

SECTION M: PAVEMENT MARKING PLANS

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET M1	TOTAL SHEETS M26
-----------------------	------------------------------	-------------	---------------------

Plotting Date: 09/23/2024

INDEX OF SHEETS

M1	General Layout with Index
M2	Estimate with General Notes & Tables
M3-M4	Pavement Markings Layout
M5-M25	Pavement Markings
M26	Standard Plates



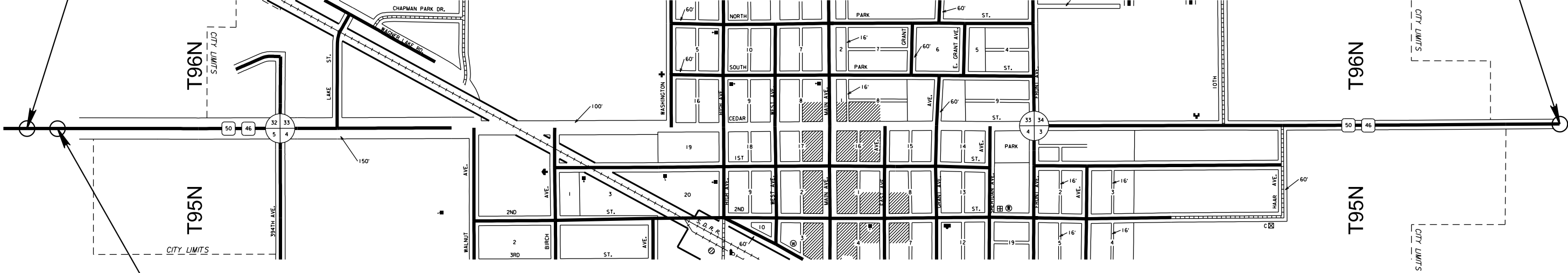
END NH-CR 0046(69)288
END GRADING
Station 124+66.00

BEGIN NH-CR 0046(69)288
Station 9+55.00

BEGIN GRADING
Station 11+00.00

R63W
WAGNER

R63W



SECTION M ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E3000	Durable Pavement Marking, 4" White	25,055	Ft
633E3005	Durable Pavement Marking, 4" Yellow	26,150	Ft
633E3030	Durable Pavement Marking, 24" White	1,160	Ft
633E3035	Durable Pavement Marking, 24" Yellow	90	Ft
633E3040	Durable Pavement Marking, Area	55	SqFt
633E3045	Durable Pavement Marking, Arrow	67	Each
633E3055	Durable Pavement Marking, Lane Reduction Arrow	7	Each
633E5100	Grooving for Durable Pavement Marking, 4"	51,205	Ft
633E5115	Grooving for Durable Pavement Marking, 24"	1,250	Ft
633E5120	Grooving for Durable Pavement Marking, Area	55	SqFt
633E5125	Grooving for Durable Pavement Marking, Arrow	67	Each
633E5131	Grooving for Durable Pavement Marking, Lane Reduction Arrow	7	Each

DURABLE PAVEMENT MARKINGS

Durable Pavement Markings will be MFUA-10, modified polyacrylate, as the material for all pavement markings as shown on the plans. The pavement markings will be applied in accordance with the Special Provisions for Durable Pavement Markings.

The Department will randomly select one test location per mile of each edge line including ramps and one test location per mile of centerline (solid and/or skip line will be considered as one centerline). Three retroreflectivity readings will be taken at each test location. The three readings will be averaged and become the reading for that test location.

Initial readings:

Pavement Marking Color	Minimum Value
White	350 mc/m ² /lux
Yellow	275 mc/m ² /lux

All pavement markings not conforming to the requirements provided in these plans will be considered deficient and will be removed and replaced. Additional retroreflectivity readings will be taken by the Department to determine the limits of removal. The removal will be accomplished using suitable sand blasting or grinding equipment unless the Engineer authorizes other means. The removal process will remove at least 90% of the deficient line, with no excessive scarring of the existing pavement. The removal width will be one inch wider all around the nominal width of the pavement marking to be removed. Removal and replacement of the pavement markings will be at the Contractor's expense, with no cost incurred by the State.

GROOVING FOR PAVEMENT MARKING

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. The cleaning of the residue for grooving will be to the satisfaction of the Engineer and may require more than one pass to adequately remove material. All costs for the removal of grinding and/or grooving residue will be included in the contract unit price per foot of "Grooving for Durable Pavement Marking, 4" White", "Grooving for Durable Pavement Marking, 4" Yellow", "Grooving for Durable Pavement Marking, 24" White", "Grooving for Durable Pavement Marking, 24" Yellow", "Grooving for Durable Pavement Marking, Lane Reduction Arrow", "Grooving for Durable Pavement Marking, Arrow", "Grooving for Durable Pavement Marking, Area".

LANE TAPER STA 9+55 TO 16+15

SD46 transitions from the existing 3 - 12' lane section at Station 9+55 to the new 5 - 11' lane section at Station 16+15 as shown on plan sheets.

PAVEMENT MARKING LAYOUTS

Pavement Marking Layouts detail longitudinal pavement marking placement on SD46 according to the longitudinal joints. Pavement Marking Layouts are included for both the 5-lane section and the 3-lane section. All costs for applying the longitudinal pavement markings in accordance with the Pavement Marking Layouts will be incidental to the contract unit price per foot for "Durable Pavement Marking, 4" White", "Durable Pavement Marking, 4" Yellow".

YIELD LINE TRIANGLES

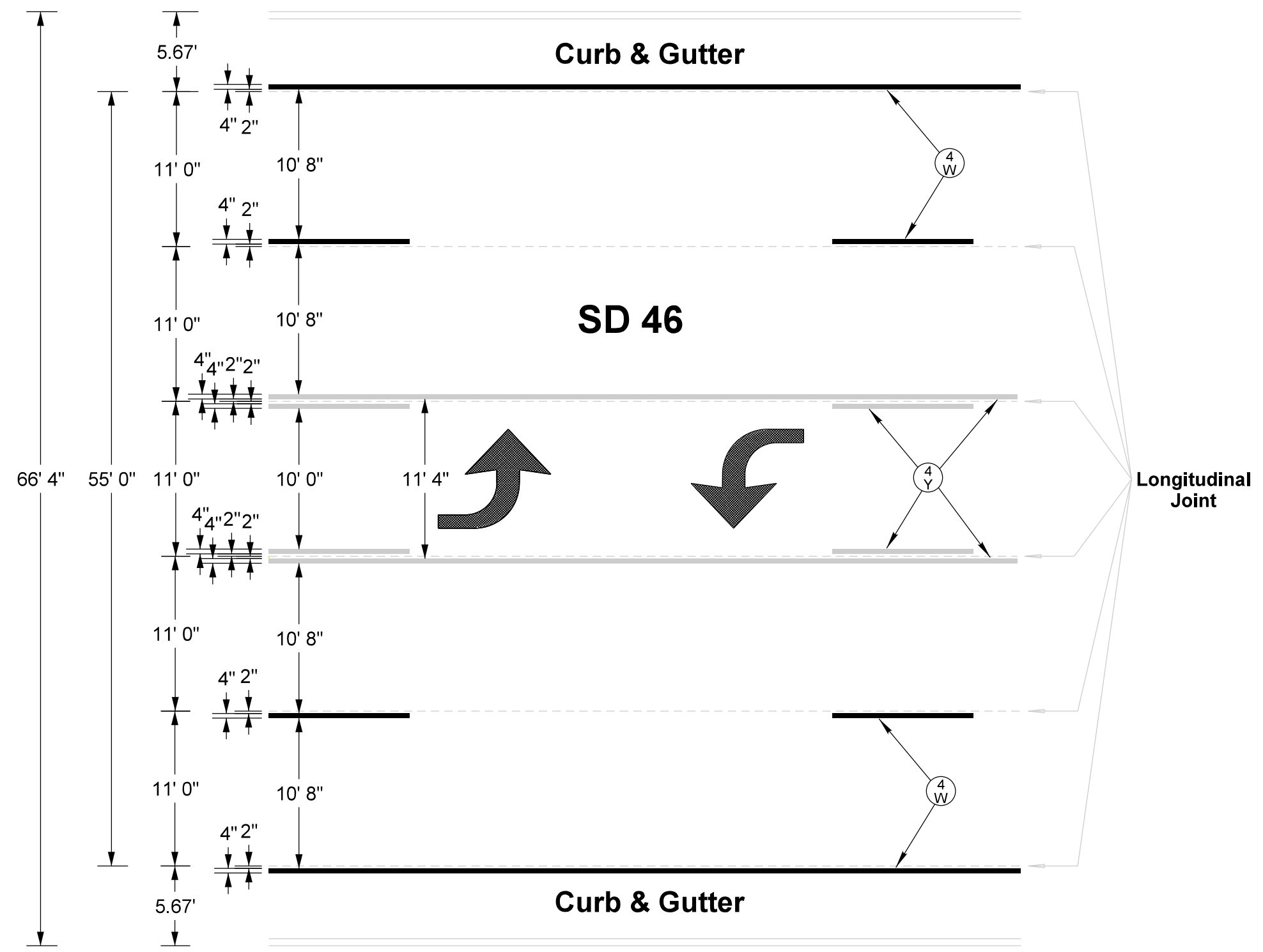
Triangular markings used in the yield lines will have a 12" base and a height of 18". The space between the triangles will be 12". The point of the triangle will be oriented towards oncoming vehicles.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	M3	M26

