 Rt. - 123rd St.	
*Sta. 181+23 Lt. - 438th Ave.	Sta. 629+55 Lt. - Taft St.	
*Sta. 230+52 Rt. - 439th Ave.	Sta. 642+99 Lt. - 122nd St.	
*Sta. 265+80 Lt. - 129th St.	Sta. 642+99 Rt. - 122nd St.	
*Sta. 265+80 Rt. - 129th St.	Sta. 696+16 Lt. - 121st St.	
Sta. 318+65 Lt. - 128th St.	Sta. 696+16 Rt. - 121st St.	
Sta. 318+65 Rt. - 128th St.	Sta. 804+69 Rt. - 119th St.	
Sta. 372+62 Lt. - 127th St.	Sta. 857+52 Lt. - 118th St.	
Sta. 372+62 Rt. - 127th St.	Sta. 857+52 Rt. - 118th St.	
Sta. 426+29 Rt. - 126th St.	Sta. 912+36 Lt. - Roykota Dr.	*Surfaced within limits of PCN 08D6
Sta. 478+91 Lt. - 125th St.	Sta. 915+58 Rt. - 117th St.	
Sta. 478+91 Rt. - 125th St.	Sta. 965+76 Lt. - Northside Dr.	
Sta. 534+30 Lt. - 124th St.	Sta. 969+61 Rt. - 116th St.	

FARM ENTRANCES			
24' Farm Entrances (95 each)			40' Farm Entrances (3 each)
Sta. 21+35 Lt.	Sta. 291+37 Lt.	Sta. 644+08 Rt.	Sta. 442+22 Lt.
Sta. 21+35 Rt.	Sta. 296+13 Lt.	Sta. 645+20 Rt.	Sta. 631+68 Rt.
Sta. 40+39 Rt.	Sta. 296+13 Rt.	Sta. 646+48 Lt.	Sta. 635+76 Lt.
Sta. 43+36 Lt.	Sta. 306+42 Lt.	Sta. 646+48 Rt.	
Sta. 47+67 Rt.	Sta. 327+06 Lt.	Sta. 649+40 Rt.	
Sta. 49+49 Rt.	Sta. 327+06 Rt.	Sta. 652+65 Rt.	
Sta. 54+89 Lt.	Sta. 345+83 Lt.	Sta. 653+65 Rt.	
Sta. 59+55 Rt.	Sta. 355+67 Rt.	Sta. 655+33 Rt.	
Sta. 63+70 Lt.	Sta. 394+49 Lt.	Sta. 656+59 Rt.	
Sta. 66+90 Lt.	Sta. 394+49 Rt.	Sta. 657+40 Rt.	
Sta. 68+87 Lt.	Sta. 403+02 Lt.	Sta. 670+45 Rt.	
Sta. 70+69 Lt.	Sta. 403+02 Rt.	Sta. 720+61 Lt.	
Sta. 73+50 Lt.	Sta. 417+43 Rt.	Sta. 720+61 Rt.	
Sta. 81+32 Rt.	Sta. 426+29 Lt.	Sta. 744+42 Rt.	*Surfaced within limits of PCN 08D6
Sta. 88+75 Rt.	Sta. 457+56 Lt.	Sta. 751+08 Lt.	
Sta. 93+55 Lt.	Sta. 460+83 Rt.	Sta. 751+08 Rt.	
Sta. 93+55 Rt.	Sta. 498+11 Lt.	Sta. 779+66 Lt.	
Sta. 104+88 Rt.	Sta. 501+38 Rt.	Sta. 804+69 Lt.	
Sta. 107+70 Rt.	Sta. 505+23 Lt.	Sta. 814+58 Lt.	
Sta. 115+54 Lt.	Sta. 511+03 Rt.	Sta. 814+58 Rt.	
Sta. 147+30 Rt.	Sta. 519+88 Lt.	Sta. 841+52 Lt.	
Sta. 149+27 Rt.	Sta. 542+73 Lt.	Sta. 890+28 Rt.	
Sta. 158+85 Rt.	Sta. 542+73 Rt.	Sta. 894+99 Lt.	
Sta. 162+11 Lt.	Sta. 548+73 Rt.	Sta. 928+23 Lt.	
*Sta. 181+23 Rt.	Sta. 559+17 Rt.	Sta. 932+74 Rt.	
*Sta. 205+56 Lt.	Sta. 562+68 Lt.	Sta. 936+63 Lt.	
*Sta. 209+61 Rt.	Sta. 574+57 Lt.	Sta. 949+94 Rt.	
*Sta. 241+43 Rt.	Sta. 574+57 Rt.	Sta. 956+25 Rt.	
*Sta. 258+79 Lt.	Sta. 599+67 Rt.	Sta. 978+12 Lt.	
*Sta. 258+79 Rt.	Sta. 619+60 Lt.	Sta. 997+53 Rt.	
Sta. 272+91 Lt.	Sta. 619+60 Rt.	Sta. 1005+49 Lt.	
Sta. 291+14 Rt.	Sta. 629+94 Rt.		

Plot Scale - 1:200

Plotted From - TRPR13462

File - ...\prj\day08GH\NotesSectionF.dgn

Revised: 04-30-2025 LLA

TABLE OF PIPE AND RELATED ITEMS

Station	Underlying Station	Culvert Inventory #	MRM	Existing Culvert	Drainage	Reprofiling Ditch	Contractor Furnished Borrow Excavation *	Remove Pipe Culvert	Remove Pipe for Reset	Remove Pipe End Section	Remove Pipe End Section for Reset	24" RCP, Furnish & Install	18" RCP Flared End, Furnish & Install	24" RCP Flared End, Furnish & Install	24" CMP Sloped End, Furnish & Install	Reset Pipe	Reset Pipe End Section	Class B Riprap	Base Course	Asphalt Concrete Composite	Comments
					Acres	Stations	CuYds	Ft	Ft	Each	Each	Ft	Each	Each	Each	Ft	Each	Ton	Ton	Ton	
51+96	970+62	14004	193.87	24" RCP - 64' & 2 FE	13		10		16	1	1			1		16	1				South: Reset Flared End and 10'. North: Replace Flared End & Reset 6'.
74+54	948+04		194.30	18" RCP - 60' & 2 FE	-		10		12	2			2			12					South: Replace Flared End. North: Replace Flared End & Reset 12'.
86+02	936+56	14007	194.51	24" RCP - 86' & 2 FE	91	1	5		4		2					4	2				South: Reset Flared End. Reprofile channel from culvert end to the ROW line. North: Reset FE & 4'.
94+91	927+69	14008	194.68	18" RCP - 72' & 2 FE	-		10		12		2					12	2				South: Reset Flared End. North: Reset Flared End & 12'.
100+40	922+18	14009	194.79	24" RCP - 72' & 2 FE	-		10		18		2					18	2				South: Reset Flared End & 6'. North: Reset Flared End & 12'.
111+07	911+51	14010	195.02	24" RCP - 100' & 2 FE	37		10		16		2					16	2				South: Reset Flared End & 6'. North: Reset Flared End & 10'.
307+91	716+00	14020	198.79	24" RCP - 78' & 2 FE	-		5			1	1			1			1				East: Reset Flared End. West: Replace Flared End.
315+91	707+00	14021	198.95	18" RCP - 86' & 2 FE	-		10		8		1					8	1				East: Reset Flared End and 8'.
341+92	681+00	14022	199.43	18" RCP - 68' & 2 FE	-		10		14		2					14	2				East: Reset FE & 14'. West: Reset FE.
347+91	675+00	14023	199.55	24" RCP - 146' & 2 FE	-	1	5				1						1				Reprofile channel from East Flared End to the NE to the ROW Line. Reset West Flared End.
358+91	664+00	14025	199.75	24" RCP - 120' & 2 FE	-		10		18		2					18	2				East: Reset Flared End and 6' West: Reset Flared End and 12'.
368+91	654+00	14026	199.94	18" RCP - 84' & 2 FE	56		10		6		1					6	1				Reset Flared end and 6' on East side.
373+51	649+50	14027	200.02	18" RCP - 106' & 2 FE	144		10		6		1					6	1				Reset Flared end and 6' on East side.
379+91	643+00	14028	200.13	18" RCP - 88' & 2 FE	86		10		4	1	1		1			4	1				East: Reset Flared End and 4' West: Replace Flared End.
386+91	636+00	14030	200.26	18" RCP - 90' & 2 FE	-		5				2						2				Reset both Flared Ends.
403+72	619+00	14032	200.58	18" RCP - 120' & 2 FE	8		5				1						1				Reset West Flared End.
418+47	604+20	14033	200.86	24" RCP - 144' & 2 FE	-		10		6		2					6	2				East: Reset Flared End and 6' West: Reset Flared End.
434+85	587+87	14737	201.16	18" RCP - 58' & 2 FE - 'Skewed 30° LHF	-		5			1			1								Replace West Flared End.

In place Culvert Markers will be removed and reset when performing Culvert Work. Cost to remove and reset Culvert Markers will be incidental to the various culvert contract items
*Water for Embankment included in Section F Bid Estimate

Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\prj\day08GHINotesSectionF.dgn

TABLE OF PIPE AND RELATED ITEMS - CONTINUED

Station	Underlying Station	Culvert Inventory #	MRM	Existing Culvert	Drainage	Reprofiling Ditch	Contractor Furnished Borrow Excavation *	Remove Pipe Culvert	Remove Pipe for Reset	Remove Pipe End Section	Remove Pipe End Section for Reset	24" RCP, Furnish & Install	18" RCP Flared End, Furnish & Install	24" RCP Flared End, Furnish & Install	24" CMP Sloped End, Furnish & Install	Reset Pipe	Reset Pipe End Section	Class B Riprap	Base Course	Asphalt Concrete Composite	Comments
					Acres	Stations	CuYds	Ft	Ft	Each	Each	Ft	Each	Each	Each	Ft	Each	Ton	Ton	Ton	
526+19.00	496+53	14738	202.88	24" RCP - 68' & 2 FE	16		10		10		2					10	2				East: Reset Flared End & 10'. West: Reset Flared End.
606+72.00	417+00	14742	204.38	18" RCP - 56' & 2 FE	80		10		12	2			2			12			10	2	East: Replace Flared End. West: Replace Flared End, Reset 12', place Base Course & AC Composite at edge of roadway.
619+72.00	403+00	14743	204.63	18" RCP - 60' & 2 FE	-		10		6		1					6	1				Reset Flare End and 6' on East side.
637+72	385+00	14744	204.97	24" RCP - 68' & 2 FE	20		10		6		2					6	2				East: Reset Flared End. West: Reset Flared End & 6'.
705+22	317+50	14746	206.27	18" RCP - 75' & 2 FE	17		10		6	1			1			6					Replace Flared End and Reset 6' on west end.
716+22	306+50	180414	206.48	18" RCP - 62' & 2 FE	120		5			2			2								Replace both Flared Ends.
780+72	49+00	14748	207.81	5'x7' - 90' RC Cattle Pass	-		10											410			Place 10+/- CY Fill and 410 Tons Class B Riprap on west inslope on both sides of Flared End.
805+57	67+06	14749	208.15	30" RCP - 116' & 2 SE	-		5		6		1					6	1				West: Reset Sloped End and 6'. (Appears tie bolts have failed.)
821+35	201+39	14750	208.45	18" RCP - 66' & 2 FE	232		15		24	1	1		1			24	1				East: Reset Flared End & 18'. West: Replace Flared End & Reset 6'.
829+28	193+46	14751	208.60	30" RCP - 128' & 2 FE	23		15		24		2					24	2				Reset Flared End and 12' on both ends.
851+21	171+53	14752	209.05	18" RCP - 78' & 2 FE	-		10		12		2					12	2				Reset Flared End and 6' on both ends.
881+74	141+00	180811	209.62	24" RCP - 78' & 2 FE	32		10		18	1	1			1		18	1				East: Replace Flared End and reset 12'. West: Reset Flared End and 6'.
960+55	61+80	13287	211.13	4'x6' - 47' RC Cattle Pass	-		30														Plug Existing Box Culvert - See notes for more information
990+27	32+40	13284	211.69	24" RCP - 108' & 2 FE	32	1	5	6	12	1	1	6		1		12	1				East: Reset Flared End, reset 12', and Reprofile ditch to Flared End. West Replace Flared End and 6'.
998+54	24+20	13283	211.84	18" RCP - 86' & 2 FE	244	2	10		20	1	1		1			20	1				East: Replace Flared End & Reset 12', Reprofile ditch to Flared End. West: Reset Flared End & 8'. Reprofile outlet channel to the ROW Line.
1014+74	8+00	13282	212.12	24" CMP - 108' & 2 SE	-		5	0.5		1					1						West: cut off 6" and replace Sloped End.
	Totals:					**5**	**320**	**7**	**296**	**16**	**38**	**6**	**11**	**4**	**1**	**296**	**38**	**410**	**10**	**2**	

In place Culvert Markers will be removed and reset when performing Culvert Work. Cost to remove and reset Culvert Markers will be incidental to the various culvert contract items
*Water for Embankment included in Section F Bid Estimate

Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\prj\day08GH\NotesSectionF.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F13	F60

Plotting Date: 10/23/2026

TABLE OF GUARDRAIL QUANTIITIES

Location	Remove Beam Guardrail	# Remove Flared End Terminal	# Remove Tangent End Terminal	Remove and Reset Rubrail	Type 1 MGS	MGS MASH Tangent End Terminal	Straight Double Class B W Beam Guardrail with Wood Posts	Straight Class B W Beam Guardrail with Wood Posts	Straight Class A W Beam Guardrail with Wood Posts	W Beam Guardrail to MGS Transition	Guardrail Delineator
	Feet	Each	Each	Feet	Feet	Each	Feet	Feet	Feet	Each	Each
PERMANENT GUARDRAIL											
Str. No. 46-276-174											
Begin Bridge Left Shoulder	100.0		1	10		1	12.5	12.5	12.5	1	4
Begin Bridge Right Shoulder	162.5	1		10	50	1	12.5	12.5	12.5	1	5
End Bridge Left Shoulder	100.0		1	10	50	1	12.5	12.5	12.5	1	5
End Bridge Right Shoulder	162.5	1		10		1	12.5	12.5	12.5	1	4
TOTALS:	525.0	2	2	40	100	4	50	50	50	4	18

For Informational Purposes Only: All cost to remove these items will be incidental to the contract unit price per foot for "Remove Beam Guardrail".

Plot Scale - 1:200

Plotted From - TRPR13462

File - ...\prj\day08GHINotesSectionF.dgn

TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F14	F60

Plotting Date: 10/23/2026

Shoulder Transitions:

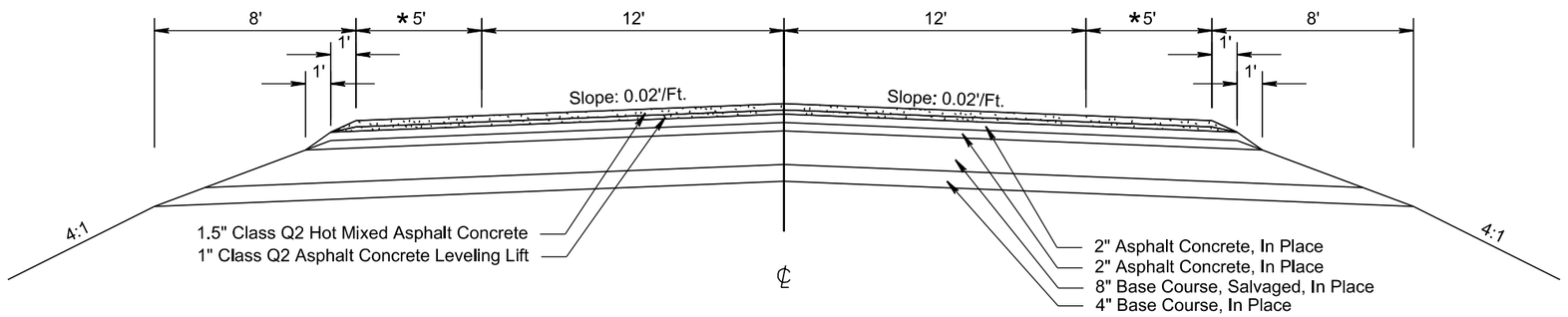
Sta. 10+00 to Sta. 11+50
* 3' to 5'

Sta. 41+20 to Sta. 42+70
* 5' to 3'

Sta. 42+70 to Sta. 43+08.73
* 3'

Section 1

Sta. 10+00 to Sta. 17+65
Sta. 34+05 to Sta. 43+08.73



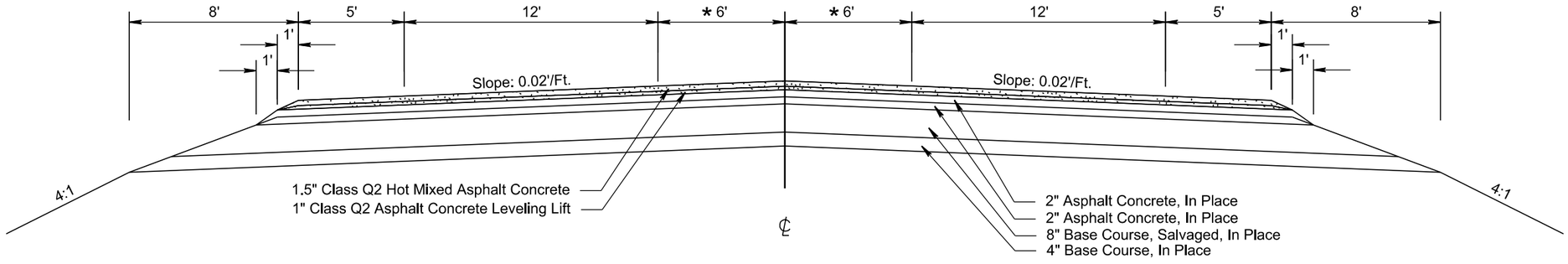
Turn Lane Transitions:

Sta. 17+65 to Sta. 23+65
* 0' to 6'

Sta. 28+05 to Sta. 34+05
* 6' to 0'

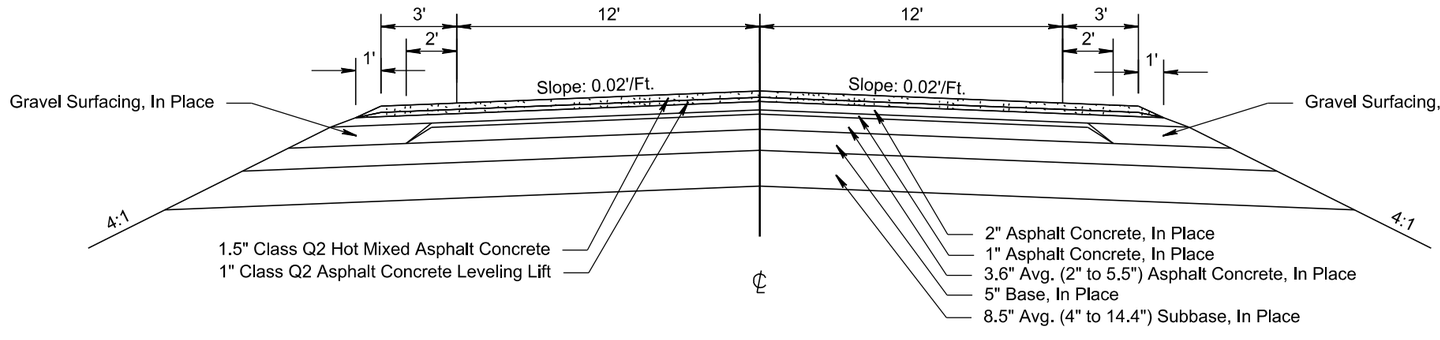
Section 2

Sta. 17+65 to Sta. 34+05



Section 3

Sta. 43+08.73 to Sta. 129+20.93
Sta. 283+03.57 to Sta. 485+74.93
Sta. 500+26.93 to Sta. 534+34.93



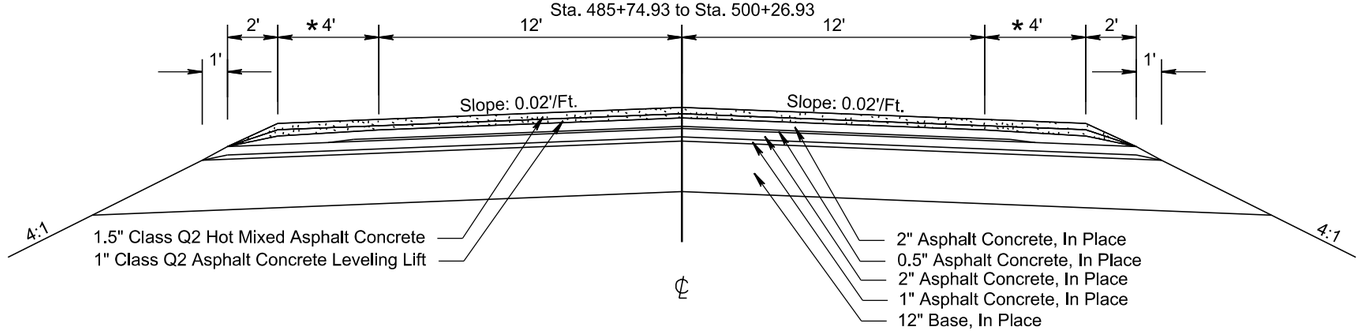
Superelevated Sections (see Table of Superelevation elsewhere in these plans)

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003P
003P
003P
PLOTTED FROM - TRPR13462
PLOT NAME - 14
FILE - ...\00GH_TYPICAL SECTIONS.DGN

TYPICAL SURFACING SECTIONS

Section 4

Sta. 129+20.93 to Sta. 177+03.57
Sta. 485+74.93 to Sta. 500+26.93



Shoulder Transitions:

Sta. 129+20.93 to Sta. 129+85.93
Sta. 485+74.93 to Sta. 486+34.93
* 3' to 4'

Sta. 499+61.93 to Sta. 500+26.93
* 4' to 3'

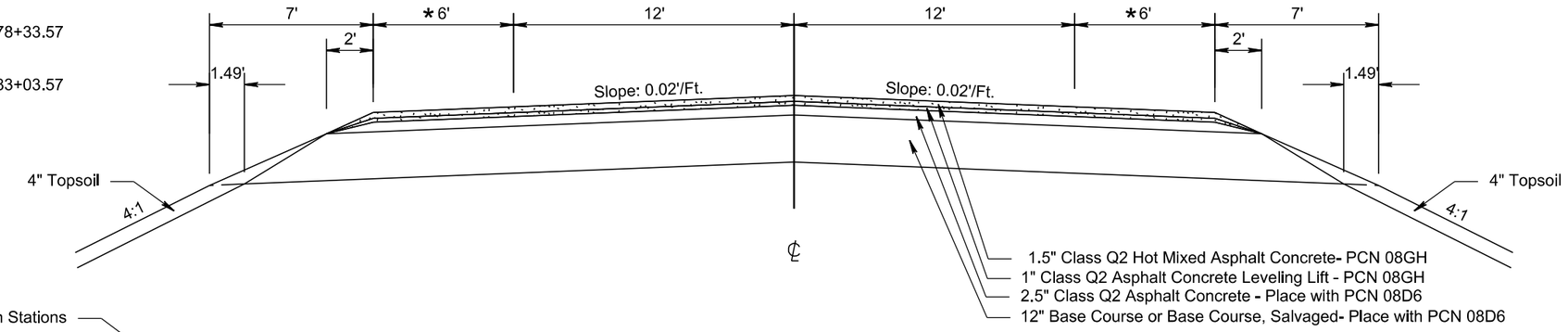
* Note:
Sta. 177+03.57 to Sta. 182+12.57 - 2' undercut - PCN 08D6

Sta. 182+12.57 and Sta. 214+32.57 - Only the existing top 3" of Asphalt Concrete will be removed & Embankment Placed - PCN 08D6

Sta. 214+32.57 to Sta. 283+03.57 - 2' undercut - PCN 08D6

* Section 5 - PCN 08GH Surfacing

Sta. 177+03.57 to Sta. 283+03.57
(Sta. 9+00 to Sta. 115+00 PCN 08D6 Stationing)

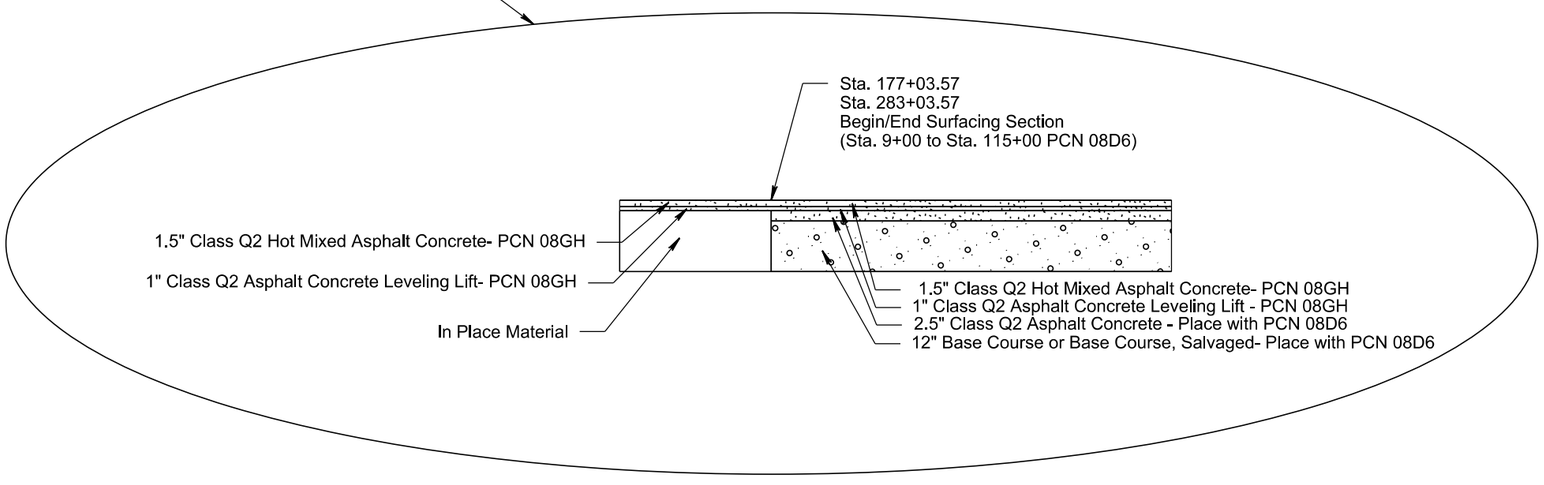


Shoulder Transitions:

Sta. 177+03.57 to Sta. 178+33.57
* 4' to 6'

Sta. 281+08.57 to Sta. 283+03.57
* 6' to 3'

Surfacing and Grading Tie-In Stations



* Note:

PCN 08GH		PCN 08D6
Sta. 177+03.57	=	Sta. 9+00
Sta. 178+33.57	=	Sta. 10+30
Sta. 182+12.57	=	Sta. 14+09
Sta. 214+32.57	=	Sta. 46+29
Sta. 281+08.57	=	Sta. 113+05
Sta. 283+03.57	=	Sta. 115+00

003P PLOT SCALE - 1:6.00001
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FILE - ...\08GH_TYPICAL SECTIONS.DGN

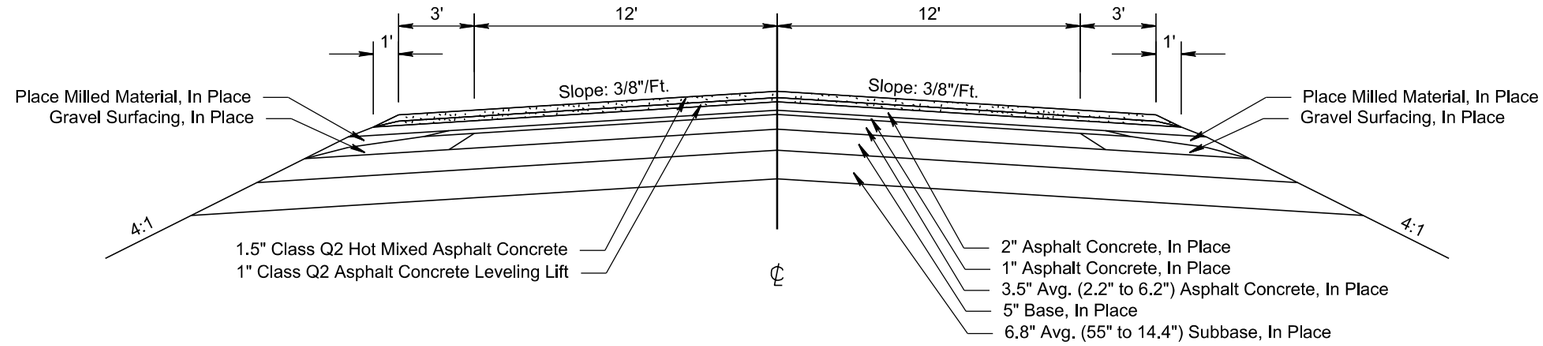
TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F16	F60

Plotting Date: 10/23/2026

Section 6

Sta. 534+34.93 to Sta. 738+65.33
Sta. 807+71.13 to Sta. 1022+63.83

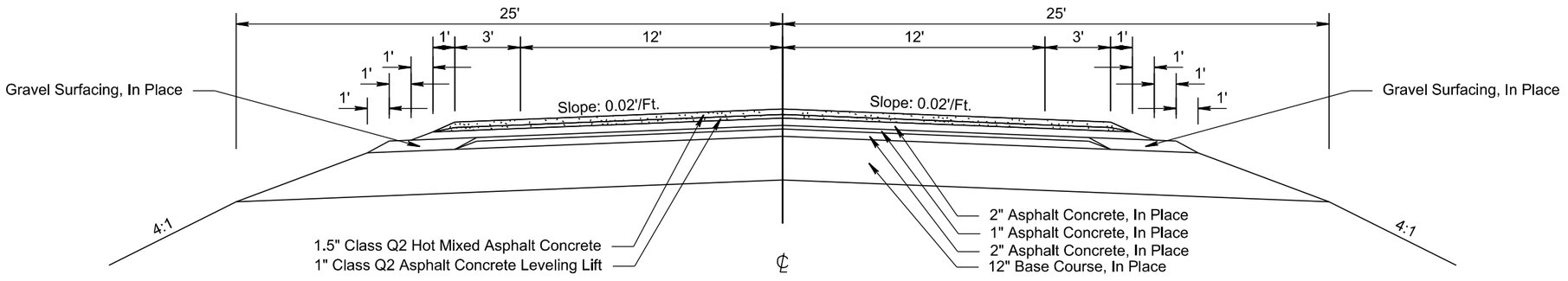


Bridge Exception:

Str. No. 46-276-174
Sta. 886+41.43 to Sta. 887+46.66

Section 7

Sta. 738+65.33 to Sta. 807+71.13



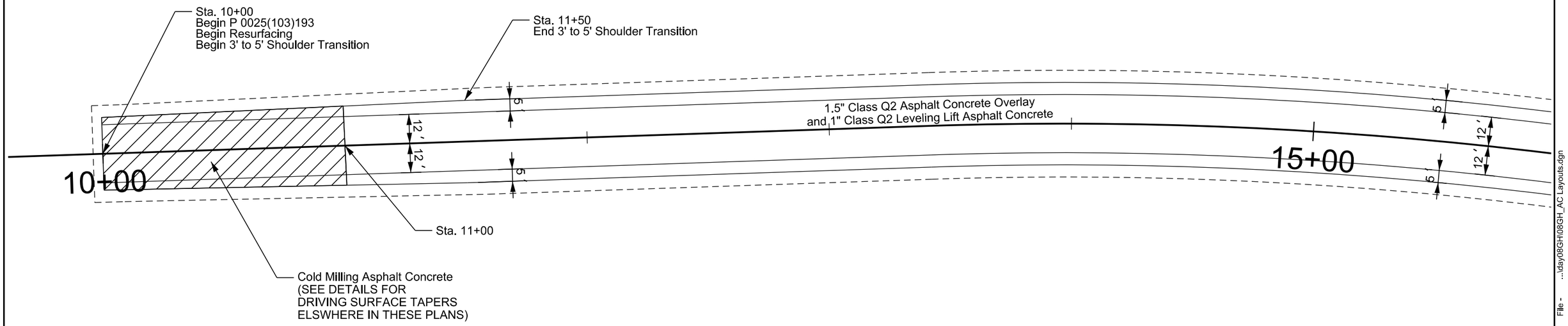
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AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 1 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F17	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

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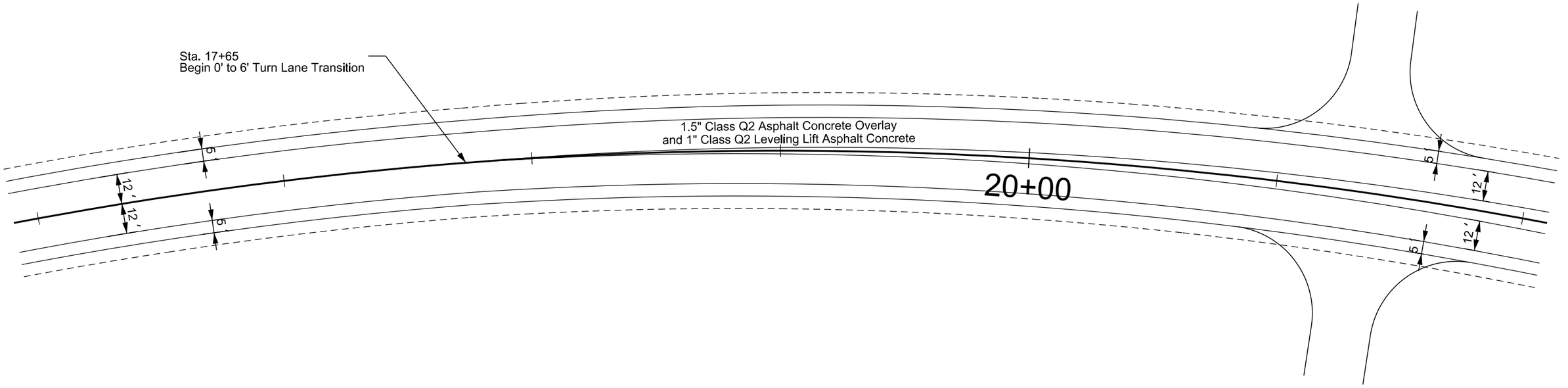
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AC LAYOUTS

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Sheet 2 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F18	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

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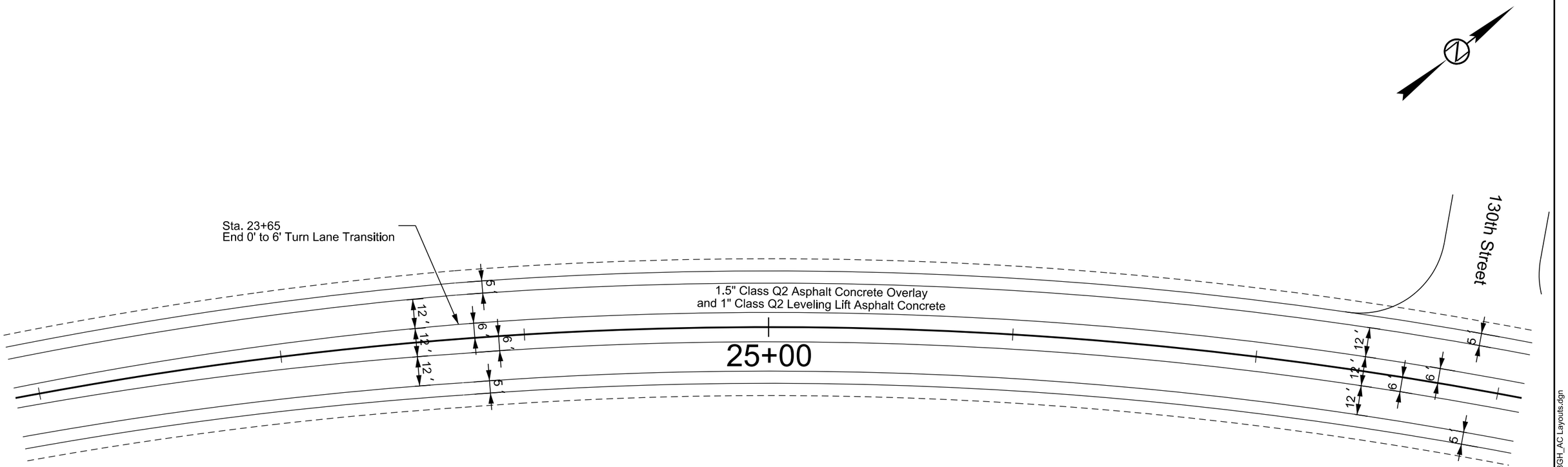
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AC LAYOUTS

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Sheet 3 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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Plotting Date: 10/23/2026



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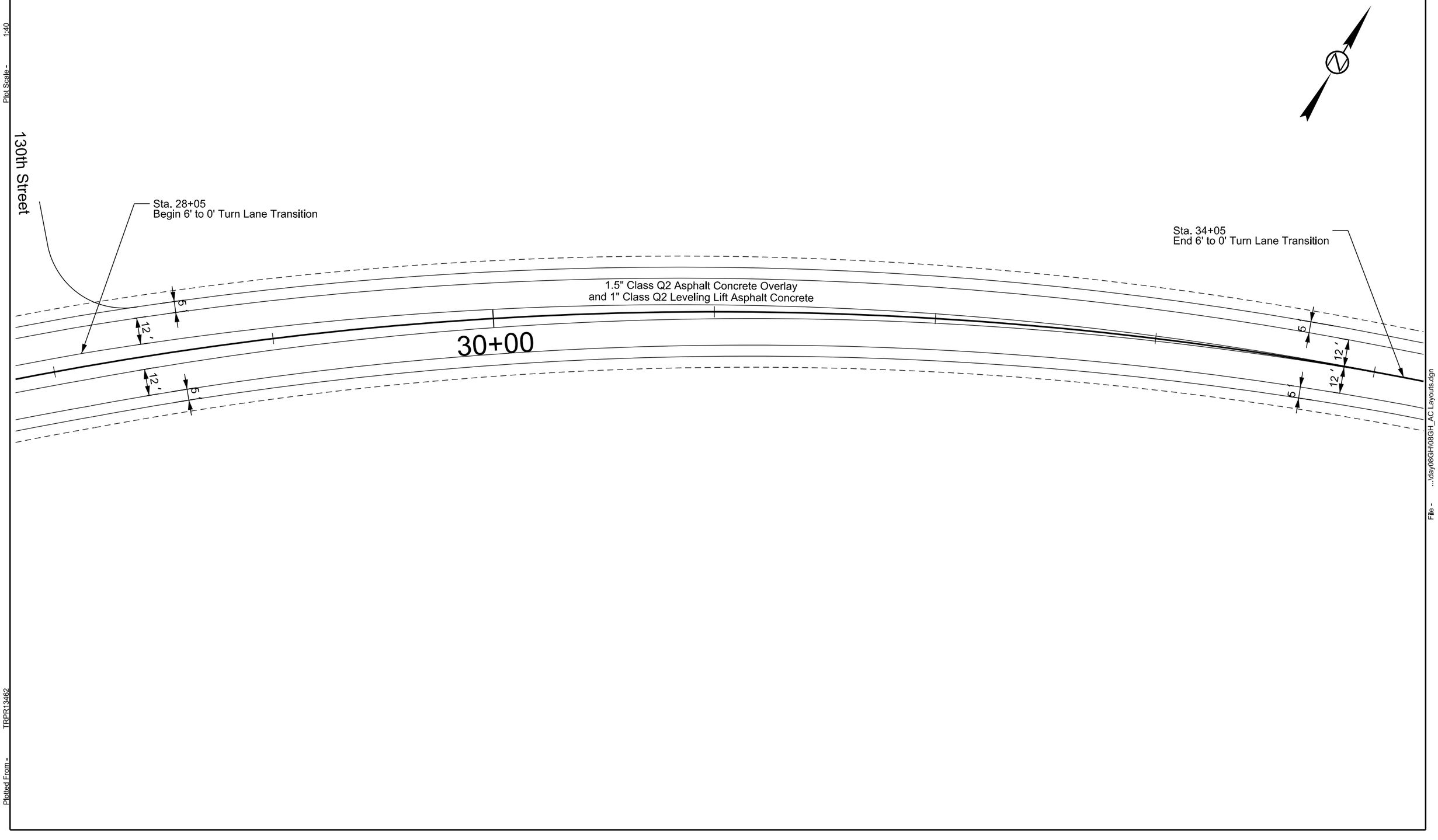
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AC LAYOUTS

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Sheet 4 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F20	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

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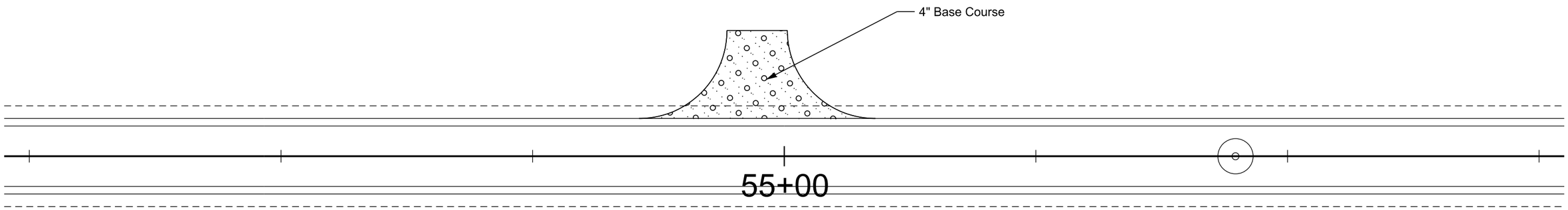
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AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 5 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F21	F60

Plotting Date: 10/23/2026



Legend:

Manhole

Plot Scale - 1:40

Plotted From - TRPR13462

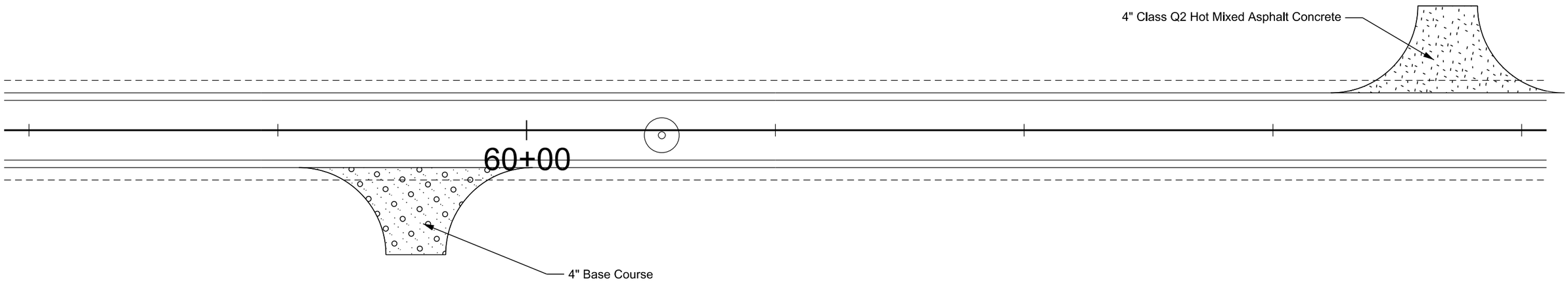
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AC LAYOUTS

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Sheet 6 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F22	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

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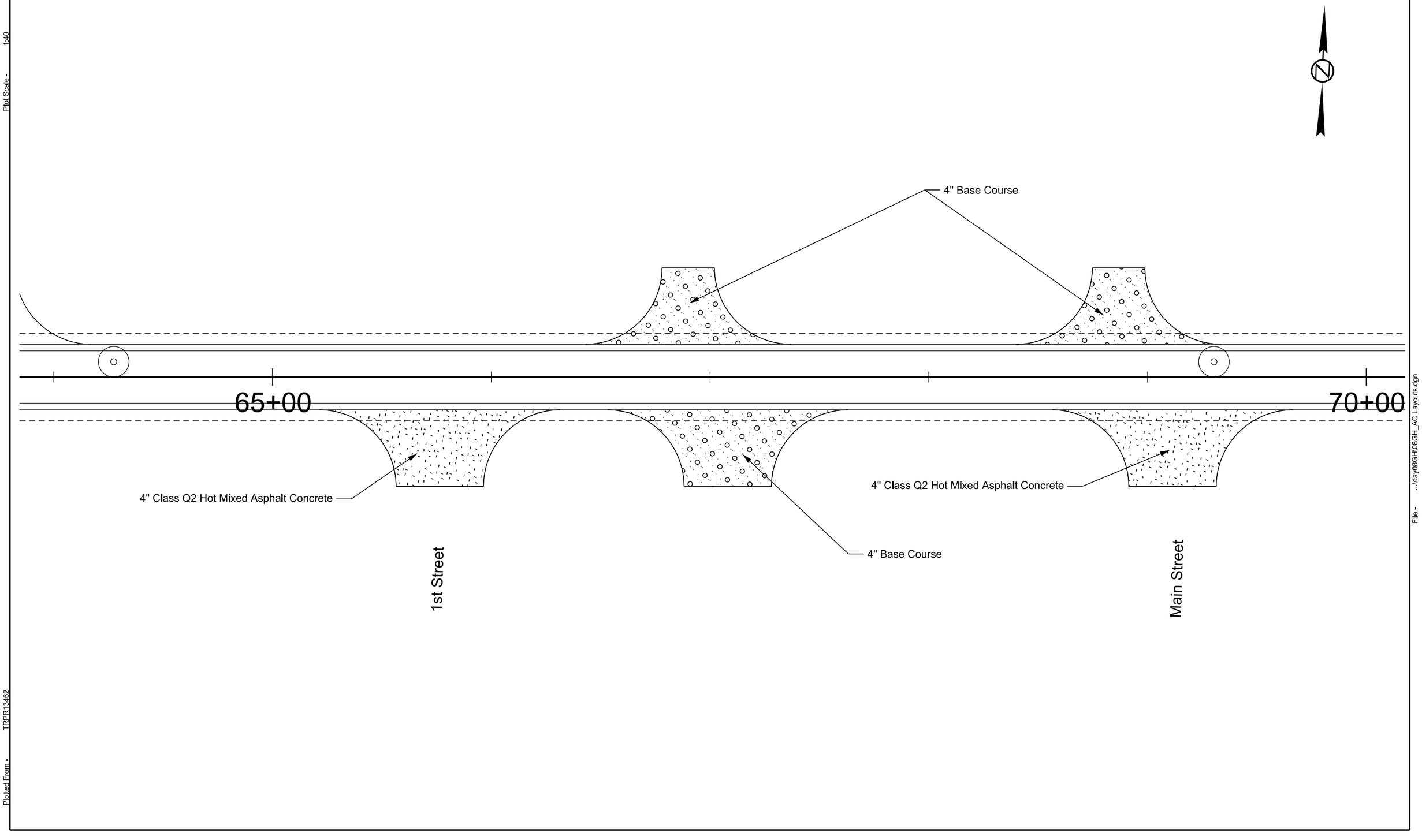
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AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 7 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F23	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

Plotted From - TRPR13462

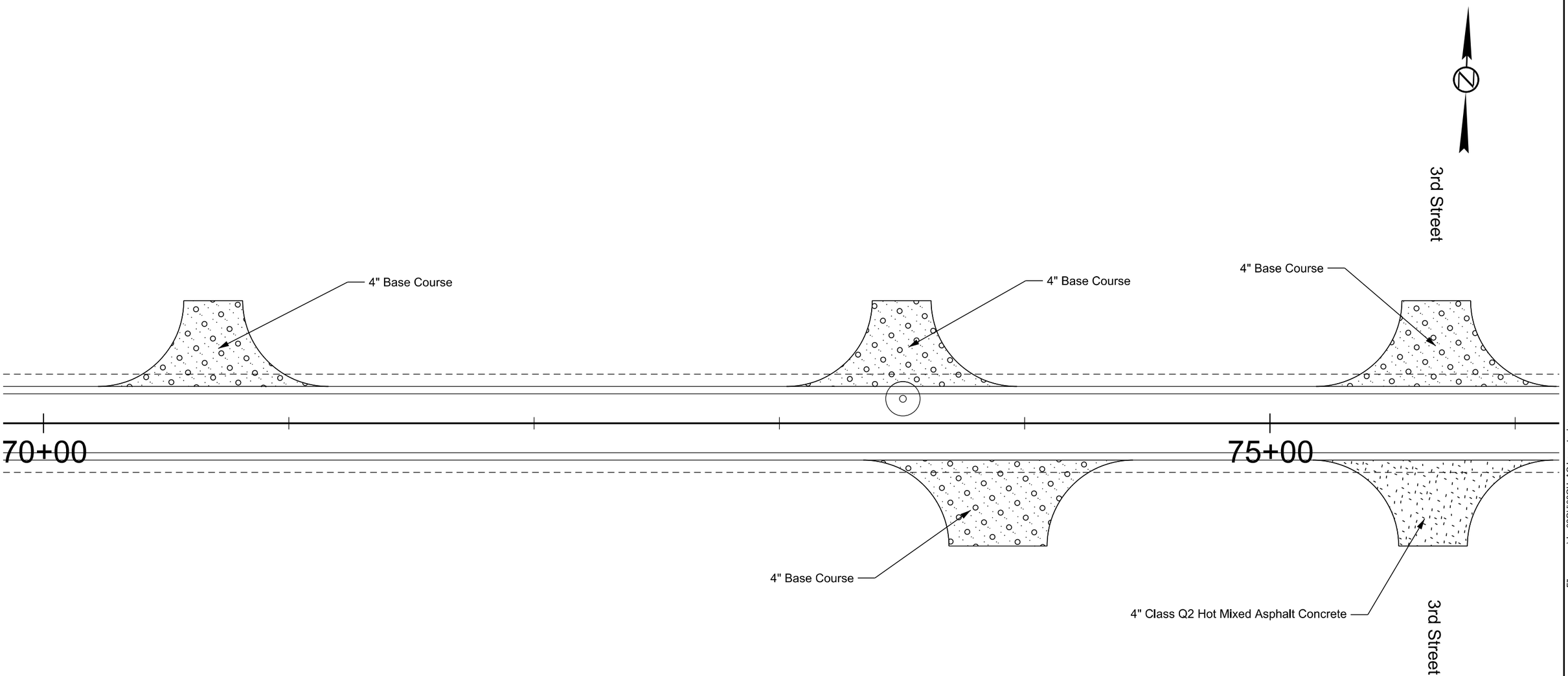
File - ...\day08GH\08GH_AC Layouts.dgn

AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 8 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F24	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

Plotted From - TRPR13462

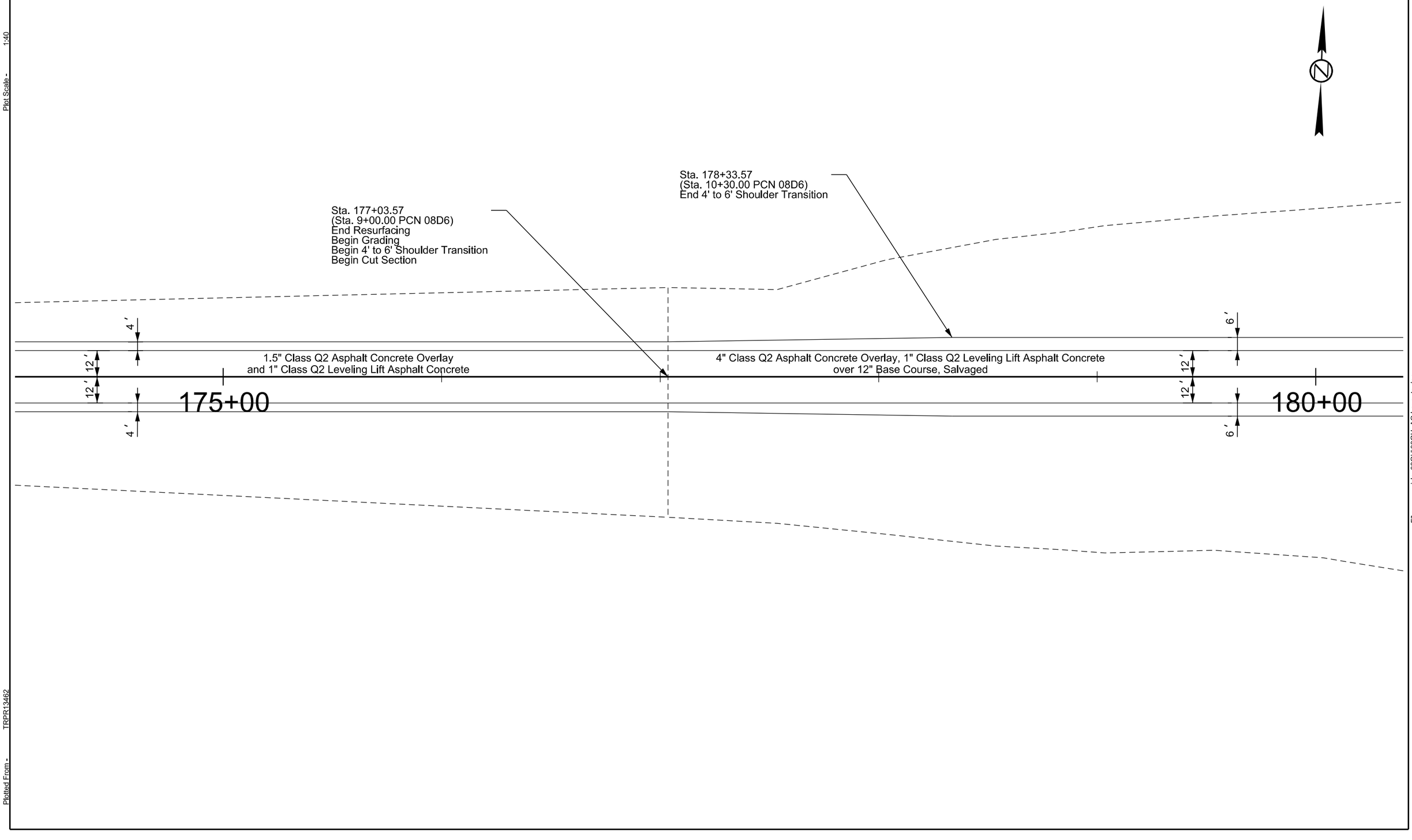
File - ...\day08GH\08GH_AC Layouts.dgn

AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 9 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F25	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

Plotted From - TRPR13462

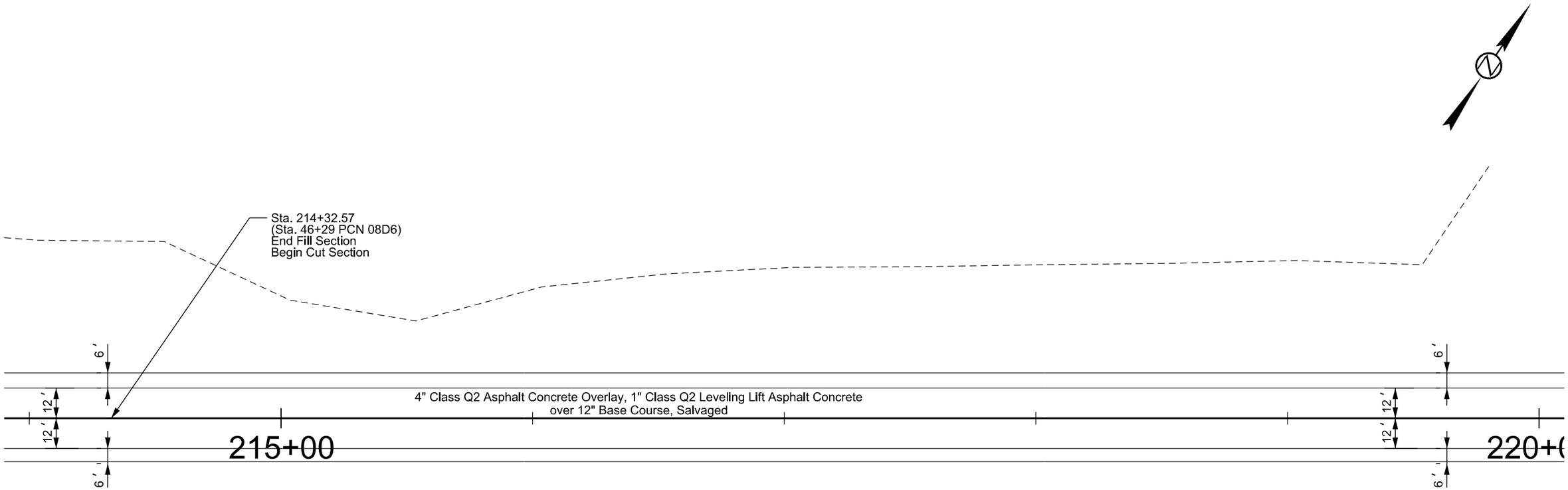
File - ...\day08GH\08GH_AC Layouts.dgn

AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 10 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F26	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

Plotted From - TRPR13462

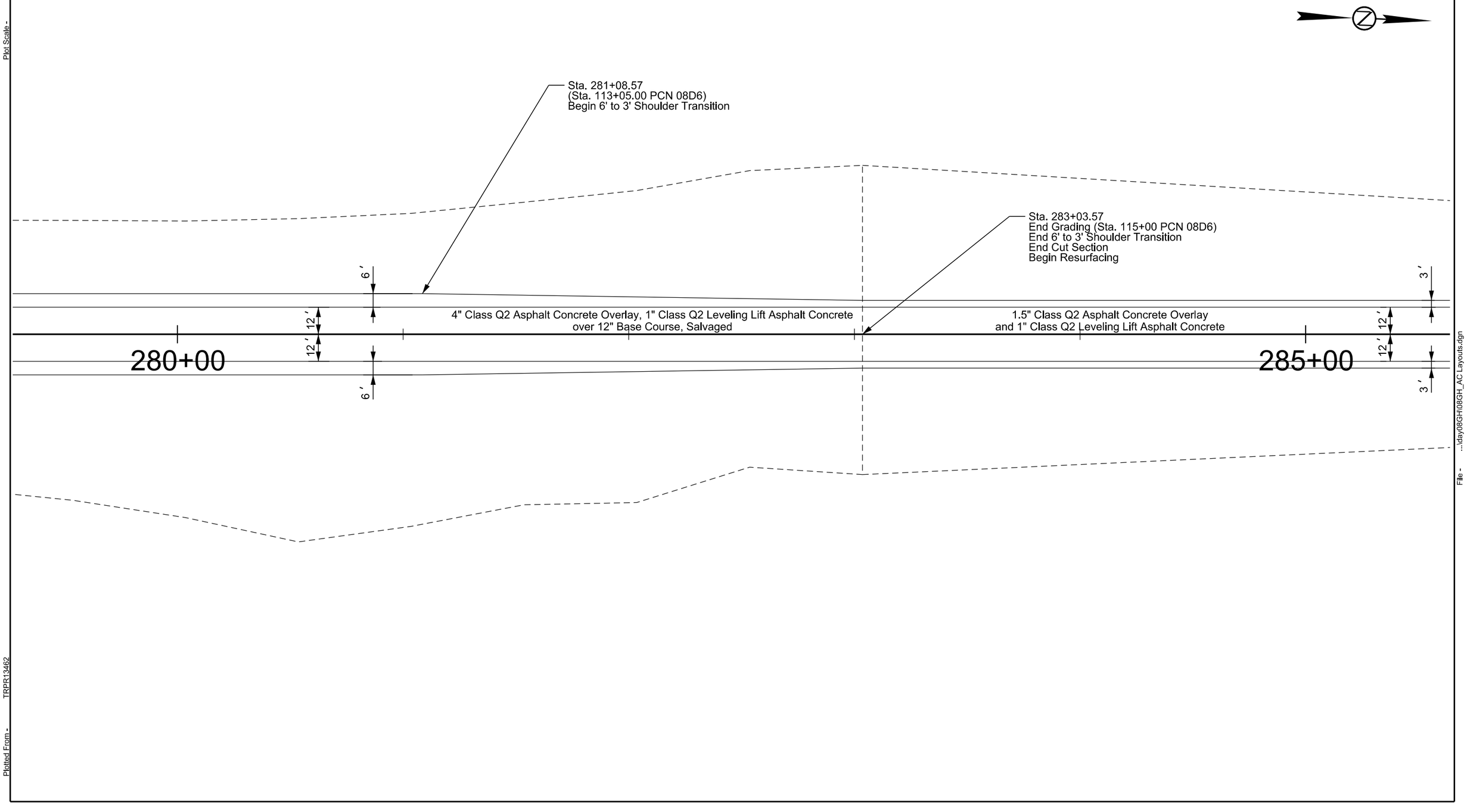
File - ...\day08GH\08GH_AC Layouts.dgn

AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 11 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F27	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

Plotted From - TRPR13462

File - ...\day08GH\08GH_AC Layouts.dgn

AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 12 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F28	F60

Plotting Date: 10/23/2026

Plot Scale - 1:40

Taft Ave.

4" Class Q2 Hot Mixed Asphalt Concrete

630+00

635+00

4" Base Course

635+00

640+00

Plotted From - TRPR13462

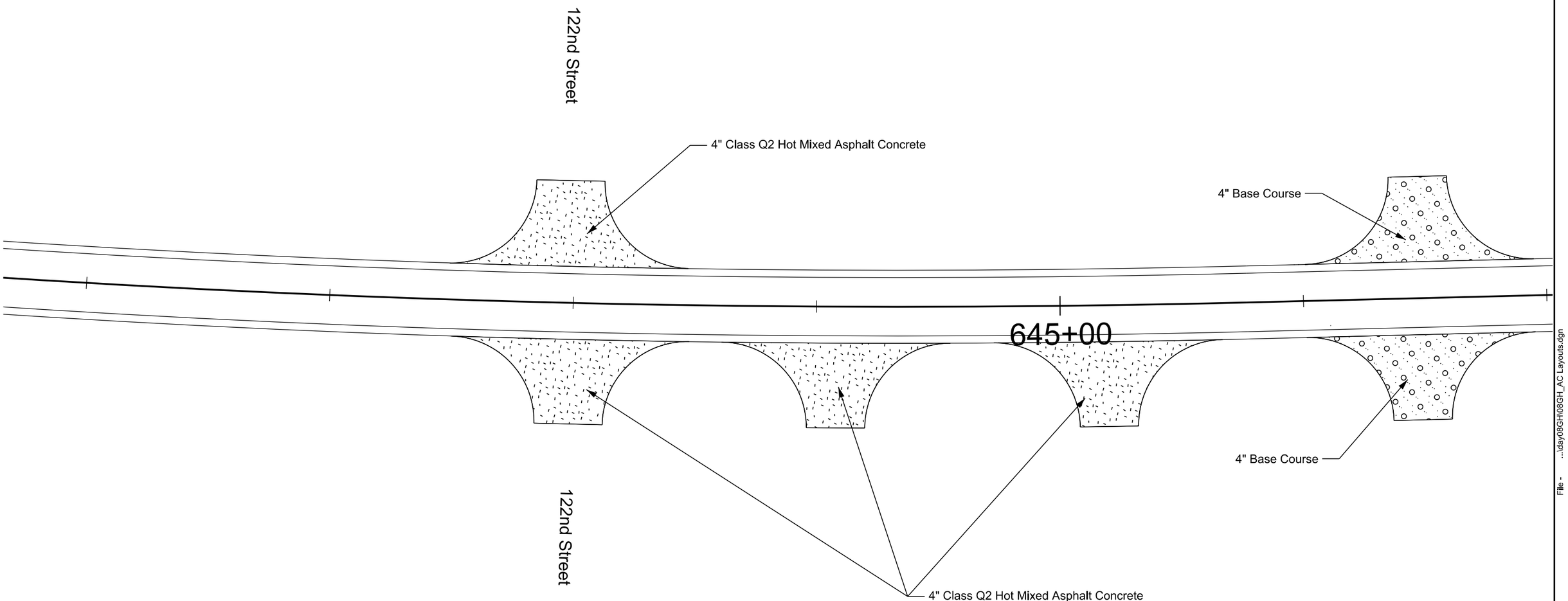
File - ...\day08GH\08GH_AC Layouts.dgn

AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 13 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F29	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

Plotted From - TRPR13462

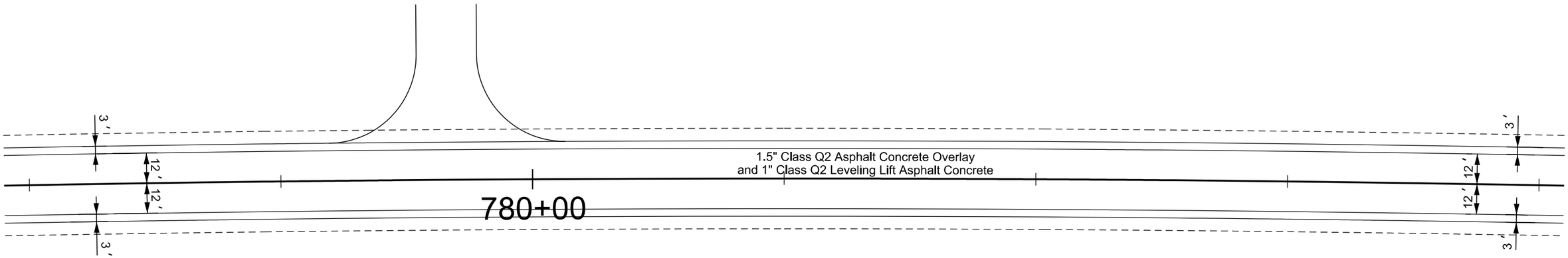
File - ...\day08GH\08GH_AC Layouts.dgn

AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 14 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F30	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

Plotted From - TRPR13462

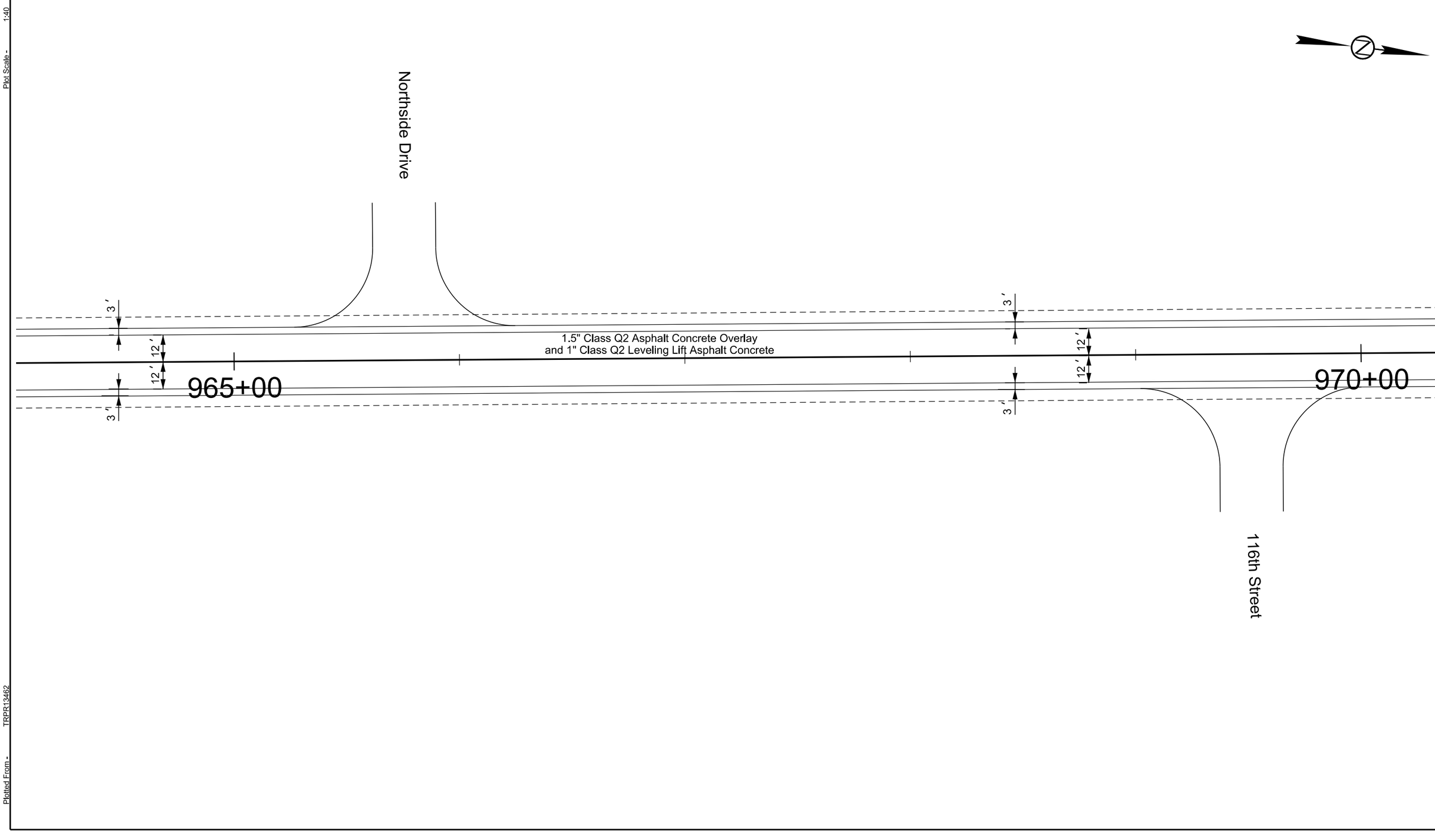
File - ...\day08GH\08GH_AC Layouts.dgn

AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 15 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F31	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

Plotted From - TRPR13462

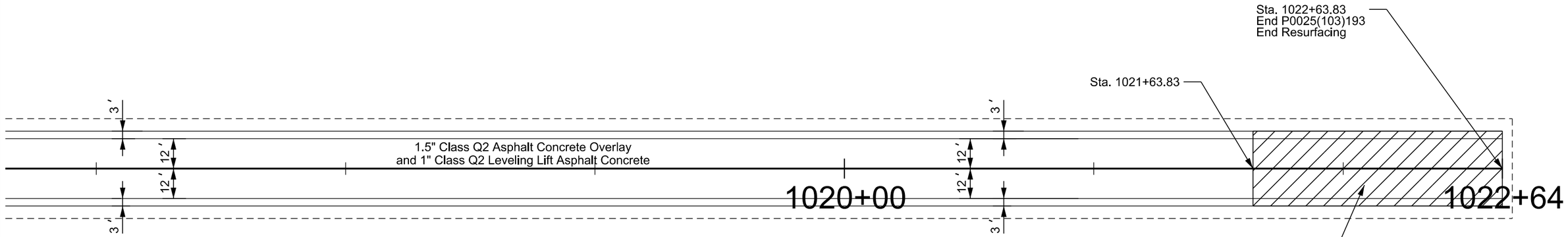
File - ...\day08GH\08GH_AC Layouts.dgn

AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 16 of 16 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F32	F60

Plotting Date: 10/23/2026



Plot Scale - 1:40

Plotted From - TRPR13462

File - ...\day08GH\08GH_AC Layouts.dgn

GUARDRAIL LAYOUTS

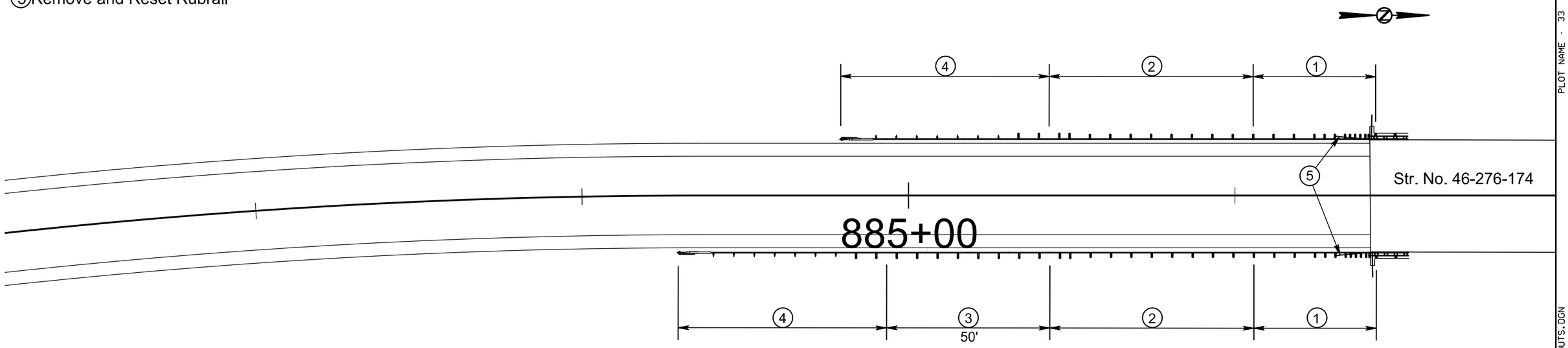
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F33	F60

Plotting Date: 10/23/2026

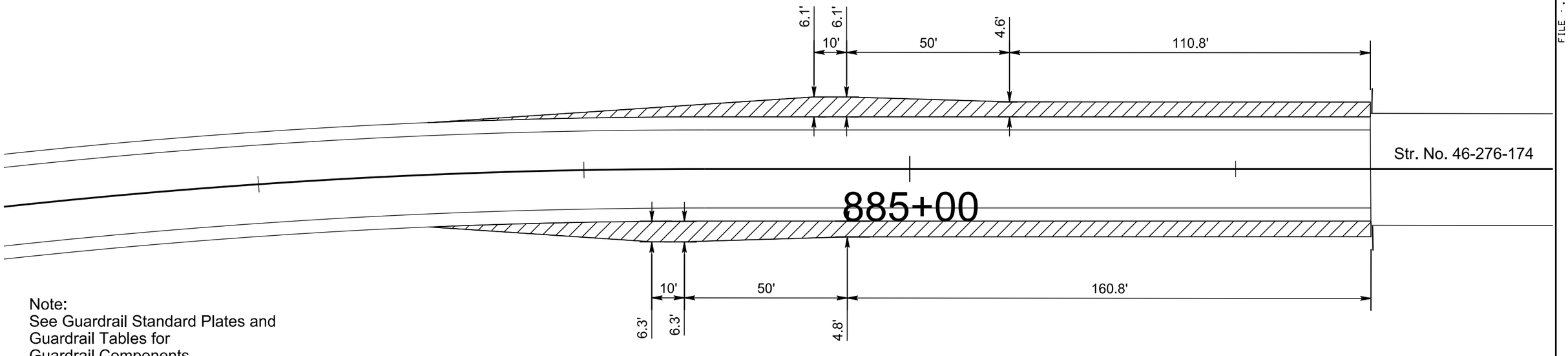
Scale 1 Inch = 40 Feet
Sheet 1 of 2 Sheets

Str. No. 46-276-174
MRM 209.70

1. Type 12 Guardrail Transition
2. W Beam Guardrail to MGS Transition
3. Type 1 MGS
4. MGS MASH Tangent End Terminal
5. Remove and Reset Rubrail



2.5" Asphalt Concrete Composite over
3" Base Course & Variable Contractor
Furnished Borrow



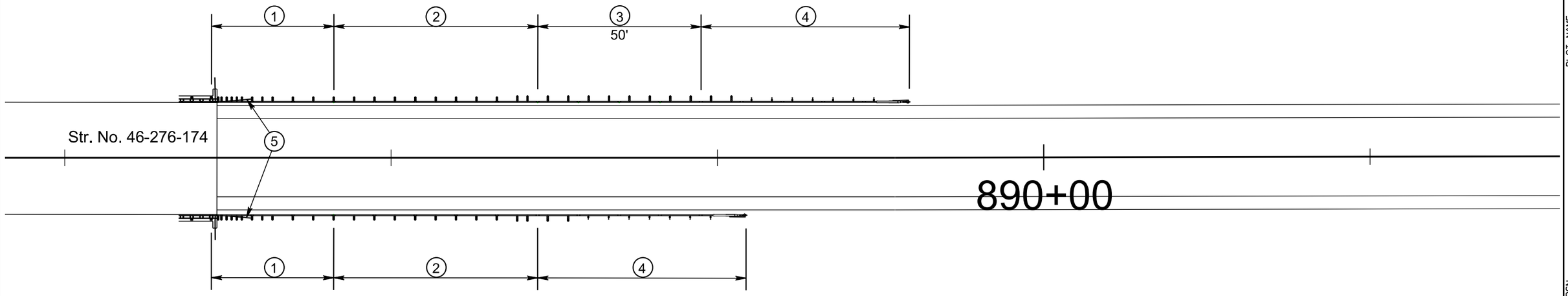
Note:
See Guardrail Standard Plates and
Guardrail Tables for
Guardrail Components

GUARDRAIL LAYOUTS

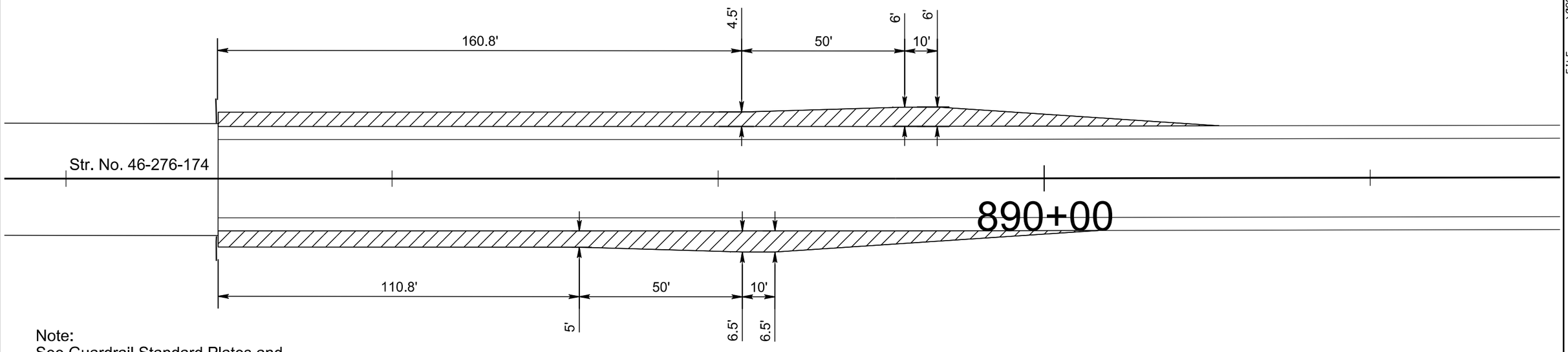
Scale 1 Inch = 40 Feet
Sheet 2 of 2 Sheets

Str. No. 46-276-174
MRM 209.70

① Type 12 Guardrail Transition
② W Beam Guardrail to MGS Transition
③ Type 1 MGS
④ MGS MASH Tangent End Terminal
⑤ Remove and Reset Rubrail



2.5" Asphalt Concrete Composite over
3" Base Course & Variable Contractor
Furnished Borrow



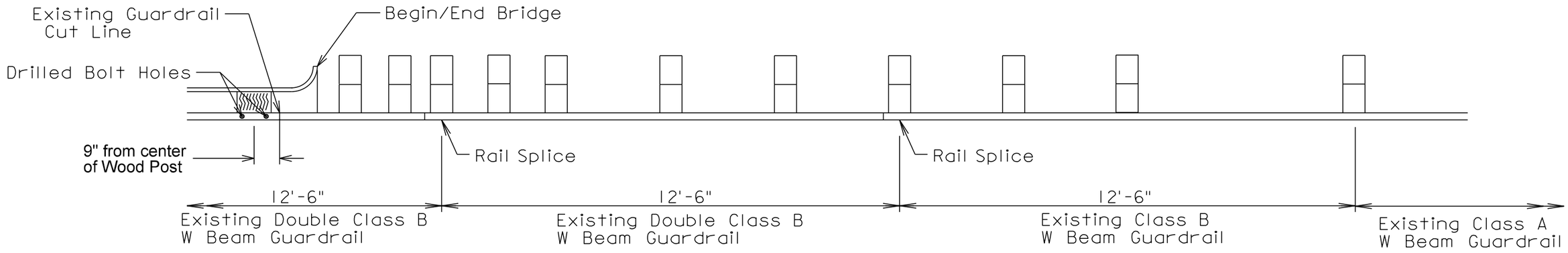
Note:
See Guardrail Standard Plates and
Guardrail Tables for
Guardrail Components

PLOT SCALE - 1:30.0391
PLOTTED FROM - TRPR13462
PLOT NAME - 34
FILE - ...\08GH_GUARDRAIL LAYOUTS.DGN

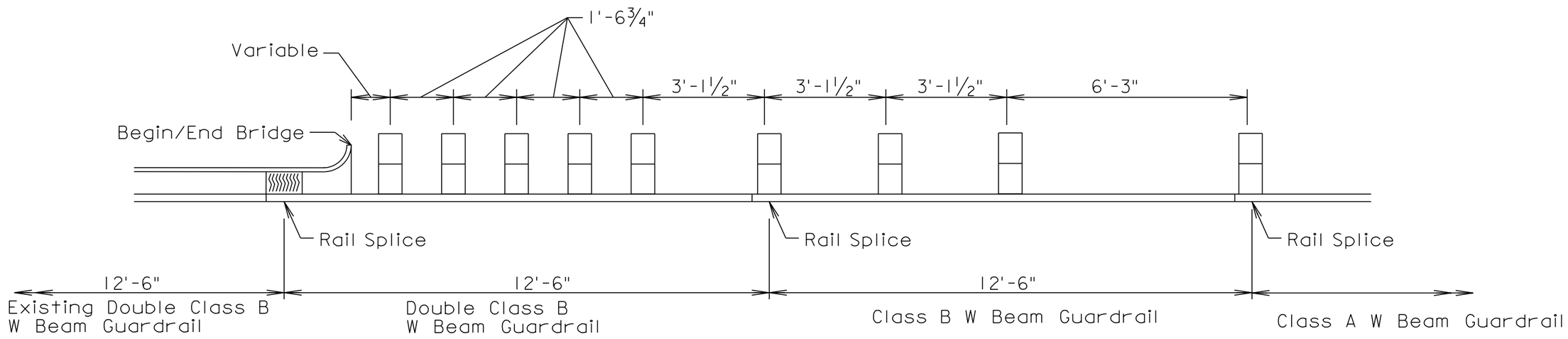
GUARDRAIL REMOVAL AT BRIDGE ENDS
STR. NO. 46-276-174

Existing double W beam guardrail on bridge will be cut 9" from center of wood post according to detail (approximately 5' of guardrail removed). Bolt holes will be drilled in existing guardrail to match "Type 12 Guardrail Transition" attachment bolt pattern. All cuts and drilled holes will be coated with an approved galvanizing paint. All cost to cut guardrail, drill holes and paint guardrail will be incidental to the contact unit price per foot for "Remove Beam Guardrail"

GUARDRAIL REMOVAL



TYPE 12 GUARDRAIL TRANSITION INSTALLATION

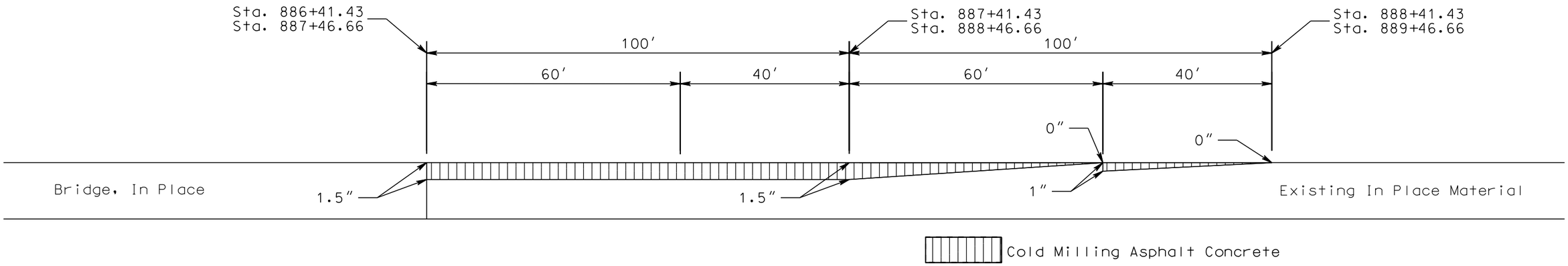


PLOT SCALE - 1:30.079
PLOTTED FROM - TRPR13462
PLOT NAME - 35
FILE - ....\DAY08GH\GRAIL POST SPACING.DGN

DETAILS FOR DRIVING SURFACE TAPERS BEGIN AND END OF STRUCTURE

NOT TO SCALE
SHEET 1 OF 3 SHEETS

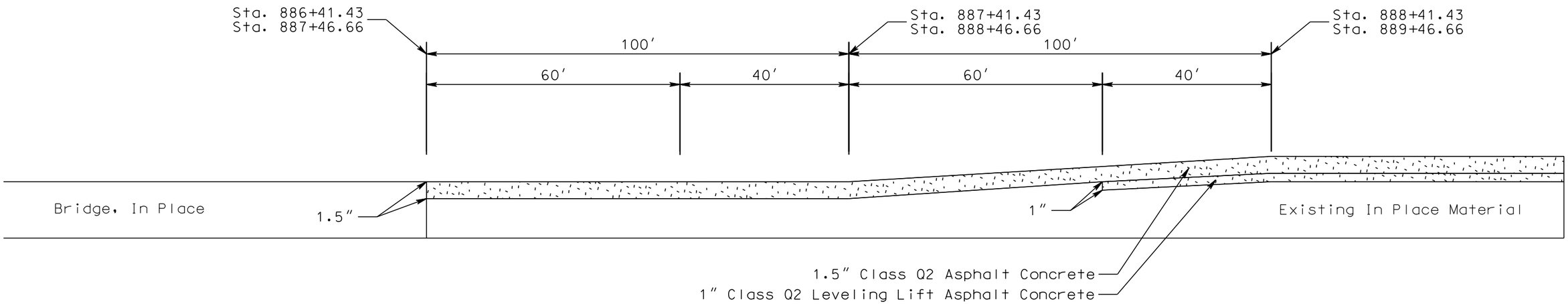
COLD MILLING ASPHALT CONCRETE AT BEGIN AND END OF STRUCTURE NO. 46-276-174



Note:

Contractor will ensure approach pavement ties into bridge structure smoothly.

RESURFACING AT BEGIN AND END OF STRUCTURE NO. 46-276-174



Not to Scale

PLOT SCALE - 1:24
PLOTTED FROM - TRPR13462
PLOT NAME - 36
FILE - ...\COLD MILLING TRANSITION.DGN

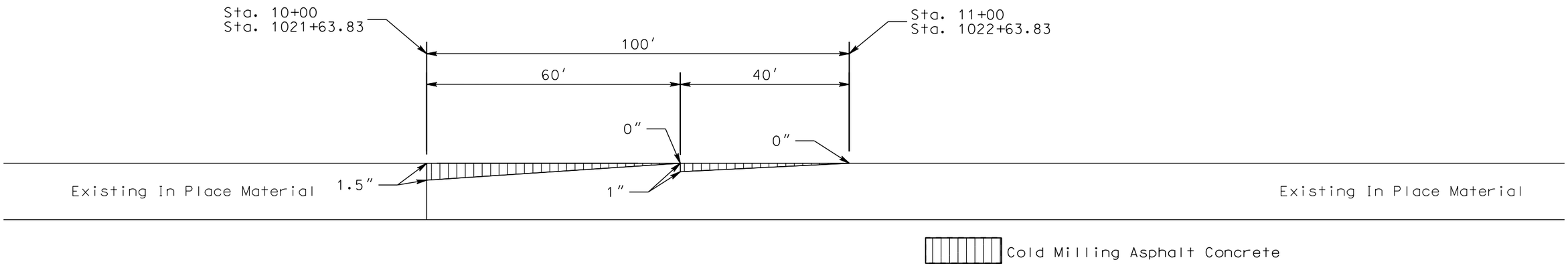
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F37	F60

Plotting Date: 10/23/2026

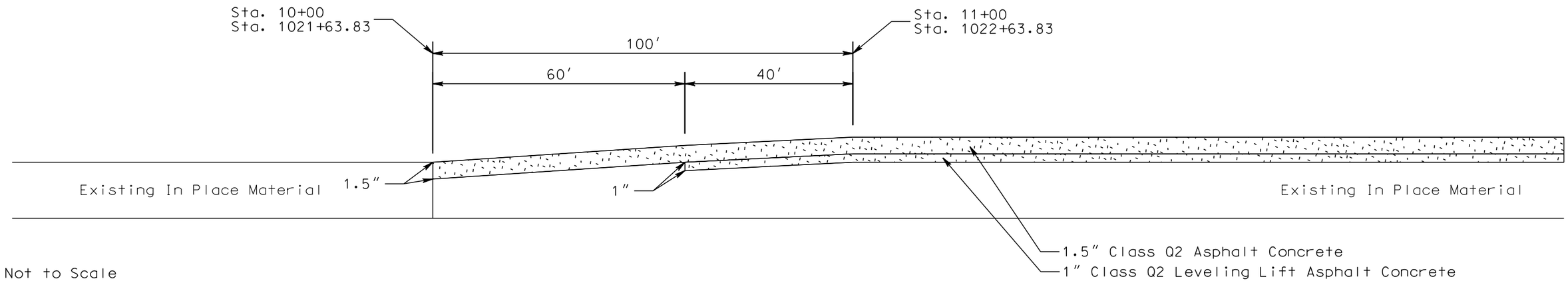
DETAILS FOR DRIVING SURFACE TAPERS BEGIN AND END OF PROJECT

NOT TO SCALE
SHEET 2 OF 3 SHEETS

COLD MILLING ASPHALT CONCRETE AT BEGIN AND END OF PROJECT



RESURFACING AT BEGIN AND END OF PROJECT



Not to Scale

PLOT SCALE - 1:24

PLOT NAME - 37

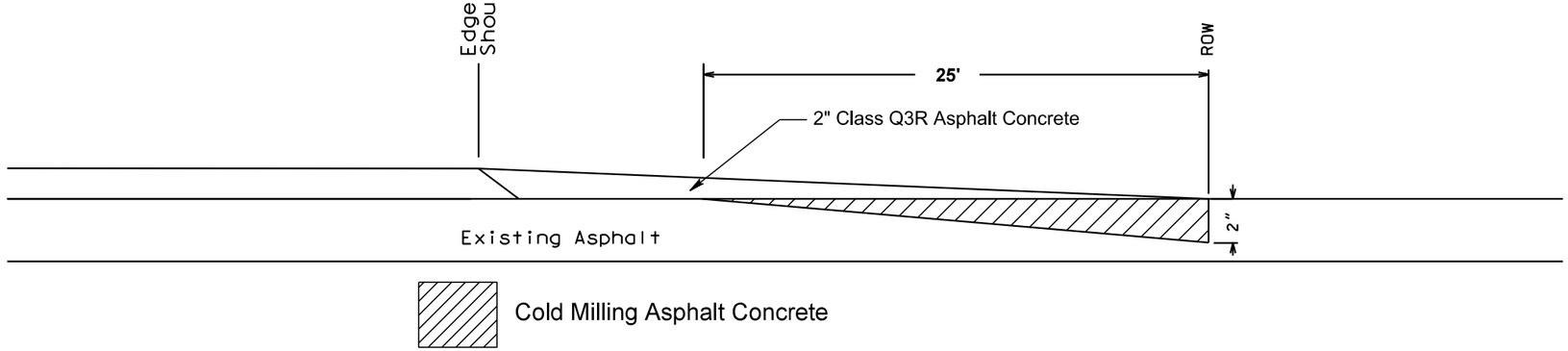
FILE - ...\COLD MILLING TRANSITION.DGN

PLOTTED FROM - TRPR13462

DETAILS FOR DRIVING SURFACE TAPERS INTERSECTING ROADS

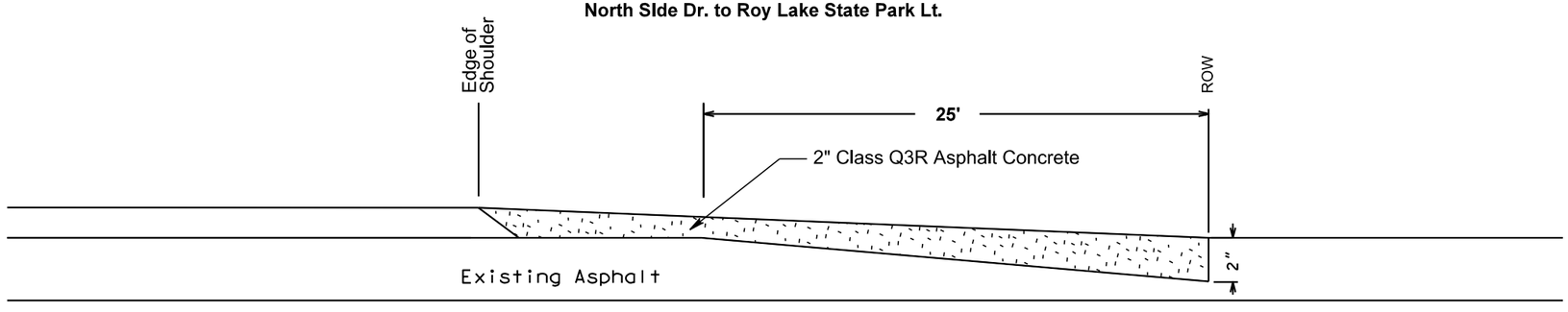
NOT TO SCALE
SHEET 3 OF 3 SHEETS

Intersecting Roads
Sta. 28+00 - 130th St. Lt.
1st St. in Roslyn Rt.
Main St. in Roslyn Rt.
3rd St. in Roslyn Rt.
122nd St. in Eden Lt. & Rt.
North Side Dr. to Roy Lake State Park Lt.



Cold Milling Asphalt Concrete

Intersecting Roads
Sta. 28+00 - 130th St. Lt.
1st St. in Roslyn Rt.
Main St. in Roslyn Rt.
3rd St. in Roslyn Rt.
122nd St. in Eden Lt. & Rt.
North SIde Dr. to Roy Lake State Park Lt.



Not to Scale

PLOT SCALE - 1:24
PLOTTED FROM - TRPR13462
PLOT NAME - 38
FILE - ...\COLD MILLING TRANSITION.DGN

PLUG EXISTING RC CATTLE PASS DETAIL

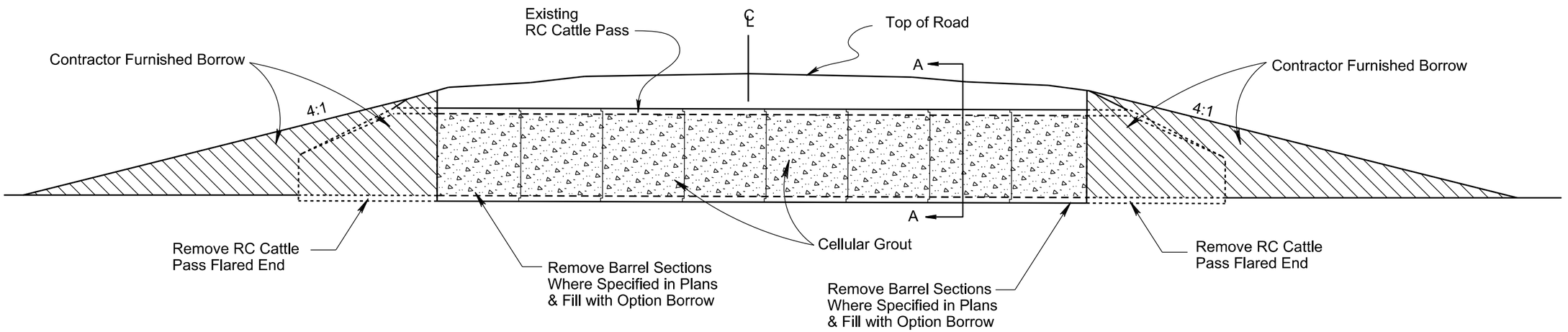
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F39	F60

Plotting Date: 10/23/2026

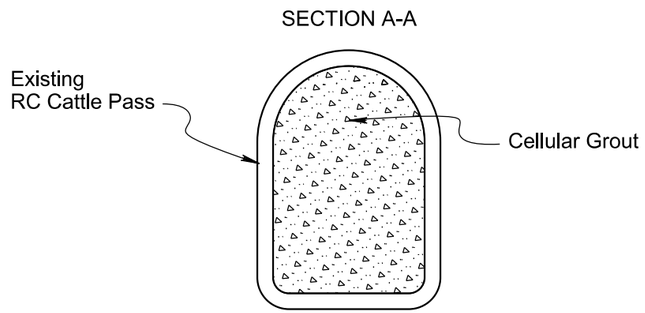
Contractor Furnished Borrow

Cellular Grout

Sta. 960+55



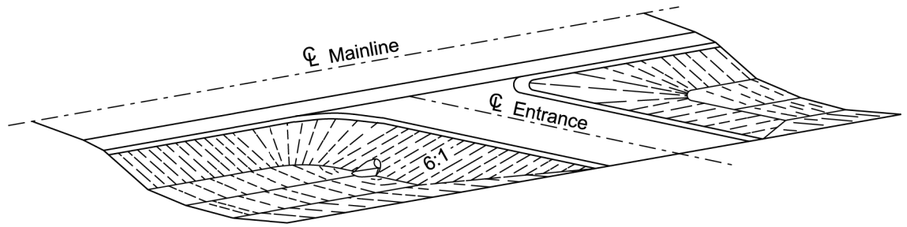
SECTION A-A



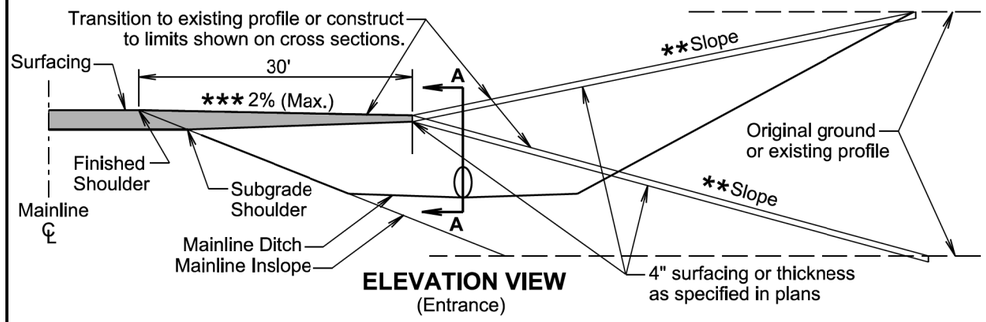
Plot Scale - 1:8

Plotted From - TRPR13462

File - ...\CattlePassPlugDetail.dgn



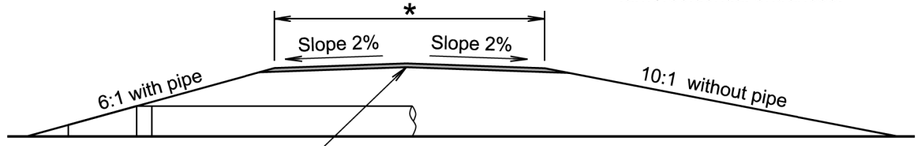
PERSPECTIVE OF ENTRANCE



ELEVATION VIEW
(Entrance)

*** 2% When on the inside of superelevation and 0% or flat when on outside of superelevation.

** Entrance maximum slope is typically 10:1 for field entrances and 15:1 for farm/residential entrances.



SECTION A-A
(Entrance and Intersecting Road)

* The finished surfacing width is stated elsewhere in the plans. The subgrade width is 4' wider than the finished surfacing width unless stated otherwise in the plans.

GENERAL NOTES:

The ditch section shown above in the perspective view is only for illustrative purpose.

The elevation view above is typical for either a ditch cut or fill section. Entrances that vary from above should be specified in the plans.

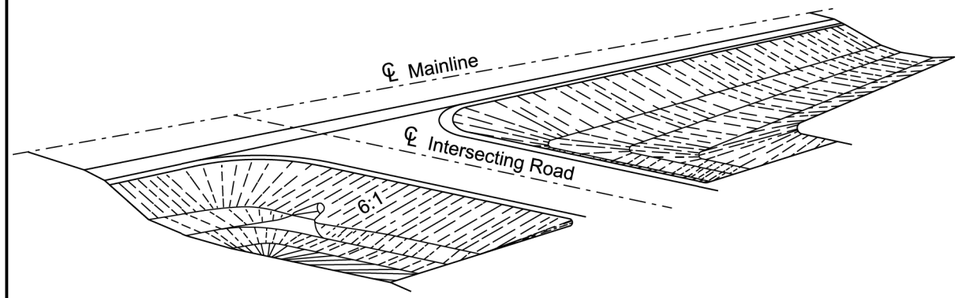
Pipe length will be adjusted if necessary during construction to obtain the 6:1 slope. For grading projects, the pipe length is estimated typically using a 4" thickness of surfacing directly over the subgrade above the pipe.

The transition area between the mainline inslope and the entrance or intersecting road inslope will be rounded to eliminate an abrupt transition.

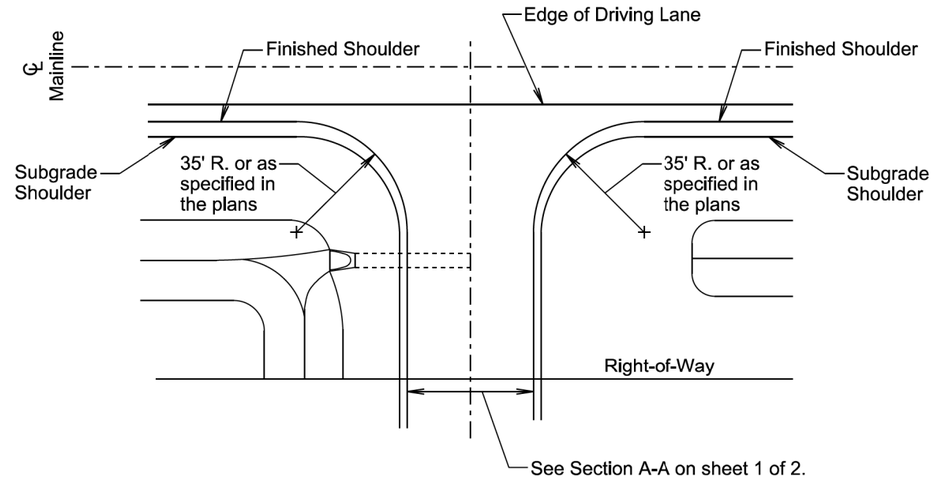
The turning radii will be 35' for intersecting roads and entrances unless stated otherwise in the plans.

November 19, 2021

Published Date: 2027	SDDOT	INTERSECTING ROADS AND ENTRANCES	PLATE NUMBER 120.01
			Sheet 1 of 2



PERSPECTIVE OF INTERSECTING ROAD



PLAN VIEW

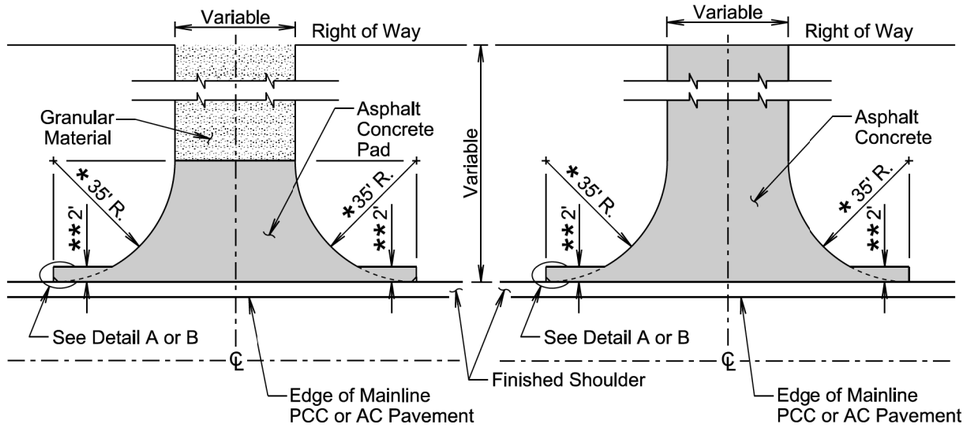
GENERAL NOTES:

The 6:1 or 10:1 intersecting road inslope will transition to the existing intersecting road inslope near the right-of-way or at a location as determined by the Engineer.

November 19, 2021

Published Date: 2027	SDDOT	INTERSECTING ROADS AND ENTRANCES	PLATE NUMBER 120.01
			Sheet 2 of 2

Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\day08GH\StdPlateSectionF.dgn



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:

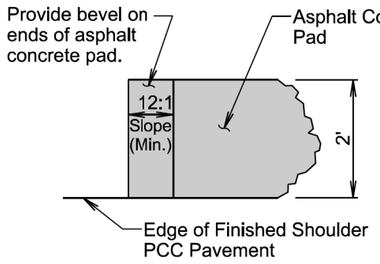
The precise construction limits for situations other than shown above will be determined by the Engineer during construction.

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

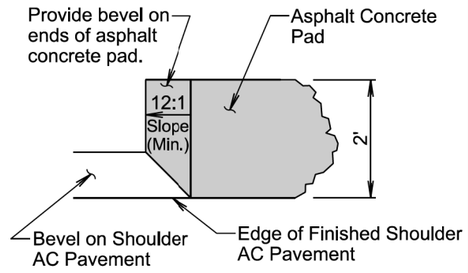
** The Contractor may adjust the screed of the paver during mainline paving operations to provide the 2-foot asphalt concrete pad or the Contractor may provide the 2-foot asphalt concrete pad during paving of the intersecting roads as shown above. The Engineer may eliminate the 2-foot asphalt concrete 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

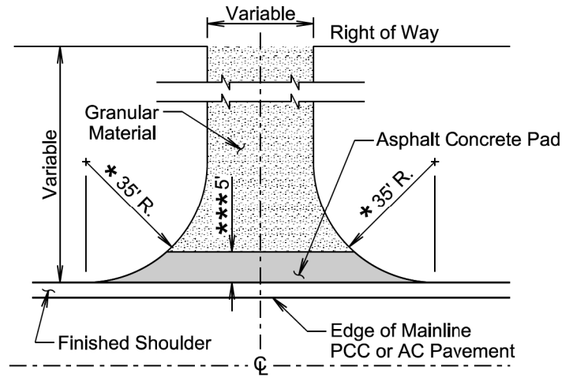
Published Date: 2027	SDDOT	SURFACING OR RESURFACING OF INTERSECTING ROADS AND ENTRANCES (MAINLINE AND SHOULDERS: PCC OR AC PAVEMENT)	PLATE NUMBER 320.04 Sheet 1 of 2



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.

