


SECTION M: PAVEMENT MARKING PLANS

FOR BIDDING PURPOSES ONLY

 STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0012(230)171...+	M1	M10

Plotting Date: 6/20/2024

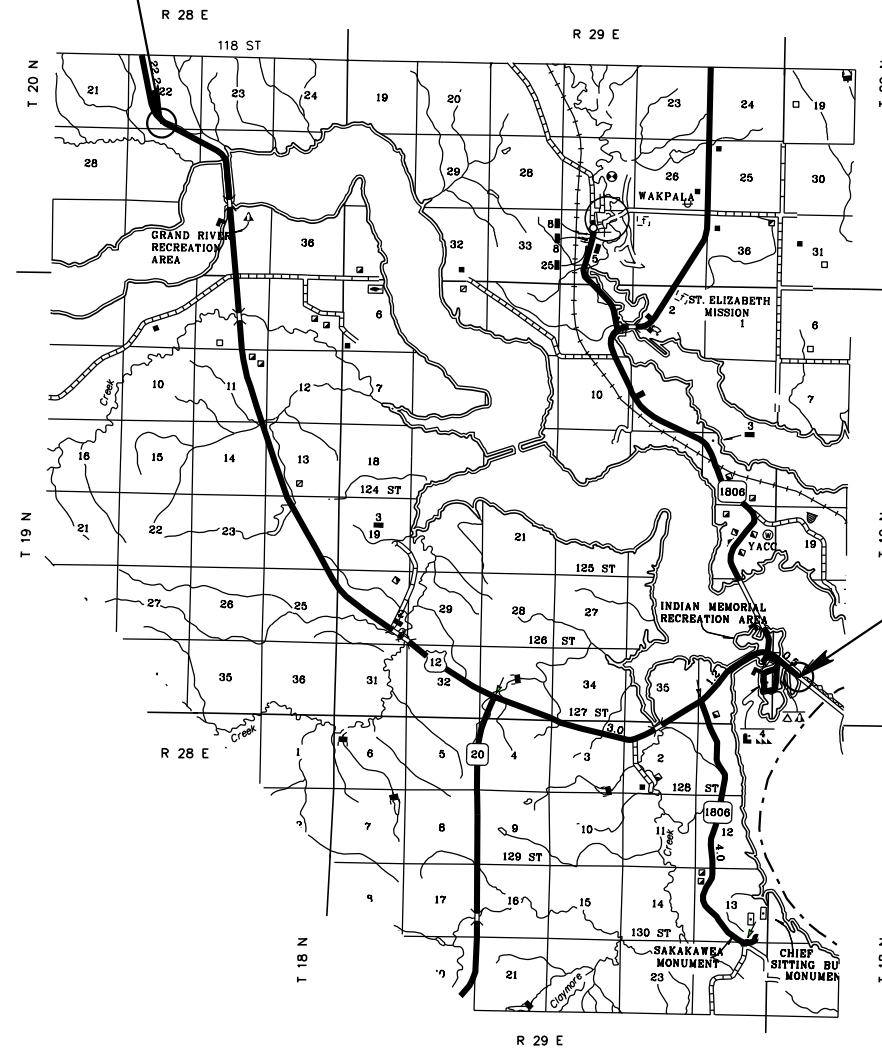
INDEX OF SHEETS

- M1-M3 General Layout with Index
- M4 Estimate with General Notes & Tables
- M5-M7 Pavemnet Marking Layouts
- M8-M9 Pavement Marking Details
- M10 Standard Plates