Plotting Date: 09/23/2024

PAVEMENT MARKING LAYOUT

SD46 5-LANE SECTION THROUGH WAGNER



Plot Scale - 1:8.71016

Plotted From - TRPR17199

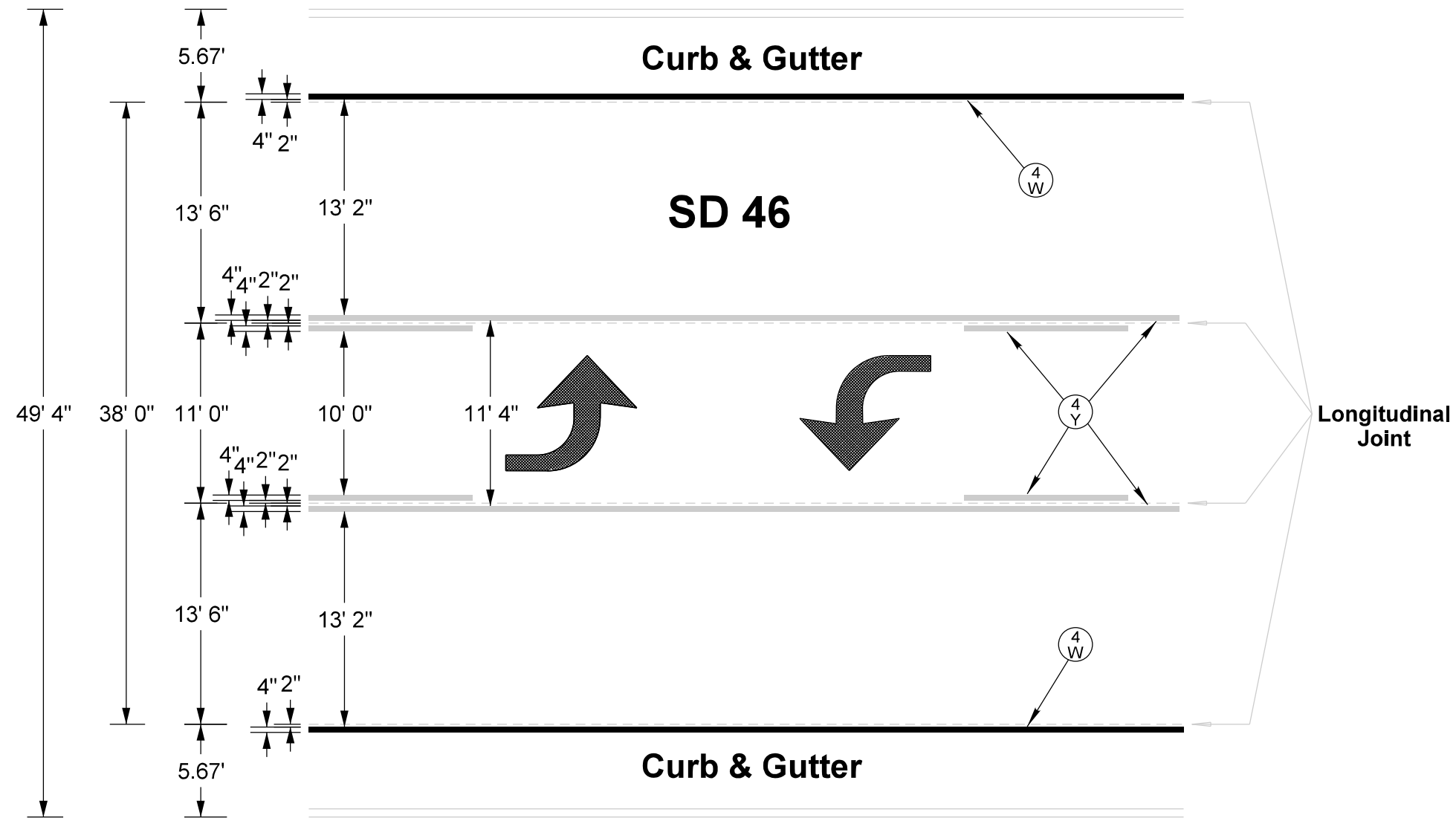
File - ...M6 Mark thru Wagner 05.JN.dgn

PAVEMENT MARKING LAYOUT

SD46 3-LANE SECTION THROUGH WAGNER

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	M4	M26

Plotting Date: 09/23/2024



PAVEMENT MARKINGS

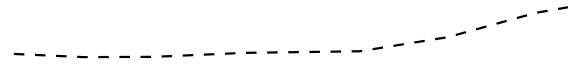
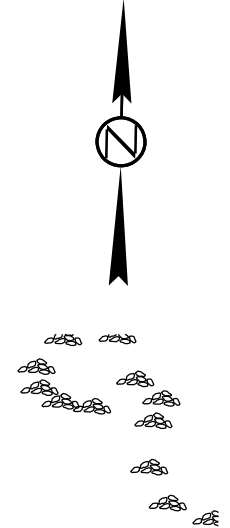
SD HWY 46 WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET M5	TOTAL SHEETS M26
-----------------------	------------------------------	-------------	---------------------

Plotting Date: 09/23/2024

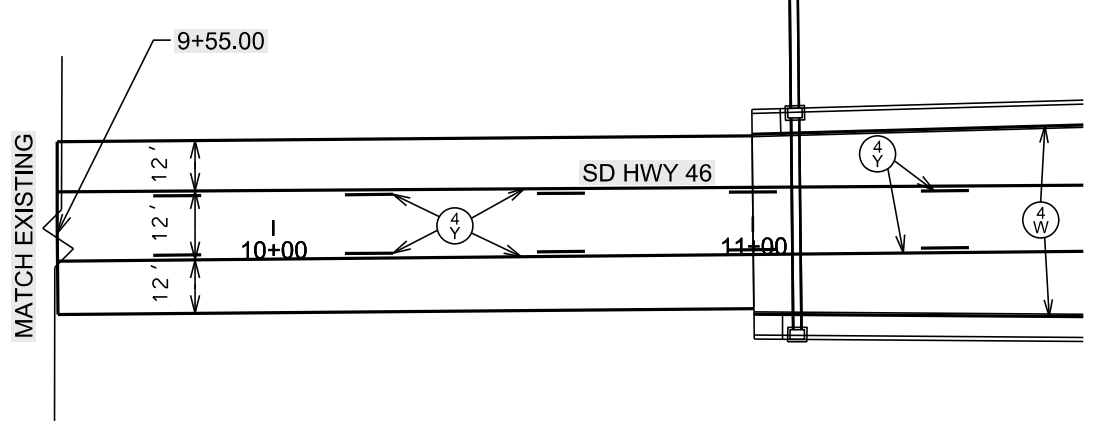
Plot Scale - 1:40

Plotted From - TRPR17199



KEY			
KEY	ITEM	EST QUANT	UNIT
Ⓞ ₄ W	Durable Pavement Marking, 4" White	25,055	FT
Ⓞ ₄ Y	Durable Pavement Marking, 4" Yellow	26,150	FT
Ⓞ ₂₄ W	Durable Pavement Marking, 24" White	1,160	FT
Ⓞ ₂₄ Y	Durable Pavement Marking, 24" Yellow	90	FT
▴	Durable Pavement Marking, Area (0.75 SQFT Each)	55	SQFT
→	Durable Pavement Marking, Lane Reduction Arrow	7	EACH
↶	Durable Pavement Marking, Arrow (Left - 67)	67	EACH