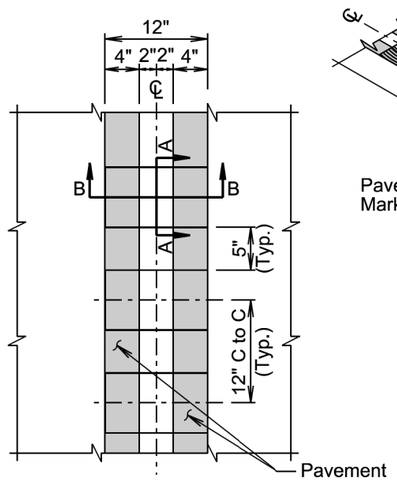
August 27, 2020

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

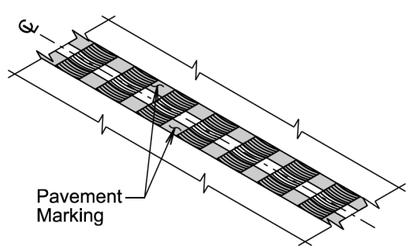
Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\day08GH\StdPlateSectionF.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F42	F60

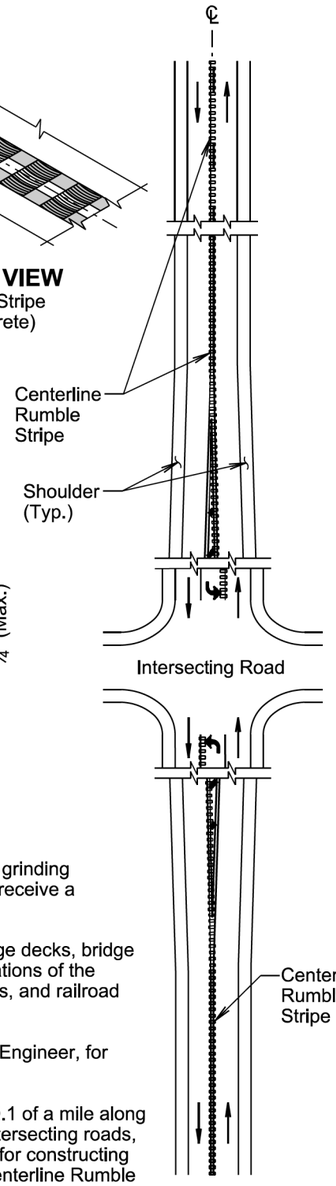
Plotting Date: 10/23/2026



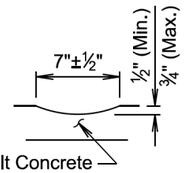
PLAN VIEW
(Typical Rumble Stripe in Asphalt Concrete)



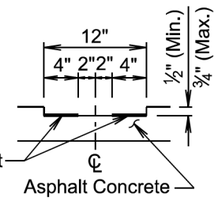
PERSPECTIVE VIEW
(Typical Rumble Stripe in Asphalt Concrete)



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES:

A rumble stripe will be constructed on the centerline of the roadway by grinding continuous indentations in the asphalt concrete. The rumble stripe will receive a flush seal or asphalt surface treatment as specified in the plans.

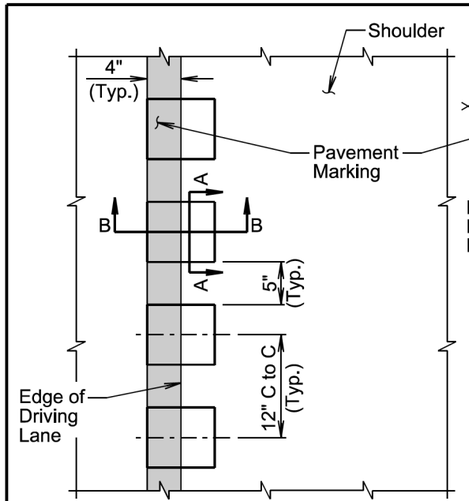
A rumble stripe will not be constructed through intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. The beginning and ending locations of the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

Prior to constructing the rumble stripe the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble stripe.

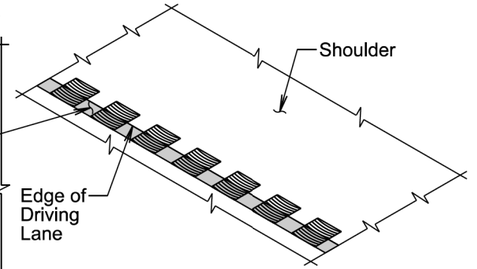
Measurement and payment of the rumble stripe will be to the nearest 0.1 of a mile along the centerline and will include segments without the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. Payment for constructing the rumble stripe will be at the contract unit price per mile for "Grind Centerline Rumble Stripe in Asphalt Concrete".

November 19, 2020

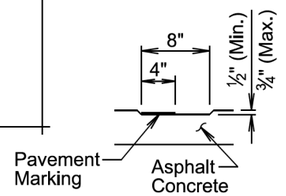
Published Date: 2027	SDDOT	12" CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE	PLATE NUMBER 320.18
			Sheet 1 of 1



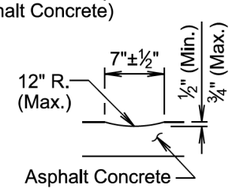
PLAN VIEW
(Typical Rumble Stripe in Asphalt Concrete)



PERSPECTIVE VIEW
(Typical Rumble Stripe in Asphalt Concrete)



SECTION B-B



SECTION A-A

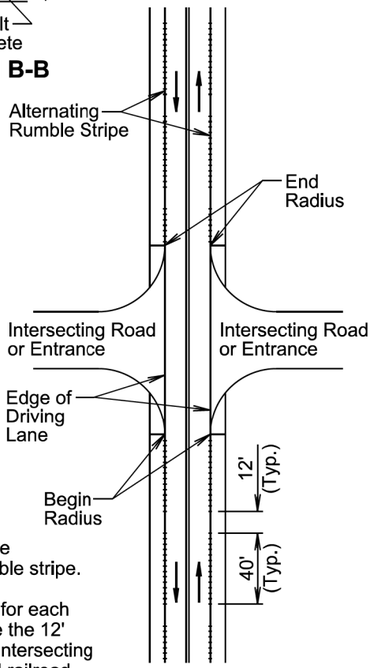
GENERAL NOTES:

A rumble stripe will be constructed on all of the asphalt concrete shoulders by grinding alternating patterns of 40' continuous indentations in the asphalt concrete. The rumble stripe will receive a flush seal or asphalt surface treatment as specified in the plans.

A rumble stripe will not be constructed through intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad crossings. The lengths of the 40' segments with continuous indentations and the 12' segments without a rumble stripe adjacent to the intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

Prior to constructing the rumble stripe the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble stripe.

Measurement of the rumble stripe will be to the nearest 0.1 of a mile for each shoulder. Measurement and payment of the rumble stripe will include the 12' long segments without rumble stripes and the segments adjacent to intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad crossings without rumble stripes. Payment for constructing the rumble stripe will be at the contract unit price per mile for "Grind 8" Rumble Strip or Stripe in Asphalt Concrete".



PLAN VIEW

September 14, 2019

Published Date: 2027	SDDOT	8" RUMBLE STRIPE IN ASPHALT CONCRETE ON NONDIVIDED HIGHWAY SHOULDERS	PLATE NUMBER 320.20
			Sheet 1 of 1

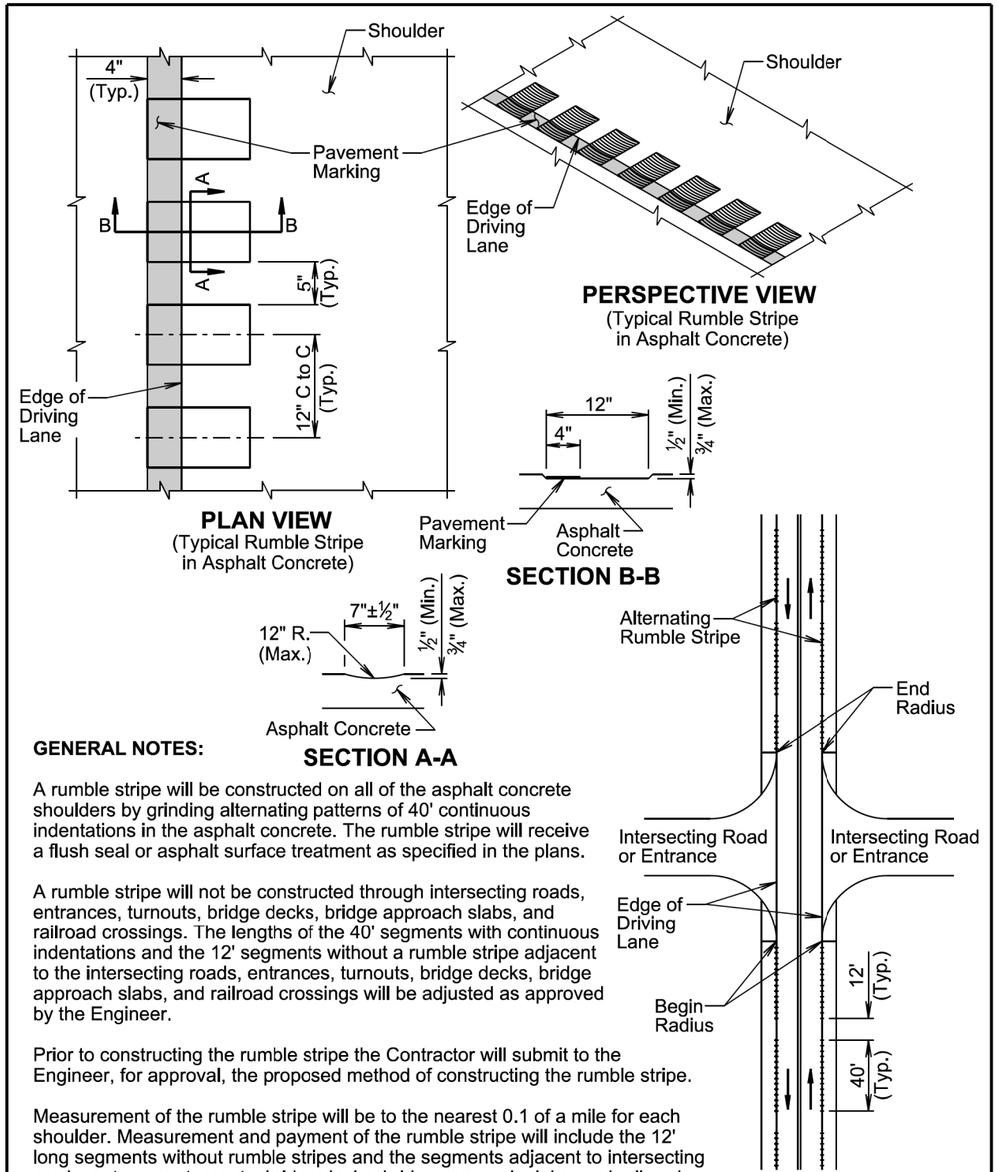
Plot Scale - 1:200

Plotted From - TRPR13462

File - ...\day08GHStdPlateSectionF.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F43	F60

Plotting Date: 10/23/2026



GENERAL NOTES:

A rumble stripe will be constructed on all of the asphalt concrete shoulders by grinding alternating patterns of 40' continuous indentations in the asphalt concrete. The rumble stripe will receive a flush seal or asphalt surface treatment as specified in the plans.

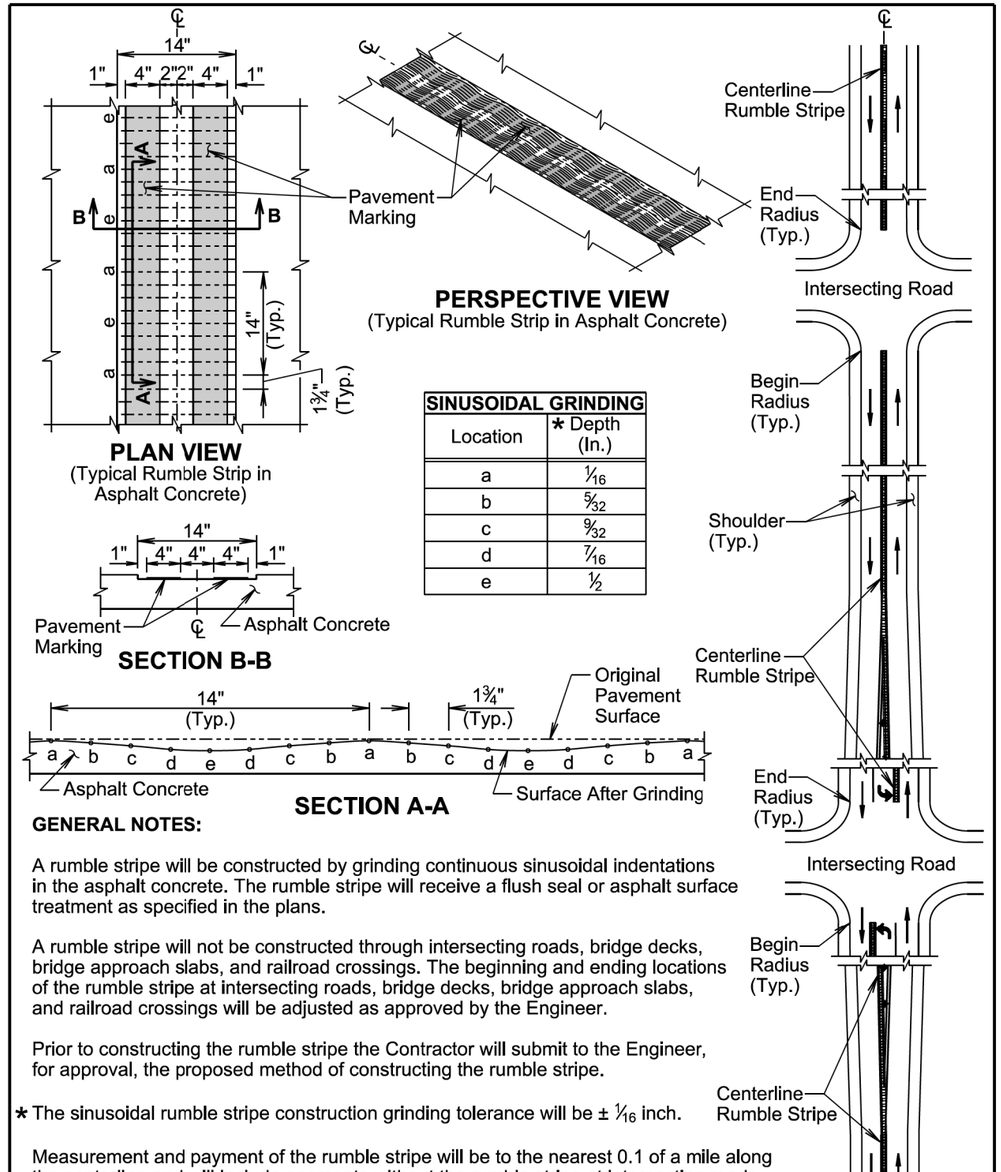
A rumble stripe will not be constructed through intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad crossings. The lengths of the 40' segments with continuous indentations and the 12' segments without a rumble stripe adjacent to the intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

Prior to constructing the rumble stripe the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble stripe.

Measurement of the rumble stripe will be to the nearest 0.1 of a mile for each shoulder. Measurement and payment of the rumble stripe will include the 12' long segments without rumble stripes and the segments adjacent to intersecting roads, entrances, turnouts, bridge decks, bridge approach slabs, and railroad crossings without rumble stripes. Payment for constructing the rumble stripe will be at the contract unit price per mile for "Grind 12" Rumble Strip or Stripe in Asphalt Concrete".

September 14, 2019

Published Date: 2027	SDDOT	12" RUMBLE STRIPE IN ASPHALT CONCRETE ON NONDIVIDED HIGHWAY SHOULDERS	PLATE NUMBER 320.22
			Sheet 1 of 1



SINUSOIDAL GRINDING	
Location	* Depth (In.)
a	1/16
b	5/32
c	9/32
d	7/16
e	½

GENERAL NOTES:

A rumble stripe will be constructed by grinding continuous sinusoidal indentations in the asphalt concrete. The rumble stripe will receive a flush seal or asphalt surface treatment as specified in the plans.

A rumble stripe will not be constructed through intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. The beginning and ending locations of the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

Prior to constructing the rumble stripe the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble stripe.

* The sinusoidal rumble stripe construction grinding tolerance will be ± 1/16 inch.

Measurement and payment of the rumble stripe will be to the nearest 0.1 of a mile along the centerline and will include segments without the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. Payment for constructing the rumble stripe will be at the contract unit price per mile for "Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete".

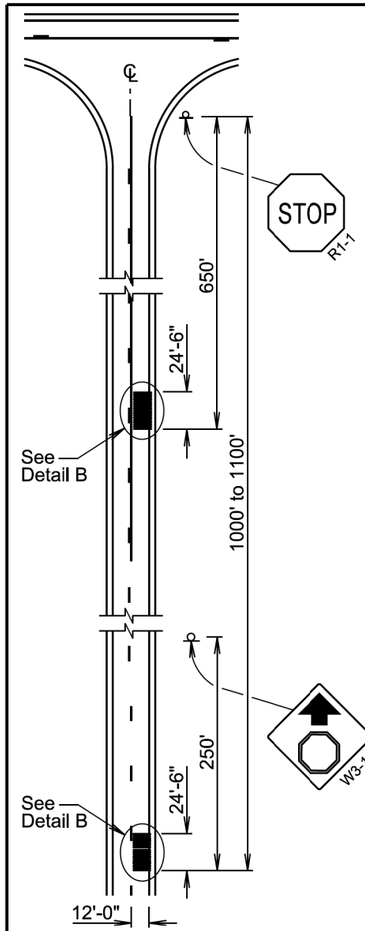
September 14, 2019

Published Date: 2027	SDDOT	SINUSOIDAL CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE	PLATE NUMBER 320.40
			Sheet 1 of 1

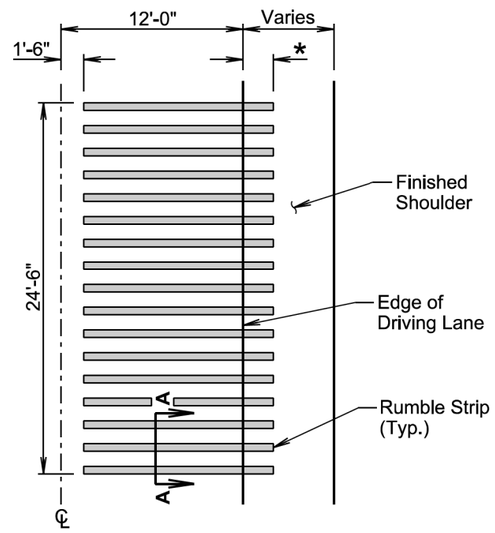
Plot Scale - 1:200

Plotted From - TRPR13462

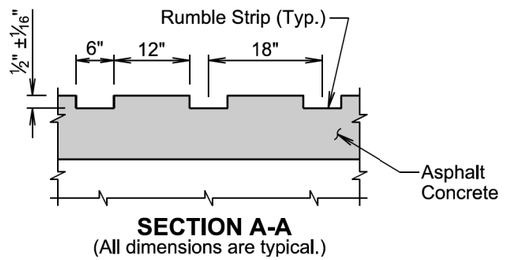
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PLAN VIEW



DETAIL B
PLAN VIEW



SECTION A-A
(All dimensions are typical.)

GENERAL NOTES:

Transverse rumble strips will be constructed by grinding, routing, or cutting recessed indentations into the asphalt concrete as approved by the Engineer. The transverse rumble strips will receive a flush seal or fog seal as specified in the plans.

* The transverse rumble strips will extend into the finished shoulder as approved by the Engineer.

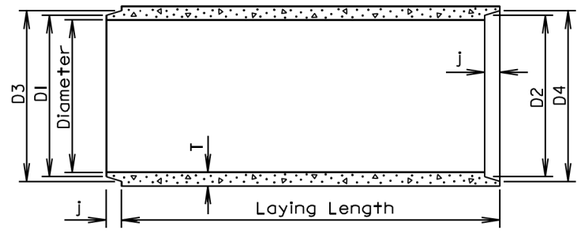
Measurement of the recessed transverse rumble strips will be to the nearest foot. Payment for constructing the recessed transverse rumble strips will be at the contract unit price per foot for "Grind 6" Transverse Rumble Strip in Asphalt Concrete".

January 22, 2021

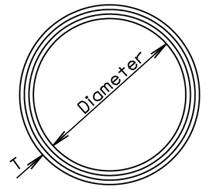
Published Date: 2027	SDDOT	*TRANSVERSE RUMBLE STRIP IN ASPHALT CONCRETE HIGHWAY ADJACENT TO STOP CONTROLLED INTERSECTION*	*PLATE NUMBER* 320.45 *Sheet 1 of 1*

TOLERANCES IN DIMENSIONS

Diameter: ±1.5% for 24" Dia. or less and ±1% or 3/8" whichever is more for 27" Dia. or greater.
Diameters at joints: ± 3/16" for 30" Dia. or less and ± 1/4" for 36" or greater.
Length of joint (j): ± 1/4".
Wall thickness (T): not less than design T by more than 5% or 3/16", whichever is greater.
Laying length: shall not underrun by more than 1/2".



LONGITUDINAL SECTION
(* Tongue and Groove Style Shown)



END VIEW

GENERAL NOTES:

Construction of R. C. P. shall conform to the requirements of Section 990 of the Specifications.

Not more than 2 four-foot sections shall be permitted near the ends of any culvert. Four-foot lengths shall be used only to secure the required length of culvert.

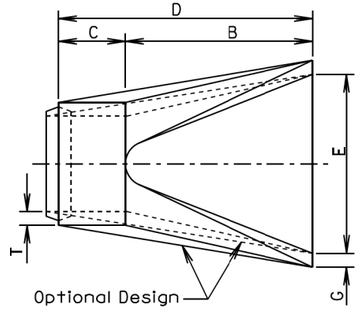
* Unless otherwise specified in the plans, the RCP may be either tongue and groove or bell and spigot style.

Diam. (in.)	Approx. Wt. /Ft. (lb.)	T (in.)	J (in.)	D1 (in.)	D2 (in.)	D3 (in.)	D4 (in.)
12	92	2	1 3/4	13 1/4	13 5/8	13 7/8	14 1/4
15	127	2 1/4	2	16 1/2	16 7/8	17 1/4	17 5/8
18	168	2 1/2	2 1/4	19 5/8	20	20 3/8	20 3/4
21	214	2 3/4	2 1/2	22 7/8	23 1/4	23 3/4	24 1/8
24	265	3	2 3/4	26	26 3/8	27	27 3/8
27	322	3 1/4	3	29 1/4	29 5/8	30 1/4	30 5/8
30	384	3 1/2	3 1/4	32 3/8	32 3/4	33 1/2	33 7/8
36	524	4	3 3/4	38 3/4	39 1/4	40	40 1/2
42	685	4 1/2	4	45 1/8	45 5/8	46 1/2	47
48	867	5	4 1/2	51 1/2	52	53	53 1/2
54	1070	5 1/2	4 1/2	57 7/8	58 3/8	59 3/8	59 7/8
60	1296	6	5	64 1/4	64 3/4	66	66 1/2
66	1542	6 1/2	5 1/2	70 5/8	71 1/8	72 1/2	73
72	1810	7	6	77	77 1/2	79	79 1/2
78	2098	7 1/2	6 1/2	83 3/8	83 7/8	85 5/8	86 1/8
84	2410	8	7	89 3/4	90 1/4	92 1/8	92 5/8
90	2740	8 1/2	7	95 3/4	96 1/4	98 1/8	98 5/8
96	2950	9	7	102 1/8	102 5/8	104 1/2	105
102	3075	9 1/2	7 1/2	109	109 1/2	111 1/2	112
108	3870	10	7 1/2	115 1/2	116	118	118 1/2

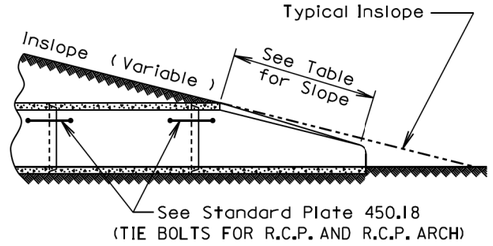
April 17, 2026

Published Date: 2027	SDDOT	*REINFORCED CONCRETE PIPE*	*PLATE NUMBER* 450.01 *Sheet 1 of 1*

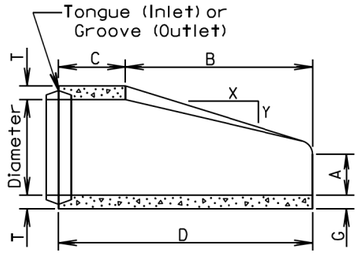
Plot Scale - 1:200
Plotted From - TRPR13462
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TOP VIEW



SLOPE DETAIL

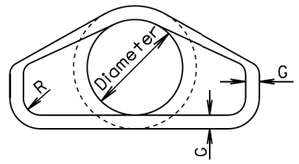


LONGITUDINAL SECTION

GENERAL NOTES:

Lengths of concrete pipe shown on plan sheets are between flared ends only.

Construction of R.C.P. Flared End shall conform to the requirements of Section 990 of the Specifications.

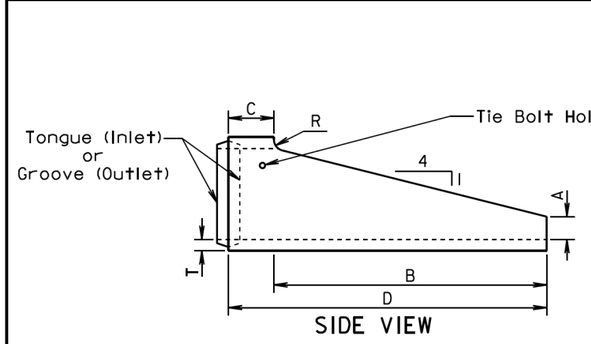


END VIEW

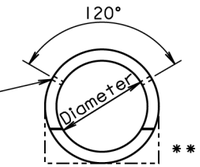
Dia. (in.)	Approx. Wt. of Section (lbs.)	Approx. Slope (X to Y)	T (in.)	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	G (in.)	R (in.)
12	530	2.4:1	2	4	24	48 7/8	72 7/8	24	2	1 1/2
15	740	2.4:1	2 1/4	6	27	46	73	30	2 1/4	1 1/2
18	990	2.3:1	2 1/2	9	27	46	73	36	2 1/2	1 1/2
21	1280	2.4:1	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	1 1/2
24	1520	2.5:1	3	9 1/2	43 1/2	30	73 1/2	48	3	1 1/2
27	1930	2.5:1	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	1 1/2
30	2190	2.5:1	3 1/2	12	54	19 3/4	73 3/4	60	3 1/2	1 1/2
36	4100	2.5:1	4	15	63	34 3/4	97 3/4	72	4	1 1/2
42	5380	2.5:1	4 1/2	21	63	35	98	78	4 1/2	1 1/2
48	6550	2.5:1	5	24	72	26	98	84	5	1 1/2
54	8240	2:1	5 1/2	27	65	33 1/4	98 1/4	90	5 1/2	1 1/2
60	8730	1.9:1	6	35	60	39	99	96	5	1 1/2
66	10710	1.7:1	6 1/2	30	72	27	99	102	5 1/2	1 1/2
72	12520	1.8:1	7	36	78	21	99	108	6	1 1/2
78	14770	1.8:1	7 1/2	36	90	21	111	114	6 1/2	1 1/2
84	18160	1.6:1	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2
90	20900	1.5:1	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	6

June 26, 2015

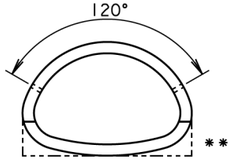
Published Date: 2027	SDDOT	R. C. P. FLARED ENDS	PLATE NUMBER 450.10
			Sheet 1 of 1



SIDE VIEW



END VIEW
"CIRCULAR"



END VIEW
"ARCH"

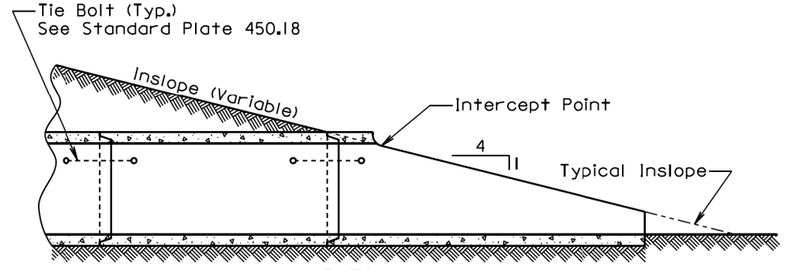
Dia. (in.)	T (in.)	A (in.)	B (in.)	C (in.)	D (in.)	R (in.)
FOR CIRCULAR PIPE						
24	3	6	72	12	84	3
30	3 1/2	7 1/2	90	12	102	3 1/2
FOR ARCH PIPE						
* 24	3	6	48	12	60	3
* 30	3 1/2	7 1/2	60	12	72	3 1/2
* 36	4 1/2	8 5/8	66	30	96	0
* 42	4 1/2	10	77 1/4	18 3/4	96	0

ALTERNATE

Dia. (in.)	T (in.)	A (in.)	B (in.)	C (in.)	D (in.)	R (in.)
FOR CIRCULAR PIPE						
24	3	9	72	12	84	0
30	3 1/2	11	90	12	102	0
FOR ARCH PIPE						
* 24	3	9	48	12	60	0
* 30	3 1/2	11	60	12	72	0

* Equivalent Diameter of Circular R.C.P.

** Acceptable Flat Bottom Alternate.



SECTION
(Along Centerline of Pipe)

GENERAL NOTE:

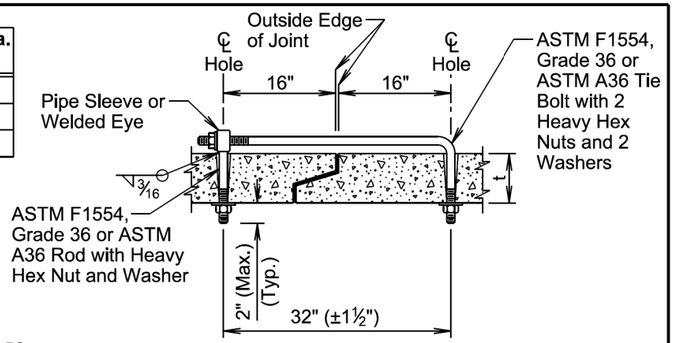
The length of concrete pipe shown in the construction plans is between sloped ends.

September 22, 2006

Published Date: 2027	SDDOT	R. C. P. SLOPED ENDS	PLATE NUMBER 450.13
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\day08GH\StdPlateSectionF.dgn

Wall "t" (in.)	Rod Dia. (in.)	Pipe Sleeve Dia. (nominal)
≤ 3¼	⅝	¾
3½-6½	¾	1
≥ 7	1	1¼



ADJUSTABLE EYE BOLT TIE

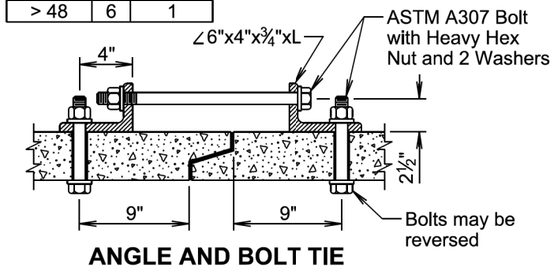
GENERAL NOTES:

Tie bolts will conform to ASTM F1554, Grade 36 or ASTM A36. Nuts will be heavy hex conforming to ASTM A563. Washers will conform to ASTM F436.

Pipe Sleeve will conform to ASTM A53, Grade B or ASTM A500, Grade B or C.

Galvanize adjustable eye bolt tie assembly in accordance with ASTM A153.

Pipe Dia. (in.)	"L" (in.)	Bolt Dia. (in.)
≤ 48	4	¾
> 48	6	1



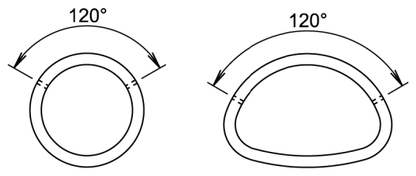
ANGLE AND BOLT TIE

GENERAL NOTES:

Angles will conform to ASTM A36.

Bolts will conform to ASTM A307. Nuts will be heavy hex conforming to ASTM A563. Washers will conform to ASTM F436.

Galvanize angles, bolts, nuts, and washers in accordance with ASTM A153.



END VIEW (Circular)

END VIEW (Arch)

GENERAL NOTES:

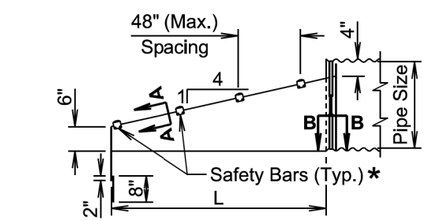
In lieu of the tie bolts detailed above other types of tie bolt connections may be installed as approved by the Office of Bridge Design.

All pipe sections of R.C.P. and R.C.P. Arch will be tied with tie bolts except for pipe located between drop inlets, manholes, and junction boxes. All pipe sections of pipes that only enter or exit drop inlets, manholes, and junction boxes will be tied with tie bolts.

There will be no separate measurement or payment for the tie bolts. The cost for furnishing and installing the tie bolts will be incidental to the contract unit price per foot for the corresponding bid item for R.C.P. or R.C.P. Arch.

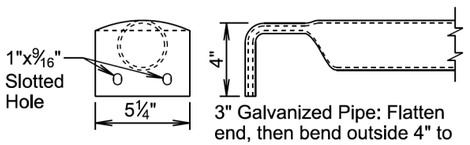
April 8, 2025

Published Date: 2027	SDDOT	TIE BOLTS FOR R.C.P. AND R.C.P. ARCH	PLATE NUMBER 450.18
			Sheet 1 of 1



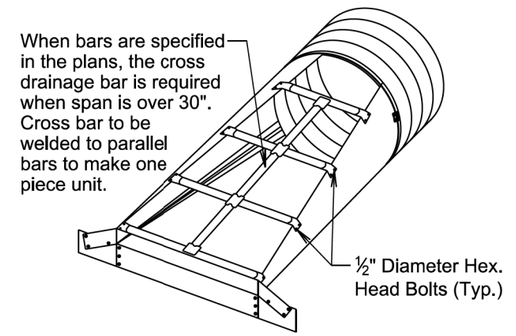
*Number of bars required will vary depending on the length of the end section.

ELEVATION VIEW

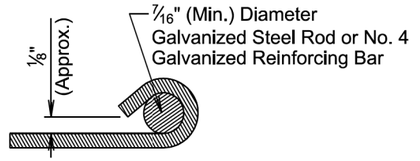


3" Galvanized Pipe: Flatten end, then bend outside 4" to match end section sides.

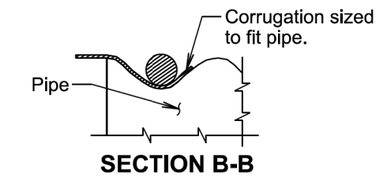
DETAIL OF SAFETY BARS



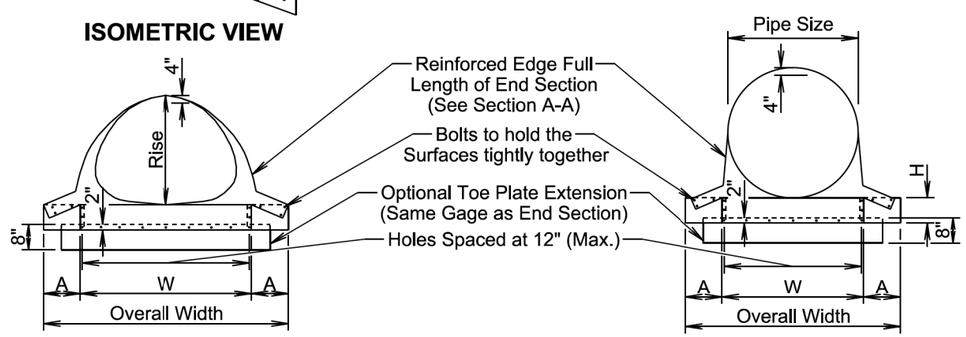
ISOMETRIC VIEW



SECTION A-A

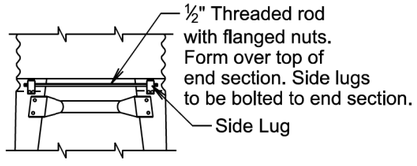


SECTION B-B

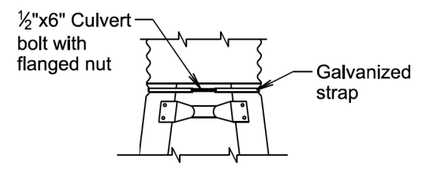


FRONT VIEW

FRONT VIEW



TYPE #2 CONNECTOR DETAIL
(For 30" and Larger)
(For 21"x15" and Larger)



TYPE #1 CONNECTOR DETAIL
(For 15" Through 24")

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Published Date: 2027	SDDOT	C.M.P. SLOPED ENDS	PLATE NUMBER 450.37
			Sheet 1 of 2

Plot Scale - 1:200

Plotted From - TRPR13462

File - ...\day08GH\StdPlateSectionF.dgn

ARCH C.M.P. SLOPED ENDS										
Equiv. Dia. (Inch)	(Inches)		(Min.) Thick.		Dimensions (Inches)				L Dimensions	
	Span	Rise	Inch	Gage	A	H	W	Overall Width	Slope	Length (Inch)
18	21	15	.064	16	8	6	27	43	4:1	20
21	24	18	.064	16	8	6	30	46	4:1	32
24	28	20	.064	16	8	6	34	50	4:1	40
30	35	24	.079	14	12	9	41	65	4:1	56
36	42	29	.109	12	12	9	48	72	4:1	76
42	49	33	.109	12	16	12	55	87	4:1	92
48	57	38	.109	12	16	12	63	95	4:1	112
54	64	43	.109	12	16	12	70	102	4:1	132
60	71	47	.109	12	16	12	77	109	4:1	148
72	83	57	.109	12	16	12	89	121	4:1	188

CIRCULAR C.M.P. SLOPED ENDS								
Pipe Dia. (Inch)	(Min.) Thick.		Dimensions (Inches)				L Dimensions	
	Inch	Gage	A	H	W	Overall Width	Slope	Length (Inch)
15	.064	16	8	6	21	37	4:1	20
18	.064	16	8	6	24	40	4:1	32
21	.064	16	8	6	27	43	4:1	44
24	.064	16	8	6	30	46	4:1	56
30	.109	12	12	9	36	60	4:1	80
36	.109	12	12	9	42	66	4:1	104
42	.109	12	16	12	48	80	4:1	128
48	.109	12	16	12	54	86	4:1	152
54	.109	12	16	12	60	92	4:1	176
60	.109	12	16	12	66	98	4:1	200

GENERAL NOTES:

Safety bars will be provided when specified in the plans.

Sloped ends will be fabricated from galvanized steel and will conform to the requirements of the Specifications.

Safety bars will be fabricated from steel schedule 40 pipe in conformance with ASTM A53, grade B or HSS 3.5x.216 in conformance with ASTM A500, grade B or C.

Slotted holes for safety bar attachment will be provided for all end sections.

Attachment to circular pipes 15" through 24" diameter will be made with Type #1 straps. All other sizes will be attached with Type #2 rods and lugs.

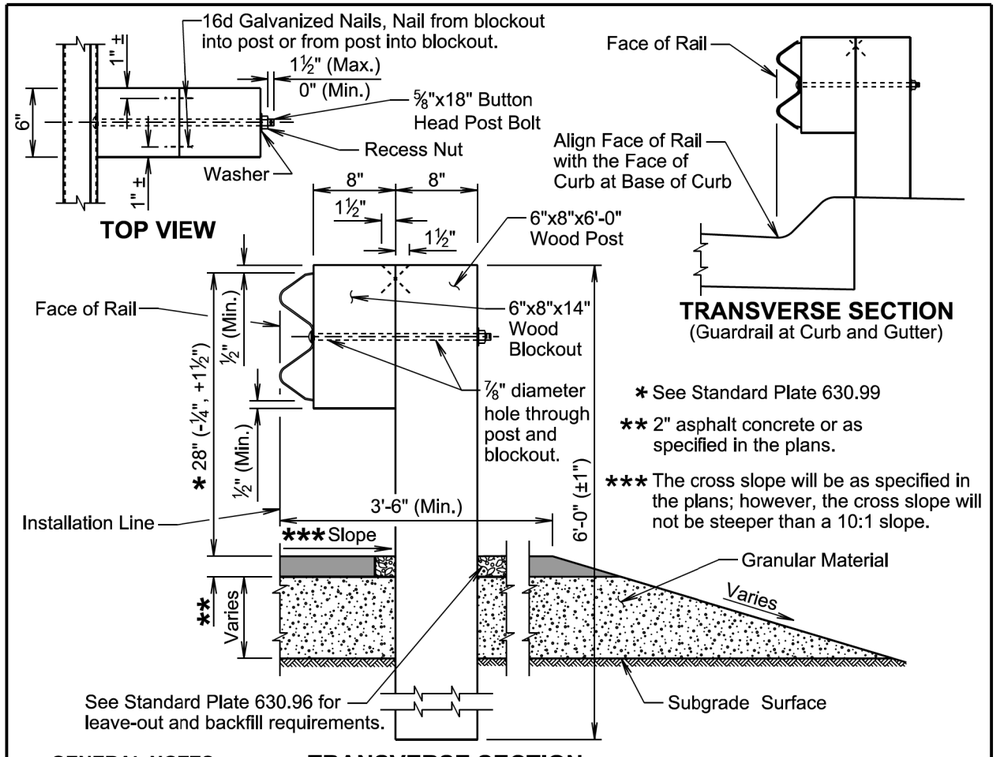
When stated in the plans, optional toe plate extension will be punched and bolted to end section apron lip with ⅜" diameter galvanized bolts. Steel for toe plate extension will be same gauge as end section. Dimensions will be overall width less 6" by 8" high.

Installation will be performed in accordance with the Specifications.

Cost of all work and materials required for fabrication and installation of sloped ends will be incidental to the bid items for the various sizes of sloped ends.

April 8, 2025

Published Date: 2027	SDDOT	C.M.P. SLOPED ENDS	PLATE NUMBER 450.37 Sheet 2 of 2



* See Standard Plate 630.99

** 2" asphalt concrete or as specified in the plans.

*** The cross slope will be as specified in the plans; however, the cross slope will not be steeper than a 10:1 slope.

GENERAL NOTES:

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite".

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

Topsoil is not shown in the transverse section drawing.

All W beam rail will be Type 1 and Class A (12 Ga.) unless specified otherwise in the plans.

W beam rail section lengths may be 12'-6" and/or 25'-0". The combination of section lengths used will be compatible with the total length of rail per site as shown in the plans.

Slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

The top of post and top of block will have a true square cut. The top of block will be a maximum of ± ½ inch from the top of the post.

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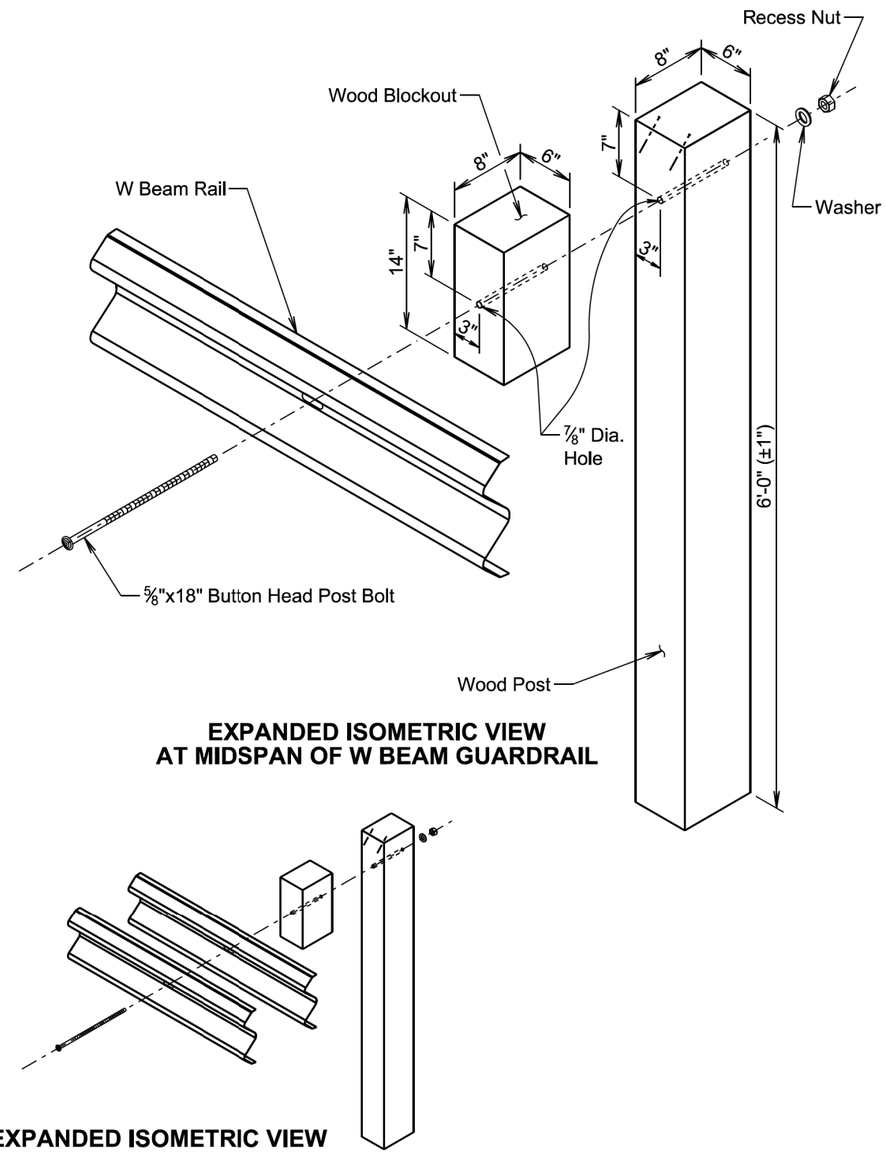
Published Date: 2027	SDDOT	W BEAM GUARDRAIL	PLATE NUMBER 630.10 Sheet 1 of 5

Plot Scale - 1:200

Plotted From - TRPR13462

File - ...\day08GH\StdPlateSectionF.dgn

Plot Scale - 1:200

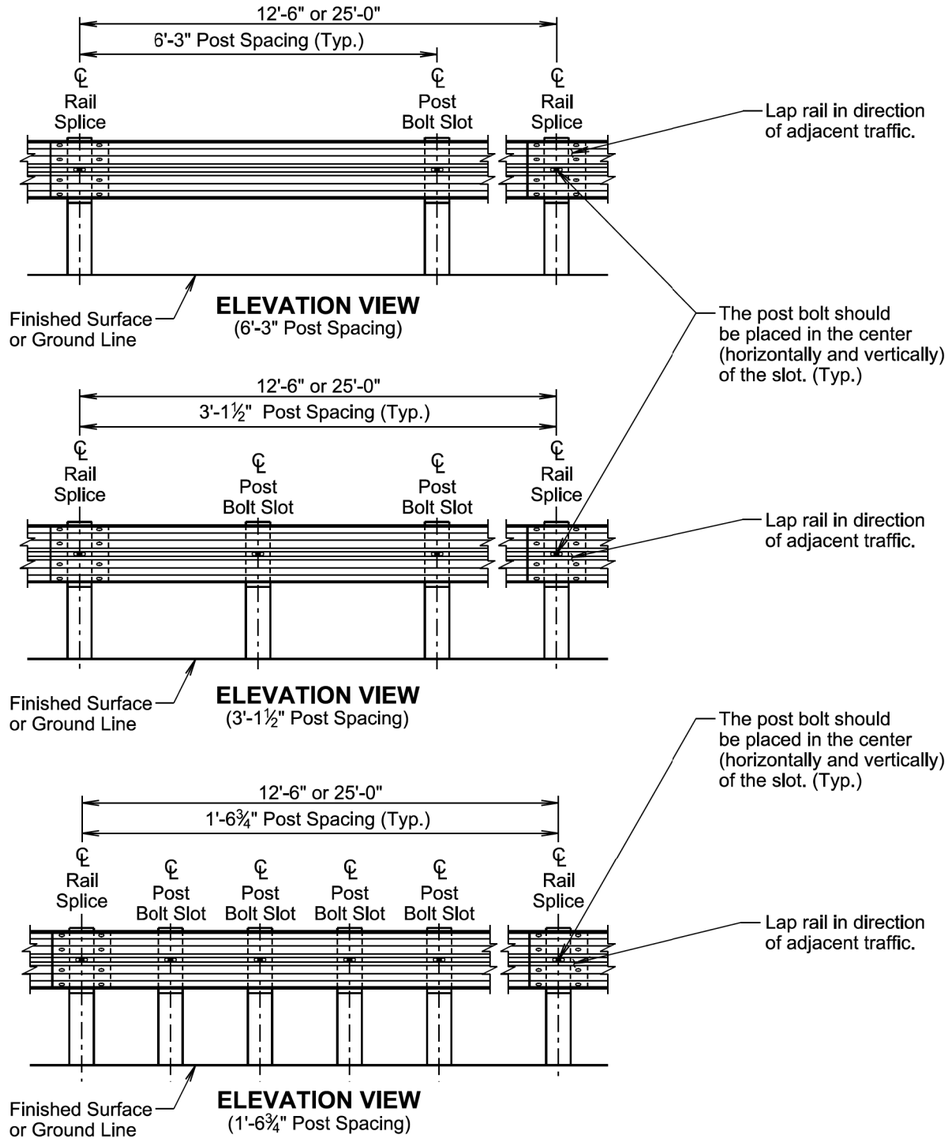


EXPANDED ISOMETRIC VIEW AT MIDSPAN OF W BEAM GUARDRAIL

EXPANDED ISOMETRIC VIEW OF DOUBLE (NESTED) W BEAM GUARDRAIL AT MIDSPAN
(For Information Only, Not to Scale)

September 14, 2019

Published Date: 2027	SDDOT	W BEAM GUARDRAIL	PLATE NUMBER 630.10 Sheet 2 of 5

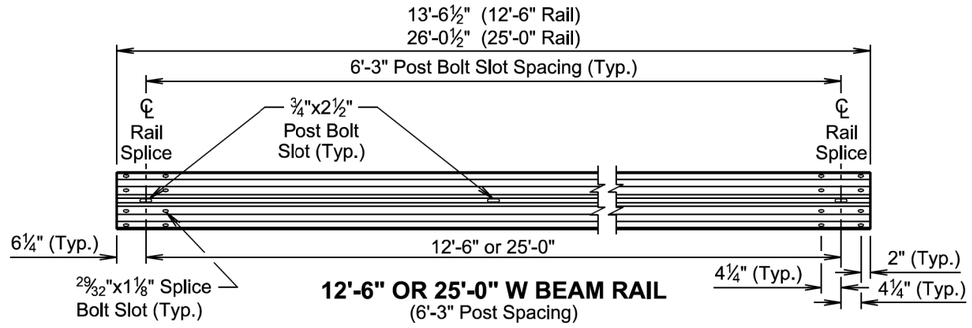


September 14, 2019

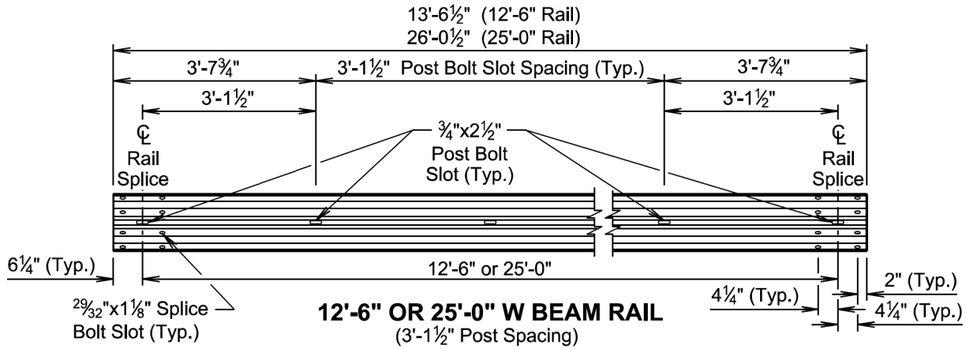
Published Date: 2027	SDDOT	W BEAM GUARDRAIL	PLATE NUMBER 630.10 Sheet 3 of 5

Plotted From - TRPR13462

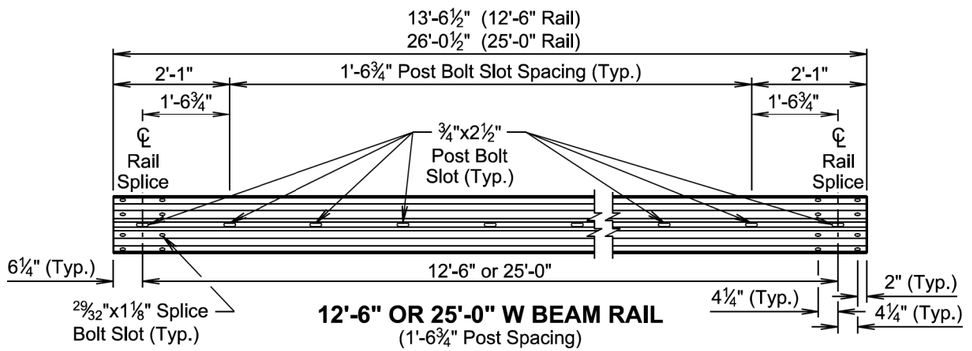
File - ...\day08GH\StdPlateSectionF.dgn



12'-6" OR 25'-0" W BEAM RAIL
(6'-3" Post Spacing)



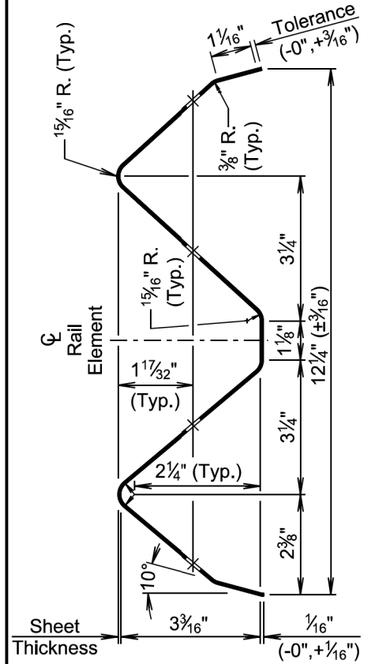
12'-6" OR 25'-0" W BEAM RAIL
(3'-1½" Post Spacing)



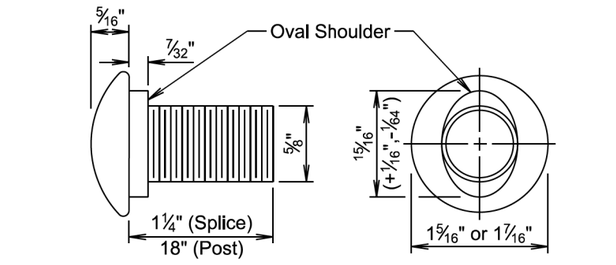
12'-6" OR 25'-0" W BEAM RAIL
(1'-6¾" Post Spacing)

September 14, 2019

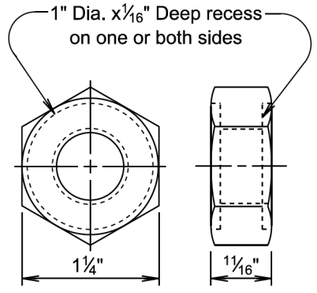
Published Date: 2027	SDDOT	W BEAM GUARDRAIL	PLATE NUMBER 630.10
			Sheet 4 of 5



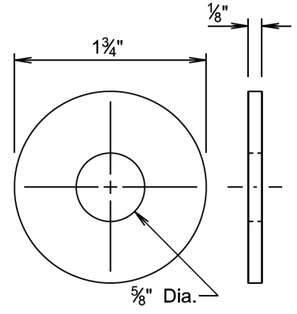
SECTION THROUGH W BEAM RAIL



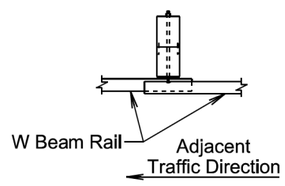
SPLICE BOLT AND POST BOLT
(⅝" Button Head Bolt)



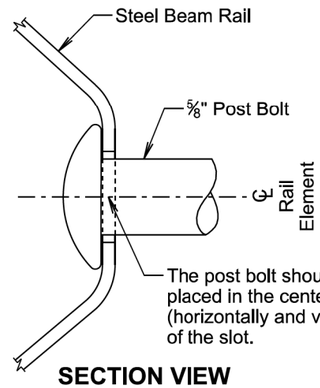
RECESS NUT
(At lap splices, the recess will be placed against the steel rail.)



WASHER
(The washer will be placed between the back side of wood post and the recess nut, see sheet 1 and 2.)



PLAN VIEW
(Lap Splice)
(Lap rail in direction of adjacent traffic.)
(8 splice bolts and 8 recess nuts per splice, NO washers)



SECTION VIEW
(At Post Bolt)

September 14, 2019

Published Date: 2027	SDDOT	W BEAM GUARDRAIL	PLATE NUMBER 630.10
			Sheet 5 of 5

Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\day08GH\StdPlateSectionF.dgn

TYPE AND DETAILS OF MGS						
Type of MGS	W Beam Rail Single or Double (Nested)	Blockout Size	Blockout Material	Post Size	Post Material	Post Spacing
1	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	6'-3"
1C	Single	6"x12"x14"	Wood	6"x8"x7'-6"	Wood	6'-3"
2	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	3'-1½"
3	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	1'-6¾"
4	Double	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	6'-3"

STANDARD PLATE REFERENCE	
Type of MGS	See Standard Plate(s)
1	630.20, 630.22
1C	630.20, 630.25
2	630.20
3	630.20
4	630.20

GENERAL NOTES:

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite".

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

Topsoil is not shown in the transverse section drawing on sheet 2 of 6.

All W beam rail will be Type 1 and Class A (12 Ga.) unless specified otherwise in the plans.

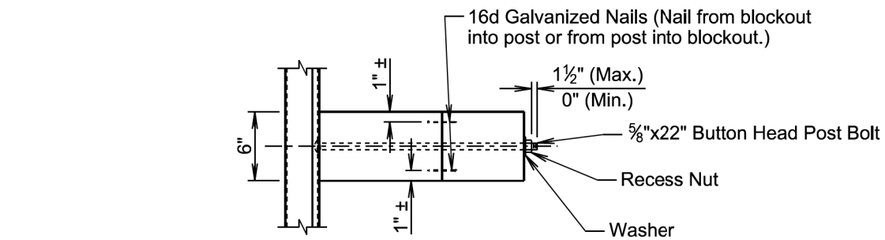
W beam rail section lengths may be 12'-6" and/or 25'-0". The combination of section lengths used will be compatible with the total length of rail per site as shown in the plans.

Slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

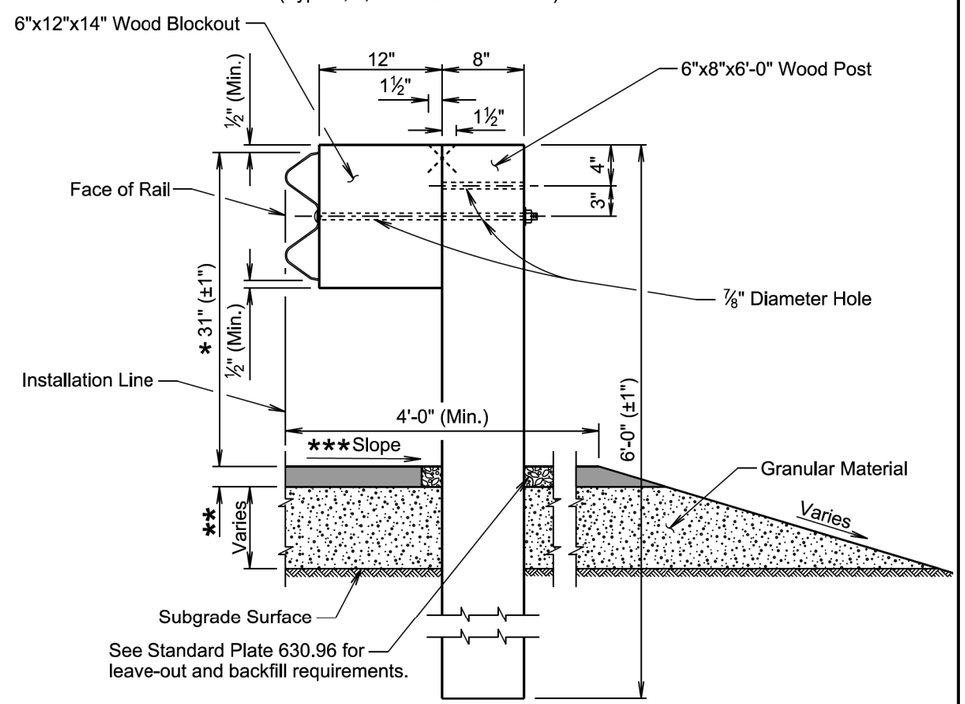
All costs for constructing the MGS including labor, equipment, and materials including all posts, blockouts, steel beam rail, and hardware will be incidental to the contract unit price per foot for the respective MGS contract item.

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TOP VIEW
(Type 1, 2, or 3 MGS Installation)



TRANSVERSE SECTION
(Type 1, 2, or 3 MGS Installation)

* See Standard Plate 630.99

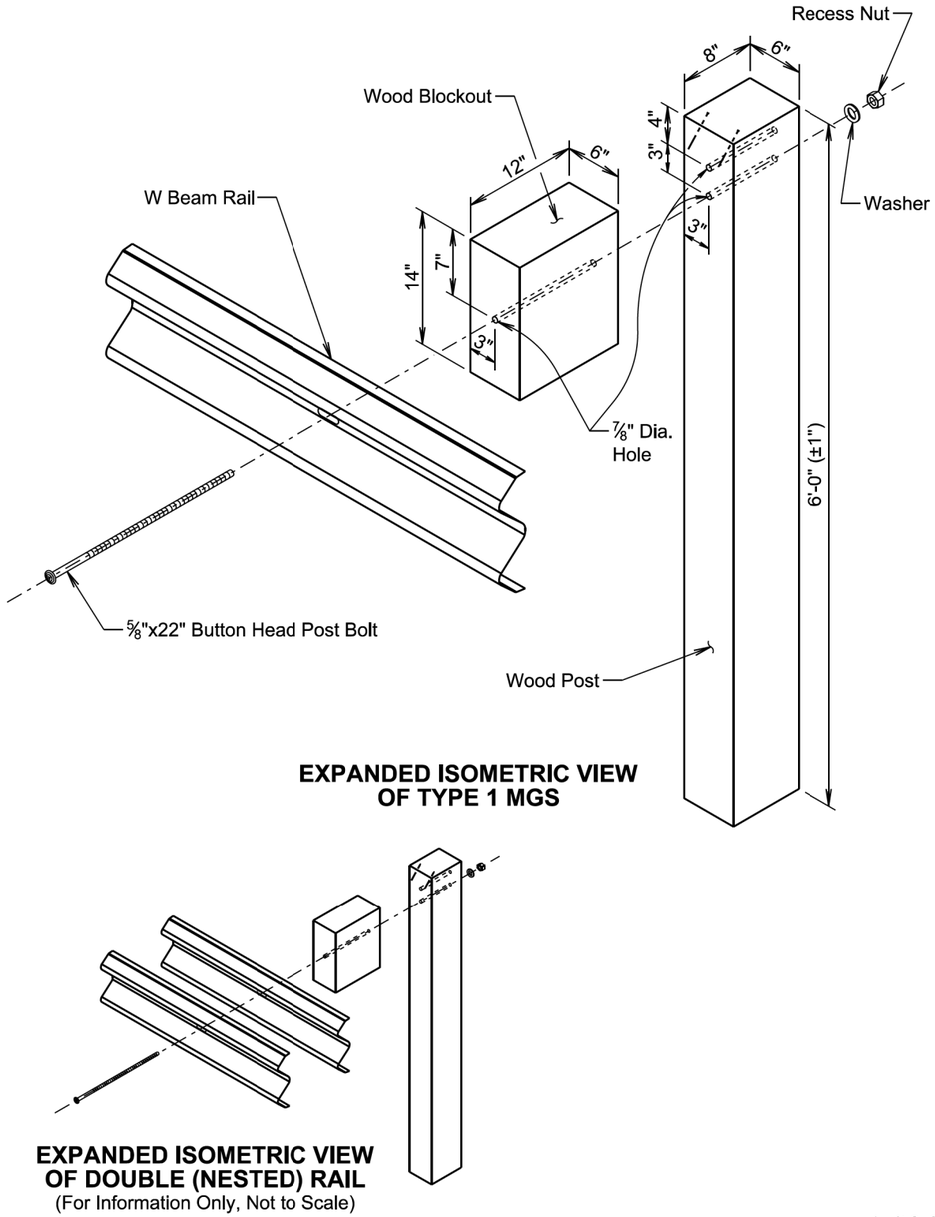
** 2" asphalt concrete or as specified in the plans.

*** The cross slope will be as specified in the plans; however, the cross slope will not be steeper than a 10:1 slope.

April 8, 2025

Published Date: 2027	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20 Sheet 2 of 6

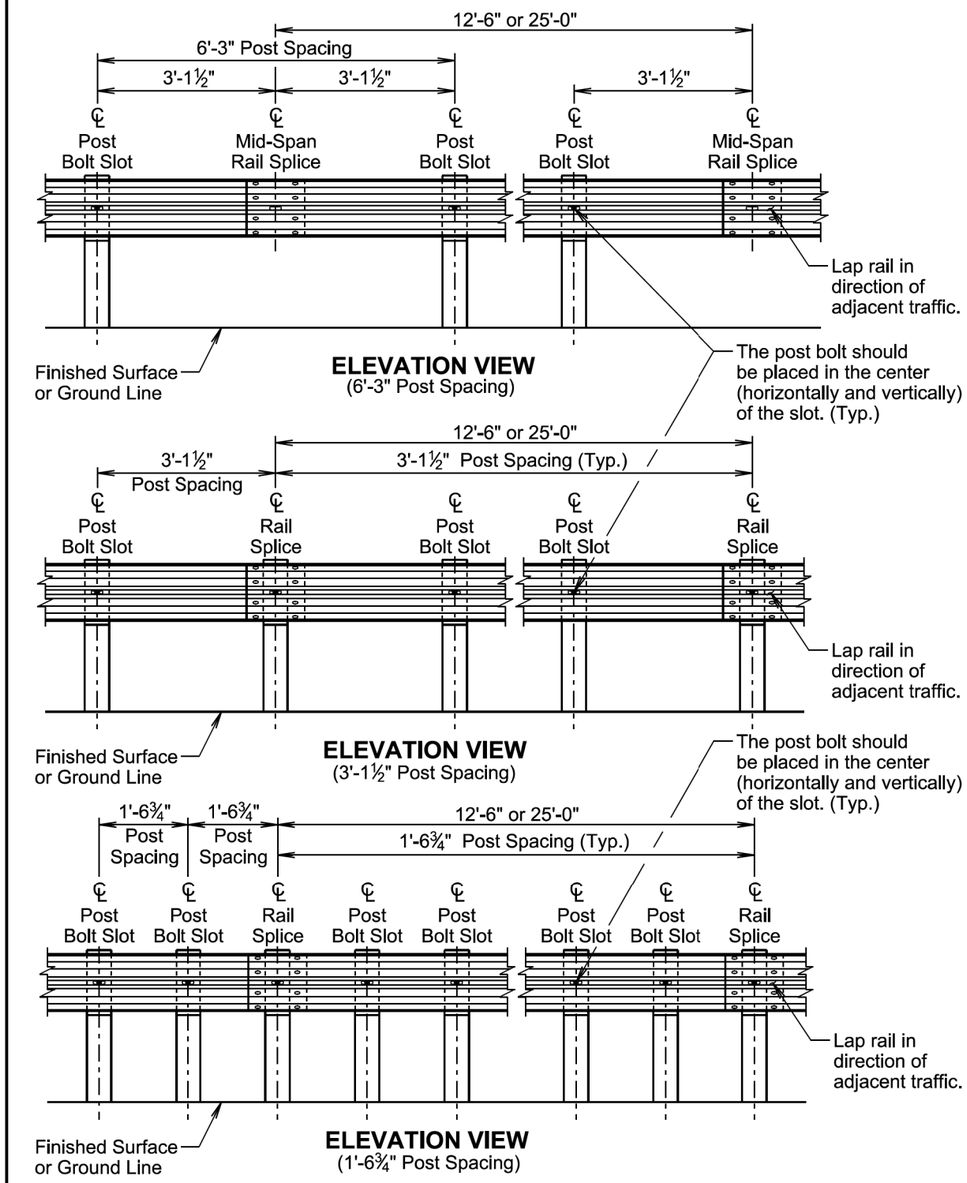
Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\day08GH\SlotPlateSectionF.dgn



EXPANDED ISOMETRIC VIEW OF TYPE 1 MGS

EXPANDED ISOMETRIC VIEW OF DOUBLE (NESTED) RAIL
(For Information Only, Not to Scale)

April 8, 2025



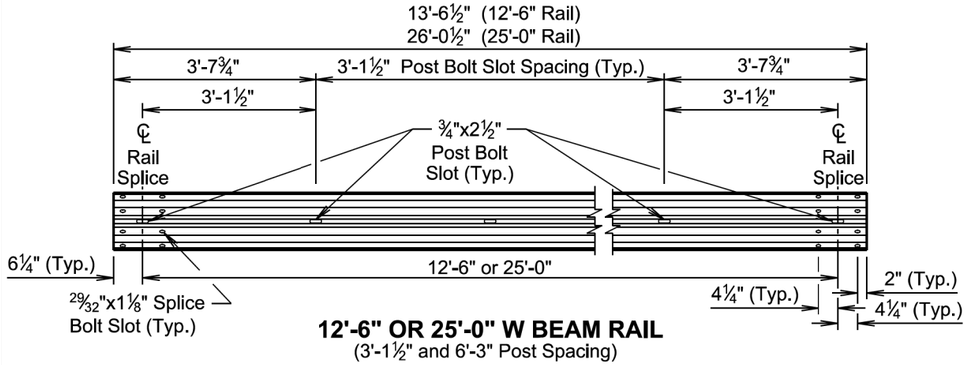
ELEVATION VIEW
(6'-3" Post Spacing)

ELEVATION VIEW
(3'-1½" Post Spacing)

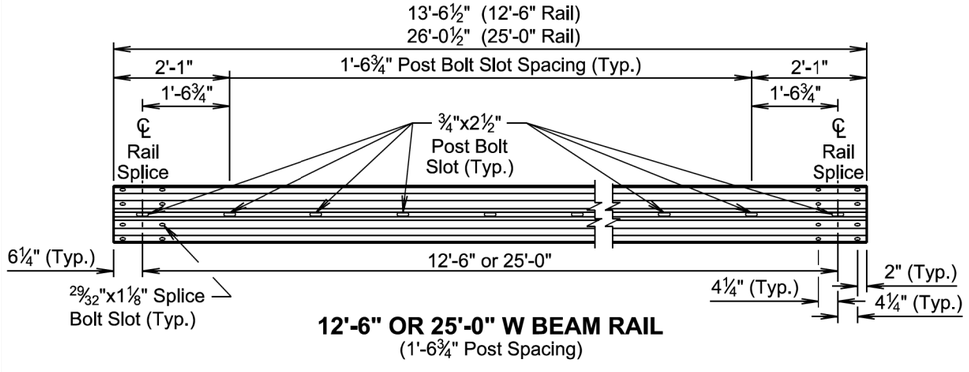
ELEVATION VIEW
(1'-6¾" Post Spacing)

April 8, 2025

Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\day08GH\StdPlateSectionF.dgn



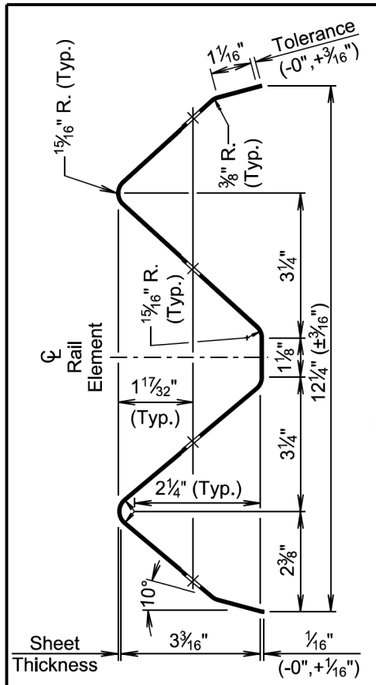
12'-6" OR 25'-0" W BEAM RAIL
(3'-1½" and 6'-3" Post Spacing)



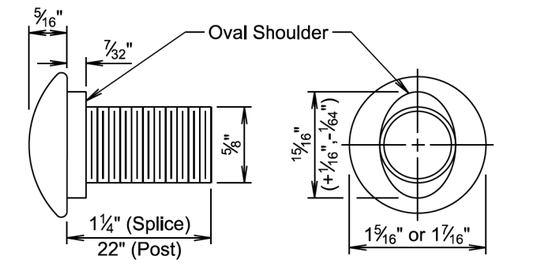
12'-6" OR 25'-0" W BEAM RAIL
(1'-6¾" Post Spacing)

April 8, 2025

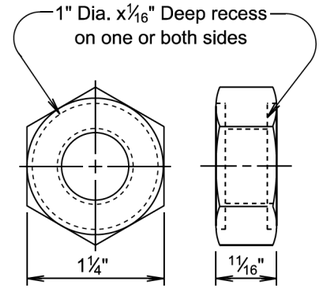
Published Date: 2027	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 5 of 6



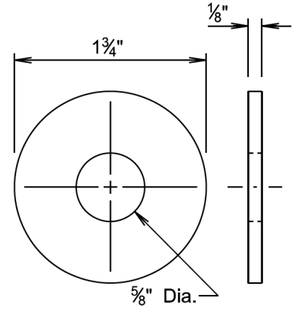
SECTION THROUGH W BEAM RAIL



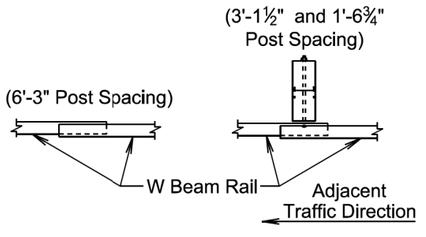
SPLICE BOLT AND POST BOLT
(⅝" Button Head Bolt)



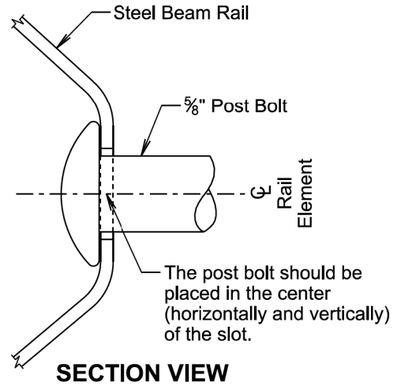
RECESS NUT
(At lap splices, the recess will be placed against the steel rail.)



WASHER
(The washer will be placed between the back side of wood post and the recess nut, see sheet 2 and 3.)



PLAN VIEW
(Lap Splice)
(Lap rail in direction of adjacent traffic.)
(8 splice bolts and 8 recess nuts per splice, NO washers)



SECTION VIEW
(At Post Bolt)

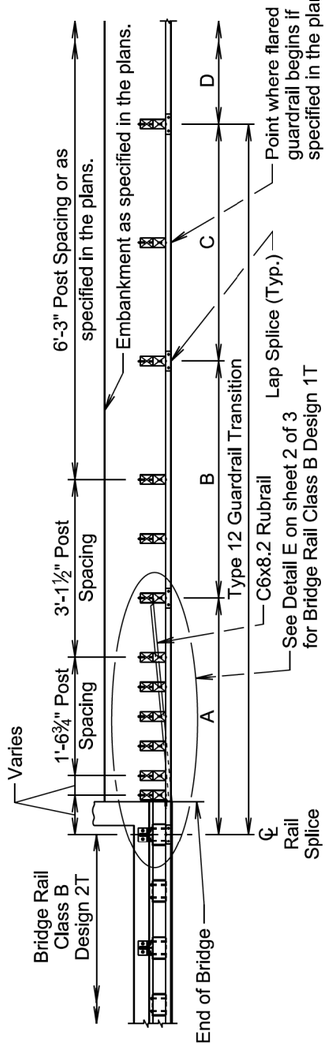
April 8, 2025

Published Date: 2027	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 6 of 6

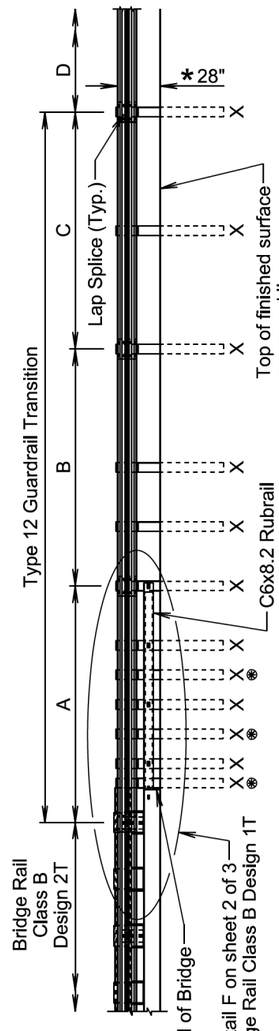
Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\day08GHISlotPlateSectionF.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F53	F60

Plotting Date: 10/23/2026



PLAN VIEW



ELEVATION VIEW

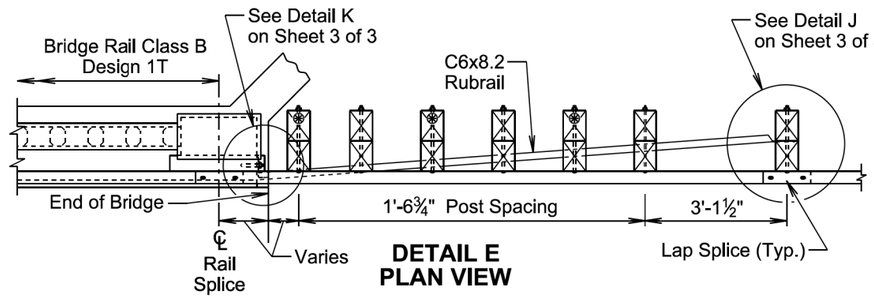
A: 12'-6" Straight Double (Nested) Class B W Beam Guardrail with Wood Posts (See standard plate 630.10)
B: 12'-6" Straight Class B W Beam Guardrail with Wood Posts (See standard plate 630.10)
C: 12'-6" Straight Class A W Beam Guardrail with Wood Posts (See standard plate 630.10) or as specified in the plans.
D: Guardrail as specified in the plans.

* See standard plate 630.99

X: 6"x8"x6'-0" Wood Post and 6"x8"x14" Wood Blockout
❀ Rubrail will not be attached to these posts.

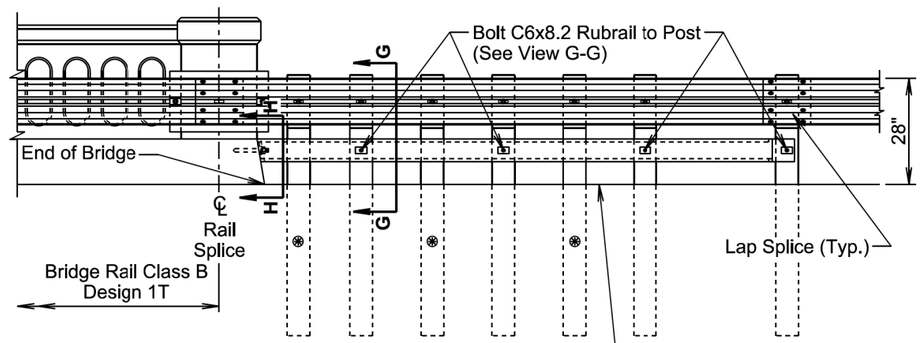
September 14, 2019

Published Date: 2027	SDDOT	TYPE 12 GUARDRAIL TRANSITION (W BEAM BRIDGE RAIL CLASS B DESIGN 1T OR 2T TO W BEAM GUARDRAIL)	PLATE NUMBER 630.63
			Sheet 1 of 3

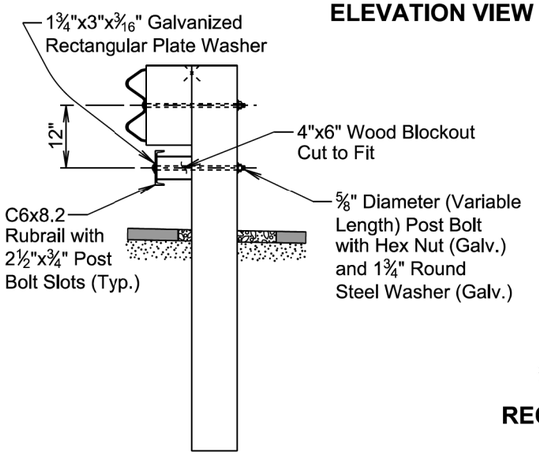


DETAIL E
PLAN VIEW

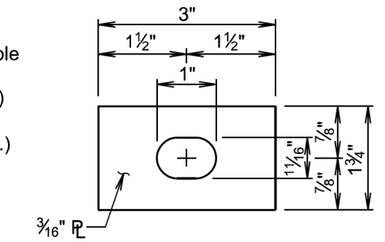
❀ Rubrail will not be attached to these posts.



DETAIL F
ELEVATION VIEW



VIEW G-G
(For Bridge Rail Class B Design 1T or 2T)

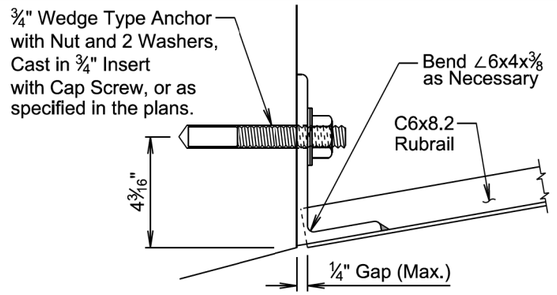


RECTANGULAR PLATE WASHER

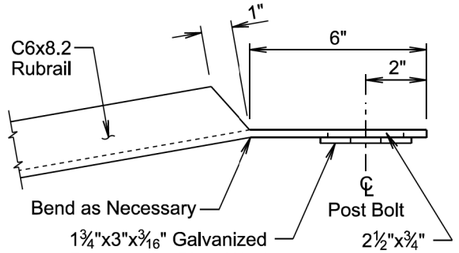
September 14, 2019

Published Date: 2027	SDDOT	TYPE 12 GUARDRAIL TRANSITION (W BEAM BRIDGE RAIL CLASS B DESIGN 1T OR 2T TO W BEAM GUARDRAIL)	PLATE NUMBER 630.63
			Sheet 2 of 3

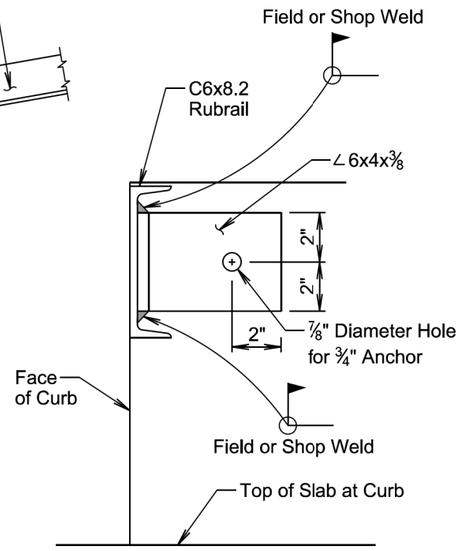
Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\day08GH\StdPlateSectionF.dgn



DETAIL K
(Double Class B Rail Not Shown)
(For Bridge Rail Class B Design 1T or 2T)



DETAIL J
(Post, Blockout, Post Bolt, and Rail Not Shown)
(For Bridge Rail Class B Design 1T or 2T)



VIEW H-H
(Anchor and Rail Not Shown)
(For Bridge Rail Class B Design 1T or 2T)

GENERAL NOTES:

Throughout the type 12 guardrail transition, slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

The rubrail steel will be in conformance with ASTM A36 and will be galvanized after fabrication in conformance with ASTM A123. If pre-galvanized steel members are used, all cuts and welds will be coated with an approved galvanizing paint.

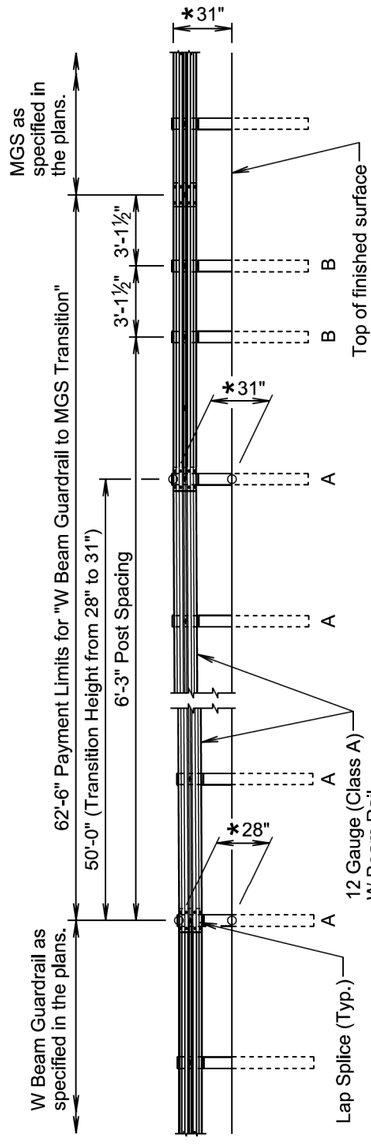
The wedge type anchor bolt, nut, and washers will be hot dipped galvanized or made of a corrosion resistent material. The wedge type anchor will be capable of sustaining an ultimate load in tension or shear of 17,000 pounds when the anchor is set in 4,500 psi compressive strength concrete. The anchor will be installed according to the manufacturer's recommendations. The Contractor will obtain certification from the manufacturer that the anchor meets the tensile and shear requirements and will submit the certification to the Engineer. The cost for furnishing and installing the wedge type anchor, nut, and washers will be incidental to the contract unit price per foot for "Rubrail".

All costs for furnishing and installing the straight double class B W beam guardrail including labor, equipment, and materials including the W beam rails, posts, blockouts, W beam terminal connector, and hardware will be incidental to the contract unit price per foot for "Straight Double Class B W Beam Guardrail with Wood Posts".

All costs for furnishing and installing the type 12 guardrail transition including labor, equipment, and materials will be included in the contract unit price for the respective guardrail contract items.

September 14, 2019

Published Date: 2027	SDDOT	TYPE 12 GUARDRAIL TRANSITION (W BEAM BRIDGE RAIL CLASS B DESIGN 1T OR 2T TO W BEAM GUARDRAIL)	PLATE NUMBER 630.63
			Sheet 3 of 3



ELEVATION VIEW

* See standard plate 630.99

A: 6"x8"x 6'-0" Wood Post and 6"x8"x14" Wood Blockout (See standard plate 630.10)
B: 6"x8"x 6'-0" Wood Post and 6"x12"x14" Wood Blockout (See standard plate 630.20)

GENERAL NOTES:

All costs for furnishing and installing the W beam guardrail to MGS transition including labor, equipment, and materials which includes all rail sections, posts and blockouts, hardware, and incidentals will be included in the contract unit price per each for "W Beam Guardrail to MGS Transition".

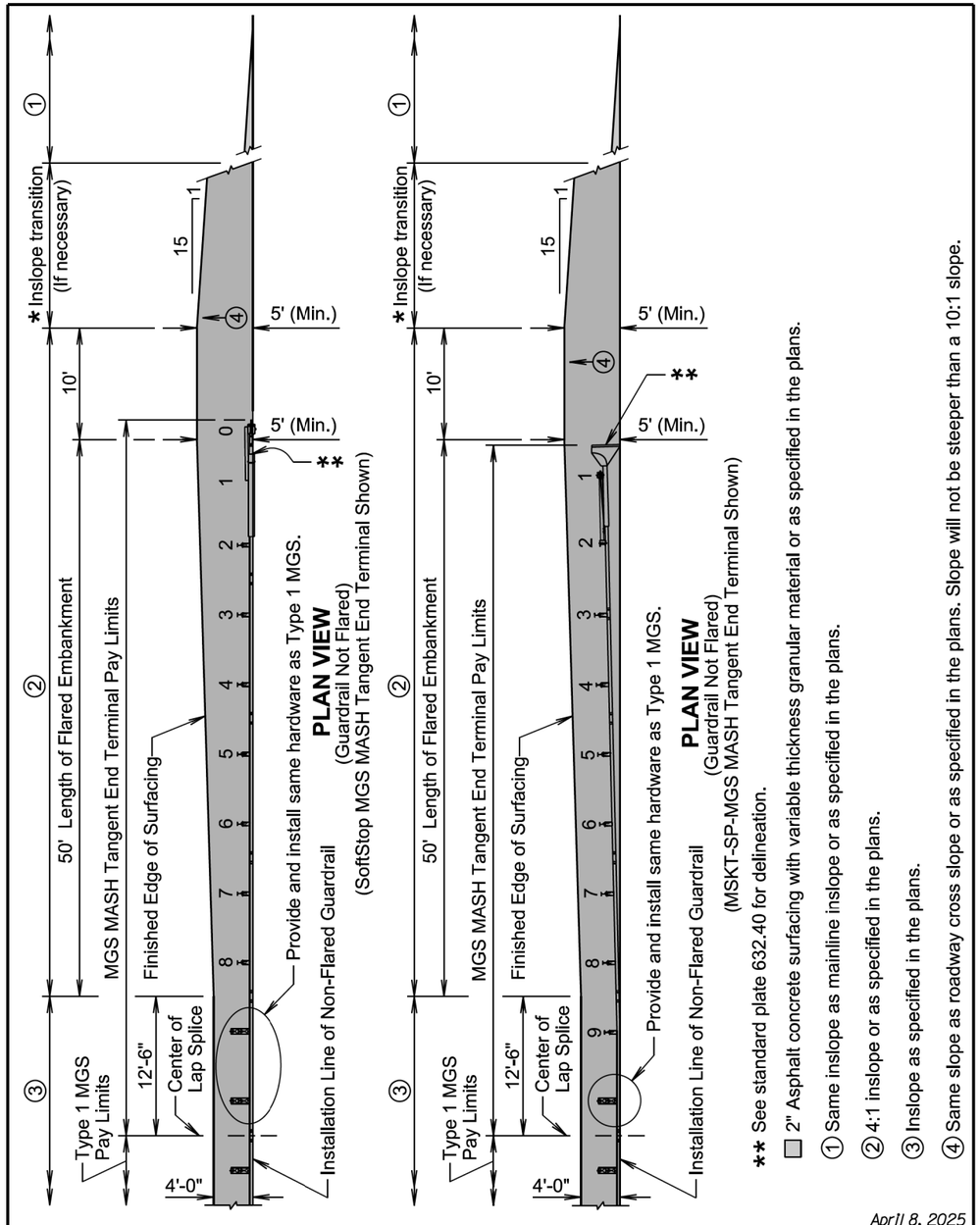
September 14, 2019

Published Date: 2027	SDDOT	W BEAM GUARDRAIL TO MGS (MIDWEST GUARDRAIL SYSTEM) TRANSITION	PLATE NUMBER 630.64
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\day08GH\StdPlateSectionF.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F55	F60

Plotting Date: 10/23/2026



** See standard plate 632.40 for delineation.

2" Asphalt concrete surfacing with variable thickness granular material or as specified in the plans.

① Same inslope as mainline inslope or as specified in the plans.

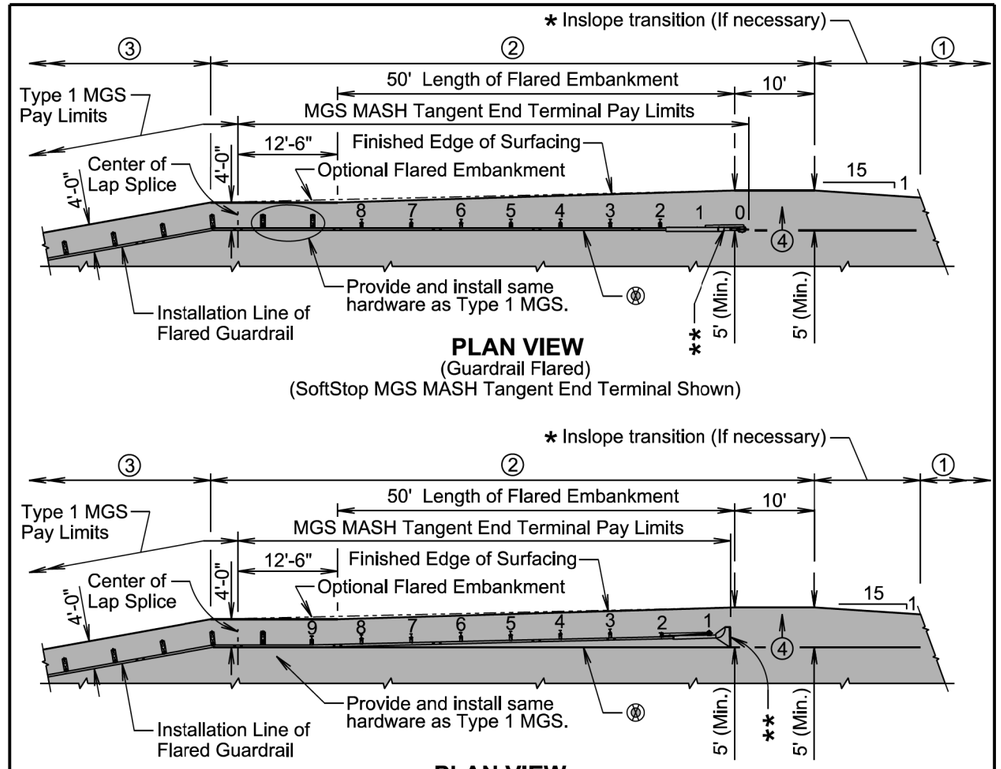
② 4:1 inslope or as specified in the plans.

③ Inslope as specified in the plans.

④ Same slope as roadway cross slope or as specified in the plans. Slope will not be steeper than a 10:1 slope.

April 8, 2025

Published Date: 2027	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH TANGENT END TERMINAL	PLATE NUMBER 630.89
			Sheet 1 of 3



GENERAL NOTES:

The MGS MASH tangent end terminals above are for illustrative purpose only. Pay limit length of the MGS MASH tangent end terminal is 62'-6".

* The length of inslope transition varies with the amount of change between inslopes. The length of the transition will change 100' for every whole number change in the inslope. For Example: If the inslope changes from a 5:1 to a 4:1 the length of the inslope transition would be 100'. If the inslope changes from a 6:1 to a 4:1 the length of the inslope transition would be 200'.

Ⓜ The installation reference line for MGS MASH tangent end terminals will always be parallel to the roadway.

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite."

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

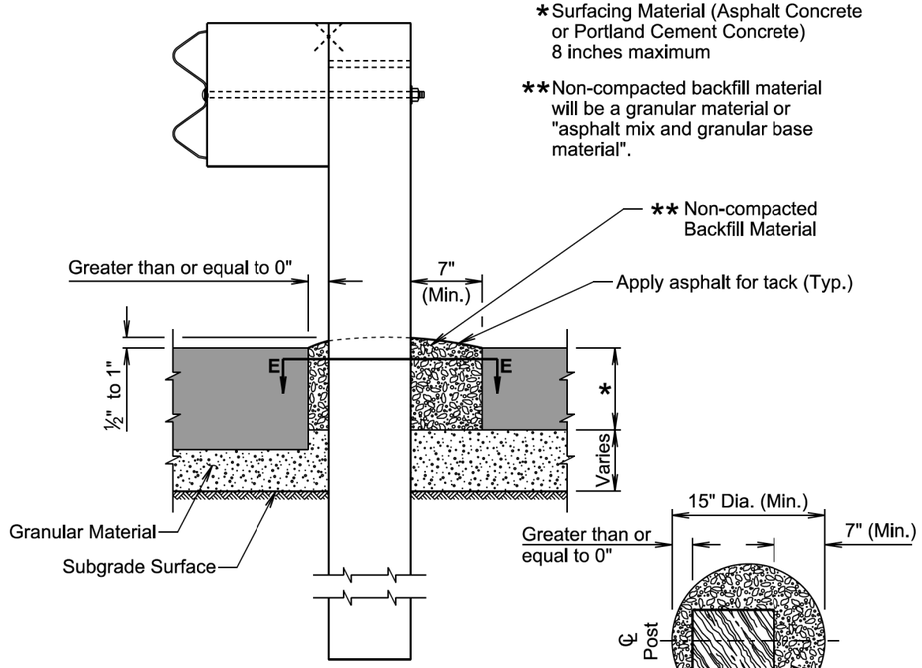
April 8, 2025

Published Date: 2027	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH TANGENT END TERMINAL	PLATE NUMBER 630.89
			Sheet 2 of 3

Plot Scale - 1:200

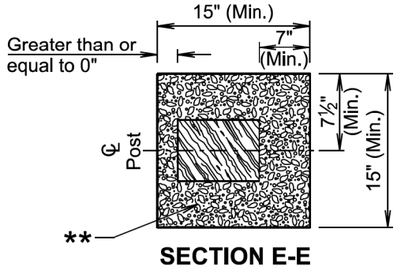
Plotted From - TRPR13462

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TRANSVERSE SECTION
(Wood post shown for illustrative purpose only)

SECTION E-E
(Round option for leave-out and backfill limits)
(Wood post shown for illustrative purpose only)



SECTION E-E
(Square option for leave-out and backfill limits)
(Wood post shown for illustrative purpose only)

GENERAL NOTES:

The leave-out limits may be increased to accommodate construction equipment and tolerances.

When posts are installed in augured or dug holes, the backfill material will be compacted to the bottom of the pavement surfacing material to the satisfaction of the Engineer. The backfill material for the thickness of the pavement surfacing material will be non-compacted.

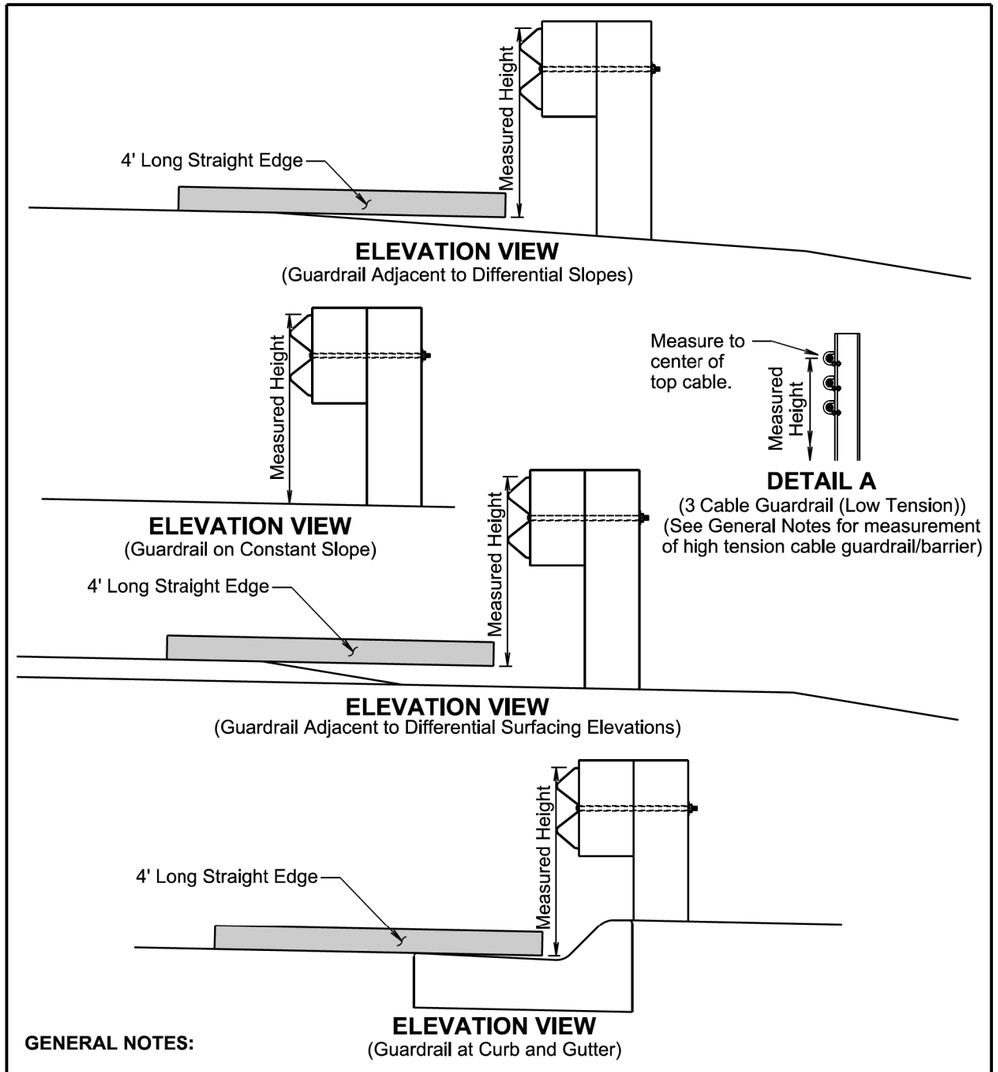
The backfill material will be mounded ½ inch to 1 inch above the top of the adjacent surfacing as illustrated above.

Asphalt for tack will be applied to the surface of the backfill material at the rate of 0.15 to 0.20 gallons per square yard.

All costs for constructing the leave-out including labor, equipment, and materials which includes the backfill material and tack coat will be incidental to the contract unit price for the respective guardrail contract item.

November 19, 2021

Published Date: 2027	SDDOT	GUARDRAIL POST INSTALLED IN ASPHALT CONCRETE OR PORTLAND CEMENT CONCRETE	PLATE NUMBER 630.96
			Sheet 1 of 1



ELEVATION VIEW
(Guardrail Adjacent to Differential Slopes)

ELEVATION VIEW
(Guardrail on Constant Slope)

DETAIL A
(3 Cable Guardrail (Low Tension))
(See General Notes for measurement of high tension cable guardrail/barrier)

ELEVATION VIEW
(Guardrail Adjacent to Differential Surfacing Elevations)

ELEVATION VIEW
(Guardrail at Curb and Gutter)

GENERAL NOTES:

The W Beam guardrail shown is for illustrative purpose. The guardrail height for all types of guardrail systems except for high tension cable guardrail/barrier will be measured in accordance with this standard plate.

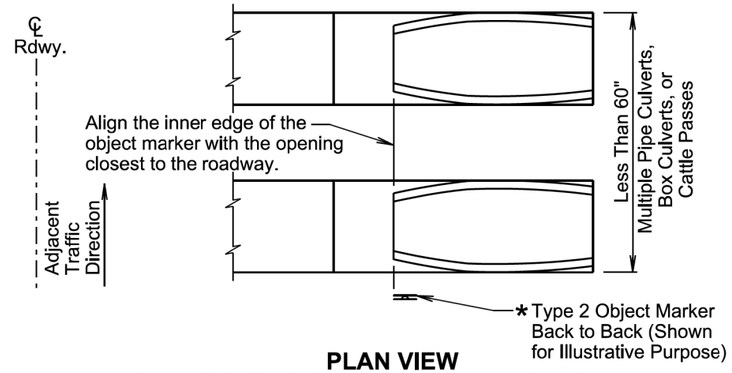
When measuring height of 3 cable guardrail (low tension) the height will be measured to the center of the top cable. See Detail A.

The height of high tension cable guardrail/barrier will be measured in accordance with the Manufacturer's installation instructions.

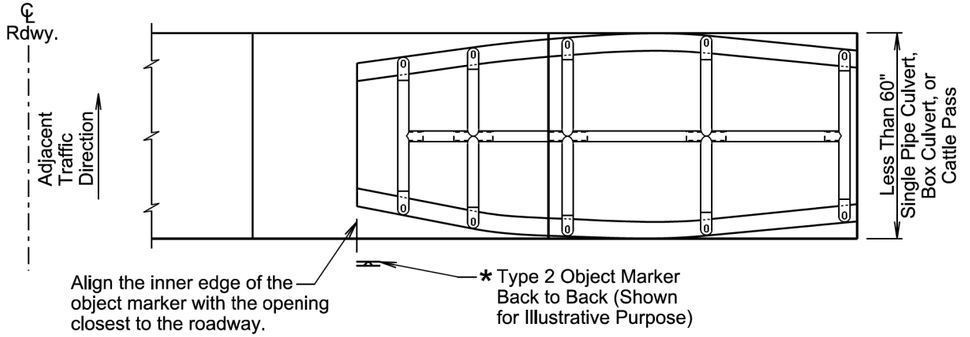
September 14, 2019

Published Date: 2027	SDDOT	MEASURING GUARDRAIL HEIGHT	PLATE NUMBER 630.99
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - TRPR13462
File - ...\day08GH\StdPlateSectionF.dgn



PLAN VIEW
(For Multiple Pipe Culverts, Box Culverts, and Cattle Passes)
(Pipe culverts shown for illustrative purpose.)
(Embankment is not shown.)



PLAN VIEW
(For Single Pipe Culvert, Box Culvert, and Cattle Pass)
(Pipe culvert shown for illustrative purpose.)
(Embankment is not shown.)