BEGIN NH 0012(230)171
US 12 - 05TY
STATION 176+72.2

END NH 0012(230)171
US 12 - 05TY
STATION c 268+01.75



Plot Scale - 1:200

Plotted From - svdnevmarczak

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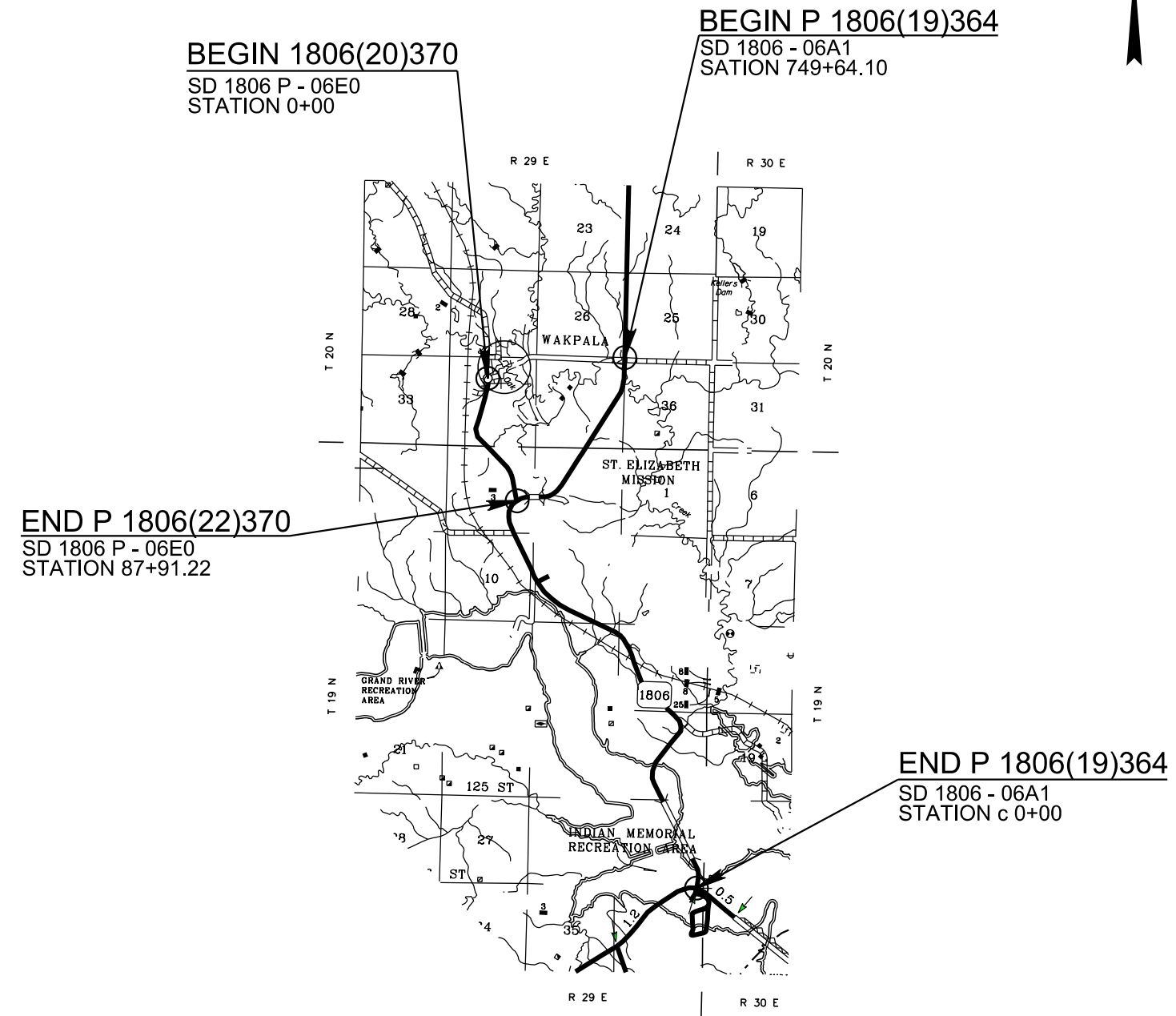
SECTION M: PAVEMENT MARKING PLANS

FOR BIDDING PURPOSES ONLY

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	NH 0012(230)171...+	M2	M10
Plotting Date: 6/20/2024			