9+00



File - U:\traj\cmix\05\1009pm.dgn

PAVEMENT MARKINGS

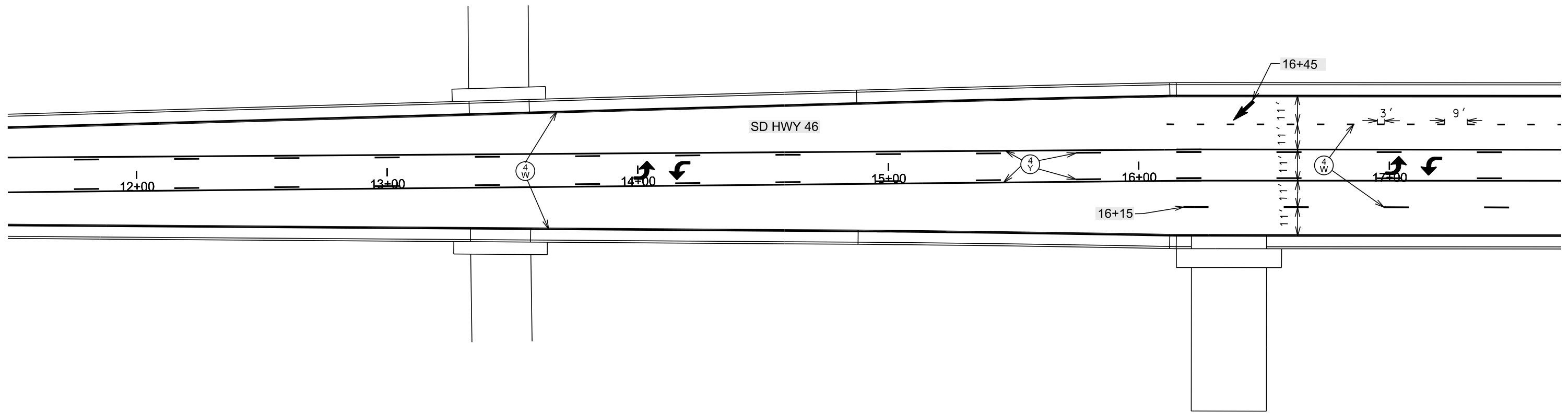
SD HWY 46
WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	M6	M26

Plotting Date: 09/23/2024



Plot Scale - 1:40



Plotted From - TRPR17199

File - U:\trproj\cmx\05\JN1012pm.dgn

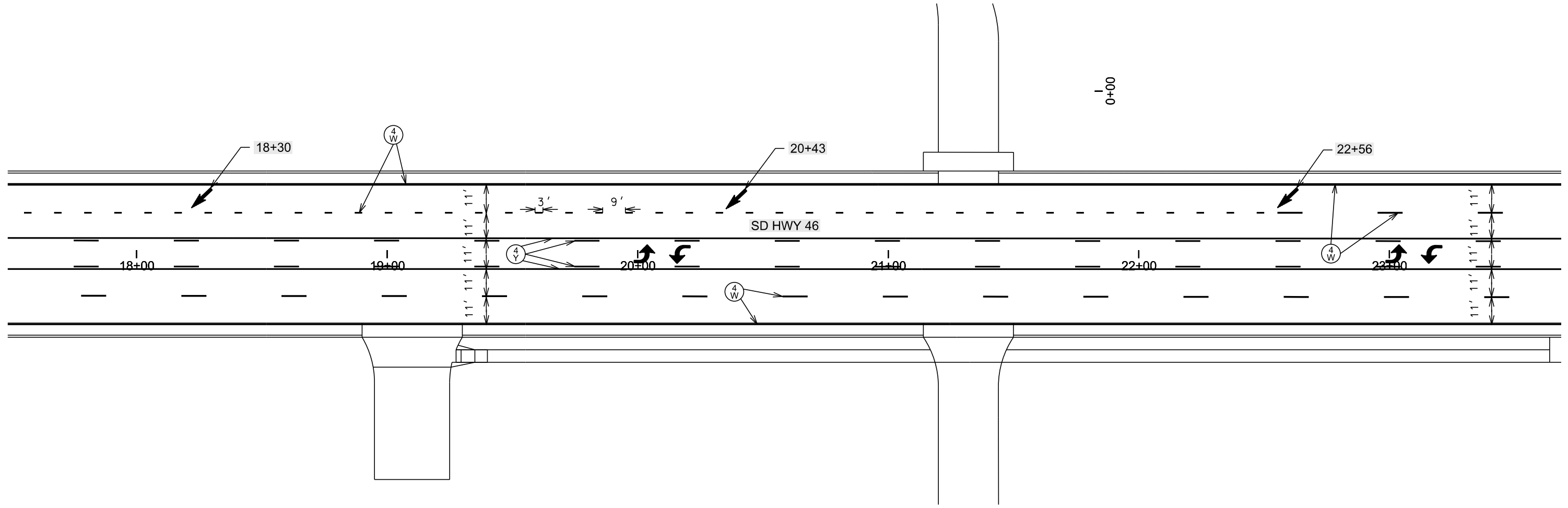
PAVEMENT MARKINGS

SD HWY 46

WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	M7	M26

Plotting Date: 09/23/2024



Plot Scale - 1:40

Plotted From - TRPR17199

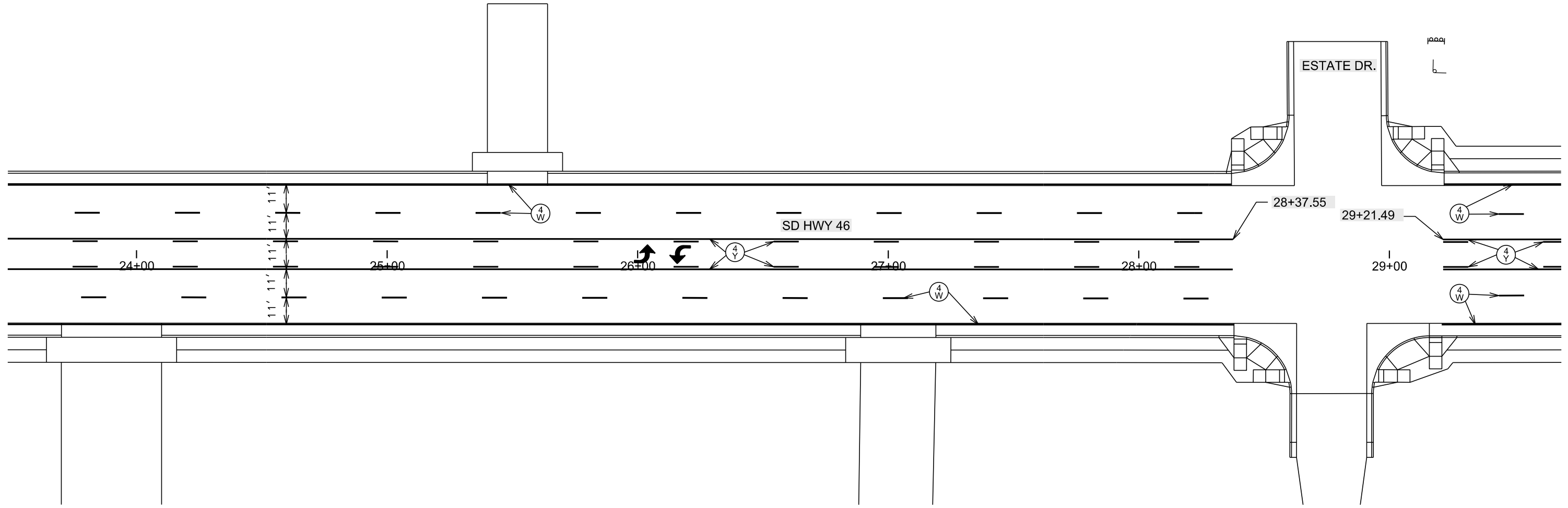
File - U:\trproj\cmx05\JN1018pm.dgn

PAVEMENT MARKINGS

SD HWY 46

WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET M8	TOTAL SHEETS M26
Plotting Date: 09/23/2024			