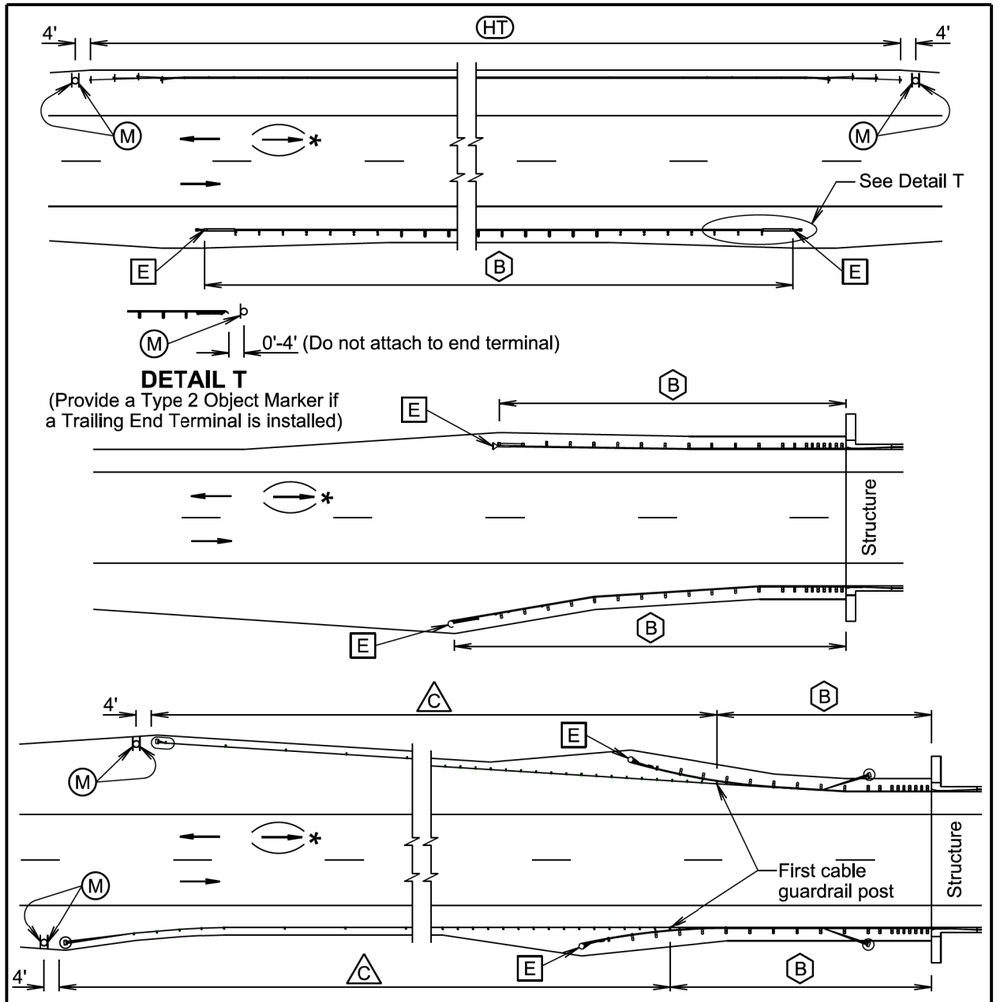
GENERAL NOTES:

This standard plate will be used in conjunction with standard plate 632.01.

* The type 2 object markers will be installed at the locations shown above. The type 2 object markers, single faced or back to back, will be as specified in the plans.

December 23, 2019

Published Date: 2027	SDDOT	TYPE 2 OBJECT MARKER AT PIPE CULVERTS, BOX CULVERTS, AND CATTLE PASSES (Less than 60" Overall Width)	PLATE NUMBER 632.03 Sheet 1 of 1



PLAN VIEW
(Typical Guardrail Layouts)

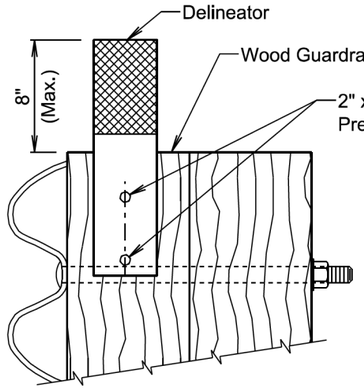
- (B) Steel Beam Guardrail Delineation
- (E) Guardrail End Terminal Object Marker
- (C) 3 Cable Guardrail (Low Tension) Delineation
- (HT) High Tension Cable Guardrail Delineation
- (M) Type 2 Object Marker

* For two-way traffic, install delineation at the opposite end of structure the same as shown. Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

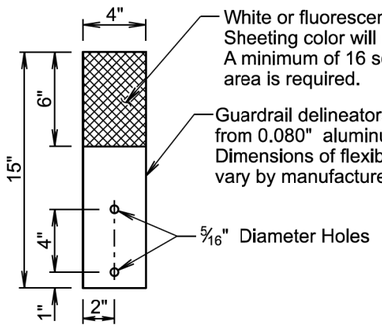
April 8, 2025

Published Date: 2027	SDDOT	DELINEATION OF GUARDRAIL	PLATE NUMBER 632.40 Sheet 1 of 4

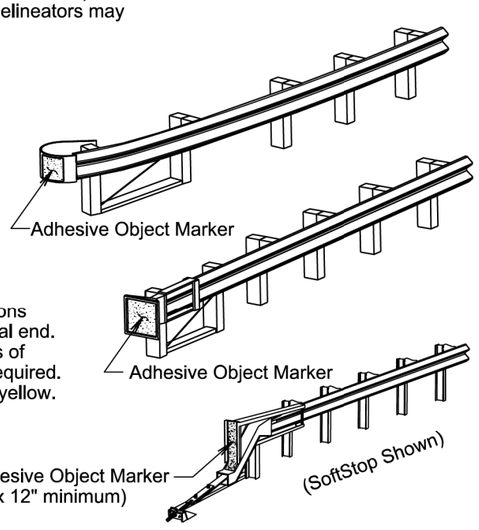
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Plotted From - TRPR13462
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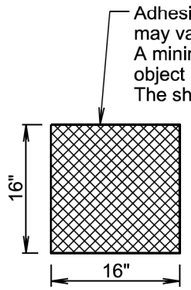
Ⓑ STEEL BEAM GUARDRAIL DELINEATION



DELINEATOR
(For Steel Beam Guardrail)



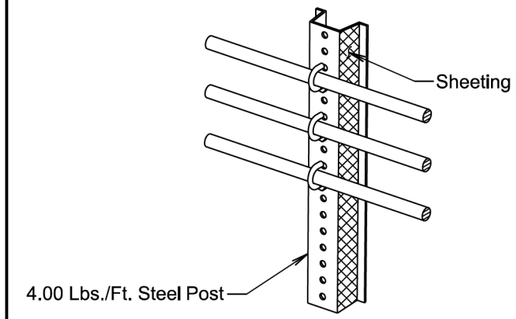
Ⓔ GUARDRAIL END TERMINAL OBJECT MARKER



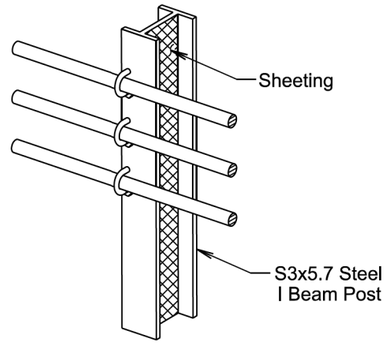
ADHESIVE OBJECT MARKER

April 8, 2025

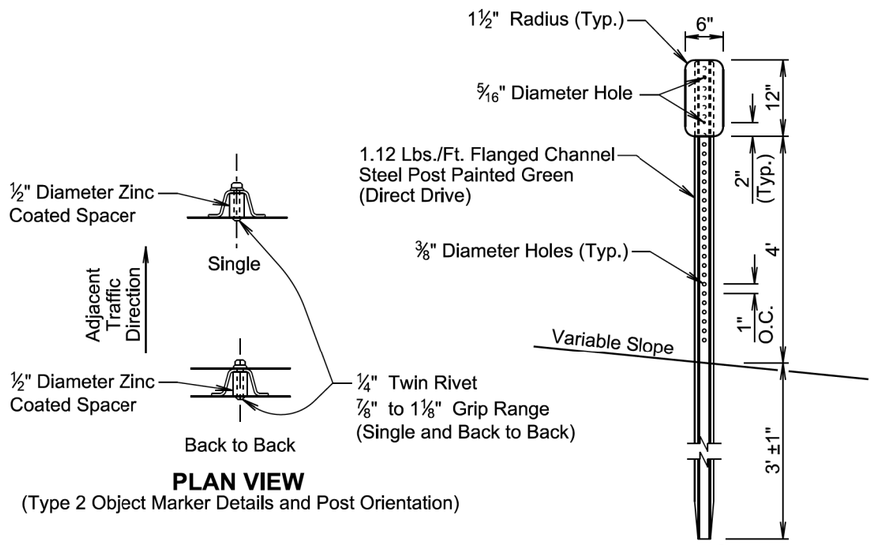
Published Date: 2027	SDDOT	DELINEATION GUARDRAIL	PLATE NUMBER 632.40
			Sheet 2 of 4



Ⓒ 3 CABLE GUARDRAIL (LOW TENSION) DELINEATION



Ⓒ 3 CABLE GUARDRAIL (LOW TENSION) DELINEATION



PLAN VIEW
(Type 2 Object Marker Details and Post Orientation)

ELEVATION VIEW
Ⓜ (Type 2 Object Marker)
(For Marking 3 Cable Guardrail (Low Tension) Anchor, High Tension Cable Guardrail Anchor, and Trailing End Terminal)

April 8, 2025

Published Date: 2027	SDDOT	DELINEATION OF GUARDRAIL	PLATE NUMBER 632.40
			Sheet 3 of 4

Plot Scale - 1:200

Plotted From - TRPR13462

File - ...\day08GH\StdPlateSectionF.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F59	F60

Plotting Date: 10/23/2026

GENERAL NOTES:

The delineation of high tension cable guardrail will be reflective sheeting placed back to back on every third post cap or cable spacer. Maximum spacing of delineation will not exceed 35 feet. The sheeting will be type XI in conformance with ASTM D4956. The color of the reflective sheeting will be the same as the nearest pavement marking.

The delineators for steel beam guardrail and sheeting on 3 cable guardrail (low tension) posts will be covered with a minimum of 16 square inches of reflective sheeting. The reflective sheeting will be type XI in conformance with ASTM D4956. Along two-way roadways the sheeting will be on both sides of the delineators and guardrail posts and will be white in color. For one-way roadways the sheeting will only be required on the side facing traffic and the color will be the same as the nearest pavement marking, yellow on the left side of the roadway and white on the right side.

When steel beam guardrail is attached to a bridge the first delineator will be attached to the post nearest the bridge.

At bridges with guardrail less than 200 feet in length, a minimum of 4 delineators will be placed in addition to the end terminal yellow object marker. The spacing between the delineators will be approximately one third of the length of the guardrail.

At bridges with guardrail 200 feet and greater in length, including bridges that have steel beam guardrail transitioning to 3 cable guardrail (low tension), the delineators will be placed at a spacing of approximately 50 feet. Delineation will extend throughout the length of the guardrail system.

Steel beam guardrail that is not attached to a bridge and is less than 200 feet in length, a minimum of 4 delineators will be placed in addition to the end terminal yellow object markers. The spacing between the delineators will be approximately one third of the length of the guardrail.

Steel beam guardrail that is not attached to a bridge and is 200 feet and greater in length, including steel beam guardrail transitioning to 3 cable guardrail (low tension), the delineators will be placed at a spacing of approximately 50 feet. Delineation will extend throughout the length of the guardrail system.

All costs for furnishing and installing single or back to back guardrail delineation on 3 cable guardrail and steel beam guardrail will be included in the contract unit price per each for "Guardrail Delineator".

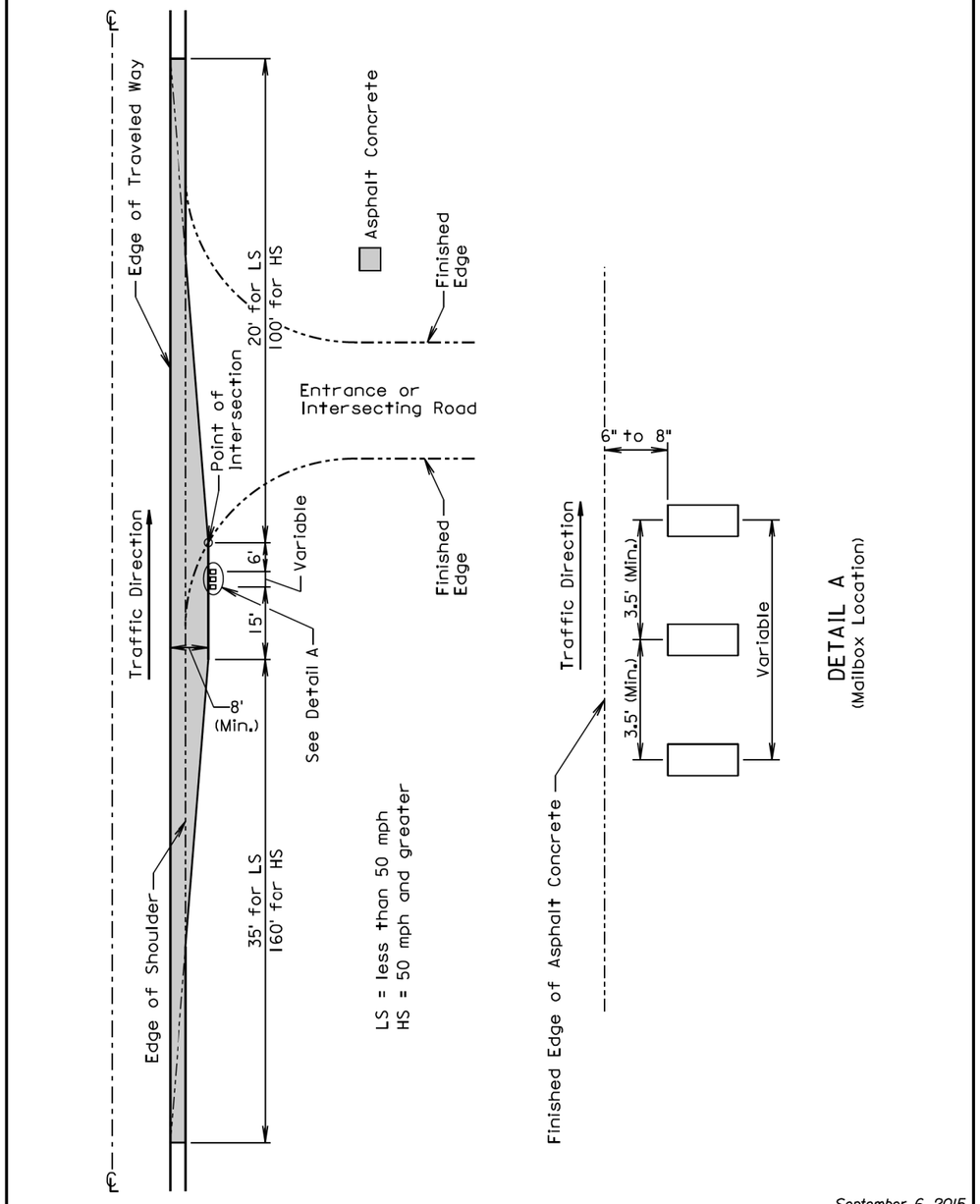
All costs for furnishing and installing the reflective sheeting on the cable spacers or post caps for the high tension cable guardrail will be incidental to the respective high tension cable guardrail contract item.

An adhesive object marker will be placed on the end of the W beam guardrail or MGS end terminal. The adhesive object marker dimensions may vary due to the shape of the terminal end. A minimum of 256 square inches of object marker reflective sheeting area is required on end terminals with sufficient surface area. Other end terminals (SoftStop) will require an adhesive object marker with a minimum size of 6" x 12". The reflective sheeting will be fluorescent yellow type XI sheeting in conformance with ASTM D4956. All costs for furnishing and installing the adhesive object marker will be incidental to various contract items.

A type 2 object marker will be placed such that the edges of the type 2 object marker and the 3 cable guardrail (low tension) anchor, high tension cable guardrail anchor, or the trailing end terminal that are nearest to the roadway will be installed in line with the same lateral offset from the traveled way at the location as noted on sheet 1 of this standard plate. The type 2 object marker (6" x 12") will have fluorescent yellow type XI sheeting in conformance with ASTM D4956. All costs for furnishing and installing the type 2 object marker including the steel post, 6" x 12" reflective panel, and hardware will be included in the contract unit price per each for "Type 2 Object Marker" for single-sided and "Type 2 Object Marker Back to Back" for back to back type 2 object markers.

April 8, 2025

Published Date: 2027	SDDOT	***DELINEATION OF GUARDRAIL***	*PLATE NUMBER* 632.40
			Sheet 4 of 4



September 6, 2015

Published Date: 2027	SDDOT	***MAILBOX TURNOUT***	*PLATE NUMBER* 900.01
			Sheet 1 of 1

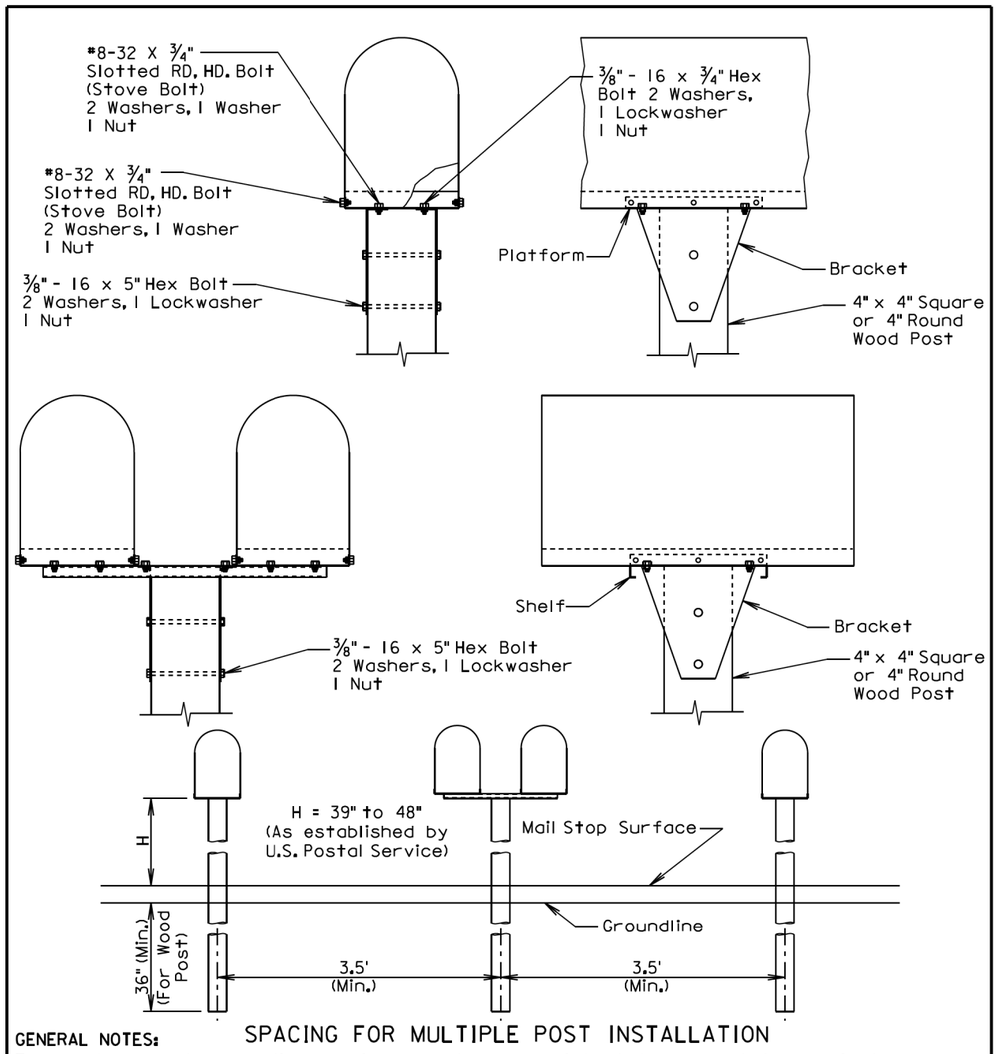
Plot Scale - 1:200

Plotted From - TRPR13462

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	F60	F60

Plotting Date: 10/23/2026



SPACING FOR MULTIPLE POST INSTALLATION

GENERAL NOTES:

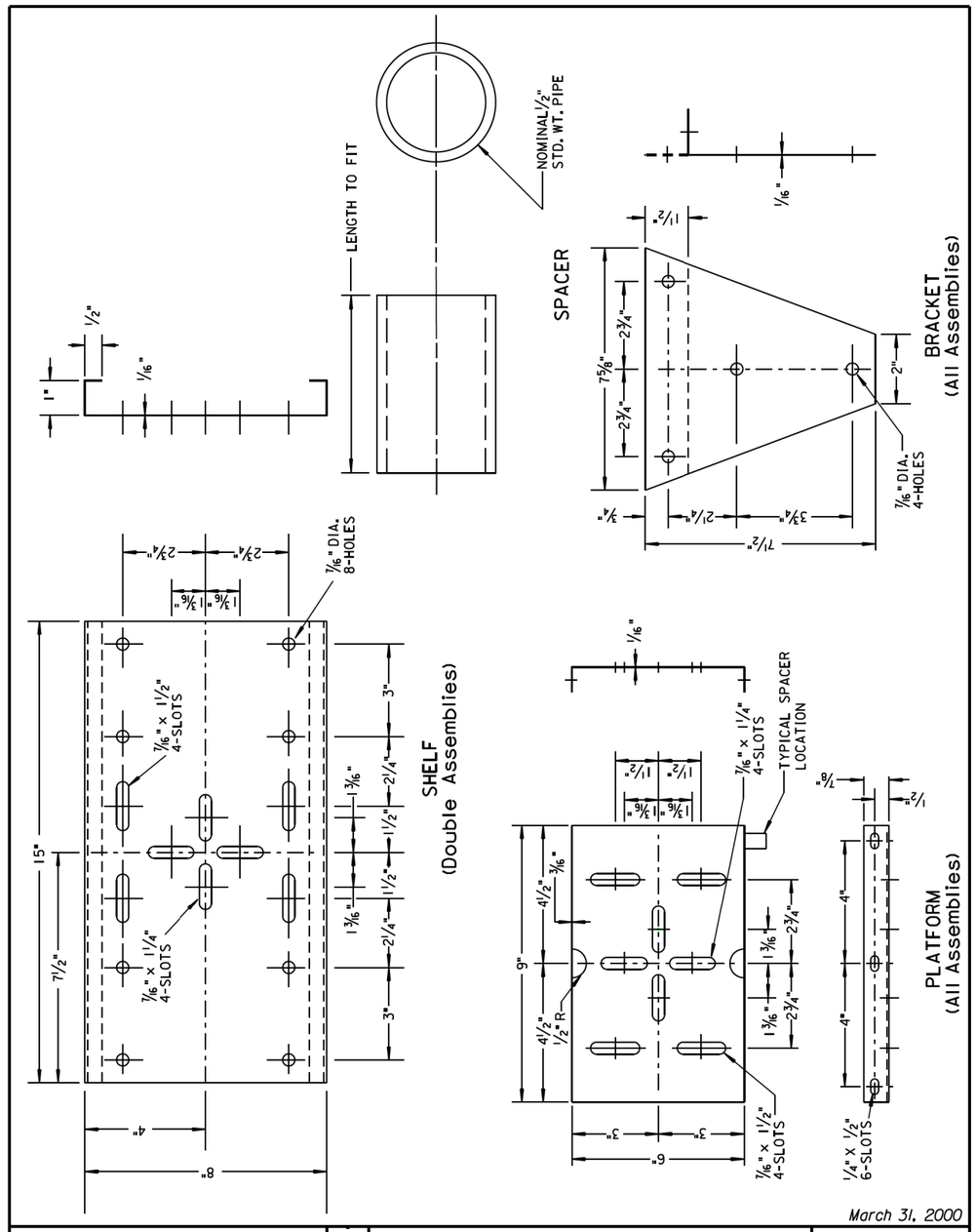
The post support assemblies provided should be consistant throughout the project. Single and double mailboxes may be in any sequence.

Post support assemblies shall be one from the approved products list, a 4"x4" or 4" round wood post, or an alternate post support assembly that meets the test level 3 crash testing requirements of NCHRP 350 or MASH.

Alternate mailbox support assemblies shall be approved by the Engineer prior to installation. The Contractor shall provide the Engineer written certification that the mailbox support assembly has met the crash testing requirements and will be installed in accordance with the manufacturer's installation instructions.

September 6, 2013

Published Date: 2027	SDDOT	***SINGLE AND DOUBLE MAILBOX ASSEMBLIES***	***PLATE NUMBER*** 900.02 *Sheet 1 of 1*



March 31, 2000

Published Date: 2027	SDDOT	***MAILBOX SUPPORT HARDWARE***	***PLATE NUMBER*** 900.03 *Sheet 1 of 1*

Plot Scale - 1:200

Plotted From - TRPR13462

File - ...\day08GH\StdPlateSectionF.dgn

SECTION M: PAVEMENT MARKING PLANS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(103)193	M1	M5

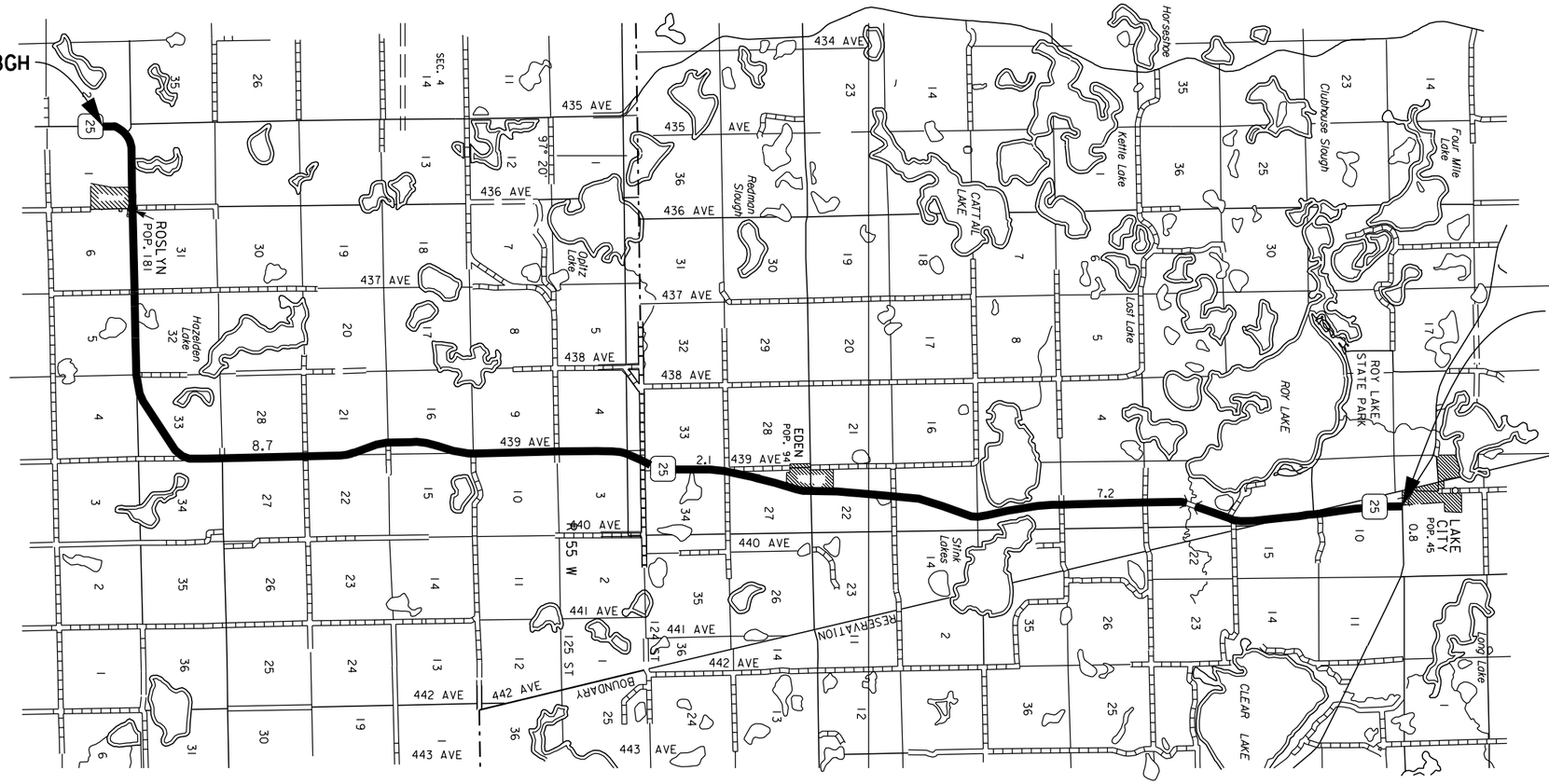
Plotting Date: 02/04/2025

INDEX OF SHEETS

M1	General Layout with Index
M2	Estimate of Quantities & Notes
M3 - M5	Details & Standard Plates

BEGIN P 0025(103)193
BEGIN RESURFACING - PCN 08GH
MRM 193.00+0.035
STA. 10+00

... 08D6)
MRM 198.0+0.300
STA. 115+00 - PCN 08D6 =
STA. 283+03.57 - PCN 08GH



END P 0025(103)193
END RESURFACING - PCN 08GH
MRM 212.26+0.000
STA. 1022+63.83

SECTION M ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E1200	High Build Waterborne Pavement Marking Paint, White	864	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	541	Gal
633E1262	High Build Waterborne Pavement Marking Paint, 24" Yellow	212	Ft
633E1272	High Build Waterborne Pavement Marking Paint, Arrow	3	Each
633E5115	Grooving for Durable Pavement Marking, 24"	212	Ft
633E5125	Grooving for Durable Pavement Marking, Arrow	3	Each

PAVEMENT MARKING PAINT

The Contractor will advise the Engineer a minimum of 3 weeks prior to the application of the permanent pavement marking to allow the State to check and mark the location of no passing zones.

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

All materials will be applied as per manufacturer's recommendations. High build waterborne pavement marking paint will conform to the supplemental specifications for Section 980.1 B.

Reflective media will consist of glass beads. Reflective media will require a Certificate of Compliance for Certification for each source and lot. Acceptance sampling will not be required.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Solid 4" line = 22.5 Gals/Mile
Dashed 4" line = 6.2 Gal/Mile
Glass Beads = 8 Lbs/Gal.

All cost for materials, labor, and equipment necessary to furnish and install the pavement markings will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

RETROREFLECTIVITY FOR PAVEMENT MARKING PAINT

The Department may take retroreflectivity readings on the pavement marking lines after 2 days and within 30 days of the line application using either a portable or mobile retroreflectometer that conforms to 30-meter geometry. If the Department chooses to take retroreflectivity readings, three retroreflectivity readings will be taken on each line at each test location. The three readings will be averaged and become the reading for that test location.

If the Department chooses to take retroreflectivity readings, three readings will be taken on the edge lines and lane lines in the direction of application. For combination solid yellow and skip yellow lines for turn lanes and for centerline markings on two-way roadways, three readings will be taken in one direction, the reflectometer will be turned 180 degrees and three more readings will be taken. The six readings for the centerline markings will be averaged and become the test reading for that test location.

If the Department chooses to take readings, the minimum retroreflectivity values will be 275 mc/m^2/lux for white and 170 mc/m^2/lux for yellow.

MARKINGS WITHIN SINUSOIDAL CENTERLINE RUMBLE STRIPES

Sinusoidal rumble stripes exist on SD25.

The sinusoidal centerline rumble stripes are recessed below the pavement surface, so pavement marking grooving will not be required at these locations.

Sinusoidal rumble stripes will receive an asphalt surface treatment to seal the centerline joint and minimize the depth of water held on centerline.

Retroreflectivity readings will not be taken for pavement markings within the sinusoidal rumble stripe. Restriping of pavement markings to meet the specified application rate requirements and to provide a quality retroreflective line will be at the expense of the Contractor with no additional cost to the Department. Sections to be restriped will be determined by the Engineer.

GROOVING FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

The Contractor will establish a positive means for the removal of the grinding and/or grooving residue. Residue from dry grooving will be vacuumed. Solid residue will be removed from the pavement surfaces before being blown by traffic action or wind. The Contractor will conduct this work to control and minimize airborne dust and similar debris that may become a hazard to motor vehicle operation or nuisance to property owners. Residue from wet grooving will not be permitted to flow across lanes being used by public traffic or into gutter or drainage facilities. Residue, whether in solid or slurry form, will be disposed of in a manner that will prevent it from reaching any waterway in a concentrated state. All costs for removal of grinding and/or grooving residue will be included in the contract unit price per foot or each for "Grooving for Durable Pavement Marking" contract item.

Unless otherwise specified in the plans, the Contractor will groove the surface for High Build Waterborne Pavement Marking Paint as specified in these plans and as per the manufacturer's instructions.

The grooving will be completed within the following tolerances:

Description	Specification	Tolerance
Depth of Groove	Marking Thickness[1] + 15 mils	+ 5 mils
Width of Groove	5 to 6 inches	
Length of Skip Lines[2]	10 foot 6 inches	± 3 inch
Tapers at ends of lines	6 to 9 inches	
Between Double Lines	4 inches	± 1/2 inch

[1] Marking thickness will include the thickness of marking material and reflective media.
[2] Additional length may be required as specified in the plans.

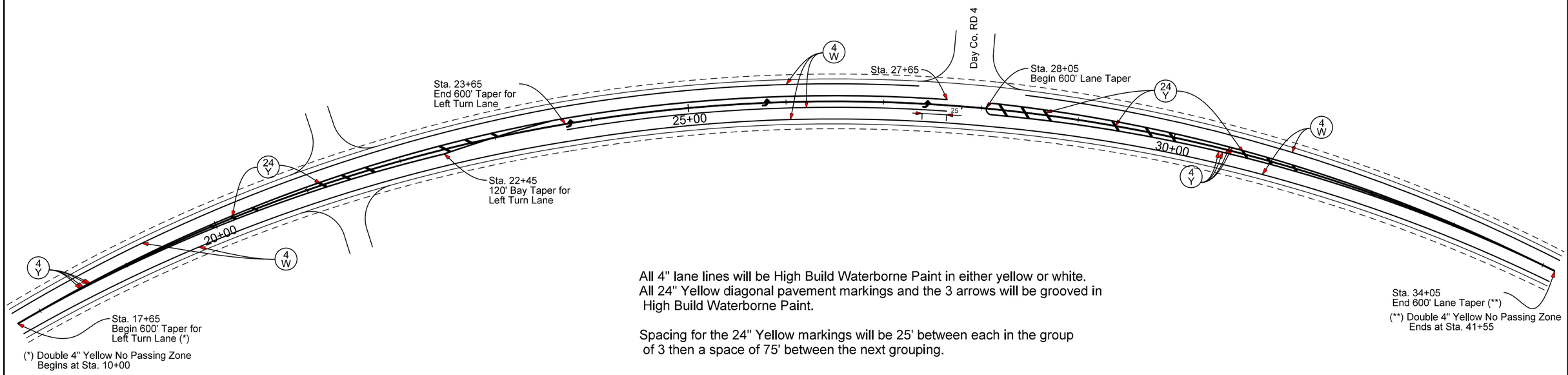
The equipment will be capable of the following:

- Grooving the total width of the groove in one pass or uniform depths with multiple passes.
- Grooving without causing damage to the pavement joints or joint sealant material.
- Provide uniform alignment and depth.
- Moving continuously to permit a mobile traffic work operation.

If damage occurs, including, but not limited to, joints, joint sealant material, and backer rod, the grooving operation will be stopped and modifications will be made to the grooving operation to prevent further damage. The Contractor will be required to use specially prepared circular diamond blade cutting heads to prevent damage at the joints. Damage caused will be repaired or replaced by the Contractor, as directed by the Engineer. No additional payment will be made for the repair work or any reapplication of the pavement marking in the area of the repair.

PAVEMENT MARKING LAYOUT
SD 25 & Day Co. RD 4

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(103)193	M3	M5
Plotting Date: 02/04/2025			



All 4" lane lines will be High Build Waterborne Paint in either yellow or white.
All 24" Yellow diagonal pavement markings and the 3 arrows will be grooved in High Build Waterborne Paint.

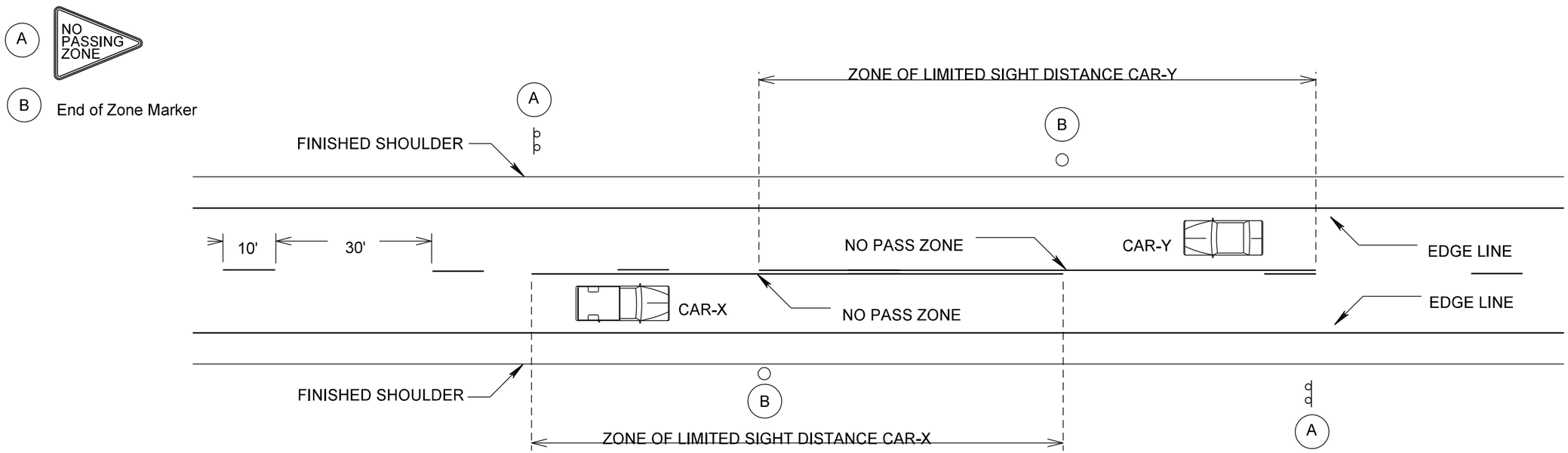
Spacing for the 24" Yellow markings will be 25' between each in the group of 3 then a space of 75' between the next grouping.

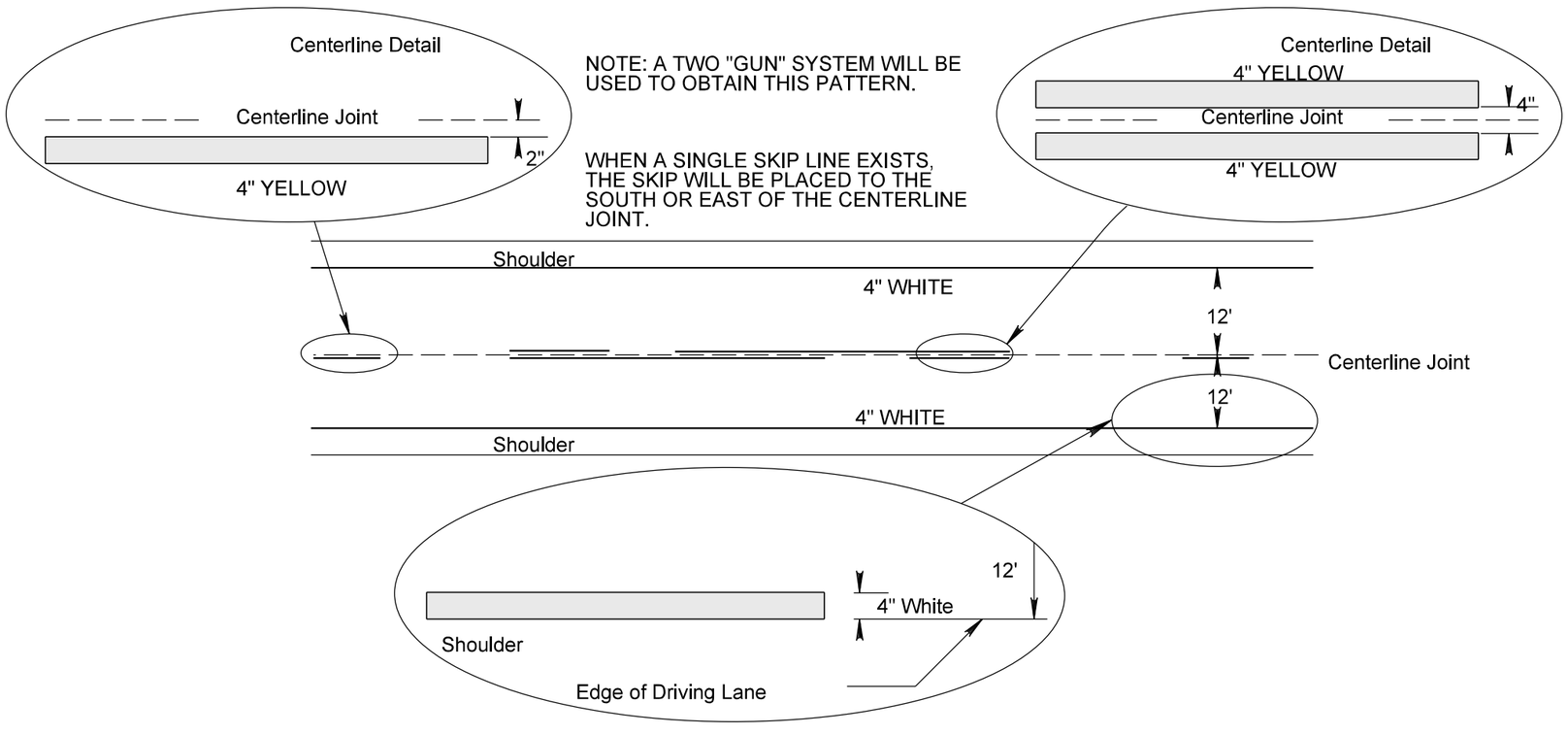
PLOT SCALE - 1:100
PLOT NAME - 2
FILE ...\SECTION M - 08GH\TURNLANE.DGN
PLOTTED FROM - TRAB17879B

PLOT SCALE - 1:22
PLOT NAME - 3
PLOTTED FROM - TRAB17879B
FILE - ...\PAVEMENTMARKINGDETAILSNEW.DGN

TYPICAL PAVEMENT MARKING LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(103)193	M4	M5
Plotting Date: 02/04/2025			





*In situations where multiple work locations in a limited distance make it practical to place stationary signs, the distance between the advance warning sign and the work should not exceed 5 miles.

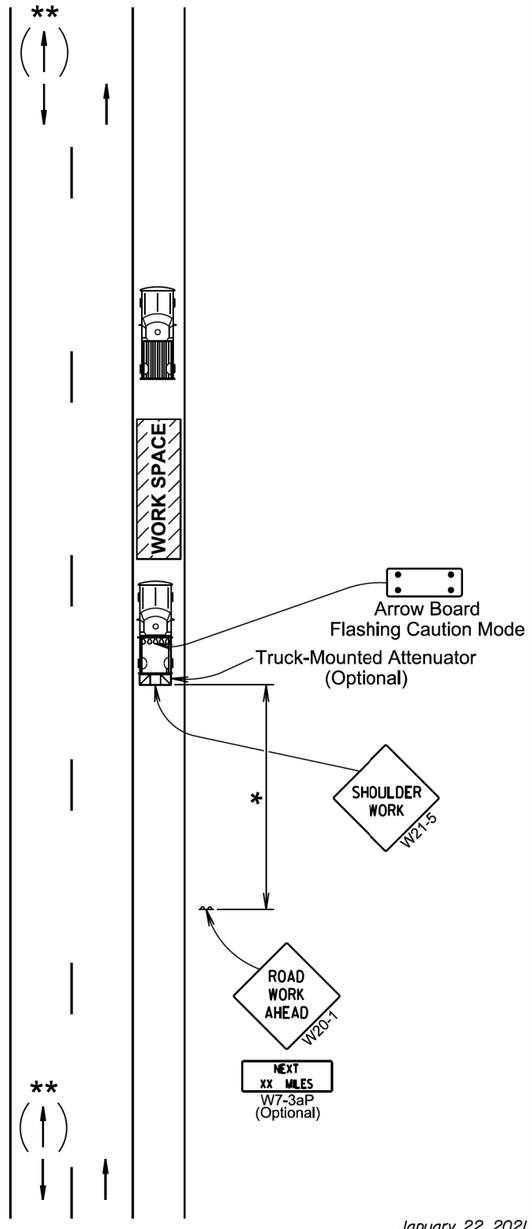
The ROAD WORK NEXT xx MILES sign may be used instead of the ROAD WORK AHEAD sign if the work locations occur over a distance of more than 2 miles.

Arrow board is required for intermittently and continuously moving mobile operations when work exceeds 1 hour.

**If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

In situations where the distance between the advance warning signs and the work is 2 miles to 5 miles, a Supplemental Distance plaque should be used with the ROAD WORK AHEAD sign.

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".



January 22, 2021

Published Date: 2025

SDDOT

MOBILE OPERATIONS ON SHOULDERS

PLATE NUMBER 634.04

Sheet 1 of 1

* Messages on signs will vary depending on the operation being conducted.

Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

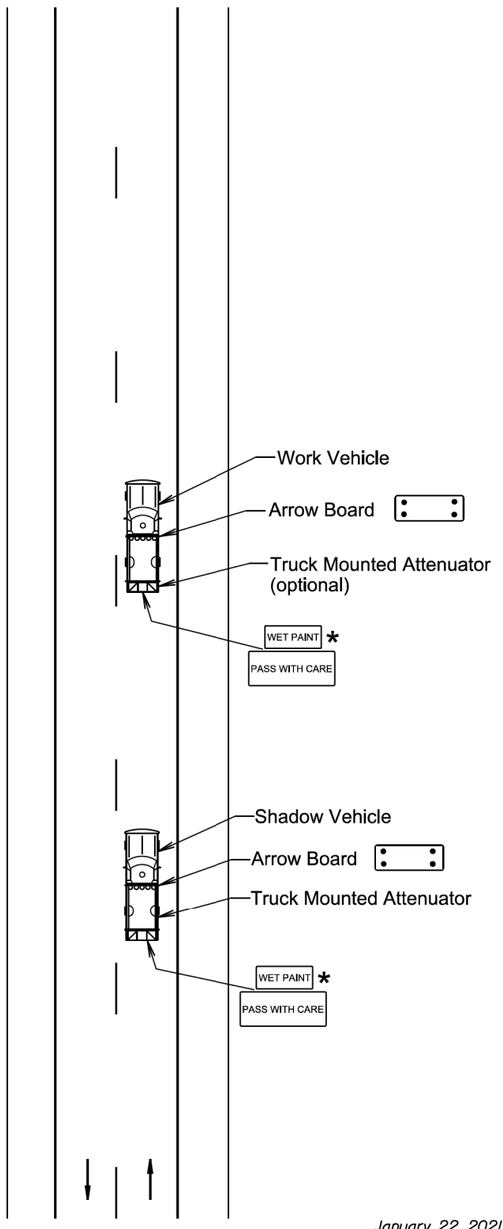
Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

Vehicle hazard warning signals will not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

When an arrow board is used, it will be used in the caution mode. Marching Diamonds are acceptable.

Arrow boards will, as a minimum, be Type B, with a size of 60" x 30".

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for “Traffic Control, Miscellaneous”.



January 22, 2021

Published Date: 2025

SDDOT

MOBILE OPERATIONS ON 2-LANE ROAD

PLATE NUMBER 634.06

Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 4
FILE - ...\SECTION M\STD PLATESX.DGN
-PLOTTED FROM - TRAB17879B

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	1	135

Plotting Date: 04/11/2025

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

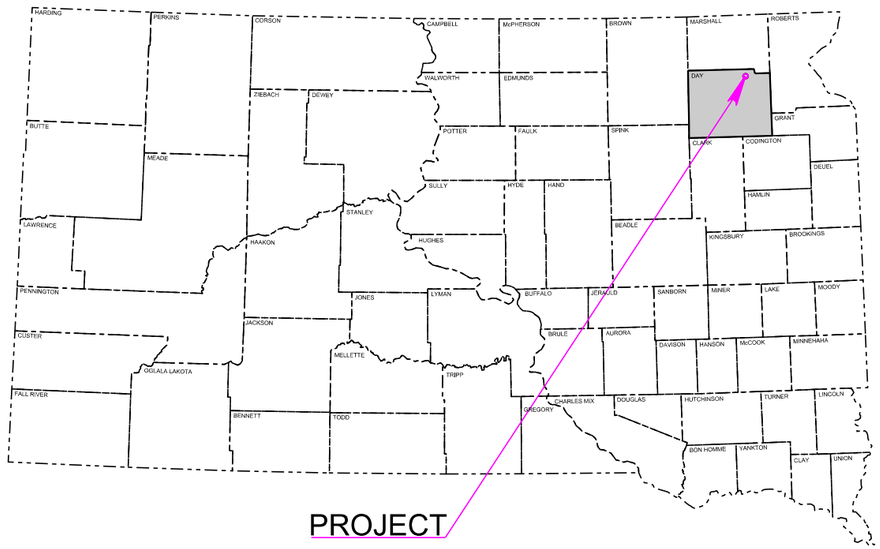
PLANS FOR PROPOSED

PROJECT P 0025(100)196
SD HIGHWAY 25
DAY COUNTY

GRADING, AC SURFACING
PCN 08D6

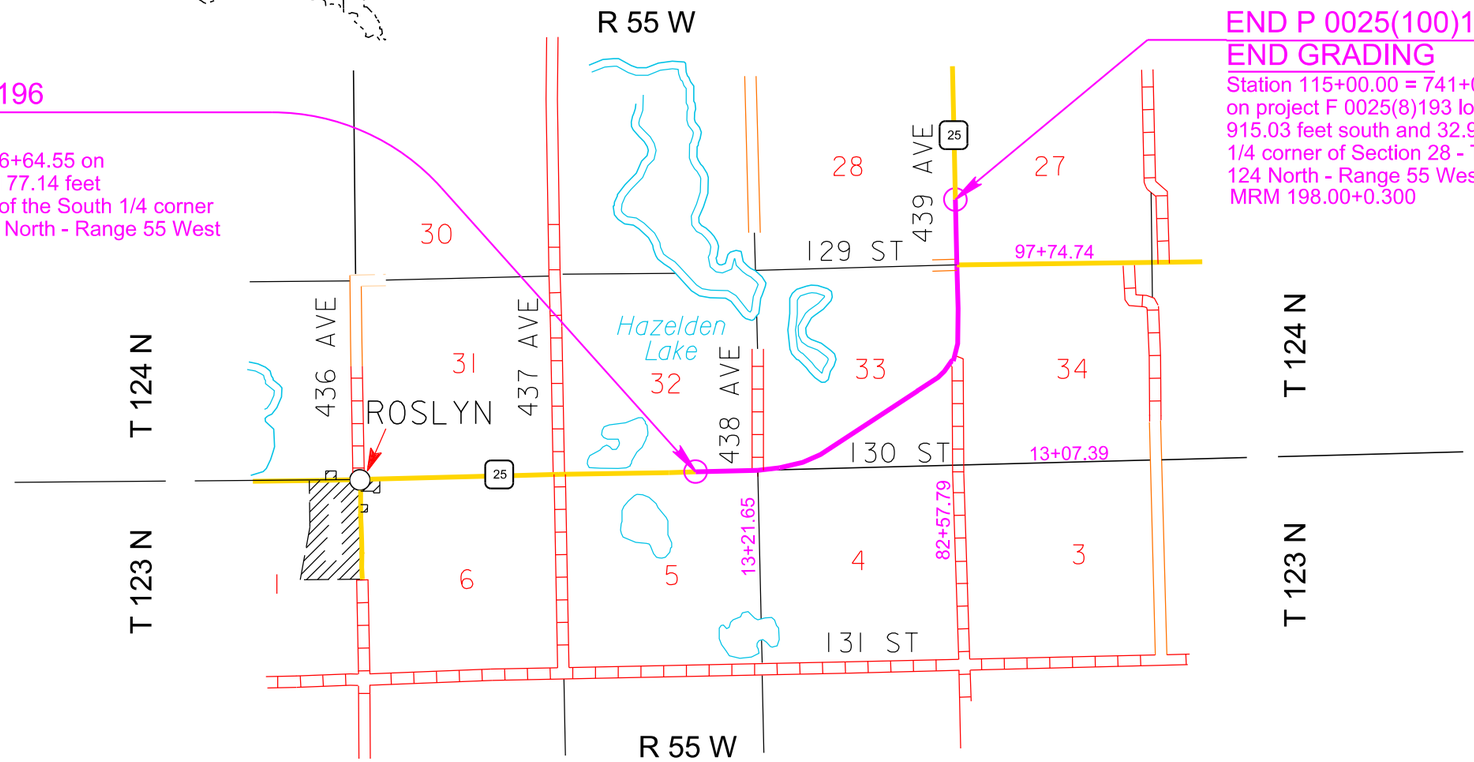
INDEX OF SECTIONS

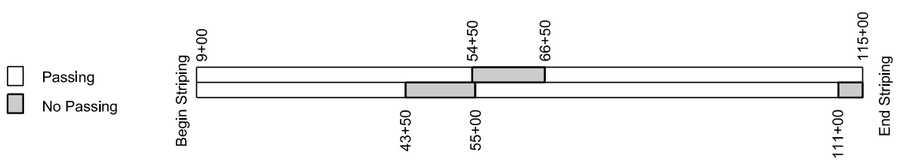
Section A:	Estimate of Quantities and Environmental Commitments
Section B:	Grading Plans
Section C:	Traffic Control Plans
Section D:	Erosion and Sediment Control Plans
Section F:	Surfacing Plans
Section S:	Permanent Signing Plans
Section X:	Cross Sections
Section Z:	Pipe Sections



BEGIN P 0025(100)196
BEGIN GRADING
Station 9+00.00 = Station 946+64.55 on project F 0025(8)193 located 77.14 feet south and 2220.31 feet east of the South 1/4 corner of Section 32 -Township 124 North - Range 55 West of the 5th P.M.
MRM 196.00+0.219

END P 0025(100)196
END GRADING
Station 115+00.00 = 741+07.74 on project F 0025(8)193 located 915.03 feet south and 32.92 feet east of the East 1/4 corner of Section 28 - Township 124 North - Range 55 West of the 5th P.M.
MRM 198.00+0.300





This striping diagram is for informational purposes only. Actual striping for passing/no passing zones should be determined by field verified procedures.

Gross Length	10600 Feet	2.008 Miles
Length of Exceptions	Feet	Miles
Net Length	10600 Feet	2.008Miles

DESIGN DESIGNATION

AADT (2021)	636
AADT (2046)	1072
DHV	119
D	50%
DHV T%	8.8%
AADT T%	19.3%
V	70mph

STORM WATER PERMIT

Major Receiving
Body of Water: Hazelden Lake
Area Disturbed: 33 Acres
Total Project Area: 42 Acres
Approx. Begin Lat,Long: 45.500385, -97.450348

Plot Scale - 1:200
Plotted From - TPPR13418
File - U:\drdpr\day08D\titleA.dgn

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	A1	A5

Plotting Date: 08/27/2025 08/27/2025 RG

Plot Scale - 1:200

Section B - Grading

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	5	Each
009E3225	Reestablish Public Land Survey System Corner	33	Each
009E3230	Grade Staking	2.008	Mile
009E3245	Final Cross Section Survey	2.008	Mile
009E3250	Miscellaneous Staking	2.008	Mile
009E3280	Slope Staking	2.008	Mile
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E4200	Construction Schedule, Category II	Lump Sum	LS
110E0600	Remove Fence	3,800	Ft
110E1020	Remove Asphalt Concrete Pavement	715.6	CuYd
120E0010	Unclassified Excavation	190,048	CuYd
120E0600	Contractor Furnished Borrow Excavation	39,802	CuYd
120E1000	Muck Excavation	27,936	CuYd
120E2000	Undercutting	20,122	CuYd
120E6100	Water for Embankment	1,933.8	MGal
120E7000	Select Granular Backfill	1,294.7	Ton
250E0020	Incidental Work, Grading	Lump Sum	LS
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	30,652.3	Ton
450E0142	24" RCP Class 2, Furnish	278	Ft
450E0143	24" RCP Class 3, Furnish	66	Ft
450E0150	24" RCP, Install	344	Ft
450E2200	24" RCP Sloped End, Furnish	6	Each
450E2201	24" RCP Sloped End, Install	6	Each
450E4759	18" CMP 16 Gauge, Furnish	170	Ft
450E4760	18" CMP, Install	170	Ft
450E4768	24" CMP 14 Gauge, Furnish	170	Ft
450E4769	24" CMP 16 Gauge, Furnish	204	Ft
450E4770	24" CMP, Install	374	Ft
450E4779	30" CMP 16 Gauge, Furnish	122	Ft
450E4780	30" CMP, Install	122	Ft
450E4798	42" CMP 14 Gauge, Furnish	274	Ft
450E4800	42" CMP, Install	274	Ft
450E4808	48" CMP 14 Gauge, Furnish	102	Ft
450E4810	48" CMP, Install	102	Ft
450E4818	54" CMP 14 Gauge, Furnish	94	Ft
450E4820	54" CMP, Install	94	Ft
450E5227	42" CMP Flared End, Furnish	6	Each
450E5228	42" CMP Flared End, Install	6	Each
450E5231	48" CMP Flared End, Furnish	2	Each
450E5232	48" CMP Flared End, Install	2	Each
450E5235	54" CMP Flared End, Furnish	2	Each
450E5236	54" CMP Flared End, Install	2	Each
450E5310	24" CMP Sloped End, Furnish	2	Each
450E5311	24" CMP Sloped End, Install	2	Each
450E5406	18" CMP Safety End, Furnish	4	Each
450E5407	18" CMP Safety End, Install	4	Each
450E5410	24" CMP Safety End, Furnish	6	Each
450E5411	24" CMP Safety End, Install	6	Each
450E5414	30" CMP Safety End, Furnish	4	Each
450E5417	30" CMP Safety End, Install	4	Each
620E0020	Type 2 Right-of-Way Fence	3,847	Ft
620E0515	Type 1A Temporary Fence	2,674	Ft
620E1020	2 Post Panel	5	Each
620E1030	3 Post Panel	6	Each
700E0110	Class A Riprap	15,502.8	Ton
831E0110	Type B Drainage Fabric	18,364	SqYd
831E1010	Geogrid Reinforcement	1,405	SqYd
900E0010	Refurbish Single Mailbox	2	Each

Section C - Traffic Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1010	Remove Asphalt Concrete Pavement	280.0	SqYd
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	42	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	630	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	390	Gal
634E0010	Flagging	60.0	Hour
634E0020	Pilot Car	20.0	Hour
634E0110	Traffic Control Signs	925.9	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	35	Each
634E0630	Temporary Pavement Marking	4.0	Mile
634E1002	Detour and Restriction Signing	3,081.9	SqFt

INDEX OF SHEETS

A1 and A2 Estimate of Quantities for Sections B, C, D, F and S

A3 to A5 Environmental Commitments

Section D - Erosion and Sediment Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	0.5	CuYd
110E1700	Remove Silt Fence	649	Ft
230E0010	Placing Topsoil	18,638	CuYd
730E0100	Cover Crop Seeding	17.0	Bu
730E0212	Type G Permanent Seed Mixture	451	Lb
731E0200	Fertilizing	17.30	Ton
732E0100	Mulching	69.3	Ton
734E0103	Type 3 Erosion Control Blanket	2,674	SqYd
734E0104	Type 4 Erosion Control Blanket	1,449	SqYd
734E0154	12" Diameter Erosion Control Wattle	250	Ft
734E0165	Remove and Reset Erosion Control Wattle	63	Ft
734E0602	Low Flow Silt Fence	1,955	Ft
734E0604	High Flow Silt Fence	640	Ft
734E0610	Mucking Silt Fence	180	CuYd
734E0620	Repair Silt Fence	649	Ft
734E0630	Floating Silt Curtain	6,847	Ft
734E0635	Remove and Reset Floating Silt Curtain	1,712	Ft
734E5010	Sweeping	10	Hour
900E1320	Construction Entrance	2	Each

Plotted From - TRPR13418

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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	A2	A5

Plotting Date: 10/23/2026 10/23/2026 BLG

Section F - Surfacing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3320	Checker	Lump Sum	LS
120E6200	Water for Granular Material	386.9	MGal
260E1010	Base Course	2,000.0	Ton
260E1030	Base Course, Salvaged	30,243.4	Ton
320E0033	PG 58V-34 Asphalt Binder	366.5	Ton
320E1002	Class Q2 Hot Mixed Asphalt Concrete	6,392.7	Ton
320E1200	Asphalt Concrete Composite	325.0	Ton
320E4000	Hydrated Lime	62.0	Ton
330E0010	MC-70 Asphalt for Prime	58.5	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	12.2	Ton
330E1000	Blotting Sand for Prime	150.5	Ton

Section S - Permanent Signing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0130	Remove Traffic Sign	18	Each
110E7150	Remove Sign for Reset	6	Each
632E1320	2.0"x2.0" Perforated Tube Post	363.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	65.0	Ft
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	8	Each
632E2510	Type 2 Object Marker Back to Back	52	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	52.4	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	129.8	SqFt
632E3500	Reset Sign	6	Each

Plot Scale - 1:200
Plotted From - TRPR13670
File - ...\pp\day08\DbINotesSectionA.dgn

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(10)196	A3	A5

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/media/3677d319/EnvironmentalProceduresManual.pdf>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT A: AQUATIC RESOURCES

COMMITMENT A1: WETLANDS

All efforts to avoid and minimize wetland impacts from projects PCN 08D6 and PCN 08GH have resulted in approximately 9.66 acres of wetlands (includes temporary and permanent) becoming impacted. Refer to Section B – Grading Plans for location and boundaries of the impacted wetlands.

Table of Impacted Wetlands

Wetland No.	Station	Perm. Impact Left (Acres)	Perm. Impact Right (Acres)	Temp. Impact Left (Acres)	Temp. Impact Right (Acres)	Total Impact (Acres)
WL 1	0+00	0.000	0.000	0.000	0.000	0.000
WL 2	5+00 to 13+00	0.000	0.000	0.000	0.138	0.138
WL 3	8+00 to 13+00	0.000	0.000	0.238	0.000	0.238
WL 4A	14-00 to 20+00	0.000	0.000	0.000	0.470	0.470
WL 4B	20+00 to 40+00	0.000	2.307	0.000	0.050	2.357
WL 4C	42+00 to 46+00	0.000	0.029	0.000	0.000	0.029
WL 5A	14+00 to 21+00	0.000	0.000	0.842	0.000	0.842
WL 5B	20+00 to 46+00	2.211	0.000	0.000	0.000	2.211
WL 6A	55+00 to 62+00	0.000	0.174	0.000	0.000	0.174
WL 6B	55+00 to 61+00	0.000	0.000	0.000	0.000	0.000
WL 7	60+00	0.000	0.000	0.188	0.000	0.188
WL 8	75+00	0.000	0.000	0.000	0.016	0.016
WL 9	74+00 to 76+00	0.365	0.000	0.124	0.000	0.489
WL 10	87+00 to 89+00	0.000	0.000	0.000	0.000	0.000
WL 11A	95+00 to 98+00	0.000	0.000	0.197	0.000	0.197
WL 11B	98+00 to 112+00	0.000	0.000	1.156	0.000	1.156
WL 12A	95+00	0.000	0.007	0.000	0.000	0.007
WL 12B	95+00 to 111+00	0.000	0.895	0.000	0.207	1.102
WL 13	113+00 to 115+00	0.000	0.000	0.000	0.000	0.000
WL 14	122+00	0.000	0.000	0.000	0.000	0.000
WL 15A	123+00	0.000	0.000	0.000	0.000	0.000
WL15B	123+00 to 128+00	0.000	0.000	0.000	0.000	0.000
WL 16	124+00 to 128+00	0.000	0.000	0.000	0.000	0.000

Action Taken/Required:

Wetland mitigation for PCNs 08D6 and 08GH will happen as one action. SDDOT will acquire 22.22 credits from the Ducks Unlimited SD ILF wetland mitigation bank site to mitigate permanent impacts for both PCN 08D6 and 08GH.

Temporary impacts identified in the Table of Impacted Wetlands will not be mitigated as original contours and elevations will be re-established as designated in Section B – Grading Plans. Prior to initiating temporary work in wetlands, the Contractor will submit a plan to the Project Engineer in accordance with Section 7.21 D of the Specifications.

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:
< https://sdleastwanted.sd.gov/maps/default.aspx >

< South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species:
https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04 >

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

This project may be in the vicinity of multiple streams and wetlands. These waters are considered waters of the state and are protected under Administrative Rules of South Dakota (ARSD) Chapter 74:51. Special construction measures may have to be taken to ensure that this water body is not impacted.

Action Taken/Required:

The Contractor is advised that the South Dakota Surface Water Quality Standards, administered by the South Dakota Department of Agriculture and Natural Resources (DANR), apply to this project. Special construction measures will be taken to ensure the above standard(s) of the surface waters are maintained and protected.

COMMITMENT D2: SURFACE WATER DISCHARGE

The DANR General Permit for Temporary Discharge is required for temporary dewatering and discharges to waters of the state. The effluent limit for total suspended solids will be 90 mg/L 30-day average. The effluent limit applies to discharges to all waters of the state except discharges to waters classified as cold water permanent fish life propagation waters according to the ARSD 74:51:01:45. For discharges to waters of the state classified as cold water permanent fish life propagation waters, the effluent limit for total suspended solids will be 53 mg/L daily maximum.

The permittee has the option of completing effluent testing or implementing a pollution prevention plan for compliance with this permit. If the permittee develops a pollution prevention plan instead of total suspended solids sampling, the plan must be developed and implemented prior to discontinuing total suspended solids sampling. Refer to Section 4.0 of the permit. If any pollutants are suspected of being discharged, a sample must be taken for those parameters listed in Section 3.4 of the permit.

Refer to Commitment D1: Surface Water Quality for stream classification.

Action Taken/Required:

If construction dewatering is required and this project is currently covered under a General Permit for Stormwater Discharges Associated with Construction Activities, the contractor will need to submit the dewatering information to the SDDANR using the following form:

< https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_AddTempInfoFillable.pdf >

The Contractor will provide a copy of the approved permit or the submitted dewatering information to the Project Engineer prior to proceeding with any dewatering activities. The approved permit or submitted dewatering information must be kept on-site and as part of the project records.

Effluent monitoring, as a result of dewatering activities, will be summarized for each month and recorded on a separate Discharge Monitoring Report (DMR) and submitted to DANR monthly. Additional information can be found at:
< https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/swdpermitting/Ereporting.aspx >

COMMITMENT E: STORM WATER

Construction activities constitute 1 acre or more of earth disturbance and/or work in a waterway.

Action Taken/Required:

The DANR General Permit for Stormwater Discharges Associated with Construction Activities is required for construction activity disturbing one or more acres of earth and work in a waterway. One storm water permit will be obtained covering both PCNs 08D6 and 08GH. The SDDOT is the owner of this permit and will submit the NOI to DANR 15 days prior to project start in order to obtain coverage under the General Permit. Work can begin once the DANR letter of approval is received.

The Contractor must adhere to the “Special Provision Regarding Storm Water Discharges to Waters of the State.”

The Contractor will complete the DANR Contractor Certification Form prior to the pre-construction meeting. The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the permit for this project. Work may not begin on this project until this form is signed and submitted to DANR.

The form can be found at:
< https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_CGPAppendixCCA2023Fillable.pdf > >

The Contractor is advised that permit coverage may also be required for off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

Storm Water Pollution Prevention Plan

The Storm Water Pollution Prevention Plan (SWPPP) will be developed prior to the submittal of the NOI and will be implemented for all construction activities for compliance with the permit. The SWPPP must be kept on-site and updated as site conditions change. Erosion control measures and best management practices will be implemented in accordance with the SWPPP.

The DOT 298 Form will be used for site inspections and to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents and retained for a minimum of three years.

The inspection will include disturbed areas of the construction site that have not been finally stabilized, areas used for storage materials, structural control measures, and locations where vehicles enter or exit the site. These areas will be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the SWPPP will be observed to ensure that they are operating correctly, and sediment is not tracked off the site.

Information on storm water permits and SWPPPs are available on the following websites:

SDDOT: < https://dot.sd.gov/doing-business/environmental/stormwater >

DANR:< https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/stormwater/default.aspx >

EPA: < https://www.epa.gov/npdes >

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Agriculture and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, “No Dumping Allowed”.

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.
Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 150 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

COMMITMENT N: SECTION 404 PERMIT

The SDDOT has obtained a Section 404 Permit from the USACE for the permanent actions associated with this project. The 404 permit covers both PCNs 08D6 and 08GH.

Action Taken/Required:

The Contractor will comply with all requirements contained in the Section 404 Permit.

The Contractor will also be responsible for obtaining a Section 404 Permit for any dredge, excavation, or fill activities associated with material sources, storage areas, waste sites, and Contractor work sites outside the plan work limits that affect wetlands, floodplains, or waters of the United States.

COMMITMENT T: NRCS EASEMENT COMPLETION

An Easement Administration Action (EAA) with NRCS National Headquarters is required for the project, in association with Parcel 4 “Svare Flood Plain Easement” (Station 71+00 to 98+00). The EAA will allow the proposed work and right of way expansion to occur on that portion of the conservation easement parcel. No work can begin on this parcel without NRCS approval and verification from the SDDOT ROW office that all easements have been secured.

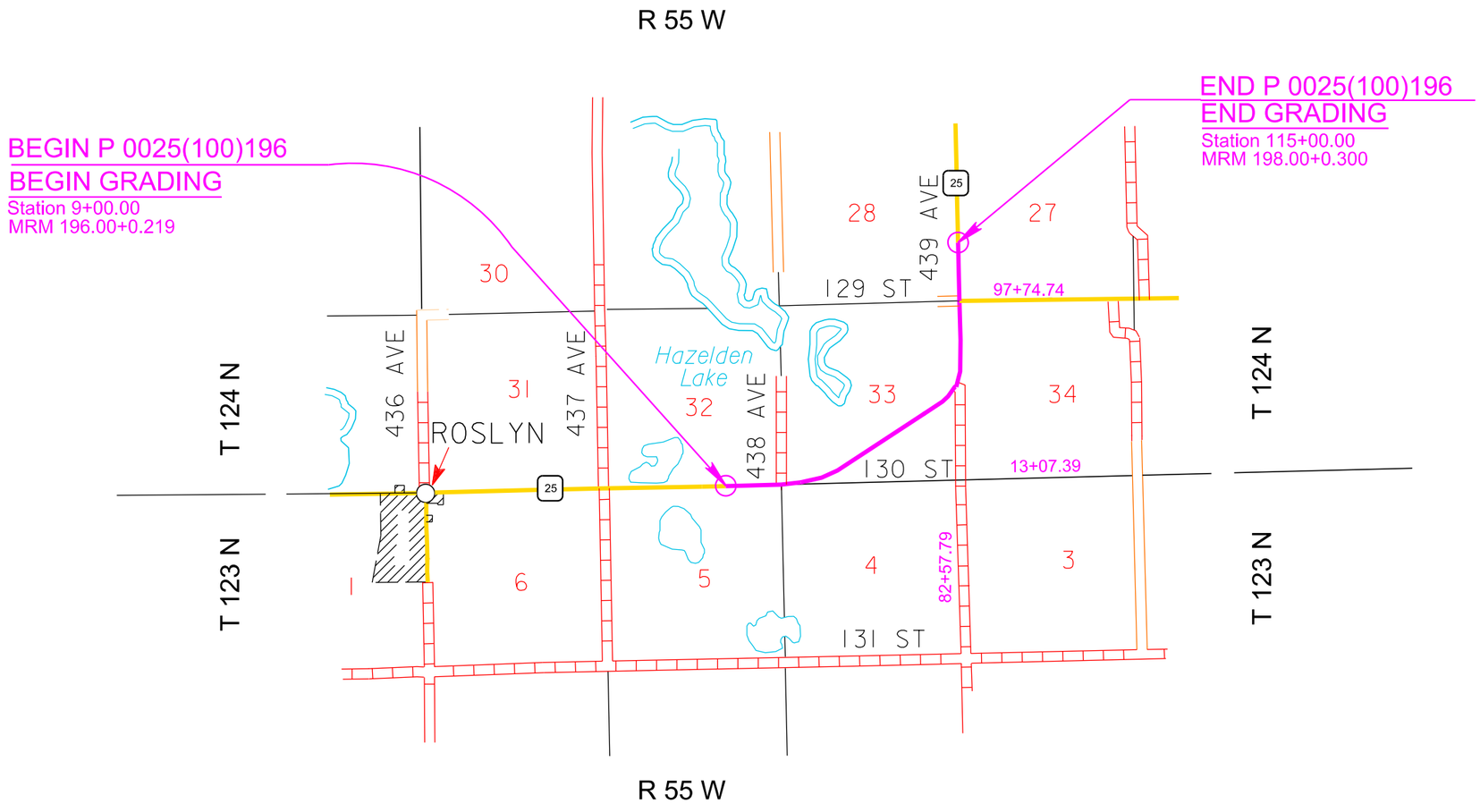
SECTION B: GRADING PLANS

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INDEX OF SHEETS

B1	General Layout with Index
B2-B7	Estimate with General Notes & Tables
B8	Pipe Quantities
B9	Fence Quantities
B10	Typical Grading Sections
B11	Horizontal Alignment Data
B12	Control Data
B13	Legend
B14-B21	Plan and Profile Sheets
B22-B32	Standard Plates



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SECTION B ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	5	Each
009E3225	Reestablish Public Land Survey System Corner	33	Each
009E3230	Grade Staking	2.008	Mile
009E3245	Final Cross Section Survey	2.008	Mile
009E3250	Miscellaneous Staking	2.008	Mile
009E3280	Slope Staking	2.008	Mile
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E4200	Construction Schedule, Category II	Lump Sum	LS
110E0600	Remove Fence	3,800	Ft
110E1020	Remove Asphalt Concrete Pavement	715.6	CuYd
120E0010	Unclassified Excavation	190,048	CuYd
120E0600	Contractor Furnished Borrow Excavation	39,802	CuYd
120E1000	Muck Excavation	27,936	CuYd
120E2000	Undercutting	20,122	CuYd
120E6100	Water for Embankment	1,933.8	MGal
120E7000	Select Granular Backfill	1,294.7	Ton
250E0020	Incidental Work, Grading	Lump Sum	LS
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	30,652.3	Ton
450E0142	24" RCP Class 2, Furnish	278	Ft
450E0143	24" RCP Class 3, Furnish	66	Ft
450E0150	24" RCP, Install	344	Ft
450E2200	24" RCP Sloped End, Furnish	6	Each
450E2201	24" RCP Sloped End, Install	6	Each
450E4759	18" CMP 16 Gauge, Furnish	170	Ft
450E4760	18" CMP, Install	170	Ft
450E4768	24" CMP 14 Gauge, Furnish	170	Ft
450E4769	24" CMP 16 Gauge, Furnish	204	Ft
450E4770	24" CMP, Install	374	Ft
450E4779	30" CMP 16 Gauge, Furnish	122	Ft
450E4780	30" CMP, Install	122	Ft
450E4798	42" CMP 14 Gauge, Furnish	274	Ft
450E4800	42" CMP, Install	274	Ft
450E4808	48" CMP 14 Gauge, Furnish	102	Ft
450E4810	48" CMP, Install	102	Ft
450E4818	54" CMP 14 Gauge, Furnish	94	Ft
450E4820	54" CMP, Install	94	Ft
450E5227	42" CMP Flared End, Furnish	6	Each
450E5228	42" CMP Flared End, Install	6	Each
450E5231	48" CMP Flared End, Furnish	2	Each
450E5232	48" CMP Flared End, Install	2	Each
450E5235	54" CMP Flared End, Furnish	2	Each
450E5236	54" CMP Flared End, Install	2	Each
450E5310	24" CMP Sloped End, Furnish	2	Each
450E5311	24" CMP Sloped End, Install	2	Each
450E5406	18" CMP Safety End, Furnish	4	Each
450E5407	18" CMP Safety End, Install	4	Each
450E5410	24" CMP Safety End, Furnish	6	Each
450E5411	24" CMP Safety End, Install	6	Each
450E5414	30" CMP Safety End, Furnish	4	Each
450E5417	30" CMP Safety End, Install	4	Each
620E0020	Type 2 Right-of-Way Fence	3,847	Ft
620E0515	Type 1A Temporary Fence	2,674	Ft
620E1020	2 Post Panel	5	Each
620E1030	3 Post Panel	6	Each
700E0110	Class A Riprap	15,502.8	Ton
831E0110	Type B Drainage Fabric	18,364	SqYd
831E1010	Geogrid Reinforcement	1,405	SqYd
900E0010	Refurbish Single Mailbox	2	Each

GRADING OPERATIONS

Water for Embankment is estimated at the rate of 10 gallons of water per cubic yard of Embankment minus Waste.

The estimated cubic yards of excavation and/or embankment required to construct outlet ditches, ditch blocks, and approaches are included in the earthwork balance notes on the profile sheets.

Special ditch grades and other sections of the roadway different than the typical section will be constructed to the limits shown on the cross sections. If significant changes to the cross sections are necessary during construction, the Engineer will contact the Designer for the proposed change.

Generally, all shallow inlet and outlet ditches as noted on the plan sheets will be cut with a 10-foot wide bottom with 5:1 backslopes. However, the Engineer may direct the Contractor to adjust the ditch width for proper alignment with the drainage structure.

Temporary fence and/or permanent fence will be placed ahead of the grading operation unless otherwise directed by the Engineer.

The Contractor is advised that groundwater was encountered at levels that will be above or near the bottom of the proposed ditch cuts in the area around Stations 17+00, 50+00, and 53+00. Seasonal changes may affect the groundwater elevations. The Contractor is encouraged to review the soil borings shown in the cross sections for additional water table information.

UTILITIES

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.

GENERAL GEOLOGY

The project alignment traverses glacial terrain typical of eastern South Dakota. Included within this terrain may be areas of loess, shale, sand, gravel, glacial till and boulder till. As is the case with most glacial terrain, the materials throughout the project can vary greatly in a short distance.

CLASSIFICATION OF EXCAVATION

Most of the material encountered should be able to be excavated using conventional methods associated with normal Unclassified Excavation. Muck Excavation will be required at the areas shown in the plans or as directed by the Engineer.

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SHRINKAGE FACTOR: Embankment +30% to +45%

TABLE OF EXCAVATION QUANTITIES BY BALANCES

Station	to	Station	Excavation (CuYd)	* Undercut (CuYd)	* Muck Exc. (CuYd)	Contractor Furnished Borrow Exc. (CuYd)	Total Excavation (CuYd)	** Waste (CuYd)	** Borrow Haul (CuYdSta)	** Haul (CuYdSta)
9+00		87+93	125685	16649	21746	0	164080	21746		3361800
87+93		115+00	8727	3473	6190	37578	55968	6190	426800	3000
XR74R			658	0	0	2224	2882			
	Totals:		135070	20122	27936	39802	222930	27936	426800	3364800

* The quantities for these items are in the Estimate of Quantities under their respective contract items.
** The quantities for these items are for information only.

TABLE OF UNCLASSIFIED EXCAVATION

	(CuYd)
Excavation	135070
Undercut	20122
Topsoil	18638
Salvaged Asphalt Mix and Granular Base Material (from cut sections)	13807
Salvaged Asphalt Mix and Granular Base Material (from fill sections)	2411
Total	190048

PROCEDURES FOR DETERMINING UNCLASSIFIED EXCAVATION QUANTITY

When plan quantities are used for payment, the Unclassified Excavation quantity will be used for final payment and the plans quantity of Topsoil and salvaged surfacing items listed in the Table of Unclassified Excavation will not be adjusted according to field measurements.

The following paragraphs are general earthwork information and information in regard to computing the Unclassified Excavation quantity when final cross sections are taken in the field:

The Unstable Material Excavation quantity is included in the Excavation quantity listed in the Table of Unclassified Excavation. When finaling a project, the Unstable Material Excavation quantity will be added to the Excavation quantity to compute the Unclassified Excavation quantity.

The Topsoil quantity in the Table of Unclassified Excavation is an estimate. When finaling a project, the total quantity of field measured Topsoil will be used in place of the estimated Topsoil quantity. The quantity of Topsoil from the cuts will be paid for twice as Unclassified Excavation, as it will be in both the Excavation and Topsoil quantities. This will be full compensation for Excavation, which includes necessary undercutting to provide space for placement of topsoil.

The Excavation quantities from individual balances and the Table of Unclassified Excavation have been reduced by the volume of in place surfacing that will be removed and/or salvaged.

Salvaged Asphalt Mix and Granular Base Material will be paid for at the contract unit price per ton and is also included in and paid for once as Unclassified Excavation. As shown in the Table of Unclassified Excavation, the estimated quantity of 2411 cubic yards of Salvaged Asphalt Mix and Granular Base Material from fill sections will be added to the Excavation quantity to determine the Unclassified Excavation quantity. When finaling a project, the quantities of Salvaged Asphalt Mix and Granular Base Material from fill sections will not be adjusted according to field measurements. The quantity of Salvaged Asphalt Mix and Granular Base Material from cut sections will not be added to the Excavation quantity as it is already in the cuts on the final cross sections.

WASTE EXCAVATION

The quantity of waste in the Table of Excavation Quantities by Balances that is muck excavation or excess excavation material will be disposed of at a Contractor furnished site acceptable to the Engineer.

HAUL

Included in the Table of Excavation Quantities by Balances are Borrow Haul, and Haul. They are not pay items and are for informational purposes only. Haul was not estimated for moving Contractor Furnished Borrow Excavation. The mass haul diagram is available as part of the bid package for use in figuring this haul.

Borrow Haul: Estimated quantity (CuYdSta) for moving borrow excavation material from the centerline mainline station listed in the Table of Borrow Pits to the locations where it is needed throughout the earthwork balance.

Haul: Estimated quantity (CuYdSta) for moving unclassified excavation material to the locations where it is needed throughout the earthwork balance.

For Purpose of Extra Haul Computations:

Average Haul = Haul/Unclassified Excavation = 3268000/188644 = 17.3 Sta.

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UNDERCUTTING

In all cut sections the earthen subgrade will be undercut 2 feet below the earthen subgrade surface. The undercut material or other suitable material, as directed by the Engineer, will then be replaced and compacted to the density specified for the section being constructed.

Shallow embankment sections, fills less than 2 feet in height measured at the finished subgrade shoulders, will be undercut to ensure a minimum 2 foot height of earth embankment for the entire width of roadbed. The upper 6 inches of undercut material that consists of topsoil with a high humus content will be used as topsoil, placed in the fill slopes outside the shoulders of the earthen subgrade, or placed in the lower portion (below 4 foot depth) in fills which are greater than 4 feet in height. The remaining undercut soil and soil obtained from adjacent excavation (excluding the upper 6 inches) will then be replaced and compacted to the density specified for the section being constructed.

The plan shown quantity will be the basis of payment. However, if there are additional areas of undercut other than what is shown in the plans, the Engineer will direct removal of these areas and the additional areas will be measured according to the Engineer.

TABLE OF UNDERCUTTING LOCATIONS RURAL

Station	to	Station
9+00		14+00
46+00		71+00
76+50		94+00
112+00		115+00

UNSTABLE MATERIAL EXCAVATION

The areas of unstable material excavation are drawn on the cross sections with a normal depth of 2 feet. The estimated quantity of 335 cubic yards of unstable material excavation will be paid for at the contract unit price per cubic yard for “Unclassified Excavation”.

All areas designated as Unstable will be excavated. The unstable material excavated on this project will be placed outside the subgrade shoulder in fill sections or stockpiled and used as topsoil.

Field measurement of unstable material excavation will not be made. However, if there are additional areas of unstable material excavation other than what is shown in the plans, the Engineer will direct removal of these areas and the additional areas will be measured according to the Engineer.

TABLE OF UNSTABLE MATERIAL EXCAVATION

Station	to	Station	L/R	Depth (Ft)	Quantity (CuYd)
75+75		76+50	L	2	221
113+00		115+00	L	2	114
				Total:	335

MUCK EXCAVATION

The areas of muck excavation are drawn on the cross sections with a normal depth of 3 feet. The estimated quantity of 27,936 cubic yards of muck excavation will be paid for at the contract unit price per cubic yard for “Muck Excavation”.

Muck excavation consists of the removal of highly organic and/or highly saturated material from the designated areas shown on the cross sections. Highly organic muck material will not be used in the embankment but may be used as topsoil. Non-organic muck material may be used as embankment outside of the fill subgrade shoulder if it is properly handled and dried prior to placement in the embankment.

Field measurement of muck excavation will not be made unless the Engineer orders additional excavation, or when the Engineer determines, in accordance with Section 120.3 A.1 of the Specifications, that the classification of excavation be changed.

If the areas designated as muck excavation can be removed with similar equipment and procedures as used for unclassified excavation, the material will be measured and paid for as “Unclassified Excavation”.

TABLE OF MUCK EXCAVATION

Station	to	Station	L/R	Depth (Ft)	Quantity (CuYd)
14+00		46+00	L	3	7119
14+00		46+00	R	3	9309
58+00		62+00	R	3	425
73+00		75+75	L	3	4893
94+50		97+25	L	3	495
94+50		97+25	R	3	498
98+10		104+40	L	3	1174
98+10		110+50	R	3	2796
105+20		111+25	L	3	1227
				Total:	27936

INUNDATED CONSTRUCTION AREAS

The following areas were inundated with water at the time of field inspection. Extra effort may be required to excavate saturated organic material from the embankment footprint prior to fill placement. The Contractor will excavate muck materials ahead of the advancing fill. Special excavation techniques (long-reach equipment etc.) may be required at the following locations:

Station 20+30± to Station 37+25±, Lt.
Station 20+50± to Station 46+00±, Rt.
Station 37+75± to Station 46+00±, Lt.
Station 58+00± to Station 61+00±, Rt.
Station 94+50± to Station 97+50±, Lt. & Rt.
Station 98+10± to Station 110+50±, Rt.

If in the opinion of the Engineer, Muck Excavation cannot be completed through conventional methods, the embankment may be constructed by end dumping and pushing fill material into the inundated area. Prior to placement of fill the foundation will be prepared to the satisfaction of the Engineer by use of long-reach or other equipment to displace soft, organic, and unstable material. Push fill material into the water at an angle that will cause the mud wave to be pushed outside the limits of the embankment.

SALVAGE AND STOCKPILE ASPHALT MIX AND GRANULAR BASE MATERIAL

The Los Angeles Abrasion Loss value on the aggregate used for the in-place asphalt concrete was 26. This value was obtained from testing during construction of the in-place asphalt concrete.

An estimated 30,652.3 tons (16,218.1 Cubic Yards) of asphalt mix and granular base material will be salvaged from the existing highway according to the in-place surfacing typical sections and stockpiled at a site furnished by the Contractor and satisfactory to the Engineer.

Salvaged material will be processed to meet the requirements of Section 884.2 D.7 prior to stockpiling. The Contractor will ensure that no vegetation, topsoil, subgrade, or other foreign material is incorporated into the salvaged asphalt mix and granular base material.

The quantity of salvaged asphalt mix and granular base material may vary from the plans.

The quantity of salvageable material is estimated from the in-place surfacing typical sections. This estimated quantity was included in the unclassified excavation quantities.

REMOVE ASPHALT CONCRETE PAVEMENT

The Los Angeles Abrasion Loss value on the aggregate used for the in-place asphalt concrete was unknown.

An estimated 715.6 Cubic Yards of the in-place asphalt concrete surfacing will be removed from the existing highway according to the in-place surfacing typical sections and wasted as directed by the Engineer. Care will be taken not to waste the in-place granular material.

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.

Plot Scale - 1:200
Plotted From - TRPR13418
File - ...\prj\day08\D6\NotesSectionB.dgn

CONTRACTOR FURNISHED BORROW EXCAVATION

The Contractor will provide a suitable site for Contractor furnished borrow excavation material. The Contractor is responsible for obtaining all required permits and clearances for the borrow site.

Restoration of the Contractor furnished borrow excavation site will be the responsibility of the Contractor.

The Contractor furnished borrow excavation material placed below the water level will be approved by the Engineer.

The Contractor furnished borrow excavation material placed above the water level will be uniform in texture and free from organic material. The liquid limit will not exceed 45 and the plastic index will not exceed 25.

The Contractor will be responsible for the following minimum testing prior to use of each borrow site:

> A minimum of one test for liquid limit and plastic index for each location and soil type, with samples obtained according to SD201.

The Department will be responsible for the following minimum testing:

> A minimum of one test for liquid limit and plastic index for every 100,000 cubic yards or a major change in soil type. Independent Assurance testing will not be required.

PIPE CULVERTS

It is anticipated that the proposed pipe culverts at Stations 33+50, 37+53 L, 39+50, 41+58 R, 97+00, 97+75 L, and 97+75 R will be at least partially underwater during construction. It is recommended that these CMP be polymer coated for corrosion protection. Polymer coating is not required for any other CMP not specified above.

The corrugated metal pipe specified above will be polymer coated 14-gauge steel as specified in the Table of Pipe Quantities. Any required connection bands, elbows, tees, crosses, wyes, reducers, and transitions will also be polymer coated. The connection bands will be 24 inches wide. All polymer coated corrugated metal pipe and components will be in conformance with AASHTO M245. Riveted pipe will not be allowed.

All damage to the polymer coating will be repaired in accordance with the manufacturer's recommendations prior to installation of the pipe.

All costs associated with the polymer coating including repair of polymer coating will be incidental to the corresponding CMP contract items.

Metal pipe end sections connected to polymer coated CMP will be aluminum-coated (Type 2) in accordance with AASHTO M36 as specified in the Table of Pipe Quantities. All costs associated for gauge, coating, and connections will be incidental to the corresponding CMP End Section contract items.

The above specified pipe culverts will be installed in accordance with the below notes.

1. **Placement of Bedding Below Culvert Invert**: Excavate to the culvert trench excavation limits under water. Excavation will be done with minimal disturbance as possible. Verify that bottom of excavation below culvert is a minimum of 1.0 feet below the bottom of the culvert invert elevation on a minimum spacing of 5 feet along the length of the excavation, and sufficiently stable to prevent subsidence of bedding material into foundation soils. Place bedding material in such a fashion as to not significantly disturb the soils at the bottom of the excavation. Once the bedding material has settled through the water, level the surface of the bedding to the culvert invert elevation and verify grade on 5-foot increments along the length of the proposed culvert footprint.

2. **Installation of Culvert Pipe**: Place culvert pipe on top of leveled bedding. Fix the ends and center of pipe to prevent pipe movement both vertically upwards and laterally during subsequent construction.

3. **Placement of Select Granular Backfill Adjacent to Culvert Pipe:** Place select granular backfill material on both sides of pipe in equal amounts up to the pipe spring line to prevent placement of material from shifting the pipe laterally.

4. **Placement of Select Granular Backfill**: The placement of backfill will be uniform and even on both sides of the pipe up to the top of pipe elevation. Once the backfill is above the pipe, the anchorages maintaining pipe alignment may be removed and the placement will continue until the backfill extends approximately 6 inches above the water level. Once the backfill is evenly 6 inches above the water level, compact with a vibratory roller. The roller will make repeated passes on the select granular backfill until the recorded surfaced elevation between passes does not vary by more than 0.02 feet. If the backfill settles to or below the water level during compaction, place additional backfill until the backfill remains at least 6 inches above the water level at the end of compaction.

Select Granular Backfill material will be obtained from a source conforming to Section 850 of the Specifications for Select Granular Backfill. Measurement and payment for Select Granular Backfill will be specified by the bid item "Select Granular Backfill".

GEOGRID REINFORCEMENT

The base course portion of the surfacing section will be reinforced with geogrid to minimize differential settlement and subsequent distortion of the surfacing at the following pipe culvert locations: Stations 33+50, 39+50, 97+00, and 97+75 R. After the subgrade has been rebuilt to grade, 4 inches of base course will be placed and compacted in preparation for geogrid placement. Place biaxial geogrid followed by 8 inches of base course. The geogrid reinforcement will extend a minimum of 10 feet beyond the excavation limits of the pipe trench from each side.

The geogrid will be a biaxial grid of single layer construction. Vibratory welded, integrally formed or woven and coated geogrids will be acceptable. Grids with laser welded grid junctions will not be allowed. The geogrid will be certified by the supplier to meet the following specification prior to installation:

Geogrid Specification:

Property	Test	MARV
Wide Width Strip Tensile Strength (Ultimate)	ASTM D6637	850 lb/ft MD and XD

Approximately 1405 square yards of Geogrid will be required. Geogrid will be paid for at the contract unit price per square yard. Payment quantities will be based on area covered plus 15%. Overlaps are accounted for by the additional 15%. Payment will be full compensation for furnishing and installing the geogrid only. Granular backfill materials will be paid for under a different bid item.

TABLE OF GEOGRID

Station	Size	Quantity (SY)
33+50	46'x61'	312
39+50	46'x61'	312
97+00	46'x66'	337
97+75 R	38'x62'	261
	Total	1,222
	Total x Overlap 15%	1,405

Geogrid Installation Procedure:

Place the geogrid on as level and smooth surface of surface as possible. Any protrusions that might damage the geogrid will be removed prior to placing the geogrid. No equipment will be allowed on the geogrid until the granular material is in place. The geogrid should be kept as taut as possible prior to backfilling.

The geogrid will be rolled out parallel to the centerline. The geogrid may be cut and realigned to prevent the propagation of wrinkles as the geogrid is unrolled. All seams in the geogrid will be overlapped at least 2 feet and shingled as to prevent granular material being forced between the geogrid layers. Damaged areas may be repaired by placing additional geogrid over the damaged area. The geogrid patch will cover the damaged area plus 2 feet minimum in all directions as directed by the Engineer.

Granular material will be dumped at least 20 feet behind the leading edge of the fill and pushed into place with a loader or dozer. Granular material will be placed in 4-inch max. lifts and compacted as per the Specified Density Method.

Plot Scale - 1:200
Plotted From - TRPR13418
File - ...\prj\day08\B6NotesSection6.dgn

INCIDENTAL WORK, GRADING

Station	L/R	Remarks
13+24	L	Take Out 24”-72’ RCP
13+24	R	Take Out 24”-68’ RCP
20+43	R	Take Out 24”-58’ CMP
33+34		Take Out 48‘-82’ RCP
41+64		Take Out 4’x6’-56’ RCCP
41+64		Take Out 54”-56’ RCP
42+14		Take Out 30”-78’ RCP
60+61		Take Out 24”-119’ CMP
73+48	R	Take Out 18”-156’ RCP
74+29		Take Out 18”-150’ CMP
88+09		Take Out 18”-76’ RCP
96+07		Take Out 36”-95’ RCP
97+76	L	Take Out 36”-60’ RCP
97+78	R	Take Out 36”-80’ RCP
104+80	L	Take Out 18”-66’ CMP

CORRUGATED METAL PIPE

Corrugated metal pipes will have 2 ⅔-inch x ½-inch corrugations for 42-inch and smaller round pipe and 48-inch and smaller arch pipe unless otherwise stated in the plans. Corrugated metal pipes will have 3-inch x 1-inch or 5-inch x 1-inch corrugations for 48-inch and larger round pipe and 54-inch and larger arch pipe unless otherwise stated in the plans.

The gauge of the corrugated metal ends will match the thickest gauge of corrugated metal pipe it is connected to.

PIPE FOR APPROACHES AND INTERSECTING ROADS

Class 2 reinforced concrete pipe, high density polyethylene pipe, polypropylene pipe (will be in conformance with AASHTO M330), or steel reinforced polyethylene pipe may be substituted for corrugated metal pipe at approaches and intersecting roads at no additional cost to the State.
If corrugated metal pipes are provided, the pipes will be as specified in the CORRUGATED METAL PIPE note.

Pipe material substitution will not be allowed at the following locations:

Sta. 37+53 – 68’ L
Sta. 41+58 – 70’ R
Sta. 97+75 – 71’ L
Sta. 97+75 – 70’ R
Sta. 104+87 – 56’ L

If high density polyethylene pipe, polypropylene pipe (will be in conformance with AASHTO M330), or steel reinforced polyethylene pipe are provided, then the end sections will be metal, be compatible, and conform to the type of end section as shown in the plans.

TABLE OF RIPRAP AND DRAINAGE FABRIC

Station to	Station	L/R	Class A Riprap (Ton)	Type B Drainage Fabric (SqYd)
20+00	37+10	L	3793.3	4467.6
21+00	41+25	R	5237.7	6019.5
37+85	46+00	L	2166.1	2477.3
41+91	45+00	R	526.7	661.9
95+00	97+39	L	334.0	438.1
95+00	97+33	R	378.9	482.2
98+11	104+00	L	823.0	1083.4
98+17	110+00	R	2243.1	2733.8
		Totals:	15502.8	18363.8

MAILBOXES

The Contractor will reset the existing mailboxes on new posts with the necessary support hardware for single mailbox assemblies. The local Postmaster will determine the recommended mounting height of the mailboxes throughout the project. The Contractor will coordinate with the Engineer on the proper postal representative to contact.

All costs for removing existing mailboxes, providing temporary mailboxes, and resetting mailboxes with new posts and necessary support hardware will be incidental to the contract unit price per each for “Refurbish Single Mailbox”.

Single mailboxes will be refurbished at Sta. 37+94 L and Sta. 104+75 R

TEMPORARY FENCE

The Contractor will verify the location of the temporary fence with the landowner prior to installation of the fence.

BRACE PANELS FOR ROW FENCE

The E-Z Brace or an approved equal may be utilized as an alternate horizontal brace in the brace panels if approved by the Engineer. The E-Z Brace will be attached to each wood post utilizing two 5/16” x 3” lag screws. Holes of appropriate diameter, based on wood post condition, will be drilled before placement of lag screws. The following is the contact regarding the E-Z Brace:

Charlie Mack
Macksteel E-Z Braces
415 20th Ave. SE.
Watertown, SD 57201
605-882-2177

TABLE OF SUPERELEVATION

Station	to	Station		
9+00		11+50	-	Normal Crown Section
11+50		13+48	-	Superelevation Transition
13+48		34+10	-	3820’ Radius Curve Left 0.05’/’ Superelevation Rate Point of Rotation at Centerline
34+10		36+08	-	Superelevation Transition
36+08		60+23	-	Normal Crown Section
60+23		62+63	-	Superelevation Transition
60+23		82+10	-	2040’ Radius Curve Left 0.06’/’ Superelevation Rate Point of Rotation at Centerline
82+10		84+10	-	Superelevation Transition
84+10		115+00	-	Normal Crown Section

Plot Scale - 1:200
Plotted From - TPPR13418
File - ...\prj\day08\B6NotesSectionB.dgn

PUBLIC LANDS SURVEY SYSTEM, RIGHT OF WAY, AND PROPERTY CORNERS

The Contractor will have a Land Surveyor, licensed in the State of South Dakota, to set, reestablish or verify public land survey system (PLSS) corners, right of way (ROW) corners, and property corners as directed by the appropriate SDDOT Region Land Surveyor. It is estimated that 5 PLSS corners and 33 ROW and property corners will be set, reestablished, or verified for this project. The Contractor's Land Surveyor, under the direction of the Region Land Surveyor, will set, reestablish, or verify all corner monuments after surfacing and fencing operations are completed in accordance with the PUBLIC LANDS SURVEY SYSTEM CORNERS section and the RIGHT OF WAY AND PROPERTY CORNERS section in Chapter 8 of the SDDOT Survey Manual.

< https://dot.sd.gov/doing-business/engineering/design-services/surveyors >

All costs associated with furnishing and installing PLSS caps, rebar, and all other materials associated with setting, reestablishing, or verifying PLSS, ROW corners, and property corners in accordance with the SDDOT Survey Manual will be incidental to the contract unit price per each for "Reestablish Public Land Survey System Corner" and/or "Reestablish Right-of-Way and Property Corner".

TABLE OF CONSTRUCTION STAKING

(See Special Provision for Contractor Staking)

					Grade Staking						
Roadway and Description	Begin Station	End Station	Number of Lanes	Length (Ft)	Length (Mile)	Lane Factor	*Sets of Stakes	**Grade Staking Quantity (Mile)	Miscellaneous Staking Quantity (Mile)	Slope Staking Quantity (Mile)	Final Cross Section Survey Quantity (Mile)
SD 25 (2 Lanes AC Pavement)	9+00	115+00	2	10,600	2.008	1	1	2.008	2.008	2.008	2.008
							Totals:	2.008	2.008	2.008	2.008

* 1 = Blue Top Stakes Only (Asphalt Concrete Pavement)
2 = Blue Top and Paving Hub Stakes (PCC Pavement)

** Grade Staking Quantity = (Length) x (Lane Factor) x (Sets of Stakes)

Plot Scale - 1:200
Plotted From - TRPR13418
File - ...\prj\day08\B6NotesSectionB.dgn

PIPE QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B8	B32

Plotting Date: 03/17/2025

		Reinforced Concrete				Corrugated Metal														
		Circular		Circular Sloped End	Circular							Circular Safety End			Circular Sloped End	Circular Flared End				
Station	Offset (L/R)	24" Cl. 2 Ft	24" Cl. 3 Ft	24" Each	18" 16 Ga Ft	24" 14 Ga Ft	24" 16 Ga Ft	30" 16 Ga Ft	42" 14 Ga Ft	48" 14 Ga Ft	54" 14 Ga Ft	18" Each	24" Each	30" Each	24" Each	42" Each	48" Each	54" Each		
13+21	R						86						2							
13+21	L							68						2						
33+50											94							2		
37+53	L								84							2				
39+50									98							2				
41+58	R					88							2							
60+50		122		2																
0+77 (XR73R)							118								2					
75+00		80	66	2																
88+00		76		2																
90+75	L				106							2								
90+75	R				64							2								
97+00										102							2			
97+75	R								92							2				
97+75	L					82							2							
104+87	L							54						2						
Total:		278	66	6	170	170	204	122	274	102	94	4	6	4	2	6	2	2		

Plot Scale - 1:200

Plotted From - TRPR17192

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FENCE QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B9	B32

Plotting Date: 12/05/2024

Station to Station		Side (L/R)	Right-of-Way Fence		Temporary Fence	Post Panels		Gates	Fence
			Type 2 (Ft)	N.A.B.I. Stream Crossing (Ft)	Type 1A (Ft)	2 Post Panel (Each)	3 Post Panel (Each)	N.A.B.I. Barbed Wire Gate (Each)	Remove Fence (Ft)
70+00	97+32	L	2,708	1	2674	5	2	1	2674
98+10	104+63	L	653				2		640
110+14	115+00	L	486				2		486
TOTALS:			3847	1	2674	5	6	1	3800

Post Type and Sequence:
Right-of-way fence shall be constructed using alternate wood and steel posts except as noted.