Plot Scale - 1:200

Plotted From - svdnevmarczak



SECTION M: PAVEMENT MARKING PLANS

FOR BIDDING PURPOSES ONLY

 STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0012(230)171...+	M3	M10

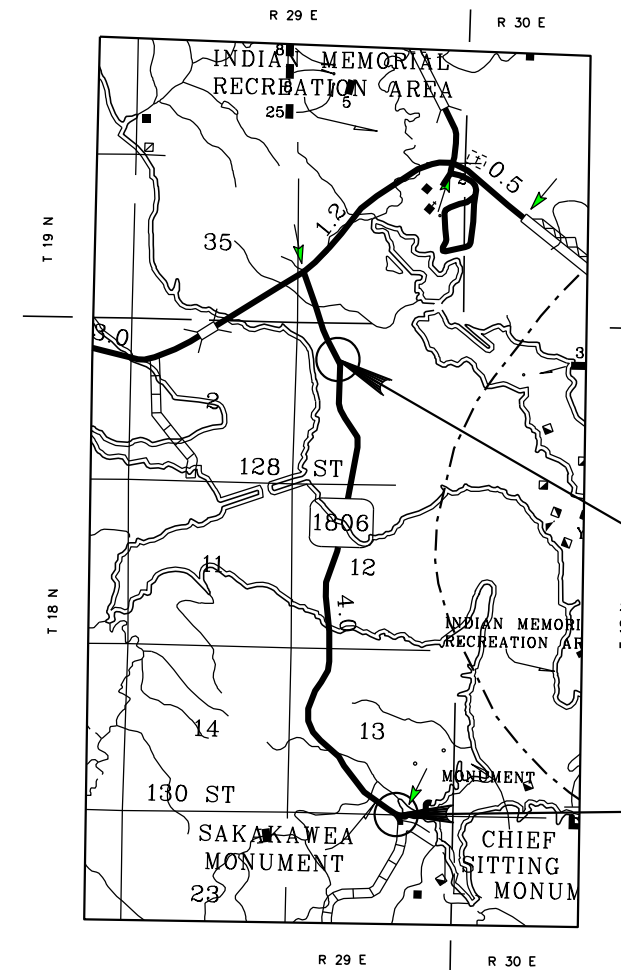
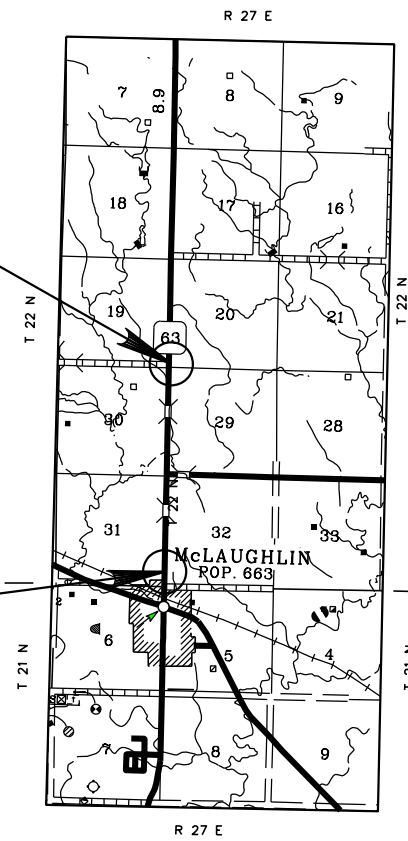
Plotting Date: 6/21/2024

Plot Scale - 1:200

Plotted From - evanwolf

BEGIN P 0063(59)252
SD 63 - 07CD
STATION 288+47.00

END P 0063(59)252
SD 63 - 07CD
STATION 390+50.00



BEGIN 1806(22)359
SD 1806 - 06RC
STATION 69+11.74

END P 1806(22)359
SD 1806 - 06RC
STATION b 229+74.50



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SECTION M ESTIMATE OF QUANTITIES

05TY-Section M

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0010	Cold Applied Plastic Pavement Marking, 4"	25,423	Ft
633E0030	Cold Applied Plastic Pavement Marking, 24"	526	Ft
633E0035	Cold Applied Plastic Pavement Marking, Area	40	SqFt
633E0040	Cold Applied Plastic Pavement Marking, Arrow	14	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	646	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	294	Gal
633E5000	Grooving for Cold Applied Plastic Pavement Marking, 4"	25,423	Ft
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	526	Ft
633E5020	Grooving for Cold Applied Plastic Pavement Marking, Area	40	SqFt
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	14	Each

06A1-Section M

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E1200	High Build Waterborne Pavement Marking Paint, White	428	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	159	Gal

06RC-Section M

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E1200	High Build Waterborne Pavement Marking Paint, White	198	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	141	Gal

06E0-Section M

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E1200	High Build Waterborne Pavement Marking Paint, White	92	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	55	Gal

07CD-Section M

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E1200	High Build Waterborne Pavement Marking Paint, White	107	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	58	Gal

PAVEMENT MARKING PAINT

The application of permanent pavement marking will begin no sooner than 7 calendar days following completion of the fog or flush seal. Application of permanent pavement marking will be completed within 14 calendar days following completion of the final surfacing.

COLD APPLIED PLASTIC PAVEMENT MARKING

All materials will be applied as per the manufacturer's recommendations.

Cold Applied Plastic Pavement Markings will be 3M Series 380 AW or an approved equal.

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.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Solid 4" line = 27.8 Gals/Mile
Dashed 4" line = 7.6 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/m²/lux for white and 170 mc/m²/lux for yellow.

GROOVING FOR COLD APPLIED PLASTIC 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 removal of grinding and/or grooving residue will be included in the contract unit price per foot or each, for "Grooving for Cold Applied Plastic Pavement Marking" contract items.