Plot Scale - 1:40

Plotted From - TRPR17199

File - U:\trp\jcm\105\1024\pm.dgn

PAVEMENT MARKINGS

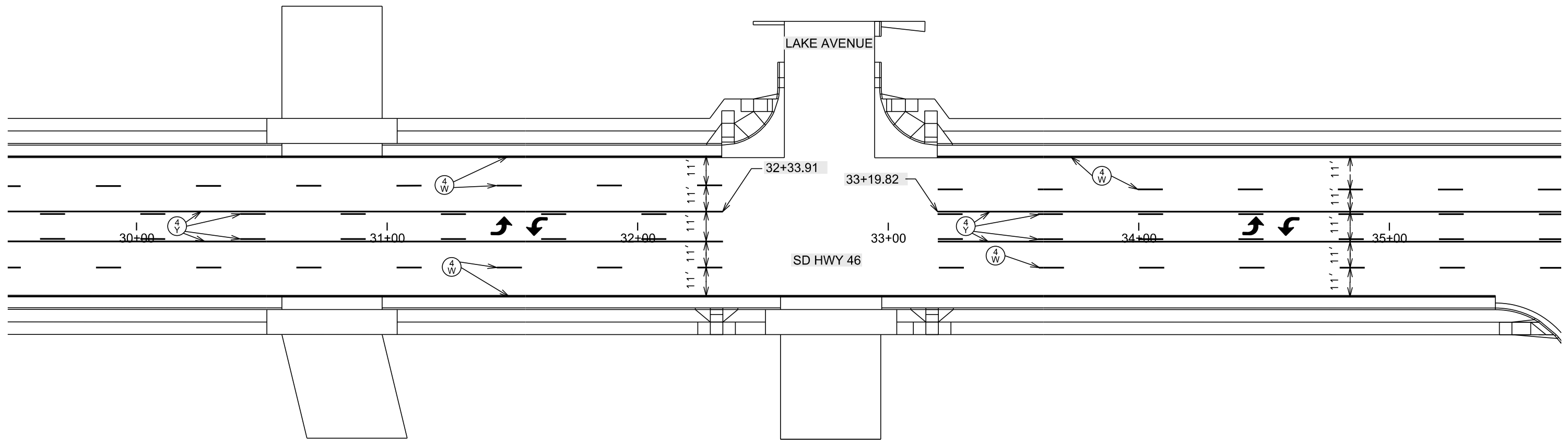
SD HWY 46

WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	M9	M26
Plotting Date: 09/23/2024			



Plot Scale - 1:40



Plotted From - TRPR17199

File - U:\trp\jcm\105\1030pm.dgn

PAVEMENT MARKINGS

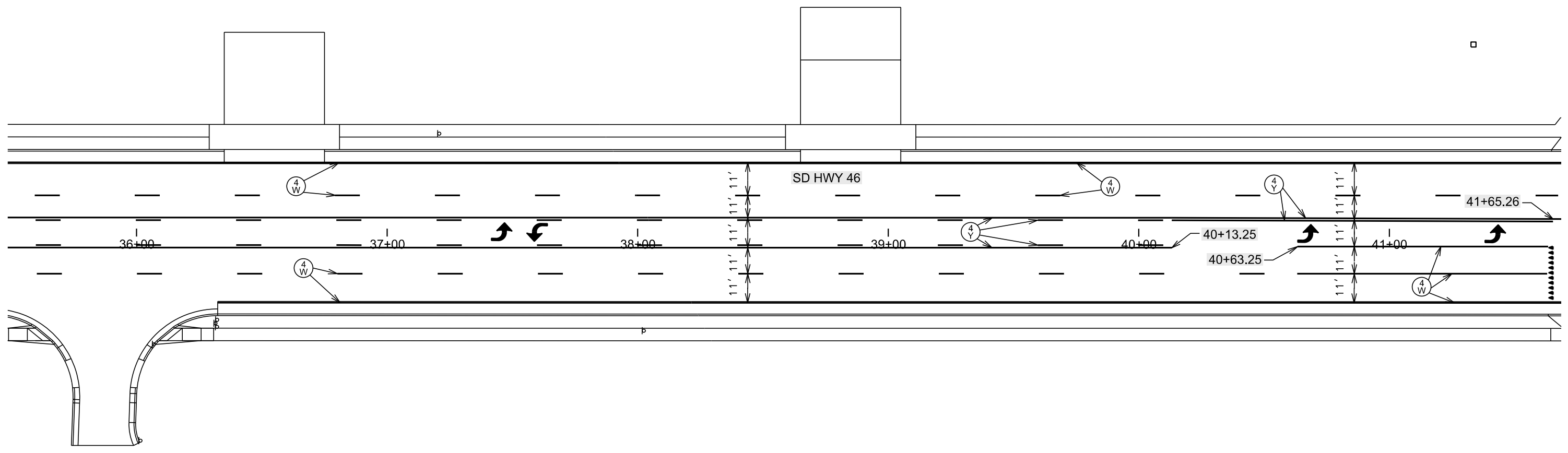
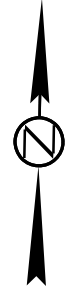
SD HWY 46

WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET M10	TOTAL SHEETS M26
-----------------------	------------------------------	--------------	---------------------

Plotting Date: 09/23/2024

Plot Scale - 1:40



Plotted From - TRPR17199

File - U:\tr\proj\cmix\05\JN1036pm.dgn

PAVEMENT MARKINGS

SD HWY 46 WAGNER, SD

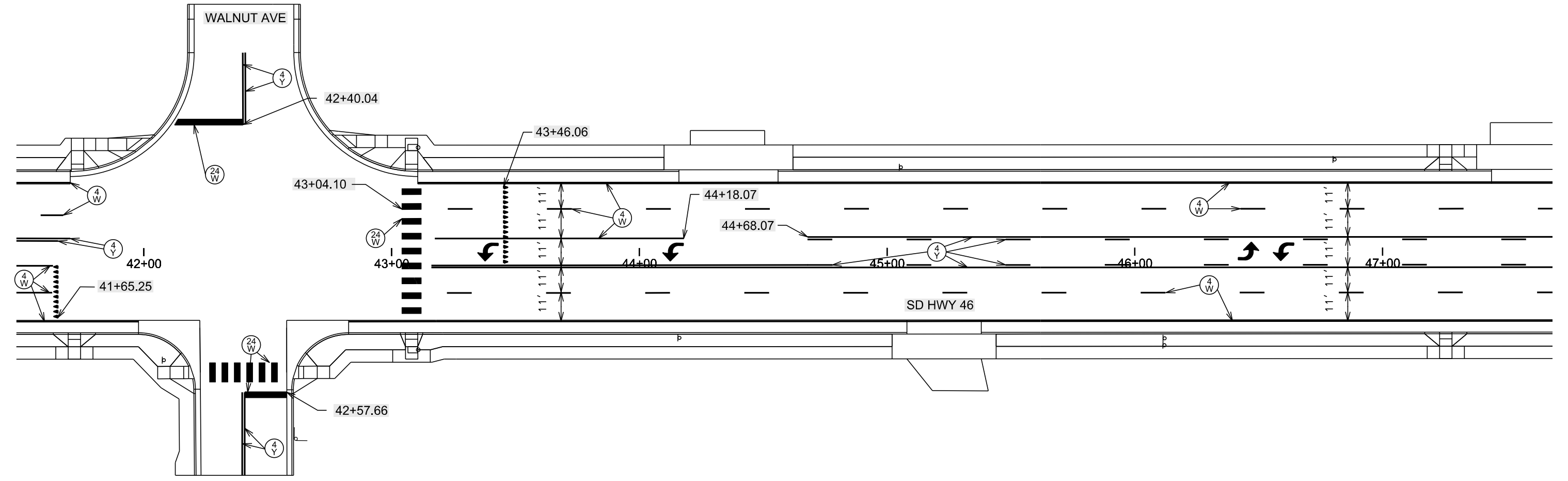
STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET M11	TOTAL SHEETS M26
-----------------------	------------------------------	--------------	---------------------