Plot Scale - 1:200

Plotted From - TRPR13418

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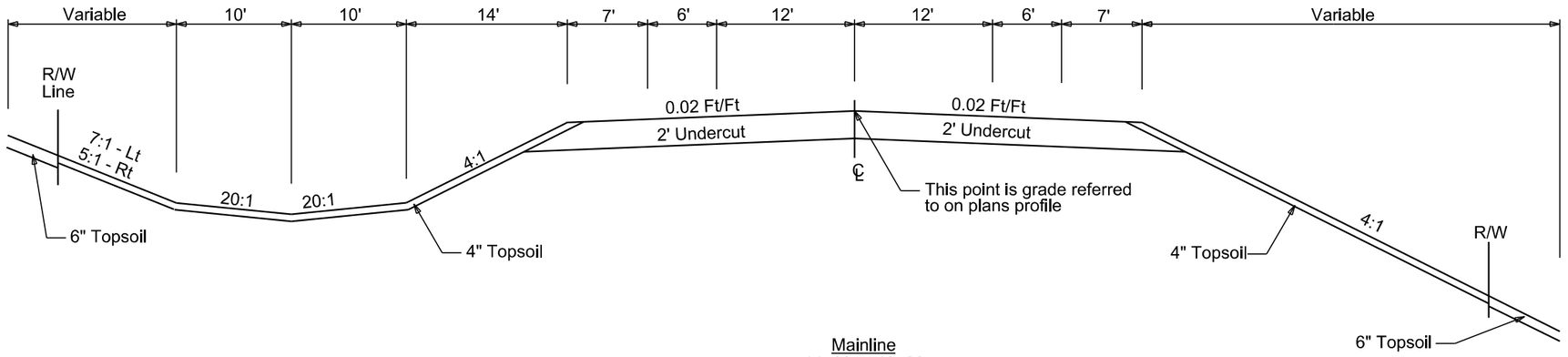
TYPICAL GRADING SECTION

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B10	B32

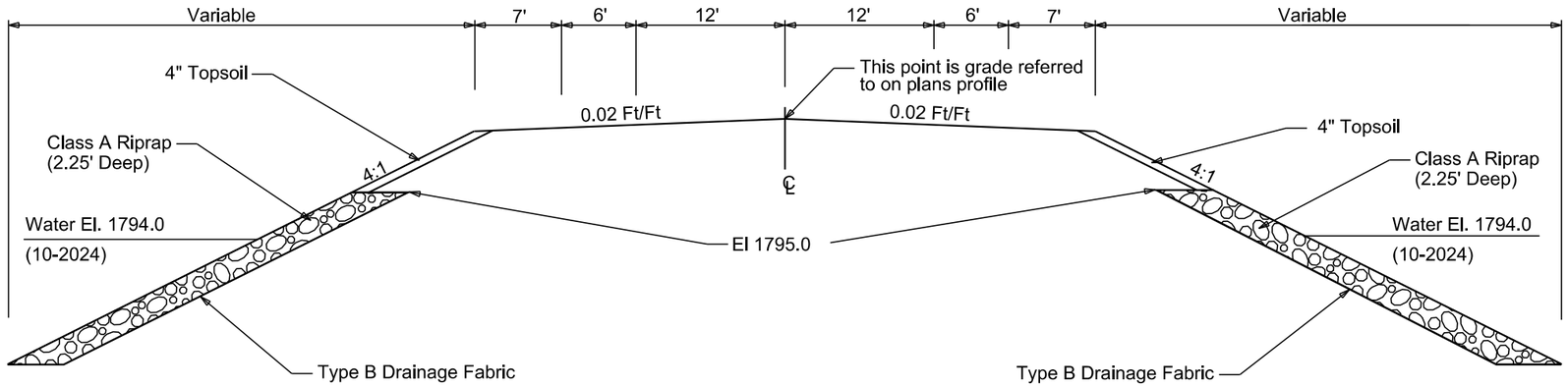
Plotting Date: 03/21/2025

Plot Scale - 1:200

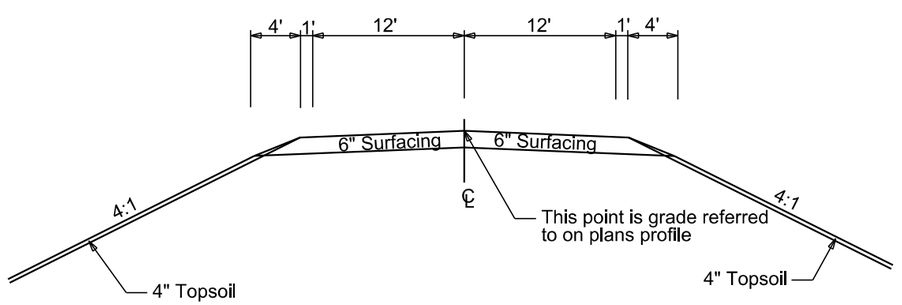
Mainline
9+00 to 14+09
46+29 to 95+00
104+00 to 115+00



Mainline
14+09 to 46+29
95+00 to 104+00



XR73R
0+25 to 3+25



Plotted From - TRPR13418

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HORIZONTAL ALIGNMENT DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B11	B32

Plotting Date: 12/05/2024

Plot Scale - 1:200

MAINLINE

Type	Station			Northing	Easting
POB	0+00.00			618045.402	2621396.03
		TL= 1307.39	N 88°00'37" E		
PC	13+07.39			618090.798	2622702.63
PI	24+07.26	R = 3820.00	Delta = 32°07'29" L	618128.988	2623801.84
PT	34+49.20			618745.852	2624712.44
		TL= 2765.66	N 55°53'07" E		
PC	62+14.86			620296.974	2627002.17
PI	73+31.22	R = 2040.00	Delta = 57°22'41" L	620923.086	2627926.43
PT	82+57.79			622039.069	2627897.35
		TL= 1516.94	N 1°29'34" W		
PI	97+74.74			623555.498	2627857.83
		TL= 2640.88	N 2°03'37" W		
POE	124+15.62			626194.673	2627762.88

xr73R

Type	Station			Northing	Easting
POB	0+00.00			621165.210	2627725.665
		TL= 106.09	S 66°16'38" E		
PC	1+06.09			621122.527	2627822.794
PI	2+12.28	R = 170.00	Delta = 63°58'41" R	621079.808	2627920.005
PT	2+95.92			620973.711	2627924.265
		TL= 50.67	S 2°17'57" E		
POE	3+46.60			620923.077	2627926.297

Plotted From - TRPR13418

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. North Zone NAD 83(2011); epoch 2010.00; Geoid18; SF = 0.9998865139

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CONTROL DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B12	B32

Plotting Date: 03/17/2025

HORIZONTAL AND VERTICAL CONTROL POINTS						
POINT	**STATION**	**OFFSET**	**DESCRIPTION**	**NORTHING**	**EASTING**	**ELEVATION**
10002			refmrk	559044.212	2599332.847	1863.95
601	17+06	21’ L	refmrk	618146.667	2623096.740	1803.32
602	47+68	74’ R	refmrk	619424.393	2625845.472	1814.95
139	13+12	73’ R	refmrk	618017.928	2622710.379	1814.25
140	123+17	15’R	refmrk	626097.061	2627781.647	1841.25
10195	83+91	101’ L	refmrk	622169.725	2627792.789	1825.69
139_1	13+12	73’ R	refmrk	618017.928	2622710.379	1814.25
602_1	47+68	74’ R	refmrk	619424.393	2625845.472	1814.95
140_1	123+17	15’ R	refmrk	626097.061	2627781.647	1841.25
1432	123+17	15’ R	refmrk	626097.084	2627781.643	1841.25
141	80+65	88’ L	refmrk	621852.550	2627805.124	1828.39

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. North Zone NAD 83(2011); epoch 2010.00
Geoid18; SF = 0.99988655139
The elevations shown on this sheet are based on NAVD 88.

Plot Scale - 1:200

Plotted From - TRPR17192

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LEGEND

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B13	B32

Plotting Date: 12/05/2024

- Anchor
- Antenna
- Approach
- Assumed Corner
- Azimuth Marker
- BBQ Grill/ Fireplace
- Bearing Tree
- Bench Mark
- Box Culvert
- Bridge
- Brush/Hedge
- Buildings
- Bulk Tank
- Cattle Guard
- Cemetery
- Centerline
- Cistern
- Clothes Line
- Concrete Symbol
- Control Point
- Creek Edge
- Curb/Gutter
- Curb
- Dam Grade/Dike/Levee
- Deck Edge
- Ditch Block
- Doorway Threshold
- Drainage Profile
- Drop Inlet
- Edge Of Asphalt
- Edge Of Concrete
- Edge Of Gravel
- Edge Of Other
- Edge Of Shoulder
- Electric Transformer/Power Junction Box
- Fence Barbwire
- Fence Chainlink
- Fence Electric
- Fence Miscellaneous
- Fence Rock
- Fence Snow
- Fence Wood
- Fence Woven
- Fire Hydrant
- Flag Pole
- Flower Bed
- Gas Valve Or Meter
- Gas Pump Island
- Grain Bin
- Guardrail
- Gutter
- Guy Pole
- Haystack
- Highway ROW Marker
- Interstate Close Gate
- Iron Pin
- Irrigation Ditch
- Lake Edge
- Lawn Sprinkler
- Mailbox
- Manhole Electric
- Manhole Gas
- Manhole Miscellaneous
- Manhole Sanitary Sewer
- Manhole Storm Sewer
- Manhole Telephone
- Manhole Water
- Merry-Go-Round
- Microwave Radio Tower
- Miscellaneous Line
- Miscellaneous Property Corner
- Miscellaneous Post
- Overhang Or Encroachment
- Overhead Utility Line — OH —
- Parking Meter
- Pedestrian Push Button Pole
- Pipe With End Section
- Pipe With Headwall
- Pipe Without End Section
- Playground Slide
- Playground Swing
- Power And Light Pole
- Power And Telephone Pole
- Power Meter
- Power Pole
- Power Pole And Transformer
- Power Tower Structure
- Propane Tank
- Property Pipe
- Property Pipe With Cap
- Property Stone
- Public Telephone
- Railroad Crossing Signal
- Railroad Milepost Marker
- Railroad Profile
- Railroad ROW Marker
- Railroad Signs
- Railroad Switch
- Railroad Track
- Railroad Trestle
- Rebar
- Rebar With Cap
- Reference Mark
- Retaining Wall
- Riprap
- River Edge
- Rock And Wire Baskets
- Rockpiles
- Satellite Dish
- Septic Tank
- Shrub Tree
- Sidewalk
- Sign Face
- Sign Post
- Slough Or Marsh
- Spring
- Stream Gauge
- Street Marker
- Subsurface Utility Exploration Test Hole
- Telephone Fiber Optics — T/F —
- Telephone Junction Box
- Telephone Pole
- Television Cable Jct Box
- Television Tower
- Test Wells/Bore Holes
- Traffic Sign Double Face
- Traffic Sign One Post
- Traffic Sign Two Post
- Traffic Signal
- Trash Barrel
- Tree Belt
- Tree Coniferous
- Tree Deciduous
- Tree Stumps
- Triangulation Station
- Underground Electric Line — P —
- Underground Gas Line — G —
- Underground High Pressure Gas Line — HG —
- Underground Sanitary Sewer — S —
- Underground Storm Sewer — S —
- Underground Tank
- Underground Telephone Line — T —
- Underground Television Cable — TV —
- Underground Water Line — W —
- Water Fountain
- Water Hydrant
- Water Meter
- Water Tower
- Water Valve
- Water Well
- Weir Rock
- Windmill
- Wingwall
- Witness Corner

- State and National Line
- County Line
- Section Line
- Quarter Line
- Sixteenth Line
- Property Line
- Construction Line
- Existing R.O.W. Line
- New R.O.W. Line
- Cut and Fill Limits
- Existing Control of Access Line
- New Control of Access Line
- Proposed R.O.W. Line (After Property Disposal)

- Drainage Arrow

- Remove Concrete Pavement
- Remove Concrete Driveway Pavement
- Remove Asphalt Concrete Pavement
- Remove Concrete Sidewalk
- Remove Concrete Median Pavement
- Remove Concrete Curb and/or Gutter

- Detectable Warning Pedestrian Push Button Pole and 30" x 48" Clear Space with 1.5% slope

Plot Scale - 1:200

Plotted From - TRPR13418

File - U:\rdpr\day08\DbLegend.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B14	B32

Plotting Date: 03/17/2025

13+24-50' L
Take Out 24"-72' RCP
(Incidental Work, Grading)

13+24-47' R
Take Out 24"-68' RCP
(Incidental Work, Grading)

13+21 L (20 ac)
Install 30" - 68' CMP
& 2 Safety Ends

13+21 R (16 ac)
Install 24" - 86' CMP
& 2 Safety Ends

20+43-47' R
Take Out 24"-58' CMP
(Incidental Work, Grading)

Sec 32 - T124N - R55W

Sec 33 - T124N - R55W

BEGIN P 0025(100)196
BEGIN GRADING
Station 9+00.00

1/16 Line

Vevang Properties, LLC
(INFORMATION ONLY)

SE1/4 SE1/4

T/F

0+00

5+00

N 88°00'37" E

10+00

200'

13+07.39

200'

15+00

Section Line
438th Avenue
13+21.65

33'

66'

13+56.73-99.97'
13+57.03 -114.00'

SW1/4

21+49-99.54'

W

T/F

200'

20+00

Present SD Hwy 25

33'

Section Line

SW1/4

Government Lot 1

Huggett Farms, LLP
Parcel 1

11+63-100'

13+21.86-100.03'
13+21.91-123'

Sec 5 - T123N - R55W

OH

16+98-185'

19+06-156'

20+40 R
Elim Ent

20+26.84-100.03'
20+58-106.29'

Government Lot 4

Huggett Farms, LLP
Parcel 2

LA Properties, LLC
Parcel A1

PI 24+07.26
N 618128.99
E 2623801.83
Del 32°07'29" L
Dc 1°30'00"
T 1099.87'
L 2141.81'
R 3820.00'

Parcel 1
11+63.00 to 13+21.91 R
Temporary Easement containing
0.1 ac, more or less

Parcel A1
13+56.73 to 21+49 L
Temporary Easement containing
0.4 ac, more or less

Parcel 2
13+21.86 to 20+58 R
Temporary Easement containing
0.9 ac, more or less

Plot Scale - 1:200

Plotted From - TRPR17192

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B15	B32

Plotting Date: 03/24/2025

9+00
Begin Work

13+21 L
28' Int Rd
13+21 R
24' Ent

PVI 13+00
Elev 1815.10

RDG -1.4000%
LDG -1.8800%
RDG -2.0556%
LDG -2.4222%
LDG -0.6667%
0.0000%

LDGPI 10+00
Elev 1813.80

RDGPI 9+00
Elev 1815.20

RDGPI 12+00
Elev 1811.00

LDGPI 15+00
Elev 1804.40

LDGPI 19+50
Elev 1793.50

RDGPI 21+00
Elev 1792.50

LDGPI 22+50
Elev 1791.50

PVI 21+00
Elev 1798.60

L 800.00ft
G1 -1.1627%
G2 -2.0625%
K 889

L 800.00ft
G1 -2.0625%
G2 0.0000%
K 388

CP 139
13+12 - 73'R
refmrk
Elev 1814.25

CP 601
17+06 - 21'L
refmrk
Elev 1803.32

1819.75 1818.53 1817.20 1815.76 1814.20 1812.53 1810.75 1808.86 1806.85 1804.92 1803.24 1801.82 1800.66 1799.76 1799.12 1798.73 1798.60 1798.60 1798.60 1798.60 1798.60 1798.60

1930 1920 1910 1900 1890 1880 1870 1860 1850 1840 1830 1820 1810 1800 1790 1780 1770 1760 1750

0+00 5+00 10+00 15+00 20+00 25+00 30+00

Plot Scale - 1:200

Plotted From - TRPP13418

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B16	B32

Plotting Date: 04/29/2025 Rev 04/25/25 RG

33+34
Take Out 48"-82' RCP
(Incidental Work, Grading)

33+50 (Equalizer 70 ac L & 296 ac R)
Install 54"- 94' CMP
& 2 Flared Ends

41+64
Take Out 4'x6'-56' RCCP
(Incidental Work, Grading)

37+53 L
Install 42"- 84' CMP
& 2 Flared Ends

39+50 (Equalizer 31 ac)
Install 42"- 98' CMP
& 2 Flared Ends

42+14
Take Out 30"-78' RCP
(Incidental Work, Grading)

41+58 R (26 ac)
Install 24"- 88' CMP
& 2 Safety Ends

Sec 33 - T124N - R55W

37+94 L
Refurbish single mailbox

LA Properties, LLC
Parcel A2

L. A. LESNAR ADDITION

LA Properties, LLC
Parcel A1

SW1/4

LOT 1

35+98.77-99.15'
36+00.22-153'

38+02.24-100.06'
38+04.64-153'

Hazelden Lake

42+22.03 1/4 Line

Vevang Properties, LLC
Parcel 3

50+99-100'

52+13-170'

SE1/4

N 55°53'07" E

Present SD Hwy 25

200'

45+00

50+00

55+00

60+00

37+30 R
Elim Ent

40+78-169'
41+00.00-100.06'
41+04.44-186'
41+58.81-100'

41+32-203'

41+97-100'

46+68-99.88'

49+50-141'

53+75-127'

54+52-99.70'

Hazelden Lake

SW1/4

LA Properties, LLC
Parcel A1

Section Line

SE1/4

Vevang Properties, LLC
Parcel 3

Parcel A2
35+98.77 to 38+04.64 L
Temporary Easement containing
0.3 ac, more or less

Parcel A1
40+78 to 41+58.81 R
Temporary Easement containing
0.1 ac, more or less

Parcel 3
41+04.44 to 41+97 R
Temporary Easement containing
0.1 ac, more or less

Parcel 3
46+68 to 54+52 R
Temporary Easement containing
0.5 ac, more or less

Parcel 3
50+99 to 70+01.88 L
Temporary Easement containing
2.8 ac, more or less

Plot Scale - 1:200

Plotted From - TRPR123418

File - U:\drdprj\day08\B6\030.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B17	B32

Plotting Date: 03/24/2025

EXC	125685	EMB	85236		
UNDERCUT	16649	39.7%	33839	119075	
MUCK	21746	UNDERCUT	16649		
TOTAL	164080	39.7%	6610	23259	
		WASTE		21746	
		TOTAL		164080	

Haul 3,361,800 C Y Sta

37+52 L
24' Ent

41+58 R
24' Ent

58+00 L
24' Ent

PVI 53+75
Elev 1838.44

-0.6718%

L 800.00ft
G1 0.0000%
G2 3.9838%
K 201

LDG 0.7367%

LDG -3.1000%

LDGPI 52+50
Elev 1824.58

LDGPI 58+50
Elev 1829.00

RDG 6.6667%

L 1200.00ft
G1 3.9838%
G2 -0.6718%
K 258

RDGPI 48+00
Elev 1811.00

0.0000%

LDG -0.3311%

LDGPI 35+48
Elev 1790.00

LDGPI 38+50
Elev 1789.00

PVI 43+75
Elev 1798.60

RDGPI 46+50
Elev 1801.00

FL 1788.95
FL 1789.07

FL 1788.60
FL 1788.69

CP 602
47+68-74' R
remrk
Elev 1814.95

1798.60 1798.60 1798.60 1798.60 1798.60 1798.60 1798.60 1798.60 1798.60 1798.60 1798.62 1798.99 1799.86 1801.23 1803.10 1805.46 1808.33 1811.69 1815.52 1819.21 1822.52 1825.43 1827.96 1830.10 1831.86 1833.22 1834.20 1834.79 1834.99 1834.80 1834.24

30+00 35+00 40+00 45+00 50+00 55+00 60+00

1930 1920 1910 1900 1890 1880 1870 1860 1850 1840 1830 1820 1810 1800 1790 1780 1770 1760 1750

Plot Scale - 1:200

Plotted From - TRPP13418

File - U:\drdprj\day08D6\030v.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B18	B32

Plotting Date: 07/01/2026 Rev 07-01-2026 RG

60+61
Take Out 24"-119' CMP
(Incidental Work, Grading)

60+50 (5 ac)
Install 24"-122' RCP
& 2 Sloped Ends

3+04- 28' R (xr73R)
Retain 18"-36' CMP

3+04- 28' R (xr73R)
Retain Ent

0+77 (XR73R) (4 ac)
Install 24" - 118' CMP
& 2 Sloped Ends

73+48 - 153' R
Take Out 18"-156' RCP
(Incidental Work, Grading)

74+29
Take Out 18"-150' CMP
(Incidental Work, Grading)

75+00 (7 ac)
Install 24"-146' RCP
(CL2-44', CL3-66', CL2-36')
& 2 Sloped Ends

88+09
Take Out 18"-76' RCP
(Incidental Work, Grading)

88+00 (2 ac)
Install 24"-76' RCP
& 2 Sloped Ends

Sec 33 - T124N - R55W

Vevang Properties, LLC
Parcel 3

David J. Koslowski and Elaine K. Koslowski
and Jesse D. Koslowski
United States of America
(Department of Agriculture)
(Natural Resources Conservation Service)

Parcel 4

SVARE FLOOD PLAIN EASEMENT

SE1/4

NE1/4

62+14.56-100.00'
61+92-158'
63+63-244'
60+00
61+98-100'
63+96-148'
64+63-157'
66+56-155'
66+73-140.36'
70+73.17
1/4 Line
67+68-120'
70+01.88-100.00'
69+86.49-120'
70+02 L
Begin type 2 fence
2 PP
3 PP
PI 73+31.22
N 620923.09
E 2627926.43
Del 57°22'41" L
Dc 2°48'31"
T 1116.36'
L 2042.93'
R 2040.00'
Type 2 fence
76+50.00-100.00'
77+87.00-162.00'
80+06-159'
82+57.79-100.00'
2 PP
Type 2 fence
N 1°29'34" W
90+00
85+00
82+57.79
80+00
75+00
70+00
65+00
100'
200'
150'
xr73R
33'
3+47
591.17'

SW1/4
Vevang Properties, LLC
Parcel 3

SNAZA ADDITION

NW1/4
Lydel Snaza & Tanya Snaza
Parcel A3

Section Line
439th Avenue

xr73R
PI 2+12.28
N 621079.81
E 2627920.01
Del 63°58'41" R
Dc 33°42'12"
T 106.18'
L 189.83'
R 170.00'

Minnesota Dakota Generating Company
(INFORMATION ONLY)

Sec 34 - T124N - R55W

Parcel 3
61+98 to 66+73 R
Temporary Easement containing
0.3 ac, more or less

Parcel 4
76+50 to 94+77 L
Temporary Easement containing
2.5 ac, more or less

Plot Scale - 1:200
Plotted From - TRPR13418
File - U:\rdpr\day08\B0160.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B19	B32

Plotting Date: 03/24/2025

Plot Scale - 1:200

xr73R

xr73R

EXC	658	EMB	2217		
CONTRACTOR FURNISHED BORROW	2224	30.0%	665		2882
TOTAL	2883		TOTAL		2882

87+93

PVI 0+25
Elev 1828.02
PVI 1+00
Elev 1827.64
PVI 3+14
Elev 1822.33
L 106.00ft
G1 -5.0000%
G2 1.4098%
K 17
-0.5000%
-5.0000%
1.4098%
1.2805%
PVI 2+30
Elev 1821.14
L 100.00ft
G1 -0.5000%
G2 -5.0000%
K 22
PVI 3+38
Elev 1822.64

1827.08
1822.80
1822.13
0+00
3+47

62+50 R
24' Ent

73+60 R
28' Int Rd
75' Rad BK
65' Rad Ah

LDG -3.1000%
LDG 3.4133%
LDGPI 62+00
Elev 1827.92
LDGPI 60+50
Elev 1822.80
FL 1822.11
FL 1822.75

RDG -2.7867%
RDG -2.2000%
RDG 2.7167%
-0.6718%
RDGPI 69+50
Elev 1825.36
RDGPI 72+50
Elev 1817.00
RDGPI 75+00
Elev 1811.50
RDGPI 78+00
Elev 1819.65

88+25 L
D Block
Elev 1812.0
PVI 89+00
Elev 1814.76
LDGPI 88+00
Elev 1810.17
LDG -2.2569%
L 800.00ft
G1 -0.6718%
G2 -2.0219%
K 593

CP 141
80+65-88' L
remrk
Elev 1828.39

CP 10195
83+91-101' L
remrk
Elev 1825.69

1834.24 1833.57 1832.90 1832.22 1831.55 1830.88 1830.21 1829.54 1828.87 1828.19 1827.52 1826.85 1826.18 1825.51 1824.83 1824.16 1823.49 1822.82 1822.15 1821.48 1820.80 1820.13 1819.46 1818.79 1818.12 1817.45 1816.69 1815.76 1814.67 1813.41 1811.98

60+00 65+00 70+00 75+00 80+00 85+00 90+00

1950 1940 1930 1920 1910 1900 1890 1880 1870 1860 1850 1840 1830 1820 1810 1800 1790 1780 1770

Plotted From - TRPR13418

File - U:\rdprj\day08D6\060v.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B20	B32

Plotting Date: 03/24/2025

96+07
Take Out 36"-95' RCP
(Incidental Work, Grading)

97+76-60' L
Take Out 36"-60' RCP
(Incidental Work, Grading)

97+78- 62' R
Take Out 36"-80' RCP
(Incidental Work, Grading)

104+80-46' L
Take Out 18"-66' CMP
(Incidental Work, Grading)

90+75- L
Install 18"-106' CMP
& 2 Safety Ends

90+75 - R
Install 18"-64' CMP
& 2 Safety Ends

97+00 (79)
Install 48"-102' CMP
& 2 Flared Ends

97+75- L (25 ac)
Install 24"-82' CMP
& 2 Safety Ends

97+75 R (38 ac)
Install 42"-92' CMP
& 2 Flared Ends

104+87 L (23 ac)
Install 30"-54' CMP
& 2 Safety Ends

104+75 R
Refurbish single mailbox

Sec 33 - T124N - R55W

David J. Koslowski and Elaine K. Koslowski
and Jesse D. Koslowski
United States of America
(Department of Agriculture)
(Natural Resources Conservation Service)

Parcel 4

PI 97+74.74
N 623555.50
E 2627857.83
Del 0°34'03" L
Dc 0°06'37"
T 257.57'
L 515.13'
R 52000.00'

90+72 L
1-24' barbed
wire gate

Hazelden Lake

Stream Crossing

SVARE FLOOD PLAIN EASEMENT

97+32 L
End type 2 fence

3 PP

NE1/4

3-2 PP

Section Line

98+10 L
Begin type 2 fence

104+63 L
End type 2 fence

SE1/4 SE1/4

3 PP

Sec 28 - T124N - R55W

Hazelden Lake

Tyler Lee and Shannon Lee
Parcel A4

LEE OUTLET 1

105+00 to 115+00 L
Do Not Disturb Trees and Bushes

110+14 L
Begin type 2 fence

3 PP

LEE OUTLET 2

Tyler Lee and
Shannon Lee
(INFORMATION ONLY)

115+00 L
End type 2 fence

N1/2 SE1/4

3 PP

N 1°29'34" W

Section Line

200'

200'

Present SD Hwy 25

Section Line

90+00 95+00 100+00 105+00 110+00 115+00 120+00

90+36-100' 90+40-112' 90+94-112' 90+98-100'

SNAZA ADDITION

91+07-100' R
Do Not Disturb
Power Pole

NW1/4

Lydel Snaza & Tanya Snaza
Parcel A3

97+04-100.34' 97+42.74-118' 97+42.61-100.49'

129th Street

97+74.74

98+08.38-100.48' 98+08.49-118' 98+95-100.18'

SW1/4 SW1/4

1/16 Line 110+95.18

111+86-100' 112+52-115' 113+75-100'

NW1/4 SW1/4

END GRADING
Station 115+00.00

Tyler Lee and Shannon Lee
Parcel A5

Sec 34 - T124N - R55W

Sec 27 - T124N - R55W

Parcel A3
90+36 to 90+98 R
Temporary Easement containing
0.1 ac, more or less

Parcel A3
97+04 to 97+42.74 R
Temporary Easement containing
0.1 ac, more or less

Parcel A4
98+07.32 to 104+66.21 L
Temporary Easement containing
0.6 ac, more or less

Parcel A4
104+66.14 to 107+16.27 L
Temporary Easement containing
0.1 ac, more or less

Parcel A5
98+08.38 to 98+95 R
Temporary Easement containing
0.1 ac, more or less

Parcel A5
111+86 to 113+75 R
Temporary Easement containing
0.1 ac, more or less

Plot Scale - 1:200

Plotted From - TRPR13418

File - U:\rdp\prj\day08D6\090.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B21	B32

Plotting Date: 03/21/2025

EXC	8727	EMB	32083		
UNDERCUT	3473	40.0%	12833	44916	
MUCK	6190	UNDERCUT	3473		
CONTRACTOR FURNISHED BORROW	37578	40.0%	1389	4862	
TOTAL	55968	WASTE		6190	
		TOTAL		55968	

Haul	3,000	C Y Sta
Borrow Haul	426,800	C Y Sta

115+00
End Work

90+75 L
24' Ent

90+75 R
24' Ent

97+75 L
28' Int Rd

97+75 L
28' Int Rd

104+87 L
24' Ent

L 800.00ft
G1 -2.0219%
G2 0.0012%
K 395

L 800.00ft
G1 0.0012%
G2 3.8929%
K 206

PVI 115+00
Elev 1814.95

3.8929%

LDG -2.2569%

L 800.00ft
G1 -0.6718%
G2 -2.0219%
K 593

LDGPI 94+50
Elev 1795.50

PVI 97+00
Elev 1798.58

0.0012%

RDG 0.5250%

LDG 0.2646%

LDGPI 109+50
Elev 1793.65

PVI 110+80
Elev 1798.60

LDGPI 98+35
Elev 1790.70

RDGPI 99+00
Elev 1790.85

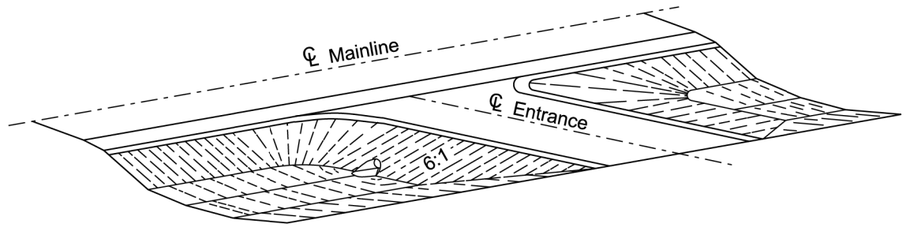
RDGPI 97+00
Elev 1789.80

1811.98 1810.38 1808.61 1806.67 1804.78 1803.13 1801.74 1800.61 1799.72 1799.09 1798.71 1798.59 1798.59 1798.59 1798.59 1798.59 1798.61 1798.95 1799.78 1801.09 1802.89 1805.18 1807.95 1811.21 1814.95

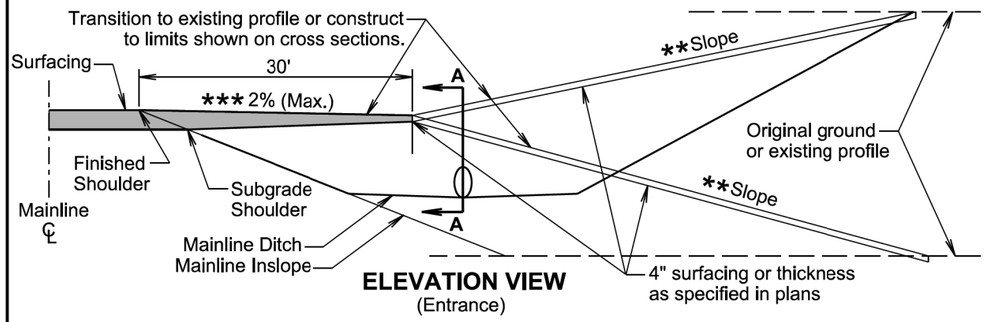
90+00 95+00 100+00 105+00 110+00 115+00 120+00

1930 1920 1910 1900 1890 1880 1870 1860 1850 1840 1830 1820 1810 1800 1790 1780 1770 1760 1750

Plot Scale - 1:200
TRPR13418
Plotted From -
File - U:\drlprj\day08D6\090v.dgn



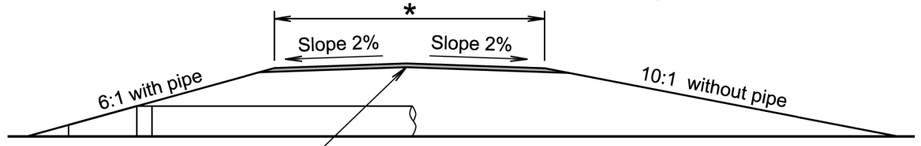
PERSPECTIVE OF ENTRANCE



ELEVATION VIEW
(Entrance)

*** 2% When on the inside of superelevation and 0% or flat when on outside of superelevation.

** Entrance maximum slope is typically 10:1 for field entrances and 15:1 for farm/residential entrances.



SECTION A-A
(Entrance and Intersecting Road)

* The finished surfacing width is stated elsewhere in the plans. The subgrade width is 4' wider than the finished surfacing width unless stated otherwise in the plans.

GENERAL NOTES:

The ditch section shown above in the perspective view is only for illustrative purpose.

The elevation view above is typical for either a ditch cut or fill section. Entrances that vary from above should be specified in the plans.

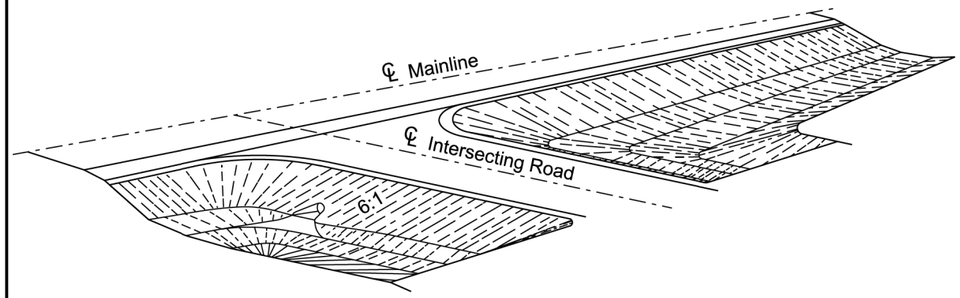
Pipe length will be adjusted if necessary during construction to obtain the 6:1 slope. For grading projects, the pipe length is estimated typically using a 4" thickness of surfacing directly over the subgrade above the pipe.

The transition area between the mainline inslope and the entrance or intersecting road inslope will be rounded to eliminate an abrupt transition.

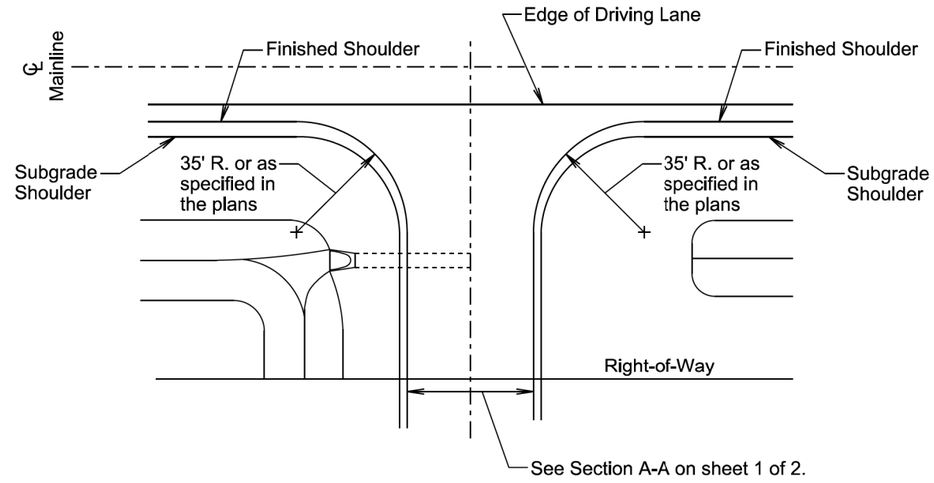
The turning radii will be 35' for intersecting roads and entrances unless stated otherwise in the plans.

November 19, 2021

Published Date: 2027	SDDOT	INTERSECTING ROADS AND ENTRANCES	PLATE NUMBER 120.01
			Sheet 1 of 2



PERSPECTIVE OF INTERSECTING ROAD



PLAN VIEW

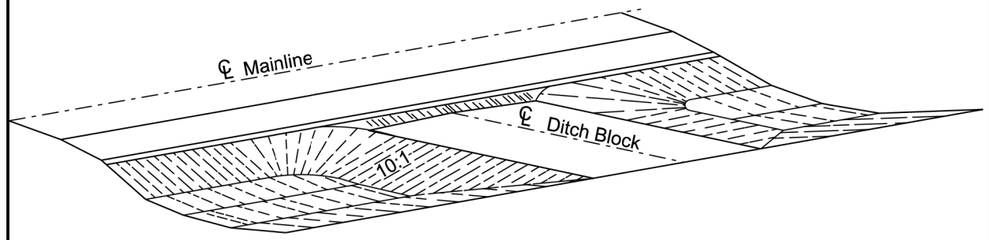
GENERAL NOTES:

The 6:1 or 10:1 intersecting road inslope will transition to the existing intersecting road inslope near the right-of-way or at a location as determined by the Engineer.

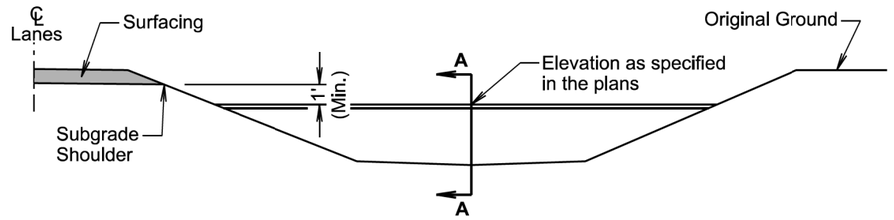
November 19, 2021

Published Date: 2027	SDDOT	INTERSECTING ROADS AND ENTRANCES	PLATE NUMBER 120.01
			Sheet 2 of 2

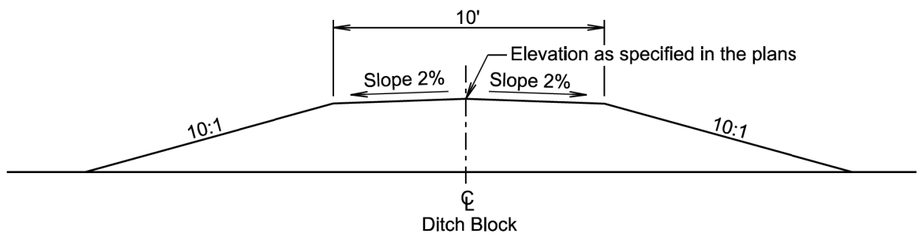
Plot Scale - 1:200
Plotted From - TRPR13418
File - ...\day08D6\StdPlateSectionB.dgn



PERSPECTIVE OF DITCH BLOCK



ELEVATION VIEW



SECTION A-A

GENERAL NOTES:

The ditch section shown above in the perspective and elevation view is only for illustrative purpose.

The inslopes of the ditch block will be 10:1 or as specified in the plans.

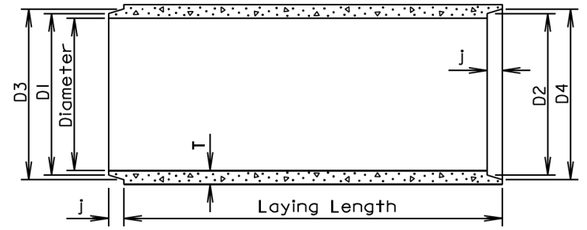
The transition area between the mainline inslope and the ditch block inslope will be rounded to eliminate an abrupt transition.

September 14, 2018

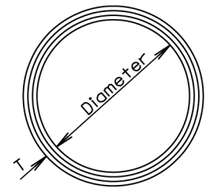
Published Date: 2027	SDDOT	DITCH BLOCK	PLATE NUMBER 120.02
			Sheet 1 of 1

TOLERANCES IN DIMENSIONS

Diameter: ±1.5% for 24" Dia. or less and ±1% or 3/8" whichever is more for 27" Dia. or greater.
Diameters at joints: ± 3/16" for 30" Dia. or less and ± 1/4" for 36" or greater.
Length of joint (j): ± 1/4".
Wall thickness (T): not less than design T by more than 5% or 3/16", whichever is greater.
Laying length: shall not underrun by more than 1/2".



LONGITUDINAL SECTION
(* Tongue and Groove Style Shown)



END VIEW

GENERAL NOTES:

Construction of R. C. P. shall conform to the requirements of Section 990 of the Specifications.

Not more than 2 four-foot sections shall be permitted near the ends of any culvert. Four-foot lengths shall be used only to secure the required length of culvert.

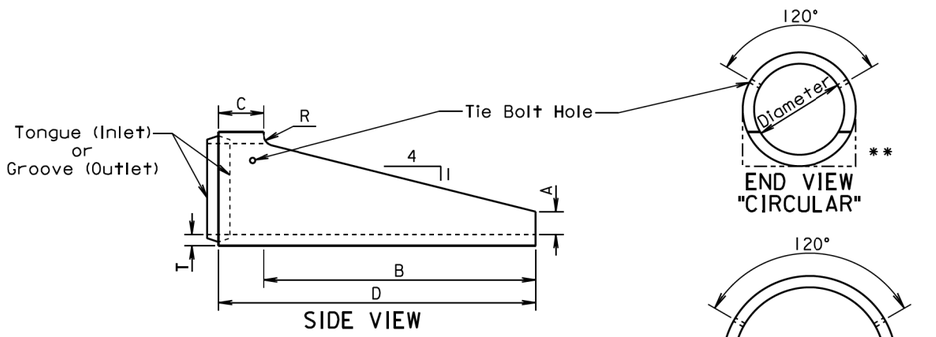
* Unless otherwise specified in the plans, the RCP may be either tongue and groove or bell and spigot style.

Diam. (in.)	Approx. Wt. /Ft. (lb.)	T (in.)	J (in.)	D1 (in.)	D2 (in.)	D3 (in.)	D4 (in.)
12	92	2	1 3/4	13 1/4	13 5/8	13 7/8	14 1/4
15	127	2 1/4	2	16 1/2	16 7/8	17 1/4	17 5/8
18	168	2 1/2	2 1/4	19 5/8	20	20 3/8	20 3/4
21	214	2 3/4	2 1/2	22 7/8	23 1/4	23 3/4	24 1/8
24	265	3	2 3/4	26	26 3/8	27	27 3/8
27	322	3 1/4	3	29 1/4	29 5/8	30 1/4	30 5/8
30	384	3 1/2	3 1/4	32 3/8	32 3/4	33 1/2	33 7/8
36	524	4	3 3/4	38 3/4	39 1/4	40	40 1/2
42	685	4 1/2	4	45 1/8	45 5/8	46 1/2	47
48	867	5	4 1/2	51 1/2	52	53	53 1/2
54	1070	5 1/2	4 1/2	57 7/8	58 3/8	59 3/8	59 7/8
60	1296	6	5	64 1/4	64 3/4	66	66 1/2
66	1542	6 1/2	5 1/2	70 5/8	71 1/8	72 1/2	73
72	1810	7	6	77	77 1/2	79	79 1/2
78	2098	7 1/2	6 1/2	83 3/8	83 7/8	85 5/8	86 1/8
84	2410	8	7	89 3/4	90 1/4	92 1/8	92 5/8
90	2740	8 1/2	7	95 3/4	96 1/4	98 1/8	98 5/8
96	2950	9	7	102 1/8	102 5/8	104 1/2	105
102	3075	9 1/2	7 1/2	109	109 1/2	111 1/2	112
108	3870	10	7 1/2	115 1/2	116	118	118 1/2

April 17, 2026

Published Date: 2027	SDDOT	REINFORCED CONCRETE PIPE	PLATE NUMBER 450.01
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - TRPR13418
File - ...\day08\D6\StdPlateSectionB.dgn



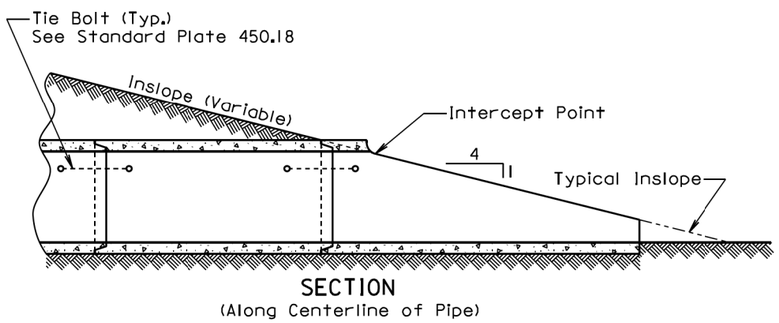
Dia. (in.)	T (in.)	A (in.)	B (in.)	C (in.)	D (in.)	R (in.)
FOR CIRCULAR PIPE						
24	3	6	72	12	84	3
30	3½	7½	90	12	102	3½
FOR ARCH PIPE						
* 24	3	6	48	12	60	3
* 30	3½	7½	60	12	72	3½
* 36	4½	8⅝	66	30	96	0
* 42	4½	10	77¼	18¾	96	0

ALTERNATE

Dia. (in.)	T (in.)	A (in.)	B (in.)	C (in.)	D (in.)	R (in.)
FOR CIRCULAR PIPE						
24	3	9	72	12	84	0
30	3½	11	90	12	102	0
FOR ARCH PIPE						
* 24	3	9	48	12	60	0
* 30	3½	11	60	12	72	0

* Equivalent Diameter of Circular R.C.P.

** Acceptable Flat Bottom Alternate.



GENERAL NOTE:

The length of concrete pipe shown in the construction plans is between sloped ends.

September 22, 2006

Published Date: 2027	SDDOT	R. C. P. SLOPED ENDS	PLATE NUMBER 450.13
			Sheet 1 of 1

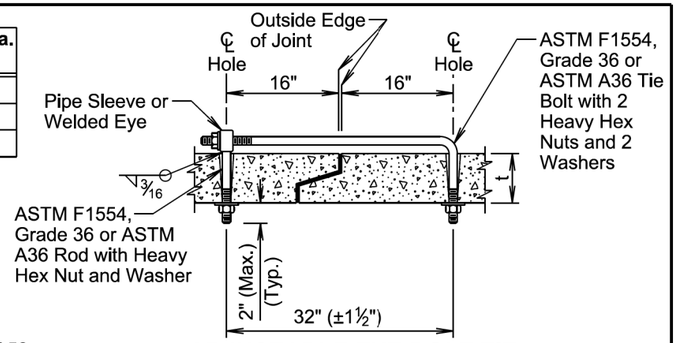
Wall "t" (in.)	Rod Dia. (in.)	Pipe Sleeve Dia. (nominal)
≤ 3¼	⅝	¾
3½-6½	¾	1
≥ 7	1	1¼

GENERAL NOTES:

Tie bolts will conform to ASTM F1554, Grade 36 or ASTM A36. Nuts will be heavy hex conforming to ASTM A563. Washers will conform to ASTM F436.

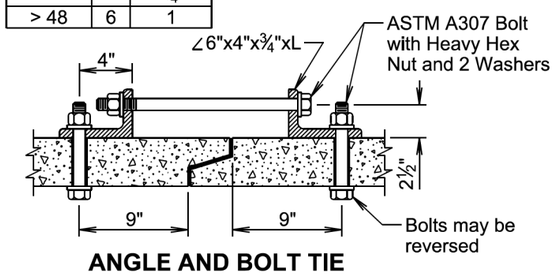
Pipe Sleeve will conform to ASTM A53, Grade B or ASTM A500, Grade B or C.

Galvanize adjustable eye bolt tie assembly in accordance with ASTM A153.



ADJUSTABLE EYE BOLT TIE

Pipe Dia. (in.)	"L" (in.)	Bolt Dia. (in.)
≤ 48	4	¾
> 48	6	1



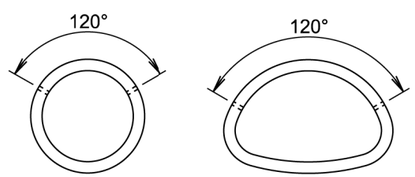
ANGLE AND BOLT TIE

GENERAL NOTES:

Angles will conform to ASTM A36.

Bolts will conform to ASTM A307. Nuts will be heavy hex conforming to ASTM A563. Washers will conform to ASTM F436.

Galvanize angles, bolts, nuts, and washers in accordance with ASTM A153.



END VIEW (Circular)

END VIEW (Arch)

GENERAL NOTES:

In lieu of the tie bolts detailed above other types of tie bolt connections may be installed as approved by the Office of Bridge Design.

All pipe sections of R.C.P. and R.C.P. Arch will be tied with tie bolts except for pipe located between drop inlets, manholes, and junction boxes. All pipe sections of pipes that only enter or exit drop inlets, manholes, and junction boxes will be tied with tie bolts.

There will be no separate measurement or payment for the tie bolts. The cost for furnishing and installing the tie bolts will be incidental to the contract unit price per foot for the corresponding bid item for R.C.P. or R.C.P. Arch.

April 8, 2025

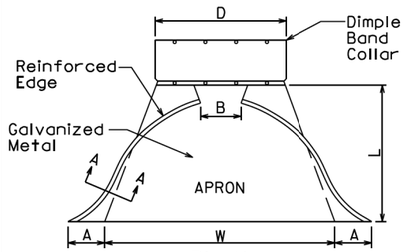
Published Date: 2027	SDDOT	TIE BOLTS FOR R.C.P. AND R.C.P. ARCH	PLATE NUMBER 450.18
			Sheet 1 of 1

Plot Scale - 1:200

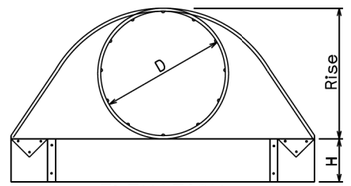
Plotted From - TRPR13418

File - ...\day08\D6\StdPlateSectionB.dgn

Alternate Type Connector Sections may be used with approval of the Engineer.



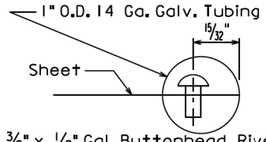
PLAN



ELEVATION

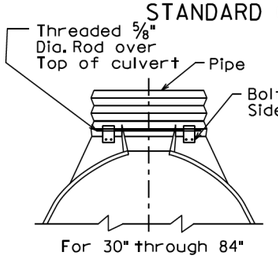
Dia. D (in.)	Ga.	DIMENSIONS (in.) A	B	H	L	W	Approx. Slope	Body
12	16	6	6	6	21	24	2½:1	1 Pc.
15	16	7	8	6	26	30	2½:1	1 Pc.
18	16	8	10	6	31	36	2½:1	1 Pc.
21	16	9	12	6	36	42	2½:1	1 Pc.
24	16	10	13	6	41	48	2½:1	1 Pc.
30	14	12	16	8	46	60	2½:1	1 Pc.
36	14	14	19	9	51	72	2½:1	2 Pc.
42	12	16	22	11	60	84	2½:1	2 Pc.
48	12	18	27	12	69	90	2¼:1	2 Pc.
54	12	18	30	12	78	102	2:1	3 Pc.
60	12	18	33	12	84	114	1¾:1	3 Pc.
66	12	18	36	12	87	120	1½:1	3 Pc.
72	12	18	39	12	87	126	1⅓:1	3 Pc.
78	12	18	42	12	87	132	1¼:1	3 Pc.
84	12	18	45	12	87	138	1⅙:1	3 Pc.

STANDARD CONNECTIONS

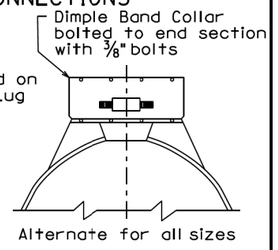


⅜" x ½" Gal. Buttonhead Rivets spaced 6" C. to C. Overall length of rivets=0.78"

TUBING ATTACHMENT DETAILS
SECTION A-A

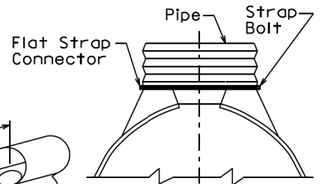


For 30" through 84"

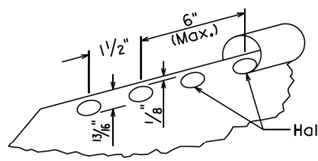


Alternate for all sizes

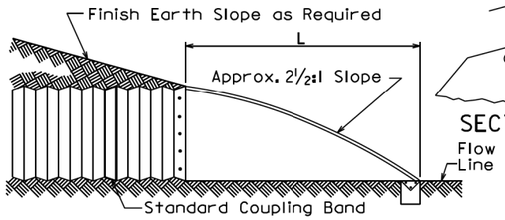
NOTE:
Tubing is slipped over the sheet and rivets or lugs prior to forming operations of the apron.



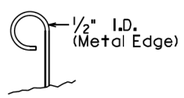
For 12" through 24" only



SECTION A-A (alternate)



TYPICAL CROSS-SECTION



SECTION A-A (alternate)

GENERAL NOTES:

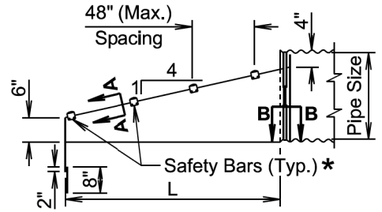
All 3 pc. bodies shall have 12 Ga. sides and 10 Ga. center panels. Width of center panels shall be greater than 20% of the pipe periphery. Multiple panel bodies to have lap seams tightly joined by ⅜" Dia. galvanized rivets or bolts.

For 60" through 84" sizes, reinforced edges shall be supplemented with galvanized stiffener angles. The angles will be 2" x 2" x ¼" for 60" through 72" diameters and 2½" x 2½" x¼" for 78" and 84" diameters. The angles shall be attached by ⅜" diameter galvanized nuts and bolts.

Rivets and Bolts shall be ⅜" Dia. Min. for 10 Ga. and 12 Ga. sheet, and ⅝" Dia. Min. for 14 Ga. and 16 Ga. sheets. Tighten nuts with torque wrench to 25 lbs. torque.

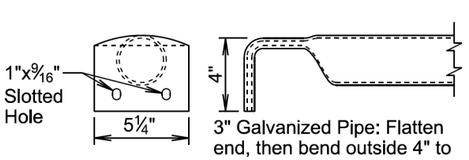
March 31, 2000

Published Date: 2027	SDDOT	C.M.P. FLARED ENDS	PLATE NUMBER 450.35
			Sheet 1 of 1



*Number of bars required will vary depending on the length of the end section.

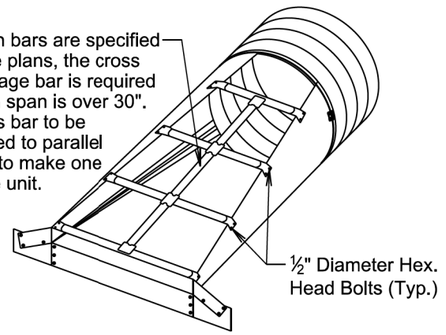
ELEVATION VIEW



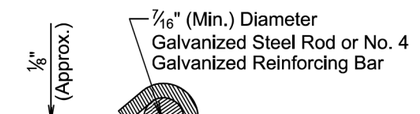
3" Galvanized Pipe: Flatten end, then bend outside 4" to match end section sides.

DETAIL OF SAFETY BARS

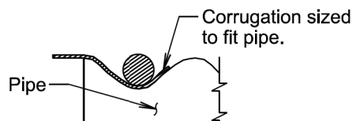
When bars are specified in the plans, the cross drainage bar is required when span is over 30". Cross bar to be welded to parallel bars to make one piece unit.



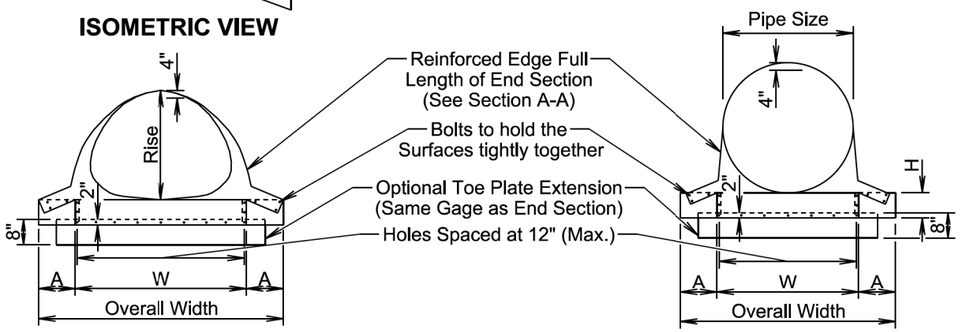
ISOMETRIC VIEW



SECTION A-A

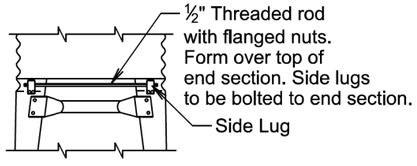


SECTION B-B

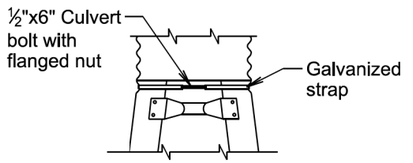


FRONT VIEW

FRONT VIEW



TYPE #2 CONNECTOR DETAIL
(For 30" and Larger)
(For 21"x15" and Larger)



TYPE #1 CONNECTOR DETAIL
(For 15" Through 24")

April 8, 2025

Published Date: 2027	SDDOT	C.M.P. SLOPED ENDS	PLATE NUMBER 450.37
			Sheet 1 of 2

Plot Scale - 1:200
Plotted From - TRPR13418
File - ...\day08\DGN\StdPlateSectionB.dgn

ARCH C.M.P. SLOPED ENDS										
Equiv. Dia. (Inch)	(Inches)		(Min.) Thick.		Dimensions (Inches)				L Dimensions	
	Span	Rise	Inch	Gage	A	H	W	Overall Width	Slope	Length (Inch)
18	21	15	.064	16	8	6	27	43	4:1	20
21	24	18	.064	16	8	6	30	46	4:1	32
24	28	20	.064	16	8	6	34	50	4:1	40
30	35	24	.079	14	12	9	41	65	4:1	56
36	42	29	.109	12	12	9	48	72	4:1	76
42	49	33	.109	12	16	12	55	87	4:1	92
48	57	38	.109	12	16	12	63	95	4:1	112
54	64	43	.109	12	16	12	70	102	4:1	132
60	71	47	.109	12	16	12	77	109	4:1	148
72	83	57	.109	12	16	12	89	121	4:1	188

CIRCULAR C.M.P. SLOPED ENDS								
Pipe Dia. (Inch)	(Min.) Thick.		Dimensions (Inches)				L Dimensions	
	Inch	Gage	A	H	W	Overall Width	Slope	Length (Inch)
15	.064	16	8	6	21	37	4:1	20
18	.064	16	8	6	24	40	4:1	32
21	.064	16	8	6	27	43	4:1	44
24	.064	16	8	6	30	46	4:1	56
30	.109	12	12	9	36	60	4:1	80
36	.109	12	12	9	42	66	4:1	104
42	.109	12	16	12	48	80	4:1	128
48	.109	12	16	12	54	86	4:1	152
54	.109	12	16	12	60	92	4:1	176
60	.109	12	16	12	66	98	4:1	200

GENERAL NOTES:

Safety bars will be provided when specified in the plans.

Sloped ends will be fabricated from galvanized steel and will conform to the requirements of the Specifications.

Safety bars will be fabricated from steel schedule 40 pipe in conformance with ASTM A53, grade B or HSS 3.5x.216 in conformance with ASTM A500, grade B or C.

Slotted holes for safety bar attachment will be provided for all end sections.

Attachment to circular pipes 15" through 24" diameter will be made with Type #1 straps. All other sizes will be attached with Type #2 rods and lugs.

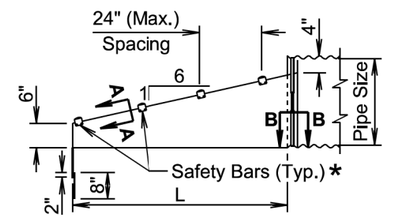
When stated in the plans, optional toe plate extension will be punched and bolted to end section apron lip with ⅜" diameter galvanized bolts. Steel for toe plate extension will be same gauge as end section. Dimensions will be overall width less 6" by 8" high.

Installation will be performed in accordance with the Specifications.

Cost of all work and materials required for fabrication and installation of sloped ends will be incidental to the bid items for the various sizes of sloped ends.

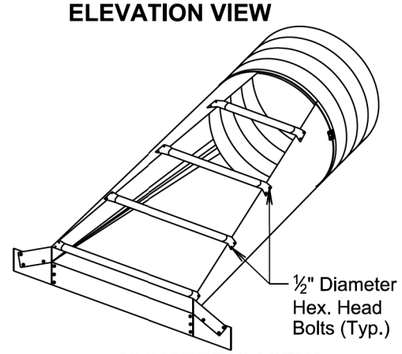
April 8, 2025

Published Date: 2027	SDDOT	C.M.P. SLOPED ENDS	PLATE NUMBER 450.37 Sheet 2 of 2

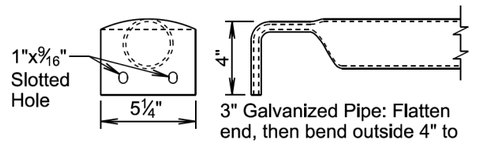


* Number of bars required will vary depending on the length of the end section.

ELEVATION VIEW



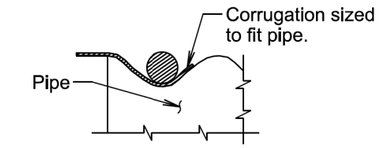
ISOMETRIC VIEW



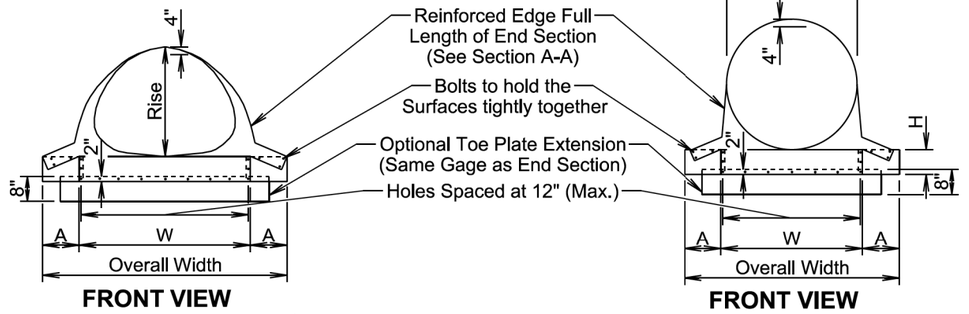
DETAIL OF SAFETY BARS



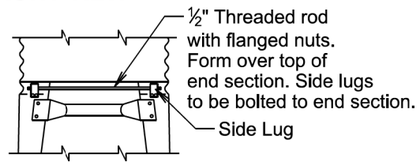
SECTION A-A



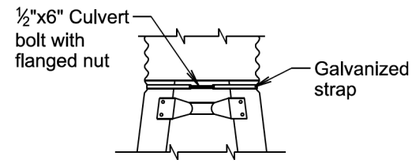
SECTION B-B



FRONT VIEW **FRONT VIEW**



TYPE #2 CONNECTOR DETAIL
(For 30" and Larger)
(For 21"x15" and Larger)



TYPE #1 CONNECTOR DETAIL
(For 15" Through 24")

April 8, 2025

Published Date: 2027	SDDOT	C.M.P. SAFETY ENDS	PLATE NUMBER 450.38 Sheet 1 of 2

Plot Scale - 1:200
Plotted From - TRPR13418
File - ...\day08\06\StdPlateSectionB.dgn

ARCH C.M.P. SAFETY ENDS										
Equlv. Dia. (Inch)	(Inches)		(Min.) Thick.		Dimensions (Inches)				L Dimensions	
	Span	Rise	Inch	Gage	A	H	W	Overall Width	Slope	Length (Inch)
18	21	15	.064	16	8	6	27	43	6:1	30
21	24	18	.064	16	8	6	30	46	6:1	48
24	28	20	.064	16	8	6	34	50	6:1	60
30	35	24	.079	14	12	9	41	65	6:1	84
36	42	29	.109	12	12	9	48	72	6:1	114
42	49	33	.109	12	16	12	55	87	6:1	138
48	57	38	.109	12	16	12	63	95	6:1	168
54	64	43	.109	12	16	12	70	102	6:1	198
60	71	47	.109	12	16	12	77	109	6:1	222
72	83	57	.109	12	16	12	89	121	6:1	282

CIRCULAR C.M.P. SAFETY ENDS								
Pipe Dia. (Inch)	(Min.) Thick.		Dimensions (Inches)				L Dimensions	
	Inch	Gage	A	H	W	Overall Width	Slope	Length (Inch)
15	.064	16	8	6	21	37	6:1	30
18	.064	16	8	6	24	40	6:1	48
21	.064	16	8	6	27	43	6:1	66
24	.064	16	8	6	30	46	6:1	84
30	.109	12	12	9	36	60	6:1	120
36	.109	12	12	9	42	66	6:1	156
42	.109	12	16	12	48	80	6:1	192
48	.109	12	16	12	54	86	6:1	228
54	.109	12	16	12	60	92	6:1	264
60	.109	12	16	12	66	98	6:1	300

GENERAL NOTES:

Safety bars will be provided when specified in the plans.

Safety ends will be fabricated from galvanized steel conforming to the requirements of the Specifications.

Safety bars will be fabricated from steel schedule 40 pipe in conformance with ASTM A53, grade B or HSS 3.5x.216 in conformance with ASTM A500, grade B or C.

Slotted holes for safety bar attachment will be provided for all end sections.

Attachment to circular pipes 15" through 24" diameter will be made with Type #1 straps. All other sizes will be attached with Type #2 rods and lugs.

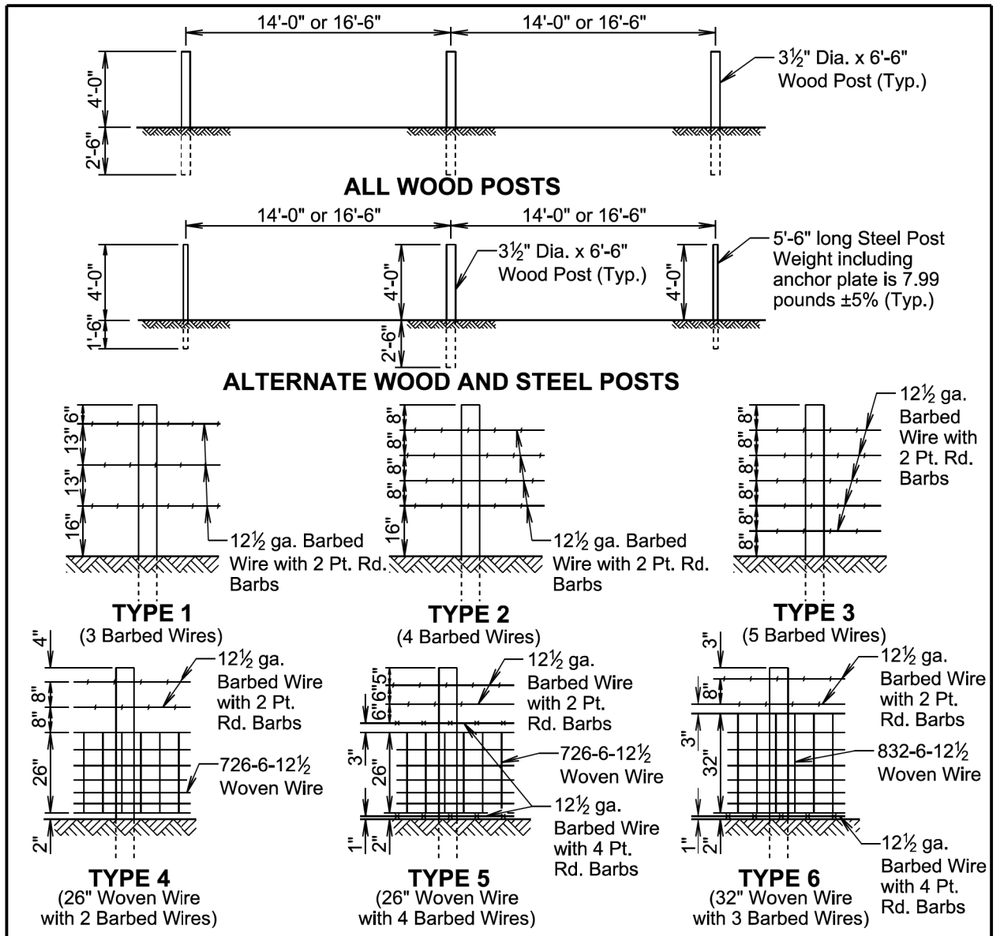
When stated in the plans, optional toe plate extension will be punched and bolted to end section apron lip with ⅜" diameter galvanized bolts. Steel for toe plate extension will be same gauge as end section. Dimensions will be overall width less 6" by 8" high.

Installation will be performed in accordance with the Specifications.

Cost of all work and materials required for fabrication and installation of safety ends will be incidental to the bid items for the various sizes of safety ends.

April 8, 2025

Published Date: 2027	SDDOT	C.M.P. SAFETY ENDS	PLATE NUMBER 450.38
			Sheet 2 of 2



TYPE OF FENCE		LINE POST SPACING	BARBED WIRE		WOVEN WIRE
TYPE	DESCRIPTION		WIRE GAGE	NUMBER AND SHAPE OF BARBS	STYLE OR DESIGN NO.
1	3 Barbed Wires	16'-6"	12½	2 Point Round	—
2	4 Barbed Wires	16'-6"	12½	2 Point Round	—
3	5 Barbed Wires	16'-6"	12½	2 Point Round	—
4	26" Woven Wire with 2 Barbed Wires	14'-0"	12½	2 Point Round	726-6-12½
5	26" Woven Wire with 4 Barbed Wires	14'-0"	12½	2 wires with 2 Pt. Rd. 2 wires with 4 Pt. Rd.	726-6-12½
6	32" Woven Wire with 3 Barbed Wires	14'-0"	12½	2 wires with 2 Pt. Rd. 1 wire with 4 Pt. Rd.	832-6-12½

GENERAL NOTES:

Fence types designated on the plans that are followed by the letter S will have smooth (barbless) wires.

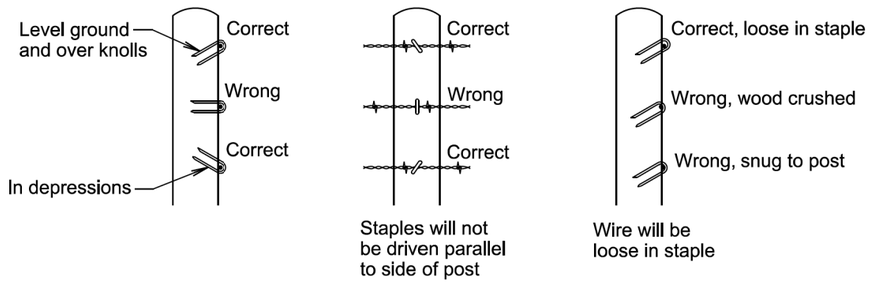
When type 5S or 6S is designated the bottom wire may be barbed, smooth, or left off.

All radius of curvature stated for fence are at centerline of roadway.

April 8, 2025

Published Date: 2027	SDDOT	RIGHT-OF-WAY FENCE	PLATE NUMBER 620.01
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - TRPR13418
File - ...\day08D6\StdPlateSectionB.dgn



STAPLE INSTALLATION

GENERAL NOTES:

The Right-of-Way fence will consist of barbed wire or a combination of woven wire and barbed wire. The barbed wire and/or woven wire will be fastened to all wood posts or fastened to alternating wood and steel posts. Only wood posts will be used for brace panels. Gates will be of the type designated in the plans or as otherwise directed by the Engineer. Fence will be constructed conforming to the details on the standard plates and in the plans unless otherwise directed by the Engineer.

Right-of-Way fence on Interstate Projects will be constructed one foot within the Interstate Right-of-Way lines except at bridge openings, cattle passes, and as otherwise directed by the Engineer.

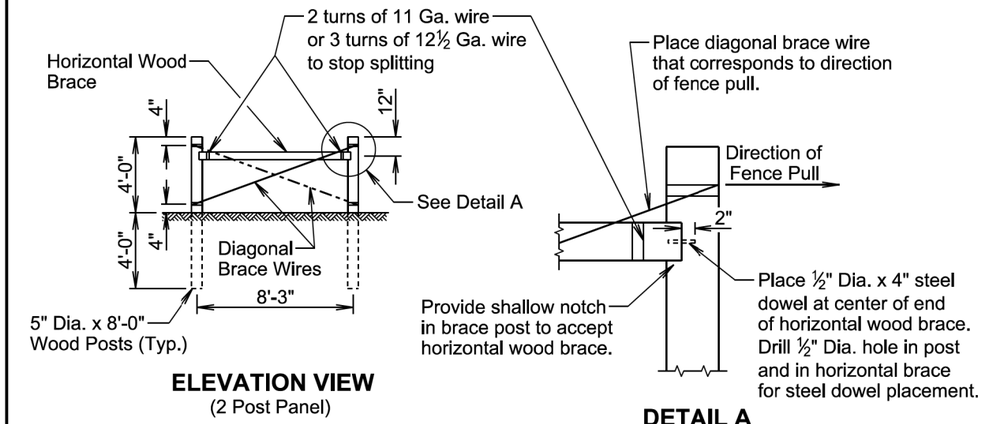
Right-of-Way fence other than on Interstate Projects will be constructed within one foot of the Right-of-Way on the Landowner's side except at bridge openings, cattle passes, and as otherwise directed by the Engineer.

Barbs will be fabricated from zinc coated 14 ga. wire. Two point barbs will be wrapped twice around one main strand at four-inch spacings and the four point barbs will be interlocked and wrapped around both main strands at five-inch spacings.

The gages of wire and wood post lengths and sizes are the minimum acceptable unless otherwise specified in the plans. The tolerances for steel posts will be as stated in AASHTO M281. Woven wire will conform to design and specifications of ASTM A116 and barbed wire will conform to ASTM A121.

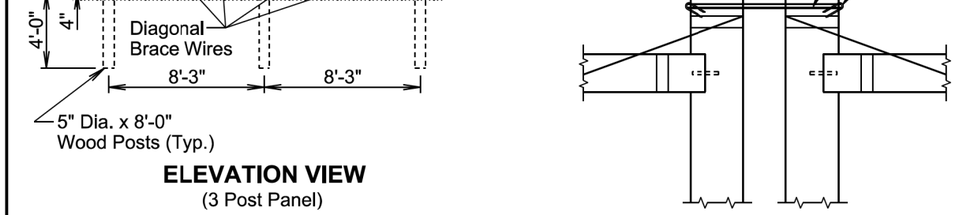
June 26, 2019

Published Date: 2027	SDDOT	STAPLE INSTALLATION AND GENERAL RIGHT-OF-WAY FENCE NOTES	PLATE NUMBER 620.02
			Sheet 1 of 1



ELEVATION VIEW
(2 Post Panel)

DETAIL A



ELEVATION VIEW
(3 Post Panel)

DETAIL B

GENERAL NOTES:

Two Post Panels will be installed at least every 1320' between corners.

Two Post Panels will be installed at any sharp vertical angle crest points and as directed by the Engineer.

Horizontal wood braces will consist of 4" dia. x 8' wood posts or rough 4" x 4" x 8' timbers.

Diagonal brace wires will be fabricated with 4 strands of 9 Ga. galvanized wire twisted tight. The diagonal brace wires will be installed in accordance with the direction of the fence pull. Two diagonal brace wires are required if fence pull is in both directions.

March 31, 2024

Published Date: 2027	SDDOT	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 1 of 3

Plot Scale - 1:200
Plotted From - TRPR13418
File - ...\day08D6\StdPlateSectionB.dgn

SPACING OF 2 POST PANELS WITHIN CURVES	
RADIUS OF CURVE	SPACING OF 2 POST PANEL
Greater than 1800 Ft.	** 1320'
Less than 1800 Ft.	** At P.C., P.T., and at every 1320' between P.C. and P.T.

** Fence lengths greater than 1320' and less than 2640' place 2 Post Panel approximately at midpoint.

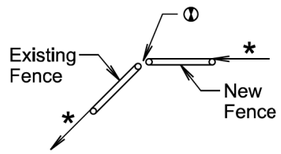
① See Detail B on Sheet 1 of 3.

GENERAL NOTE:

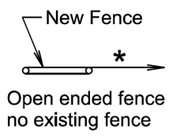
All radius of curvature stated for fence are at centerline of roadway.

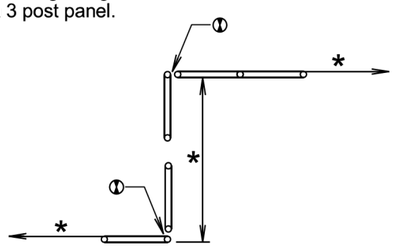
If fence length is less than 600' to next corner use a 2 post panel.

* If fence length is greater than 600' to next corner use a 3 post panel.

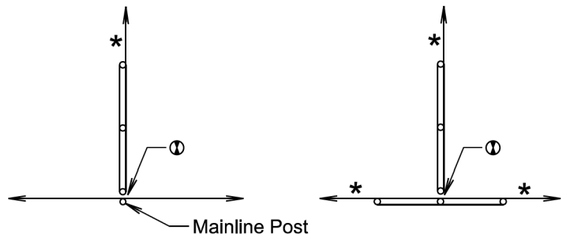


BEGIN OR END FENCE
(Where new fence ties into existing fence)

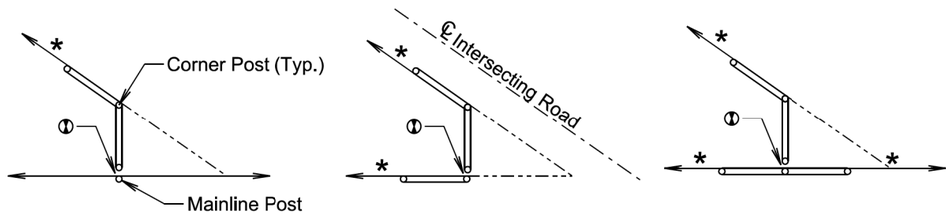




SHORT JOGS IN FENCE



CROSS FENCE



SHARP ANGLES IN CROSS FENCE



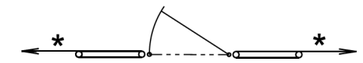
Additional fence panel is NOT required when an angle in the mainline fence is 10° and less.

Additional fence panel is required when an angle in the mainline fence is greater than 10°.

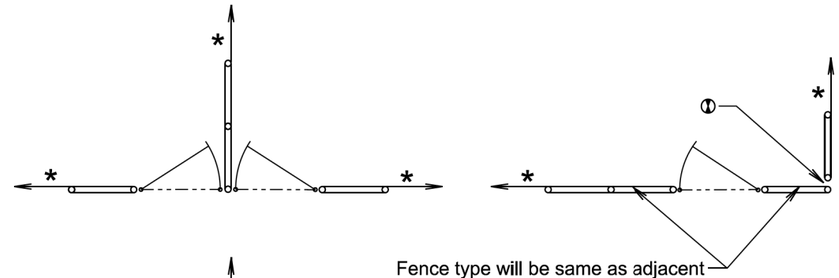
ANGLES IN MAINLINE FENCE

March 31, 2024

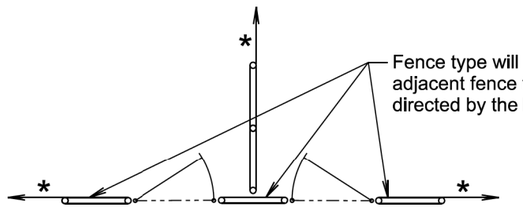
Published Date: 2027	SDDOT	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 2 of 3



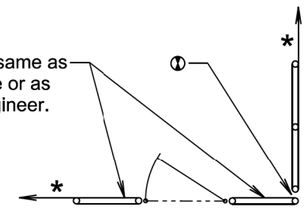
ENTRANCE
(Not on corner)



Fence type will be same as adjacent fence type or as directed by the Engineer.



DOUBLE ENTRANCES



ENTRANCES AT CORNERS

GATES

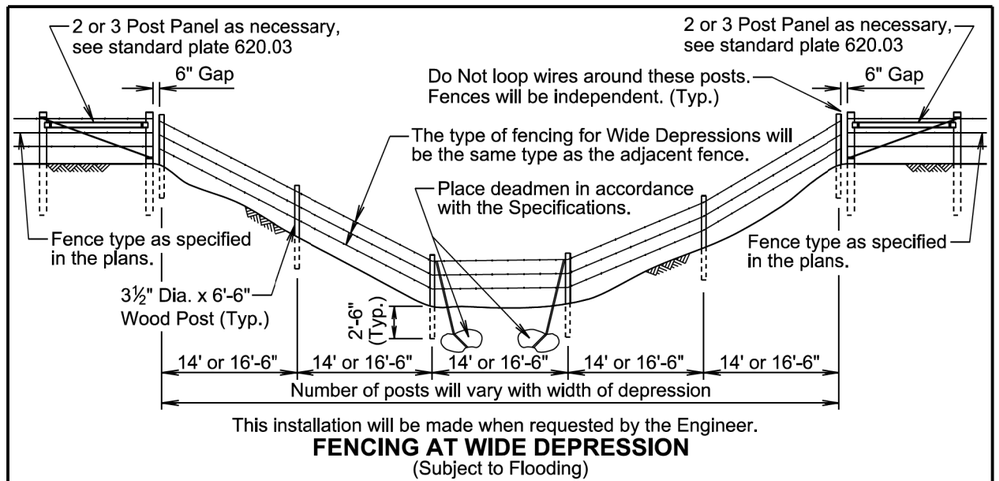
* If fence length is less than 600' to next corner use a 2 post panel.
If fence length is greater than 600' to next corner use a 3 post panel.

① See Detail B on Sheet 1 of 3.

March 31, 2024

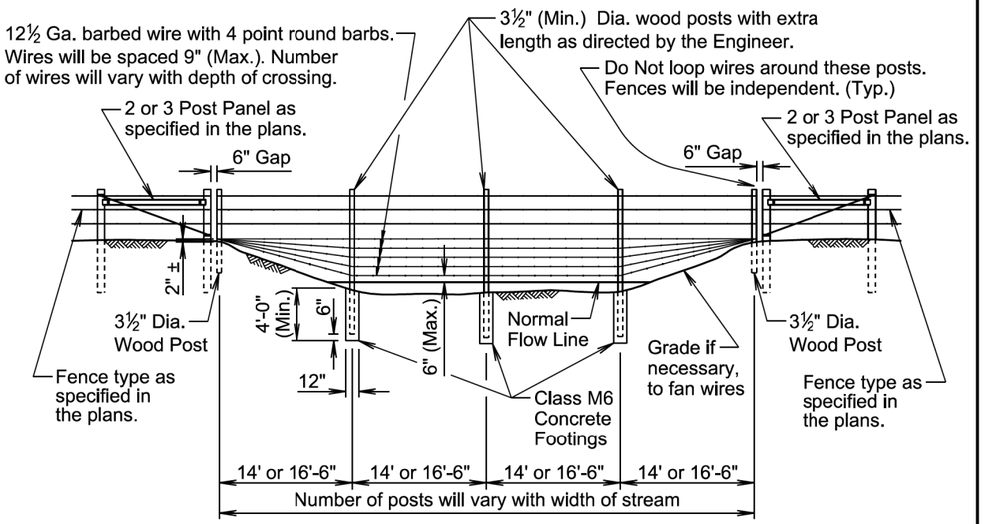
Published Date: 2027	SDDOT	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 3 of 3

Plot Scale - 1:200
Plotted From - TRPR13418
File - ...\day08D6\StdPlateSectionB.dgn



This installation will be made when requested by the Engineer.

FENCING AT WIDE DEPRESSION
(Subject to Flooding)



This installation will be made only when stated in the plans.

FENCING AT STREAM CROSSING

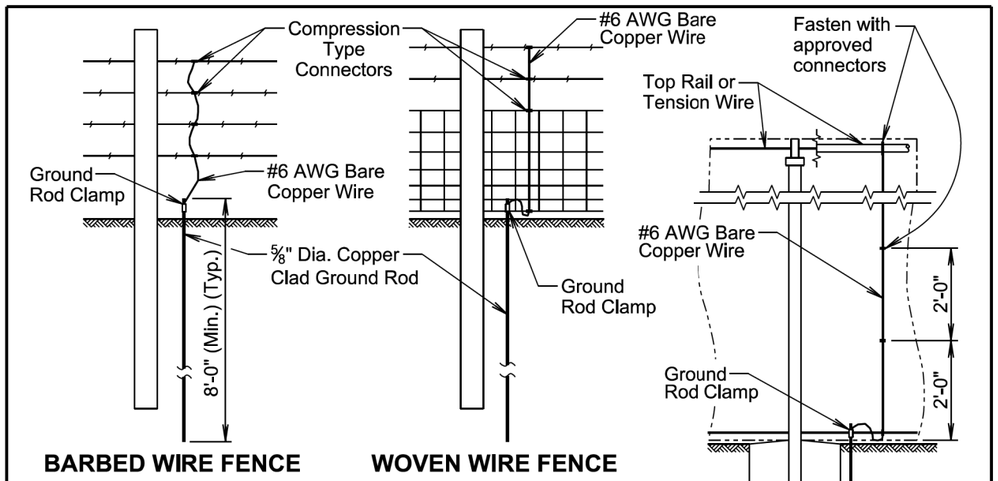
GENERAL NOTES:

There will be no extra payment for the additional work and materials required to construct the fencing at the wide depression(s) and/or the fencing at the stream crossing(s). The deadmen will be paid for in accordance with 620.5 A of the Specifications.

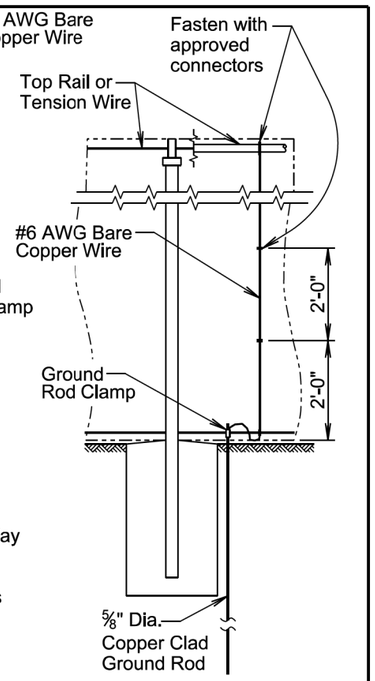
Measurement and payment for the fencing at the wide depression(s) and/or the fencing at the stream crossing(s) will be at the contract unit price per foot for the corresponding Right-of-Way fence contract item.

June 26, 2019

Published Date: 2027	SDDOT	FENCING AT WIDE DEPRESSION(S) AND STREAM CROSSING(S)	PLATE NUMBER 620.10 Sheet 1 of 1



BARBED WIRE FENCE **WOVEN WIRE FENCE**



CHAIN LINK FENCE

GENERAL NOTES:

Details shown on this standard plate will apply to all types of Right-of-Way fence constructed with all wood posts or chain link fence.

Continuous fence in urban areas will be grounded at maximum intervals of 500 feet. Continuous fence in rural areas will be grounded at maximum intervals of 1000 feet. There will be a ground at a maximum of 100 feet from a gate in each adjacent section of fence.

Fence placed under a power line will be grounded with three grounds. One ground will be placed directly below the crossing and the other two will be placed 25 feet to 50 feet away, one on each side.

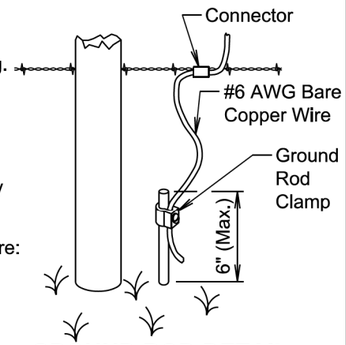
One ground will be placed directly below each telephone or cable crossing.

Ground rods will be located on the post side of the fence and will be as close as possible to the post and fence.

The cost of furnishing and placing all materials for grounding will be incidental to the contract unit price per foot for the respective Right-of-Way fence or chain link fence contract item.

The approximate quantites of materials per each installation of a ground are:

1 ground rod clamp.
1 ⅝" diameter x 8' long copper clad ground rod
1 #6 AWG bare copper wire; 7' long for Right-of-Way fence or 10' long for chain link fence.



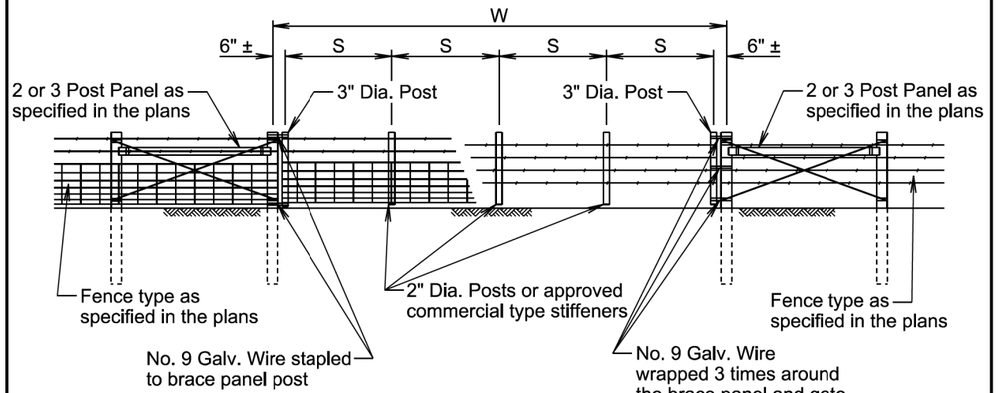
GROUND ROD DETAIL

Compression type or other type of connectors:
26" woven wire will have a total of two connectors, one secured to the top and one secured to the bottom.
32" woven wire will have a total of three connectors, one secured to the top, one secured to the middle, and one secured to the bottom.
One connector will be used for each strand of barbed wire.
A minimum of 3 connectors will be installed on chain link fence, the connectors will be placed vertically at every 2-foot increment and connectors will be placed on the top and bottom tension wires or top rail.

June 26, 2019

Published Date: 2027	SDDOT	FENCE GROUNDING	PLATE NUMBER 620.11 Sheet 1 of 1

Plot Scale - 1:200
Plotted From - TRPR13418
File - ...\day08D6\StdPlateSectionB.dgn



ELEVATION VIEW

W Gate Width (Ft.)	S Post Spacing
16	3 @ 5'-0" ±
20	4 @ 4'-9" ±
24	4 @ 5'-9" ±
30	5 @ 5'-10" ±
40	6 @ 6'-6" ±

GENERAL NOTES:

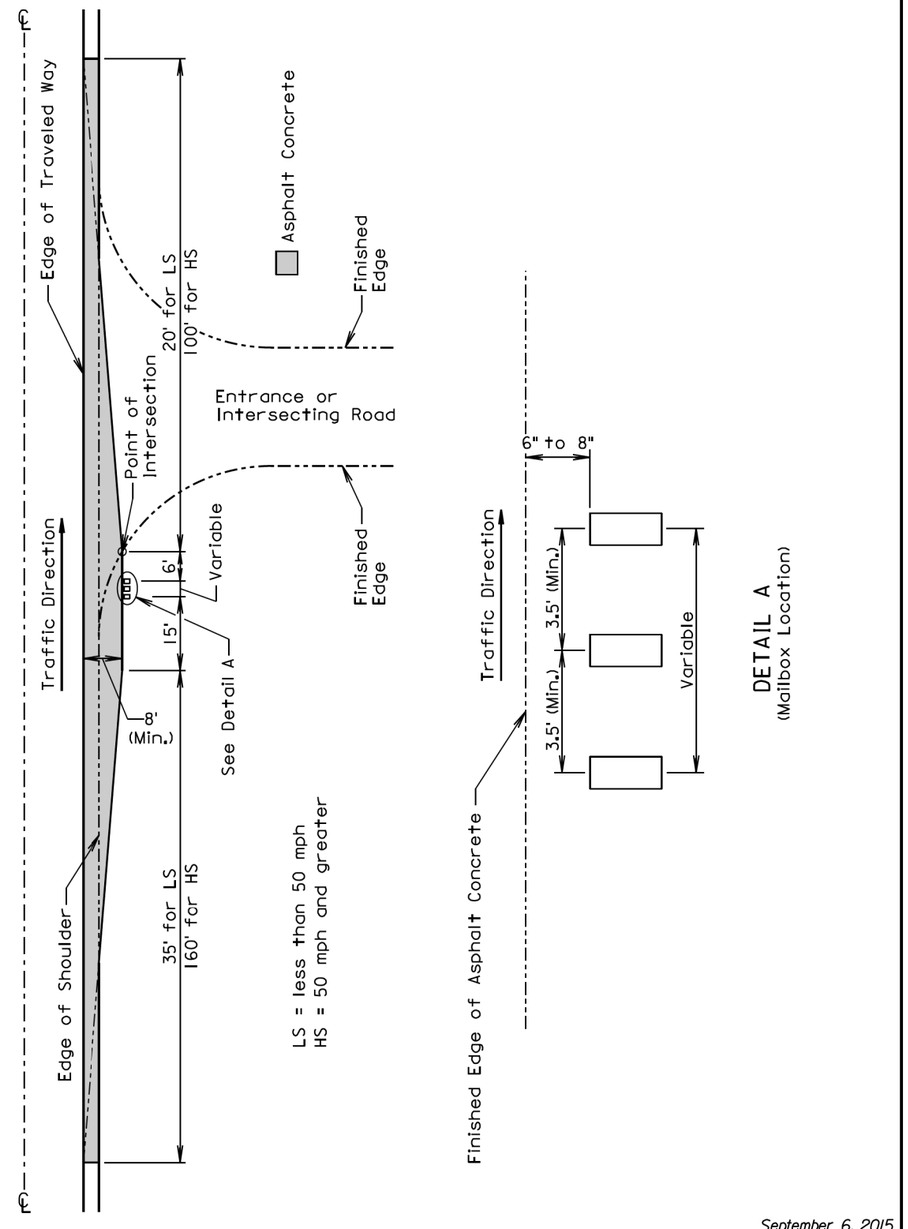
Creosote treatment of the gate posts will not be accepted.

The type of fencing in the gate will be of the same type as specified for the adjacent Right-of-Way fence.

All costs for furnishing and constructing the wire gate(s) will be incidental to the contract unit price per foot for the respective Right-of-Way fence contract item.

June 26, 2019

Published Date: 2027	SDDOT	WIRE GATES	PLATE NUMBER 620.20
			Sheet 1 of 1



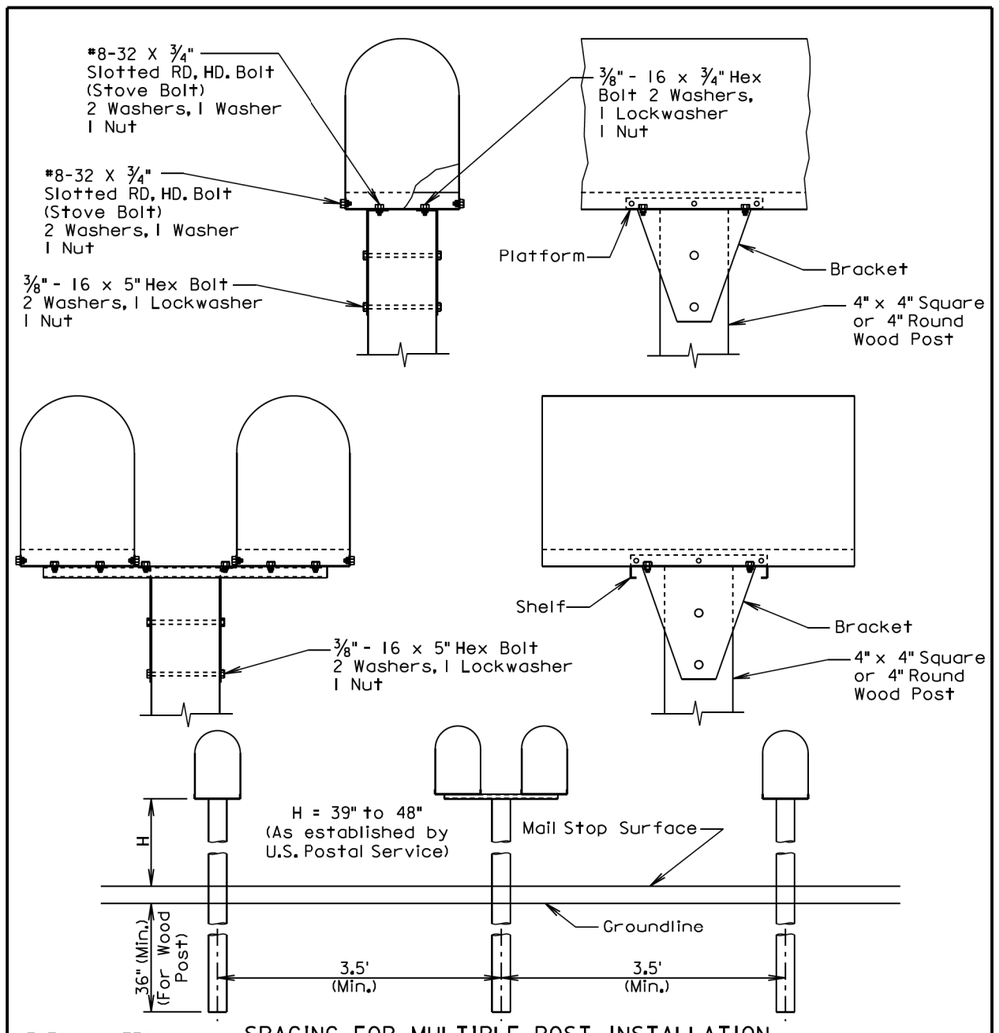
September 6, 2015

Published Date: 2027	SDDOT	MAILBOX TURNOUT	PLATE NUMBER 900.01
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - TRPR13418
File - ...\tday08D6\StdPlateSectionB.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	B32	B32

Plotting Date: 07/01/2026



SPACING FOR MULTIPLE POST INSTALLATION

GENERAL NOTES:

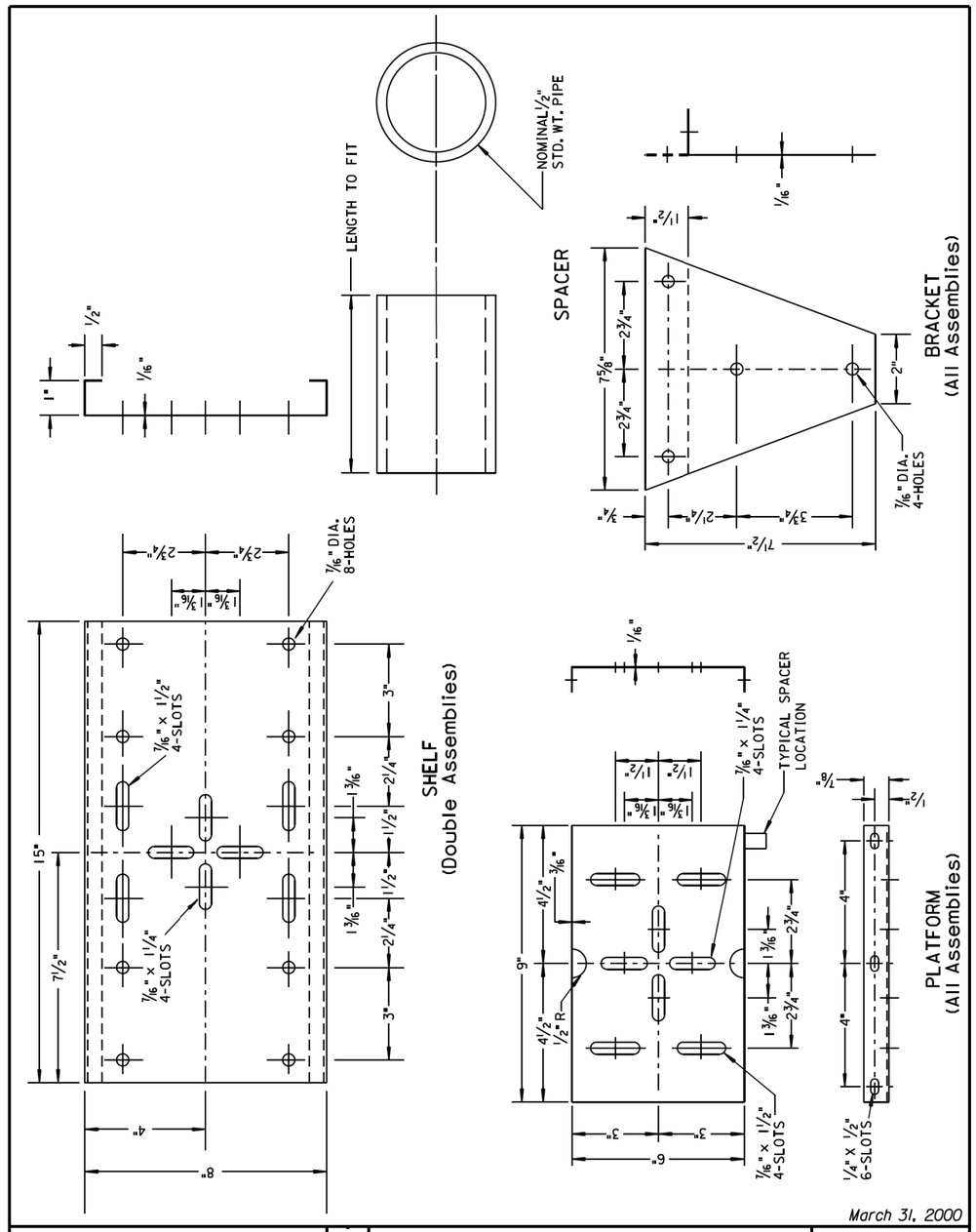
The post support assemblies provided should be consistant throughout the project. Single and double mailboxes may be in any sequence.

Post support assemblies shall be one from the approved products list, a 4"x4" or 4" round wood post, or an alternate post support assembly that meets the test level 3 crash testing requirements of NCHRP 350 or MASH.

Alternate mailbox support assemblies shall be approved by the Engineer prior to installation. The Contractor shall provide the Engineer written certification that the mailbox support assembly has met the crash testing requirements and will be installed in accordance with the manufacturer's installation instructions.

September 6, 2013

Published Date: 2027	SDDOT	***SINGLE AND DOUBLE MAILBOX ASSEMBLIES***	***PLATE NUMBER*** 900.02 *Sheet 1 of 1*



March 31, 2000

Published Date: 2027	SDDOT	***MAILBOX SUPPORT HARDWARE***	***PLATE NUMBER*** 900.03 *Sheet 1 of 1*

Plot Scale - 1:200

Plotted From - TRPR13418

File - ...\day08D6\StdPlateSectionB.dgn

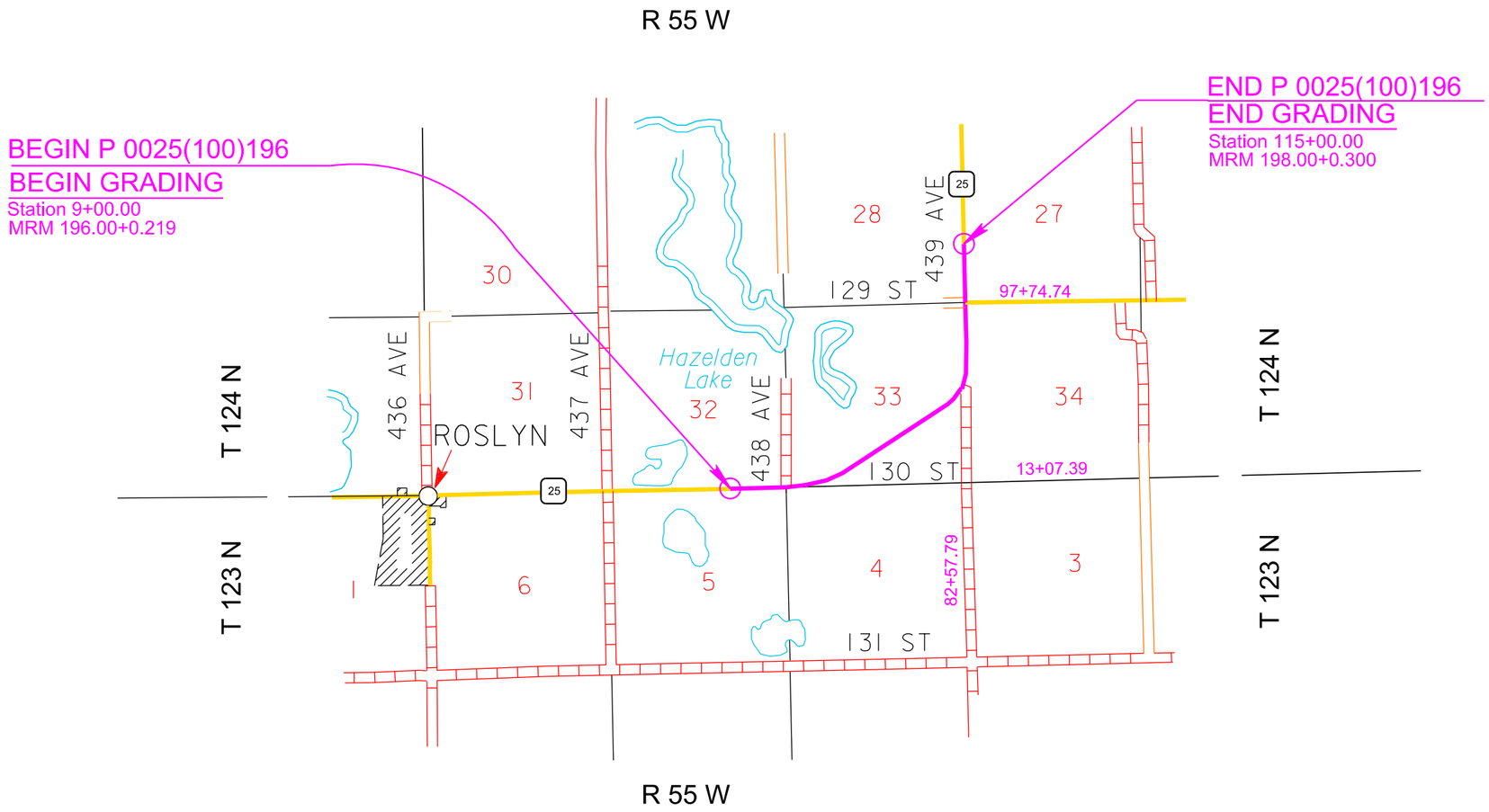
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	C1	C20

Plotting Date: 02/18/2025

SECTION C: TRAFFIC CONTROL PLANS

INDEX OF SHEETS

C1	General Layout with Index
C2-C3	Estimate with General Notes
C4-C10	Advance Detour Sign Layout & Design
C11	Truck Detour Layout
C12	Car Detour Layout
C13-14	Road Closure Layout and TC Sign Tables
C15	Temporary Pavement Marking Guides
C16-C20	Standard Plates



Plot Scale - 1:200

Plotted From - TRAB12222

File - ...\prj\Day08\B61Title Sheet.dgn

SECTION C ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1010	Remove Asphalt Concrete Pavement	280.0	SqYd
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	42	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	630	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	390	Gal
634E0010	Flagging	60.0	Hour
634E0020	Pilot Car	20.0	Hour
634E0110	Traffic Control Signs	925.9	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	35	Each
634E0630	Temporary Pavement Marking	4.0	Mile
634E1002	Detour and Restriction Signing	3,081.9	SqFt

SEQUENCE OF OPERATIONS

The car detour will only be in use while the road is closed. Upon completion of the base course placement the car detour will no longer be utilized.

1. Install traffic control signs.
2. Begin patching on the car detour route.
3. Install erosion control BMP's.
4. Strip topsoil.
5. Completed grade work.
6. Pave asphalt concrete.
7. Install permanent signing.
8. Replace topsoil, seed, apply final BMP's.
9. Complete any patching needed on the car detour route.
10. Remove traffic control signs.

Contractor requests to deviate from the sequence of operations will be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, signposts, and breakaway bases will be removed within 7 calendar days following pavement marking.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

The Contractor will furnish, install, maintain, and remove TRUCK CROSSING (W8-6) signs daily. The TRUCK CROSSING signs will be displayed always when haul vehicles are hauling material. When hauling conditions no longer exist, the signs will be covered or removed from view. The exact number and location will be determined during construction. Payment for additional signs will be based on the contract unit price per square foot for "Traffic Control Signs".

For the primed surface operation, when flaggers are not being used, the FRESH OIL signs (W21-2) will be displayed in advance of the liquid asphalt areas.

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements. Residential entrances at MRM 196.00+0.755 LT and MRM 198.00+0.100 LT will have 24/7 access accessibility.