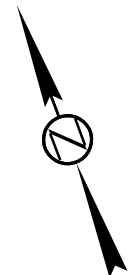
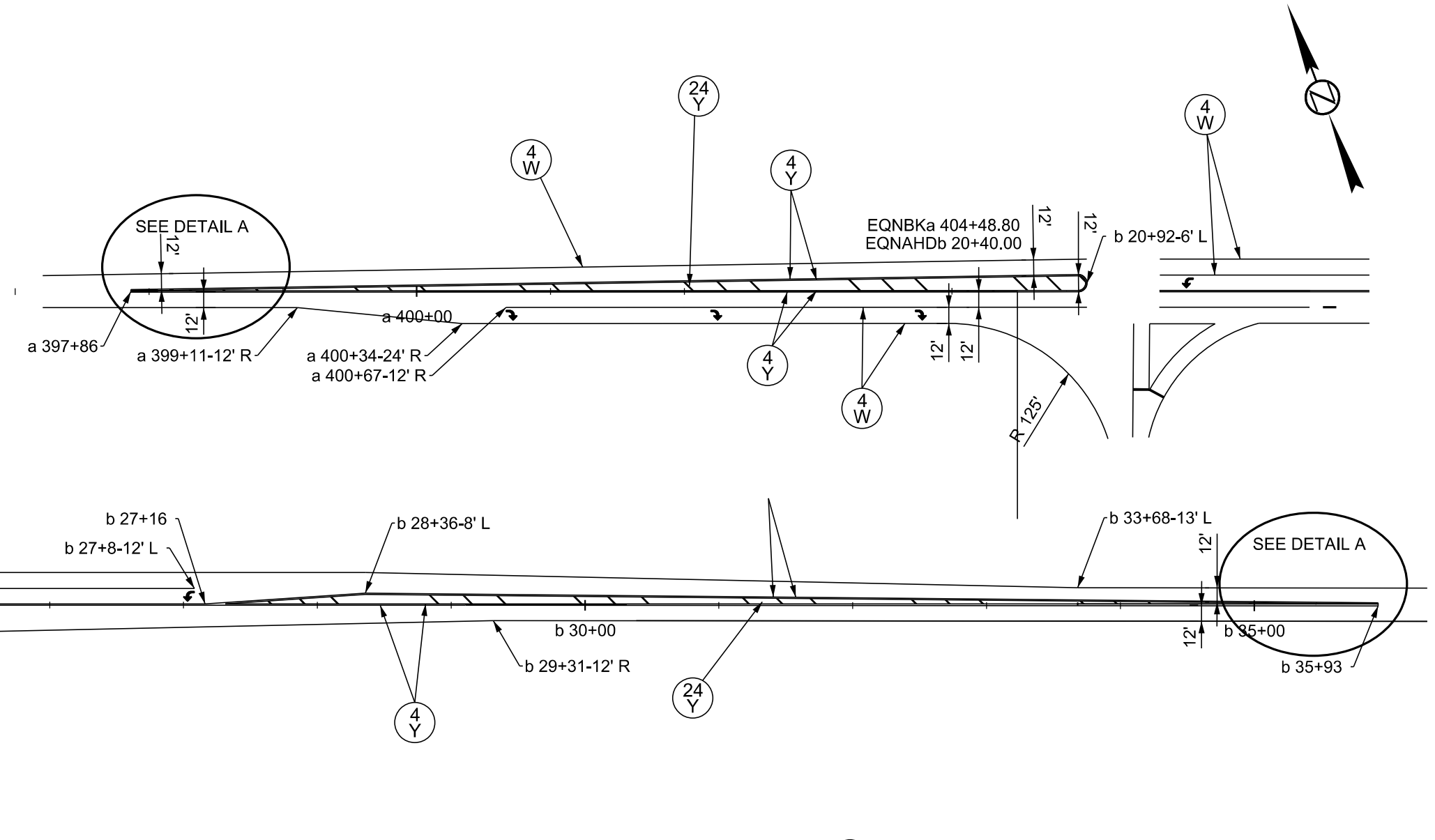