Plotting Date: 09/23/2024



Plot Scale - 1:40

Plotted From - TRPR17199



File - U:\trproj\cmx\05\10\042pm.dgn

PAVEMENT MARKINGS

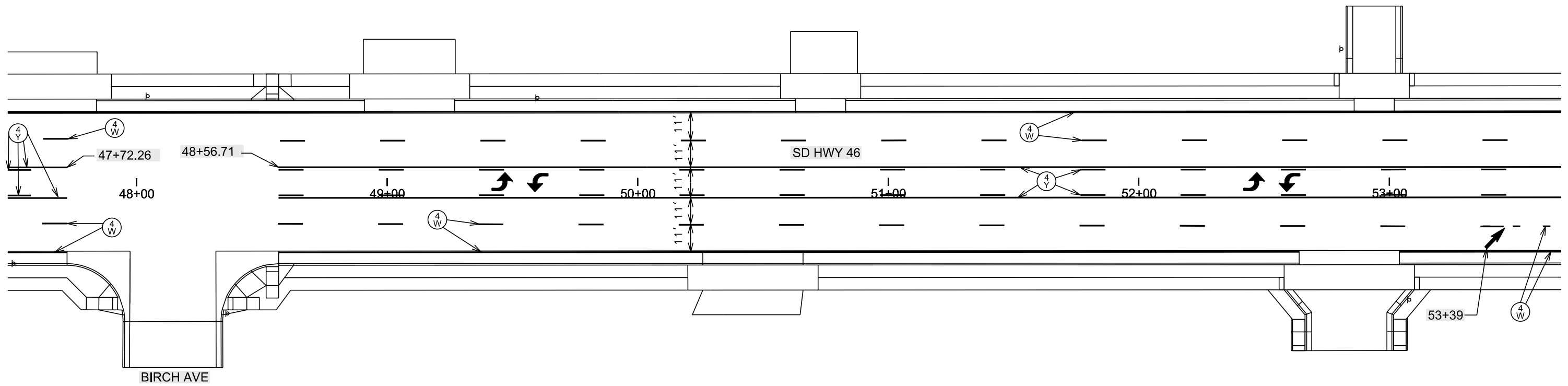
SD HWY 46

WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET M12	TOTAL SHEETS M26
Plotting Date: 09/23/2024			



Plot Scale - 1:40



Plotted From - TRPR17199

File - U:\trproj\cmix\05\10\048pm.dgn

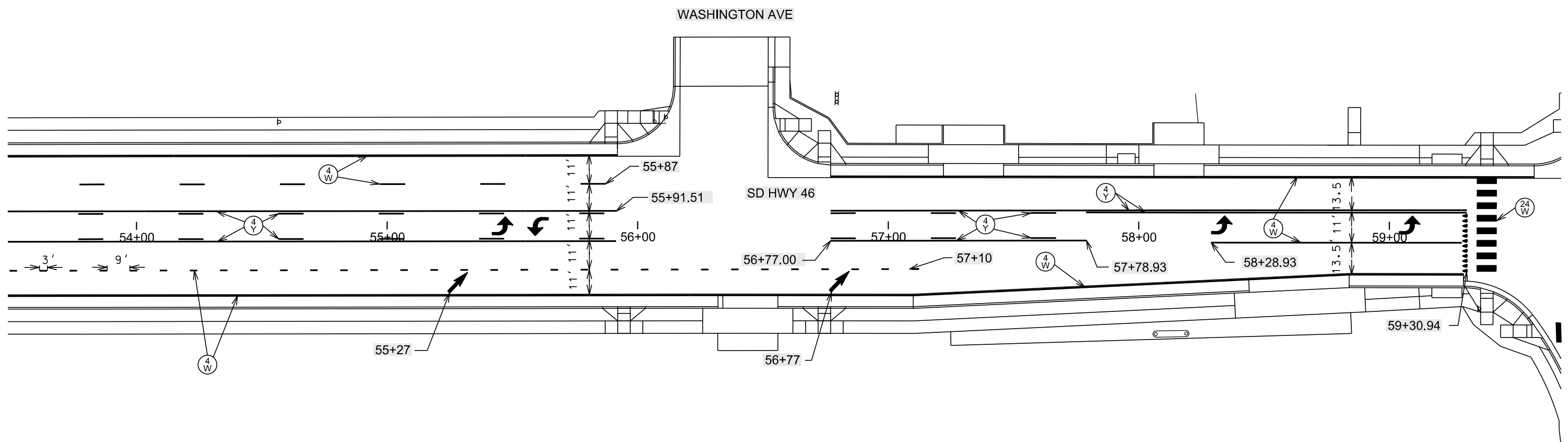
PAVEMENT MARKINGS

SD HWY 46

WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	M13	M26
Plotting Date: 09/23/2024			

Plot Scale - 1:40



Plotted From - TRPR17199

File - U:\trp\jcm\mix05\JN1054pm.dgn

PAVEMENT MARKINGS

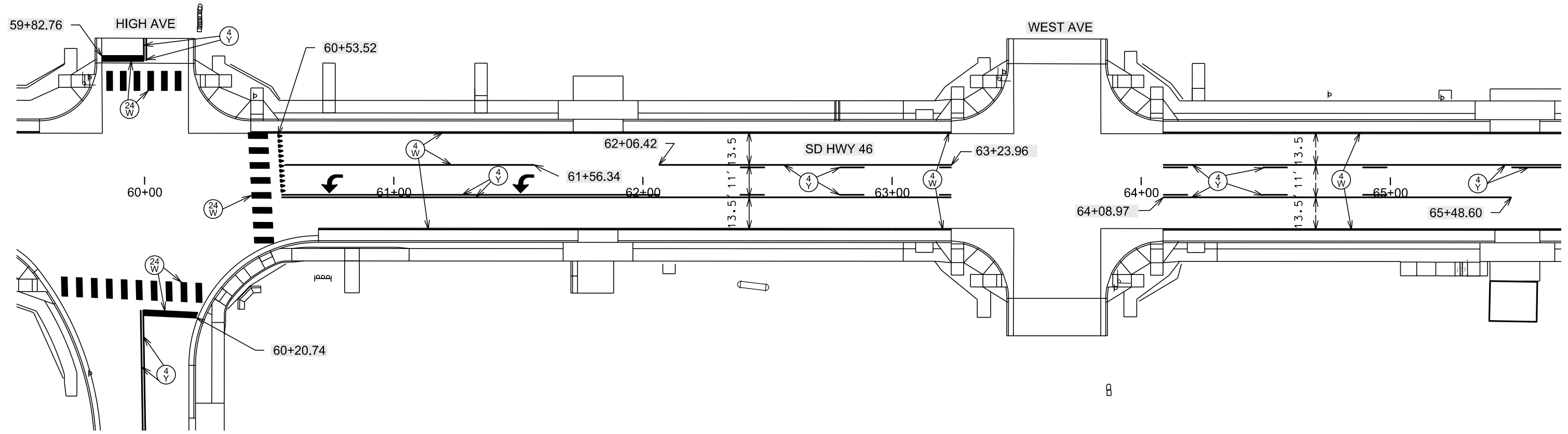
SD HWY 46

WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET M14	TOTAL SHEETS M26
Plotting Date: 09/23/2024			



Plot Scale - 1:40



Plotted From - TRPR17199

File - U:\trproj\cmix\05\10\60pm.dgn

PAVEMENT MARKINGS

SD HWY 46

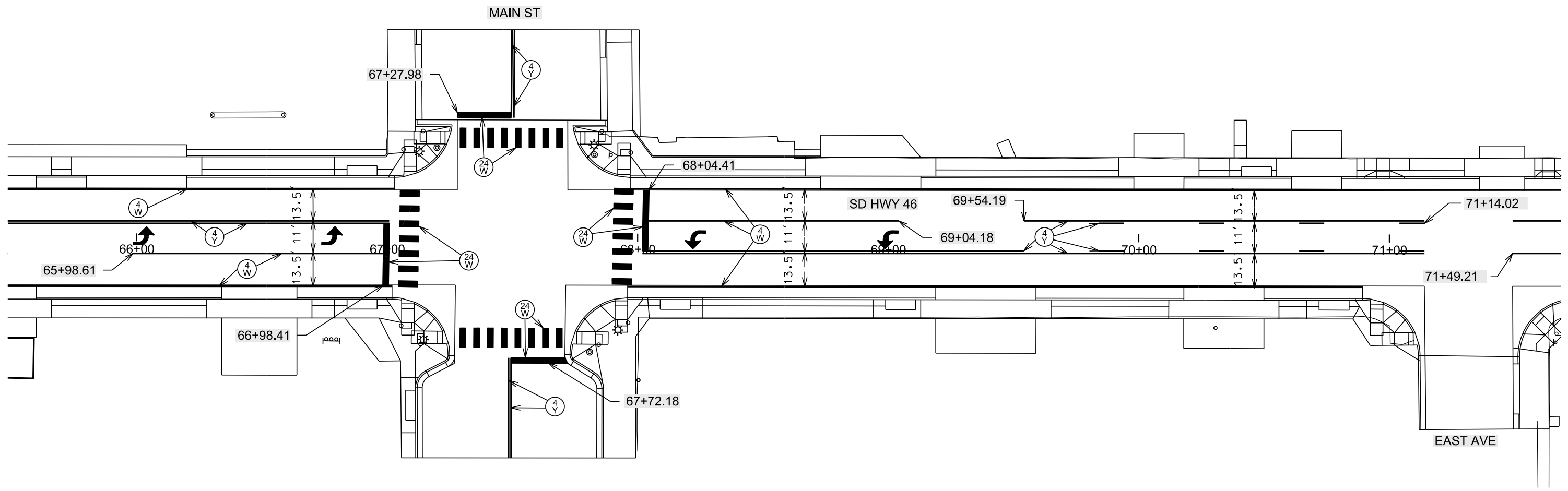
WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET M15	TOTAL SHEETS M26
Plotting Date: 09/23/2024			