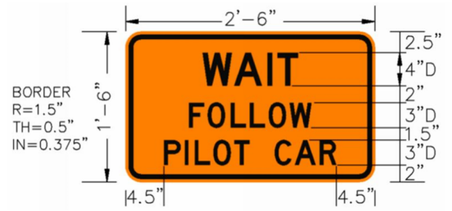
The Contractor will maintain access to all mailboxes along the project. With Post Office and Engineer approval, mailboxes may temporarily be relocated. There will be no additional payment for temporary relocation of a mailbox.

Access will also be maintained at all times to 438th Ave. This is the public access road for Hazelden Lake.

FLAGGING

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

Additional flagger warning signs and flagger hours have been included in the Estimate of Quantities for use on intersecting roads. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours. Also included in the Estimate of Quantities are WAIT FOLLOW PILOT CAR signs for use on low volume intersecting roads as determined by the Engineer. WAIT FOLLOW PILOT CAR signs will not block the view of the stop sign.



It is required that the flaggers and pilot car operators be able to communicate with one another. If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for "Flagging".

TEMPORARY PAVEMENT MARKINGS

Temporary flexible vertical markers (tabs) will be required on the top lift of asphalt concrete surfacing.

Temporary pavement marking paint will not be allowed on the final lift of asphalt surfacing. Temporary pavement marking paint will not be allowed on the chip seal, fog seal, or flush seal. Temporary flexible vertical markers (tabs) must be used on the final lift of asphalt surfacing. The Contractor may use tabs with covers, uncovering them for the chip seal, fog seal, or flush seal. As an alternative, the Contractor may install new tabs for the fog seal or flush seal.

Covers on the tabs will be sufficiently secured to prevent traffic from dislodging the cover and when removed, the covers will be properly disposed of. The Contractor will remove and properly dispose of the tabs after permanent pavement marking is applied. Method of removal will be nondestructive to the road surface and will be accomplished within one week of completion of the permanent pavement marking.

Full reflectivity of all temporary flexible vertical markers (tabs) is required at all times. The Contractor will be required to replace any missing or non-reflective tabs after each installation as detailed below at no additional cost to the State.

Quantities of Temporary Pavement Markings consist of:

One pass on top of the primed surface
One pass on top of the 1st lift of asphalt concrete

In the absence of a signed lane closure or pilot car operation, FLAGGER (W20-7) symbol signs and flaggers, or a shadow vehicle with rotating yellow lights or strobe lights will be positioned on the shoulder in advance of workers for both directions of traffic during the installation and removal of the temporary flexible vertical markers (tabs). The traffic control device used will be moved intermittently to provide proper warning of the work operation. A ROAD WORK AHEAD (W20-1) sign, a WORKER (W21-1) symbol sign or a BE PREPARED TO STOP (W3-4) sign will be mounted on the rear of the shadow vehicle. The method of traffic control used by the Contractor for this work must be approved by the Engineer.

Prior to nightfall, tabs will be required to mark centerline on segments of roadway where existing centerline markings have been removed and new markings have not been installed.

DETOUR SIGNING

The Contractor will furnish and install the detour signs as shown in these plans. Prior to installing the signs, the Contractor will mark the sign locations and review them with the Engineer. Detour signs will be installed on fixed location, ground mounted, breakaway supports. It will be the responsibility of the Contractor to maintain and reinstall these signs during the project as required by the construction progress. Upon completion of the project, the Contractor will remove the detour signs.

Detour signs for the car detour will be removed from the project once the gravel surface is in place.

All costs for furnishing the signs, posts, and mounting hardware, and for installing, maintaining, covering, and removing the detour signs will be incidental to the contract unit price per square foot for “Detour and Restriction Signing”.

REMOVAL OF DAMAGED ASPHALT ON CAR DETOUR ROUTE

Removal of loose and deteriorated asphalt surfacing may be required prior to patching. Removal areas will be filled the same day as they are removed. The work will be done at the discretion and to the satisfaction of the Engineer. Hand work can be anticipated, use of power brooms and or compressed air may also be required. A lift of asphalt concrete equivalent to the surrounding asphalt will be placed in the removal area prior to placing the patching lift of asphalt; hand, and loader patching will be acceptable, wheel rolling with a pneumatic tired machine will be required. The work will be paid for at the contract unit price per square yard for REMOVE ASPHALT CONCRETE PAVEMENT. 20 Square Yards per mile have been included in the estimate of quantities. Asphalt Concrete will be paid for at the contract unit price per ton for ASPHALT CONCRETE COMPOSITE. Payment will be based on field measurements.

ASPHALT CONCRETE PATCHING ON CAR DETOUR ROUTE

Prior to use and after the car detour is no longer in use the Contractor will complete any asphalt concrete patching along the detour route at areas determined in the field by the Engineer. Patching will be done at specified areas on the car detour route beginning at the junction of SD 25/130th St and end at the junction of SD 25/122nd St. in Eden. The patches will be a minimum of 1.5 inches thick and match the slope and width of the existing road. A thickness of greater than 1.5 inches will not be allowed unless approved by the Engineer. The minimum length of a patch will be 100 feet. All patches will be full width. The Contractor will transition in and out of the patches at a rate of 40’ to one inch of thickness to achieve a smooth ride. Due to the nature of this work a paver feeder will only be required when ordered by the Engineer.

For the purpose of calculating tack and flush seal approximately 3,600 Square Yards of roadway will be paved.

ASPHALT CONCRETE COMPOSITE ON CAR DETOUR ROUTE

Asphalt Concrete Composite will be paved on the car detour at locations and thickness determined by the Engineer in the field. The Contractor will notify the Engineer a minimum of 5 business days prior to the start of work to allow the Engineer to mark the areas to be patched.

Included in the Estimate of quantities is 325 Ton of Asphalt Concrete Composite.

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.

All other requirements in the specifications for Asphalt Concrete Composite will apply.

See Section F Bid Estimate for Asphalt Concrete Composite quantities.

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Prior to being used as a detour route, the car detour will be painted with new centerline and edge line striping, including no passing zones.

All materials will be applied as per manufacturer’s recommendations. High build waterborne pavement marking paint will conform to the supplemental specifications for Section 980.1 B.

Reflective media will consist of glass beads. Reflective media will require a Certificate of Compliance for Certification for each source and lot. Acceptance sampling will not be required.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Solid 4” line = 22.5 Gals/Mile
Dashed 4” line = 6.2 Gal/Mile
Glass Beads = 8 Lbs/Gal.

All cost for materials, labor, and equipment necessary to furnish and install the pavement markings will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

RETROREFLECTIVITY FOR PAVEMENT MARKING PAINT

The Department may take retroreflectivity readings on the pavement marking lines after 2 days and within 30 days of the line application using either a portable or mobile retroreflectometer that conforms to 30-meter geometry. If the Department chooses to take retroreflectivity readings, three retroreflectivity readings will be taken on each line at each test location. The three readings will be averaged and become the reading for that test location.

If the Department chooses to take retroreflectivity readings, three readings will be taken on the edge lines and lane lines in the direction of application. For combination solid yellow and skip yellow lines for turn lanes and for centerline markings on two-way roadways, three readings will be taken in one direction, the reflectometer will be turned 180 degrees and three more readings will be taken. The six readings for the centerline markings will be averaged and become the test reading for that test location.

If the Department chooses to take readings, the minimum retroreflectivity values will be 275 mc/m^2/lux for white and 170 mc/m^2/lux for yellow.

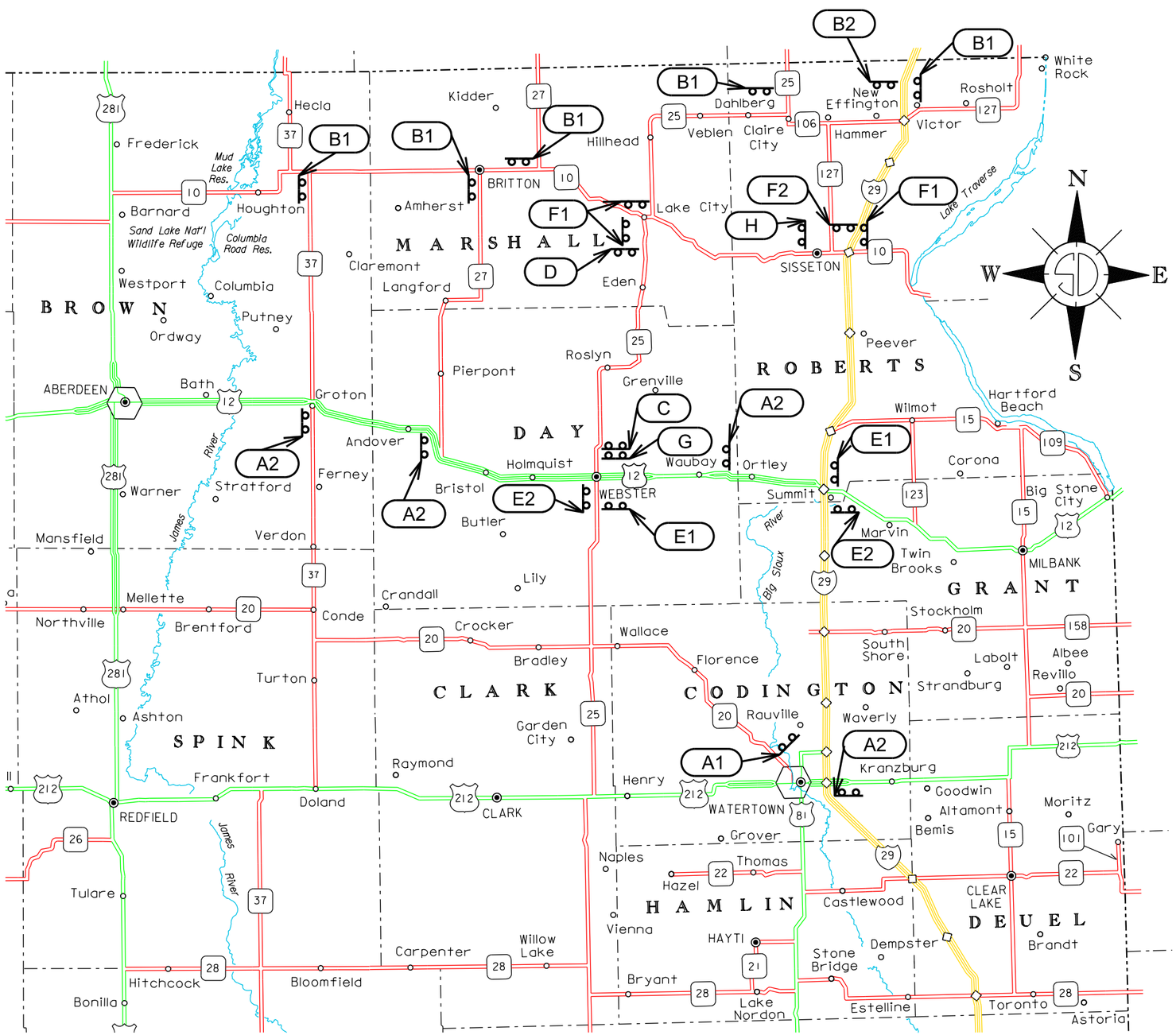
PRESS RELEASE ANNOUNCEMENTS

The SDDOT will prepare a press release to be released 5 days prior to any phase change or any other major change that affects traffic flow. The SDDOT will be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. The Contractor will provide the Engineer with pertinent information 7 days prior to any phase change or any other major change that affects traffic flow.

ADVISORY & ADVANCE DETOUR SIGN LAYOUT

(FIXED LOCATION GROUND MOUNTED, BREAKAWAY SUPPORTS)

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	C4	C20
Plotting Date: 02/18/2025			



A1

ROAD CLOSURE
25 2 MI EAST
OF ROSLYN
USE ALT ROUTE

A2

ROAD CLOSURE
25 2 MI EAST
OF ROSLYN
USE ALT ROUTE

B1

ROAD CLOSURE
25 4 MI EAST
OF ROSLYN
USE ALT ROUTE

B2

ROAD CLOSURE
25 4 MI EAST
OF ROSLYN
USE ALT ROUTE

C

ROAD CLOSURE
25 2 MI EAST
OF ROSLYN
USE CAR DETOUR

D

ROAD CLOSURE
25 4 MI EAST
OF ROSLYN
USE CAR DETOUR

E1

TRUCK CLOSURE
25 2 MI EAST
OF ROSLYN
USE TRUCK DETOUR

E2

TRUCK CLOSURE
25 2 MI EAST
OF ROSLYN
USE TRUCK DETOUR

F1

TRUCK CLOSURE
25 4 MI EAST
OF ROSLYN
USE TRUCK DETOUR

F2

TRUCK CLOSURE
25 4 MI EAST
OF ROSLYN
USE TRUCK DETOUR

G

TRUCK CLOSURE
25 2 MI EAST
OF ROSLYN
USE ALT ROUTE

H

TRUCK CLOSURE
25 4 MI EAST
OF ROSLYN
USE ALT ROUTE

PLOT SCALE - 1:64000

PLOTTED FROM - TRAB12222

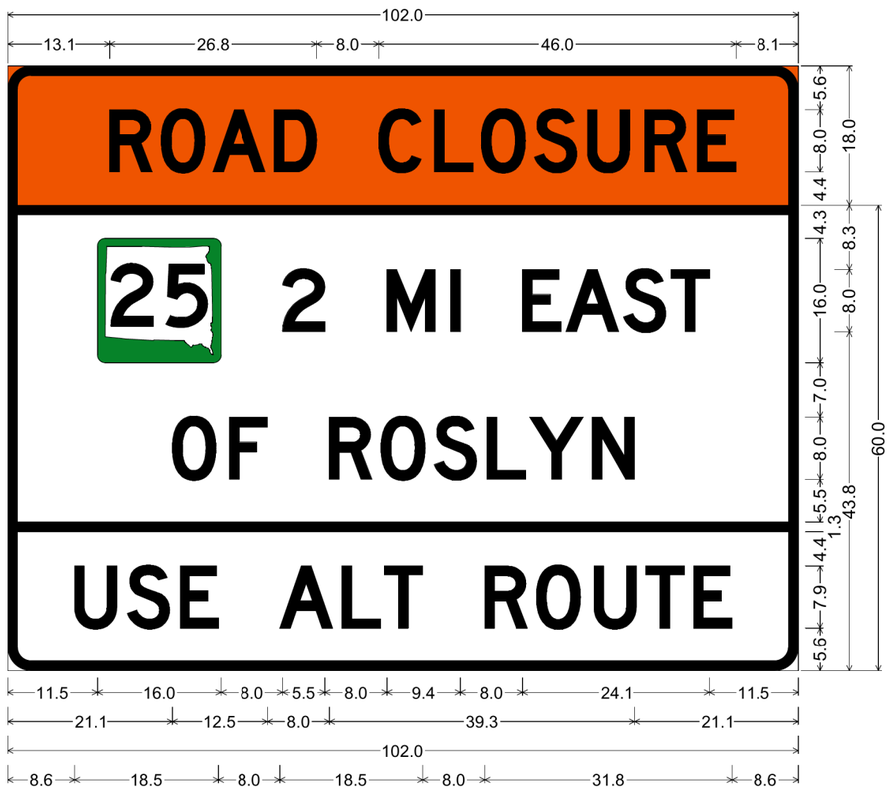
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FILE - ...\DAY0806\FIXED SIGN DETOUR.DGN

ADVISORY & ADVANCE DETOUR SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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Plotting Date: 02/18/2025			

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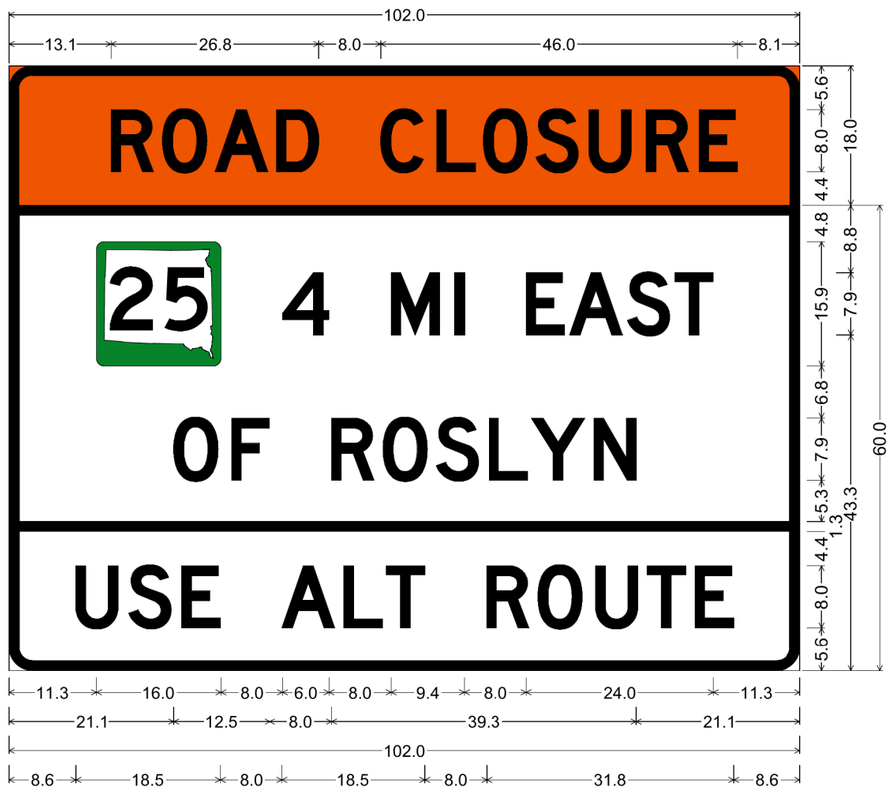


3.0" Radius, 1.3" Border, Black on Orange;
"ROAD CLOSURE", D 2K;

3.0" Radius, 1.3" Border, Black on White;
"2 MI EAST", D 2K; "OF ROSLYN", D 2K; "USE ALT ROUTE", D 2K;
Table of letter and object lefts

R 13.1	O 19.8	A 26.5	D 34.5	C 47.9	L 55.1	O 61.1	S 68.0	U 74.8	R 82.1	E 89.0	
25 11.5	2 35.5	M 49.0	I 57.1	E 66.4	A 72.0	S 79.5	T 85.5				
O 21.1	F 28.6	R 41.5	O 48.3	S 55.1	L 61.9	Y 67.4	N 75.4				
— -0.0											
U 8.6	S 15.4	E 22.3	A 35.1	L 43.1	T 48.6	R 61.5	O 68.3	U 75.6	T 82.3	E 88.5	

B1



3.0" Radius, 1.3" Border, Black on Orange;
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3.0" Radius, 1.3" Border, Black on White;
"4 MI EAST", D 2K; "OF ROSLYN", D 2K; "USE ALT ROUTE", D 2K;
Table of letter and object lefts

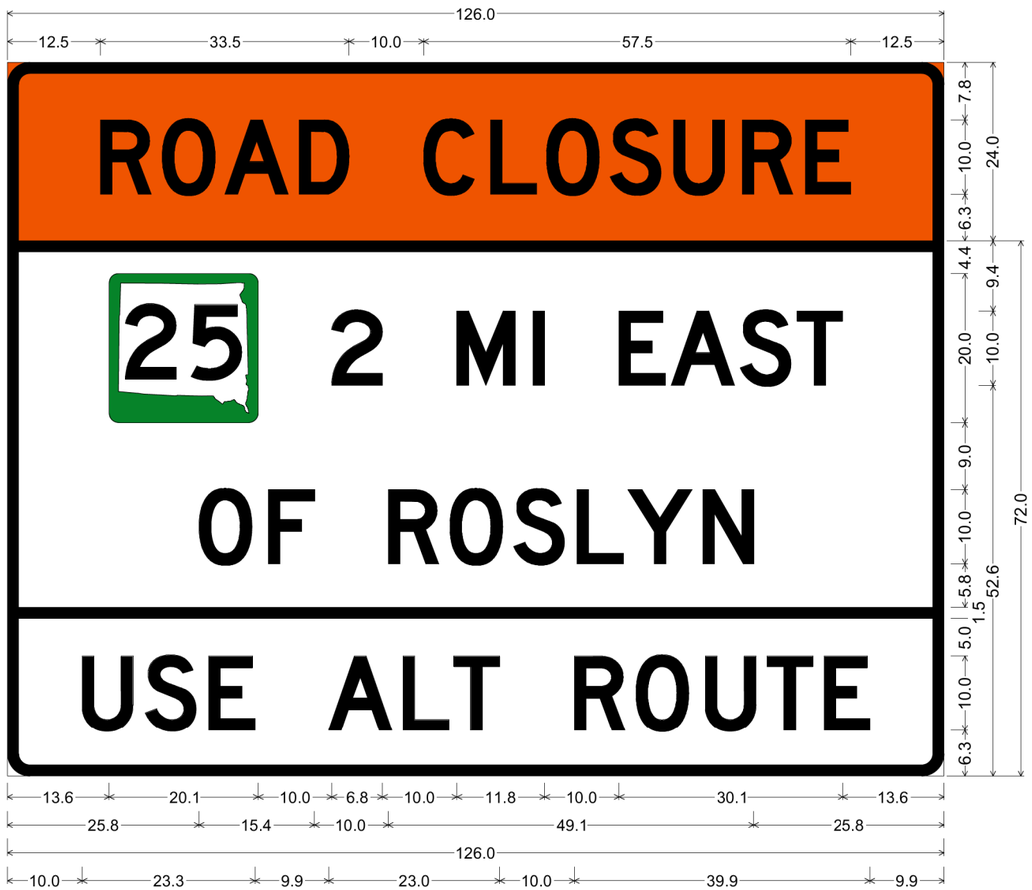
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25 11.3	4 35.3	M 49.3	I 57.4	E 66.6	A 72.3	S 79.8	T 85.8				
O 21.1	F 28.6	R 41.5	O 48.3	S 55.1	L 61.9	Y 67.4	N 75.4				
— -0.0											
U 8.6	S 15.4	E 22.3	A 35.1	L 43.1	T 48.6	R 61.5	O 68.3	U 75.6	T 82.3	E 88.5	

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PLOT NAME - 3
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ADVISORY & ADVANCE DETOUR SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	C6	C20
Plotting Date: 02/18/2025			

A2

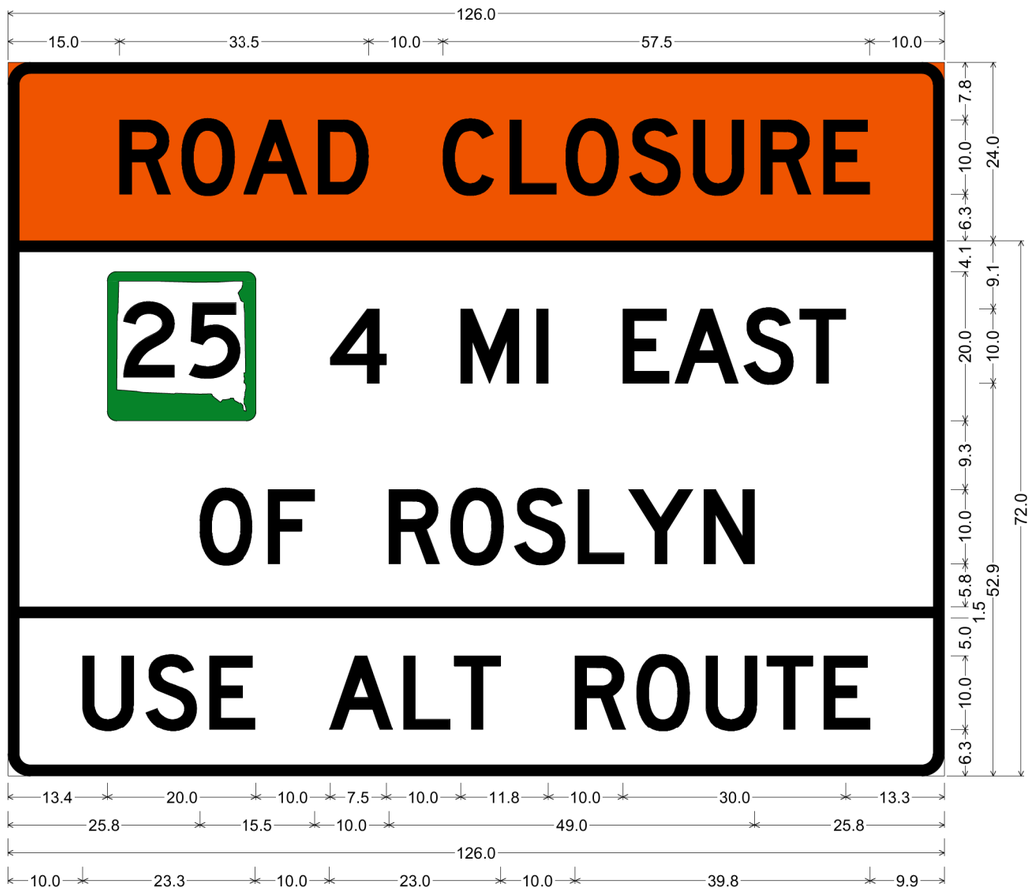


3.0" Radius, 1.5" Border, Black on Orange;
"ROAD CLOSURE", D 2K;

3.0" Radius, 1.5" Border, Black on White;
"2 MI EAST", D 2K; "OF ROSLYN", D 2K; "USE ALT ROUTE", D 2K;
Table of letter and object lefts

R 12.5	O 20.8	A 29.3	D 39.3	C 56.0	L 65.0	O 72.5	S 81.1	U 89.6	R 98.8	E 107.3	
25 13.6	2 43.6	M 60.5	I 70.6	E 82.3	A 89.3	S 98.6	T 106.1				
O 25.8	F 35.0	R 51.3	O 59.5	S 68.1	L 76.6	Y 83.4	N 93.5				
_ -0.0											
U 10.0	S 18.5	E 27.0	A 43.3	L 53.3	T 60.0	R 76.3	O 84.5	U 93.9	T 102.1	E 109.9	

B2



3.0" Radius, 1.5" Border, Black on Orange;
"ROAD CLOSURE", D 2K;

3.0" Radius, 1.5" Border, Black on White;
"4 MI EAST", D 2K; "OF ROSLYN", D 2K; "USE ALT ROUTE", D 2K;
Table of letter and object lefts

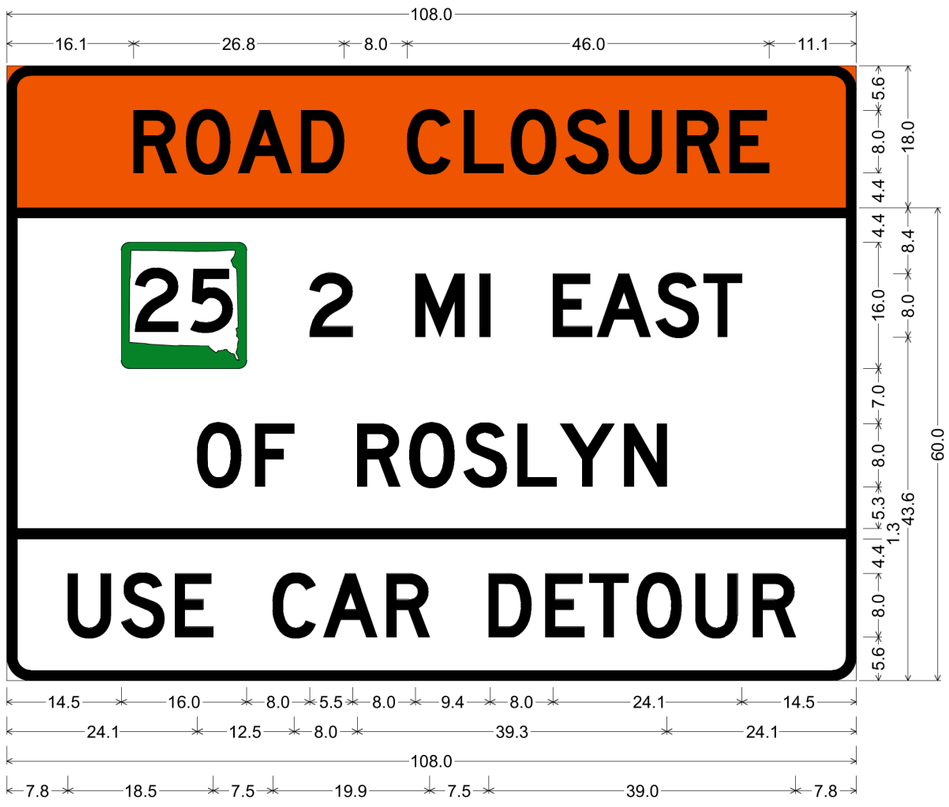
R 15.0	O 23.3	A 31.8	D 41.8	C 58.5	L 67.5	O 75.0	S 83.6	U 92.1	R 101.3	E 109.8	
25 13.4	4 43.4	M 60.9	I 71.0	E 82.6	A 89.6	S 99.0	T 106.5				
O 25.8	F 35.0	R 51.3	O 59.5	S 68.1	L 76.6	Y 83.5	N 93.5				
_ -0.0											
U 10.0	S 18.5	E 27.0	A 43.3	L 53.3	T 60.0	R 76.3	O 84.5	U 93.9	T 102.1	E 109.9	

PLOT SCALE - 1:200
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ADVISORY & ADVANCE DETOUR SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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Plotting Date: 02/18/2025			

C

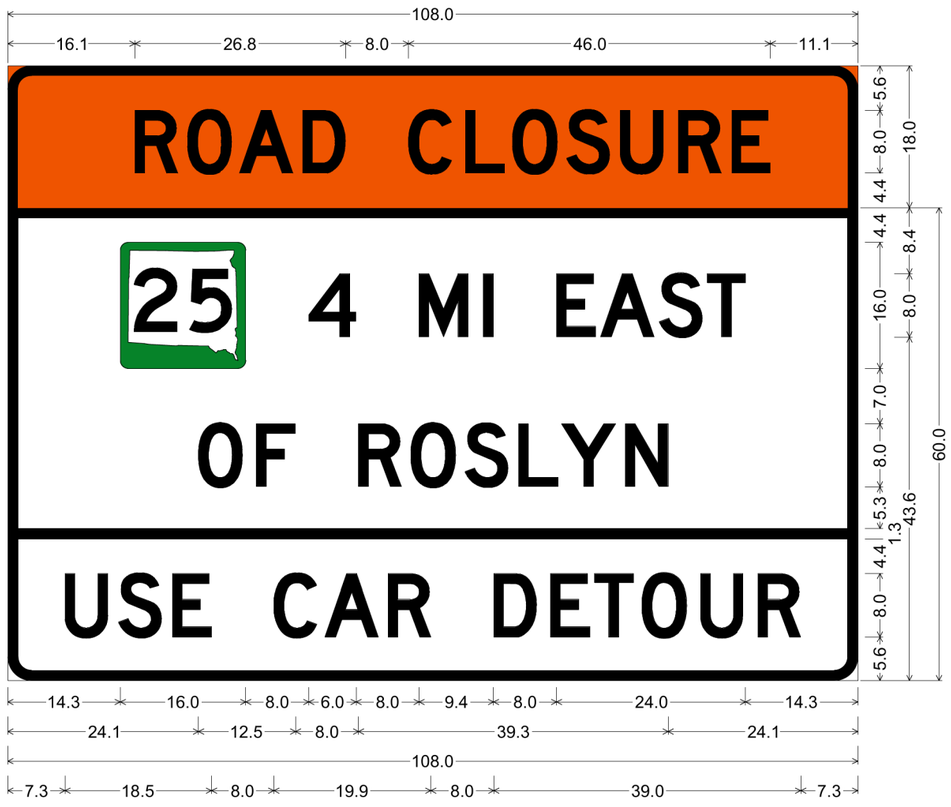


3.0" Radius, 1.3" Border, Black on Orange;
"ROAD CLOSURE", D 2K;

3.0" Radius, 1.3" Border, Black on White;
"2 MI EAST", D 2K; "OF ROSLYN", D 2K; "USE CAR DETOUR", D 2K;
Table of letter and object lefts

R	O	A	D	C	L	O	S	U	R	E	
16.1	22.8	29.5	37.5	50.9	58.1	64.1	71.0	77.8	85.1	92.0	
25	2	M	I	E	A	S	T				
14.5	38.5	52.0	60.1	69.4	75.0	82.5	88.5				
O	F	R	O	S	L	Y	N				
24.1	31.6	44.5	51.3	58.1	64.9	70.4	78.4				
—											
-0.0											
U	S	E	C	A	R	D	E	T	O	U	R
7.8	14.5	21.4	33.8	40.3	48.3	61.3	68.4	74.0	80.0	87.5	94.9

D



3.0" Radius, 1.3" Border, Black on Orange;
"ROAD CLOSURE", D 2K;

3.0" Radius, 1.3" Border, Black on White;
"4 MI EAST", D 2K; "OF ROSLYN", D 2K; "USE CAR DETOUR", D 2K;
Table of letter and object lefts

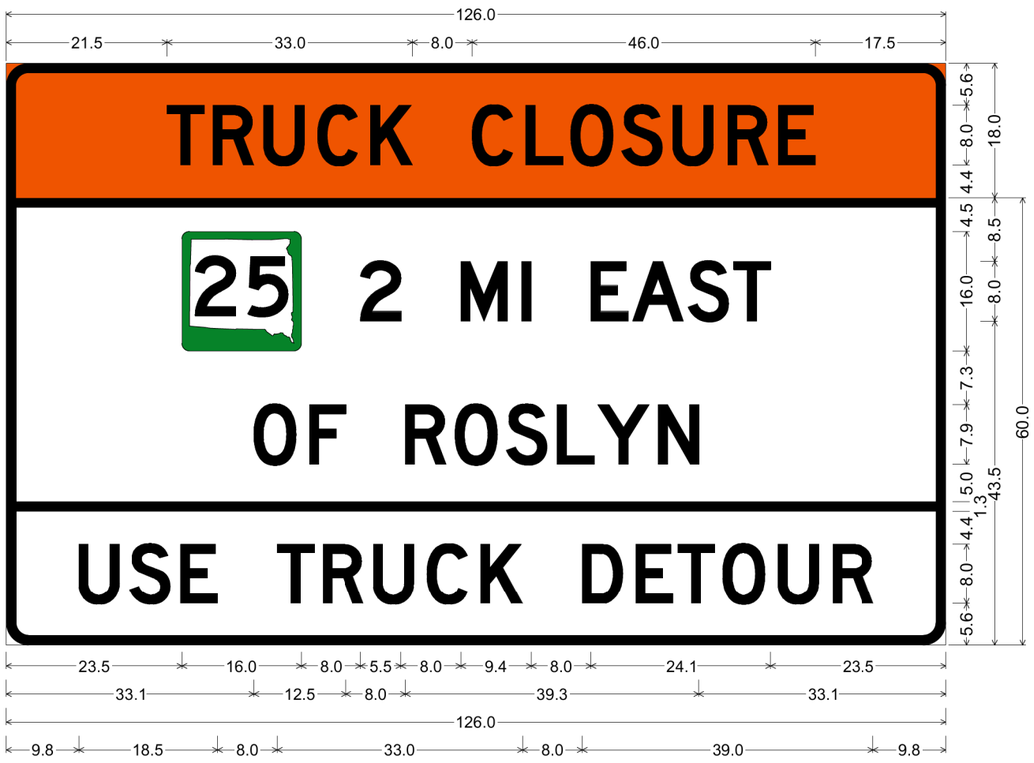
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16.1	22.8	29.5	37.5	50.9	58.1	64.1	71.0	77.8	85.1	92.0	
25	4	M	I	E	A	S	T				
14.3	38.3	52.3	60.4	69.6	75.3	82.8	88.8				
O	F	R	O	S	L	Y	N				
24.1	31.6	44.5	51.3	58.1	64.9	70.4	78.4				
—											
-0.0											
U	S	E	C	A	R	D	E	T	O	U	R
7.3	14.0	20.9	33.8	40.3	48.3	61.8	68.9	74.5	80.5	88.0	95.4

PLOT SCALE - 1:200
PLOTTED FROM - TRAB12222
PLOT NAME - 5
FILE - ...\PRJ\DAY08D6\SIGN TABS.DGN

ADVISORY & ADVANCE DETOUR SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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Plotting Date: 02/18/2025			

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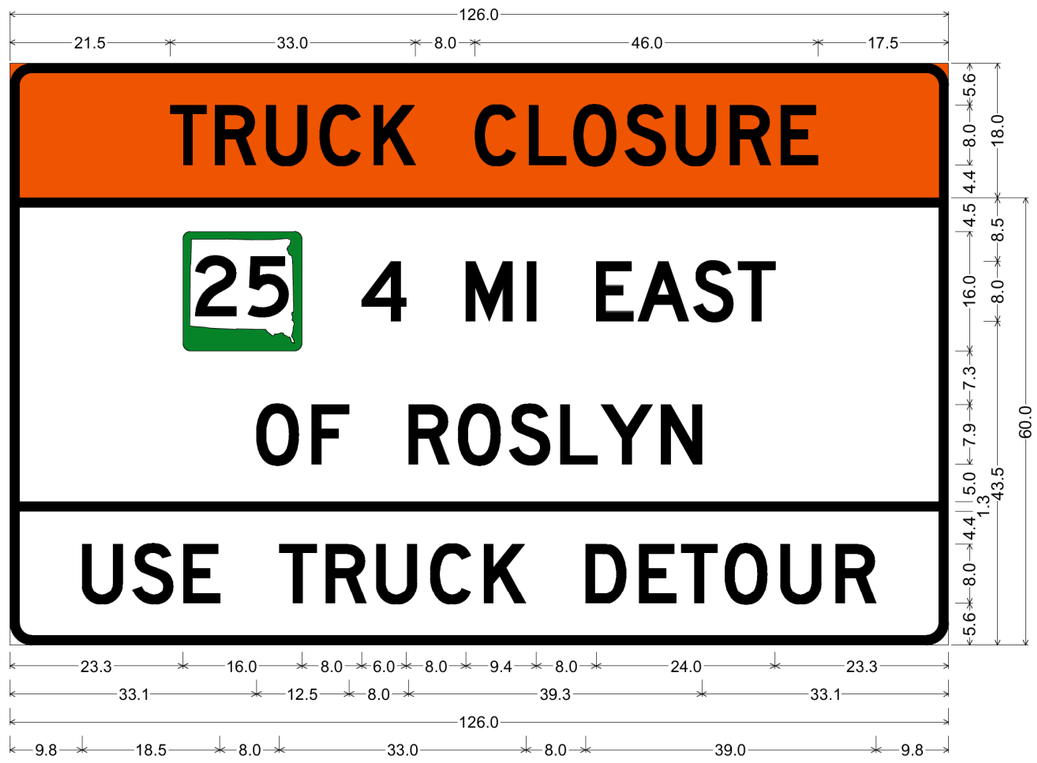


3.0" Radius, 1.3" Border, Black on Orange;
"TRUCK CLOSURE", D 2K;

3.0" Radius, 1.3" Border, Black on White;
"2 MI EAST", D 2K; "OF ROSLYN", D 2K; "USE TRUCK DETOUR", D 2K;
Table of letter and object lefts

T 21.5	R 27.6	U 34.5	C 41.6	K 48.9	C 62.5	L 69.6	O 75.6	S 82.5	U 89.4	R 96.8	E 103.5	
25 23.5	2 47.5	M 61.0	I 69.1	E 78.4	A 84.0	S 91.5	T 97.5					
O 33.1	F 40.6	R 53.5	O 60.3	S 67.1	L 73.9	Y 79.4	N 87.4					
— -0.0												
U 9.8	S 16.5	E 23.4	T 36.3	R 42.5	U 49.3	C 56.5	K 63.6	D 77.3	E 84.5	T 90.0	O 96.0	U 103.5	R 110.9

F1



3.0" Radius, 1.3" Border, Black on Orange;
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3.0" Radius, 1.3" Border, Black on White;
"4 MI EAST", D 2K; "OF ROSLYN", D 2K; "USE TRUCK DETOUR", D 2K;
Table of letter and object lefts

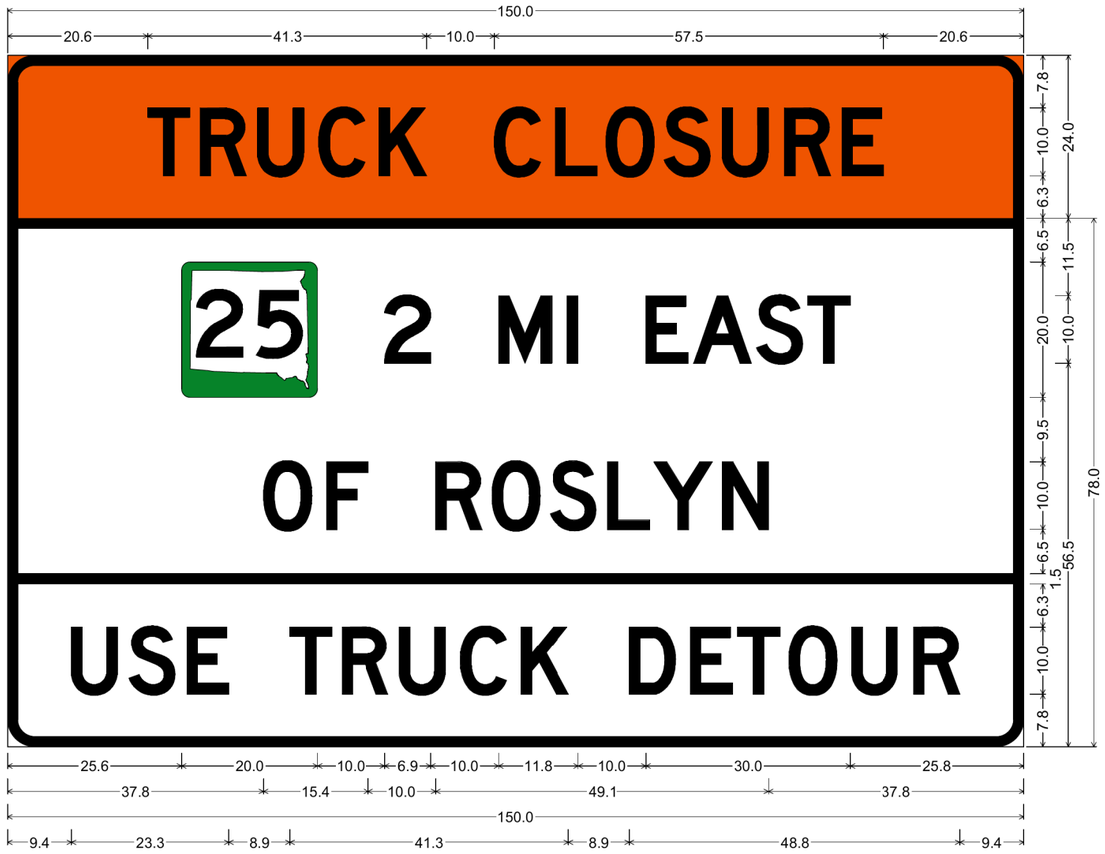
T 21.5	R 27.6	U 34.5	C 41.6	K 48.9	C 62.5	L 69.6	O 75.6	S 82.5	U 89.4	R 96.8	E 103.5	
25 23.3	4 47.3	M 61.3	I 69.4	E 78.6	A 84.3	S 91.8	T 97.8					
O 33.1	F 40.6	R 53.5	O 60.3	S 67.1	L 73.9	Y 79.4	N 87.4					
— -0.0												
U 9.8	S 16.5	E 23.4	T 36.3	R 42.5	U 49.3	C 56.5	K 63.6	D 77.3	E 84.5	T 90.0	O 96.0	U 103.5	R 110.9

PLOT SCALE - 1:200
PLOTTED FROM - TRAB12222
PLOT NAME - 6
FILE - ...\PRJ\DAY0806\SIGN TABS.DGN

ADVISORY & ADVANCE DETOUR SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	C9	C20
Plotting Date: 02/18/2025			

E2

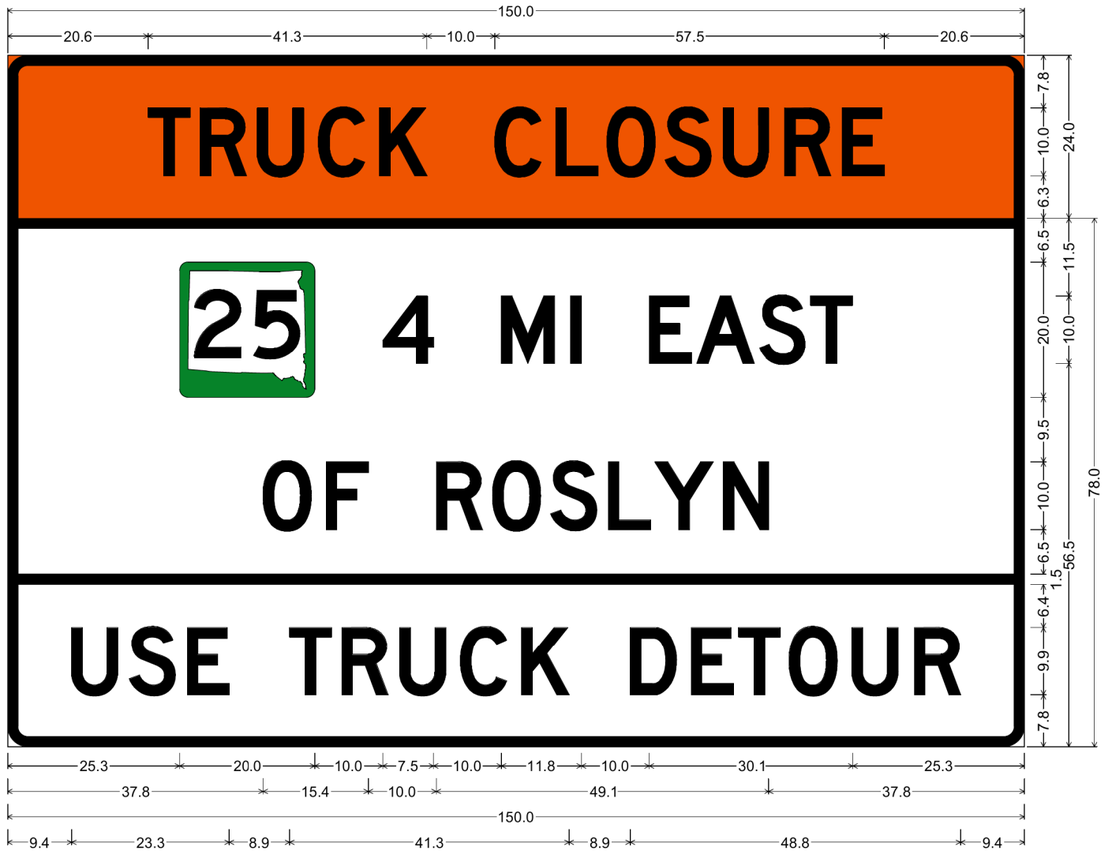


4.0" Radius, 1.5" Border, Black on Orange;
"TRUCK CLOSURE", D 2K;

4.0" Radius, 1.5" Border, Black on White;
"2 MI EAST", D 2K; "OF ROSLYN", D 2K; "USE TRUCK DETOUR", D 2K;
Table of letter and object lefts

T	R	U	C	K	C	L	O	S	U	R	E	
20.6	28.4	36.9	45.9	54.9	71.9	80.9	88.4	97.0	105.5	114.6	123.1	
25	2	M	I	E	A	S	T					
25.6	55.6	72.5	82.6	94.3	101.3	110.5	118.1					
O	F	R	O	S	L	Y	N					
37.8	47.0	63.3	71.5	80.1	88.6	95.4	105.5					
—												
-0.0												
U	S	E	T	R	U	C	K	D	E	T	O	U	R
9.4	17.9	26.4	41.6	49.3	57.8	66.8	75.8	91.8	100.8	107.8	115.3	124.6	133.8

F2



3.0" Radius, 1.5" Border, Black on Orange;
"TRUCK CLOSURE", D 2K;

3.0" Radius, 1.5" Border, Black on White;
"4 MI EAST", D 2K; "OF ROSLYN", D 2K; "USE TRUCK DETOUR", D 2K;
Table of letter and object lefts

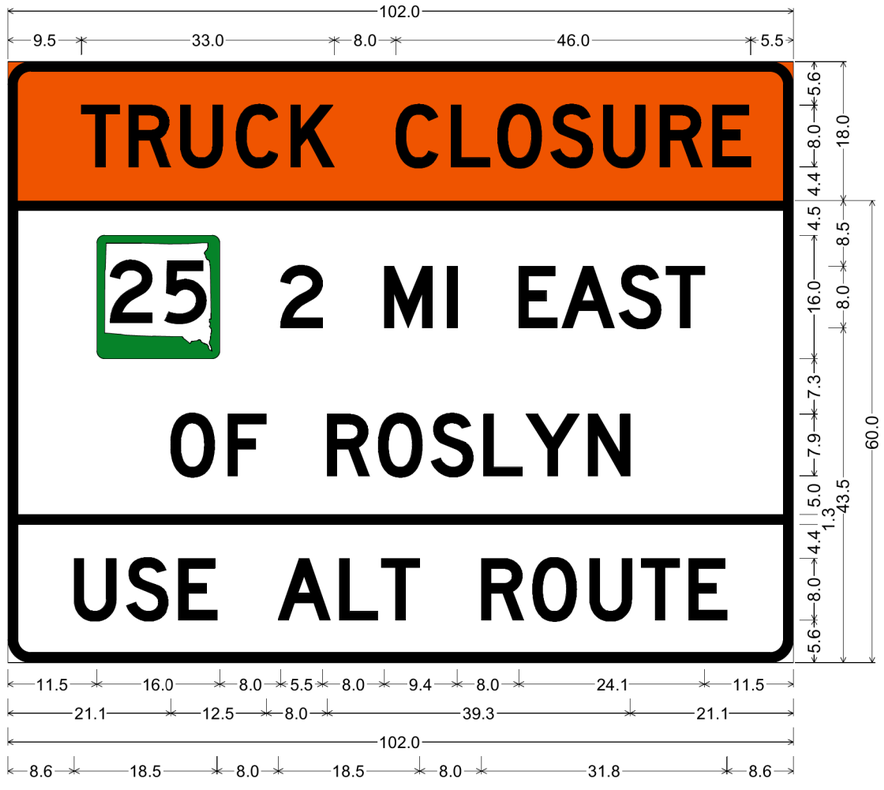
T	R	U	C	K	C	L	O	S	U	R	E	
20.6	28.4	36.9	45.9	54.9	71.9	80.9	88.4	97.0	105.5	114.6	123.1	
25	4	M	I	E	A	S	T					
25.3	55.3	72.8	83.0	94.6	101.6	110.9	118.5					
O	F	R	O	S	L	Y	N					
37.8	47.0	63.3	71.5	80.1	88.6	95.4	105.5					
—												
-0.0												
U	S	E	T	R	U	C	K	D	E	T	O	U	R
9.4	17.9	26.4	41.6	49.3	57.8	66.8	75.8	91.8	100.8	107.8	115.3	124.6	133.8

PLOT SCALE - 1:200
PLOTTED FROM - TRAB12222
PLOT NAME - 7
FILE - ...\PRJ\DAY08D6\SIGN TABS.DGN

ADVISORY & ADVANCE DETOUR SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	C10	C20
Plotting Date: 02/18/2025			

G

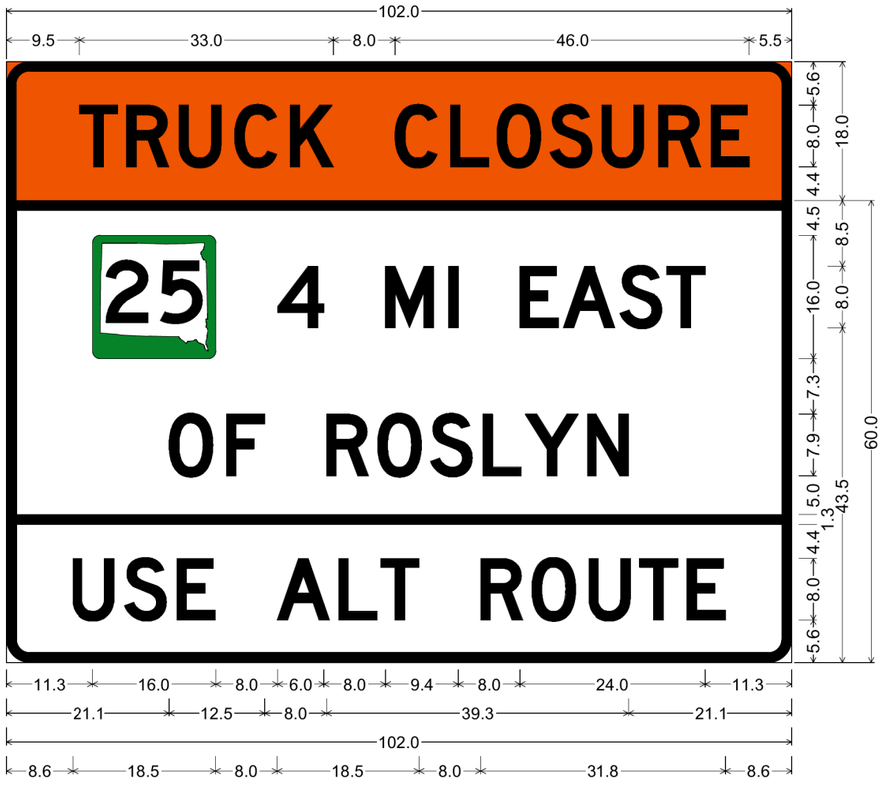


3.0" Radius, 1.3" Border, Black on Orange;
"TRUCK CLOSURE", D 2K;

3.0" Radius, 1.3" Border, Black on White;
"2 MI EAST", D 2K; "OF ROSLYN", D 2K; "USE ALT ROUTE", D 2K;
Table of letter and object lefts

T	R	U	C	K	C	L	O	S	U	R	E	
9.5	15.6	22.5	29.6	36.9	50.5	57.6	63.6	70.5	77.4	84.8	91.5	
25	2	M	I	E	A	S	T					
11.5	35.5	49.0	57.1	66.4	72.0	79.5	85.5					
O	F	R	O	S	L	Y	N					
21.1	28.6	41.5	48.3	55.1	61.9	67.4	75.4					
—												
-0.0												
U	S	E	A	L	T	R	O	U	T	E		
8.6	15.4	22.3	35.1	43.1	48.6	61.5	68.3	75.6	82.3	88.5		

H



3.0" Radius, 1.3" Border, Black on Orange;
"TRUCK CLOSURE", D 2K;

3.0" Radius, 1.3" Border, Black on White;
"4 MI EAST", D 2K; "OF ROSLYN", D 2K; "USE ALT ROUTE", D 2K;
Table of letter and object lefts

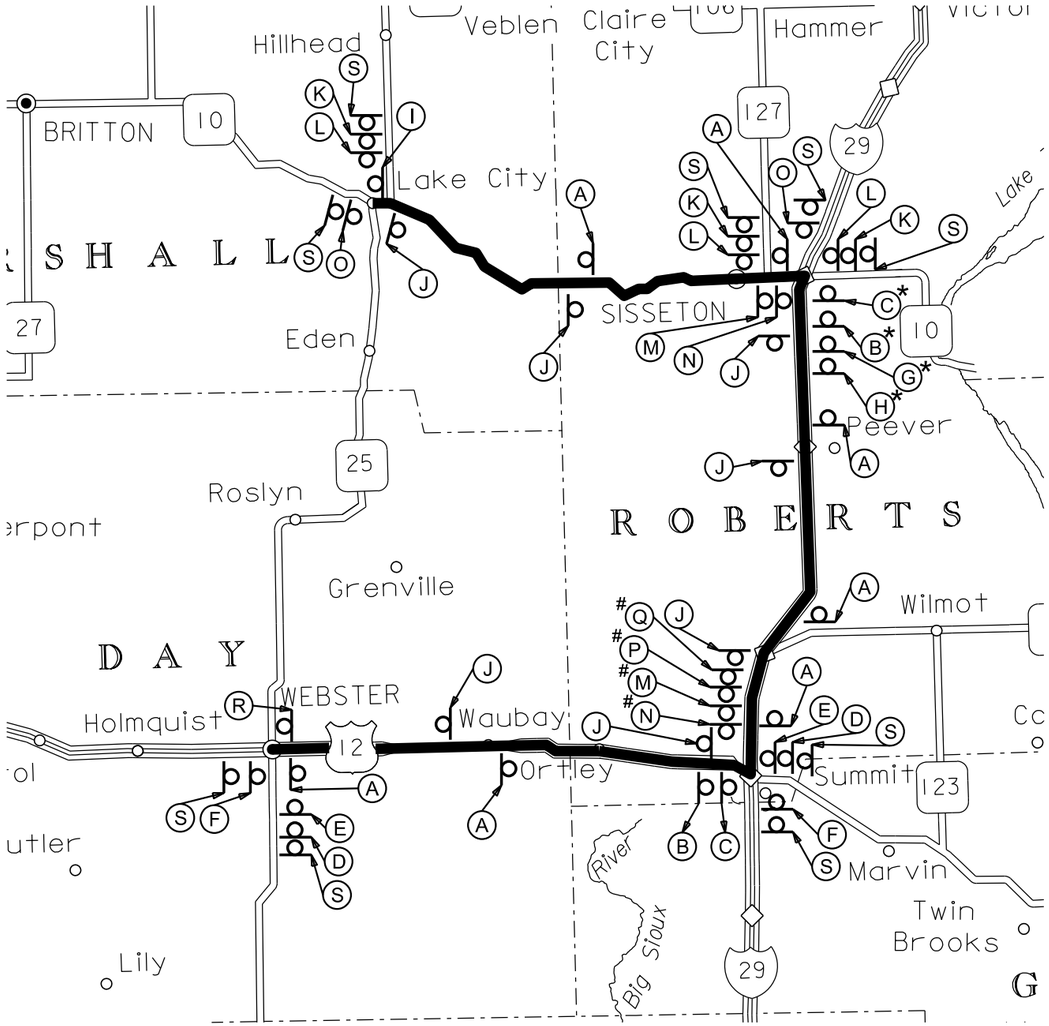
T	R	U	C	K	C	L	O	S	U	R	E	
9.5	15.6	22.5	29.6	36.9	50.5	57.6	63.6	70.5	77.4	84.8	91.5	
25	4	M	I	E	A	S	T					
11.3	35.3	49.3	57.4	66.6	72.3	79.8	85.8					
O	F	R	O	S	L	Y	N					
21.1	28.6	41.5	48.3	55.1	61.9	67.4	75.4					
—												
-0.0												
U	S	E	A	L	T	R	O	U	T	E		
8.6	15.4	22.3	35.1	43.1	48.6	61.5	68.3	75.6	82.3	88.5		

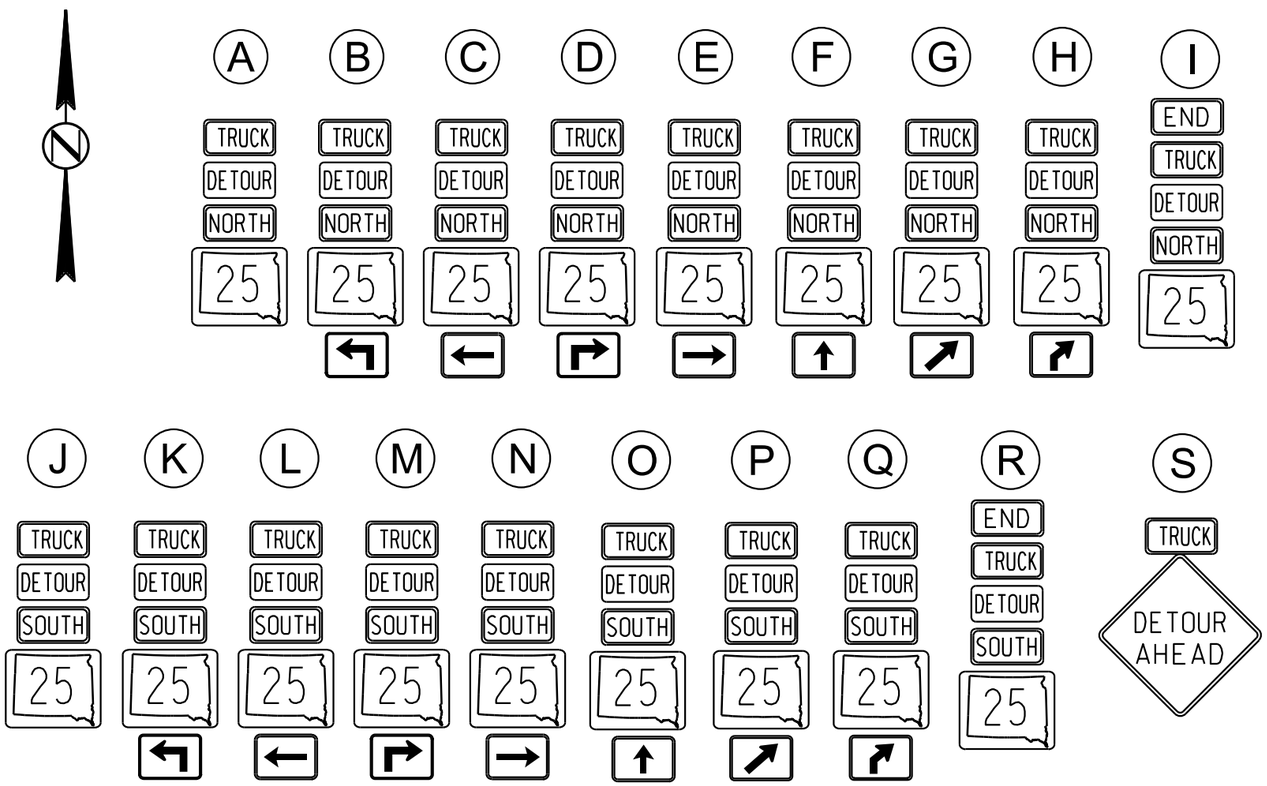
PLOT SCALE - 1:200
PLOTTED FROM - TRAB12222
PLOT NAME - 8
FILE ....\PRJNDAY08D6\SIGN TABS.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	C11	C20
Plotting Date: 02/18/2025			

TRUCK DETOUR LAYOUT

(FIXED LOCATION GROUND MOUNTED, BREAKAWAY SUPPORTS)





* Signs G and H will be placed along I 29 N mainline. Signs B and C will be placed along the off-ramp for SD 10.

\# Signs P and Q will be placed along I 29 S mainline. Signs M and N will be placed along the off-ramp for US 12.

CONVENTIONAL TRUCK DETOUR ARROW QUANTITY:

3 6 3 1

EXPRESSWAY/INTERSTATE TRUCK DETOUR ARROW QUANTITY:

2 3 1 3 2 2

PLOT SCALE - 1:38250

PLOTTED FROM - TRAB12222

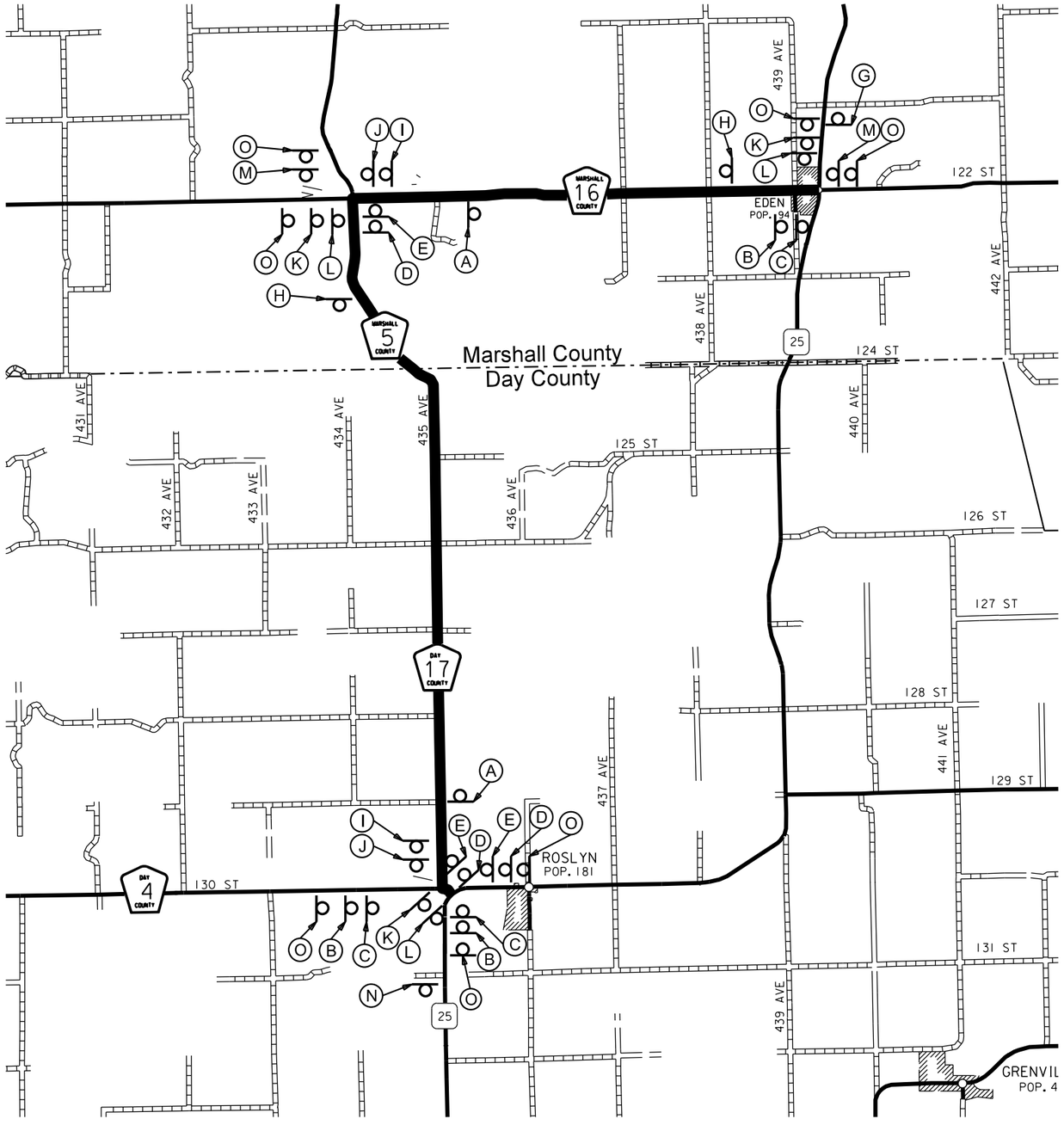
PLOT NAME - 9

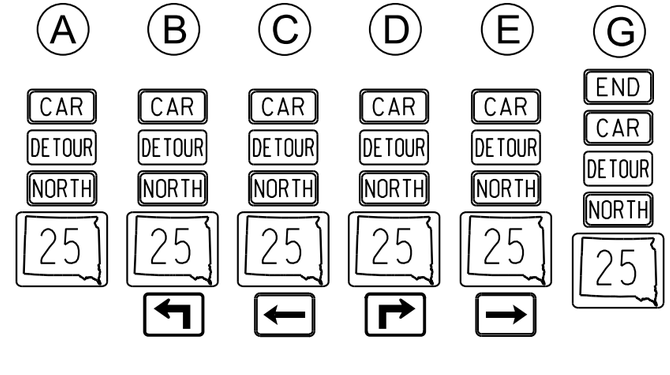
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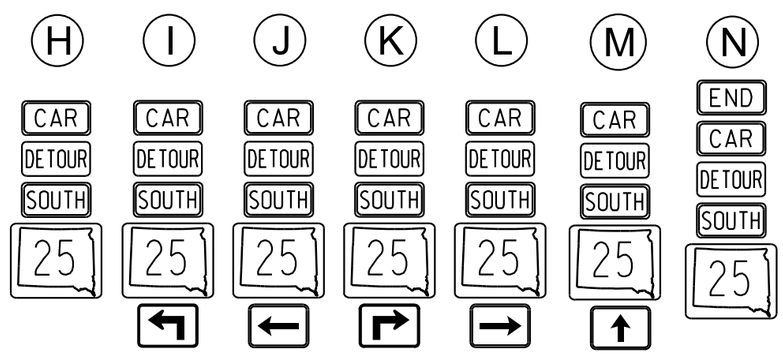
CAR DETOUR LAYOUT

(FIXED LOCATION GROUND MOUNTED, BREAKAWAY SUPPORTS)

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	C12	C20
Plotting Date: 02/18/2025			









CAR DETOUR ARROW QUANTITY:

5	11	6	2

PLOT SCALE - 1:8000

PLOTTED FROM - TRAB12222

PLOT NAME - 10

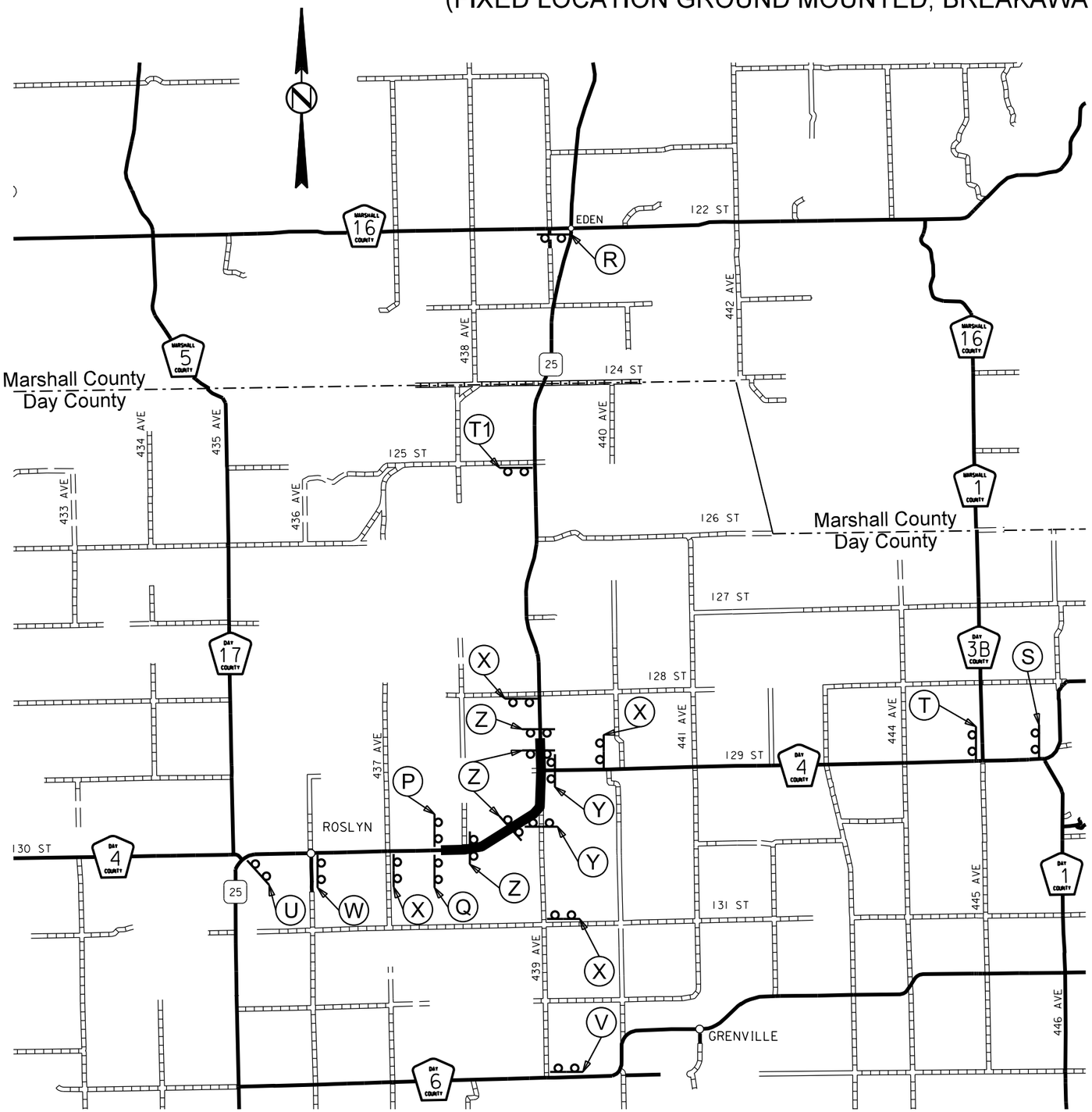
FILE - ...\PRJ\DAY0806\CAR DETOUR.DGN

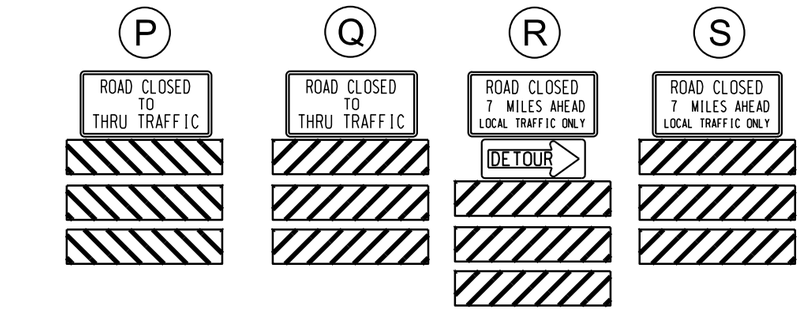
ROAD CLOSURE LAYOUT

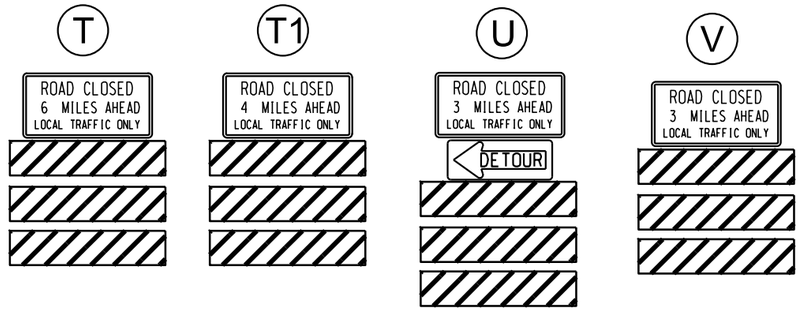
(FIXED LOCATION GROUND MOUNTED, BREAKAWAY SUPPORTS)

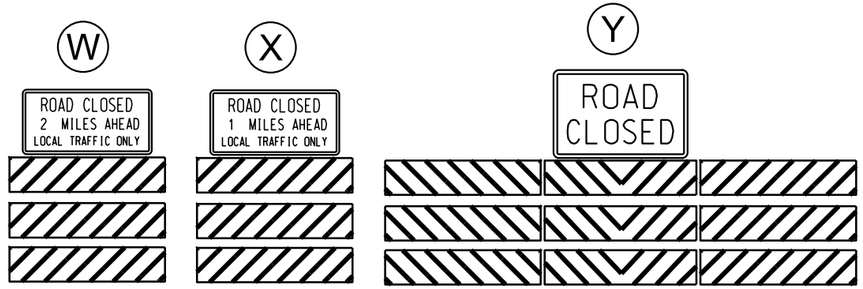
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	C13	C20

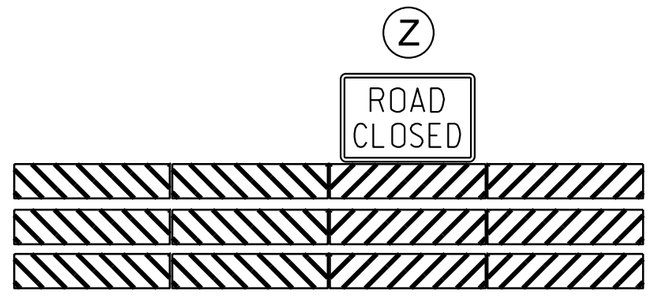
Plotting Date: 02/18/2025











See Standard Plate 634.29 for more detail.

PLOT SCALE - 1:8100

PLOT NAME - 11

FILE ...\ROAD CLOSURE DETAIL.DGN

PLOTTED FROM - TRAB12222

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	C14	C20
Plotting Date: 02/18/2025			

ITEMIZED LIST FOR ADVISORY & ADVANCE DETOUR AND RESTRICTION SIGNING

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD NUMBER	CONVENTIONAL ROAD SIGN SIZE	CONVENTIONAL ROAD SQFT PER SIGN	CONVENTIONAL ROAD SQFT	EXPRESSWAY / INTERSTATE NUMBER	EXPRESSWAY / INTERSTATE SIGN SIZE	EXPRESSWAY / INTERSTATE SQFT PER SIGN	EXPRESSWAY / INTERSTATE SQFT
SPECIAL	ROAD CLOSURE SD 25 2 MI EAST OF ROSYLN USE ALT ROUTE (A1)	1	102" x 78"	55.3	55.3		102" x 78"	55.3	
SPECIAL	ROAD CLOSURE SD 25 2 MI EAST OF ROSYLN USE ALT ROUTE (A2)		126" x 96"	84.0		4	126" x 96"	84.0	336.0
SPECIAL	ROAD CLOSURE SD 25 4 MI EAST OF ROSYLN USE ALT ROUTE (B1)	5	102" x 78"	55.3	276.5		102" x 78"	55.3	
SPECIAL	ROAD CLOSURE SD 25 4 MI EAST OF ROSYLN USE ALT ROUTE (B2)		126" x 96"	84.0		1	126" x 96"	84.0	84.0
SPECIAL	ROAD CLOSURE SD 25 2 MI EAST OF ROSYLN USE CAR DETOUR (C)	1	108" x 78"	58.5	58.5		108" x 78"	58.5	
SPECIAL	ROAD CLOSURE SD 25 4 MI EAST OF ROSYLN USE CAR DETOUR (D)	1	108" x 78"	58.5	58.5		108" x 78"	58.5	
SPECIAL	TRUCK CLOSURE SD 25 2 MI EAST OF ROSYLN USE TRUCK DETOUR (E1)	2	126" x 78"	68.3	136.6		126" x 78"	68.3	
SPECIAL	TRUCK CLOSURE SD 25 2 MI EAST OF ROSYLN USE TRUCK DETOUR (E2)		150" x 102"	106.3		2	150" x 102"	106.3	212.6
SPECIAL	TRUCK CLOSURE SD 25 4 MI EAST OF ROSYLN USE TRUCK DETOUR (F1)	3	126" x 78"	68.3	204.9		126" x 78"	68.3	
SPECIAL	TRUCK CLOSURE SD 25 4 MI EAST OF ROSYLN USE TRUCK DETOUR (F2)		150" x 102"	106.3		1	150" x 102"	106.3	106.3
SPECIAL	TRUCK CLOSURE SD 25 2 MI EAST OF ROSYLN USE ALT ROUTE (G)	1	102" x 78"	55.3	55.3		102" x 78"	55.3	
SPECIAL	TRUCK CLOSURE SD 25 4 MI EAST OF ROSYLN USE ALT ROUTE (H)	1	102" x 78"	55.3	55.3		102" x 78"	55.3	
		CONVENTIONAL ROAD DETOUR AND RESTRICTION SIGNING SQFT			900.9	EXPRESSWAY / INTERSTATE DETOUR AND RESTRICTION SIGNING SQFT			738.9

ITEMIZED LIST FOR TRUCK DETOUR AND RESTRICTION SIGNING

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD NUMBER	CONVENTIONAL ROAD SIGN SIZE	CONVENTIONAL ROAD SQFT PER SIGN	CONVENTIONAL ROAD SQFT	EXPRESSWAY / INTERSTATE NUMBER	EXPRESSWAY / INTERSTATE SIGN SIZE	EXPRESSWAY / INTERSTATE SQFT PER SIGN	EXPRESSWAY / INTERSTATE SQFT
SPECIAL	TRUCK (Black Text and Border on Orange Background)	6	24" x 12"	2.0	12.0	3	36" x 18"	4.5	13.5
W20-2	DETOUR AHEAD	6	48" x 48"	16.0	96.0	3	48" x 48"	16.0	48.0
M1-5	SD ROUTE MARKER (1 or 2 digits)	17	24" x 24"	4.0	68.0	25	36" x 36"	9.0	225.0
M3-1	DIRECTION MARKER - NORTH	6	24" x 12"	2.0	12.0	14	36" x 18"	4.5	63.0
M3-3	DIRECTION MARKER - SOUTH	11	24" x 12"	2.0	22.0	11	36" x 18"	4.5	49.5
M4-4	TRUCK (Black Text and Border on White Background)	17	24" x 12"	2.0	34.0	25	36" x 18"	4.5	112.5
M4-6	END	1	24" x 12"	2.0	2.0	1	36" x 18"	4.5	4.5
M4-8	DETOUR	17	24" x 12"	2.0	34.0	25	30" x 15"	3.1	77.5
M5-1	ADVANCE TURN ARROW 90° (L or R)	6	21" x 15"	2.2	13.2	3	30" x 21"	4.4	13.2
M5-2	ADVANCE TURN ARROW 45° (L or R)		21" x 15"	2.2		2	30" x 21"	4.4	8.8
M6-1	DIRECTION ARROW - Horizontal Single Head (L or R)	6	21" x 15"	2.2	13.2	3	30" x 21"	4.4	13.2
M6-2	DIRECTION ARROW - 45° Single Head (L or R)		21" x 15"	2.2		2	30" x 21"	4.4	8.8
M6-3	DIRECTION ARROW - Vertical Single Head	1	21" x 15"	2.2	2.2	3	30" x 21"	4.4	13.2
		CONVENTIONAL ROAD DETOUR AND RESTRICTION SIGNING SQFT			308.6	EXPRESSWAY / INTERSTATE DETOUR AND RESTRICTION SIGNING SQFT			650.7

ITEMIZED LIST FOR CAR DETOUR AND RESTRICTION SIGNING

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD NUMBER	CONVENTIONAL ROAD SIGN SIZE	CONVENTIONAL ROAD SQFT PER SIGN	CONVENTIONAL ROAD SQFT
SPECIAL	CAR (Black Text and Border on Orange Background)	7	24" x 12"	2.0	14.0
W20-2	DETOUR AHEAD	7	48" x 48"	16.0	112.0
M1-5	SD ROUTE MARKER (1 or 2 digits)	30	24" x 24"	4.0	120.0
M3-1	DIRECTION MARKER - NORTH	15	24" x 12"	2.0	30.0
M3-3	DIRECTION MARKER - SOUTH	15	24" x 12"	2.0	30.0
SPECIAL	CAR (Black Text and Border on White Background)	30	24" x 12"	2.0	60.0
M4-6	END	2	24" x 12"	2.0	4.0
M4-8	DETOUR	30	24" x 12"	2.0	60.0
M5-1	ADVANCE TURN ARROW 90° (L or R)	11	21" x 15"	2.2	24.2
M6-1	DIRECTION ARROW - Horizontal Single Head (L or R)	11	21" x 15"	2.2	24.2
M6-3	DIRECTION ARROW - Vertical Single Head	2	21" x 15"	2.2	4.4
		CONVENTIONAL ROAD DETOUR AND RESTRICTION SIGNING SQFT			482.8

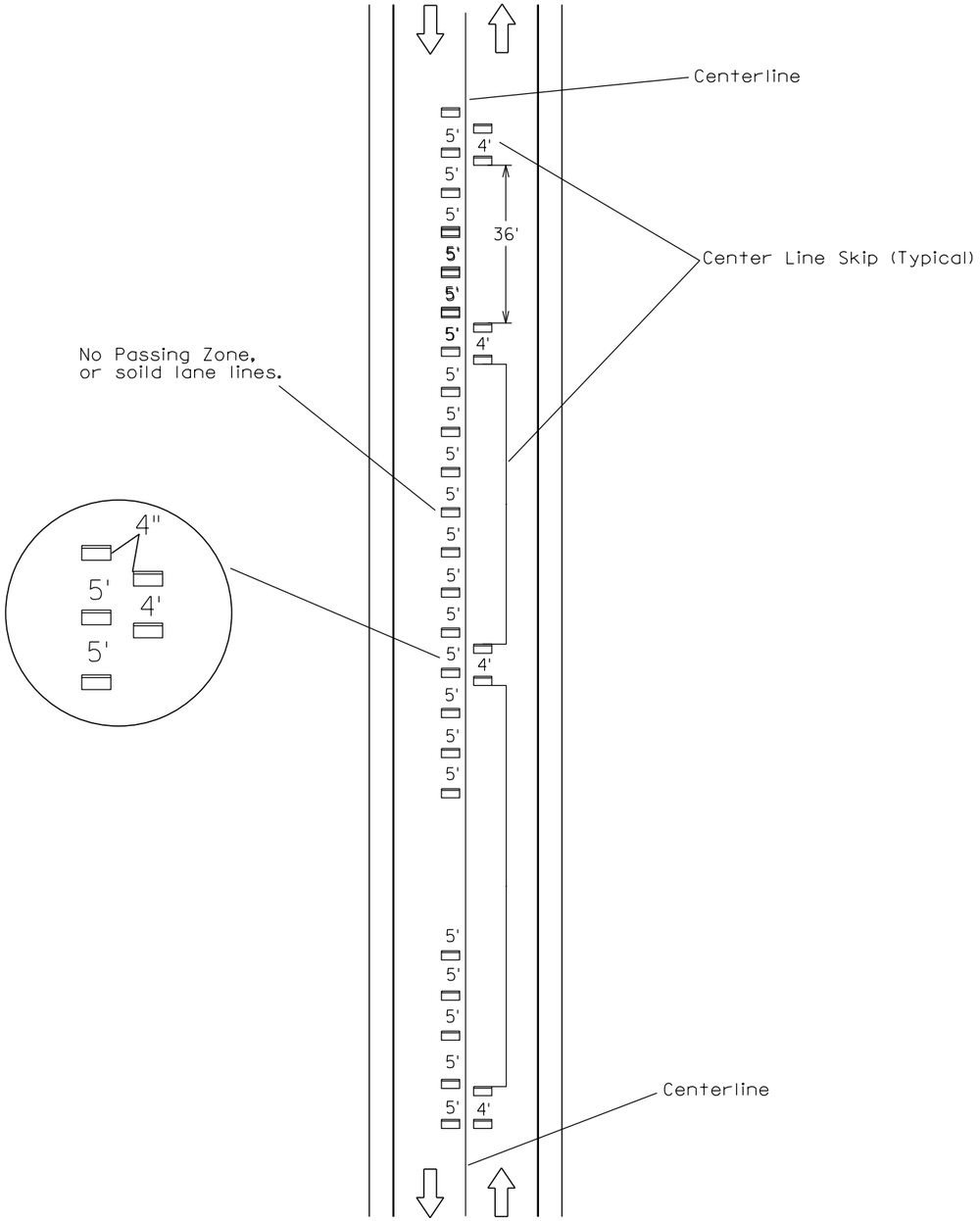
ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD NUMBER	CONVENTIONAL ROAD SIGN SIZE	CONVENTIONAL ROAD SQFT PER SIGN	CONVENTIONAL ROAD SQFT
R4-7	KEEP RIGHT (symbol)	2	24" x 30"	5.0	10.0
R11-2	ROAD CLOSED	6	48" x 30"	10.0	60.0
R11-3a	ROAD CLOSED 1 MILES AHEAD LOCAL TRAFFIC ONLY	4	60" x 30"	12.5	50.0
R11-3a	ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY	1	60" x 30"	12.5	12.5
R11-3a	ROAD CLOSED 3 MILES AHEAD LOCAL TRAFFIC ONLY	2	60" x 30"	12.5	25.0
R11-3a	ROAD CLOSED 4 MILES AHEAD LOCAL TRAFFIC ONLY	1	60" x 30"	12.5	12.5
R11-3a	ROAD CLOSED 6 MILES AHEAD LOCAL TRAFFIC ONLY	1	60" x 30"	12.5	12.5
R11-3a	ROAD CLOSED 7 MILES AHEAD LOCAL TRAFFIC ONLY	2	60" x 30"	12.5	25.0
R11-4	ROAD CLOSED TO THRU TRAFFIC	2	60" x 30"	12.5	25.0
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
W8-1	BUMP	6	48" x 48"	16.0	96.0
W8-3	PAVEMENT ENDS	2	48" x 48"	16.0	32.0
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	2	48" x 48"	16.0	32.0
SPECIAL	WINDROW	2	48" x 48"	16.0	32.0
W8-11	UNEVEN LANES	2	48" x 48"	16.0	32.0
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6.3	12.6
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-3	ROAD CLOSED AHEAD	8	48" x 48"	16.0	128.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	3	48" x 48"	16.0	48.0
W21-1	WORKERS (symbol)	2	48" x 48"	16.0	32.0
W21-2	FRESH OIL	2	48" x 48"	16.0	32.0
W21-3	ROAD MACHINERY AHEAD	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	1	30" x 18"	3.8	3.8
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
M4-10	DETOUR ARROW (L or R)	2	48" x 18"	6.0	12.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			925.9

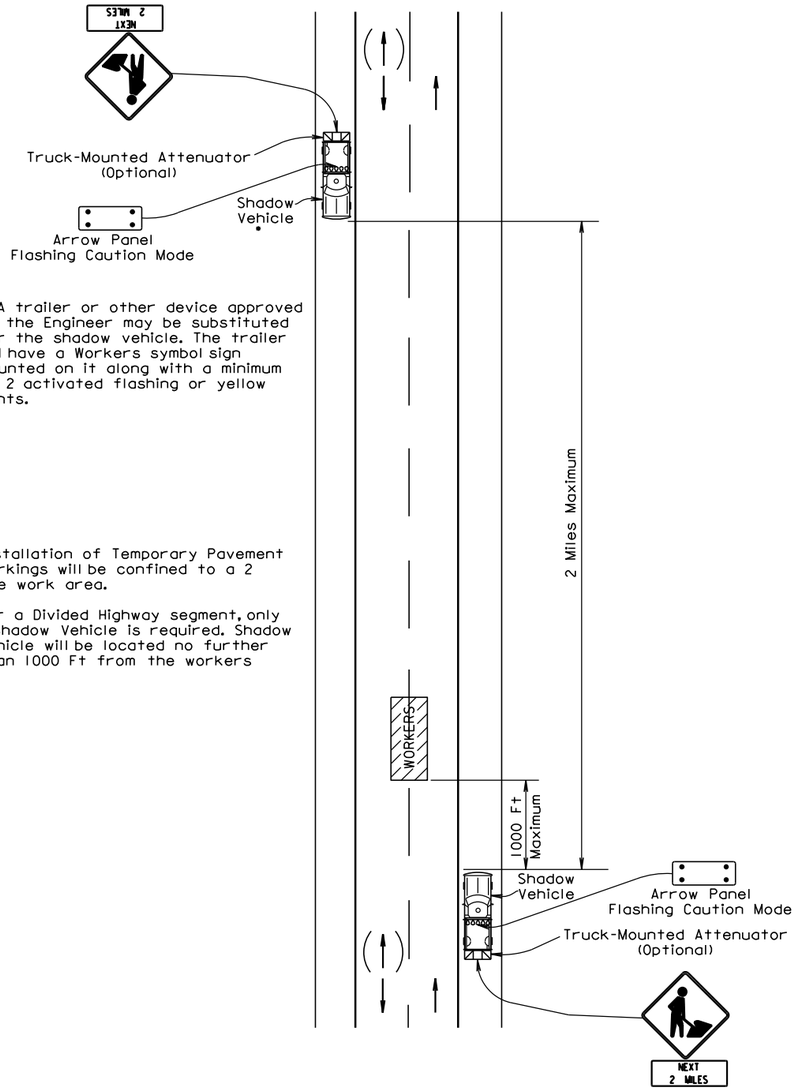
PLOT SCALE - 1:200
PLOTTED FROM - TRAB12222
PLOT NAME - 12
FILE - ...\PRJ\DAY\0806\SIGN TABS.DGN

PLOT SCALE - 1:28000

GUIDES FOR TRAFFIC CONTROL DEVICES TEMPORARY ROAD MARKER INSTALLATION



GUIDES FOR TRAFFIC CONTROL DEVICES APPLICATION OF TEMPORARY PAVEMENT MARKING TABS



* A trailer or other device approved by the Engineer may be substituted for the shadow vehicle. The trailer will have a Workers symbol sign mounted on it along with a minimum of 2 activated flashing or yellow lights.

Installation of Temporary Pavement Markings will be confined to a 2 Mile work area.

For a Divided Highway segment, only 1 Shadow Vehicle is required. Shadow Vehicle will be located no further than 1000 Ft from the workers

PLOTTED FROM - TRAB12222
PLOT NAME - 13
FILE - ...\DAY08D6\08D6_TEMPMARKERS.DGN

* Messages on signs will vary depending on the operation being conducted.

Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

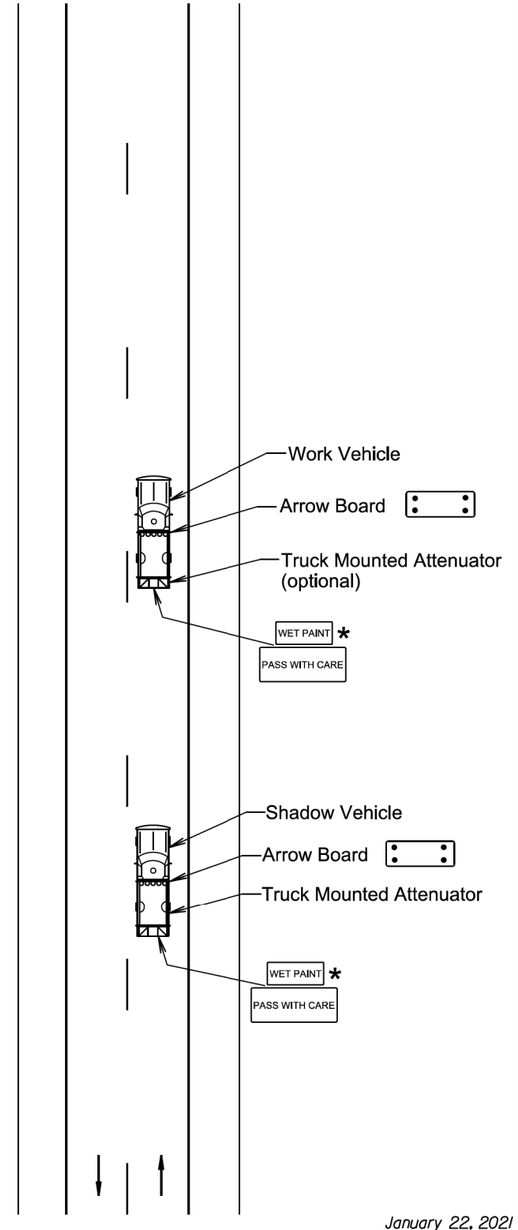
Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

Vehicle hazard warning signals will not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

When an arrow board is used, it will be used in the caution mode. Marching Diamonds are acceptable.

Arrow boards will, as a minimum, be Type B, with a size of 60" x 30".

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for “Traffic Control, Miscellaneous”.



January 22, 2021

Published Date: 2025

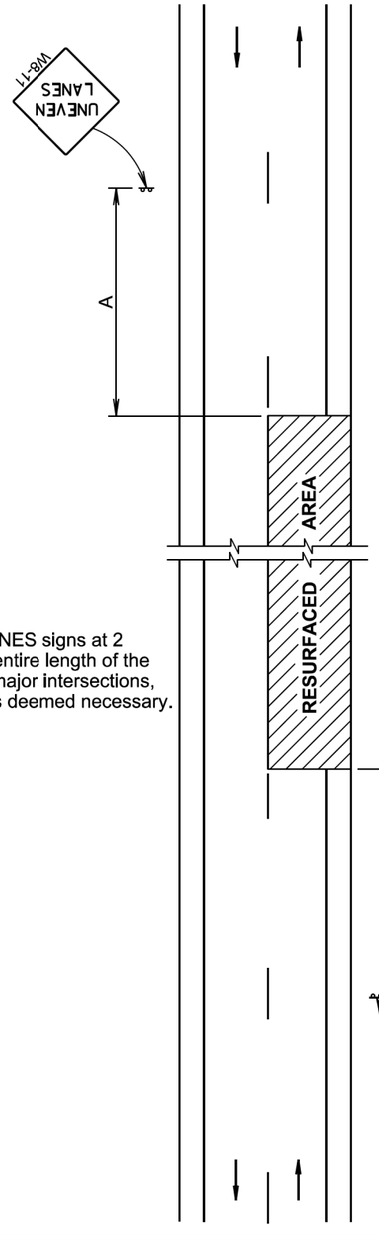
SDDOT

MOBILE OPERATIONS ON 2-LANE ROAD

PLATE NUMBER 634.06

Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 14
FILE - ...\PRJ\DAY08D6\63400_&_63406.DGN
-PLOTTED FROM - TRAB12222



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 75	1000

Install additional UNEVEN LANES signs at 2 mile intervals throughout the entire length of the uneven area and at affected major intersections, edge of towns, and other sites deemed necessary.

January 22, 2021

Published Date: 2025	SDDOT	UNEVEN ROAD SURFACE	PLATE NUMBER 634.22
			Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45	500	25
50	500	50
55	750	50
60 - 65	1000	50

Flagger

Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

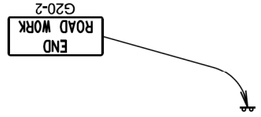
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) will be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

The channelizing devices will be drums or 42" cones.

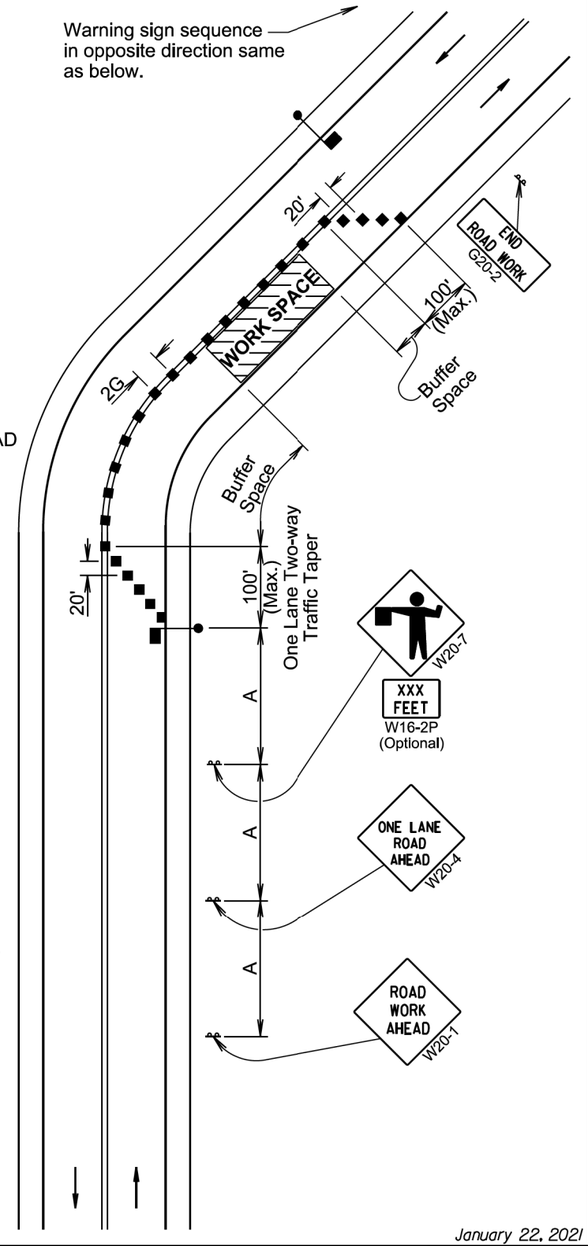
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.



Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

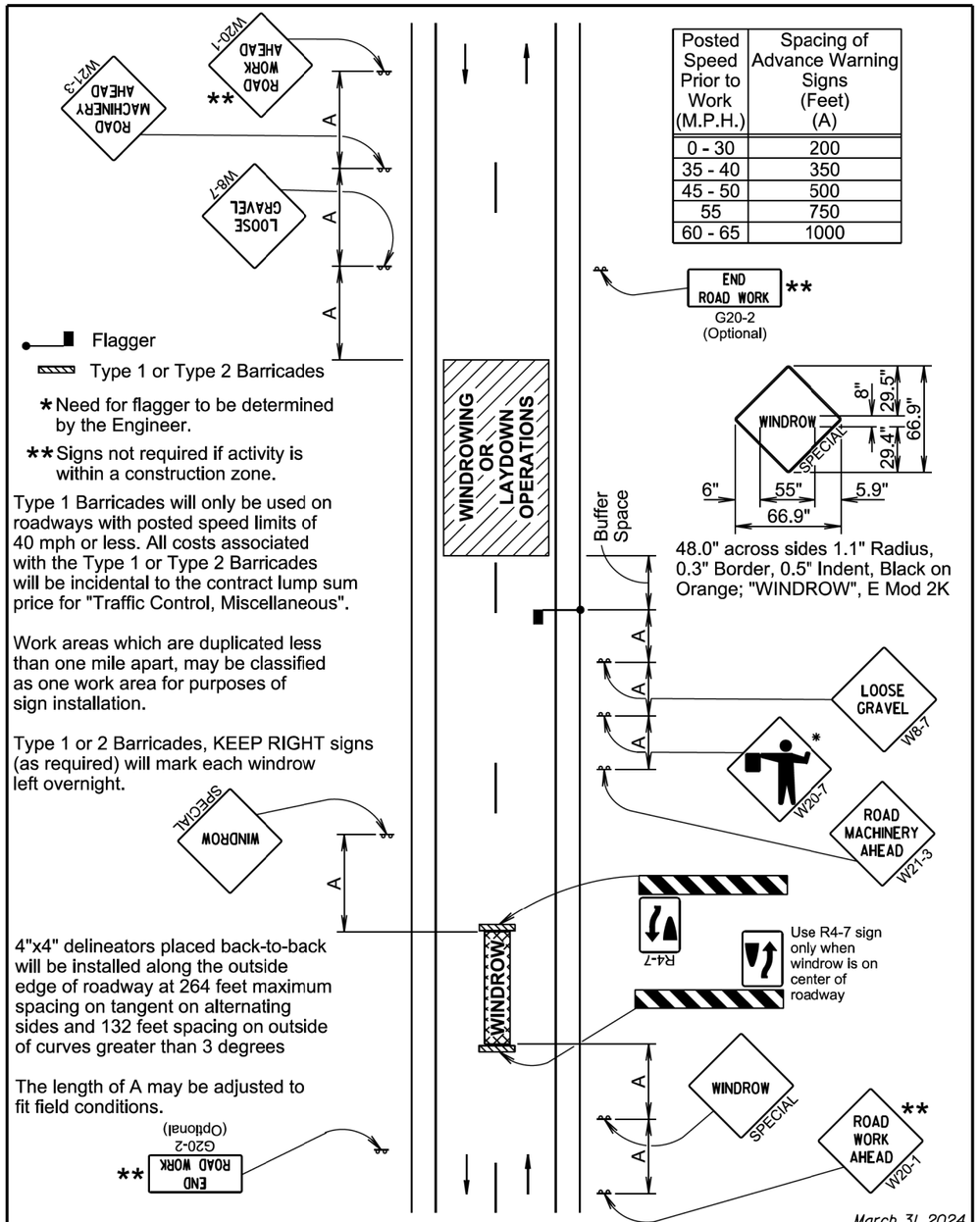
The length of A may be adjusted to fit field conditions.



January 22, 2021

Published Date: 2025	SDDOT	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1

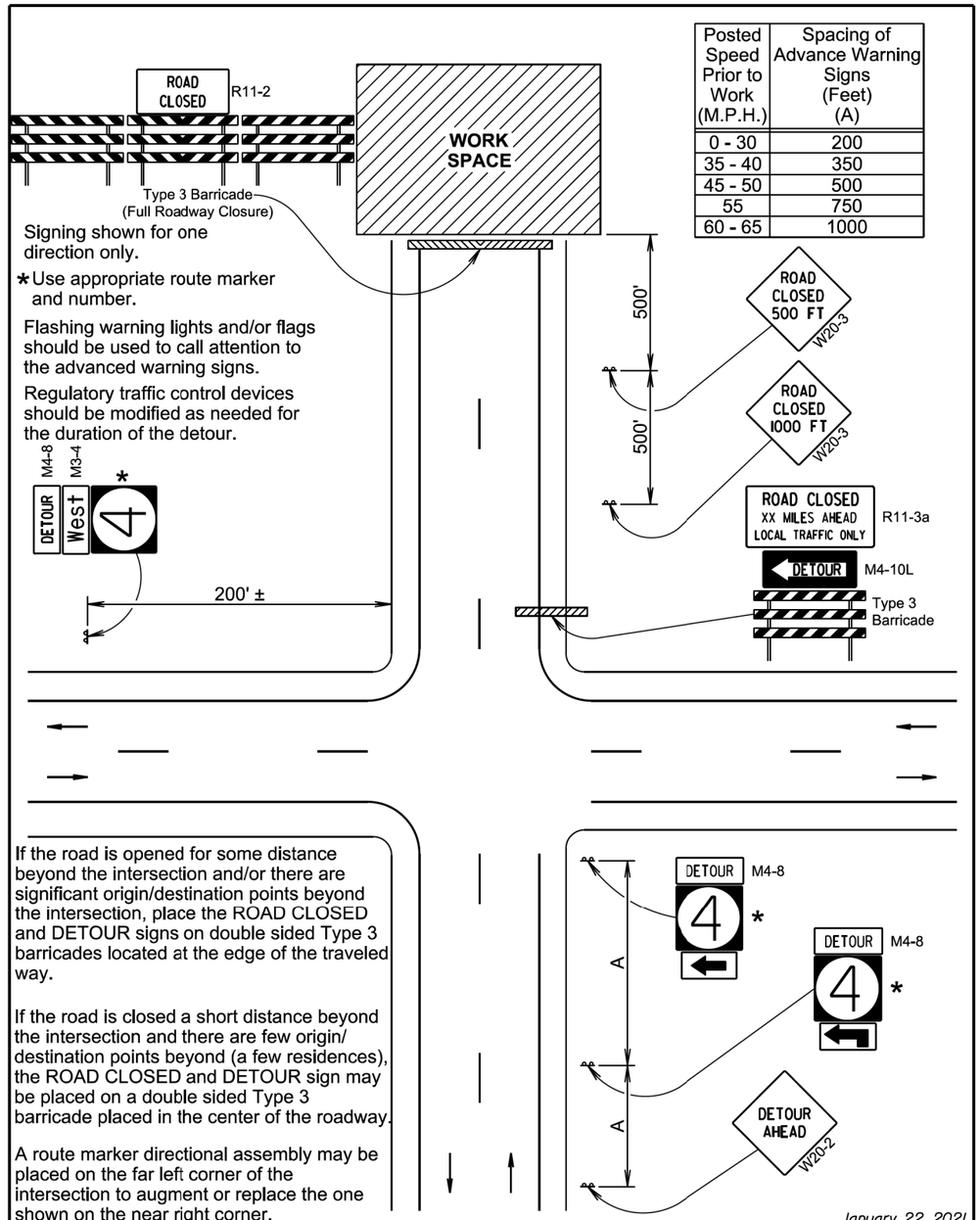
PLOT SCALE - 1:200
PLOT NAME - 15
FILE - ...\PRJ\DAY08D6\63422_&_63423.DGN
-PLOTTED FROM - TRAB12222



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000

March 31, 2024

Published Date: 2025	SDDOT	WINDROWING OR LAYDOWN OPERATION	PLATE NUMBER 634.27
			Sheet 1 of 1

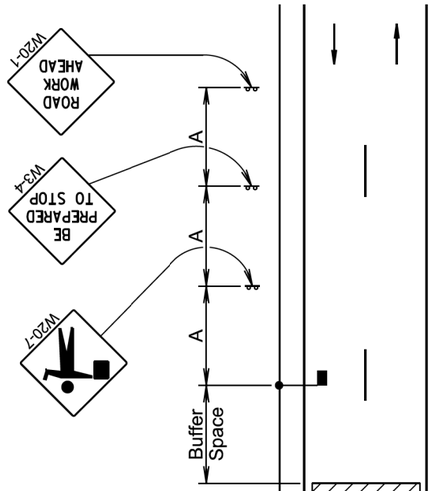


Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000

January 22, 2021

Published Date: 2025	SDDOT	ROAD CLOSED WITH OFF-SITE DETOUR	PLATE NUMBER 634.29
			Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 16
FILE - ...\PRJ\DAY08D6\63427_&_63429.DGN
-PLOTTED FROM - TRAB12222



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000

Flagger

END ROAD WORK
G20-2
(Optional)

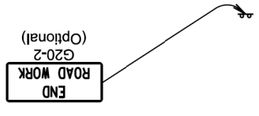
Posted Speed Prior to Work (M.P.H.)	Length of Longitudinal Buffer Space (Feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

Buffer space dependent on work site limitations.