PAVEMENT MARKING LAYOUT FOR BIDDING PURPOSES ONLY

US Hwy 12 and SD Hwy 20

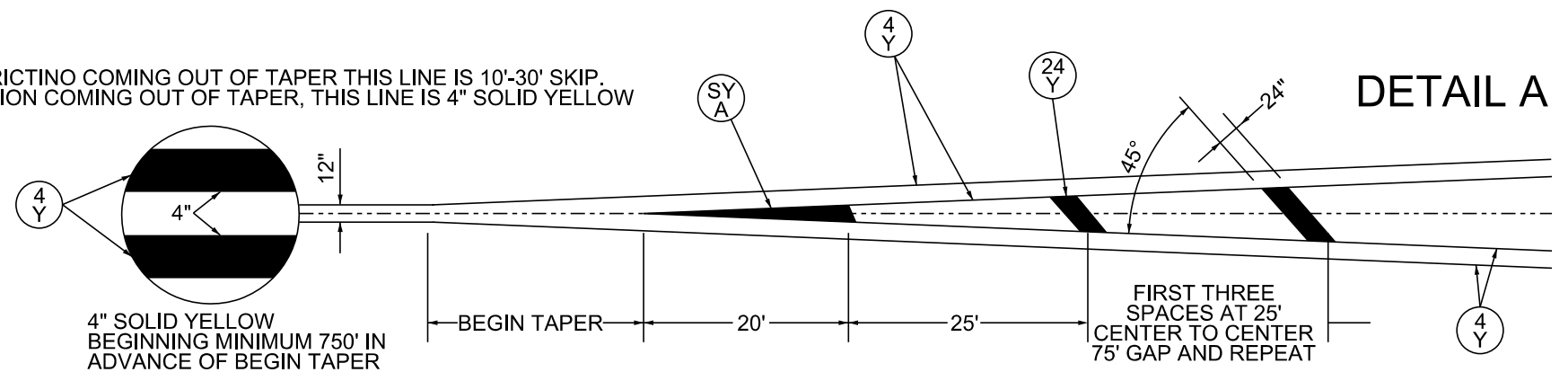
KLI	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		NH 0012(230)171...+	M5	M10
Plotting Date:		6/20/2024		

Plot Scale - 1:100



Estimate of Quantities US12 & SD20			
Key	Item	Quantity	Unit
4 W	Cold Applied Plastic Pavement Marking, 4" White	6118	Ft
4 Y	Cold Applied Plastic Pavement Marking, 4" Yellow	7485	Ft
24 Y	Cold Applied Plastic Pavement Marking, 24" White	24	Ft
24 Y	Cold Applied Plastic Pavement Marking, 24" Yellow	249	Ft
SY A	Cold Applied Plastic Pavement Marking, Area	20	SqFt
	Cold Applied Plastic Pavement Marking, Arrow	6	Each
	Grooving for Cold Applied Plastic Pavement Marking, 4"	13603	Ft
	Grooving for Cold Applied Plastic Pavement Marking, 24"	273	Ft
	Grooving for Cold Applied Plastic Pavement Marking, Area	20	SqFt
	Grooving for Cold Applied Plastic Pavement Marking, Arrow	6	Each

WITH NO SIGHT RESTRICTINO COMING OUT OF TAPER THIS LINE IS 10'-30' SKIP.
 WITH SIGHT RESTRICTION COMING OUT OF TAPER, THIS LINE IS 4" SOLID YELLOW