Plot Scale - 1:40

Plotted From - TRPR17199



File - U:\trproj\cmix\05\JN1066pm.dgn

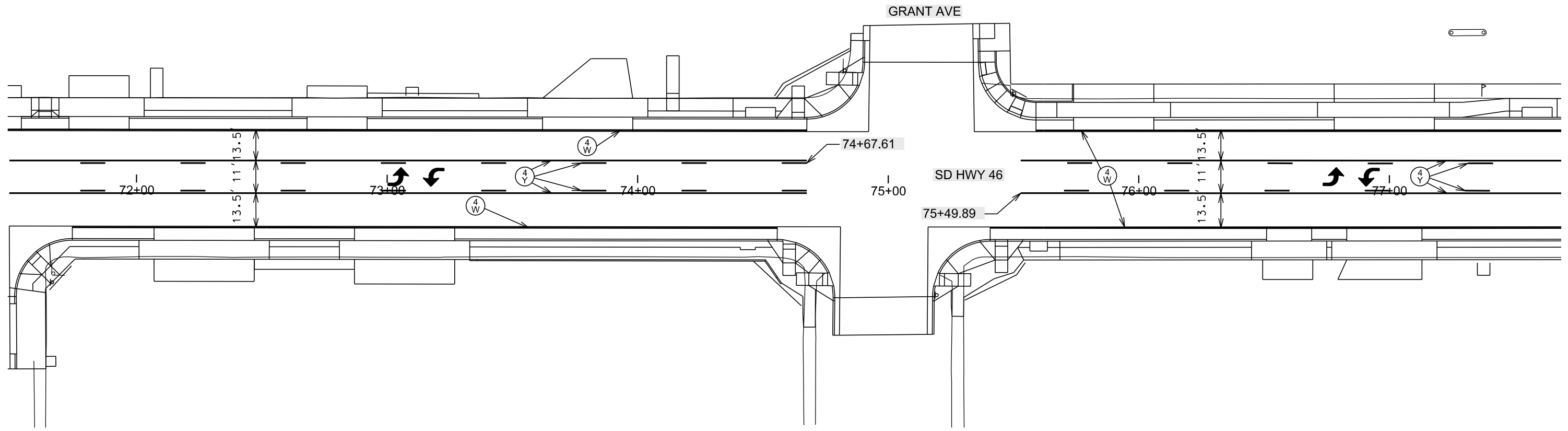
PAVEMENT MARKINGS

SD HWY 46 WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET M16	TOTAL SHEETS M26
Plotting Date: 09/23/2024			



Plot Scale - 1:40



Plotted From - TRPR17199

File - U:\trproj\cmix\05\JN1072pm.dgn

PAVEMENT MARKINGS

SD HWY 46

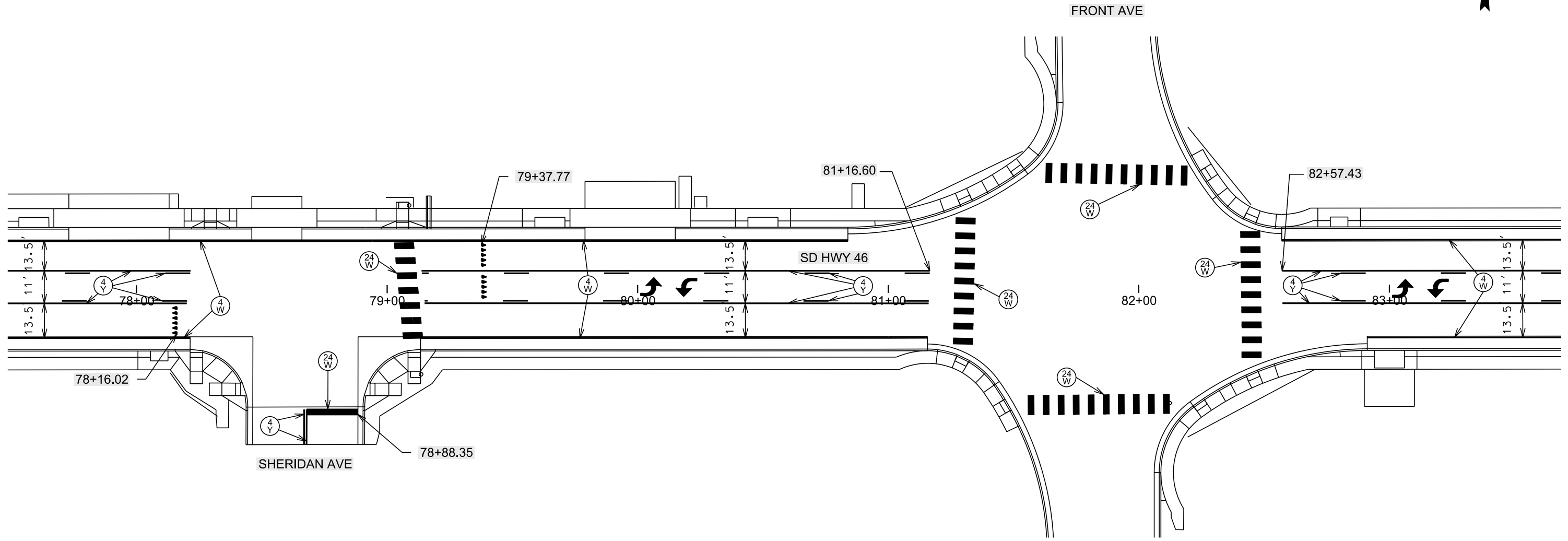
WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	M17	M26
Plotting Date: 09/23/2024			



Plot Scale - 1:40

Plotted From - TRPR17199



File - U:\trproj\cmix\05\JN1078pm.dgn

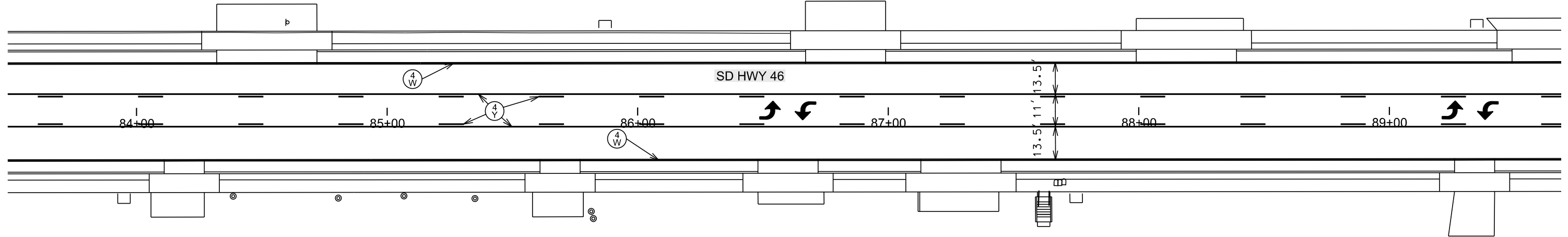
PAVEMENT MARKINGS

SD HWY 46
WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	M18	M26
Plotting Date:		09/23/2024	