A changeable message sign may be used in addition to the initial warning sign.

Flagger station to be lighted at night.

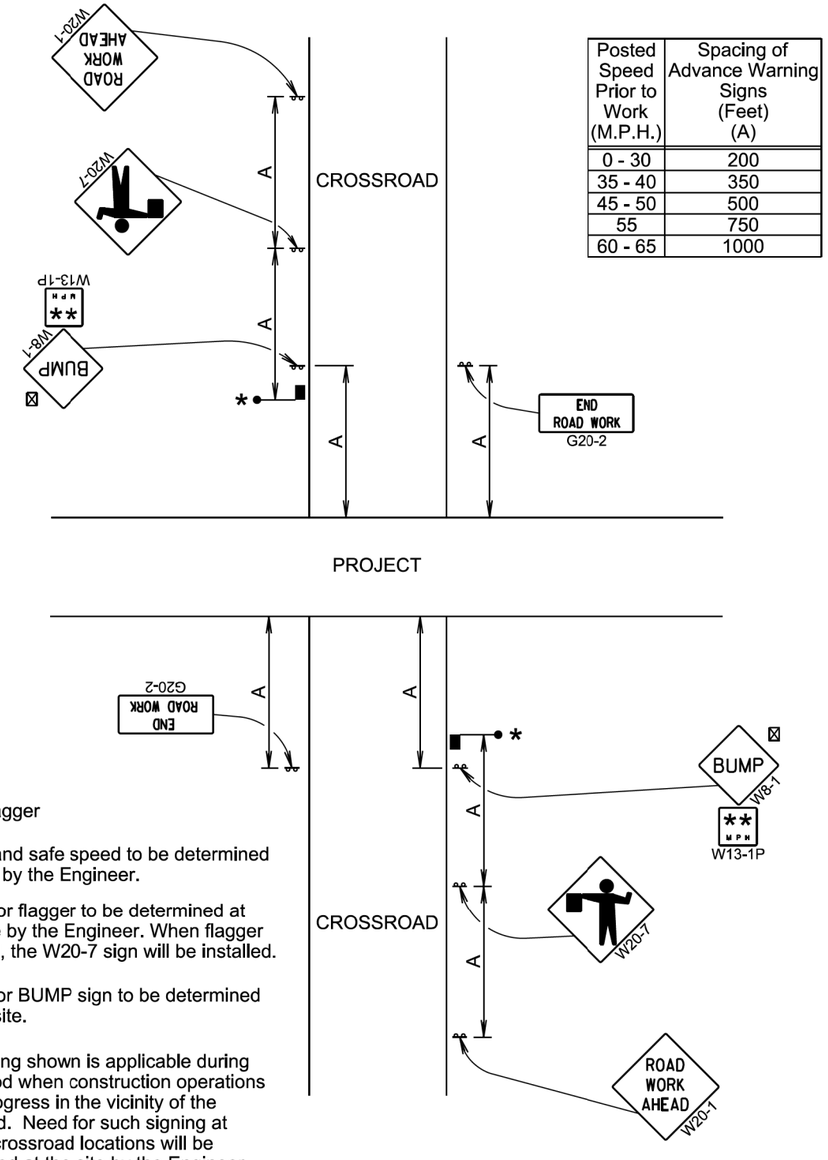
On unfinished grades, until gravel is in place, reflectorized devices (cones, tubular markers, drums, or vertical panels back-to-back) defining the outside edge of the road will be placed at 264 feet maximum spacing on tangent and at 132 feet maximum spacing on curves (greater than 3 degrees) during night time hours and during daytime hours at inactive locations where grading work is being performed. During daytime hours at active locations, a well defined path of adequate width will be provided by motor grader, normally in conjunction with flagging operations either with or without pilot car. Minimum width for one-way operations is 12 feet for two-way operations is 24 feet.



Work areas which are duplicated less than one mile apart, may be classified as one work area for purposes of sign installation unless otherwise directed by the Engineer.
PAVEMENT ENDS signs (W8-3) to be used as appropriate to warn of existing surfacing being removed.

January 22, 2021

Published Date: 2025	SDDOT	LONG TERM ROAD WORK	PLATE NUMBER 634.31 Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000

Flagger

** Need and safe speed to be determined on site by the Engineer.

* Need for flagger to be determined at the site by the Engineer. When flagger is used, the W20-7 sign will be installed.

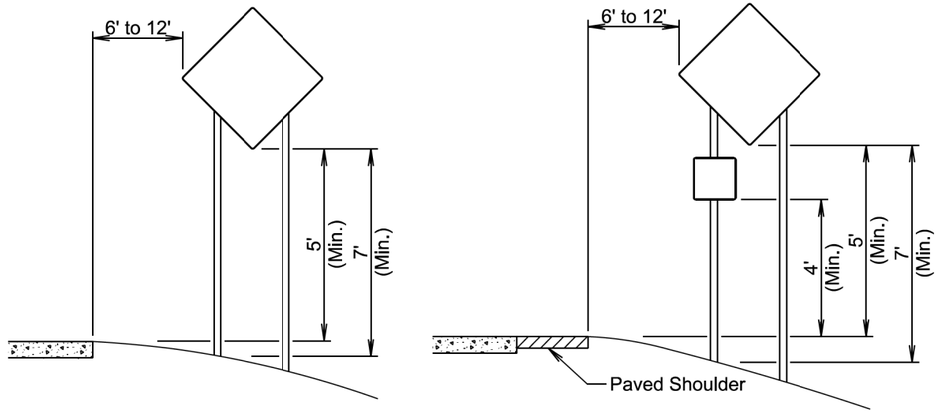
☒ Need for BUMP sign to be determined at the site.

The signing shown is applicable during that period when construction operations are in progress in the vicinity of the crossroad. Need for such signing at specific crossroad locations will be determined at the site by the Engineer.

January 22, 2021

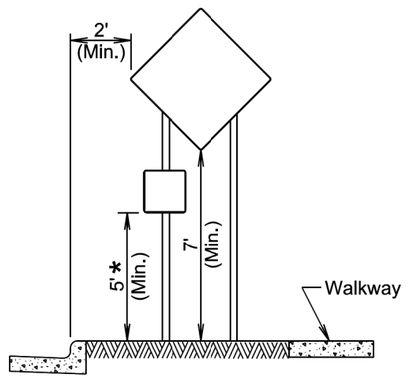
Published Date: 2025	SDDOT	PROJECT OPEN TO TRAFFIC FROM CROSSROAD	PLATE NUMBER 634.38 Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 17
FILE - ...\PRJ\DAY08D6\63431_&_63438.DGN
-PLOTTED FROM - TRAB12222

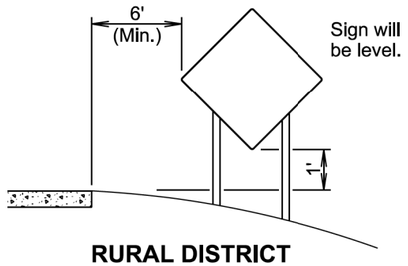


RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

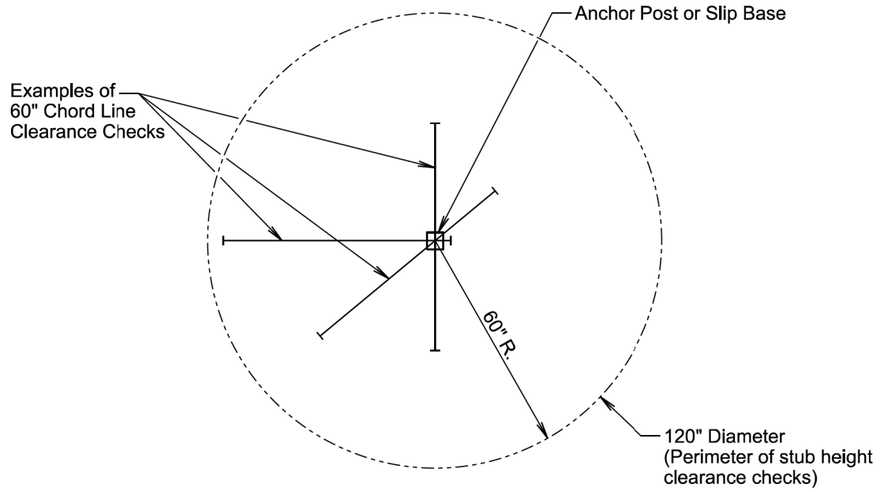


RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

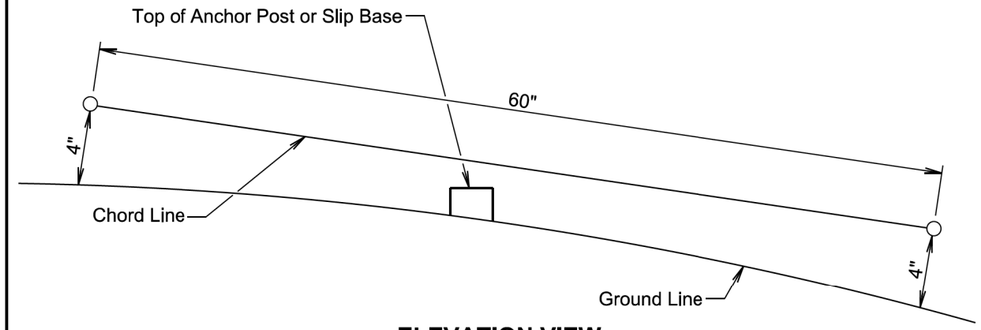
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2025	SDDOT	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

Published Date: 2025	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 18
FILE - ...\PRJ\DAY0806\63485_&_63499.DGN
-PLOTTED FROM - TRAB12222

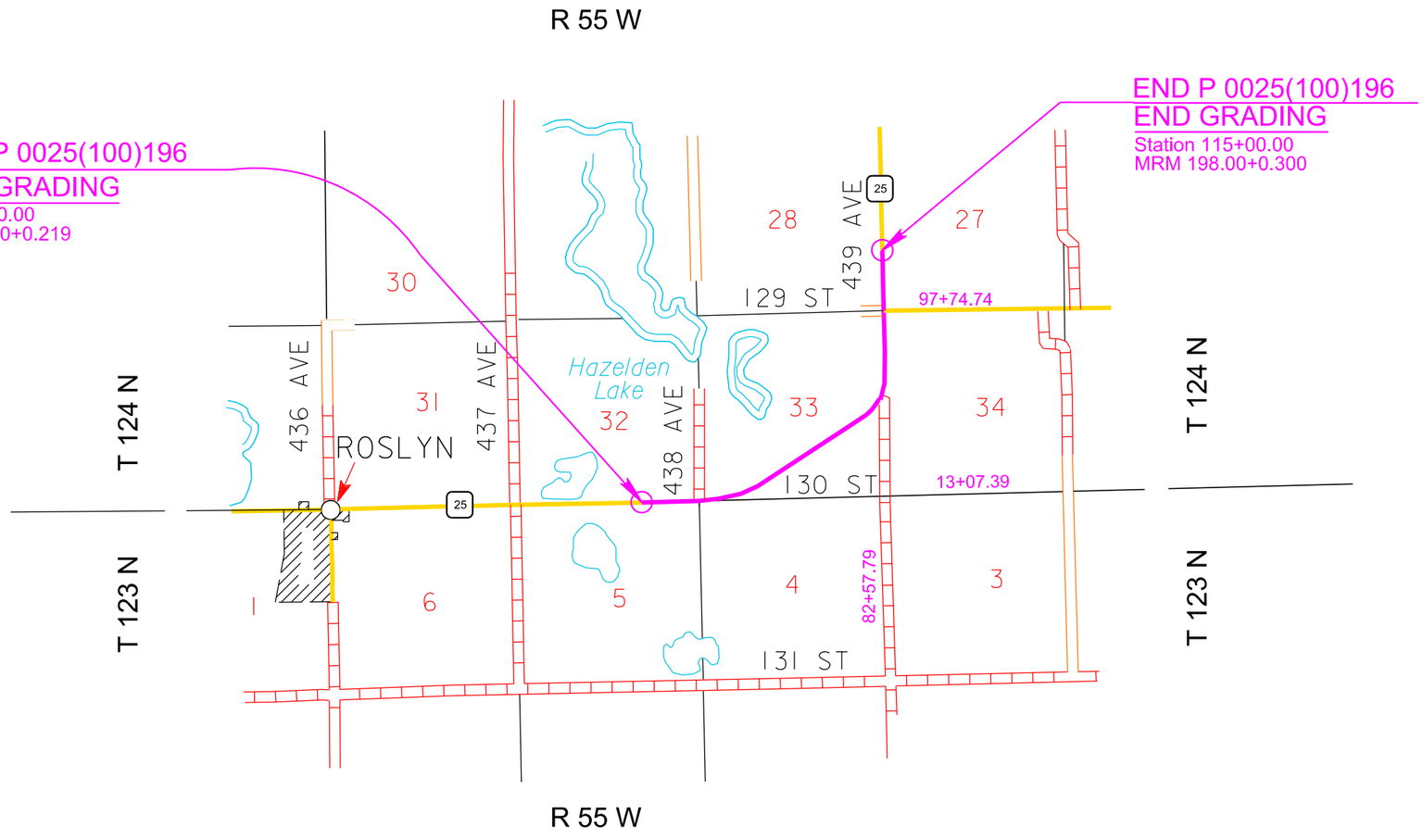
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	D1	D19

Plotting Date: 04/28/2025

SECTION D: EROSION AND SEDIMENT CONTROL PLANS

INDEX OF SHEETS

D1	General Layout with Index
D2-D4	Estimate with General Notes and Tables
D5-D8	Stormwater Pollution Prevention Plan Checklist
D9	Erosion and Sediment Control Legend
D10-D13	Erosion and Sediment Control Plan Sheets
D14	Dewatering and Sediment Collection System Details
D15	SDDOT Construction Entrance Details
D16-D19	Standard Plates



Plot Scale - 1:200
Plotted From - tmpr17200
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SECTION D ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	0.5	CuYd
110E1700	Remove Silt Fence	649	Ft
230E0010	Placing Topsoil	18,638	CuYd
730E0100	Cover Crop Seeding	17.0	Bu
730E0212	Type G Permanent Seed Mixture	451	Lb
731E0200	Fertilizing	17.30	Ton
732E0100	Mulching	69.3	Ton
734E0103	Type 3 Erosion Control Blanket	2,674	SqYd
734E0104	Type 4 Erosion Control Blanket	1,449	SqYd
734E0154	12" Diameter Erosion Control Wattle	250	Ft
734E0165	Remove and Reset Erosion Control Wattle	63	Ft
734E0602	Low Flow Silt Fence	1,955	Ft
734E0604	High Flow Silt Fence	640	Ft
734E0610	Mucking Silt Fence	180	CuYd
734E0620	Repair Silt Fence	649	Ft
734E0630	Floating Silt Curtain	6,847	Ft
734E0635	Remove and Reset Floating Silt Curtain	1,712	Ft
734E5010	Sweeping	10	Hour
900E1320	Construction Entrance	2	Each

PLACING TOPSOIL

The thickness will be approximately 4 inches within the right-of-way and 6 inches on temporary easements. The topsoil thickness for the option borrow pits will be as stated on the option borrow pit sheets.

The estimated amount of topsoil to be placed is as follows:

Station	to	Station	Topsoil (CuYd)
9+00		30+00	3,337
30+00		60+00	4,566
60+00		90+00	7,088
90+00		115+00	3,647
		Total:	18,638

MYCORRHIZAL INOCULUM

Mycorrhizal inoculum will consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier will provide certification of the fungal species claimed and the live propagule count. The inoculum will include a minimum 25% the fungal species *Rhizophagus intraradices*. The remaining 75% may include other endomycorrhizal fungal species.

All seed will be inoculated by the seed supplier with a minimum of 100,000 live propagules of mycorrhizal fungi per acre. All costs of inoculating the seed will be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

The Mycorrhizal Inoculum provided will be from the approved product list. The approved product list may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

FERTILIZING

The Contractor will apply an all-natural slow-release fertilizer prior to seeding or placing sod. The all-natural fertilizer will have a minimum guaranteed analysis of 4-4-4 and be USDA Certified BioBased. It should provide a minimum of 4% (N) nitrogen with a minimum water insoluble nitrogen (WIN) fraction of 2.07%, a minimum of 4% (P2O5) available phosphate, a minimum of 4% (K2O) soluble potash, and a maximum carbon to nitrogen ratio (C:N ratio) of 5:1. The all-natural fertilizer will be free of weed-seed and pathogens accomplished through thermophilic composting, and not mechanical or chemical sterilization, to assure presence of beneficial soil microbiology. The fertilizer will have a near neutral pH, a low salt index, a low biological oxygen demand, contain organic humic and fulvic acids, and have high aerobic organism counts. The fertilizer will also be stable, free of bad odors, and be unattractive as a food source for animals. It should also be in a granular form that is easily spread.

The fertilizer will be applied at a rate of 1,000 pounds per acre in accordance with the manufacturer's recommended method of application.

The Fertilizer provided will be from the approved product list. The approved product list may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits except for the top of roadways, temporary easements under cultivation, and areas designated to be sod.

Type G Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	7
Switchgrass	Dacotah, Forestburg, Nebraska 28, Pathfinder, Summer, Sunburst, Trailblazer	3
Indiangrass	Holt, Tomahawk, Chief, Nebraska 54	3
Big Bluestem	Bison, Bonilla, Champ, Sunnyview, Rountree, Bonanza	3
Oats or Spring Wheat: April through May; Winter Wheat: August through November		10
	Total:	26

COVER CROP SEEDING

Cover crop seeding may be used on this project as a temporary erosion control measure. The actual limits and use of cover crop seeding will be determined by the Engineer during construction.

Plot Scale - 1:200
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MULCHING (GRASS HAY OR STRAW)

An additional 2.5 tons of Grass Hay or Straw Mulch has been added to the Estimate of Quantities for temporary erosion control on areas determined by the Engineer during construction.

If the Contractor uses a no-till drill, mulch may be applied prior to seeding and the mulch can then be punched into the soil by the no-till drill. If the Contractor uses this process, the no-till drill seeding will be completed immediately following the mulch application and the mulch will be punched into the soil at a 3-inch depth.

TABLE OF MULCHING (GRASS HAY OR STRAW)

Station	Location	Quantity (Ton)
15+40 to 20+00 R	Backslope	1.4
47+50 to 49+00 R	Backslope	1.4
52+50 to 60+00 R	Backslope	2.5
61+50 to 65+50 L	Backslope	1.7
63+00 to 66+00 R	Backslope	1.2
70+00 to 74+15 R	Backslope	1.3
76+50 to 82+00 L	Backslope	2
92+00 to 94+00 L	Backslope	1
98+16 to 101+00 L	Backslope	1
	Additional Quantity:	2.5
	Total Quantity for Temporary Stabilization:	16
	Total Quantity for Permanent Stabilization:	69.3

EROSION CONTROL WATTLE

Erosion control wattles for restraining the flow of runoff and sediment will be installed at locations noted in the table and at locations determined by the Engineer during construction. Refer to Standard Plate 734.06 for details.

The Contractor will provide certification that the erosion control wattles do not contain noxious weed seeds.

Erosion control wattles will remain on the project to decompose.

An additional quantity of 12” Diameter Erosion Control Wattles has been added to the Estimate of Quantities for temporary erosion and sediment control in highway ditch channels and as an alternative to low flow or high flow silt fence at wetland areas adjacent to the highway.

The erosion control wattle provided will be from the approved product list. The approved product list for erosion control wattle may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

TABLE OF EROSION CONTROL WATTLE

Station	Location	Diameter (Inch)	Quantity (Ft)
46+55 to 49+55 R	Highway Ditch Channel	12	150
3+17 L (xr73R)	Pipe Inlets	12	40
	Additional Quantity:	12	60
		Total:	250

LOW FLOW SILT FENCE

The low flow silt fence fabric provided will be from the approved product list. The approved product list for low flow silt fence may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

Low flow silt fence will be placed at the locations noted in the table and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.04 for details.

An additional quantity of Low Flow Silt Fence has been added to the Estimate of Quantities for temporary sediment control.

TABLE OF LOW FLOW SILT FENCE

Station	Location	Quantity (Ft)
56+00 to 60+50 R	Perimeter Control	350
72+00 to 78+00 L	Perimeter Control	574
86+50 to 89+35 R	Protect Wetland	287
92+00 to 94+00 R	Perimeter Control	200
94+64 L	Protect Wetland	82
94+64 R	Protect Wetland	82
115+10 L	Perimeter Control	90
115+10 R	Perimeter Control	90
	Additional Quantity:	200
	Total:	1,955

HIGH FLOW SILT FENCE

The high flow silt fence fabric provided will be from the approved product list. The approved product list for high flow silt fence may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

High flow silt fence will be placed at the locations noted in the table and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.05 for details.

An additional quantity of high flow silt fence has been added to the Estimate of Quantities for temporary sediment control.

TABLE OF HIGH FLOW SILT FENCE

Station	Location	Quantity (Ft)
12+72 L	Inlet End of Pipe	18
12+72 R	Inlet End of Pipe	18
33+50	Inlet and Outlet Ends of Pipe (60 Ft each end)	120
38+08 L	Across Ditch at Inlet End of Pipe	30
39+50	Inlet and Outlet Ends of Pipe (60 Ft each end)	120
42+10 R	Across Ditch at Inlet End of Pipe	30
60+50 L	Inlet End of Pipe	18
75+00 R	Inlet End of Pipe	18
88+00 L	Inlet End of Pipe	18
90+17 L	Inlet End of Pipe	18
90+28 R	Inlet End of Pipe	18
97+00 R	Across Ditch at Inlet End of Pipe (30 Ft each side)	60
97+21 L	Inlet End of Pipe	18
98+35 R	Inlet End of Pipe	18
105+36 L	Inlet End of Pipe	18
	Additional Quantity:	100
	Total:	640

Plot Scale - 1:200
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FLOATING SILT CURTAIN

Floating silt curtains will be installed at locations noted in the table and at locations determined by the Engineer during construction.

The Contractor will determine the water depth and other waterway characteristics such as stream flow velocity and seek technical advice from the manufacturer before ordering the floating silt curtain so that the floating silt curtain installed is the correct type for the individual sites.

The Contractor will install the floating silt curtain in accordance with the manufacturer's installation instructions or as directed by the Engineer.

The Contractor will maintain the floating silt curtains for the duration of the project to ensure continuous protection of the waterway.

The Floating Silt Curtain provided will be from the approved product list. The approved product list may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

TABLE OF FLOATING SILT CURTAIN

Station	Location	Quantity (Ft)
20+78 to 45+70 R	Lake	2487
21+48 to 46+41 L	Lake	2417
94+70 to 97+55 R	Lake	287
94+80 to 97+40	Lake	260
98+45 to 110+40	Lake	1196
101+00 to 103+00	Lake	200
	Total:	6,847

EROSION CONTROL BLANKET

Erosion control blanket will be installed 16 feet wide at the locations noted in the table and at locations determined by the Engineer during construction.

The erosion control blanket provided will be from the approved product list. The approved product list for erosion control blanket may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

An additional quantity of Type 3 and 4 Erosion Control Blanket has been added to the Estimate of Quantities for temporary erosion control.

TABLE OF EROSION CONTROL BLANKET

Station	Location	Type	Quantity (SqYd)
9+00 to 16+20 R	Highway Ditch Channel	3	1077
13+74 to 16+20 L	Highway Ditch Channel	3	437
46+00 to 50+00 R	Highway Ditch Channel	4	711
49+00 to 52+00 L	Highway Ditch Channel	3	533
71+00 to 72+90 R	Highway Ditch Channel	4	338
91+50 to 93+90 L	Highway Ditch Channel	3	427
	Additional Quantity:	3	200
	Additional Quantity:	4	400
	Total Type 3 Erosion Control Blanket:		2,674
	Total Type 4 Erosion Control Blanket:		1,449

CONSTRUCTION ENTRANCE

The Contractor will install a Construction Entrance at locations where there is a potential for mud tracking and sediment flow from the construction site and work area onto a paved public roadway.

It is the Contractor's option to use the SDDOT Construction Entrance (See SDDOT Construction Entrance notes and details), a product from the list provided in these notes, or other products or processes as approved by the Engineer during construction.

If the Contractor elects to use one of the products listed in the table, then the Contractor will install the construction entrance product in accordance with the manufacturer's installation instructions or as directed by the Engineer.

The Contractor will maintain the construction entrance such that mud tracking and sediment flow will not enter the roadway or adjacent drainage areas. The construction entrance will be routinely inspected, and the Contractor will repair or replace material as deemed necessary by the Engineer.

All costs for furnishing, installing, maintaining, and removal of the construction entrance including equipment, labor, materials, and incidentals will be included in the contract unit price per each for "Construction Entrance".

The Construction Entrance provided will be from the approved product list. The approved product list may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

SDDOT CONSTRUCTION ENTRANCE

If the SDDOT Construction Entrance is utilized, then the Contractor will install the SDDOT Construction Entrance in accordance with these notes and the detail drawings.

Pit run material will be obtained from a granular source and will conform to the following gradation:

Sieve Size	Percent Passing
6"	100%
#4	0-60%
#200	0-20%

The pit run material will be compacted to the satisfaction of the Engineer.

The aggregate for the granular material will conform to the following gradation requirements:

Sieve Size	Percent Passing
3"	100%
2 ½"	90-100%
1 ½"	25-60%
¾"	0-10%
½"	0-5%

The granular material will be placed in 6" maximum lifts.

It is anticipated that the granular material will need to be periodically removed and replaced as it becomes inundated with mud and sediment.

The Reinforcement Fabric (MSE) will be in conformance with Section 831 of the Specifications. The Reinforcement Fabric (MSE) will be on the Approved Products List for this material or will be certified by the supplier to meet this specification prior to installation.

The Reinforcement Fabric (MSE) should be kept as taut as possible prior to placing.

Equipment will not be allowed on the Reinforcement Fabric (MSE) until the first lift of granular material is in place.

All seams in the Reinforcement Fabric (MSE) will be overlapped at least 2' and shingled.

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9STORMWATER POLLUTION PREVENTION PLAN CHECKLIST

*(The numbers left of the title headings are **reference numbers** to the GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES (Stormwater Permit))*

5.3 (2): STAFF TRAINING/SWPPP IMPLEMENTATION

To promote stormwater management awareness specific for this project, the Contractor's Erosion Control Supervisor should provide correspondence of how the SWPPP will be implemented. The Contractor's Erosion Control Supervisor is responsible for providing this information at the preconstruction meeting, and subsequently completing an attendance log, which should identify site-specific implementation of the SWPPP and the names of the personnel who attended the preconstruction meeting. Documentation of the preconstruction meeting will be filed with the SWPPP documents.

5.3 (3): DESCRIPTION OF CONSTRUCTION ACTIVITIES

- **5.3 (3a): Project Limits** (See Title Sheet)
- **5.3 (3a): Project Description** (See Title Sheet)
- **5.3 (4): Site Map(s)** (See Title Sheet and Plans)
- **Major Soil Disturbing Activities** (check all that apply)
  - ☒ Clearing and grubbing
  - ☐ Excavation/borrow
  - ☒ Grading and shaping
  - ☒ Filling
  - ☐ Other (describe):
- **5.3 (3b): Total Project Area** 42 Acres
- **5.3 (3b): Total Area to be Disturbed** 33 Acres
- **5.3 (3c): Maximum Area Disturbed at One Time**
- **5.3 (3d): Existing Vegetative Cover (%)** 90
- **5.3 (3d): Description of Vegetative Cover** Typical East River Vegetation
- **5.3 (3e): Soil Properties:** Soil Series Classification, Silty Clay Loam
- **5.3 (3f): Name of Receiving Water Body/Bodies** Hazelden Lake
- **5.3 (3g): Location of Construction Support Activity Areas**

5.3 (3h): ORDER OF CONSTRUCTION ACTIVITIES

- **Special sequencing requirements (**see sheet).

The Contractor will enter the Estimated Start Date.

Description	Estimated Start Date
Install stabilized construction entrance(s).	
Install perimeter protection where runoff may exit site.	
Install perimeter protection around stockpiles.	
Install channel and ditch bottom protection.	
Clearing and grubbing.	
Remove and stockpile topsoil.	
Stabilize disturbed areas.	
Install inlet and culvert protection after completing storm drainage and other utility installations.	
Final grading.	
Final paving.	
Removal of protection devices.	
Reseed areas disturbed by removal activities.	

5.3 (5): DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES

All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report. Include the technical reasoning for selecting each control. (check all that apply)

Perimeter Controls (See Detail Plan Sheets)

Description	Estimated Start Date
☒ Natural Buffers (within 50 ft of Waters of State)	
☒ Silt Fence	
☐ Erosion Control Wattles	
☐ Temporary Berm / Windrow	
☒ Floating Silt Curtain	
☐ Stabilized Construction Entrances	
☐ Entrance/Exit Equipment Tire Wash	
☐ Other:	

Structural Erosion and Sediment Controls

Description	Estimated Start Date
☒ Silt Fence	
☐ Temporary Berm/Windrow	
☒ Erosion Control Wattles	
☐ Temporary Sediment Barriers	
☐ Erosion Bales	
☐ Temporary Slope Drain	
☐ Turf Reinforcement Mat	
☒ Riprap	
☐ Gabions	
☐ Rock Check Dams	
☐ Sediment Traps/Basins	
☒ Culvert Inlet Protection	
☐ Transition Mats	
☐ Median/Area Drain Inlet Protection	
☐ Curb Inlet Protection	
☐ Interceptor Ditch	
☐ Concrete Washout Facility	
☐ Work Platform	
☐ Temporary Water Barrier	
☐ Temporary Water Crossing	
☐ Permanent Stormwater Ponds	
☐ Permanent Open Vegetated Swales	
☐ Natural Depressions to allow for Infiltration	
☐ Sequential Systems that combine several practices	
☐ Other:	

Dust Controls

Description	Estimated Start Date
☐ Tarps & Wind impervious fabrics	
☐ Watering	
☐ Stockpile location/orientation	
☐ Dust Control Chlorides	
☐ Other	

Dewatering BMPs

Description	Estimated Start Date
☐ Sediment Basins	
☐ Dewatering bags	
☐ Weir tanks	
☐ Temporary Diversion Channel	
☐ Other:	

Stabilization Practices (See Detail Plan Sheets)

(Stabilization measures will begin the following work day whenever earth disturbing activity on any portion of the site has temporarily or permanently ceased. Temporary stabilization will be completed as soon as practicable but no later than 14 days after initiating soil stabilization activities (**3.18**))

Description	Estimated Start Date
☐ Vegetation Buffer Strips	
☒ Temporary Seeding (Cover Crop Seeding)	
☒ Permanent Seeding	
☐ Sodding	
☐ Planting (Woody Vegetation for Soil Stabilization)	
☒ Mulching (Grass Hay or Straw)	
☒ Fiber Mulching (Wood Fiber Mulch)	
☐ Soil Stabilizer	
☐ Bonded Fiber Matrix	
☐ Fiber Reinforced Matrix	
☒ Erosion Control Blankets	
☒ Surface Roughening (e.g. tracking)	
☐ Other:	

Wetland Avoidance

Will construction and/or erosion and sediment controls impinge on regulated wetlands? Yes ☒ No ☐ If yes, the structural and erosion and sediment controls have been included in the total project wetland impacts and have been included in the 404 permit process with the USACE.

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5.3 (6): PROCEDURES FOR INSPECTIONS

- Inspections will be conducted at least once every 7 days.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Silt fence will be inspected for depth of sediment and for tears to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches $^1/_3$ of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.
- Check dams will be inspected for stability. Sediment will be removed when depth reaches ½ the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Inspection and maintenance reports will be prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
- The SDDOT Project Engineer and Contractor's Erosion Control Supervisor are responsible for inspections. Maintenance and repair activities are the responsibility of the Contractor. The SDDOT Project Engineer will complete the inspection and maintenance reports and distribute copies per the distribution instructions on DOT 298.

5.3 (7): POST CONSTRUCTION STORMWATER MANAGEMENT

Stormwater management will be handled by temporary controls outlined in "DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES" above, and any permanent controls needed to meet permanent stormwater management needs in the post construction period will be shown in the plans and noted as permanent.

5.3 (8): POLLUTION PREVENTION PROCEDURES

5.3 (8a): Spill Prevention and Response Procedures

Material Management

Housekeeping

- Only needed products will be stored on-site by the Contractor.
- Except for bulk materials the contractor will store all materials under cover and/or in appropriate containers.
- Products must be stored in original containers and labeled.
- Material mixing will be conducted in accordance with the manufacturer's recommendations.
- When possible, all products will be completely used before properly disposing of the container off-site.
- The manufacturer's directions for disposal of materials and containers will be followed.
- The Contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.
- Dust generated will be controlled in an environmentally safe manner.

Hazardous Materials

- Products will be kept in original containers unless the container is not resealable and provide secondary containment as applicable.
- Original labels and material safety data sheets will be retained in a safe place to relay important product information.
- If surplus product must be disposed of, manufacturer's label directions for disposal will be followed.
- Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants will be conducted on an impervious surface and under cover during wet weather to prevent the release of contaminants onto the ground.
- Wheel wash water will be collected and allowed to settle out suspended solids prior to discharge. Wheel wash water will not be discharged directly into any stormwater system or stormwater treatment system.
- Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, residuals from concrete saw cutting (either wet or dry), and mixer washout waters will be collected on site and managed to prevent contamination of stormwater runoff.

Spill Control Practices

In addition to the previous housekeeping and management practices, the following practices will be followed for spill prevention and cleanup if needed.

- For all hazardous materials stored on site, the manufacturer's recommended methods for spill cleanup will be clearly posted. Site personnel will be made aware of the procedures and the locations of the information and cleanup supplies.
- Appropriate cleanup materials and equipment will be maintained by the Contractor in the materials storage area on-site. As appropriate, equipment and materials may include items such as brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for cleanup purposes.
- All spills will be cleaned immediately after discovery and the materials disposed of properly.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- After a spill a report will be prepared describing the spill, what caused it, and the cleanup measures taken. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring, as well as clean up instructions in the event of reoccurrences.
- The Contractor's site superintendent, responsible for day-to-day operations, will be the spill prevention and cleanup coordinator.

Spill Response

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into stormwater runoff and conveyance systems. If the release has impacted on-site stormwater, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens stormwater or surface water at the site, the spill response procedures outlined below must be implemented in a timely manner to prevent the release of pollutants.

- The Contractor's site superintendent will be notified immediately when a spill or the threat of a spill is observed. The superintendent will assess the situation and determine the appropriate response.
- If spills represent an imminent threat of escaping erosion and sediment controls and entering receiving waters, personnel will be directed to respond immediately to contain the release and notify the superintendent after the situation has been stabilized.
- Spill kits containing appropriate materials and equipment for spill response and cleanup will be maintained by the Contractor at the site.
- If oil sheen is observed on surface water (e.g. settling ponds, detention ponds, swales), action will be taken immediately to remove the material causing the sheen. The Contractor will use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
- If a spill occurs the superintendent or the superintendent's designee will be responsible for completing the spill reporting form and for reporting the spill to SDDANR.
- Personnel with primary responsibility for spill response and cleanup will receive training by the Contractor's site superintendent or designee. The training must include identifying the location of the spill kits and other spill response equipment and the use of spill response materials.
- Spill response equipment will be inspected and maintained as necessary to replace any materials used in spill response activities.

5.3 (8b): WASTE MANAGEMENT PROCEDURES

Waste Disposal

- All liquid waste materials will be collected and stored in approved sealed containers. All trash and construction debris from the site will be deposited in the approved containers. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill. All onsite personnel will be instructed in the proper procedures for waste disposal and notices stating proper practices will be posted. The Contractor is responsible for ensuring waste disposal procedures are followed.

Hazardous Waste

- All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Site personnel will be instructed in these practices, and the Contractor will be responsible for seeing that these practices are followed.

Sanitary Waste

- Portable sanitary facilities will be provided on all construction sites. Sanitary waste will be collected from the portable units which must be secured to prevent tipping and serviced in a timely manner by a licensed waste management Contractor or as required by any local regulations.

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5.3 (9): CONSTRUCTION SITE POLLUTANTS

The following materials or substances are expected to be present on the site during the construction period. These materials will be handled as noted under the heading “POLLUTION PREVENTION PROCEDURES” (check all that apply).

- ☒ Concrete and Portland Cement
- ☐ Detergents
- ☒ Paints
- ☒ Metals
- ☒ Bituminous Materials
- ☒ Petroleum Based Products
- ☒ Diesel Exhaust Fluid
- ☐ Cleaning Solvents
- ☒ Wood
- ☐ Cure
- ☐ Texture
- ☐ Chemical Fertilizers
- ☐ Other:

Product Specific Practices

- **Petroleum Products**
  All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled.

- **Fertilizers**
  Fertilizers will be applied only in the amounts specified by the SDDOT. Once applied, fertilizers will be worked into the soil to limit the exposure to stormwater. Fertilizers will be stored in an enclosed area. The contents of partially used fertilizer bags will be transferred to sealable containers to avoid spills.

- **Paints**
  All containers will be tightly sealed and stored when not required for use. The excess will be disposed of according to the manufacturer’s instructions and any applicable state and local regulations.

- **Concrete Trucks**
  Contractors will provide designated truck washout facilities on the site. These areas must be self-contained and not connected to any stormwater outlet of the site. Upon completion of construction, the area at the washout facility will be properly stabilized.

5.3 (10): NON-STORMWATER DISCHARGES

The following non-stormwater discharges are anticipated during the course of this project (check all that apply).

- ☐ Discharges from water line flushing.
- ☐ Pavement wash-water, where no spills or leaks of toxic or hazardous materials have occurred.
- ☒ Uncontaminated ground water associated with dewatering activities.

5.3 (11): INFEASIBILITY DOCUMENTATION

If it is determined to be infeasible to comply with any of the requirements of the Stormwater Permit, the infeasibility determination must be thoroughly documented in the SWPPP.

7.0: SPILL NOTIFICATION

In the event of a spill, the Contractor’s site superintendent will make the appropriate notification(s), consistent with the following procedures:

- A release or spill of a regulated substance (includes petroleum and petroleum products) must be reported to SDDANR immediately **if any one of the following** conditions exists:
  - The release or spill threatens or is able to threaten waters of the state (surface water or ground water)
  - The release or spill causes an immediate danger to human health or safety
  - The release or spill exceeds 25 gallons
  - The release or spill causes a sheen on surface water
  - The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01
  - The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:51:01
  - The release or spill of any substance that harms or threatens to harm wildlife or aquatic life
  - The release or spill is required to be reported according to Superfund Amendments and Reauthorization Act (SARA) Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.

- To report a release or spill, call SDDANR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231. Reporting the release to SDDANR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, you must also contact local authorities to determine the local reporting requirements for releases. A written report of the unauthorized release of any regulated substance, including quantity discharged, and the location of the discharge will be sent to SDDANR within 14 days of the discharge.

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5.4: SWPPP CERTIFICATIONS

➢ **Certification of Compliance with Federal, State, and Local Regulations**

The Storm Water Pollution Prevention Plan (SWPPP) for this project reflects the requirements of all local municipal jurisdictions for storm water management and sediment and erosion control as established by ordinance, as well as other state and federal requirements for sediment and erosion control plans, permits, notices or documentation as appropriate.

➢ **South Dakota Department of Transportation**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Authorized Signature (See the General Permit, Section 7.4 (1))

➢ **Prime Contractor**

This section is to be executed by the General Contractor after the award of the contract. This section may be executed any time there is a change in the Prime Contractor of the project.

I certify under penalty of law that this document and all attachments will be revised or maintained under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signature

CONTACT INFORMATION

The following personnel are duly authorized representatives and have signatory authority for modifications made to the SWPPP:

➢ **Contractor Information**:

- Prime Contractor Name: _____
- Contractor Contact Name: _____
- Address: _____
- _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **Erosion Control Supervisor**

- Name: _____
- Address: _____
- _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: Fax:

➢ **SDDOT Project Engineer**

- Name: _____
- Business Address: _____
- Job Office Location: _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **SDDANR Contact Spill Reporting**
- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231

➢ **SDDANR Contact for Hazardous Materials.**
- (605) 773-3153

➢ **National Response Center Hotline**
- (800) 424-8802.

➢ **SDDANR Stormwater Contact Information**
- SDDANR Stormwater (800) 737-8676
- Surface Water Quality Program (605) 773-3351

5.5: REQUIRED SWPPP MODIFICATIONS

➢ **5.5 (1): Conditions Requiring SWPPP Modification**

The SWPPP must be modified, including the site map(s), in response to any of the following conditions:

- When a new operator responsible for implementation of any part the SWPPP begins work on the site.
- When changes to the construction plans, sediment and erosion control measures, or any best management practices on site that are no longer accurately reflected in the SWPPP. This includes changes made in response to corrective actions triggered by inspections.
- To reflect areas on the site map where operational control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.
- If inspections by site staff, local officials, SDDANR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with the Stormwater Permit.
- To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the site.
- If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, age rates, different areas, or methods of application.

➢ **5.5 (2): Deadlines for SWPPP Modification**

Any required revisions to the SWPPP must be completed within 7 calendar days following any of the items listed above.

➢ **5.5 (3): Documentation of Modifications to the Plan**

All SWPPP modification records are required to be maintained showing the dates of when the modification occurred. The records must include the name of the person authorizing each change and a brief summary of all changes.

➢ **5.5 (4): Certification Requirements**

All modifications made to the SWPPP must be signed and certified as required in Section 7.4.

➢ **5.5 (5): Required Notice to Other Operators**

If there are multiple operators at the site, the Contractor's Erosion Control Supervisor must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

When modifications as described above occur, the SWPPP will be modified to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP using the DOT 298 form and drawings on the plan will be modified to reflect the needed changes. Copies of the DOT 298 forms and the SWPPP will be retained on site in a designated place for review throughout the course of the project. A copy of the DOT 298 form will be given to the Contractor Erosion Control Supervisor and a copy will be emailed to the SDDOT Environmental Section in accordance with the DOT 298 Form.

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EROSION AND SEDIMENT CONTROL LEGEND

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- Low Flow Silt Fence
- High Flow Silt Fence
- High Flow Silt Fence at Pipe
- Sediment Control at Inlet After Placement of Surfacing
- Sediment Control at Inlet Before Placement of Surfacing
- Temporary Sediment Barriers
- Temporary Water Barriers
- Floating Silt Curtain
- Sediment Filter Bags
- Triangular Silt Barriers
- Erosion Control Wattles on Slopes
- Erosion Control Wattles at Inlets
- Erosion Control Wattles in Ditches
- Erosion Bales
- Surfacing Roughening
- Temporary Grass Hay or Straw Mulch/ Soil Stabilizer
- Cut Interceptor Ditch
- Temporary Slope Drain
- Bonded Fiber Matrix/ Fiber Reinforced Matrix
- Rock Check Dam
- Type 1 Erosion Control Blanket
- Type 2 Erosion Control Blanket
- Type 3 Erosion Control Blanket
- Type 4 Erosion Control Blanket
- Type 1 Turf Reinforcement Mat
- Type 2 Turf Reinforcement Mat
- Type 3 Turf Reinforcement Mat
- Transition Mat
- Silt Trap (See Standard Plate 734.04)

BEST MANAGEMENT PRACTICES

Best Management Practices (BMPs) are split into three categories and are to be used throughout construction.

INITIAL PHASE

BMPs from the Legend shown as Orange Symbols on the Erosion and Sediment Control Plan Sheets are to be installed in the Initial Phase prior to earth disturbing activitles and remain in place for the Intermediate Phase for temporary stabilization and in the Final Phase to achieve final stabilization.

INTERMEDIATE PHASE

BMPs from the Legend shown as Blue Symbols on the Erosion and Sediment Control Plan Sheets are to be installed in the Intermediate Phase for temporary stabilization and remain in place in the Final Phase to achieve final stabilization.

FINAL PHASE

BMPs from the Legend shown as Green Symbols on the Erosion and Sediment Control Plan Sheets are to be installed in the Final Phase to achieve final stabilization.

If these items are applicable they are to be shown in the updated SWPPP using the Symbols given.

- TS — Topsoil Stockpile
- M — On-Site Construction Material Storage Area
- B — Borrow Area
- SK — Spill Kit
- CE — Stabilized Construction Entrance
- WP — Work Platform
- VB — Vegetated Buffer Strip
- CC — Cover Crop Seeding
- CW — Concrete Washout
- PT — Portable Toilet
- AP — Asphalt Plant Site
- CP — Concrete Plant Site
- V — Vehicle and Equipment Parking Area, Fueling Area, or Maintenance Area
- D — Dumpster or other Trash and Debris Containers

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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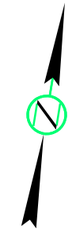
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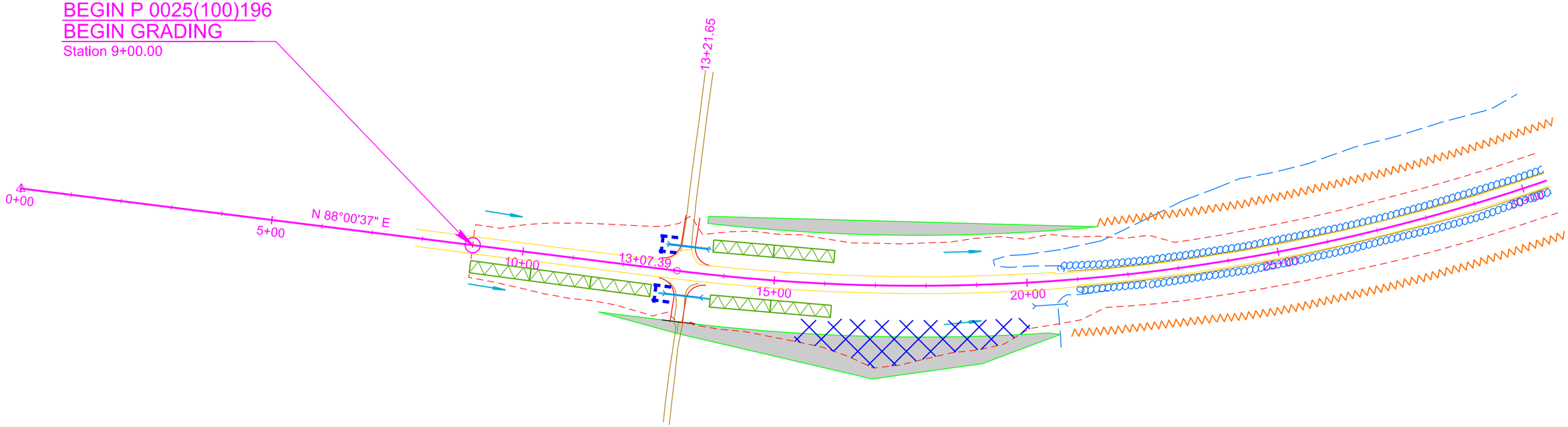
Install Floating Silt Curtain along the banks of the lake at the following locations:
20+78 to 45+70 R 2,487 Ft
21+48 to 46+41 L 2,417 Ft

Apply Grass Hay or Straw Mulch at 2 Tons/Acre after Placing Topsoil on disturbed areas until Permanent Seeding can be completed at the following locations:
15+40 to 20+00 R Backslope 1.4 Ton

Install High Flow Silt Fence at the following locations:
12+72 L Inlet end of pipe 18 Ft
12+72 R Inlet end of pipe 18 Ft

Install Type 3 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
9+00 to 16+20 R 1,077 SqYd
13+74 to 16+20 L 437 SqYd





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Install Low Flow Silt Fence at the following locations:
56+00 to 60+50 R Perimeter control 350 Ft

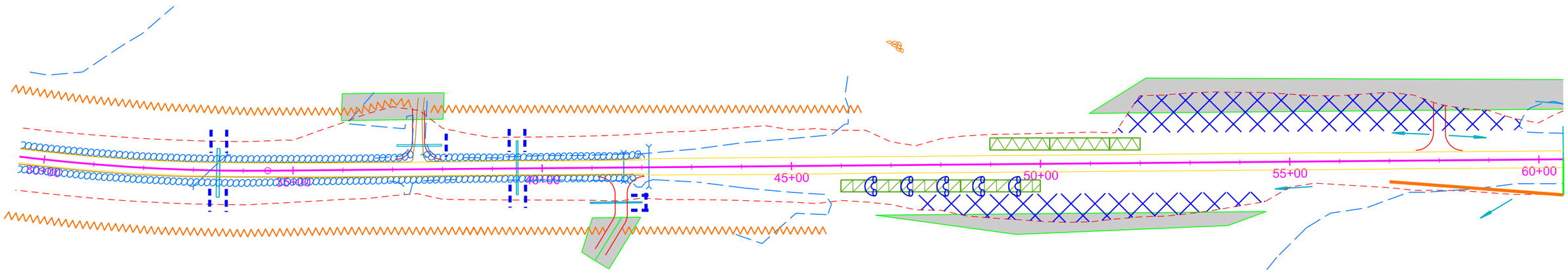
Apply Grass Hay or Straw Mulch at 2 Tons/Acre after Placing Topsoil on disturbed areas until Permanent Seeding can be completed at the following locations:
47+50 to 49+00 R Backslope 1.4 Ton
51+50 to 60+00 L Backslope 2.5 Ton

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
46+55 to 49+55 R (75' Spacing - 30ft each) 150 Ft

Install High Flow Silt Fence at the following locations:
33+50 Inlet and Outlet ends of pipe (60 Ft each end) 120 Ft
38+08 L Across ditch at inlet end of pipe 30 Ft
39+50 Inlet and Outlet ends of pipe (60 Ft each end) 120 Ft
42+10 R Across ditch at inlet end of pipe 30 Ft

Install Type 3 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
49+00 to 52+00 L 533 SqYd

Install Type 4 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
46+00 to 50+00 R 711 SqYd



Plot Scale - 1:200
Plotted From - tgp17200
File - U:\rdprj\day08D6\030dec.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	D12	D19

Plotting Date: 04/28/2025

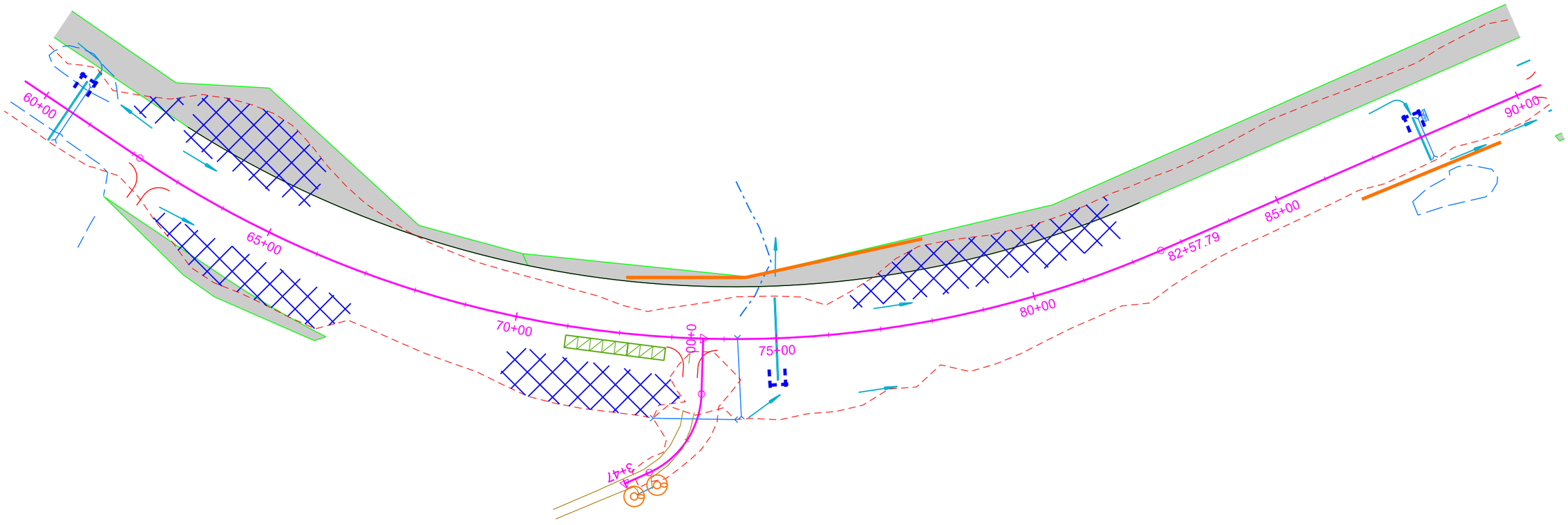
Install Low Flow Silt Fence at the following locations:
72+00 to 78+00 L Perimeter control 574 Ft
86+50 to 89+35 R Protect Wetland 287 Ft

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
3+17 L (xr73R) 40 Ft
*Remove and Reset Wattles as needed.

Apply Grass Hay or Straw Mulch at 2 Tons/Acre after Placing Topsoil on disturbed areas until Permanent Seeding can be completed at the following locations:
61+50 to 65+50 L Backslope 1.7 Ton
63+00 to 66+00 R Backslope 1.2 Ton
70+00 to 74+15 R Backslope 1.3 Ton
76+50 to 82+00 L Backslope 2 Ton

Install High Flow Silt Fence at the following locations:
60+50 L Inlet end of pipe 18 Ft
75+00 R Inlet end of pipe 18 Ft
88+00 L Inlet end of pipe 18 Ft

Install Type 4 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
71+00 to 72+90 R 338 SqYd



Plotted From - trgr17200
Plot Scale - 1:200
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	D13	D19

Plotting Date: 04/28/2025

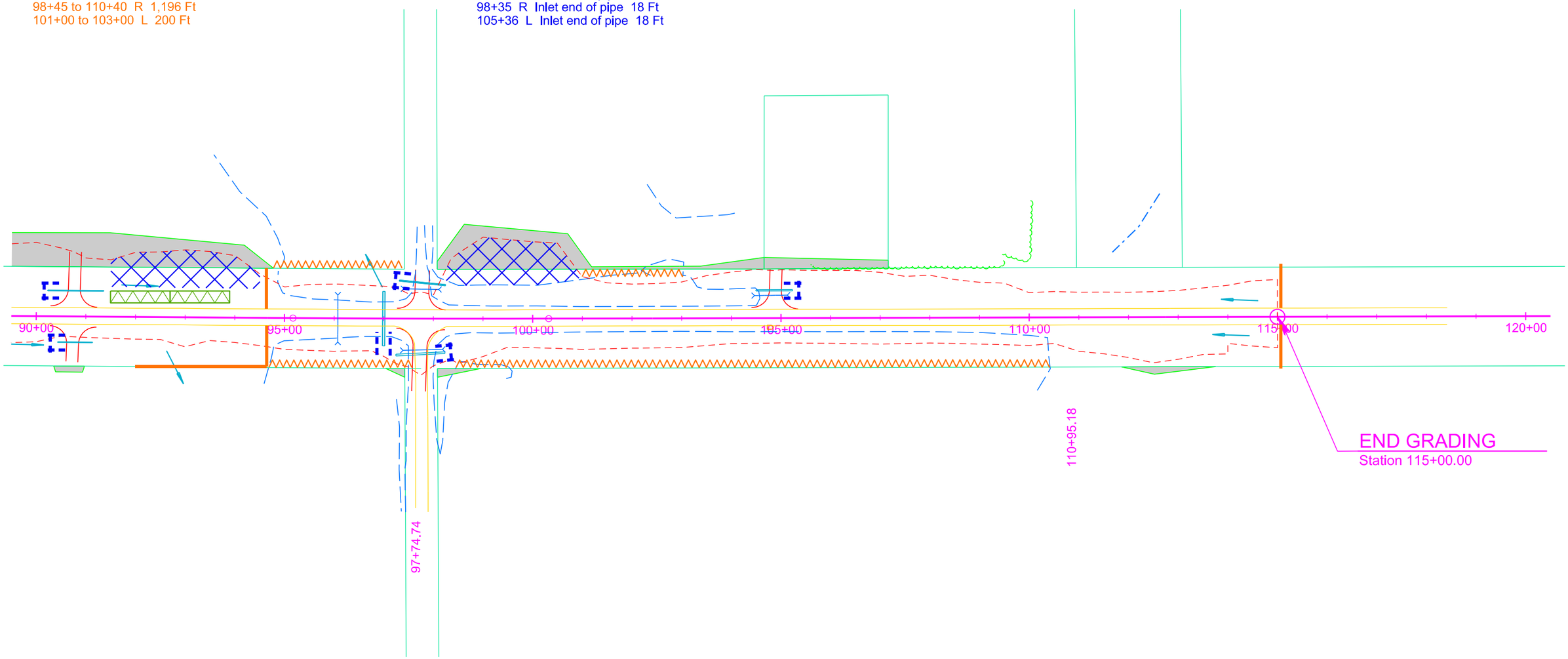
Install Low Flow Silt Fence at the following locations:
92+00 to 94+64 R Perimeter control 200 Ft
94+64 L/R Protect Wetland (82 Ft each) 164 Ft Total
115+10 L/R Perimeter control (90 Ft each) 180 Ft Total

Install Floating Silt Curtain along the banks of the lake at the following locations:
94+70 to 97+55 R 287 Ft
94+80 to 97+40 L 260 Ft
98+45 to 110+40 R 1,196 Ft
101+00 to 103+00 L 200 Ft

Apply Grass Hay or Straw Mulch at 2 Tons/Acre after Placing Topsoil on disturbed areas until Permanent Seeding can be completed at the following locations:
92+00 to 94+00 L Backslope 1 Ton
98+16 to 101+00 L Backslope 1 Ton

Install High Flow Silt Fence at the following locations:
90+17 L Inlet end of pipe 18 Ft
90+28 R Inlet end of pipe 18 Ft
97+00 R Across ditch at inlet end of pipe (30 Ft each side) 60 Ft
97+21 L Inlet end of pipe 18 Ft
98+35 R Inlet end of pipe 18 Ft
105+36 L Inlet end of pipe 18 Ft

Install Type 3 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
91+50 to 93+90 L 427 SqYd



Plot Scale - 1:200

Plotted From - tpp17200

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OPTIONS FOR DEWATERING AND SEDIMENT COLLECTING

OPTIONS ARE NOT LIMITED TO WHAT IS SHOWN ON THIS SHEET

NO MATTER THE SYSTEM OR METHOD USED, THE CONTRACTOR MUST MEET THE TERMS OF THE TEMPORARY DISCHARGE PERMIT AND THE STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES.

Various systems, devices, and products are shown on this sheet to give the Contractor ideas of what may be used for water treatment. Other systems, devices, and products are available and can be used with approval from the Engineer.

The Contractor may elect to block a portion of storm sewer near the outfall with sand bags and pump the water out to be treated with a flocculent or allow the water to set in a lined dumpster until sediment to falls out of suspension before discharging the water. Drop inlet protection devices could also be used as part of a treatment train. The Contractor may pump dirty water into a hydroseeder and mix it with a flocculent, and spray the mixture back onto a sediment pond.

PURPOSE

The purpose of a dewatering and sediment collection system is to collect turbid storm water on the project, treat it with flocculents as needed, and capture the sediment that falls out of suspension before the water is discharged into “Waters of the US” or “Waters of the State”. Refer to the Environmental Commitments for the specific requirements for each body of water on this project.

The Contractor will need to create a Pollution Prevention Plan (PPP) for dewatering and sediment collection if the Contractor choses to discharge the water into "Waters of the US" or "Waters of the State" instead of disposing of the water off-site, using it for irrigation, or using it for hydroseeding. The Contractor will also need to obtain a Temporary Discharge Permit from the South Dakota Department of Environment & Natural Resources (DENR) on all projects outside of Indian Reservation boundaries.

Suggestions for dewatering and sediment collection may be shown on the plan sheets. It is the Contractor's responsibility to dewater and collect sediment. The Contractor will have to intercept and treat the stormwater before storm sewer outfalls into "Waters of the US" or "Waters of the State". The Contractor may need more than one dewatering and sediment collection system to capture and treat stormwater at multiple outfalls and/or locations simultaneously during each phase of the project.

PAYMENT

No additional payment will be made for Dewatering and Sediment Collecting. Dewatering and Sediment Collecting will be incidental to other items on the project.

DEWATERING BAGS AND SOCKS capture sediment and should be placed on pavement, vegetated areas, or gravel.

Dandy Dewatering Bag
Dandy Products, Inc.
Powell, OH
Phone: 1.800.591.2284
www.dandyproducts.com

Non-woven Sediment Filter Bags
Indian Valley Industries, Inc.
Johnson City, NY
Phone: 1.800.659.5111
www.iviindustries.com

Taurus Dewatering Bags/Socks
SolHuTec Group, Inc.
Sebastian, FL
Phone: 1.888.703.9889
www.solhutec.com

Ultra-Dewatering Bag
UltraTech International, Inc
Jacksonville, FL
Phone: 1.800.764.9563
www.spillcontainment.com

Heavy Duty Dirtbag 55
ACF Environmental
Richmond, VA
Phone: 1.800.223.9021
www.acfenvironmental.com

Pump-It Tube
Flo-Water, LLC
West Des Moines, IA
Phone: 1.515.577.6763
www.flo-water.net

FLOCCULENTS listed below are considered to be safe for the environment, if used as directed:

APS 700 Series Floc Logs
Applied Polymer Systems, Inc.
Woodstock, GA
Phone: 1.866.200.9868
http://www.siltstop.com

Floc, Floc Soc, Floc Bag
Innovative Turf Solutions Products
Cincinnati, OH
Phone: 1.513.317.8311
http://www.innovativeturfsolutions.com

Biostar CH
Hild & Associates, Inc.
Stillwater, MN
Phone: 1.715.426.5131
www.biostar-ch.com

Terra-Tubes
ACF Environmental
Buffalo Grove, IL
Phone: 1.800.366.1180
www.terratubes.com

FI-3500 Tablets
JRM Chemical, Inc.
Cleveland, OH
Phone: 1.216.475.8488
http://www.soilmoist.com

Tigerfloc
Floc Systems Inc.
Surrey, British Columbia
Phone: 1.604.343.2046
www.flocsystems.com

PORTABLE FLOCCULENT SYSTEMS

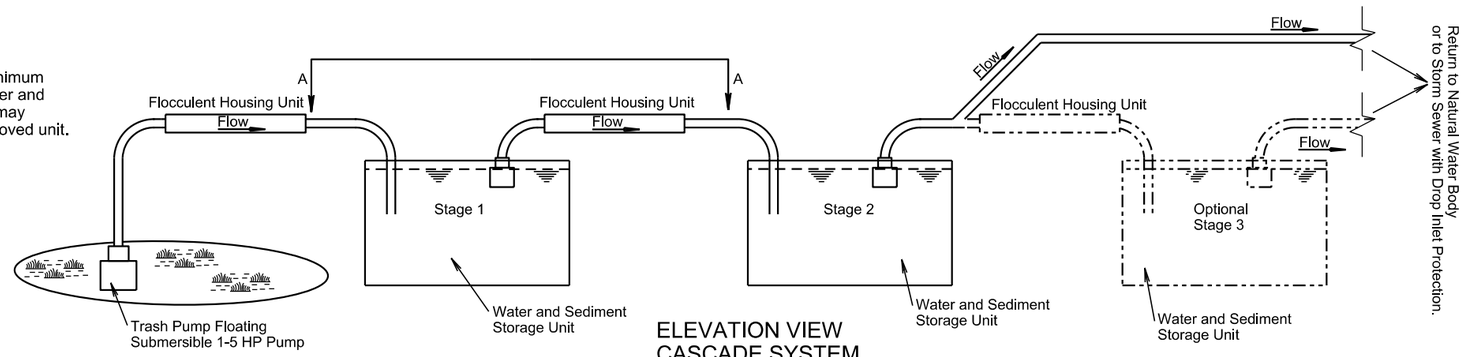
Eco Pond Rescue Water Wagon
Eco Pond Rescue LLC
Seminole, Florida
Phone: 1.727.412.4323
www.ecopondrescue.com

WTS2000 Portable Sediment Tank
Aqualete Industries, LLC
Ocean, New Jersey
Phone: 1.732.695.6336
http://aqualeteindustries.com

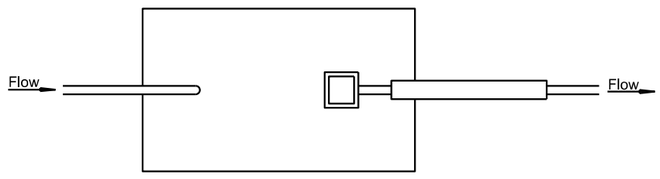
Dry Flocculent Mixing System
Innovative Equipment Solutions
Hot Springs, Arkansas
Phone: 1.501.525.8484
http://www.neptunewash.com

THE CASCADE SYSTEM

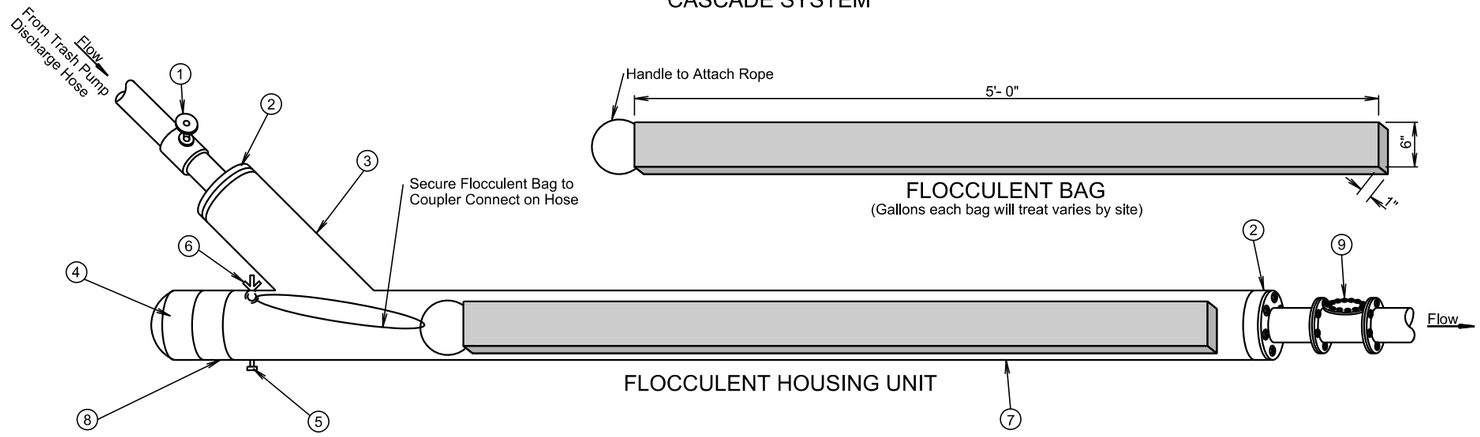
The cascade system is shown below and to the right for conceptual purposes only; however, the cascade system will at a minimum incorporate the use of 2 flocculent housing units and 2 water and sediment storage units. Design and construction of the water and sediment storage units are project site specific and will be the Contractor's responsibility. A water and sediment storage unit may consist of a storage bin lined with plastic, the bed of a dump truck lined with plastic, a sediment basin, or other Engineer approved unit. The treatment flocculent bag may be from the list or an approved equal.



ELEVATION VIEW
CASCADE SYSTEM



VIEW A-A



FLOCCULENT HOUSING UNIT

FLOCCULENT BAG
(Gallons each bag will treat varies by site)

FLOCCULENT HOUSING UNIT
(estimated quantities for information only)

NO.	DESCRIPTION	QUANTITY	UNIT
1	4" or 6" Dia. Sch. 40 Gate Valve	1	Each
2	4" X 6" or 6" X 8" Sch. 40 PVC Bushing	2	Each
3	6" or 8" Dia. Sch. 40 PVC "Y"	1	Each
4	6" or 8" Dia. Sch. 40 PVC Female Threaded Cap	1	Each
5	1" Dia. Sch. 80 PVC Drain Valve	1	Each
6	1/2" Eye Bolt with Wing Nut and Rubber Gromets	1	Each
7	6" or 8" Dia. Sch. 40 PVC Pipe	10	Ft.
8	6" or 8" Dia. Sch. 40 PVC Male Adapter	1	Each
9	4" or 6" Dia. Sch. 40 PVC Swing Check Valve	1	Each

FLOW RATE ESTIMATE

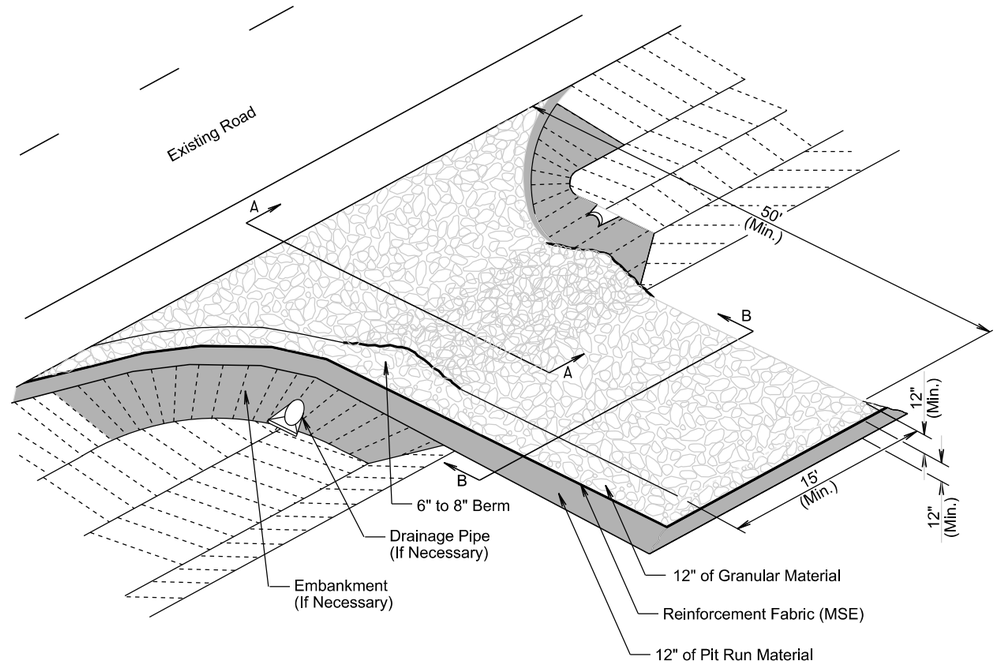
Pump Type	Flow Rate (gpm)
2"	50-250
3" Gas	250-350
4" Diesel	500-750
6" Diesel	750-1000

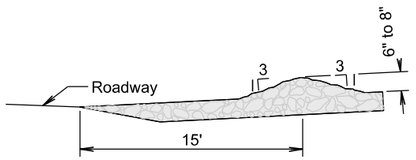
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SDDOT CONSTRUCTION ENTRANCE

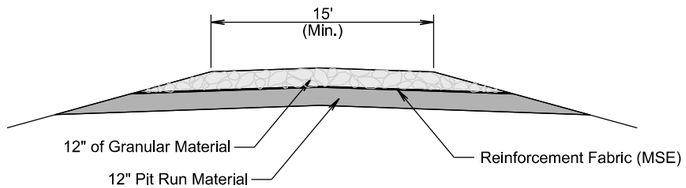
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	D15	D19

Plotting Date: 04/28/2025





SECTION A-A



SECTION B-B

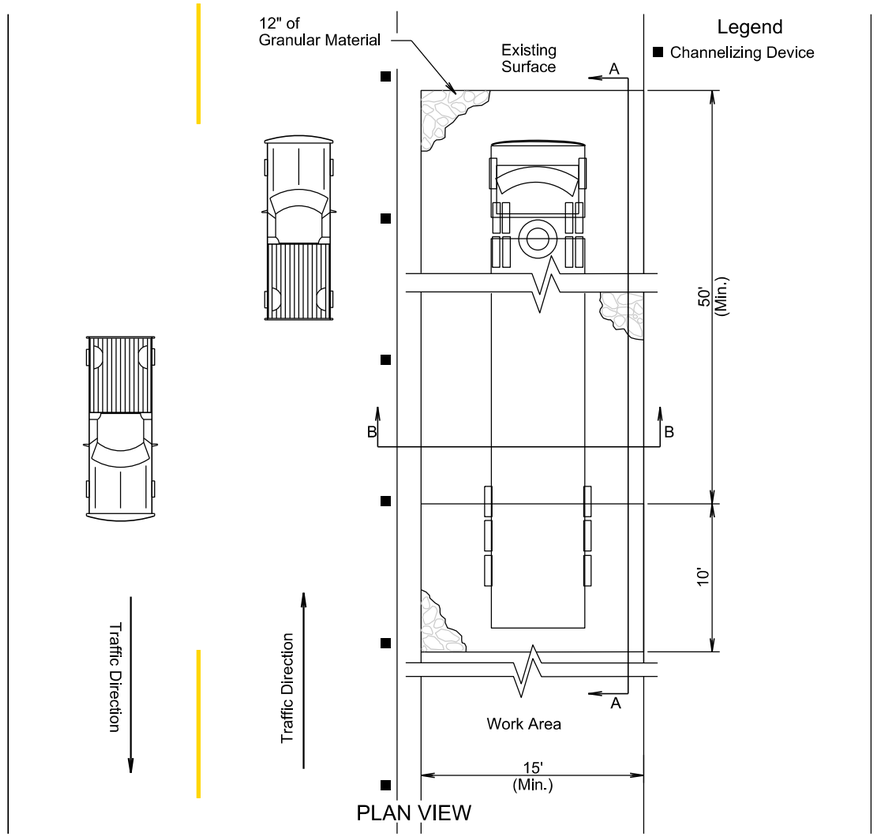
GENERAL NOTES:

If the grade of the entrance slopes down to the roadway, a berm of extra rock will be used to prevent sediment or mud from being deposited on the roadway. See SECTION A-A.

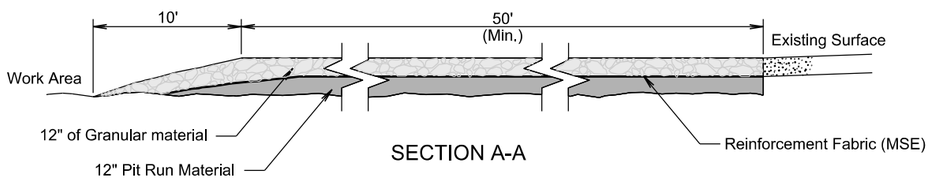
If a drainage pipe is necessary the size and type will be determined by the Contractor to meet field conditions. All cost will be incidental to the various contract items.

If embankment is necessary it must be pit run material.

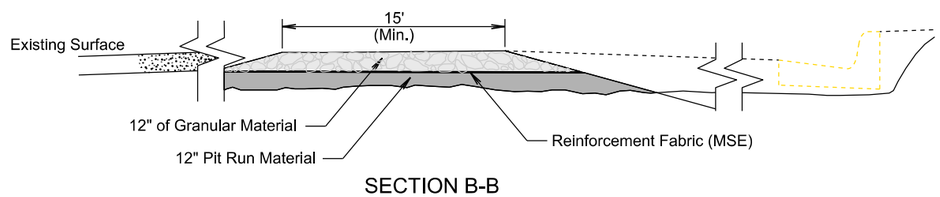
TRANSVERSE TO ROADWAY



PLAN VIEW



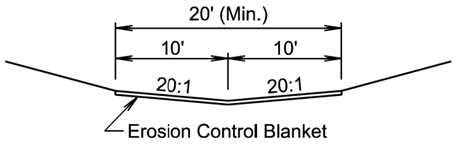
SECTION A-A



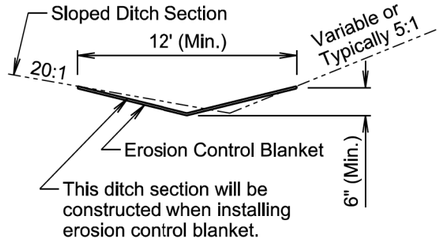
SECTION B-B

PARALLEL TO ROADWAY

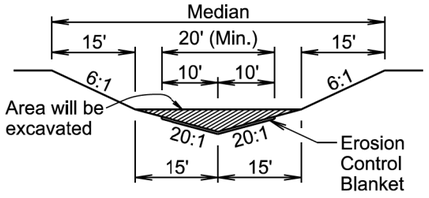
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STANDARD DITCH SECTION

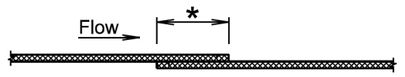


SLOPED DITCH SECTION



The median will be shaped to the limits shown in this detail where the erosion control blanket will be placed.

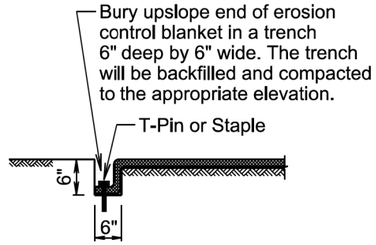
MEDIAN SECTION



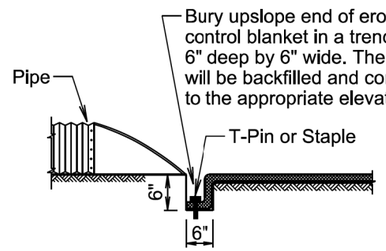
* Use a 4" (Min.) overlap wherever two widths of erosion control blanket are applied side by side.

* Use a 6" (Min.) overlap wherever one roll of erosion control blanket ends and another begins.

OVERLAP DETAIL



TRENCH DETAIL



PIPE END DETAIL

GENERAL NOTES:

Prior to placement of the erosion control blanket, the areas will be properly prepared, shaped, seeded, and fertilized.

Erosion control blanket will be unrolled in the direction of the flow of water when placed in ditches and on slopes. The upslope end of the erosion control blanket will be buried in a trench 6" wide by 6" deep. There will be at least a 6" overlap wherever one roll of erosion control blanket ends and another begins, with the upslope erosion control blanket placed on top of the downslope erosion control blanket.

The erosion control blanket will be pinned to the ground according to the manufacturer's installation recommendations.

After the placement of the erosion control blanket, the Contractor will fine grade along all edges of the blanket to maintain a uniform slope adjacent to the blanket and level any low spots which might prevent uniform and unrestricted flow of side drainage directly onto the erosion control blanket.

All ditch sections will be shaped when installing the erosion control blanket. All costs for shaping the ditches will be incidental to the contract unit price per foot for "Shaping for Erosion Control Blanket".

February 14, 2020

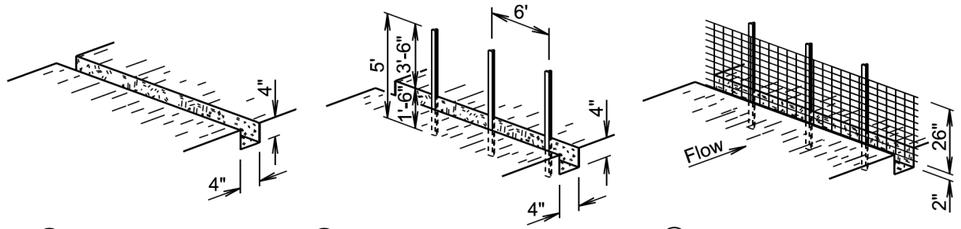
Published Date: 2025	SDDOT	*EROSION CONTROL BLANKET*	*PLATE NUMBER 734.01* *Sheet 1 of 1*

Plot Scale - 1:200
Plotted From - tmp17200
File - U:\rdsprj\day08D6is73401_01.dgn

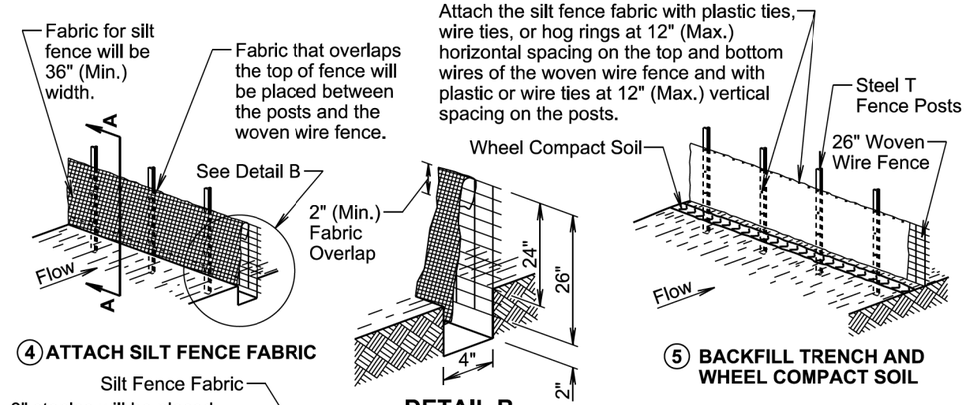
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	D17	D19

Plotting Date: 04/28/2025

MANUAL LOW FLOW SILT FENCE INSTALLATION

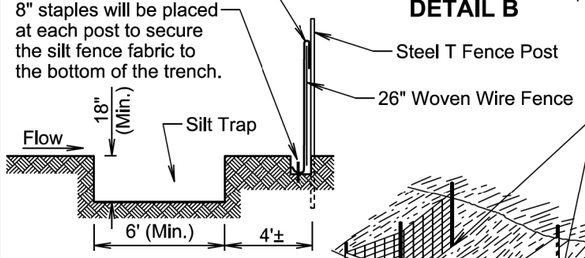


① EXCAVATE TRENCH ② DRIVE STEEL T FENCE POSTS ③ ATTACH 26" WOVEN WIRE FENCE TO POSTS

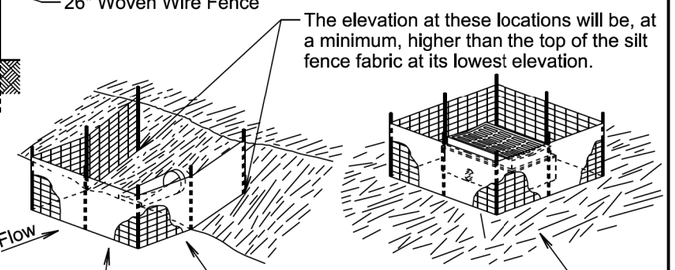


④ ATTACH SILT FENCE FABRIC ⑤ BACKFILL TRENCH AND WHEEL COMPACT SOIL

DETAIL B



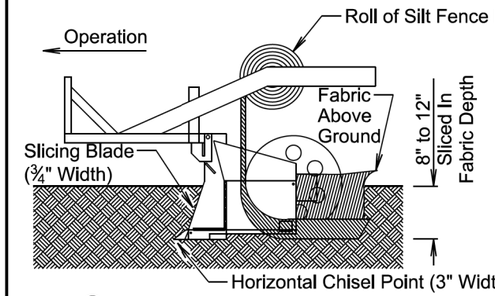
SECTION A-A



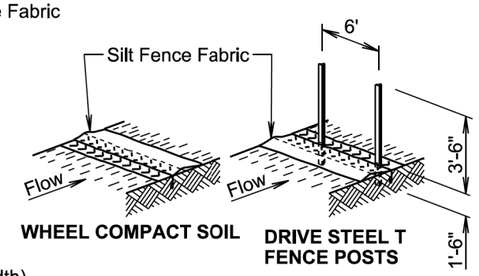
February 14, 2020

Published Date: 2025	SDDOT	LOW FLOW SILT FENCE AND SILT TRAP	PLATE NUMBER 734.04
			Sheet 1 of 2

MACHINE SLICED LOW FLOW SILT FENCE INSTALLATION

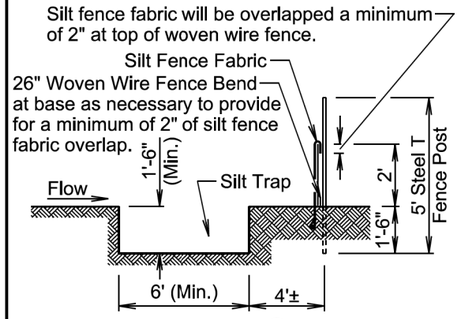


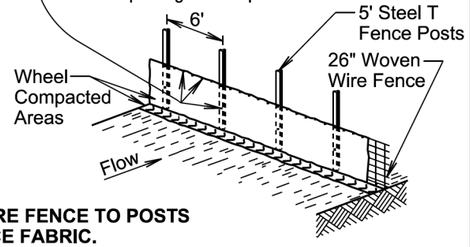
① INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.



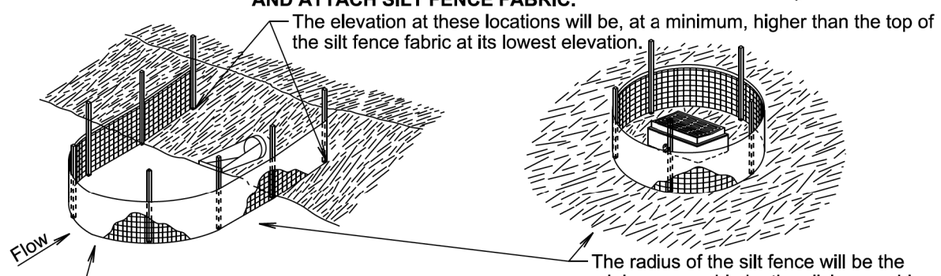
WHEEL COMPACT SOIL DRIVE STEEL T FENCE POSTS

② WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.





③ ATTACH 26" WOVEN WIRE FENCE TO POSTS AND ATTACH SILT FENCE FABRIC.



GENERAL NOTES:

A silt trap will be provided when specified by a plan note. All costs for constructing the silt trap will be incidental to the contract unit price per cubic yard for "Silt Trap".

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

February 14, 2020

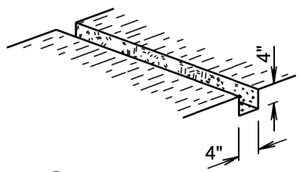
Published Date: 2025	SDDOT	LOW FLOW SILT FENCE AND SILT TRAP	PLATE NUMBER 734.04
			Sheet 2 of 2

Plot Scale - 1:200
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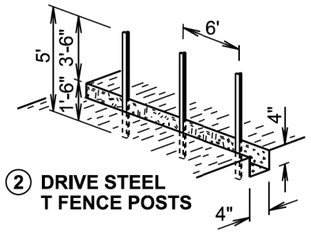
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	D18	D19

Plotting Date: 04/28/2025

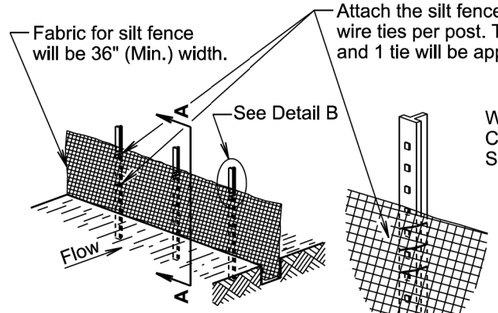
MANUAL HIGH FLOW SILT FENCE INSTALLATION



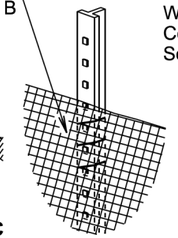
① EXCAVATE TRENCH



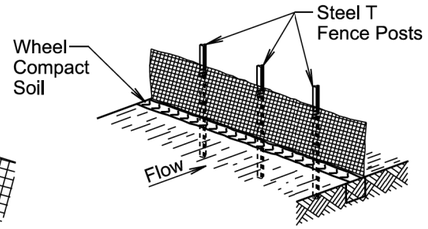
② DRIVE STEEL T FENCE POSTS



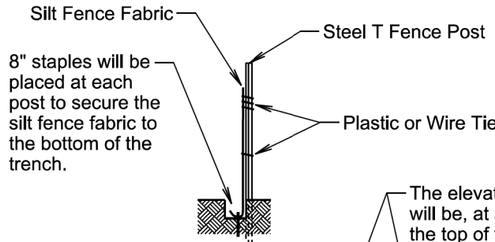
③ ATTACH SILT FENCE FABRIC



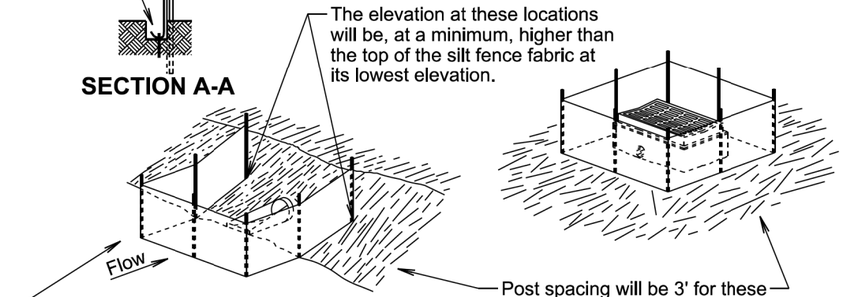
DETAIL B



④ BACKFILL TRENCH AND WHEEL COMPACT SOIL



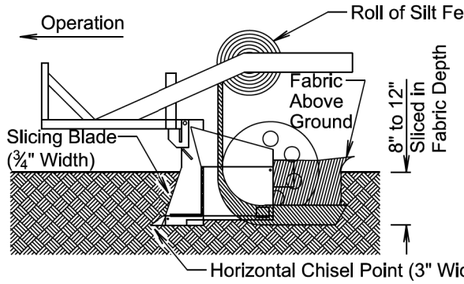
SECTION A-A



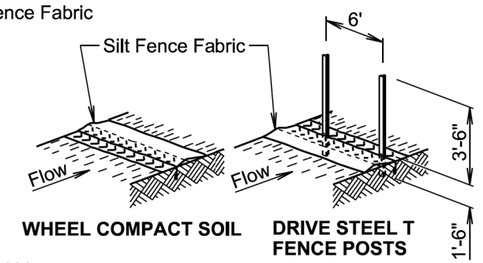
February 14, 2020

Published Date: 2025	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 1 of 2

MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION

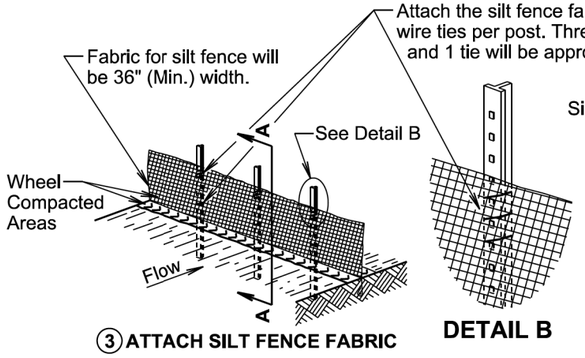


① INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.



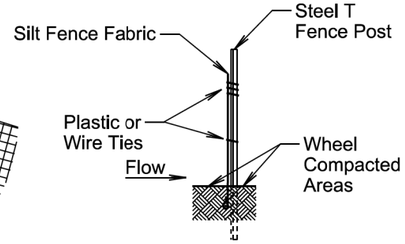
WHEEL COMPACT SOIL — DRIVE STEEL T FENCE POSTS

② WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.

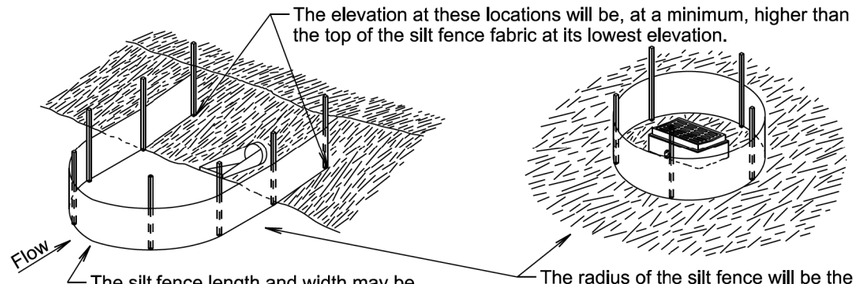


③ ATTACH SILT FENCE FABRIC

DETAIL B



SECTION A-A



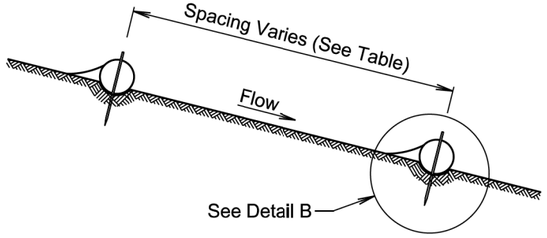
GENERAL NOTE:

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

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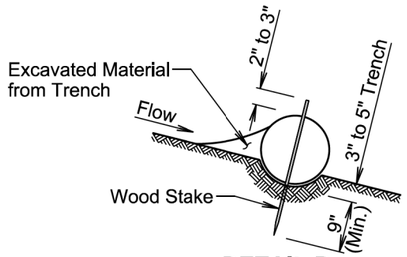
Published Date: 2025	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 2 of 2

Plot Scale - 1:200
• Plotted From - tmp17200
File - ...\day08D6is73405_01s73405_02.dgn

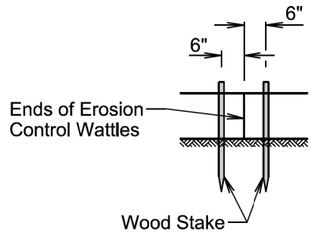


ELEVATION VIEW
(Cut or Fill Slope Installation)

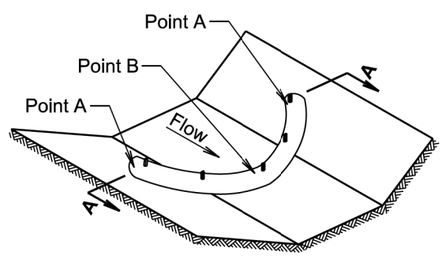
CUT OR FILL SLOPE INSTALLATION	
Slope	Spacing (Ft.)
1:1	10
2:1	20
3:1	30
4:1	40



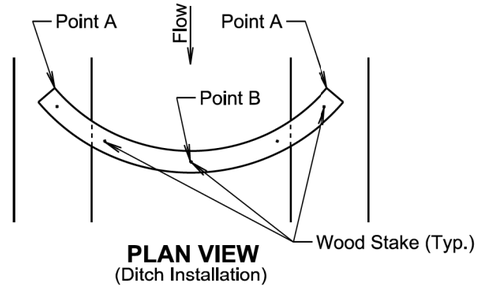
DETAIL B
(Typical of All Installations)



DETAIL C
(See General Notes)

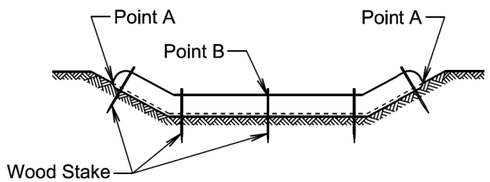


ISOMETRIC VIEW
(Ditch Installation)



PLAN VIEW
(Ditch Installation)

DITCH INSTALLATION	
Grade	Spacing (Ft.)
2%	150
3%	100
4%	75
5%	50



SECTION A-A

February 14, 2020

Published Date: 2025	SDDOT	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 1 of 2

GENERAL NOTES:

At cut or fill slope installations, wattles will be installed along the contour and perpendicular to the water flow.

At ditch installations, point A must be higher than point B to ensure that water flows over the wattle and not around the ends.

The Contractor will dig a 3" to 5" trench, install the wattle tightly in the trench so that daylight can not be seen under the wattle, and then compact the soil excavated from the trench against the wattle on the uphill side. See Detail B.

The stakes will be 1"x2" or 2"x2" wood stakes, however, other types of stakes such as rebar may be used only if approved by the Engineer. The stakes will be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles will be 3' to 4'.

Where installing running lengths of wattles, the Contractor will butt the second wattle tightly against the first and will not overlap the ends. See Detail C.

The Contractor and Engineer will inspect the erosion control wattles in accordance with the storm water permit. The Contractor will remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

Sediment removal, disposal, or necessary shaping will be as directed by the Engineer. All costs for removing accumulated sediment, disposal of sediment, and necessary shaping will be incidental to the contract unit price per cubic yard for "Remove Sediment".

All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials will be incidental to the contract unit price per foot for the corresponding erosion control wattle contract item.

All costs for removing the erosion control wattle from the project including labor, equipment, and materials will be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

February 14, 2020

Published Date: 2025	SDDOT	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 2 of 2

Plot Scale - 1:200
• Plotted From - tmp17200
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SECTION F: SURFACING PLANS

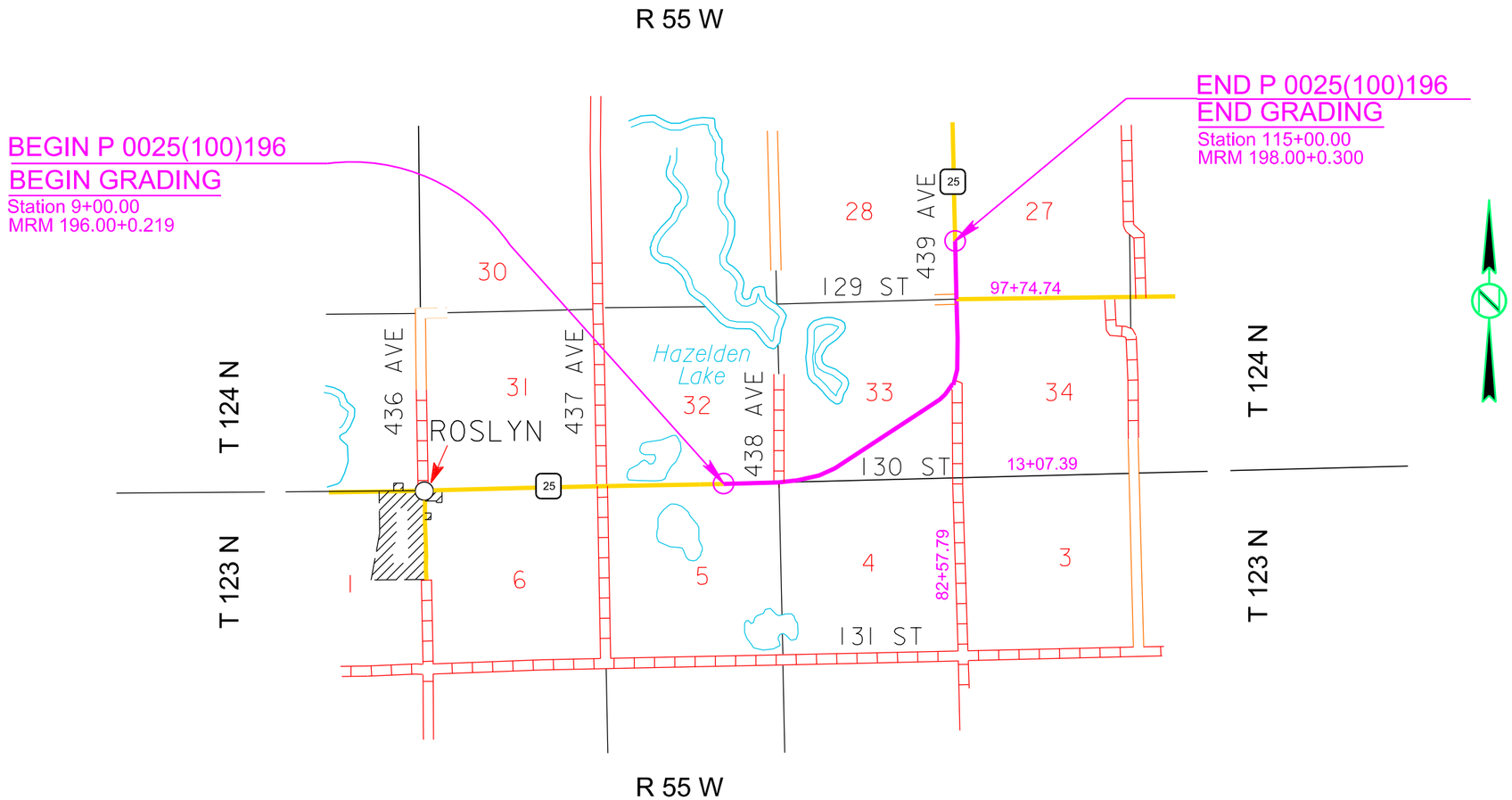
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	F1	F10

Plotting Date: 10/23/2026

Revised: 04-29-2025 RTS

INDEX OF SHEETS

F1	General Layout with Index
F2 - F4	Estimate of Quantities, Notes, Rates, and Tables
F5 - F6	Typical Surfacing Sections
F7 - F10	Asphalt Concrete Layouts



Plot Scale - 1:200

Plotted From -

Revised: 10-23-2026 LLA

SECTION F ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3320	Checker	Lump Sum	LS
120E6200	Water for Granular Material	386.9	MGal
260E1010	Base Course	2,000.0	Ton
260E1030	Base Course, Salvaged	30,243.4	Ton
320E0033	PG 58V-34 Asphalt Binder	366.5	Ton
320E1002	Class Q2 Hot Mixed Asphalt Concrete	6,392.7	Ton
320E1200	Asphalt Concrete Composite	325.0	Ton
320E4000	Hydrated Lime	62.0	Ton
330E0010	MC-70 Asphalt for Prime	58.5	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	12.2	Ton
330E1000	Blotting Sand for Prime	150.5	Ton

SURFACING THICKNESS DIMENSIONS

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

CHECKING SPREAD RATES

The Contractor will be responsible for checking the Base Course and Base Course, Salvaged 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.

BASE COURSE, SALVAGED

Base Course, Salvaged will be obtained from the stockpile site(s) provided by the Contractor and may be used without further gradation testing.

The Contractor will ensure the Base Course, Salvaged material contains no more than 50% salvaged asphalt mix material and at least 50% granular material (salvaged or virgin). Blended material will be to the satisfaction of the Engineer.

All other requirements for Base Course, Salvaged 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)

ASPHALT CONCRETE SUMMARY TABLE

LOCATION	Class Q2 With Specified Density Compaction (Ton)	Class Q2 Without Specified Density Compaction (Ton)
Mainline		
Sta. 9+00 to Sta. 10+30	48.6	25.2
Sta. 10+30 to Sta. 113+05	3,843.4	2,368.2
Sta. 113+05 to Sta. 115+00	72.9	34.4
Grand Total:	6,392.7	

STORAGE UNIT

There will be only one storage unit for both PCN 08GH and PCN 08D6. This will be included in PCN 08GH plans.

MAINTENANCE OF TRAFFIC DETOUR ROUTE

It is anticipated that the car detour route will need asphalt concrete patching installed prior to and after completion of the project. See Section C plan notes for more information.

Plot Scale - 1:200
Plotted From - TRPR13462
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	F3	F10

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RATES OF MATERIALS – See Table of Materials Quantities

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

SD 25 MAINLINE

Sta. 10+30 to Sta. 113+05

Mainline
Base Course or Base Course, Salvaged 16,092 tons

Water for Granular Material at the rate of 193.1 MGal

MC-70 Asphalt for Prime at the Rate of 29.2 ton applied 42 feet wide (Rate = 0.30 gallon per square yard).

Blotting Sand for Prime at the Rate of 70 ton applied 24 feet wide (Rate = 10 pounds per square yard).

SS-1h or CSS-1h Asphalt for Tack at the rate of 6.1 tons applied 41 feet Wide (Rate = 0.06 gallon per square yard).

CLASS Q2 HOT MIXED ASPHALT CONCRETE

Crushed Aggregate	2915	tons
PG 58V-34 Asphalt Binder	179	tons
Total Mix	3094	tons
Hydrated Lime	31	tons
Total Mix with Hydrated Lime	3125	tons

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

Plot Scale - 1:200

Plotted From - TRPR13462

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Revised: 10-23-2026 LLA

TABLE OF MATERIALS QUANTITIES

LOCATION Station	to	Station	WATER FOR GRANULAR MATERIAL (MGal)	BASE COURSE, SALVAGED/ BASE COURSE (Ton)	CLASS Q2 HOT MIXED ASPHALT CONCRETE (Ton)	ASPHALT CONCRETE COMPOSITE (Ton)	PG 58V-34 ASPHALT BINDER (Ton)	ASPHALT FOR PRIME (Ton)	BLOTTING SAND FOR PRIME (Ton)	HYDRATED LIME (Ton)	ASPHALT FOR TACK (Ton)
Mainline											
9+00	to	10+30	4.5	377.0	73.8		4.2	0.7	1.7	0.7	0.1
10+30	to	113+05	375.8	31,315.0	6,211.6		356.1	56.8	136.2	60.3	11.9
113+05	to	115+00	6.6	551.4	107.3		6.2	1.0	2.6	1.0	0.2
Maintenance of Traffic									10.0		
Maintenance of Car Detour Route						325.0					
(See Section C plans)											
Rates		Totals:	386.9	32,243.4	6,392.7	325.0	366.5	58.5	150.5	62.0	12.2

Application Rates: MC-70 Asphalt for Prime rate = 0.30 gallon per square yard
SS-1h or CSS-1h Asphalt for Tack rate = 0.06 gallon per square yard.
SS-1h or CSS-1h Asphalt for Flush Seal rate = 0.05 gallon per square yard.