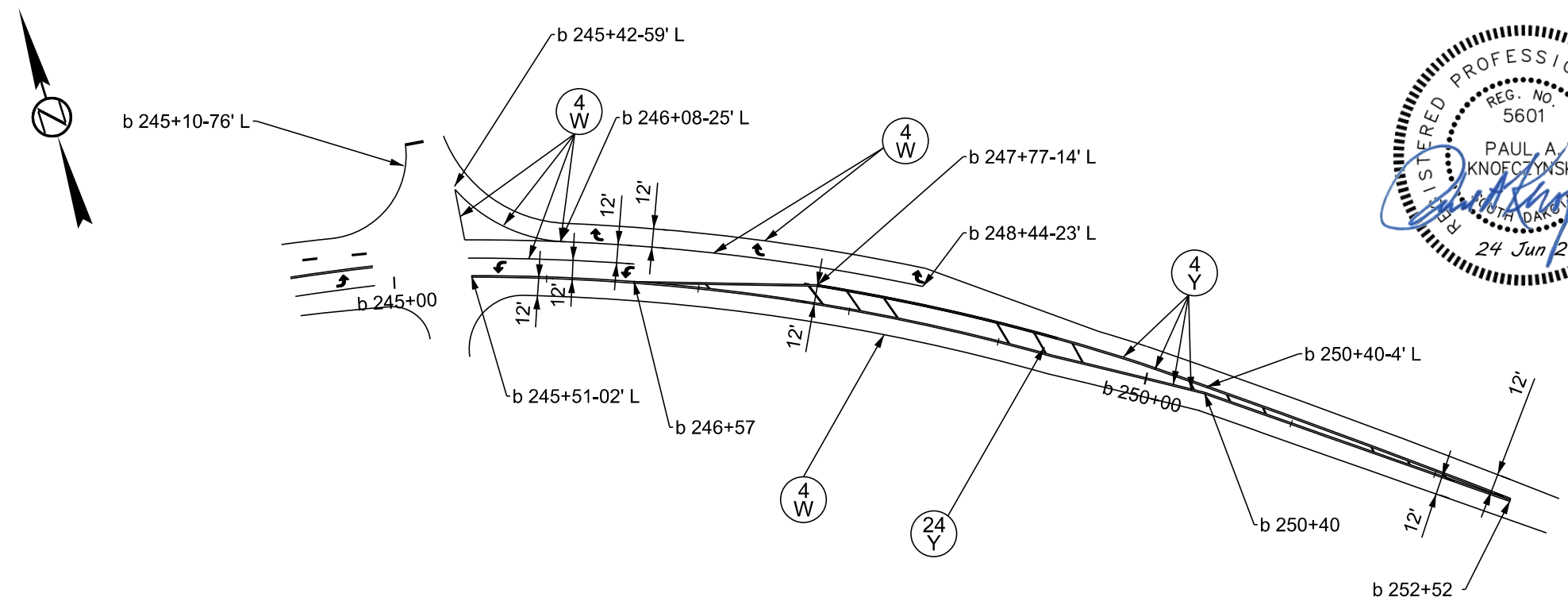
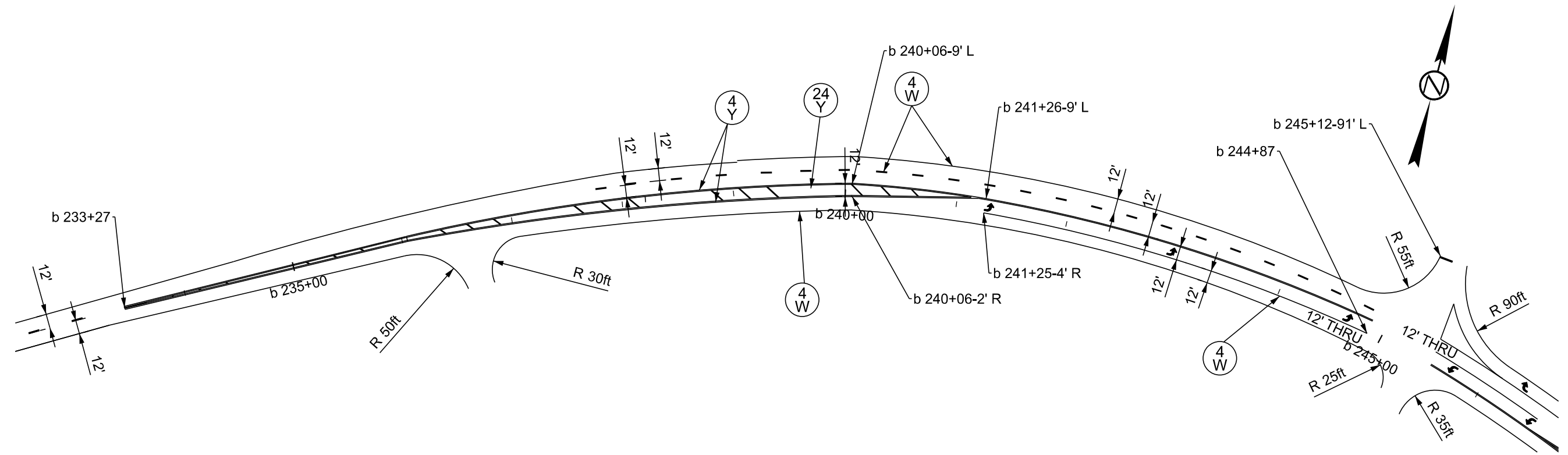
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Plotted From - evanwolf

PAVEMENT MARKING LAYOUT FOR BIDDING PURPOSES ONLY

US Hwy 12 and SD Hwy 1806

 STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0012(230)171...+	M6	M10
Plotting Date: 6/20/2024			



Estimate of Quantities US12 & SD1806

Key	Item	Quantity	Unit
4 W	Cold Applied Plastic Pavement Marking, 4" White	5090	Ft
4 Y	Cold Applied Plastic Pavement Marking, 4" Yellow	6730	Ft
24 Y	Cold Applied Plastic Pavement Marking, 24" White	12	Ft
24 Y	Cold Applied Plastic Pavement Marking, 24" Yellow	241	Ft
SY A	Cold Applied Plastic Pavement Marking, Area	20	SqFt
↪	Cold Applied Plastic Pavement Marking, Arrow	8	Each
	Grooving for Cold Applied Plastic Pavement Marking, 4"	11820	Ft
	Grooving for Cold Applied Plastic Pavement Marking, 24"	253	Ft
	Grooving for Cold Applied Plastic Pavement Marking, Area	20	SqFt
	Grooving for Cold Applied Plastic Pavement Marking, Arrow	8	Each