Plot Scale - 1:40



Plotted From - TRPR17199

File - U:\trp\jcm\105\1084\pm.dgn

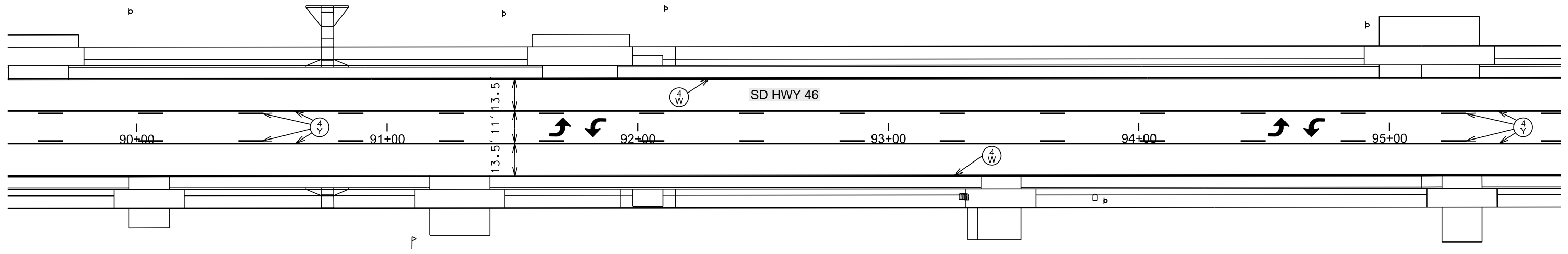
PAVEMENT MARKINGS

SD HWY 46

WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET M19	TOTAL SHEETS M26
Plotting Date: 09/23/2024			

Plot Scale - 1:40



Plotted From - TRPR17199

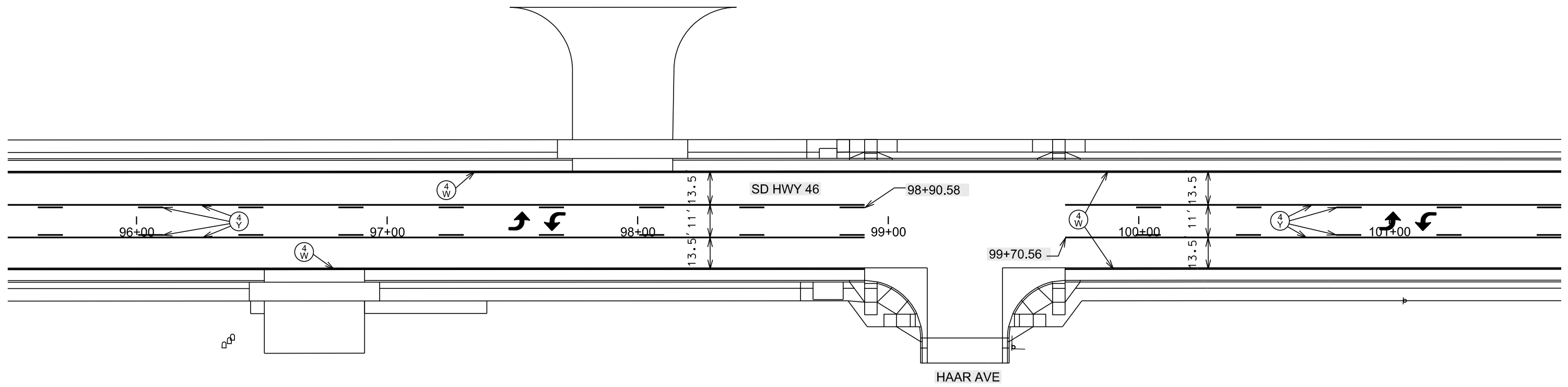
File - U:\trp\jcm\1905\10090pm.dgn

PAVEMENT MARKINGS

SD HWY 46

WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET M20	TOTAL SHEETS M26
Plotting Date: 09/23/2024			



Plot Scale - 1:40

Plotted From - TRPR17199

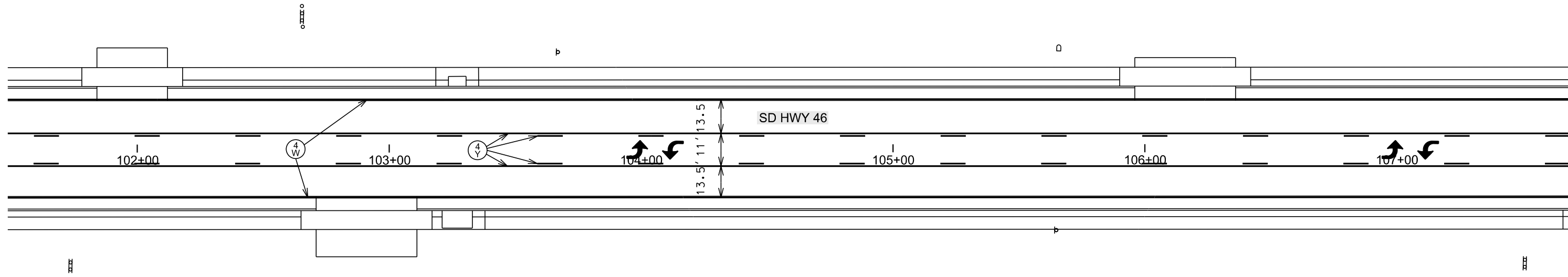
File - U:\trpr\cmix\05\10096pm.dgn

PAVEMENT MARKINGS

SD HWY 46
WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	M21	M26
Plotting Date: 09/23/2024			

Plot Scale - 1:40



Plotted From - TRPR17199

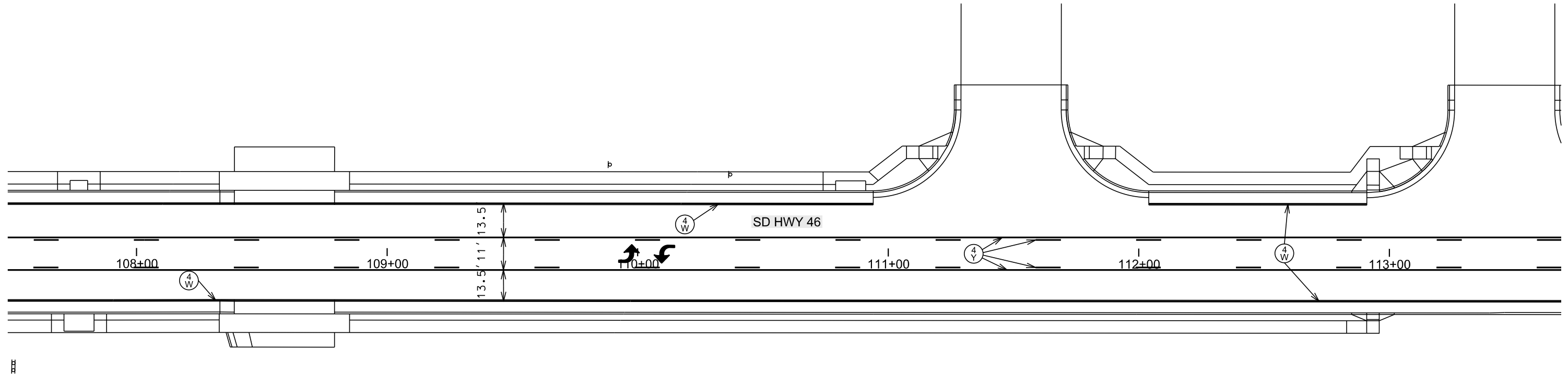
File - U:\trp\jcm\105\JN1102pm.dgn

PAVEMENT MARKINGS

SD HWY 46
WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	M22	M26
Plotting Date: 09/23/2024			