*LOCATION OF INTERSECTING ROADS AND FARM ENTRANCES

INTERSECTING STREETS & ROADS
28’ Intersecting Roads
(4 each)
Sta. 13+19 Lt. - 438th Ave.
Sta. 62+48 Rt. - 439th Ave.
Sta. 97+76 Lt. - 129th St.
Sta. 97+76 Rt. - 129th St.

FARM ENTRANCES
24’ Farm Entrances
(7 each)
Sta. 13+19 Rt.
Sta. 37+52 Lt.
Sta. 41+57 Rt.
Sta. 73+39 Rt.
Sta. 90+75 Lt.
Sta. 90+75 Rt.
Sta. 104+87 Lt.

*For location only - Surfacing for Intersecting Roads and Farm Entrances
will be utilized using materials included in Section F plans for Project PCN 08GH.

Plot Scale - 1:200
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IN PLACE TYPICAL SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	F5	F10

Plotting Date: 10/23/2026

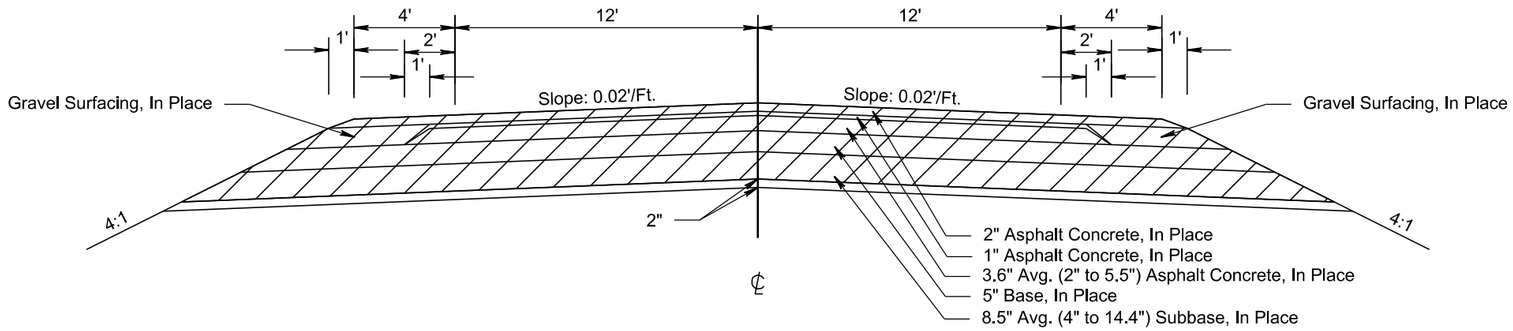
* Note:
PCN 080U - Underlying Plans

		PCN 08D6
Sta. -8+13.77	=	Sta. 9+00
Sta. -3+04.77	=	Sta. 14+09
Sta. 29+15.57	=	Sta. 46+29
Sta. 98+33.14	=	Sta. 115+00

Section 1

Sta. 9+00 to Sta. 14+09
Sta. 46+29 to Sta. 115+00

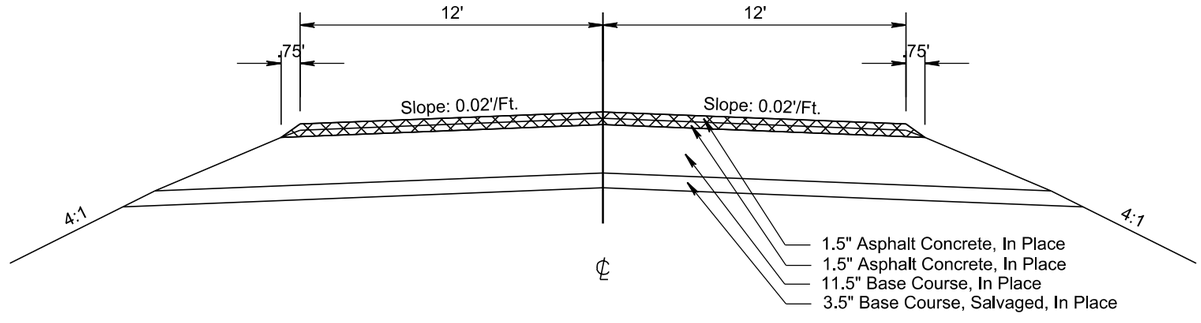
Salvage & Stockpile Asphalt Mix & Granular Base Material



Section 2

Sta. 14+09 to Sta. 46+29

Remove Asphalt Concrete Pavement



003P PLOT SCALE - 1:6.00001
080U
PLOTTED FROM - TRPR13462
PLOT NAME - 5
FILE - ...\08D6_TYPICAL SECTIONS.DGN

TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	F6	F10

Plotting Date: 10/23/2026

Shoulder Transitions:

Sta. 9+00 to Sta. 10+30
* 4' to 6'

Sta. 113+05 to Sta. 115+00
* 6' to 3'

Section 3

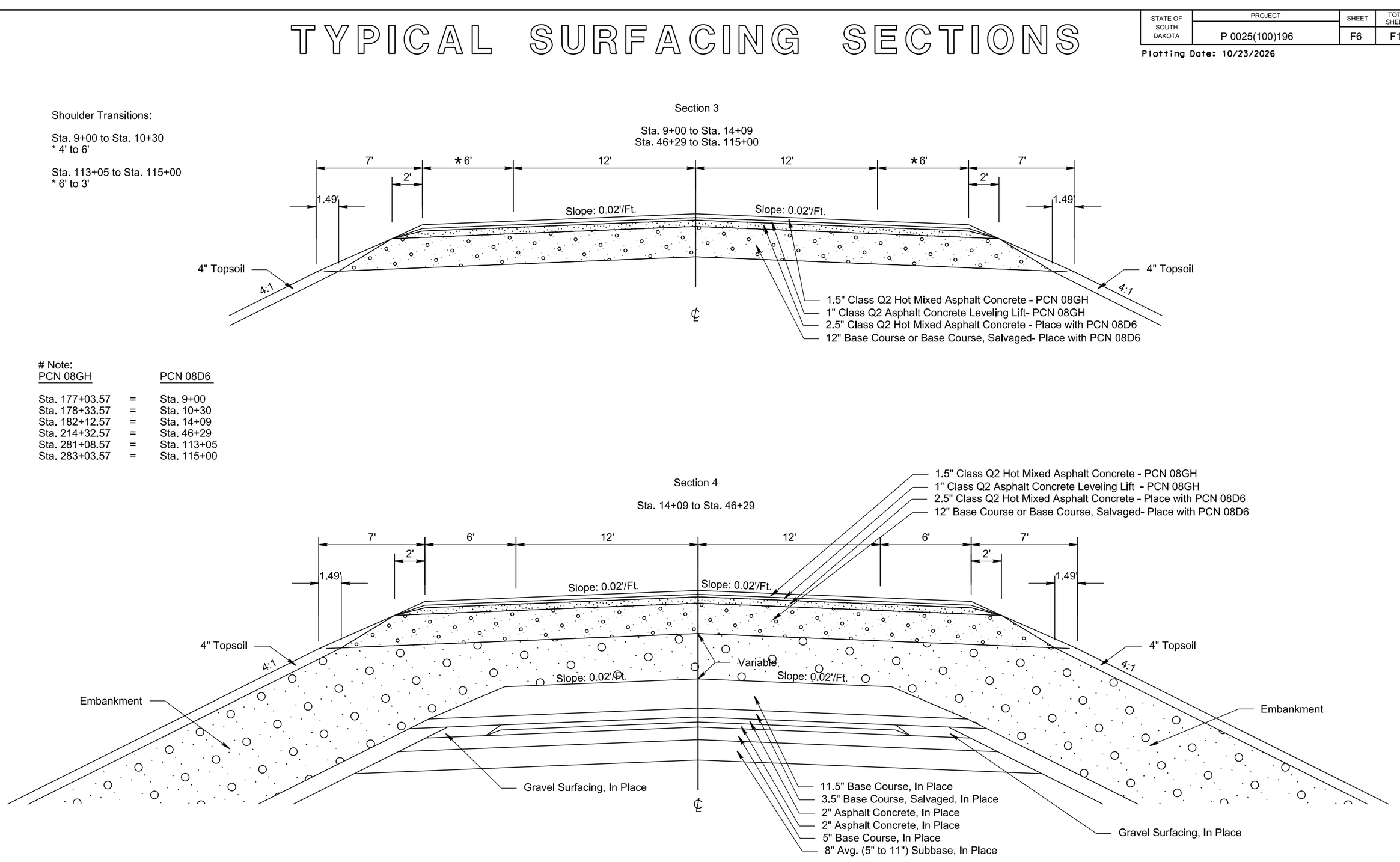
Sta. 9+00 to Sta. 14+09
Sta. 46+29 to Sta. 115+00

Note:

PCN 08GH		PCN 08D6
Sta. 177+03.57	=	Sta. 9+00
Sta. 178+33.57	=	Sta. 10+30
Sta. 182+12.57	=	Sta. 14+09
Sta. 214+32.57	=	Sta. 46+29
Sta. 281+08.57	=	Sta. 113+05
Sta. 283+03.57	=	Sta. 115+00

Section 4

Sta. 14+09 to Sta. 46+29



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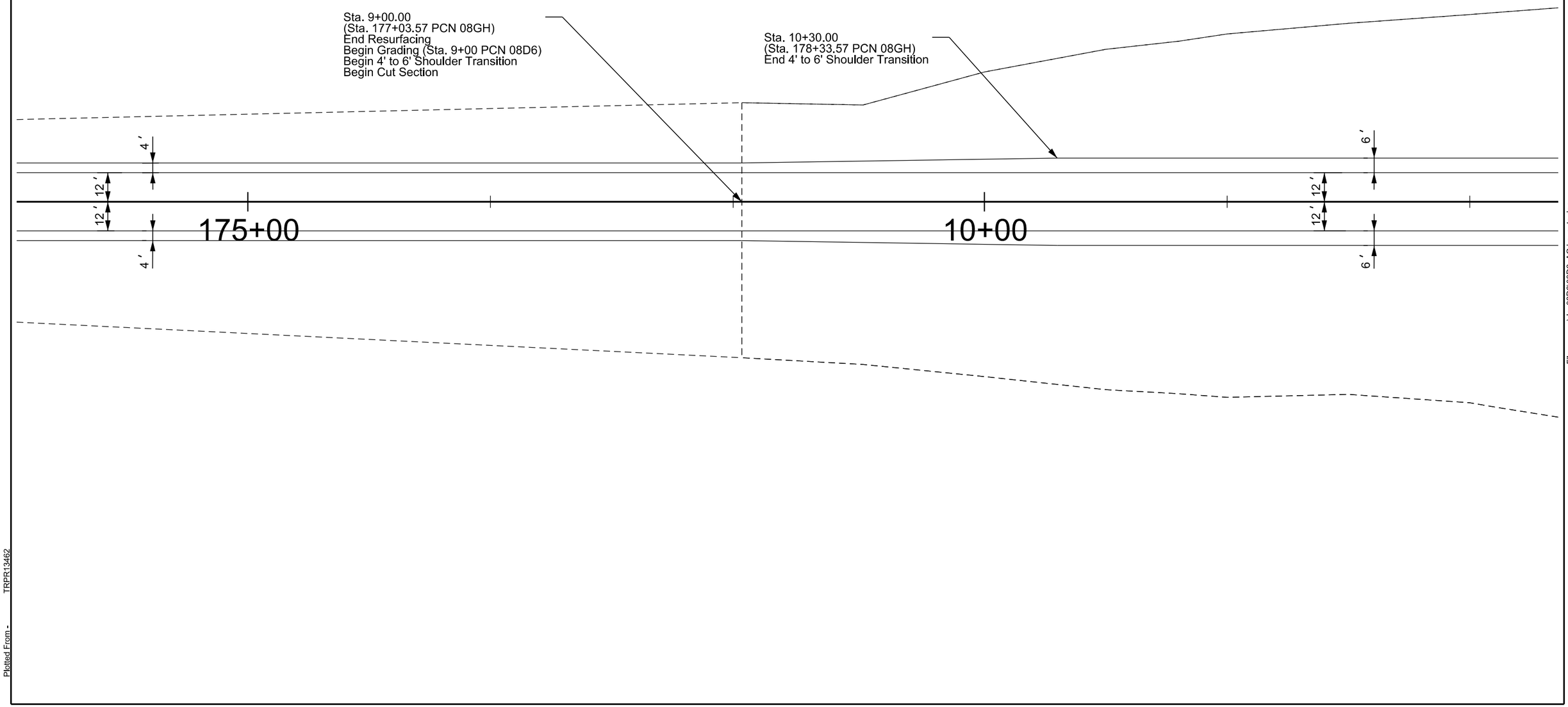
AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 1 of 4 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	F7	F10

Plotting Date: 10/23/2026

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Plot Scale - 1:40

Plotted From - TRPR13462

File - ...\day08D6\08D6_AC Layouts.dgn

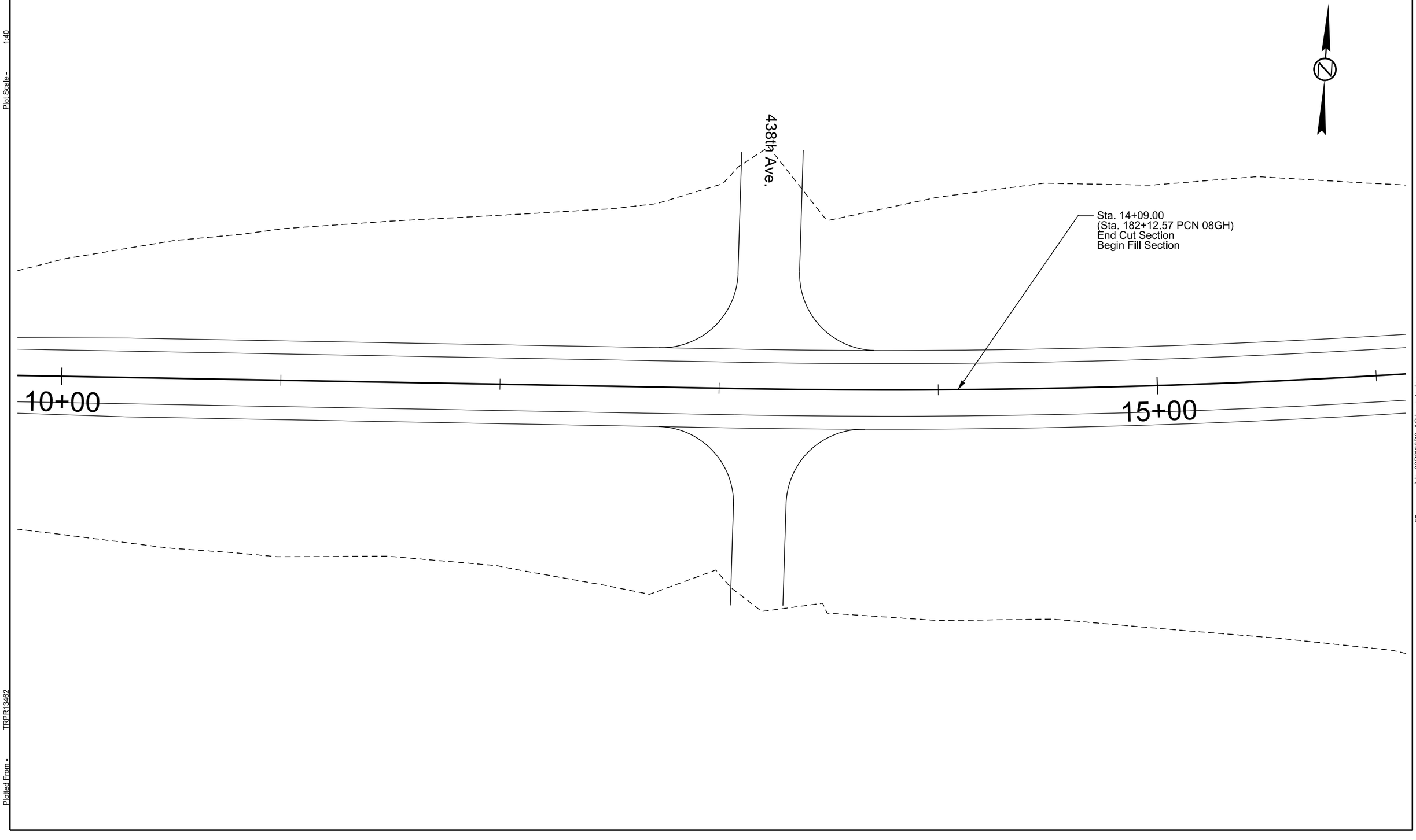
AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 2 of 4 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	F8	F10

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Revised: 04/29/2025 RTS



Plot Scale - 1:40

Plotted From - TRPR13462

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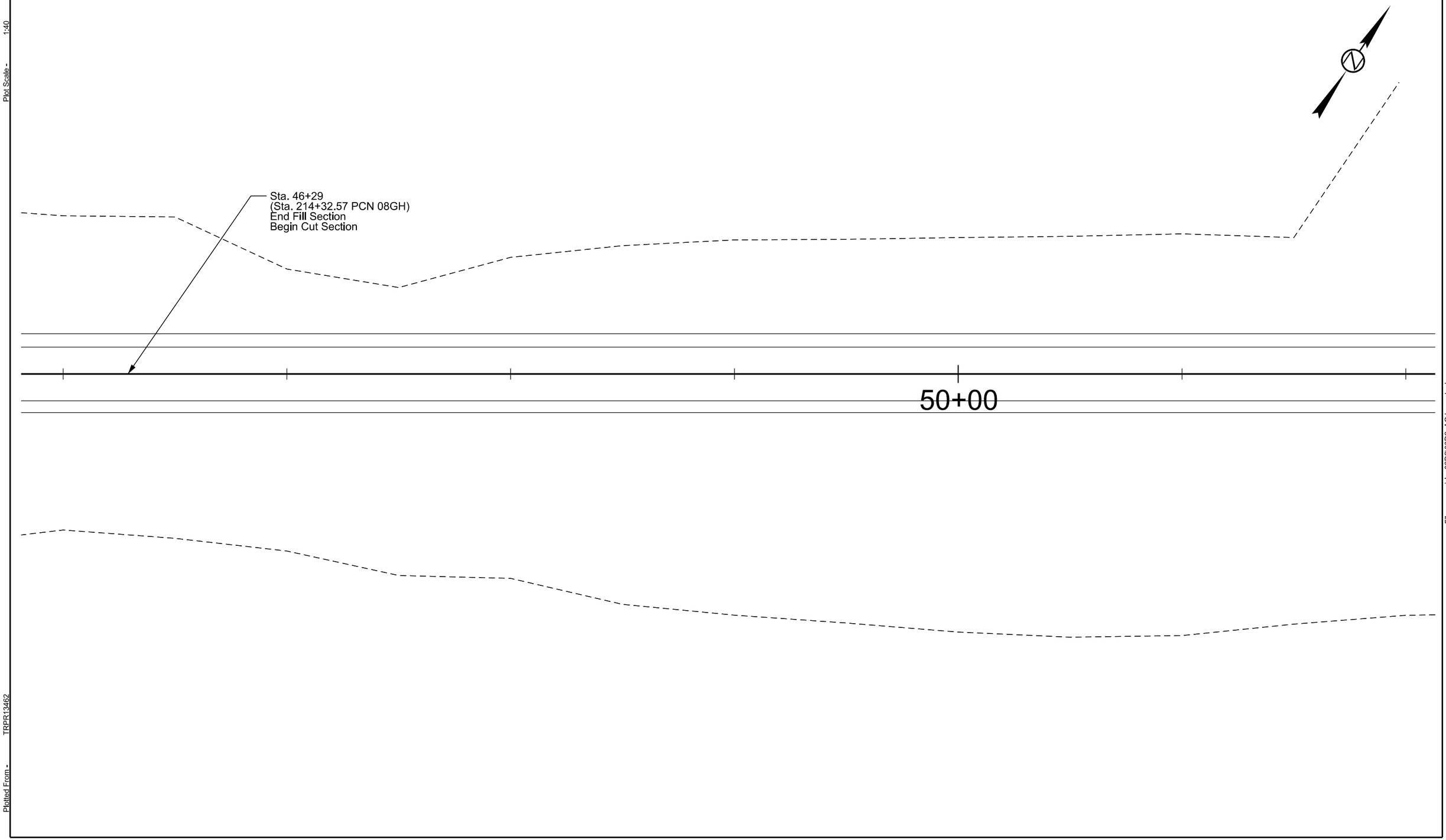
AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 3 of 4 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	F9	F10

Plotting Date: 10/23/2026

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Plot Scale - 1:40

Plotted From - TRPR13462

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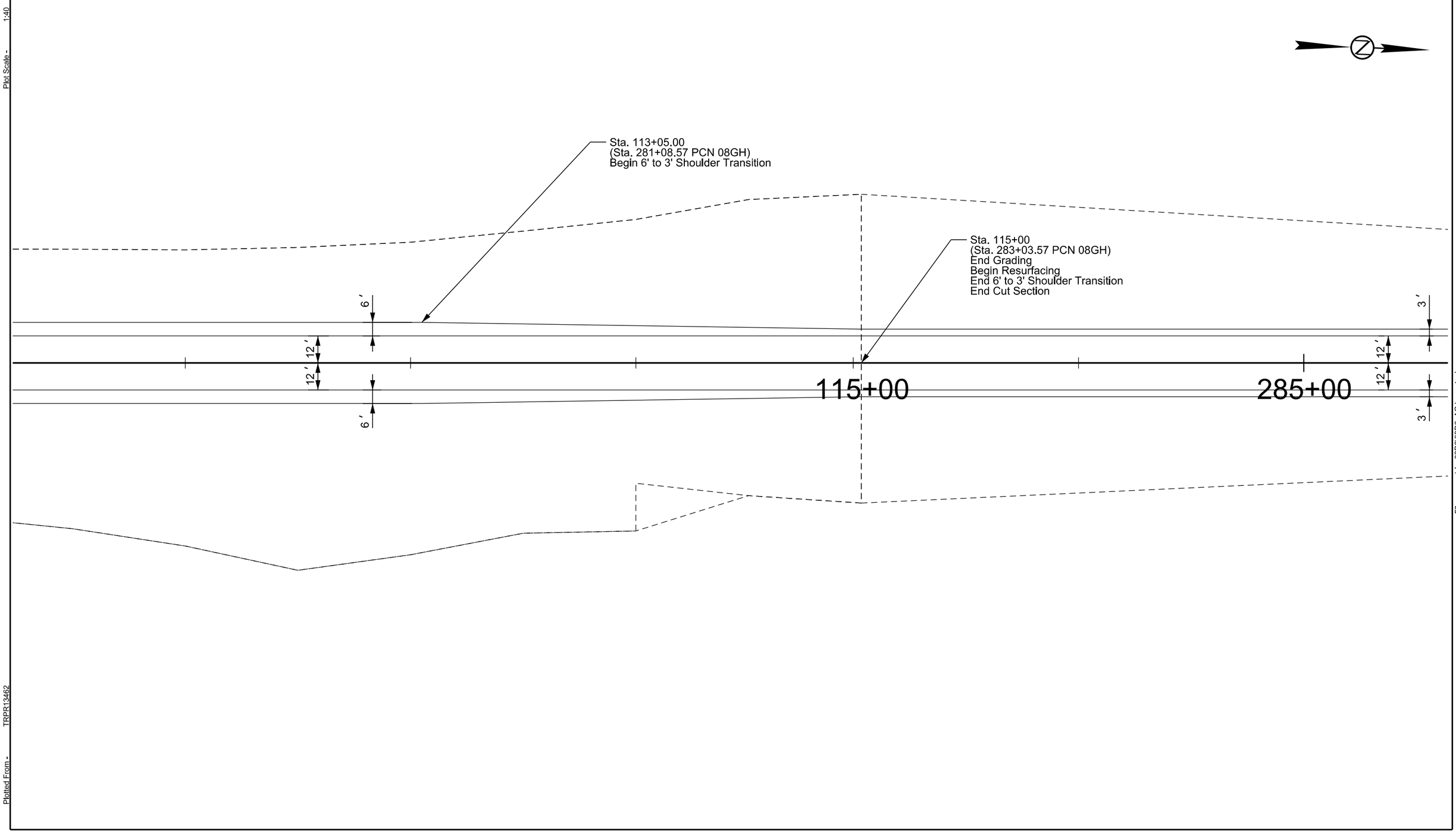
AC LAYOUTS

Scale 1 Inch = 40 Feet
Sheet 4 of 4 Sheets

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	F10	F10

Plotting Date: 10/23/2026

Revised: 04/29/2025 RTS



Plot Scale - 1:40

Plotted From - TRPR13462

File - ...\day08D6\08D6_AC Layouts.dgn

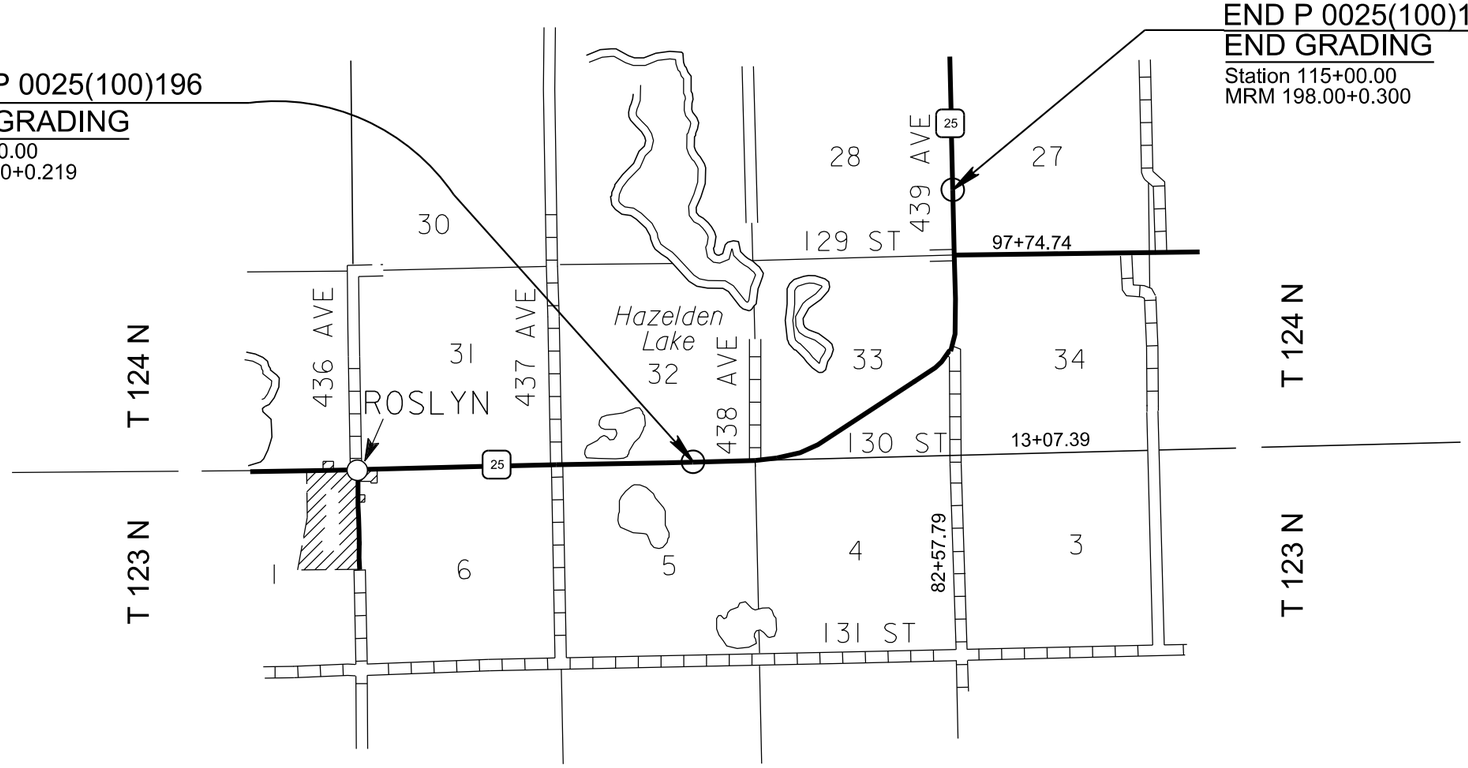
PLOT SCALE - 1:200

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	S1	S18
Plotting Date: 04/23/2024			

SECTION S: PERMANENT SIGN PLANS

INDEX OF SHEETS

S1	General Layout with Index
S2-S3	Estimate with General Notes and Tables
S4	Delineation Table & Chevron Table
S5-S6	Permanent Sign Installation
S7	Sign Summary
S8	Special Sign Design
S9-S11	Sign Installation Details
S12-S18	Standard Plates



PLOTTED FROM - TRAB10100

PLOT NAME - 1

FILE - ...\PRJDEUEL0507\TITLEM.DGN

SECTION S – ESTIMATE OF QUANTITIES – PCN 08D6

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0130	Remove Traffic Sign	18	Each
110E7150	Remove Sign for Reset	6	Each
632E1320	2.0"x2.0" Perforated Tube Post	363.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	65.0	Ft
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	8	Each
632E2510	Type 2 Object Marker Back to Back	52	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	52.4	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	129.8	SqFt
632E3500	Reset Sign	6	Each

GENERAL PERMANENT SIGNING

New sign installations will be staked in the field by the Contractor and checked by the Engineer. The Contractor will give the Engineer a minimum of one week to check staked locations prior to signpost installation. Lateral offset of signs will be as shown in the plans or as directed by the Engineer.

The Contractor will be responsible for contacting South Dakota One Call to locate the utilities at the staked sign installation locations.

When signs are mounted in an assembly, they will be 1-2 inches apart vertically and horizontally.

The height of the post must not exceed the minimum height needed by more than 0.5 feet. Any portion that extends above the sign will be cut off. No separate payment will be made for cutting the post or for that length cut off.

Aluminum U-Channel stiffeners will be used on all signs 36 inches or greater in width and will conform to ASTM B221 Alloy 6063-T6 or 6061-T6. The U-Channel will be 2 inches in width and free of holes. The U-Channel stiffeners will also be used to connect various signs together so that an entire sign assembly can be erected on a single installation. Stiffeners may be fastened to signs by use of 1/4-inch diameter drive rivets.

The Contractor will use 3/8-inch diameter rust proof machine sign bolts, flat metal washers, neoprene washers (against the sign sheeting), lock washers, and nuts to fasten the sign to the channel aluminum and posts. A minimum of two bolts will extend through each post.

Prior to ordering signs, the Contractor will verify dimensions, background, border, and legend of the signs.

Prior to use, the Contractor will provide documentation for the sign support devices showing they meet the applicable NCHRP 350 or MASH requirements.

REMOVE TRAFFIC SIGN

Existing signs that are shown as being removed in the Permanent Signing Table will become the property of the Contractor. Existing signposts and bases will be removed in their entirety. All existing signs, posts, and/or hardware removed will not be reused. Holes remaining from the removal of wood posts will be backfilled and compacted with material placed in layers not to exceed 6 inches in depth.

All costs associated with the removal of existing signs, posts, hardware, and backfilled holes will be incidental to the contract unit price per each for “Remove Traffic Sign”. Quantities will be per assembly at the contract unit price per each.

NEW PERMANENT SIGNING

All signs will be manufactured in accordance with the sheeting manufacturer’s recommendations utilizing a matched component system, including inks, electronic cuttable films, and protective overlay films.

All Flat Aluminum Signs, Nonremovable Copy High Intensity will have sheeting in conformance with the requirements of ASTM D4956 Type IV. All Flat Aluminum Signs, Nonremovable Copy Super/Very High Intensity will have sheeting in conformance with the requirements of ASTM D4956 Type XI.

All costs associated with furnishing and installing the new permanent signs, and with furnishing and installing stiffeners and hardware will be incidental to the contract unit price per square foot for “Flat Aluminum Sign, Nonremovable Copy High Intensity” or “Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity”.

REMOVE SIGN FOR RESET AND RESET SIGN

Signs that are scheduled for reset will be dismantled and reassembled to the extent needed by the Contractor to properly reset the sign. Signs will be handled with care so that the existing signs, posts, and bases are not damaged during the relocation process. The Contractor will replace and pay for any reset signs damaged in their care. The Contractor will remove and dispose of any existing posts for all reset signs that require use of new posts as shown in the Table of Permanent Signing.

All costs for removing, dismantling, and disposing of any existing posts will be incidental to the contract unit price per each for “Remove Sign for Reset”.

All costs for resetting the existing signs will be incidental to the contract unit price per each for “Reset Sign”. All quantities for Remove Sign for Reset and Reset Sign will be per assembly at the contract unit price per each.

Any 911 Emergency Number signs within the project work limits will not be stockpiled but temporarily repositioned at a location outside the work limits but within the immediate proximity of the existing location. To complete the project sign work, the 911 Emergency Number signs will be permanently installed at their original locations, or as near as practicable where entrances have been reconfigured by the project. The existing supports will be reused. Cost for removing, temporarily repositioning, and permanently resetting 911 Emergency Number signs will be included in the contract unit price per each for “Remove Sign for Reset” and “Reset Sign”.

DIGITALLY PRINTED SIGNS

Digitally printed signs will be allowed on this project. If the Contractor elects to provide digitally printed signs, such signs will adhere to the following specifications.

PROTECTIVE OVERLAY FILM

Permanent traffic signs printed with digital ink systems will be fabricated with a full sign protective overlay film designed to provide a smooth surface needed for retroreflectivity, and to protect the sign from fading and UV degradation. The overlaminate will comply with the retroreflective sheeting manufacturer’s recommendations to ensure proper adhesion and transparency and will also meet the reflective film durability as identified in Table 1.

Table 1: Retroreflective Film Minimum Durability Requirements

ASTM D4956 Type	Full Sign Replacement Term (years)	Sheeting Replacement Term (years)
I	0	7
III	7	10
IV	7	10
VIII	7	10
IX	7	12
XI	7	12

FABRICATION

Retroreflective sheeting will be applied to a properly cleaned and prepared aluminum sign blank in accordance with the retroreflective sheeting manufacturer’s recommendations. Sign legend will be applied using digital print technologies and systems in accordance with the retroreflective sheeting manufacturer’s recommendations and the requirements of these plans.

Finished signs will be free of ragged edges and must be supplied clean and free of scratches, grease, oil, lubricants or other contaminants. Minor blemishes (dirt speck, dust, etc.) may settle on the fresh ink surface or become entrapped between the sheeting surface and transparent overlay film due to static charge within the sign shop environment. Any blemish must be minor and not interfere with the communication of the sign message to the motorist. The blemish must not be visible to the naked eye when viewed from 30 feet or greater.

After application of the retroreflective sheeting, sign blanks will be stacked and packaged face to face, back to back, and protected in accordance with the sheeting manufacturer’s recommendations. Finished signs will be securely packaged to prevent damage during transit or storage according to the sheeting manufacturer’s recommendations.

TRAFFIC SIGN PERFORMANCE WARRANTY PROVISIONS

Based on the ASTM Type of sheeting specified, traffic control signs will be warranted for the duration shown in Table 1. Full product terms and conditions are as established by each sheeting manufacturer and may contain certain limitations based on sheeting and ink colors, and geographic exposure of the sign. A copy of the warranty document with complete details of terms and conditions will be supplied if requested by the Engineer.

CERTIFIED DIGITAL SIGN FABRICATOR

Sign fabricators using digital imaging methods to produce regulated traffic signs must be certified by the reflective sheeting manufacturer whose materials are used to produce the delivered signs.

PLOT SCALE - 1.1200
PLOTTED FROM - TRAB10100
PLOT NAME - 1
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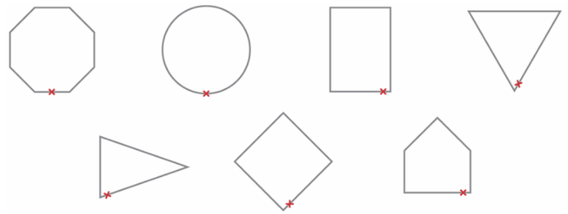
DIGITALLY PRINTED SIGNS (CONTINUED)

DATE TAGGING SIGNS WITH PERTINENT INFORMATION

All digitally printed signs are required to be date-tagged with the following 2 components:

1. Date tags on the back of signs
   Tags will have the following information and be fabricated with material and printing system that are as durable as the warranted sign.
   - Name of Sign Fabricator
   - Date the sign was fabricated (month and year)
   - Process that was used for sign fabrication (digitally printed)
   - Supplier of sheeting that was used for fabricating the sign.
2. Border date

The month and year (mm/yyyy) of sign fabrication will be printed in the border of the sign in 3/8" sans serif font. Border date will be printed with the same warranted printed system as the sign face. The date should be printed in the locations indicated below.



SQUARE TUBE ANCHOR SLEEVE

The Contractor will furnish and install new 2.5" x 2.5" x 18", 12 Gauge square tube anchor sleeve or equivalent components as approved by the Engineer for 2.0" x 2.0" perforated tube posts. A 2.25" x 2.25" x 4', 12 Gauge perforated tube post will be used as the anchor post for installation with the square tube anchor sleeve.

SQUARE TUBE POST SLEEVE

All 2.5" x 2.5", 10 Gauge perforated tube post will be sleeved with a 2-3/16" x 2-3/16" x 4', 10 Gauge perforated tube post.

WINGED SLIP BASE ANCHOR

The Contractor will furnish and install new winged slip base anchors for 2.5" x 2.5" perforated tube posts as required in the Permanent Signing Table. Winged slip base anchors will be installed using the direct drive method. Winged slip base anchors will consist of a slip base (upper), a 48-inch long winged anchor (lower), and a hardware kit.

TYPE 2 OBJECT MARKERS

The following table indicates locations of Type 2 Object Markers. The below quantity is in addition to the Pipe Object Marker Table.

Station				
Start	End	L/R	Spacing, FT	Quantity
19+90	46+10	Both	97	27
95+00	104+00	Both	100	9
104+00	110+00	R	150	4
			Total	40

All costs associated with the removal of object markers, posts, hardware and the installation of the new back-to-back object markers will be incidental to the contract unit price per each for "type 2 object marker back-to-back".

MILEAGE REFERENCE MARKERS

SDDOT will be notified to do Mileage Reference Markers (MRMs) locates prior to project completion by calling the Aberdeen Region Traffic Engineer at (605)626-2245. Payment for this work will be incidental to the various signing contract items.

NO PASSING ZONE SIGNS

SDDOT will be notified to do NO PASSING ZONE sign locates prior to project completion by calling the Aberdeen Region Traffic Engineer at (605)626-2245. Payment for this work will be incidental to the various signing contract items.

ADVISORY SPEED PLATES

SDDOT will be notified to do ADVISORY SPEED PLATE evaluation prior to project completion by calling the Aberdeen Region Traffic Engineer at (605)626-2245. Payment for this work will be incidental to the various signing contract items.

5 DIGIT STREET ADDRESS SIGN REMOVAL AND PLACEMENT

Any blue 5 Digit Street Address signs within the project work limits will not be stockpiled but temporarily repositioned at a location outside the work limits but within the immediate proximity of the existing location. To complete the project sign work, the blue 5 Digit Street Address signs will be permanently installed outside the right of way line where entrances have been reconfigured by the project. The existing supports will be reused. Cost for removing and placing blue 5 Digit Street Address signs will incidental to various contract items.

THINK SIGNS

THINK signs within the project work limits will be removed for reset and reset in the existing location. Cost for removing for reset, resetting, posts, and components needed for THINK signs will be incidental to various signing contract items.

DELINEATION

Delineation installation and spacing will be done according to Standard Plates 632.40, 632.42, 632.44, 632.46, and 633.07.

4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post will be placed along the project length excluding sections in Type 2 Object Markers note. Delineators will be reset and the cost will be incidental to the contract unit price for "4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post" Each in Section C.

Type	Intersecting Road	Number Per Radius	Total
4" x 6" White Tubular Delineators	129th St.	4 SE Quadrant	8
		4 NE Quadrant	

Cost for removing delineation will be incidental to various signing contract items.

PLOT SCALE - 1:200
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PLOT NAME - 1
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PLOT SCALE - 1:200

PLOT NAME - 8

FILE - ...\08XO_STANDARD PLATES.DGN

-PLOTTED FROM - TRAB10100

Pipe Object Marker Table

Station	Type 2 Object Marker Back-to-Back (Each)	Description
33+50	2	1 Each Side of Road
39+43	1	1 Right Side of Road
39+58	1	1 Left Side of Road
60+50	2	1 Each Side of Road
75+00	2	1 Each Side of Road
88+00	2	1 Each Side of Road
97+00	2	1 Each Side of Road
Total	**12**	

439th Ave Chevron InstallationTable

Sign Code W1-8

Station	Side of Road	Width (Inches)	Height (Inches)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	Number of Chevrons	2.0"x2.0" Perforated Tube Post 12 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)
1+37	Rt.	18	24	3.0	1	7.5	1
1+77	Rt.	18	24	6.0	2	7.5	1
2+17	Rt.	18	24	6.0	2	7.5	1
2+57	Rt.	18	24	6.0	2	7.5	1
2+97	Rt.	18	24	6.0	2	7.5	1
3+37	Rt.	18	24	3.0	1	7.5	1
			Total	**30.0**	**10**	**45.0**	**6**

SD 25 Permanent Sign Installation Table

Station	Side of Road	Description	Sign Code	Width (Inches)	Height (Inches)	Flat Aluminum sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
7+84	Rt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1		1			N	Telespar	Replace Existing Sign with New Sign on New Post
9+26	Rt.	Left Curve Arrow	W1-2L	30	30							1			W	Telespar	Remove Existing Sign
12+07	Rt.	Left Curve Arrow	W1-2L	30	30		6.3	12.0		1					W		Place New Sign on New Post
13+00	Rt.	No Maintenance						24.0		2			1	1	N	Telespar	Remove and Reset Existing Signs on New Posts (Locate out of DOT ROW)
		NO TRAVEL ADVISED															
13+01	Lt.	Stop	R1-1	30	30		5.2	11.0		1		1			N	Telespar	Replace Existing Sign with New Sign on New Post
13+38	Lt.	DEAD END	W14-1					12.0		1			1	1	S	Telespar	Remove and Reset Existing Sign on New Post (Locate out of DOT ROW)
13+50	Lt.	438 Ave (Two Signs)	D3-1	36	12	6.0		12.0		1		1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
		SD 25 (Two Signs)	D3-1	30	12	5.0									N/S		
35+50	Lt.	Right Curve Arrow	W1-2R	30	30		6.3	14.0		1					NE		Place New Sign on New Post
36+86	Lt.	Right Curve Arrow	W1-2R	30	30							1			NE	Telespar	Remove Existing Sign
40+11	Lt.	No Passing Zone	W14-3	48X48X36								1			SW	Telespar	Remove Existing Sign
43+50	Lt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					SW	Telespar	Place New Sign on New Post
48+83	Rt.	Mile Marker 197 (Two Signs)	D10-6	4.5	18	1.1		8.0		1		1			NE/SW	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
49+25	Lt.	Adopt A Highway	ADO-5	36	36			24		2			1	1	NE	Telespar	Remove and Reset Existing Signs on New Posts
		COUNTY KIDS 4-H CLUB	ADO-1	36	18												
		Litter Crew Ahead	ADO-6	30	30												
60+72	Rt.	Left Curve Arrow	W1-2L	30	30		6.3	12.0		1		1			W	Telespar	Replace Existing Sign with New Sign on New Post
		Advisory Speed 55 MPH	W13-1P	18	18												Remove Existing Sign
66+50	Rt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					NE	Telespar	Place New Sign on New Post
73+56	Lt.	SD 25	M1-4	24	24	4		26		2					SE		Place New Sign on New Posts
		Horizontal Double Head Arrow	M6-4P	21	15	2.2											
		Large Horizontal Double Arrow	W1-7	48	24		8.0										
73+68	Rt.	Stop	R1-1	30	30		5.2	12.0		1		1			SE	Telespar	Replace Existing Sign with New Sign on New Post
73+73	Rt.	439 Ave (Two Signs)	D3-1	36	12	6.0			13		1				NE/SW	Telespar	Place New Sign on New Post
		SD 25 (Two Signs)	D3-1	30	12	5.0									NW/SE		
5+46 (439th Ave)	Lt.	Left Curve Arrow	W1-2L	30	30		6.3	12.0		1					S		Place New Sign on New Post
6+20 (439th Ave)	Lt.	Stop Ahead	W3-1	36	36		9.0	12.0		1					S		Place New Sign on New Post
82+92	Lt.	Right Curve Arrow	W1-2R	30	30		6.3	12.0		1		1			W	Telespar	Replace Existing Sign with New Sign on New Post
		Advisory Speed 55 MPH	W13-1P	18	18		2.3										

PLOT SCALE - 1:200

PLOTTED FROM - TRAB10100

PLOT NAME - 1

FILE - ...\PRJ\DEUEL0507\TITLEM.DGN

PLOT SCALE - 1:200

SD 25 Permanent Sign Installation Table

Station	Side of Road	Description	Sign Code	Width (Inches)	Height (Inches)	Flat Aluminum sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
89+42	Rt.	PICKEREL LAKE RECREATION AREA 11 MILES -->	RA-080	96	42				26.0		2		1	1	S	Telespar	Remove and Reset Existing Signs on New Posts
		Trailer Site	RS-040	24	24												
		Boat Ramp	RS-054	24	24												
		Picnic Site	RS-044	24	24												
		Swimming	RS-061	24	24												
91+73	Rt.	No Passing Zone	W14-3	48X48X36								1			N	Telespar	Remove Existing Sign
96+74	Lt.	South	M3-3	24	12	2.0		14.0		1		1			N	Telespar	Replace Existing Sign with New Sign on New Post
		SD 25	M1-5	24	24	4.0											
97+50 - 129' R (129th St.)	Rt.	Speed Limit 55 MPH											1	1	W	Telespar	Remove and Reset Existing County Signs on Existing Post to Existing Location
		DAY COUNTY IS ZONED BUILDING PERMITS REQUIRED								1							
97+54	Lt.	Stop	R1-1	30	30							1			W	Telespar	Remove Existing Sign
97+99	Rt.	Stop	R1-1	36	36		7.5	12.0		1		1			E	Telespar	Replace Existing Sign with New Sign on New Post
98+24	Rt.	129 St (Two Signs)	D3-1	30	12	5.0		13.0		1		1			N/S	Telespar	Replace Existing Signs with New Signs on New Post
		SD 25 (Two Signs)	D3-1	30	12	5.0									E/W		
98+97	Rt.	North	M3-1	24	12	2.0		14.0		1		1			S	Telespar	Replace Existing Signs with New Signs on New Post at Existing MRM Location
		SD 25	M1-5	24	24	4.0											
		Mile Marker 198 (Two Signs)	D10-6	4.5	18	1.1									N/S		
102+88	Lt.	Snowmobile Crossing	W11-6	36	36		9.0	14.0		1		1			W	Telespar	Replace Existing Sign with New Sign on New Post
108+79	Lt.	No Passing Zone	W14-3	48X48X36								1			S	Telespar	Remove Existing Sign
110+18	Lt.	PICKEREL LAKE RECREATION AREA 11 MILES -->	RA-080	96	42				26.0		2		1	1	N	Telespar	Remove and Reset Existing Signs on New Posts
		Trailer Site	RS-040	24	24												
		Boat Ramp	RS-054	24	24												
		Picnic Site	RS-044	24	24												
		Swimming	RS-061	24	24												
111+00	Lt.	No Passing Zone	W14-3	48X48X36			5.6	12.0		1					SW	Telespar	Place New Sign on New Post
					TOTAL	**52.4**	**99.8**	**318.0**	**65.0**	**27**	**5**	**18**	**6**	**6**			

PLOTTED FROM - TRAB10100

PLOT NAME - 1

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PLOT SCALE - 1:200

Sign Installation Summary SD 25 & 439 Ave

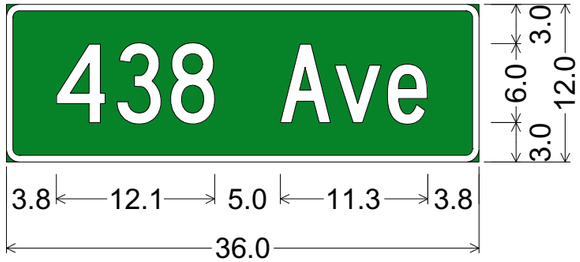
Sign Code	Description	Width (Inches)	Height (Inches)	Sq. Ft.	No.	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super or Very High Intensity (SQFT)	Text / Background
D3-1	Street Signs SD 25 (Two Signs for Each)	30	12	2.5	6	15.0		White on Green
D3-1	Street Signs 438 Ave - 439 Ave (Two Signs for Each)	36	12	3.0	4	12.0		White on Green
D3-1	Street Signs 129 St (Two Signs for Each)	30	12	2.5	2	5.0		White on Green
D10-6	Mile Markers 197-198 (Two Signs for Each)	4.5	18	0.55	4	2.2		White on Green
M1-5	SD 25	24	24	4.0	3	12.0		See Standard Plate 632.20
M3-1	North	24	12	2.0	1	2.0		Black on White/Green Border
M3-3	South	24	12	2.0	1	2.0		Black on White/Green Border
M6-4P	Horizontal Double Head Arrow	21	15	2.2	1	2.2		Black on White/Black Border
R1-1	Stop	30	30	5.2	2		10.4	White on Red
R1-1	Stop	36	36	7.5	1		7.5	White on Red
W1-2L	Left Curve Arrow	30	30	6.3	3		18.8	Black on Fluorescent Yellow
W1-2R	Right Curve Arrow	30	30	6.3	2		12.5	Black on Fluorescent Yellow
W1-7	Large Horizontal Double Arrow	48	24	8.0	1		8.0	Black on Fluorescent Yellow
W1-8	Chevron	18	24	3.0	10		30.0	Black on Fluorescent Yellow
W3-1	Stop Ahead	36	36	9.0	1		9.0	Black on Fluorescent Yellow
W11-6	Snowmobile Crossing	36	36	9.0	1		9.0	Black on Fluorescent Yellow
W13-1P	Advisory Speed Plate 55 MPH	18	18	2.3	1		2.3	Black on Fluorescent Yellow
W14-3	No Passing Zone	48X48X36		5.6	4		22.4	Black on Fluorescent Yellow
					Totals	**52.4**	**129.8**	

PLOTTED FROM - TRAB10100

PLOT NAME - 1

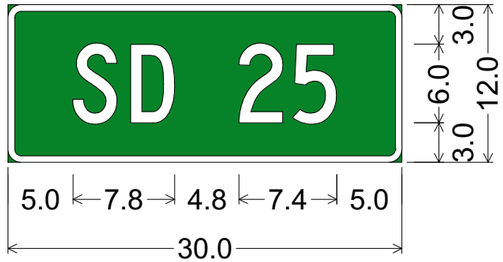
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SPECIAL SIGN LAYOUT



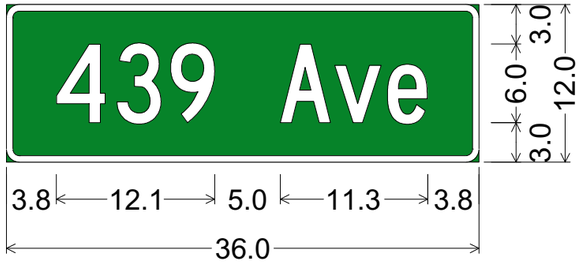
1.0" Radius, 0.5" Border, White on Green;
"438 Ave", C 2K;
Table of letter and object lefts

4	3	8	A	v	e
3.8	8.4	12.5	20.9	25.0	29.0



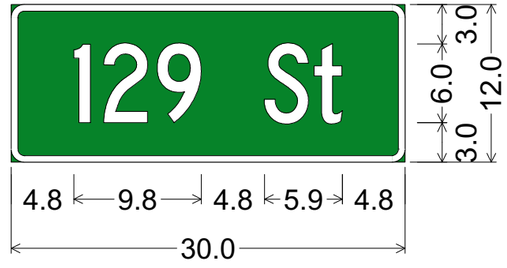
1.0" Radius, 0.5" Border, White on Green;
"SD 25", C 2K;
Table of letter and object lefts

S	D	2	5
5.0	9.4	17.6	21.6



1.0" Radius, 0.5" Border, White on Green;
"439 Ave", C 2K;
Table of letter and object lefts

4	3	9	A	v	e
3.8	8.4	12.5	20.9	25.0	29.0



1.0" Radius, 0.5" Border, White on Green;
"129 St", C 2K;
Table of letter and object lefts

1	2	9	S	t
4.8	7.0	11.1	19.3	23.1

PLOT SCALE - 1:200
PLOT NAME - 8
FILE - ...\08XO_STANDARD PLATES.DGN
-PLOTTED FROM - TRAB10100

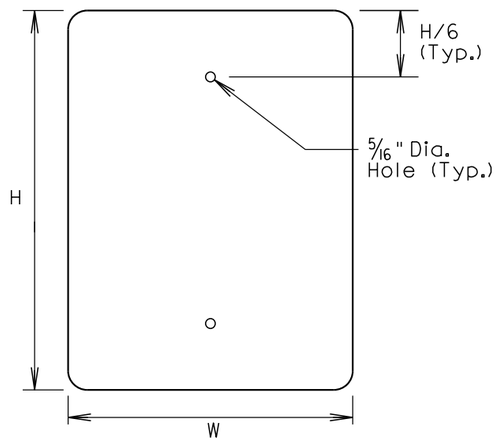
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	S9	S18

Plotting Date: 04/23/2024

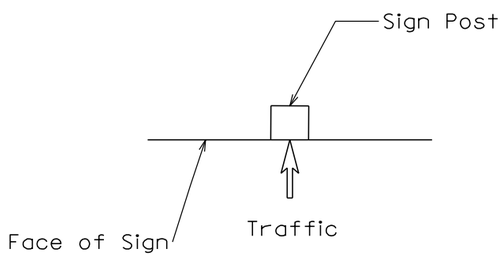
CHEVRON INSTALLATION DETAIL

WI-8 Single Mount Detail

View from Face

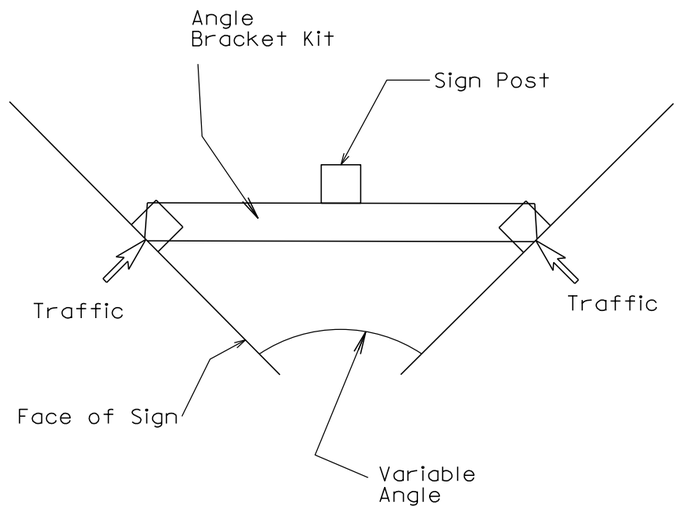


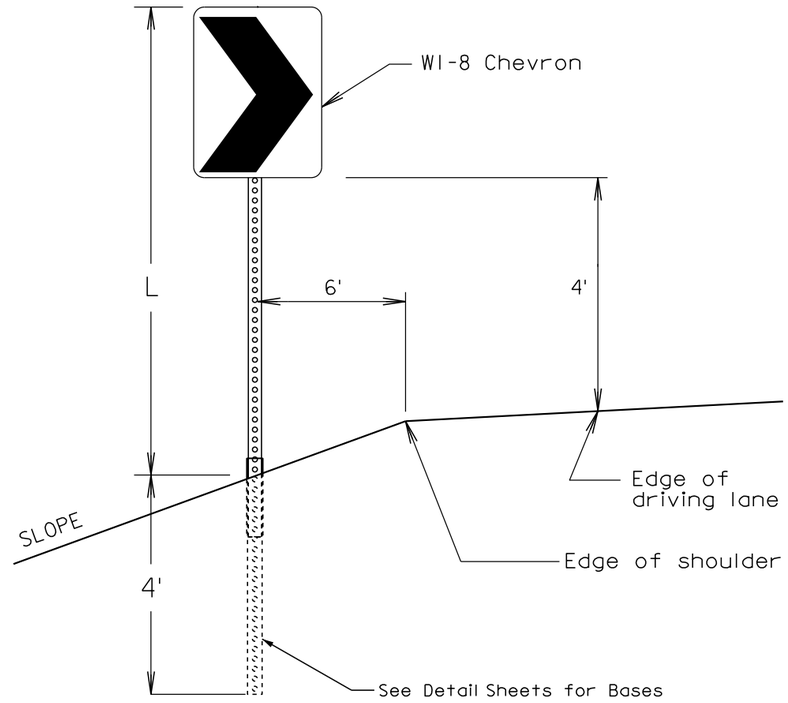
View from Top



WI-8 Double Mount Detail

View from Top



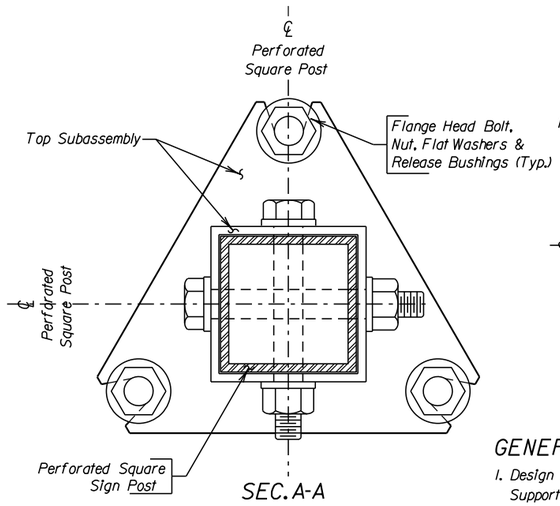


SIGN SIZE (IN)		12x18	18x24	24x30	30x36	36x48
		POST LENGTH L (FT)				
SLOPE	6:1	6½	7	7½	8	9
	4:1	7	7½	8	8½	9½
	3:1	7½	8	8½	9	10

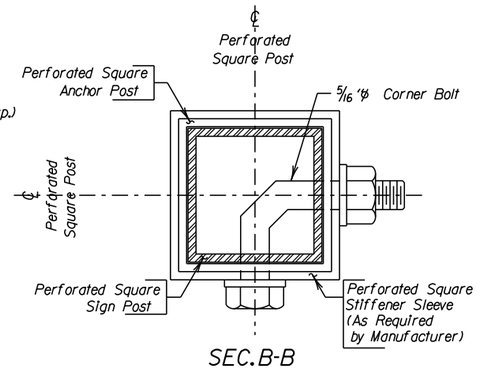
NOTE: The first Chevron shall be placed within 50' of begining of curve from each direction of travel and shall be mounted as a single mount installation. All intermediate installations shall be mounted as a double mount installation with approach angle adjusted such that 3 sign faces are visible at all times when traveling through the curve.

PLOT SCALE - 1:200
PLOTTED FROM - TRAB10100
PLOT NAME - 1
FILE - ...\PRJDEUEL0507\TITLEM.DGN

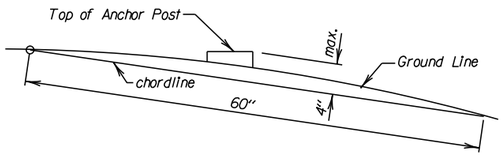
BREAKAWAY SIGN SUPPORTS



SEC. A-A



SEC. B-B



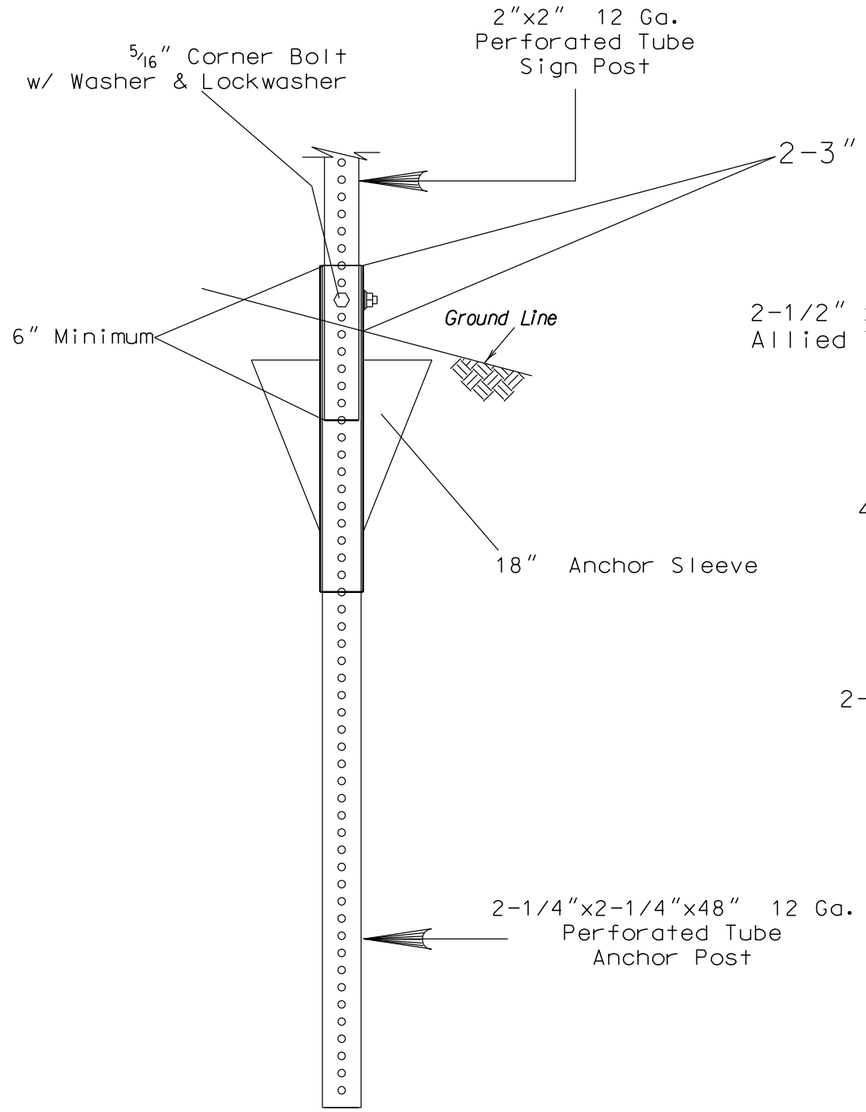
BREAKAWAY SUPPORT STUB CLEARANCE DIAGRAM

NOTE: The top of anchor post will NOT extend more than 4" max. above the chordline within a 60" chord.

GENERAL NOTES-

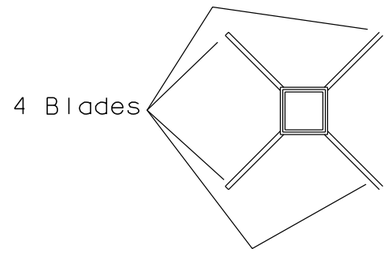
1. Design Specification: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Latest Edition.
2. The manufacturer will provide certification that the posts and hardware furnished have essentially the same chemistry, mechanical properties and geometry as that used in the FHWA tests, and that it will meet the FHWA change in velocity requirements.
3. The manufacturer will also provide certification that the breakaway system furnished will develop the full shear and bending yield strength of the sign post section being spliced.
4. All posts will be galvanized in accordance with ASTM A653, Des. G-90.
5. All hardware will be galvanized in accordance with ASTM A153.

SIGN BASE DETAILS FOR A 2" SIGN POST



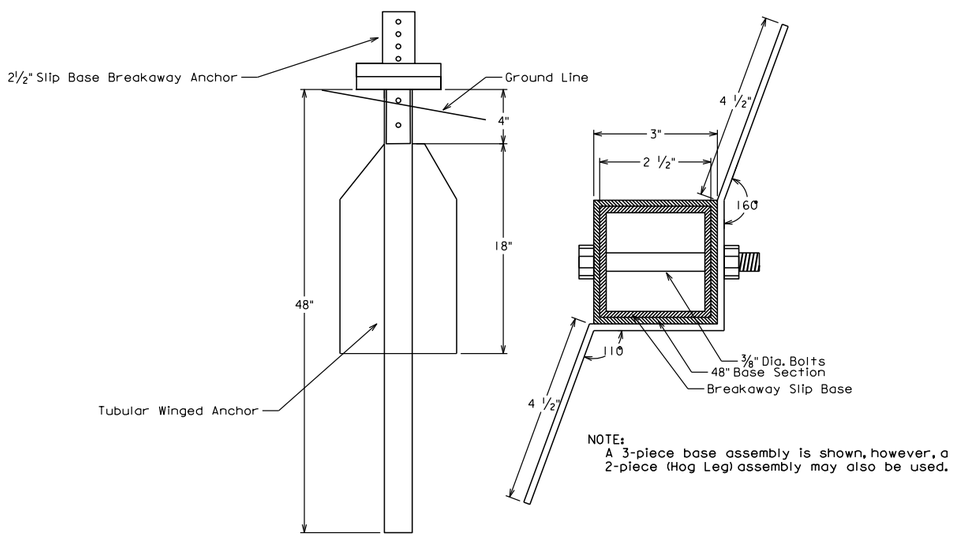
Anchor Sleeve
Top View

2-1/2" x 18" 12 Ga. Anchor Sleeve
Allied Tube - Part No. 739199



2-1/2" x 18" Anchor Sleeve
For Soil Stabilization

SIGN BASE DETAILS FOR A 2½" SIGN POST



NOTE:
A 3-piece base assembly is shown, however, a 2-piece (Hog Leg) assembly may also be used.

PLOT SCALE - 1:200

PLOT NAME - 8

FILE ...\08XD_STANDARD PLATES.DGN

-PLOTTED FROM - TRAB10100

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	S11	S18
Plotting Date: 10/30/2024			

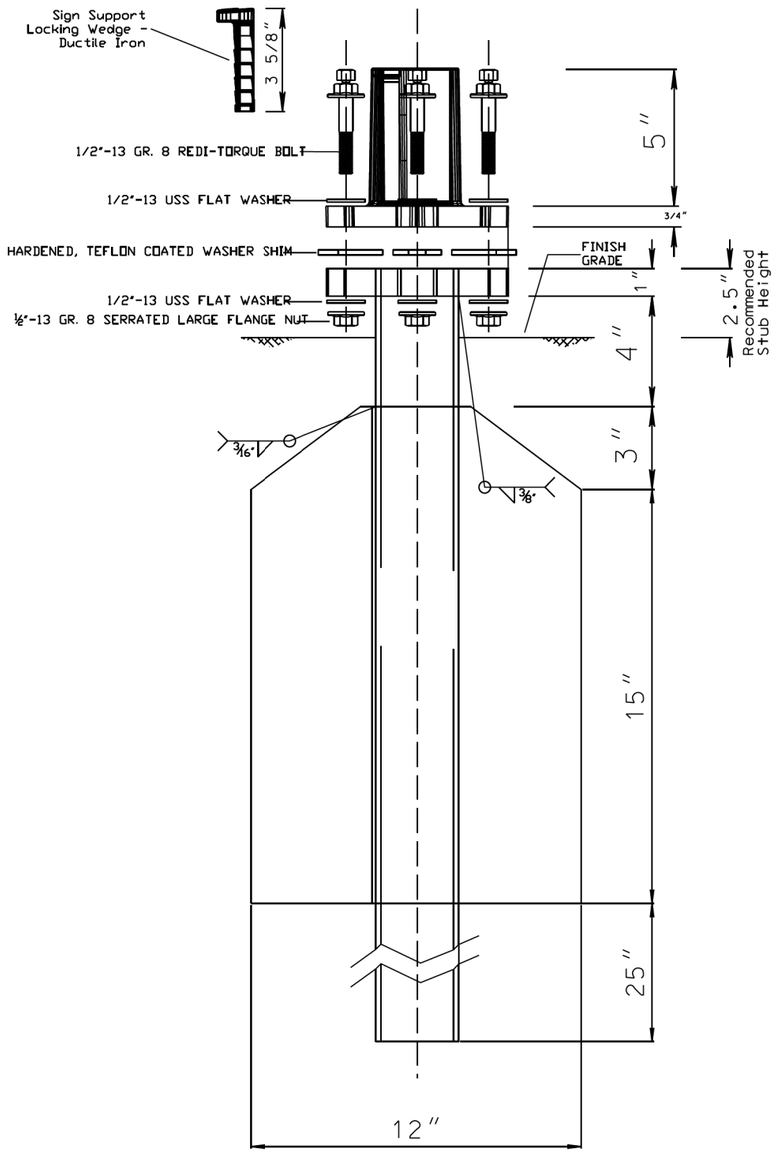
PLOT SCALE - 1:200

PLOT NAME - 1

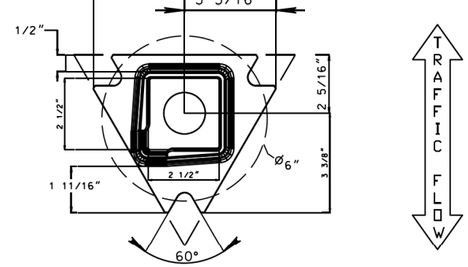
FILE - ...\WINGEDANCHORSLIPBASEDETAIL.DGN

-PLOTTED FROM - TRAB10100

48" WINGED ANCHOR SLIP BASE



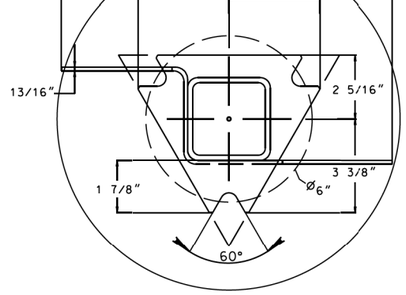
TOP POST RECEIVER for 2-½" SQUARE POST



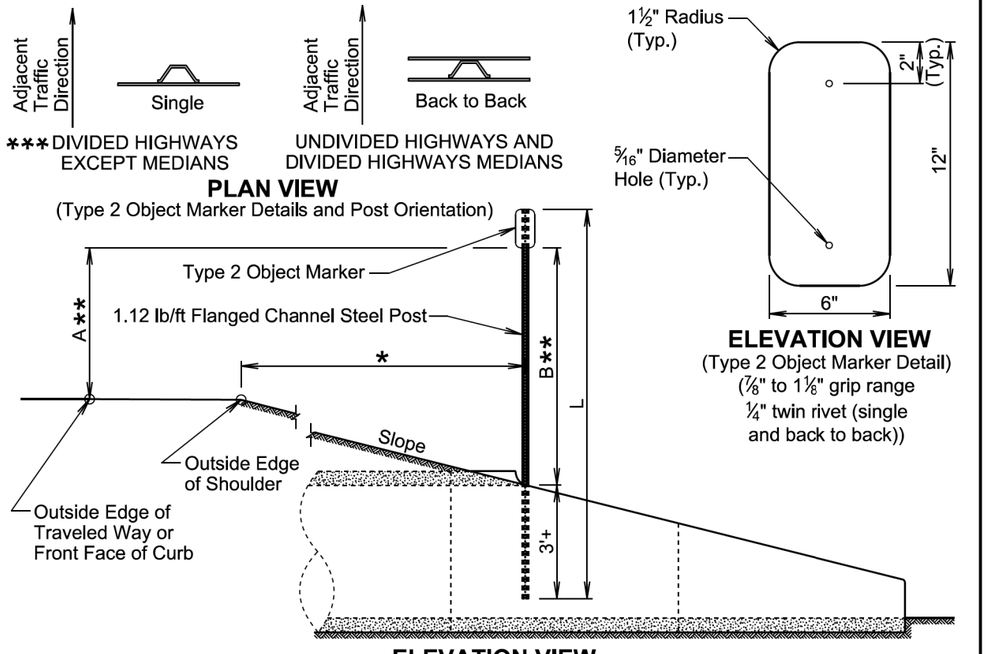
MATERIAL:
DUCTILE IRON CASTING, CLASS 65-45-12

TRAFFIC FLOW

BOTTOM UNIBASE SOIL STUB



MATERIALS:
Tube - 3" x 3" x 7 ga. ASTM A500 Grade B tube
Stabilizing Wing - 7 ga. H.R.P.O. ASTM A 569
Plate - ASTM A572 grade 50



TYPE 2 OBJECT MARKER POST LENGTHS									
OFFSET (*)		1'	2'	3'	4'	5'	6'	7'	8'	Greater Than 8'
		POST LENGTH (L)								
SLOPE	3:1	8'-6"	8'-9"	9'-3"	9'-6"	9'-9"	10'-3"	10'-6"	10'-9"	8'-0"
	4:1	8'-6"	8'-9"	9'-0"	9'-3"	9'-9"	9'-9"	10'-0"	10'-3"	8'-0"
	5:1	8'-3"	8'-6"	8'-9"	9'-0"	9'-3"	9'-3"	9'-6"	9'-9"	8'-0"
	6:1	8'-3"	8'-6"	8'-9"	8'-9"	9'-0"	9'-3"	9'-3"	9'-6"	8'-0"

GENERAL NOTES:

*** The type 2 object marker may be installed back to back when specified in the plans.

Post Length L was calculated based on a shoulder width of 6 feet at a crosslope of 4 percent and L was rounded up to the nearest 3 inches.

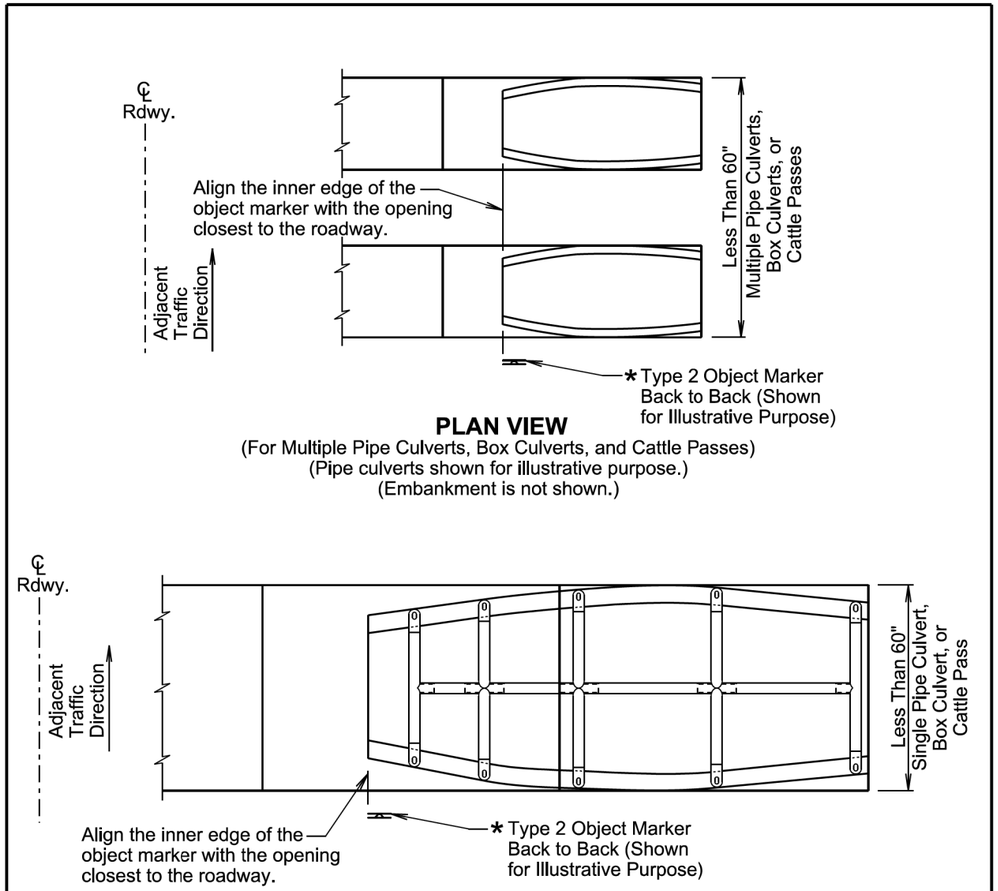
** Dimension A is 4 feet when the Offset * is 8 feet and less. Dimension B is 4 feet when Offset * is greater than 8 feet.

The type 2 object marker and the 1.12 lb/ft flanged channel steel post will be in conformance with Specifications Section 982.2 J.

Payment for the type 2 object marker will be in conformance with Specification Section 632.5 B.

December 23, 2019

Published Date: 2025	SDDOT	TYPE 2 OBJECT MARKER (DIRECT DRIVE)	PLATE NUMBER 632.01
			Sheet 1 of 1



GENERAL NOTES:

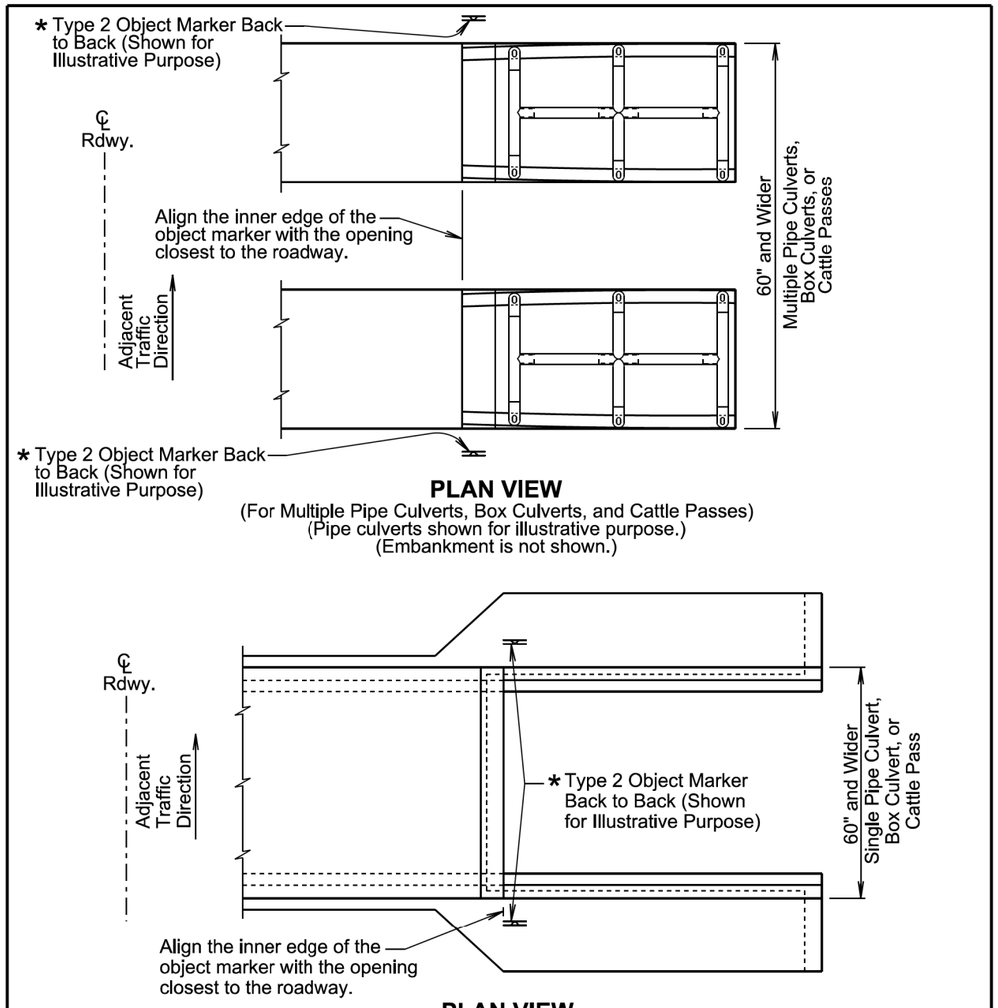
This standard plate will be used in conjunction with standard plate 632.01.

* The type 2 object markers will be installed at the locations shown above. The type 2 object markers, single faced or back to back, will be as specified in the plans.

December 23, 2019

Published Date: 2025	SDDOT	TYPE 2 OBJECT MARKER AT PIPE CULVERTS, BOX CULVERTS, AND CATTLE PASSES (Less than 60" Overall Width)	PLATE NUMBER 632.03
			Sheet 1 of 1

PLOT SCALE - 1:200
PLOTTED FROM - TRAB10100
PLOT NAME - 2
FILE - ...\08D6_STANDARD PLATES.DGN



PLAN VIEW
(For Multiple Pipe Culverts, Box Culverts, and Cattle Passes)
(Pipe culverts shown for illustrative purpose.)
(Embankment is not shown.)

PLAN VIEW
(For Single Pipe Culvert, Box Culvert, and Cattle Pass)
(Box culvert shown for illustrative purpose.)
(Embankment is not shown.)

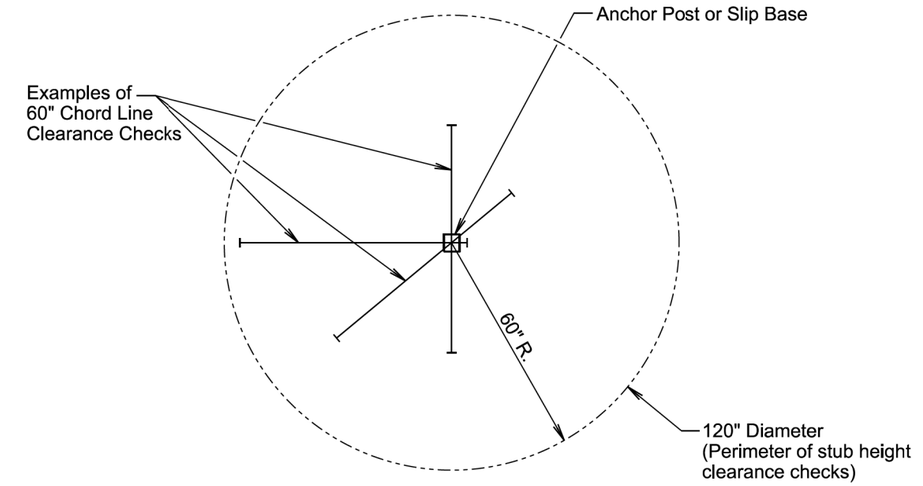
GENERAL NOTES:

This standard plate will be used in conjunction with standard plate 632.01.

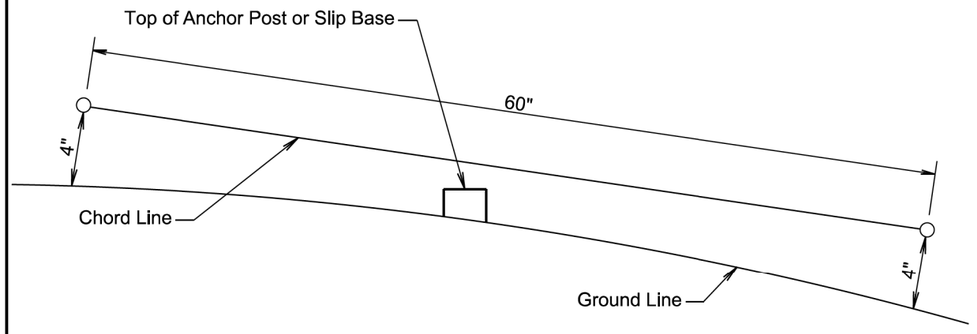
* The type 2 object markers will be installed at the locations shown above. The type 2 object markers, single faced or back to back, will be as specified in the plans.

December 23, 2019

Published Date: 2025	SDDOT	TYPE 2 OBJECT MARKER AT PIPE CULVERTS, BOX CULVERTS, AND CATTLE PASSES (60" and Greater Overall Width)	PLATE NUMBER 632.04 Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

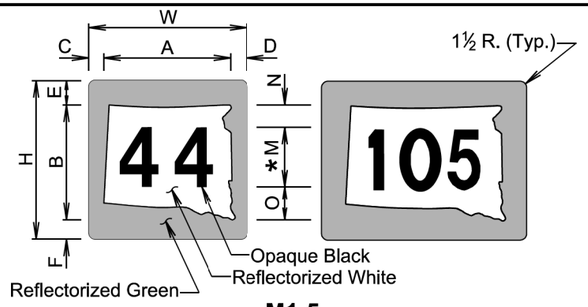
The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

January 22, 2021

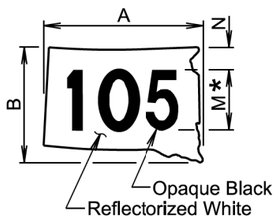
Published Date: 2025	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 632.18 Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 1
FILE - ...\0806_STANDARD PLATES.DGN
-PLOTTED FROM - TRAB10100



M1-5

SIGN CODE	WxH	A	B	C	D	E	F	M*	N	O
M1-5	24x24	20½	18	2	1½	3½	2½	12D	2	4
M1-5 **	30x24	24	18	2¼	1¾	3½	2½	12D	2	4
M1-5	30x30	25⅝	22½	2½	1⅞	4⅜	3⅛	15D	2½	5
M1-5	36x36	30¾	27	3	2¼	5¼	3¾	18D	3	6

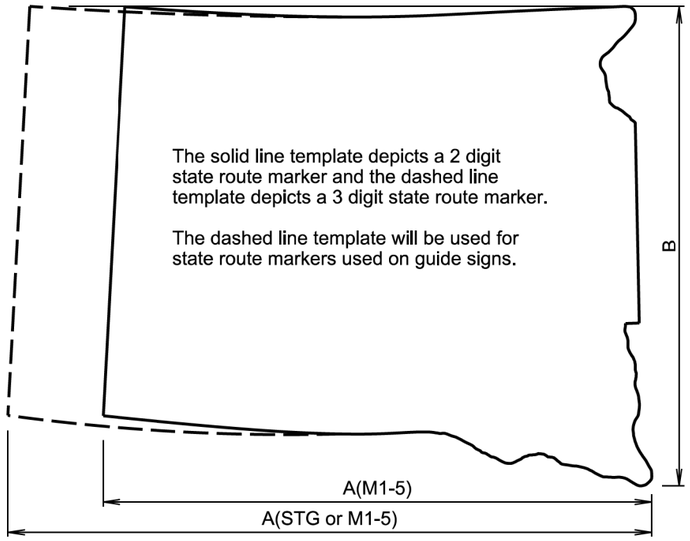


STG

SIGN CODE	AxB	M*	N
STG-24	24x18	10D	4
STG-32	32x24	12D	4¾
STG-48	48x36	18D	7
STG-64	64x48	24D	9½

* In the few cases where there is not enough space for the numerals, the standard D series font may be replaced with C series font if approved by the Engineer.

** 3 Digits



TEMPLATE FOR STATE ROUTE MARKER

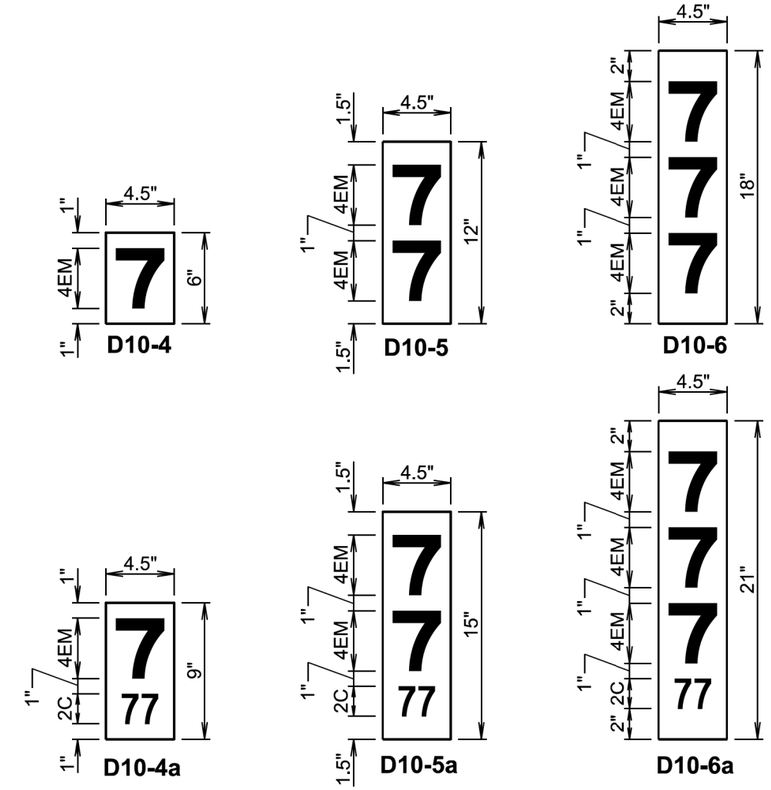
GENERAL NOTES:

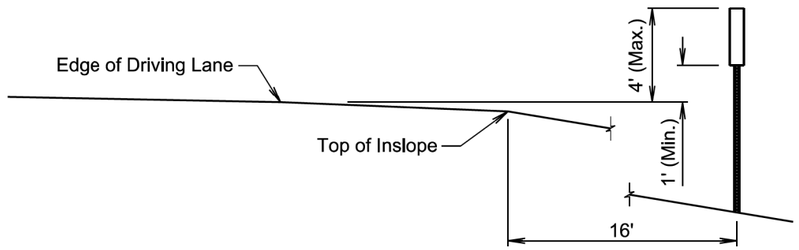
The unit for all dimensions shown is inches.

Numerals will be D series font for all state route markers except as noted above.

December 23, 2019

Published Date: 2025	SDDOT	STATE ROUTE MARKERS	PLATE NUMBER 632.20 Sheet 1 of 1





ELEVATION VIEW

GENERAL NOTES:

Background will be high intensity green.

Legend will be high intensity white.

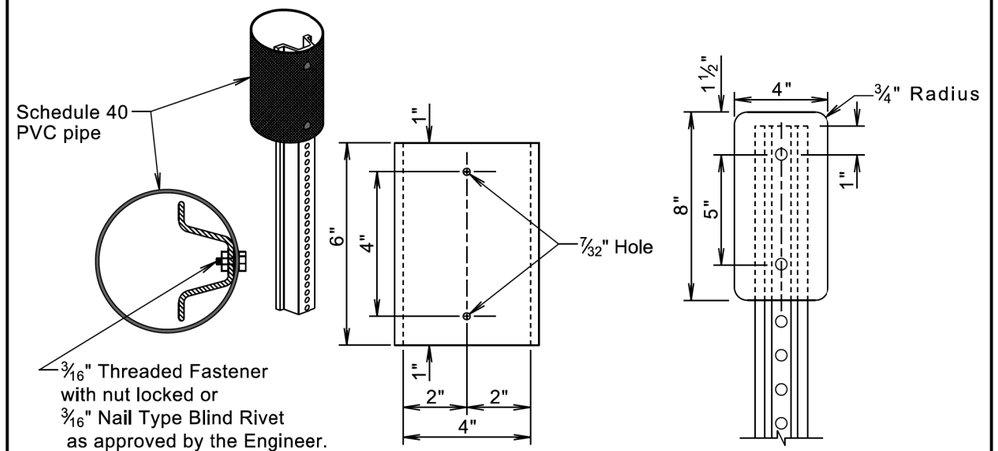
Signs will have squared corners with no border.

Sign locations will be staked by the Engineer.

December 23, 2019

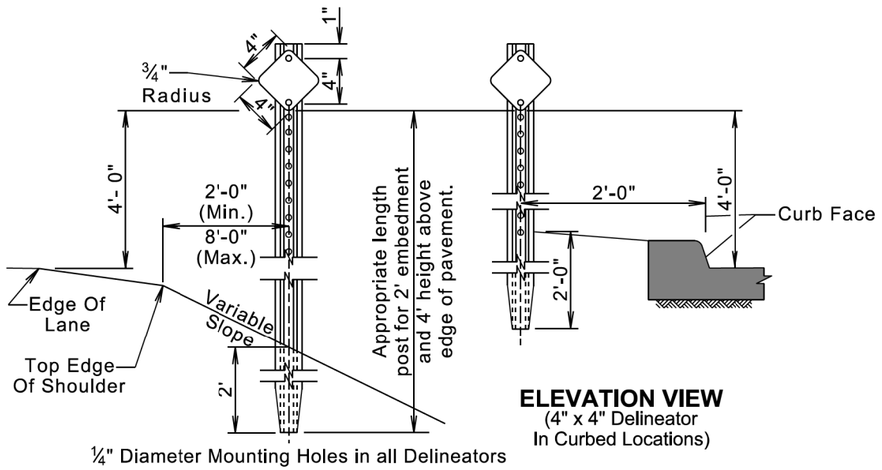
Published Date: 2025	SDDOT	NON-INTERSTATE MILEAGE REFERENCE MARKERS	PLATE NUMBER 632.30 Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 4
FILE - ...\0806_STANDARD PLATES.DGN
-PLOTTED FROM - TRAB10100



ELEVATION VIEW
(4" Tubular delineator
mounted on post)

ELEVATION VIEW
(4" x 8" Delineator)



¼" Diameter Mounting Holes in all Delineators

ELEVATION VIEW
(4" x 4" Delineators)

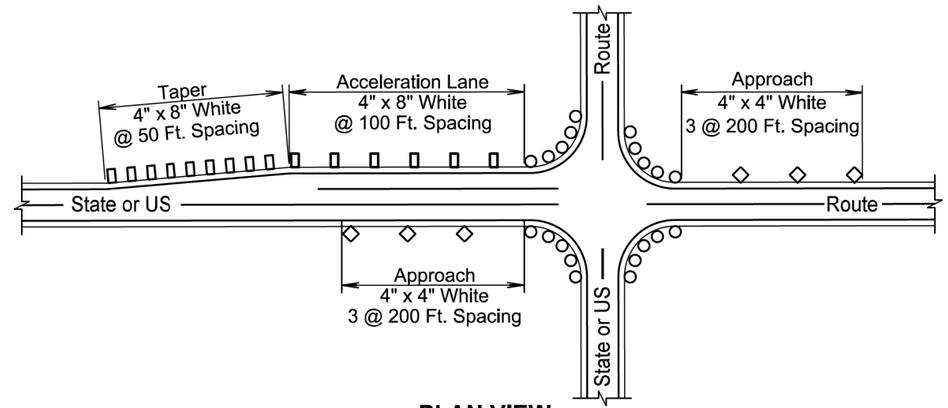
ELEVATION VIEW
(4" x 4" Delineator
In Curbed Locations)

GENERAL NOTES:

Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

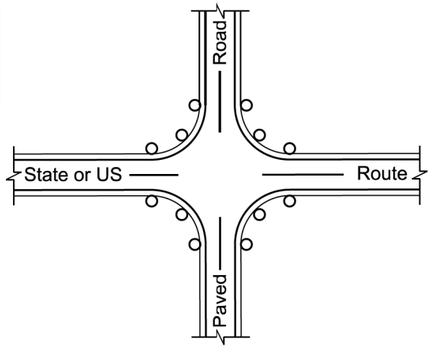
March 31, 2024

Published Date: 2025	SDDOT	DELINEATOR INSTALLATION DETAIL	PLATE NUMBER 632.42
			Sheet 1 of 1



PLAN VIEW
(State or US Highway Intersection)

LEGEND
◇ 4" x 4" White Delineator
▯ 4" x 8" White Delineator
○ 4" x 6" White Tubular Delineator



PLAN VIEW
(Paved County Crossroad)

GENERAL NOTES:

At all intersections with State or US highways and paved county roads:

For radii greater than 100 feet, place 5 tubular white delineators on equally spaced posts around the turning radius.

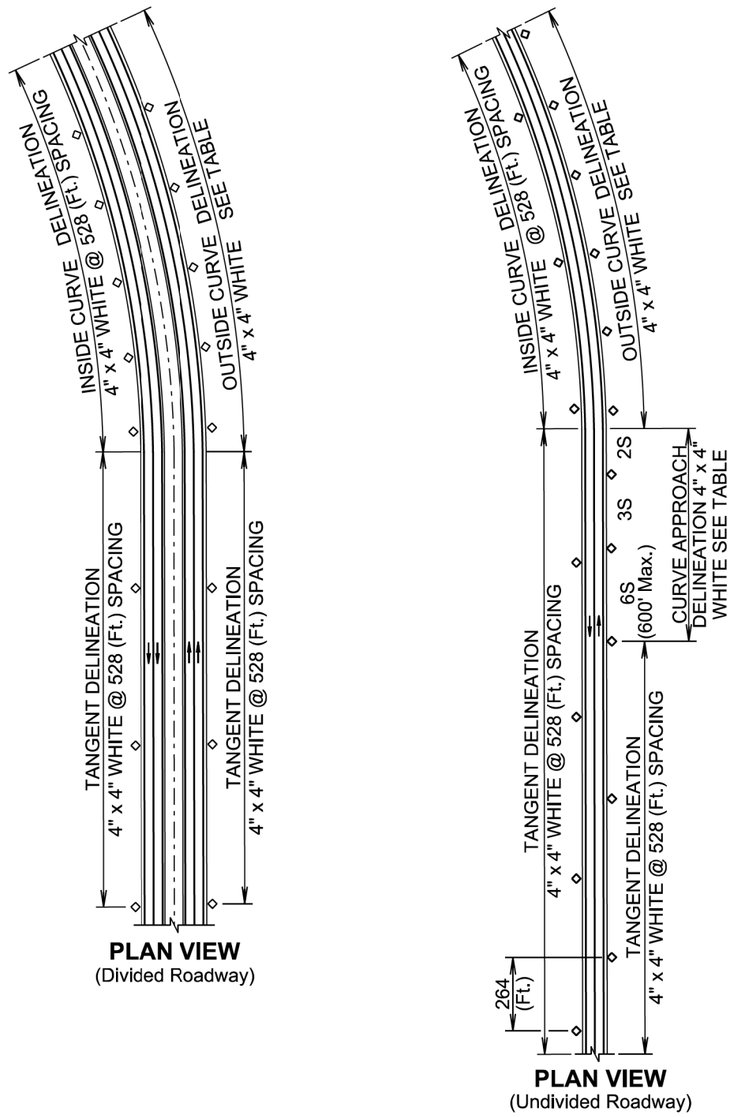
For radii greater than 50 feet up to 100 feet, place 4 tubular white delineators on equally spaced posts around the turning radius.

For radii of 50 feet or less, place 3 tubular white delineators on equally spaced posts around the turning radius.

November 19, 2020

Published Date: 2025	SDDOT	DELINEATOR AT INTERSECTIONS	PLATE NUMBER 632.44
			Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 6
FILE - ...\08D6_STANDARD PLATES.DGN
-PLOTTED FROM - TRAB10100



PLAN VIEW
(Divided Roadway)

PLAN VIEW
(Undivided Roadway)

March 31, 2024

Published Date: 2025	SDDOT	DELINEATOR INSTALLATION SPACING	PLATE NUMBER 632.46
			Sheet 1 of 2

GENERAL NOTES:

Delineators will be located from 2 to 8 feet outside of the outer edge of shoulder. When a roadside barrier or other obstruction intrudes into the space between the pavement edge and the extension of the line of delineators, the delineators should be in line with the barrier or in line with the innermost edge of the obstruction.

When normal spacing is interrupted by driveways, crossroads, or approaches, delineators falling within such areas may be moved in either direction a distance not exceeding one-quarter of the standard spacing. Delineators still falling within such areas should be eliminated.

The spacing for specific radii may be interpolated from the table. The minimum spacing should be 20 feet. The spacing on curves should not exceed 300 feet. In advance of or beyond a curve, and proceeding away form the end of the curve, the spacing of the first delineator is 2S, the second 3S, and the third 6S, but not to exceed 300 feet. S refers to the delineator spacing for specific radii computed from the formula $S = 3\sqrt{R - 50}$. The distances for S shown in the table were rounded to the nearest 5 feet.

Curve approach delineation is not required if curve delineation spacing exceeds 100 ft.

Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

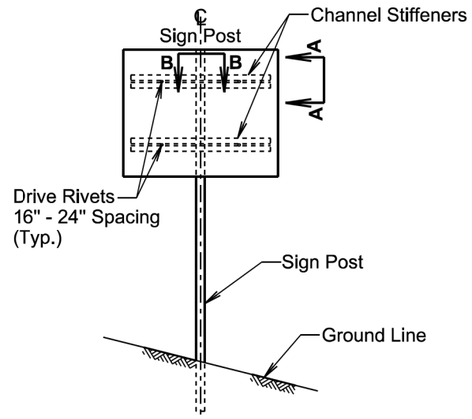
DELINEATOR SPACING
OUTSIDE CURVE

Radius of Curve (Ft.)	Curve Delineator Spacing (Ft.)	Curve Approach Spacing (Ft.)		
		A	B	C
50	20	40	65	125
115	25	50	75	150
150	30	60	90	180
180	35	70	110	215
250	40	85	125	250
300	45	95	140	285
400	55	110	170	300
500	65	125	190	300
600	70	140	210	300
700	75	150	230	300
800	80	165	245	300
900	85	175	260	300
1000	90	185	275	300

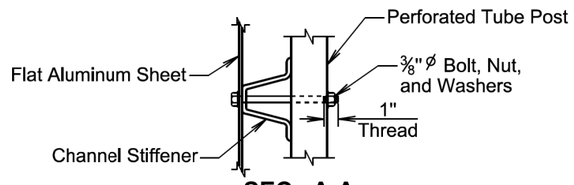
March 31, 2024

Published Date: 2025	SDDOT	DELINEATOR INSTALLATION SPACING	PLATE NUMBER 632.46
			Sheet 2 of 2

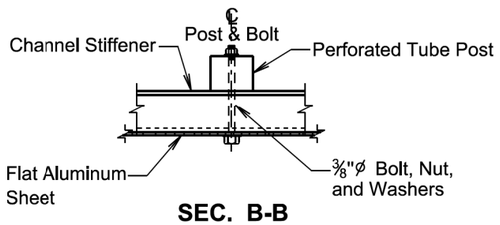
PLOT SCALE - 1:200
PLOT NAME - 7
FILE - ...\0806_STANDARD PLATES.DGN
-PLOTTED FROM - TRAB10100



ELEVATION VIEW
(One post breakaway sign supports.)



SEC. A-A

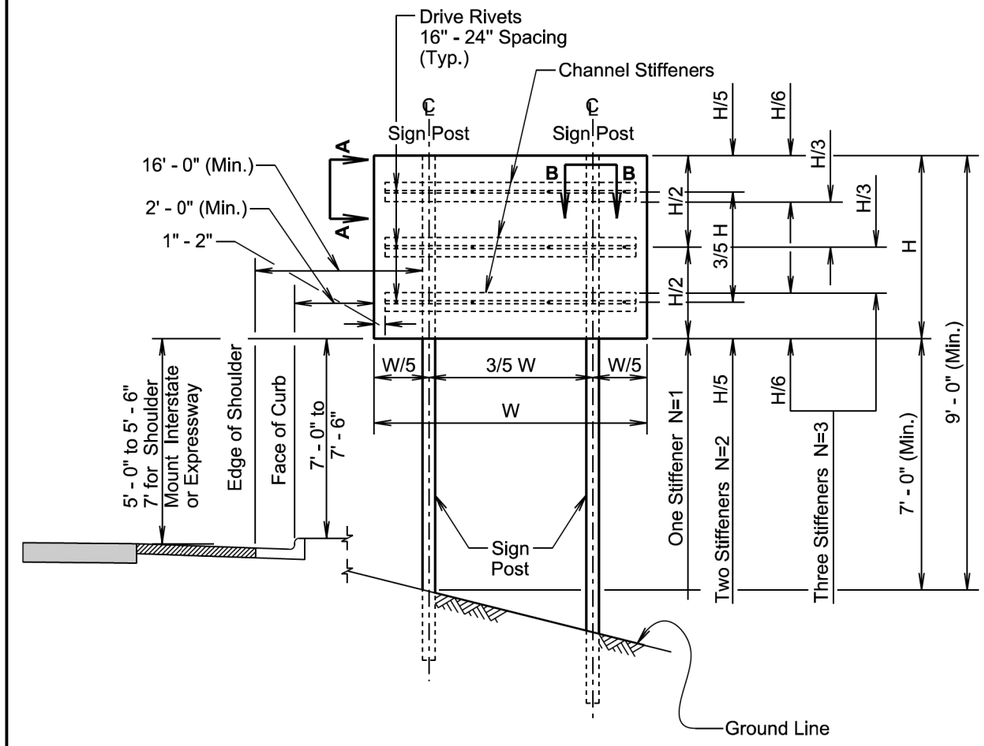


SEC. B-B
(Typical sign and stiffener details.)

ø A plastic washer, as recommended by the sheeting manufacturer, will be installed between the sign face and the metal washer shown.

November 19, 2020

Published Date: 2025	SDDOT	SIGN STIFFENER DETAILS	PLATE NUMBER 632.60
			Sheet 1 of 2



TWO POST BREAKAWAY SIGN SUPPORTS

GENERAL NOTES:

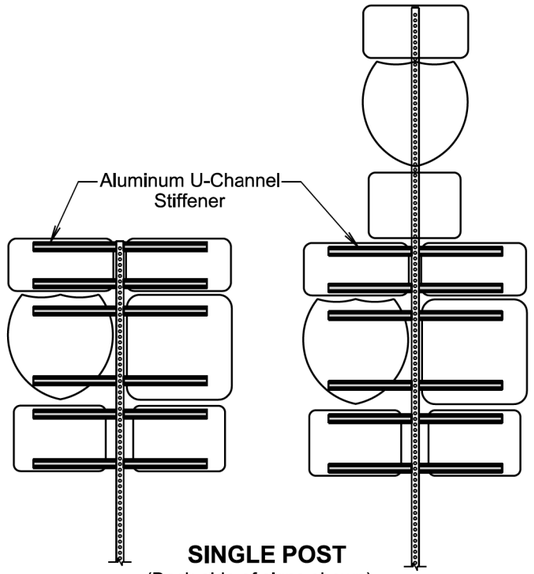
The number of stiffeners used (N) will be as follows:
If H < = 2' - 0" then N = 1
if 2' - 0" < H < = 8' - 0" then N = 2
if 8' - 0" < H < = 15' - 0" then N = 3
where H is the vertical dimension of the sign.