Plot Scale - 1:100

Plotted From - evanwolf

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PAVEMENT MARKING LAYOUT FOR BIDDING PURPOSES ONLY

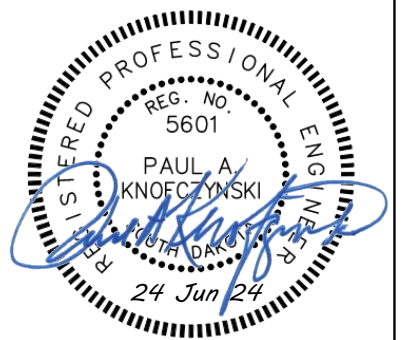
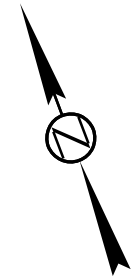
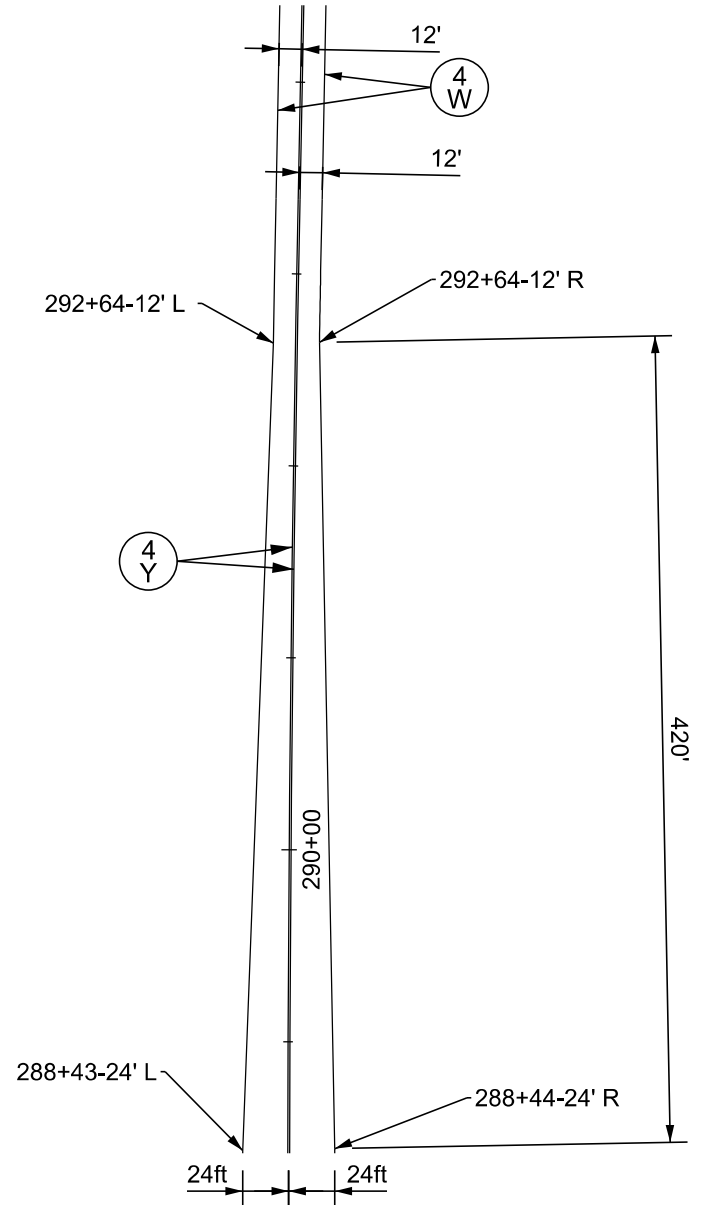
SD Hwy 63

KLI STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0012(230)171...+	M7	M10