Plot Scale - 1:40



Plotted From - TRPR17199

File - U:\tr\proj\cmix\05\JN1108pm.dgn

PAVEMENT MARKINGS

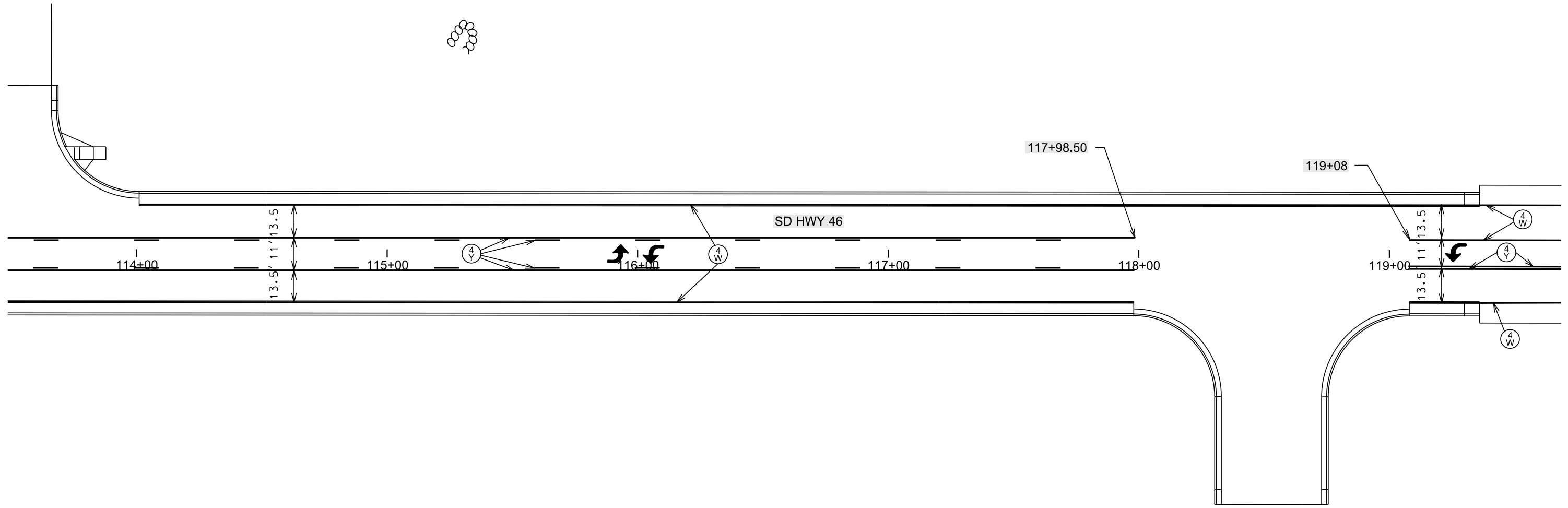
SD HWY 46

WAGNER, SD

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET M23	TOTAL SHEETS M26
-----------------------	------------------------------	--------------	---------------------

Plotting Date: 09/23/2024

Plot Scale - 1:40



Plotted From - TRPR17199

File - U:\proj\cmix\05\N114\pm.dgn

PAVEMENT MARKINGS

SD HWY 46

WAGNER, SD

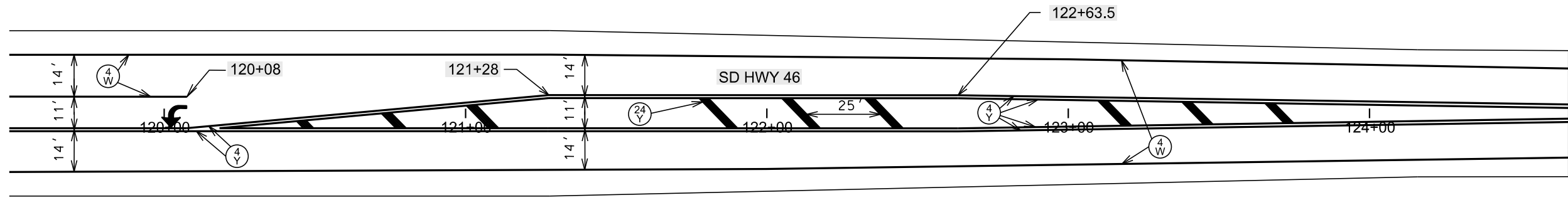
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	M24	M26

Plotting Date: 09/23/2024



Plot Scale - 1:40

Plotted From - TRPR17199



File - U:\proj\cmix\05\N120\pm.dgn

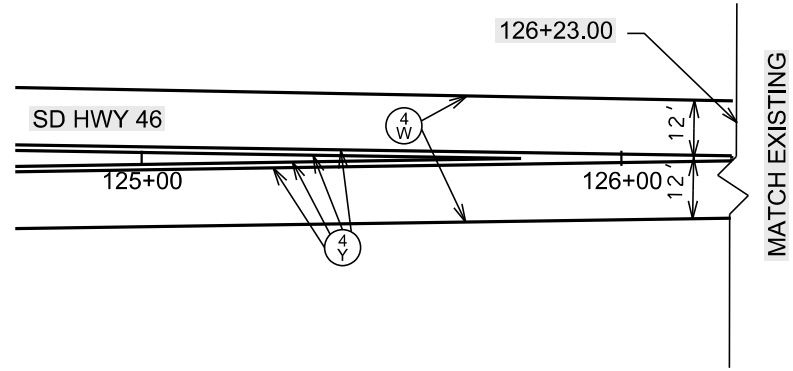
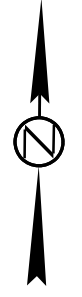
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	M25	M26

Plotting Date: 09/23/2024

PAVEMENT MARKINGS

SD HWY 46

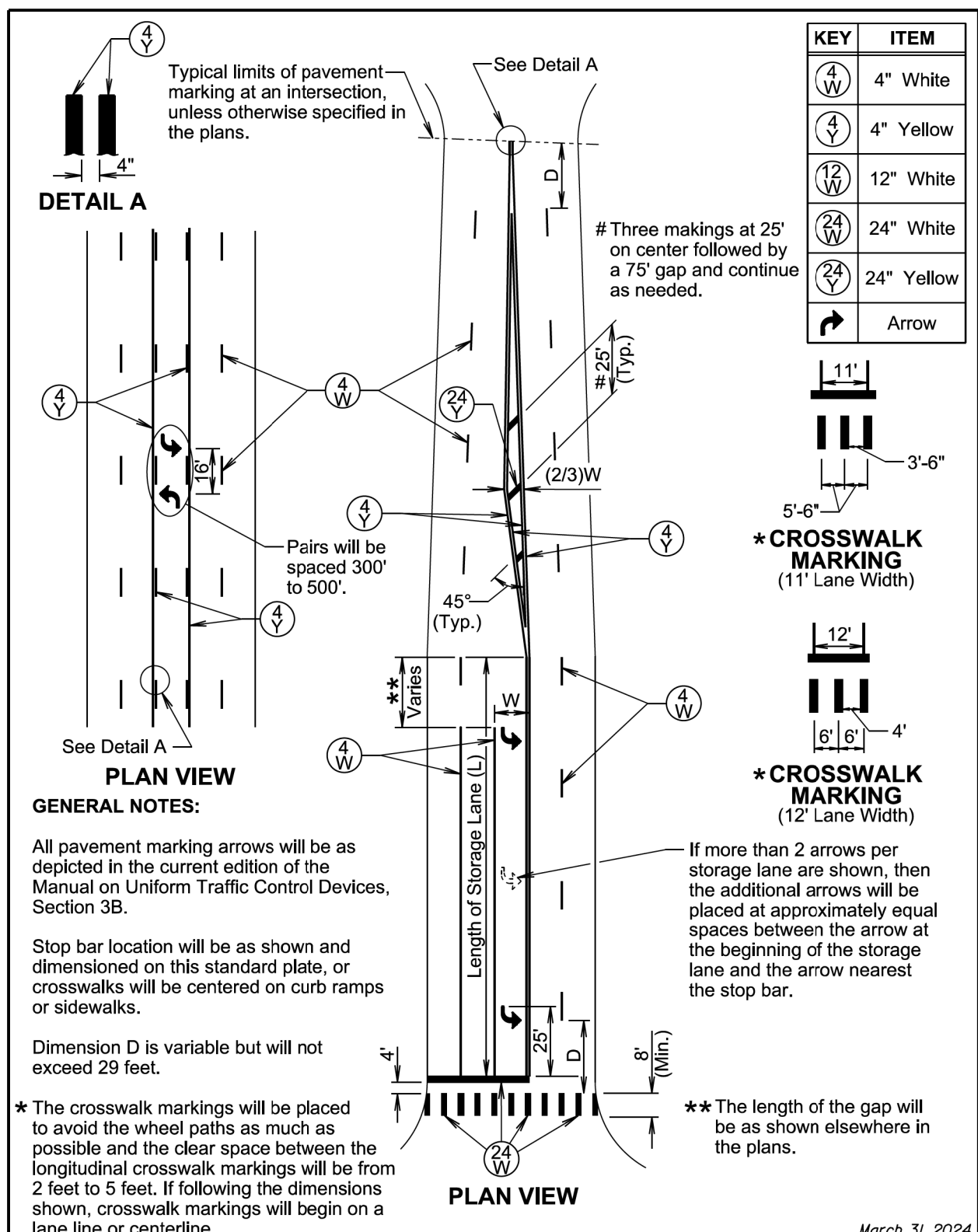
WAGNER, SD



Plot Scale - 1:40

Plotted From - TRPR17199

Plot Scale - 1:200



March 31, 2024

S D D O T	PAVEMENT MARKINGS FOR ADJACENT INTERSECTIONS AND CENTER TURN LANE	PLATE NUMBER 633.01
	Published Date: 2025	Sheet 1 of 1

Plotted From - TRPR17199

File - ...cmix05\N\StdPlatesSectionM.dgn