A minimum of two bolts will be required to fasten the sign to each post.

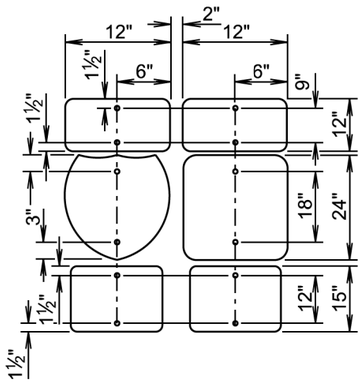
November 19, 2020

Published Date: 2025	SDDOT	SIGN STIFFENER DETAILS	PLATE NUMBER 632.60
			Sheet 2 of 2

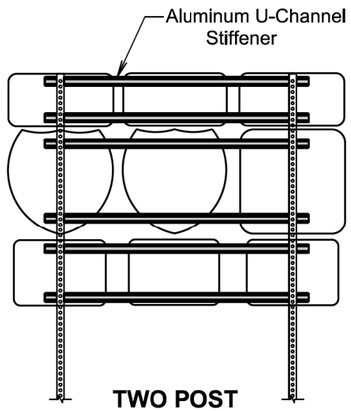
PLOT SCALE - 1:200
PLOT NAME - 3
FILE - ...\0806_STANDARD PLATES.DGN
-PLOTTED FROM - TRAB10100



SINGLE POST
(Back-side of signs shown)



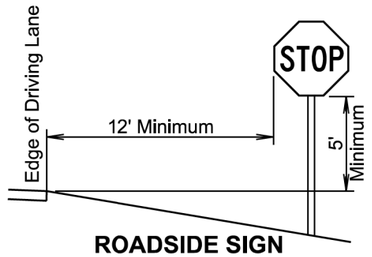
TYPICAL ROUTE MARKER BOLT HOLE LOCATIONS



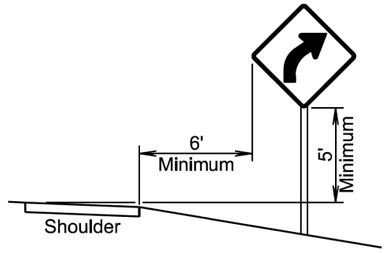
TWO POST
(Back-side of signs shown)

November 19, 2020

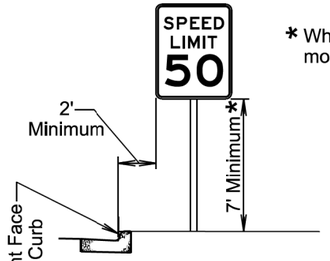
Published Date: 2025	SDDOT	MULTIPLE ROUTE MARKER SIGN STIFFENER INSTALLATION DETAILS	PLATE NUMBER 632.62
			Sheet 1 of 1



ROADSIDE SIGN IN RURAL AREA

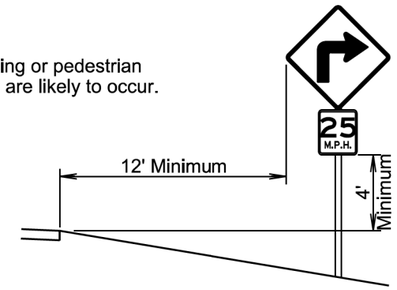


ROADSIDE SIGN IN RURAL AREA
(If shoulder width is greater than 6 foot)

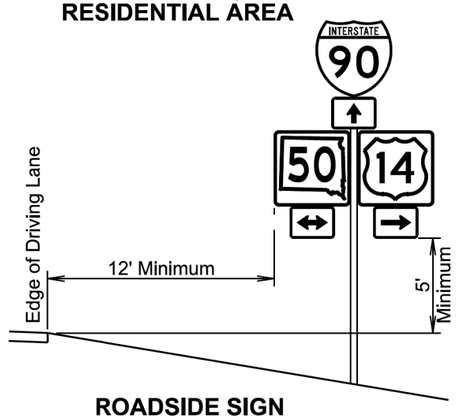


ROADSIDE SIGN IN BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA

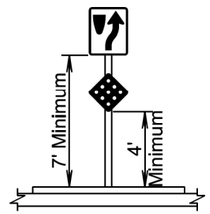
* Where parking or pedestrian movements are likely to occur.



WARNING SIGN ADVISORY SPEED PLAQUE IN RURAL AREA



ROADSIDE SIGN IN RURAL AREA



SIGN ON NOSE OF MEDIAN

November 19, 2020

Published Date: 2025	SDDOT	OFFSETS FOR SIGN INSTALLATION	PLATE NUMBER 632.90
			Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 5
FILE - ...\0806_STANDARD PLATES.DGN
-PLOTTED FROM - TRAB10100

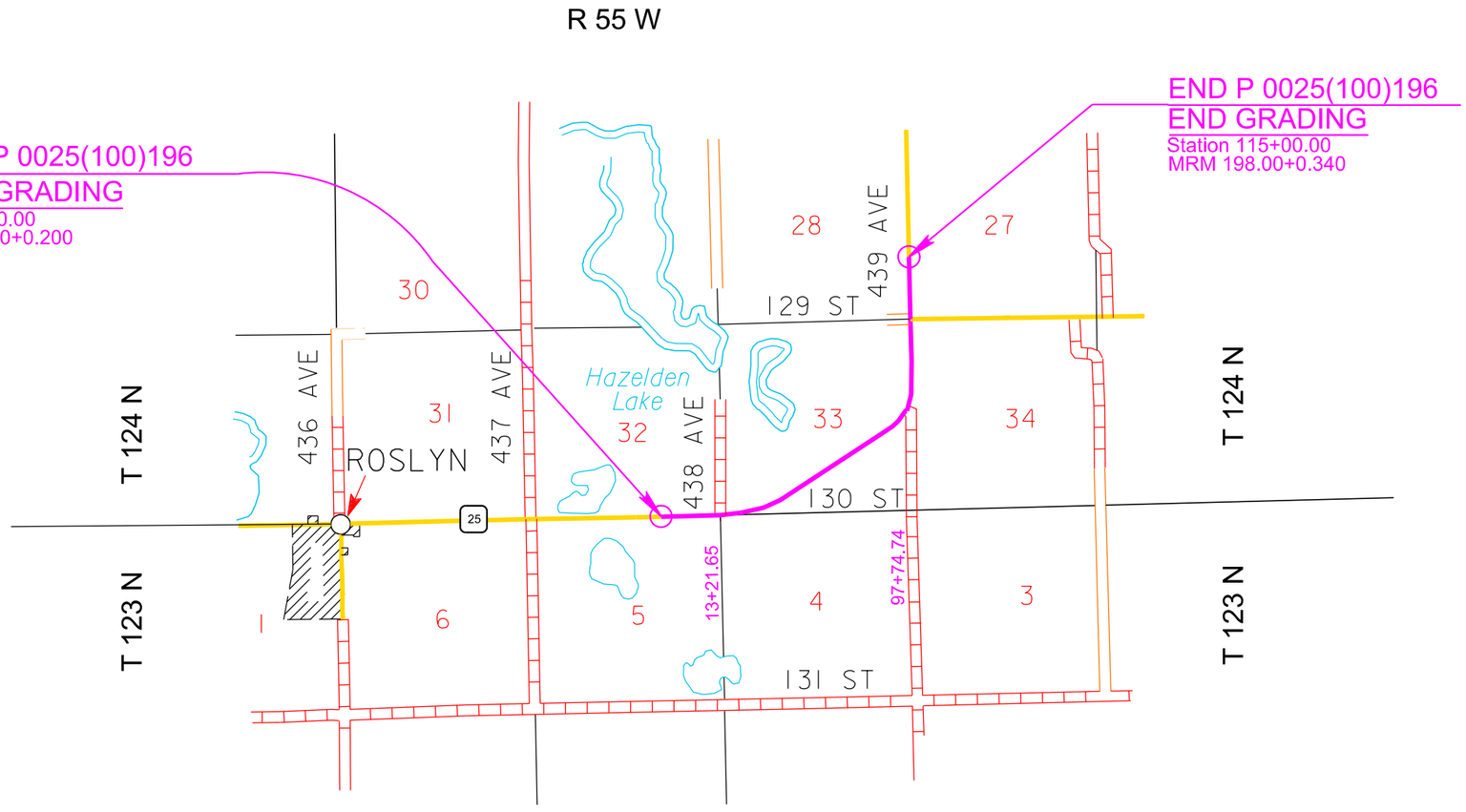
SECTION X: CROSS SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	X1	X23

Plotting Date: 01/14/2025

INDEX OF SHEETS

X1	General Layout with Index
X2	Soil Legend
X3-X23	Cross Sections



Plot Scale - 1:200

Plotted From - TRPR13418

File - U:\rdpr\day08\Dbtitle\X.dgn

Soil Legend

①	Clay Silt	⑥	Silty Sand
②	Silt Clay	⑦	Sandy Silt
③	Clay	⑧	Sand
④	Sandy Clay	⑨	Silt
⑤	Clay Sand	⑩	Gravel

The soils information presented is representative of the material encountered at the specific bore hole location.

The Geotechnical Engineering Activity has on file all of the boring logs for this project. These logs and additional results of laboratory tests, if any, are available for review at the Central Office in Pierre.

Water levels encountered in the borings when drilled in August 2022 are annotated on the cross-sections.

▽ Water Level

Plotting Date: 08/28/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X2	X23

Hole Number	1	1	1	1	1
Station	17+00	17+00	17+00	17+00	17+00
Offset	125'RT	125'RT	125'RT	125'RT	125'RT
Depth, ft	0-5.0	5.0-10.0	10.0-15.0	15.0-18.0	18.0-25.0
Moisture Depth, ft	3.0	8.0	12.0	17.0	23.0
Moisture, %	11.1	16.4	20.9	15.1	20.4
Dry Loose Wt, lbs/cuft	77.0	76.0	75.4	92.4	80.0
% Passing 3/8	98.1	100.0	97.7	99.4	97.9
% Passing #4	97.4	99.9	97.2	98.3	97.4
% Passing #10	97.0	99.5	96.2	95.9	96.6
% Passing #40	85.6	90.5	89.0	63.7	78.6
% Passing #200	66.0	70.8	68.9	23.2	50.9
% Sand	30.9	28.6	27.3	72.7	45.8
% Silt	27.1	28.8	30.2	11.5	24.4
% Clay	39.0	42.0	38.7	11.7	26.5
Liquid Limit	38	38	38	0	31
Plastic Limit	19	18	18	0	16
Plasticity Index	19	20	20	NP	15
Soil Color	Brown	Brown	Brown	Brown	Brown
Textural Class.	Sandy Clay	Silt Clay	Sandy Clay	Silty Sand	Clay Sand
AASHTO Class.	A-6 (10)	A-6 (11)	A-6 (11)	A-2-4 (0)	A-6 (5)

Hole Number	2	2
Station	50+00	50+00
Offset	120'RT	120'RT
Depth, ft	0-5.0	5.0-15.0
Moisture Depth, ft	3.0	7.0
Moisture, %	12.8	17.3
Dry Loose Wt, lbs/cuft	75.2	74.3
% Passing 3/8	100.0	99.6
% Passing #4	99.9	99.3
% Passing #10	99.2	98.8
% Passing #40	88.0	89.7
% Passing #200	66.3	70.4
% Sand	32.9	28.4
% Silt	27.2	30.5
% Clay	39.1	39.9
Liquid Limit	40	39
Plastic Limit	20	18
Plasticity Index	20	21
Soil Color	Brown	Brown
Textural Class.	Sandy Clay	Silt Clay
AASHTO Class.	A-6 (10)	A-6 (11)

Hole Number	3	3	3
Station	53+00	53+00	53+00
Offset	130'LT	130'LT	130'LT
Depth, ft	0-6.0	6.0-11.0	11.0-15.0
Moisture Depth, ft	4.0	8.0	13.0
Moisture, %	17.3	18.2	20.6
Dry Loose Wt, lbs/cuft	72.5	72.2	74.3
% Passing 3/8	99.6	100.0	100.0
% Passing #4	99.5	100.0	99.9
% Passing #10	99.3	99.6	99.4
% Passing #40	94.1	91.9	91.7
% Passing #200	78.3	73.8	73.3
% Sand	21.0	25.7	26.1
% Silt	30.3	31.6	31.1
% Clay	48.0	42.2	42.2
Liquid Limit	47	41	40
Plastic Limit	22	18	17
Plasticity Index	25	23	23
Soil Color	Brown	Brown	Brown
Textural Class.	Silt Clay	Silt Clay	Silt Clay
AASHTO Class.	A-7-6 (16)	A-7-6 (13)	A-6 (13)

Hole Number	4	4	4
Station	64+00	64+00	64+00
Offset	160'LT	160'LT	160'LT
Depth, ft	0-4.0	4.0-10.0	10.0-20.0
Moisture Depth, ft	3.0	7.0	15.0
Moisture, %	9.4	15.1	19.3
Dry Loose Wt, lbs/cuft	81.3	76.4	76.4
% Passing 3/8	97.9	97.2	99.7
% Passing #4	97.4	96.7	99.3
% Passing #10	96.9	96.3	98.4
% Passing #40	85.5	86.3	90.5
% Passing #200	60.4	66.4	71.9
% Sand	36.5	29.9	26.5
% Silt	29.0	28.5	30.2
% Clay	31.4	38.0	41.7
Liquid Limit	32	37	40
Plastic Limit	17	17	18
Plasticity Index	15	20	22
Soil Color	Brown	Brown	Brown
Textural Class.	Sandy Clay	Sandy Clay	Silt Clay
AASHTO Class.	A-6 (7)	A-6 (10)	A-6 (12)

Hole Number	5	5	5	5	5
Station	78+00	78+00	78+00	78+00	78+00
Offset	110'LT	110'LT	110'LT	110'LT	110'LT
Depth, ft	0-3.0	3.0-9.5	9.5-12.0	12.0-16.0	16.0-18.0
Moisture Depth, ft	2.0	6.0	11.0	14.0	17.0
Moisture, %	3.5	9.0	14.5	9.1	15.5
Dry Loose Wt, lbs/cuft	110.9	88.3	83.9	97.9	84.0
% Passing 3/8	75.4	99.0	99.5	88.3	95.7
% Passing #4	63.3	95.6	99.1	81.3	93.8
% Passing #10	60.0	94.9	98.7	79.2	93.0
% Passing #40	38.8	77.5	83.8	53.9	75.5
% Passing #200	25.7	55.4	59.7	30.4	52.6
% Sand	34.3	39.6	39.0	48.8	40.4
% Silt	14.8	26.7	27.9	15.2	24.5
% Clay	10.9	28.7	31.8	15.2	28.1
Liquid Limit	33	34	34	24	31
Plastic Limit	20	16	15	13	15
Plasticity Index	13	18	19	11	16
Soil Color	Brown	Brown	Brown	Brown	Brown
Textural Class.	Gravelly Silty Sand	Clay Sand	Sandy Clay	Gravelly Silty Sand	Clay Sand
AASHTO Class.	A-2-6 (0)	A-6 (7)	A-6 (9)	A-2-6 (0)	A-6 (6)

Hole Number	6	6	6
Station	82+00	82+00	82+00
Offset	105'LT	105'LT	105'LT
Depth, ft	0-5.0	5.0-10.0	10.0-15.0
Moisture Depth, ft	4.0	7.0	12.0
Moisture, %	13.2	17.6	20.8
Dry Loose Wt, lbs/cuft	76.6	73.8	74.0
% Passing 3/8	99.4	99.3	98.6
% Passing #4	99.0	98.8	97.7
% Passing #10	98.7	98.4	97.5
% Passing #40	87.8	90.3	89.7
% Passing #200	68.0	72.8	71.3
% Sand	30.7	25.6	26.2
% Silt	28.3	31.3	28.2
% Clay	39.7	41.5	43.1
Liquid Limit	41	41	39
Plastic Limit	19	17	17
Plasticity Index	22	24	22
Soil Color	Brown	Brown	Brown
Textural Class.	Sandy Clay	Silt Clay	Silt Clay
AASHTO Class.	A-7-6 (11)	A-7-6 (13)	A-6 (12)

Plotting Date: 08/28/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X3	X23

STATE OF SOUTH DAKOTA	
PROJECT	P 0025(100)196
SHEET NO.	X4
TOTAL SHEETS	X23

Plotting Date: 11/20/2024

Muck

98+00

1793.45
-48.10

1799.22
-25.00

1799.72

1799.22
25.00

RDG EL 1790.33

1794.08
94.88

99+00

1804.28
-164.26

LDG EL 1790.87

1798.59
-25.00

1799.09

1798.59
25.00

RDG EL 1790.85

1791.77
76.07

100+00

1803.59
-154.97

LDG EL 1791.14

1798.21
-25.00

1798.71

1798.21
25.00

1789.85
58.44

101+00

1794.33
-84.32

LDG EL 1791.40

6:1

1798.09
-25.00

1798.59

1798.09
25.00

1788.84
61.99

102+00

1792.24
-69.16

LDG EL 1791.67

6:1

1798.09
-25.00

1798.59

1798.09
25.00

1789.39
59.80

103+00

1793.35
-73.13

LDG EL 1791.93

6:1

1798.09
-25.00

1798.59

1798.09
25.00

1789.61
58.91

Plotting Date: 08/28/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X5	X23

-200

1808.46
-135.68

LDG EL 1798.89

1806.17
-25.00

1806.87

1806.17
25.00

1802.76
59.45

0

93+00

1780
200

1790

1800

1810

1820

-200

1804.43
-124.70

LDG EL 1796.63

1804.28
-25.00

1804.78

1804.28
25.00

1798.04
49.94

0

94+00

1780
200

1790

1800

1810

1820

-200

Muck

1793.28
-62.43

1802.63
-25.00

1803.13

1802.63
25.00

1793.08
63.20

0

95+00

1780
200

1790

1800

1810

1820

-200

1790.27
-68.89

1801.24
-25.00

1801.74

1801.24
25.00

1790.90
66.37

0

96+00

1770
200

1780

1790

1800

1810

1820

-200

1790.05
-65.24

1800.11
-25.00

1800.61

1800.11
25.00

RDG EL 1789.80

1789.89
75.98

0

97+00

1770
200

1780

1790

1800

1810

1820

-200

1795.67
-53.98

1799.42
-25.00

1799.92

97+75 L & R
28' Int Rd

1799.42
25.00

RDG EL 1790.19

1797.53
114.08

0

97+75

1780
200

1790

1800

1810

1820

Plotting Date: 08/28/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X6	X23

Plotting Date: 01/15/2025

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X7	X23

Plotting Date: 08/28/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X8	X23

Plotting Date: 08/28/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X9	X23

Muck

1812.72
-68.54

1823.60
-25.00

1825.10

1826.60
25.00

RDG EL 1814.58

1825.68
144.09

73+60 R
28' Int Rd
75' Rad Bk
65' Rad Ah

Muck

1810.45
-76.53

1823.34
-25.00

1824.83

1826.33
25.00

RDG EL 1813.70

1821.76
131.36

Muck

1808.75
-80.66

1822.66
-25.00

1824.16

1825.66
25.00

RDG EL 1811.50

1812.11
156.00

Unstable

1813.94
-57.21

1821.99
-25.00

1823.49

1824.99
25.00

RDG EL 1814.22

1816.70
147.00

1823.75
-100.52

1821.32
-25.00

1822.82

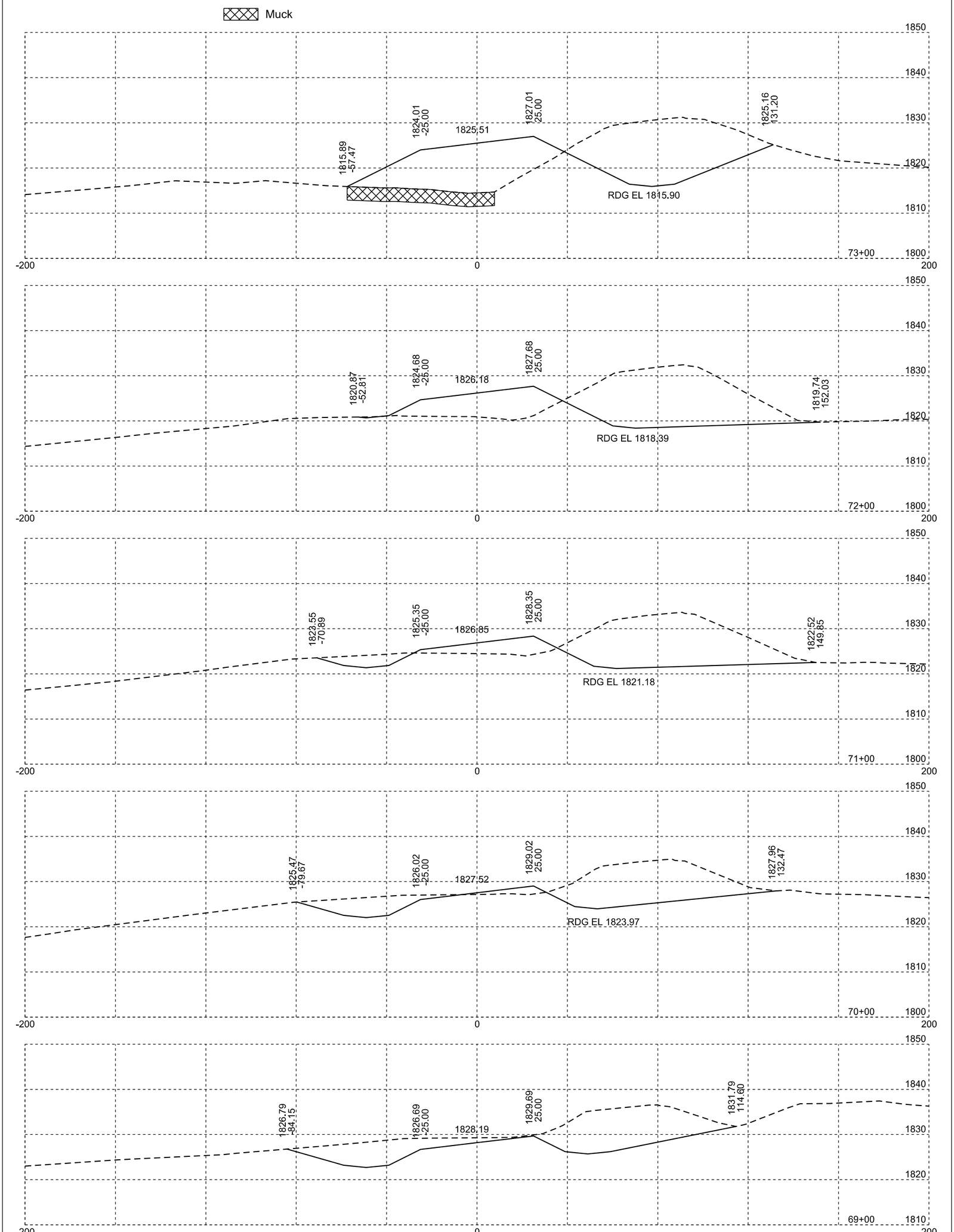
1824.32
25.00

RDG EL 1816.93

1826.03
115.51

Plotting Date: 01/14/2025

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X10	X23



Plotting Date: 01/14/2025

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X11	X23

Plotting Date: 08/28/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X12	X23

-200

1832.05
-99.13

LDG EL 1827.45

1834.30
-25.00

1834.80

1834.30
25.00

1824.11
65.77

0

59+00

1810
200

1820

1830

1840

1850

-200

1824.48
-73.11

LDG EL 1824.35

1833.74
-25.00

1834.24

1833.74
25.00

1822.53
69.83

0

60+00

1810
200

1820

1830

1840

1850

-200

1825.18
-78.44

LDG EL 1824.51

1833.07
-25.00

1833.57

1833.71
25.00

1822.41
70.20

0

61+00

1810
200

1820

1830

1840

1850

-200

1837.99
-125.98

LDG EL 1827.92

1831.92
-25.00

1832.90

1833.87
25.00

1827.37
50.99

0

62+00

1810
200

1820

1830

1840

1850

1860

-200

1843.22
-167.88

1831.17
-25.00

1832.56

1833.95
25.00

62+50 R
24' Ent

1831.17
62.61

0

62+50

1810
200

1820

1830

1840

1850

1860

-200

1845.61
-187.70

1830.72
-25.00

1832.22

1833.72
25.00

1835.37
84.74

0

63+00

1810
200

1820

1830

1840

1850

1860

Muck

Rev 03/13/25 RG
Plotting Date: 03/19/2025

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X13	X23

Rev 03/13/25 RG
Plotting Date: 03/19/2025

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X14	X23

-200
0
1805.70
-46.95
1811.19
-25.00
1811.69
1811.19
25.00
RDG EL 1804.33
1806.57
79.10
1790
200
47+00
1800
1810
1820
1830
-200
0
1811.17
-52.12
1815.02
-25.00
1815.52
1815.02
25.00
RDG EL 1811.00
1817.96
91.37
1800
200
48+00
1810
1820
1830
1840
-200
0
1815.34
-59.92
1818.71
-25.00
1819.21
1818.71
25.00
1824.97
107.81
1800
200
49+00
1810
1820
1830
1840
-200
0
1818.80
-61.01
1822.02
-25.00
1822.52
1822.02
25.00
1829.78
115.33
Hole 2
50+00 - 120'RT
1800
200
50+00
1810
1820
1830
1840
1850
-200
0
1821.95
-62.64
1824.93
-25.00
1825.43
1824.93
25.00
1833.01
116.90
1810
200
51+00
1820
1830
1840
1850
-200
0
1834.79
-134.79
1827.46
-25.00
1827.96
1827.46
25.00
1833.73
107.86
1810
200
52+00
1820
1830
1840
1850

Plotting Date: 08/28/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X15	X23

Plotting Date: 01/22/2025

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X16	X23

-200

Muck

1788.89
-65.19

1798.93
-25.00

1799.43

1798.93
25.00

1788.56
66.51

41+58 R
24' Ent

41+15 - 169' R

0

200

1770

1780

1790

1800

1810

41+58

1788.87
-66.97

1799.36
-25.00

1799.86

1799.36
25.00

1790.21
61.61

42+00

1789.10
-71.53

1800.73
-25.00

1801.23

1800.73
25.00

1790.59
65.57

43+00

1789.17
-78.69

1802.60
-25.00

1803.10

1802.60
25.00

1791.83
68.08

44+00

1790.51
-72.61

1804.96
-25.00

1805.46

1804.96
25.00

1793.15
72.24

45+00

1794.01
-70.69

1807.83
-25.00

1808.33

1807.83
25.00

1796.64
69.73

46+00

1820

Muck

1796.92
-125.86

LDG EL 1789.50

1798.10
-25.00

1798.60

1798.10
25.00

1791.31
52.17

37+00

1795.82
-120.05

LDG EL 1789.32

37+52 L
24' Ent

1798.10
-25.00

1798.60

1798.10
25.00

1791.94
49.66

37+52

1790.20
-84.33

LDG EL 1789.17

1798.06
-27.00

1798.60

1798.10
25.00

1789.24
60.43

38+00

1788.71
-62.55

1798.10
-25.00

1798.60

1798.10
25.00

1788.72
62.54

39+00

1788.70
-62.66

1798.12
-25.00

1798.62

1798.12
25.00

1788.40
63.85

40+00

Muck

1788.80
-63.77

1798.49
-25.00

1798.99

1798.49
25.00

1788.42
65.29

41+00

Plotting Date: 11/20/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X17	X23

Muck

1789.08
-58.49

1797.45
-25.00

1798.60

1799.75
25.00

1789.05
67.81

-200

0

1770

1780

1790

1800

1810

200

31+00

Muck

1789.08
-58.49

1797.45
-25.00

1798.60

1799.75
25.00

1788.95
68.18

-200

0

1770

1780

1790

1800

1810

200

32+00

Muck

1789.09
-58.45

1797.45
-25.00

1798.60

1799.75
25.00

1788.93
68.29

-200

0

1770

1780

1790

1800

1810

200

33+00

Muck

1789.09
-58.44

1797.45
-25.00

1798.60

1799.75
25.00

1788.96
68.16

-200

0

1770

1780

1790

1800

1810

200

34+00

Muck

1789.21
-60.55

1798.10
-25.00

1798.60

1799.00
25.00

1789.29
63.82

-200

0

1770

1780

1790

1800

1810

200

35+00

Muck

1792.98
-94.68

LDG EL 1789.83

1798.10
-25.00

1798.60

1798.17
25.00

1789.68
58.94

-200

0

1770

1780

1790

1800

1810

200

36+00

Plotting Date: 08/28/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X18	X23

-200

Muck

1790.14
-54.23

1797.45
-25.00

1798.60

1799.75
25.00

1789.50
66.02

0

1770

1780

1790

1800

1810

25+00

200

-200

1789.93
-55.06

1797.45
-25.00

1798.60

1799.75
25.00

1789.51
65.95

0

1770

1780

1790

1800

1810

26+00

200

-200

1789.44
-57.04

1797.45
-25.00

1798.60

1799.75
25.00

1789.26
66.95

0

1770

1780

1790

1800

1810

27+00

200

-200

1789.29
-57.64

1797.45
-25.00

1798.60

1799.75
25.00

1788.93
68.27

0

1770

1780

1790

1800

1810

28+00

200

-200

1789.28
-57.67

1797.45
-25.00

1798.60

1799.75
25.00

1789.02
67.92

0

1770

1780

1790

1800

1810

29+00

200

-200

1789.25
-57.78

1797.45
-25.00

1798.60

1799.75
25.00

1789.17
67.31

0

1770

1780

1790

1800

1810

30+00

200

Plotting Date: 08/28/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X19	X23

Muck

1797.99
-91.99

LDG EL 1794.71

1802.09
-25.00

1803.24

1804.39
25.00

RDG EL 1796.61

1807.99
128.49

1795.49
-85.77

LDG EL 1793.17

1800.67
-25.00

1801.82

1802.97
25.00

RDG EL 1794.56

1797.88
90.80

1794.80
-83.65

LDG EL 1792.50

1799.51
-25.00

1800.66

1801.81
25.00

RDG EL 1792.50

1793.09
80.70

1792.52
-71.39

LDG EL 1791.83

1798.61
-25.00

1799.76

1800.91
25.00

1791.50
62.63

1791.37
-51.37

1797.97
-25.00

1799.12

1800.27
25.00

1790.27
64.96

1790.74
-52.37

1797.58
-25.00

1798.73

1799.88
25.00

1789.71
65.67

-200

0

19+00

20+00

21+00

22+00

23+00

24+00

200

1780

1790

1800

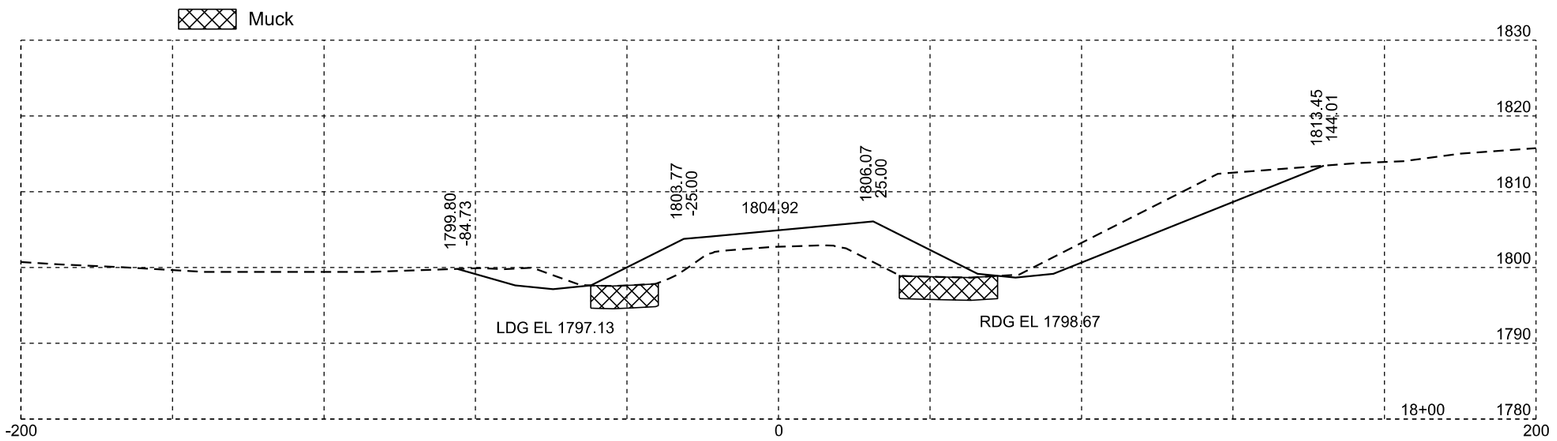
1810

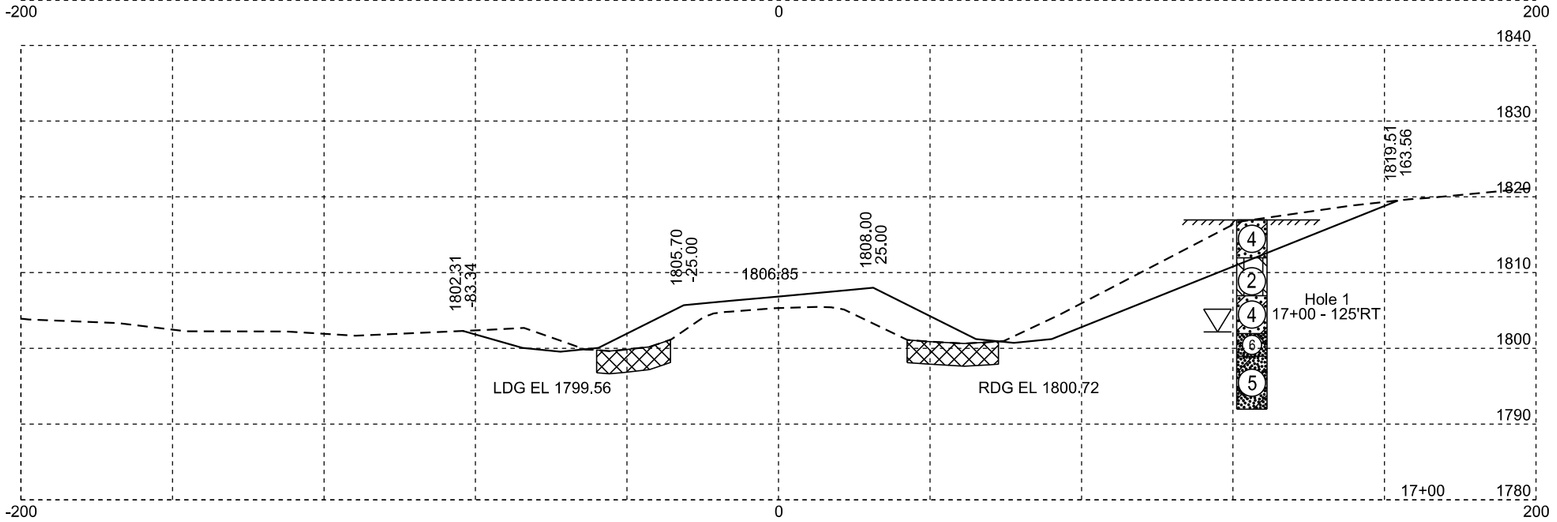
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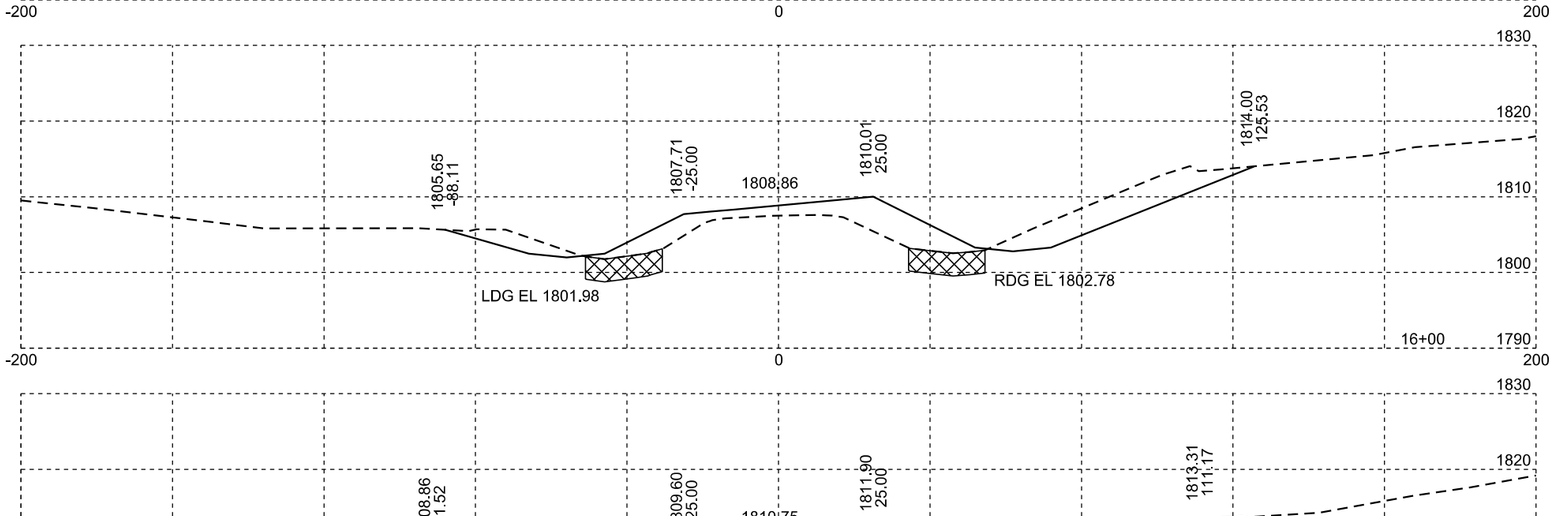
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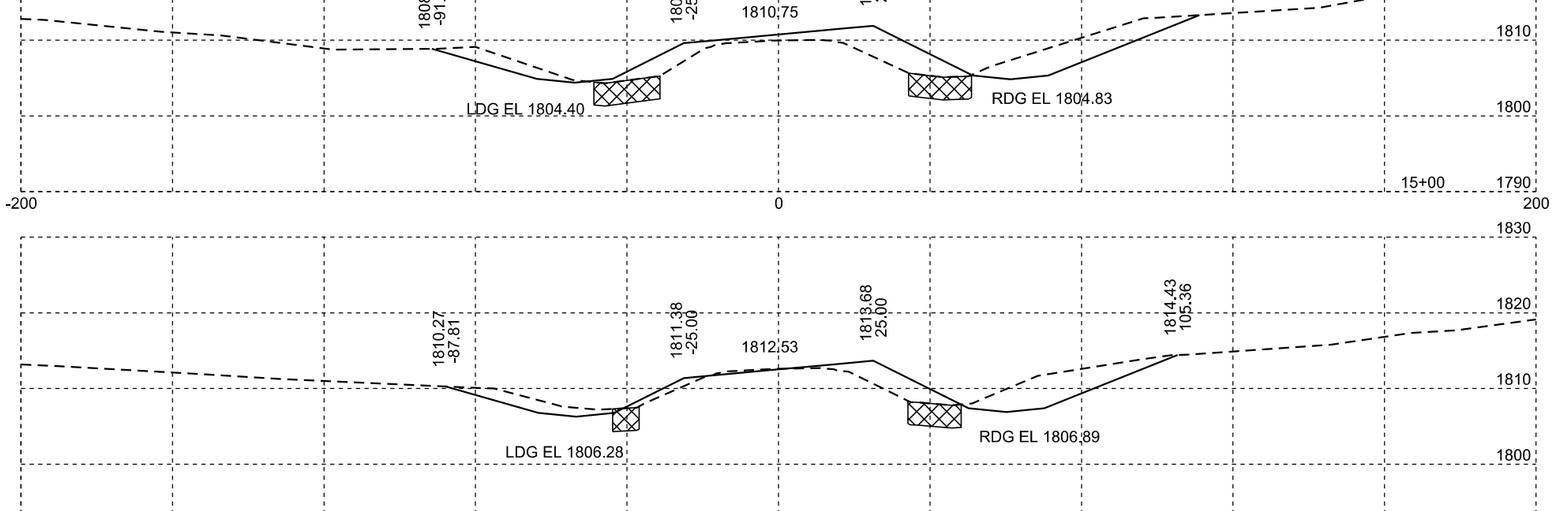
Plotting Date: 08/28/2024

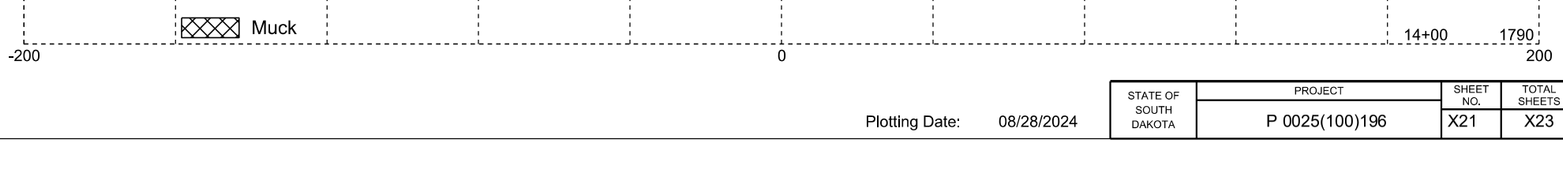
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X20	X23





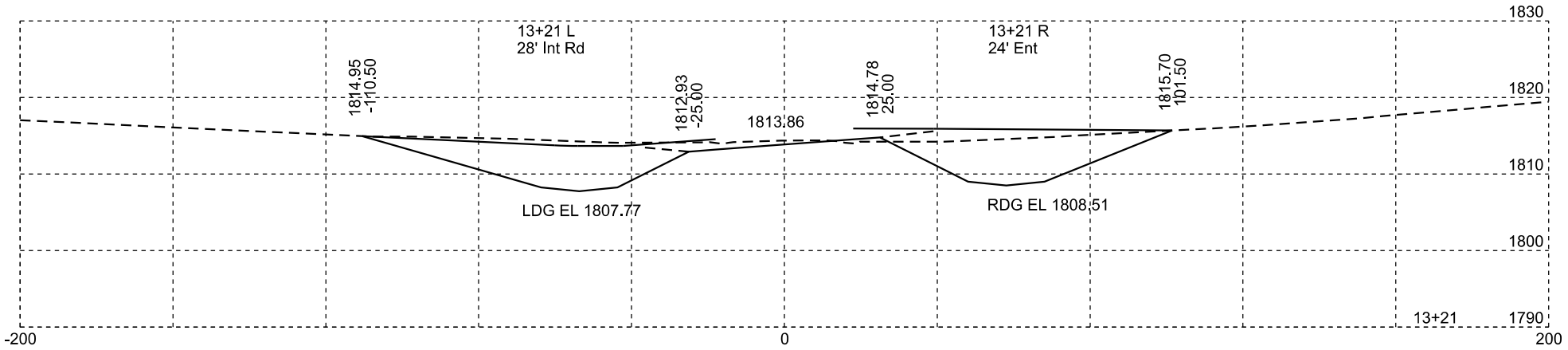


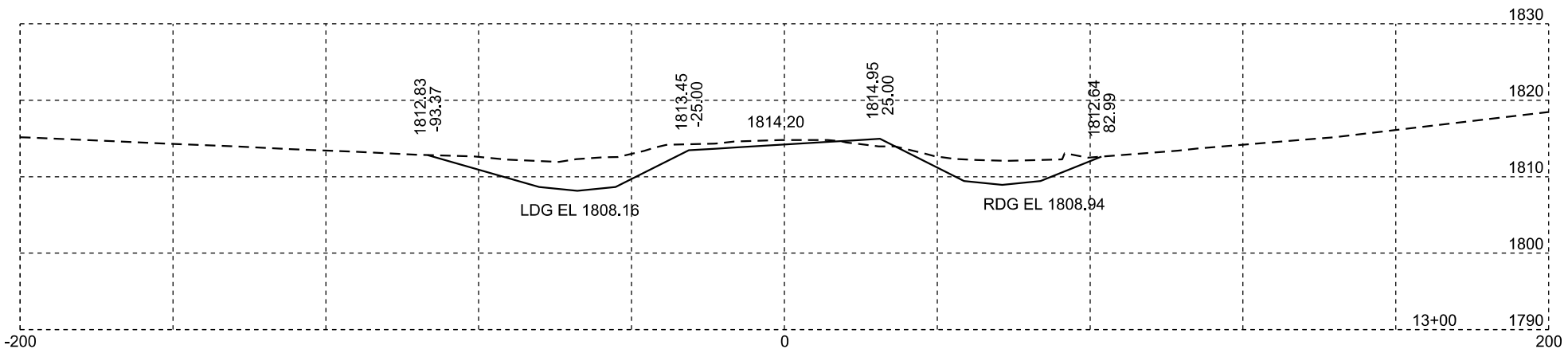


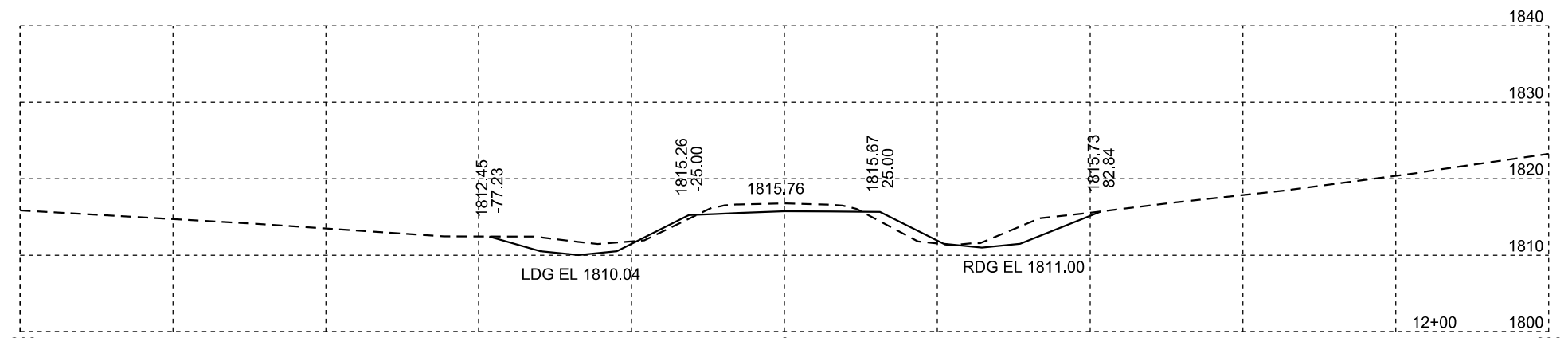


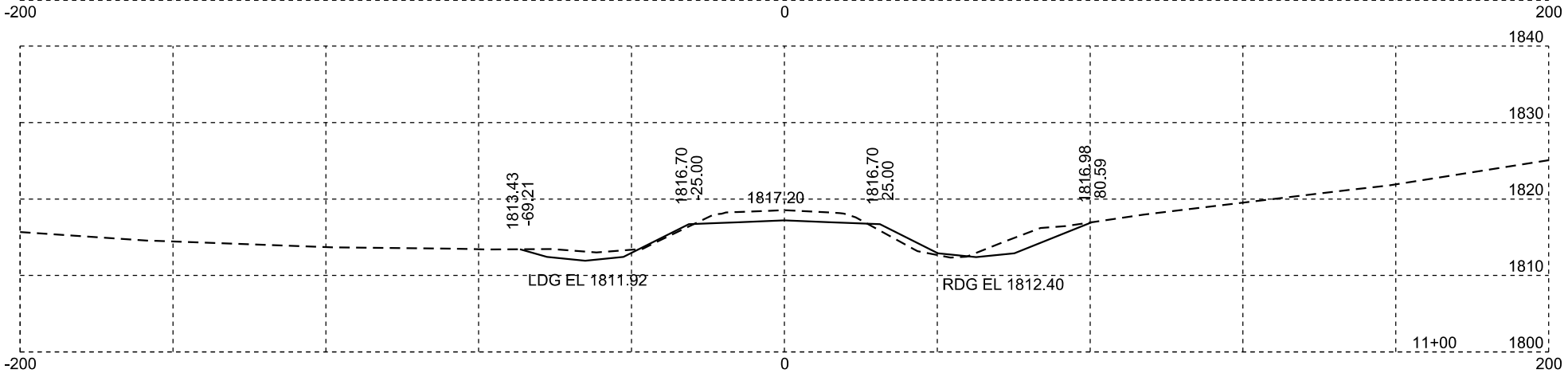
Plotting Date: 08/28/2024

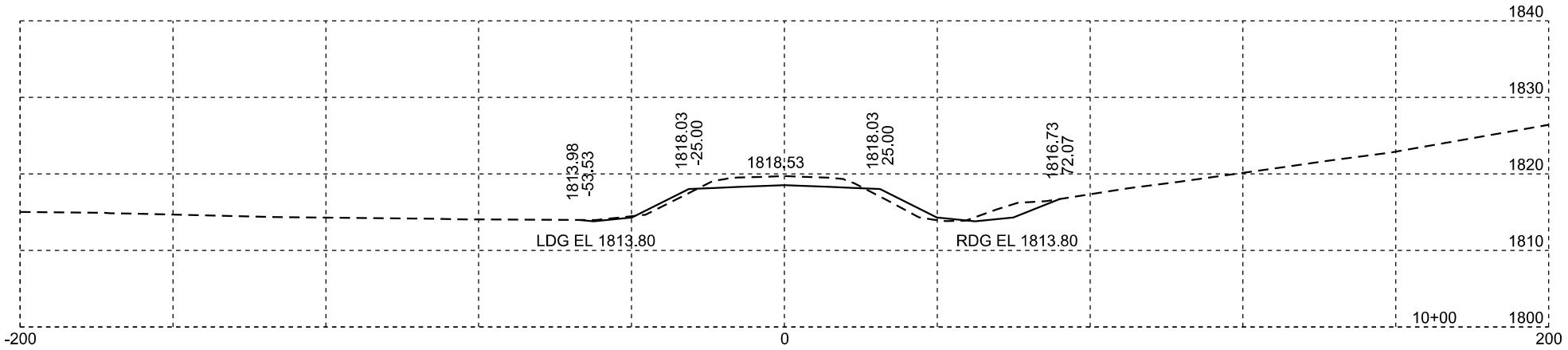
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X21	X23

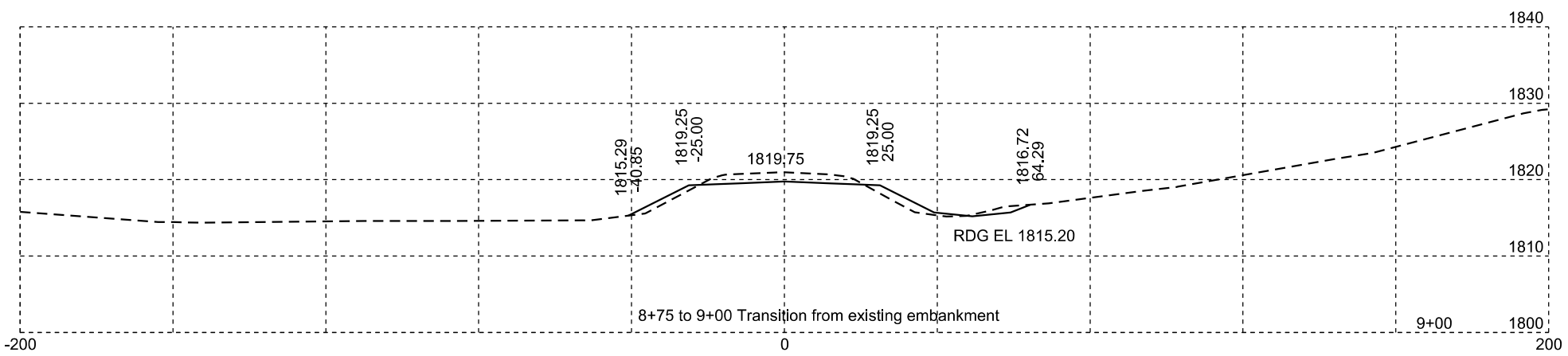








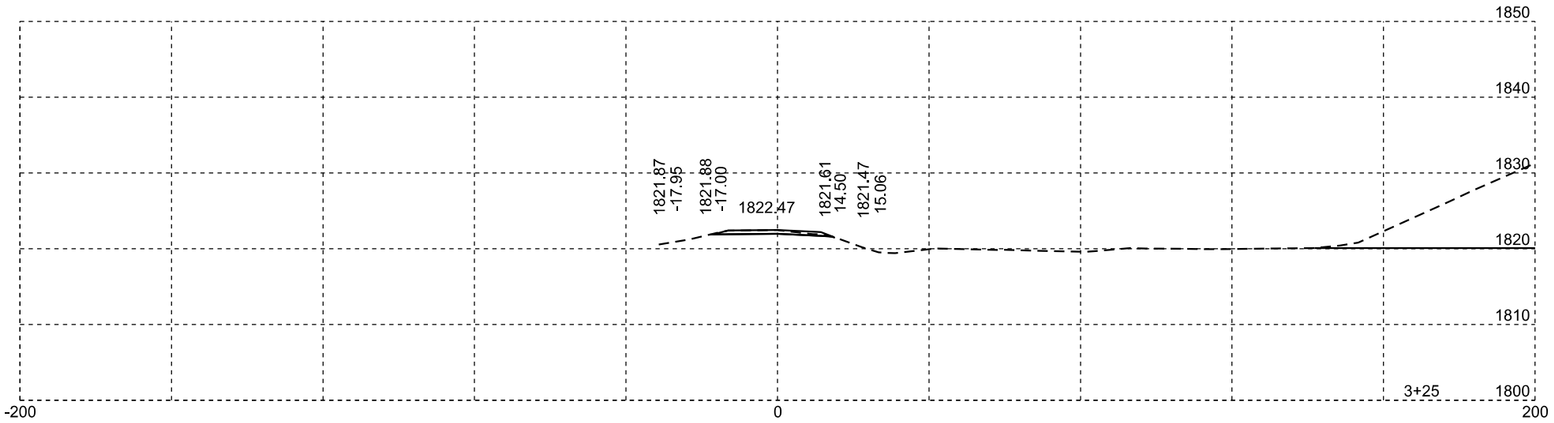


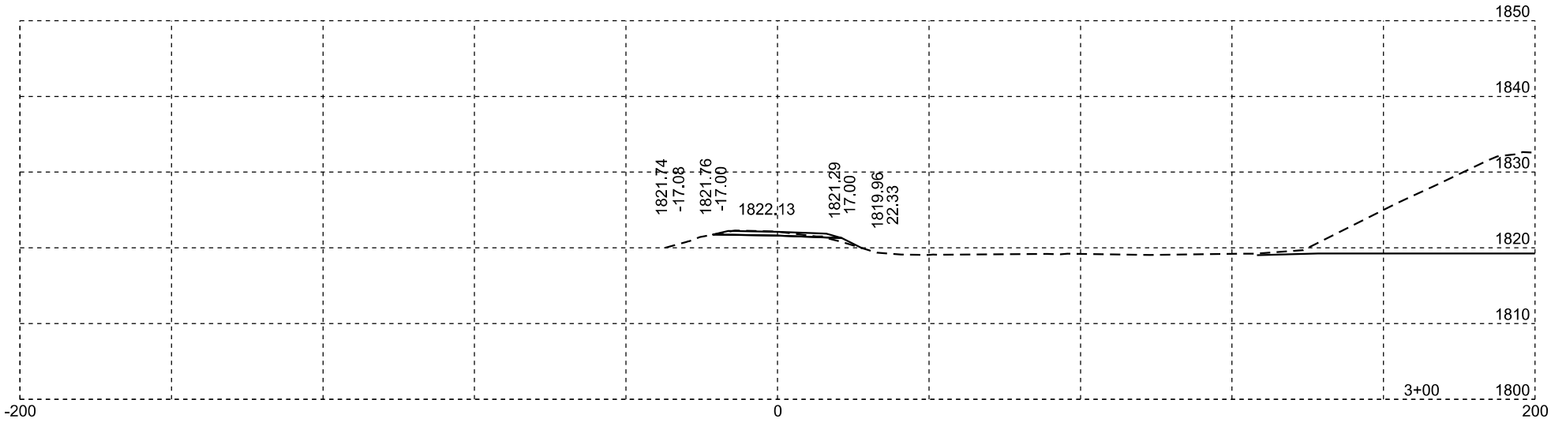


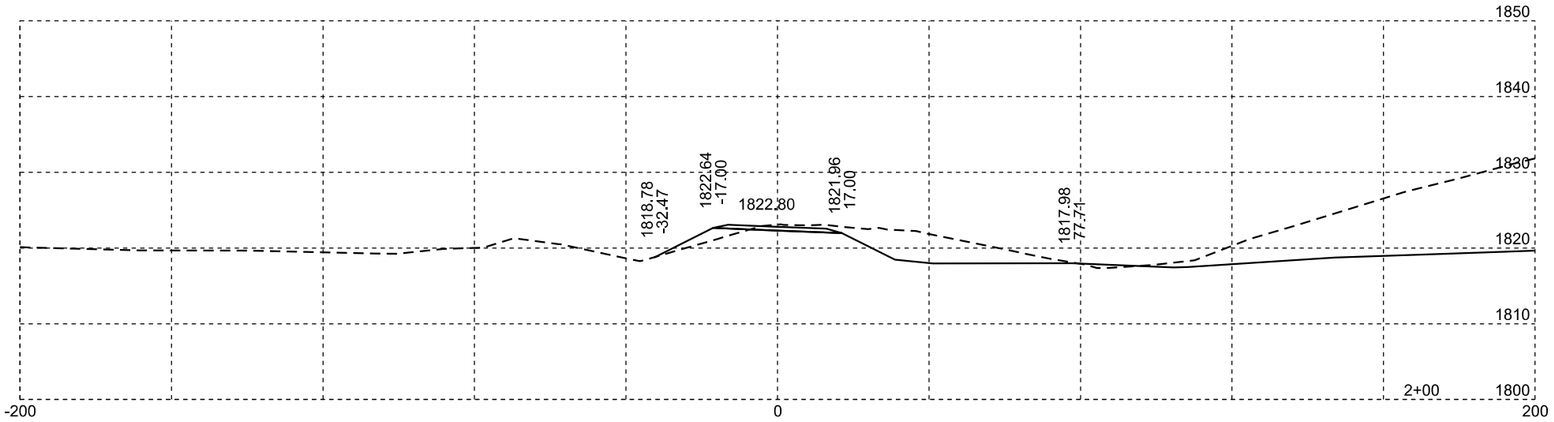
Plotting Date: 08/28/2024

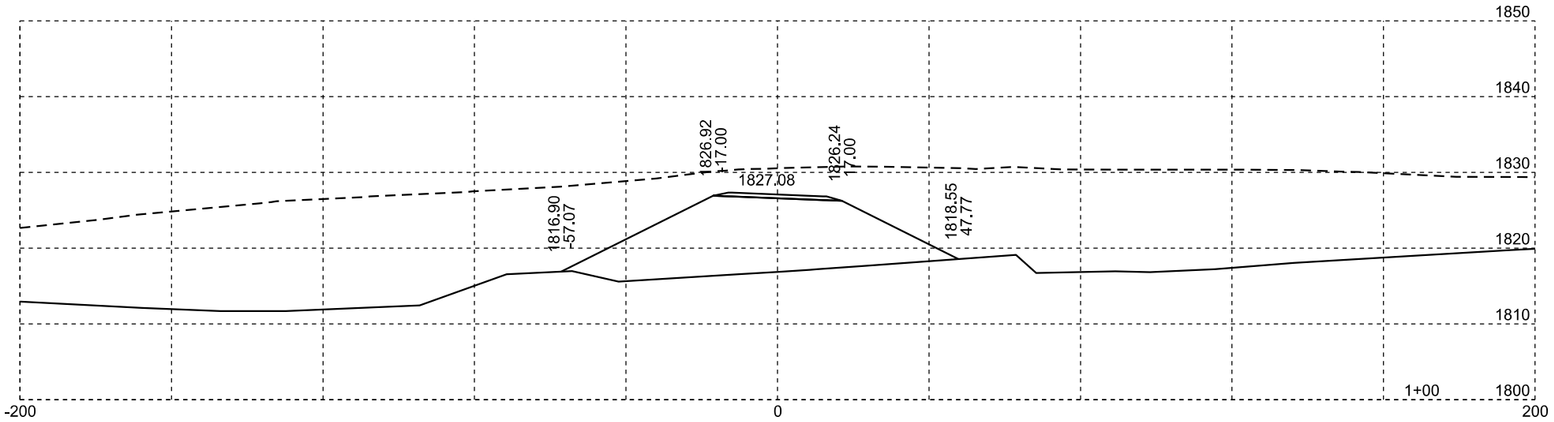
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X10	X23

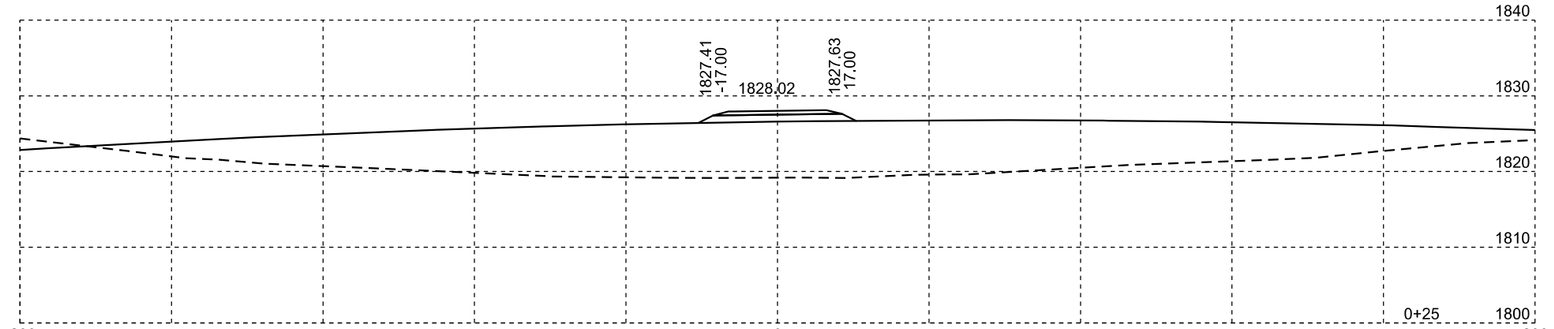
XR73R











XR73R

Plotting Date: 01/14/2025

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0025(100)196	X11	X23

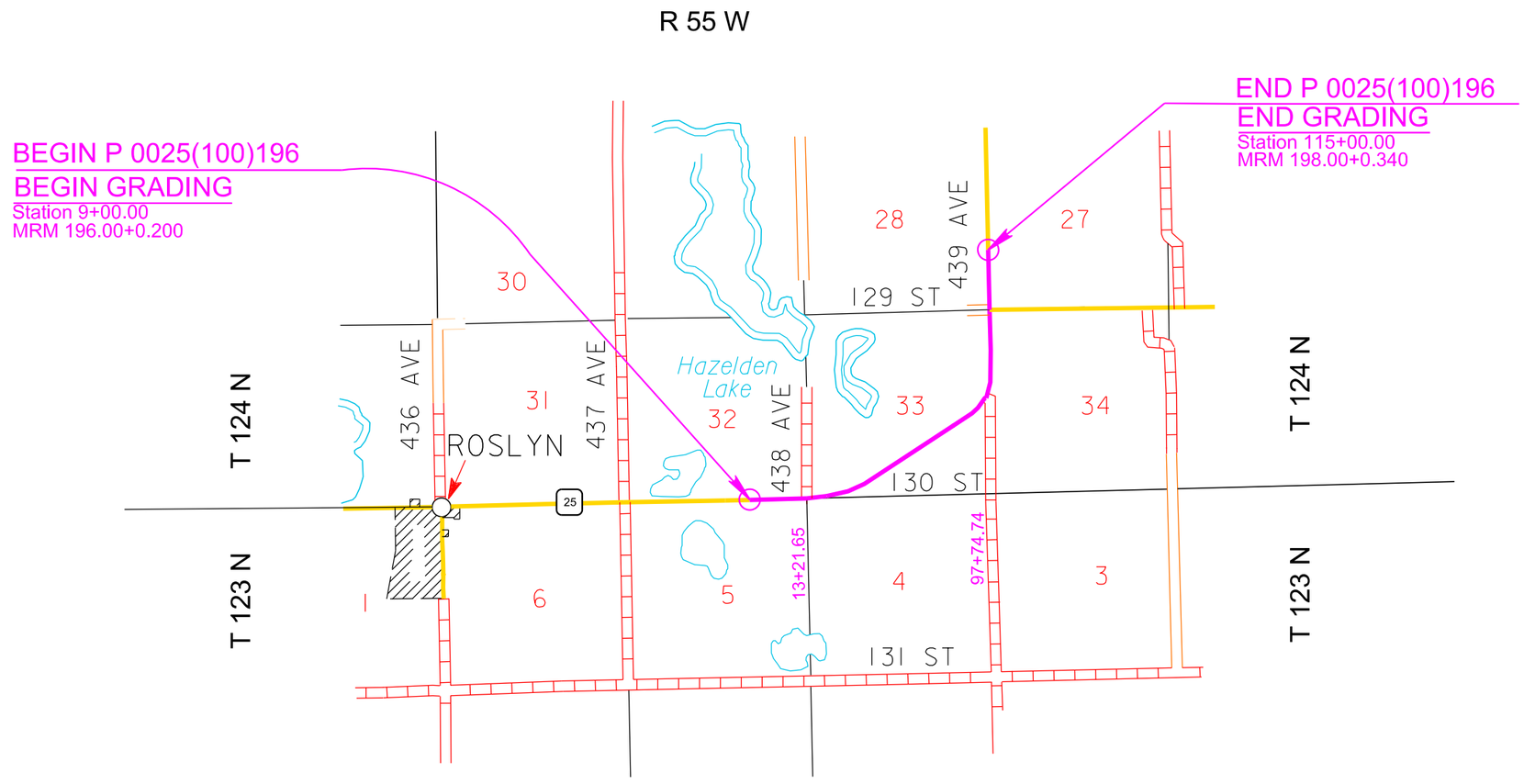
SECTION Z: PIPE SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(100)196	Z1	Z6

Plotting Date: 08/30/2022

INDEX OF SHEETS

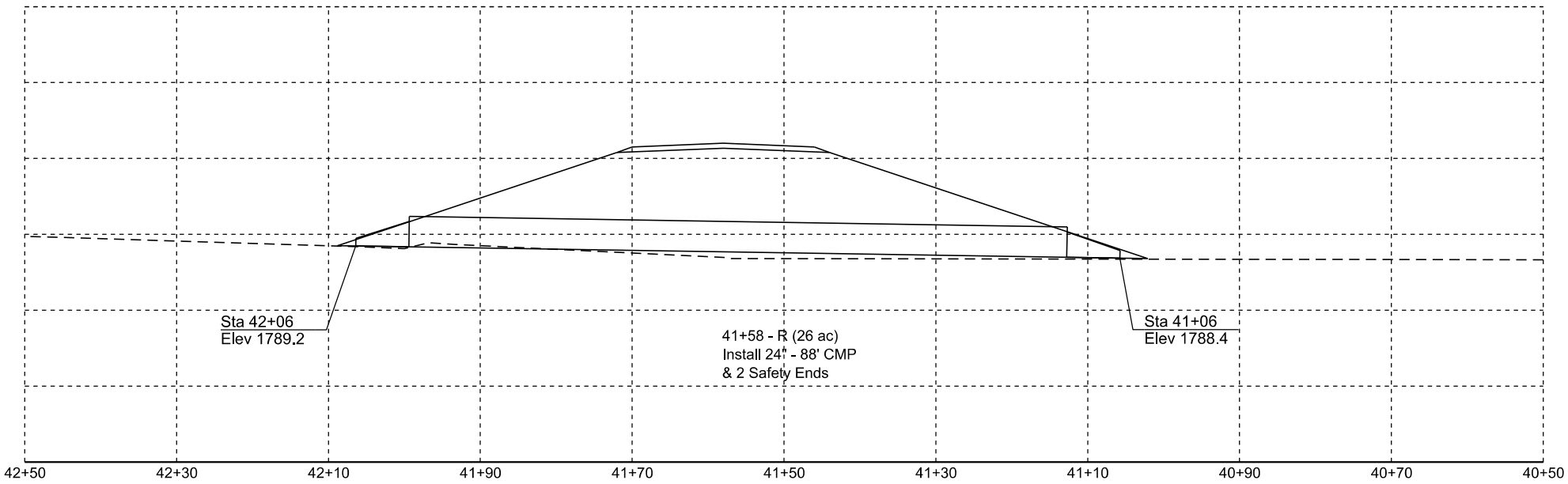
Z1	General Layout with Index
Z2-Z4	Mainline Pipe Sections
Z5-Z6	Approach Pipe Sections

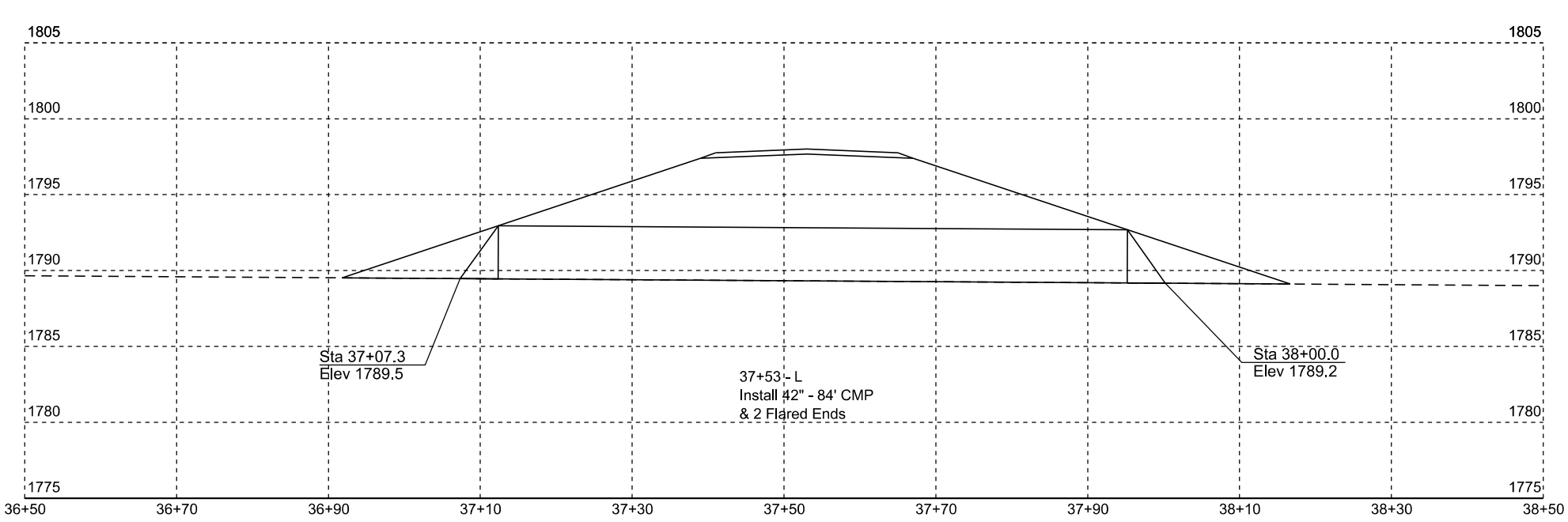


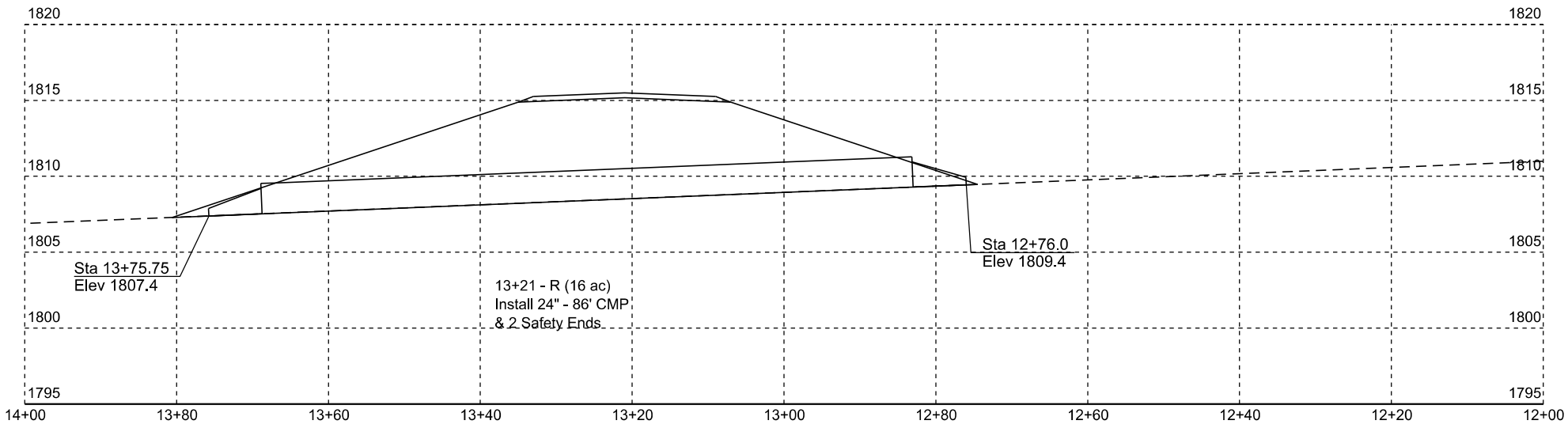
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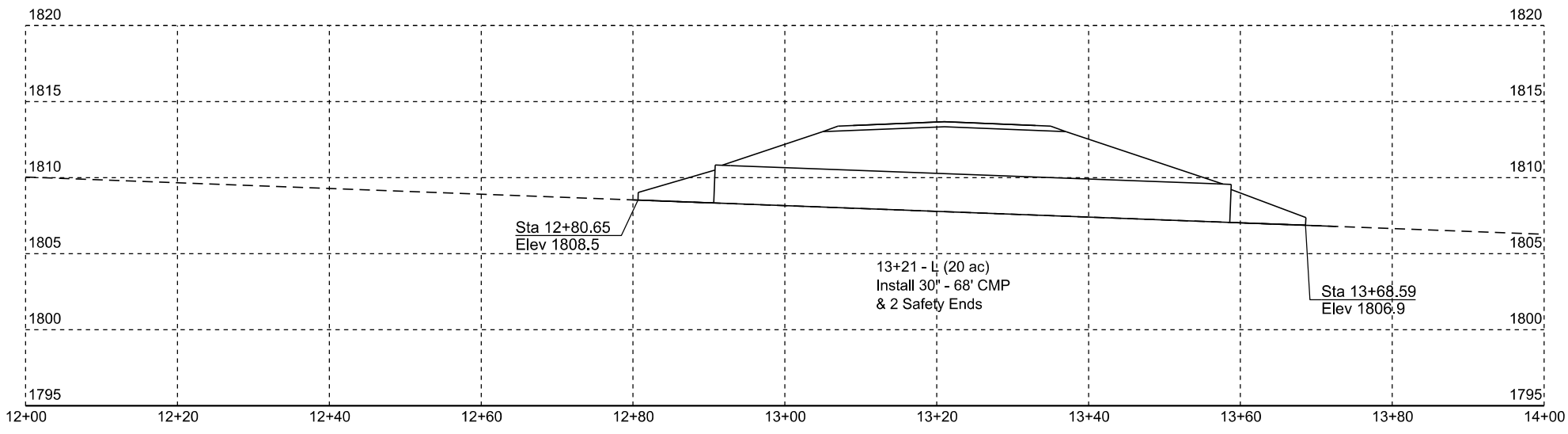
Plotted From - TRPR13418

File - U:\rdpr\day08\Dbtitle\z.dgn



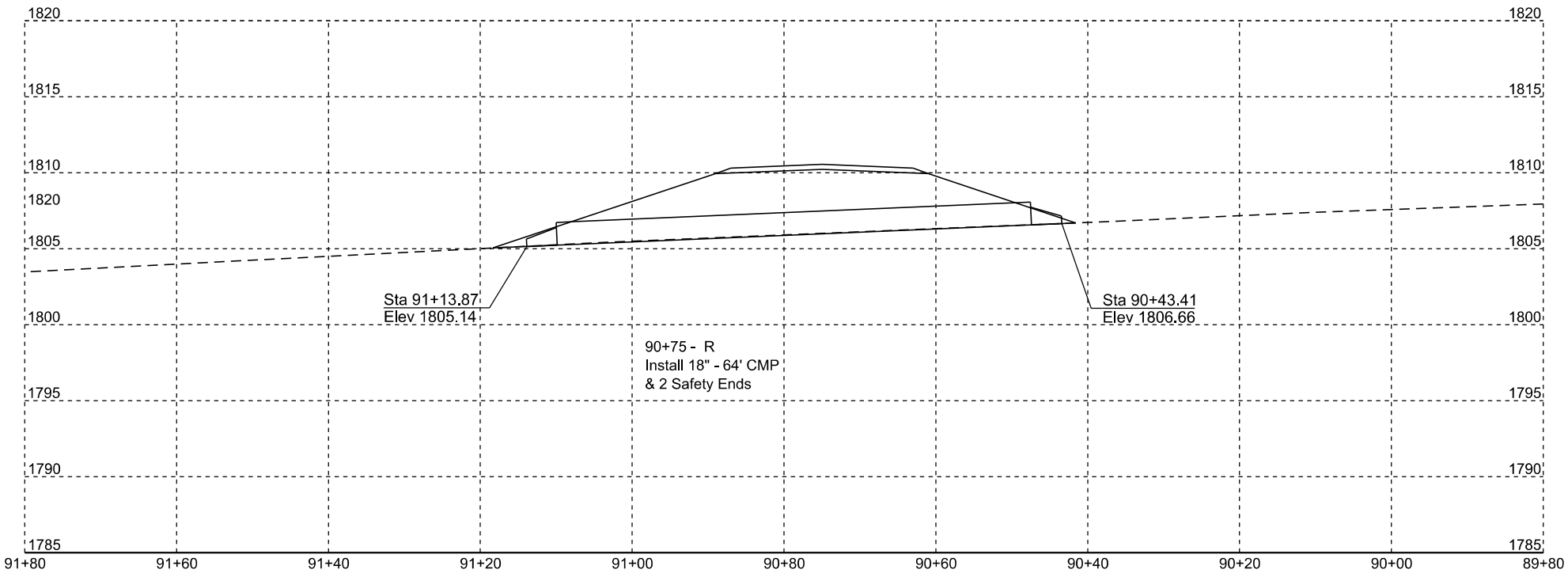


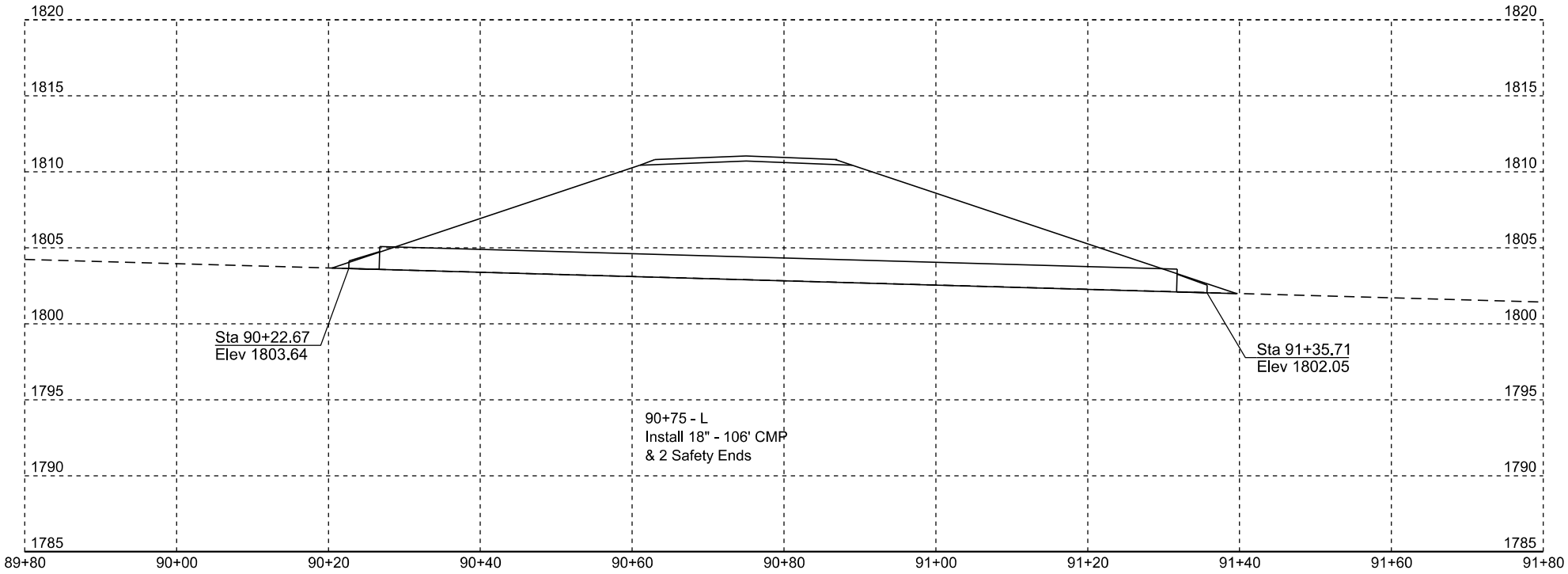


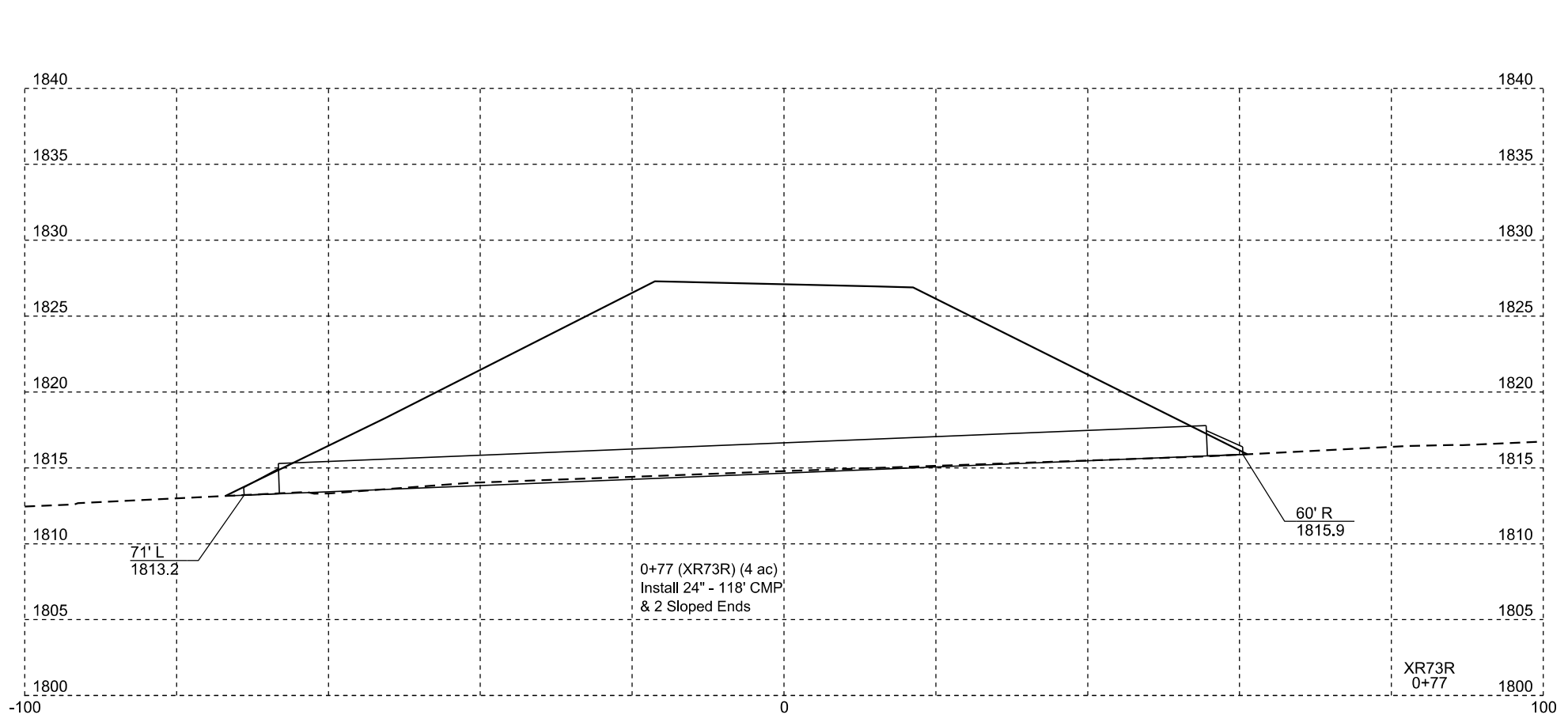


Plotting Date: 07/27/2023

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P-0025(100)196	Z2	Z6

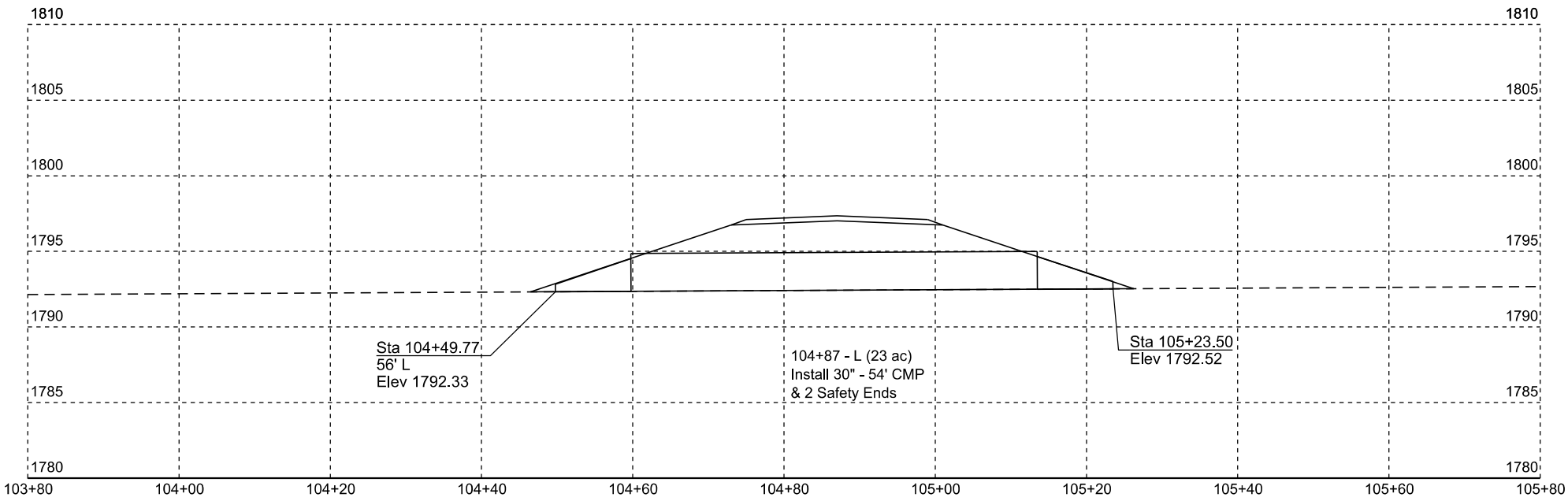


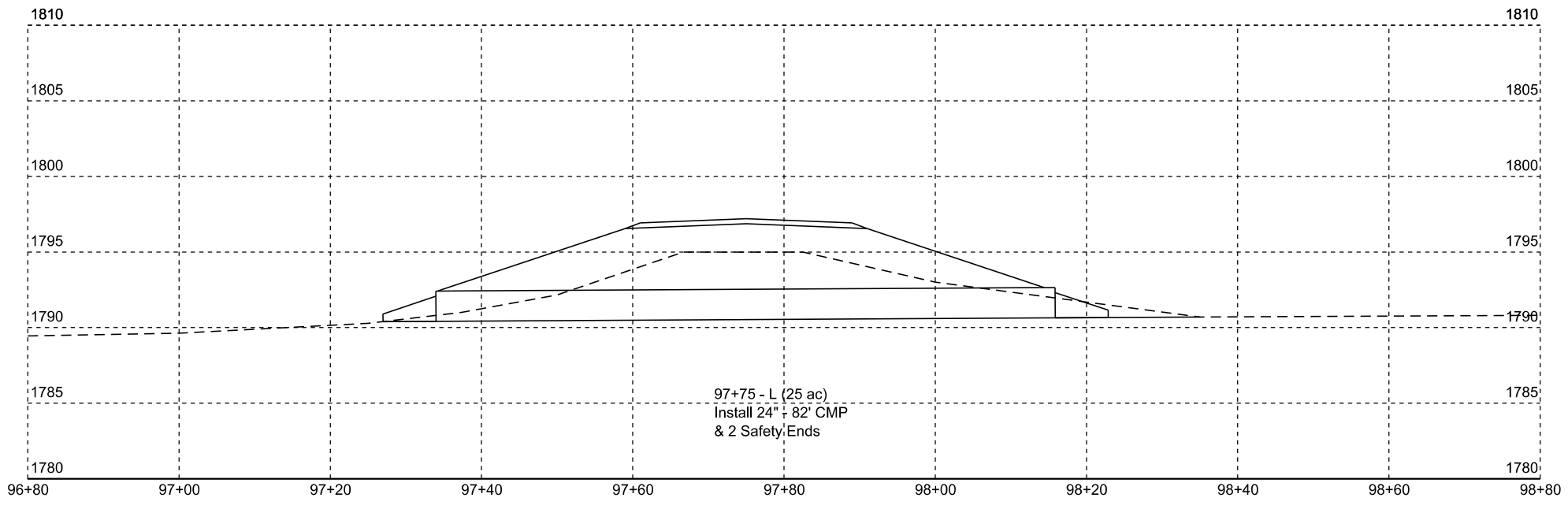


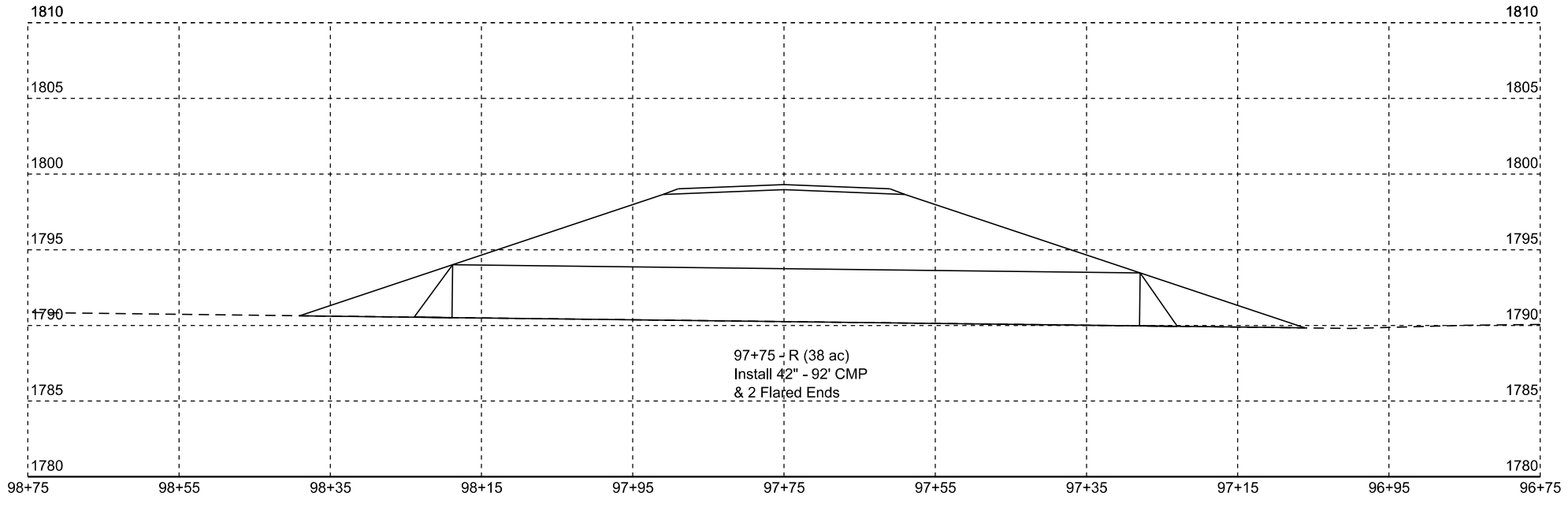


Plotting Date: 01/15/2025

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P-0025(100)196	Z3	Z6

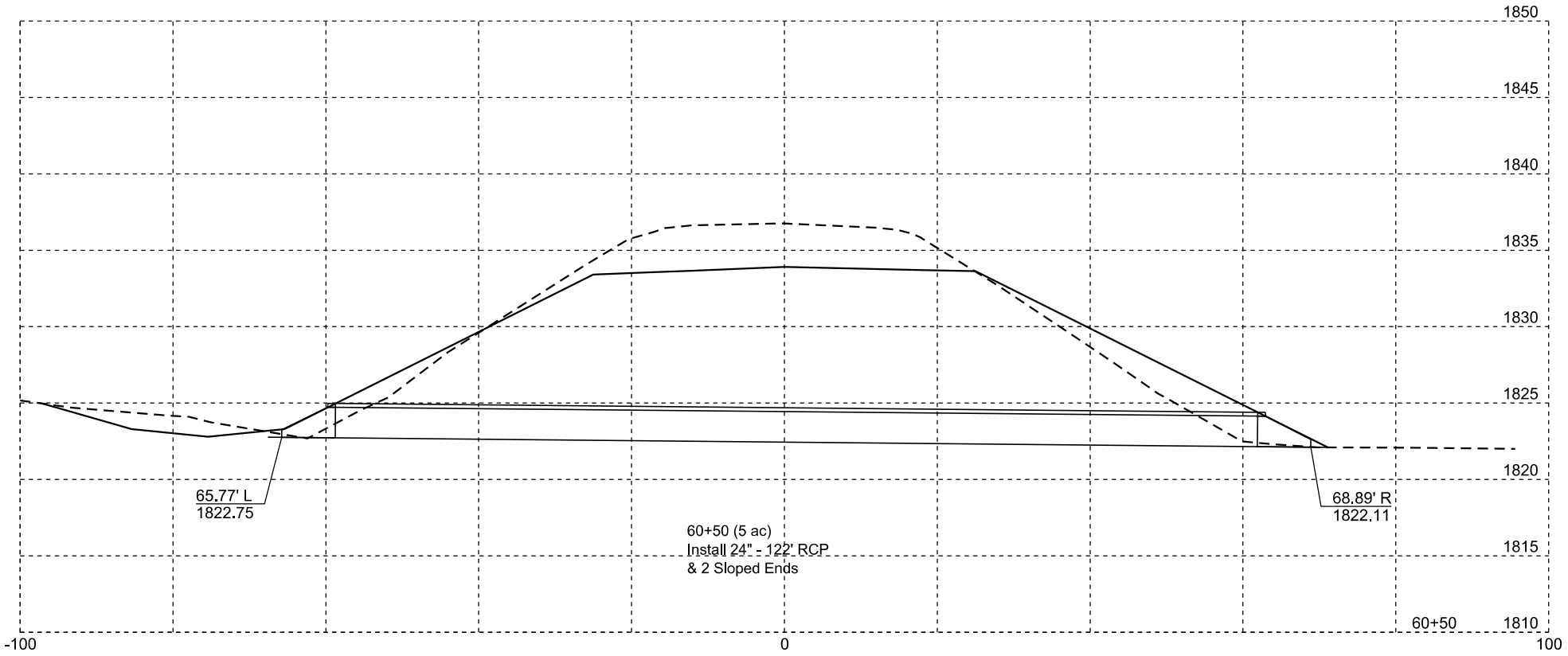


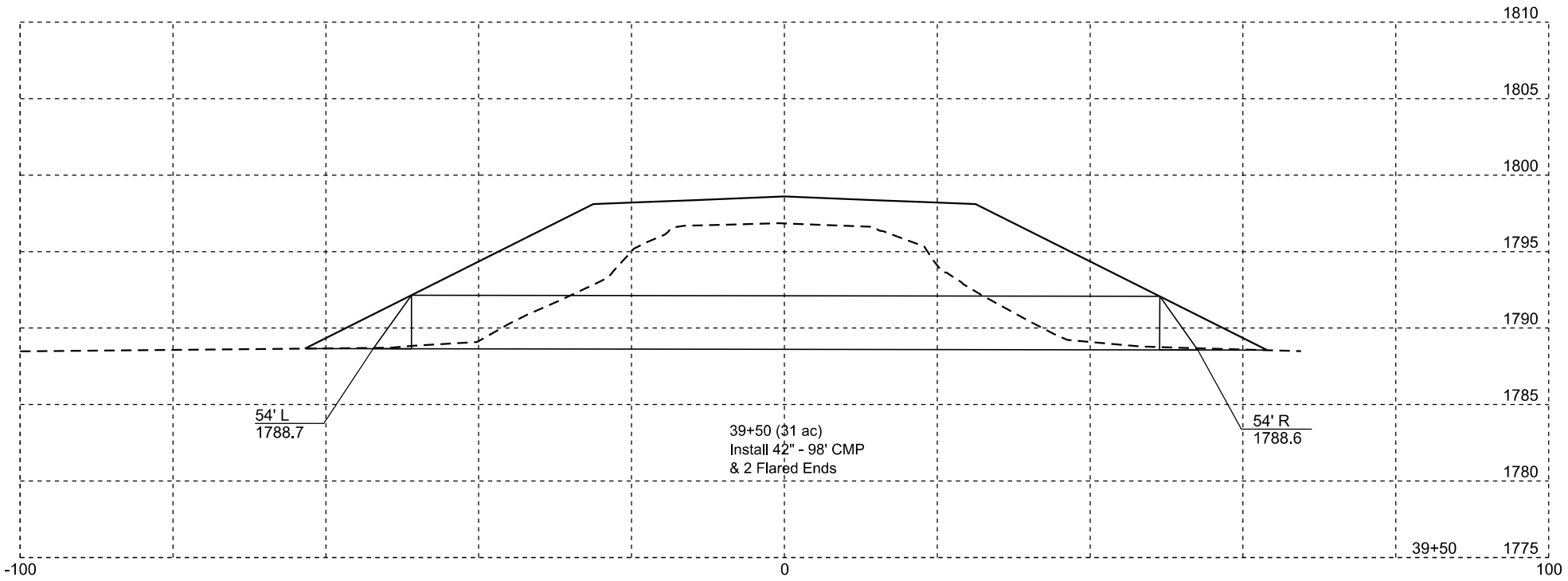


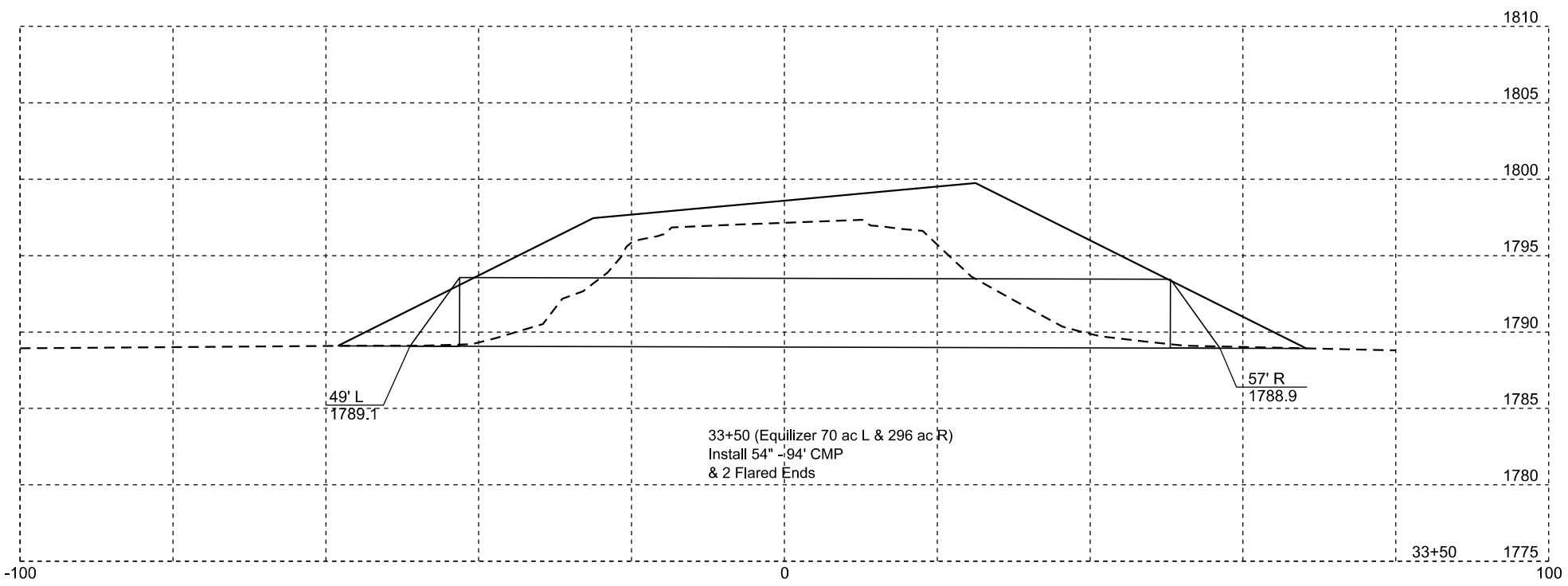


Plotting Date: 01/15/2025

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P-0025(100)196	Z4	Z6

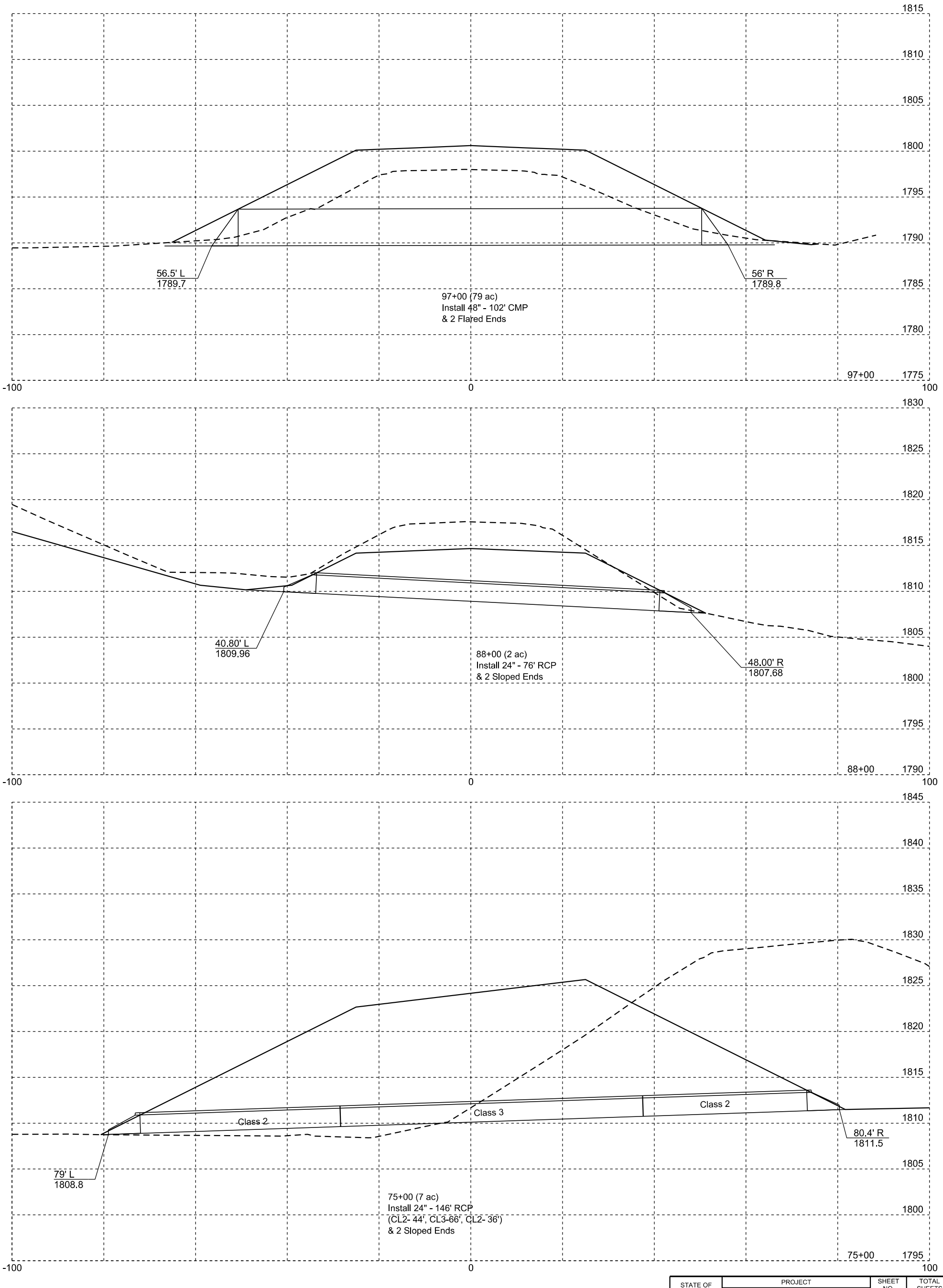






Plotting Date: 01/15/2025

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P-0025(100)196	Z5	Z6



Plotting Date: 09/10/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P-0025(100)196	Z6	Z6