Plotting Date: 6/20/2024


Plot Scale - 1:100

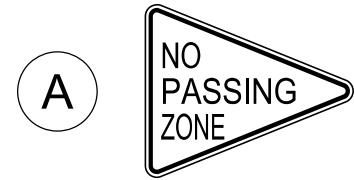
Plotted From - evanwolf



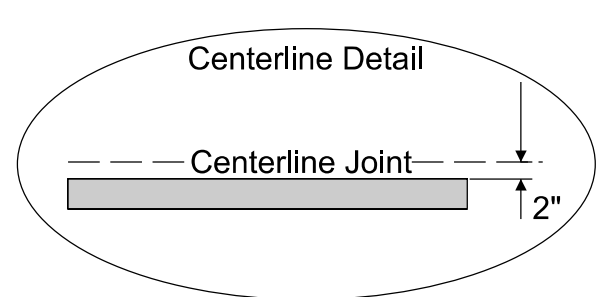
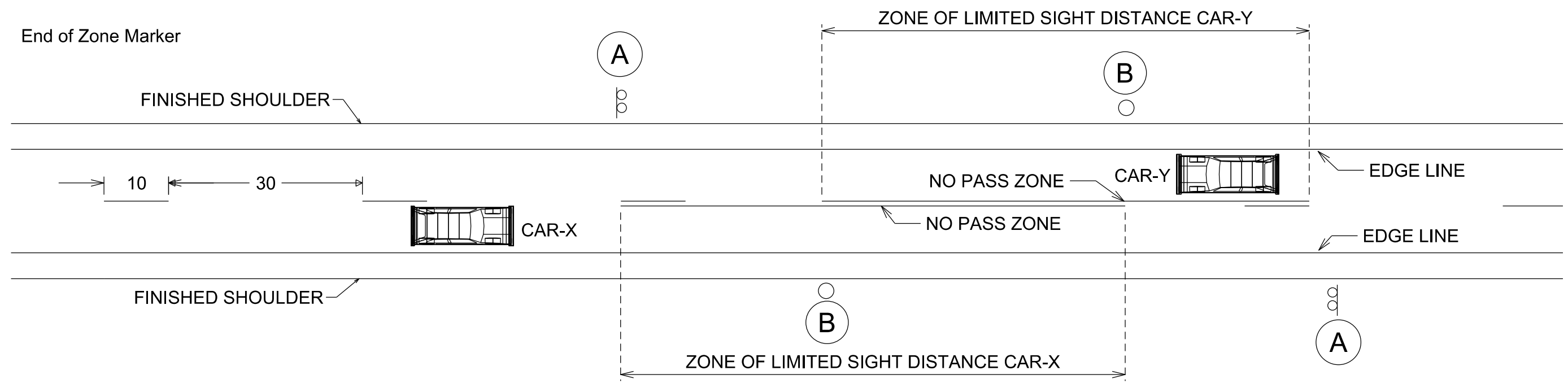
TYPICAL PAVEMENT MARKING LAYOUT

FOR BIDDING PURPOSES ONLY

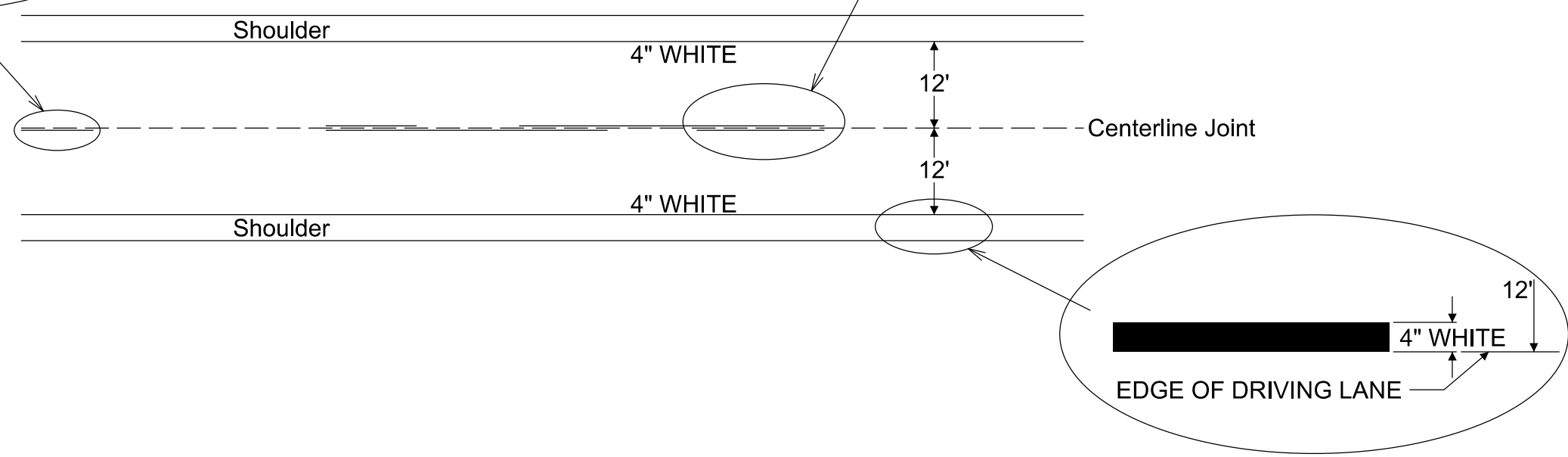
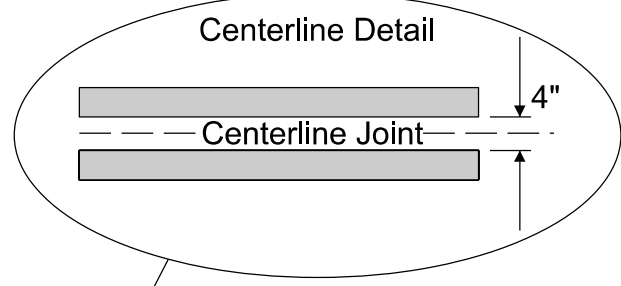
 STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0012(230)171...+	M8	M10
Plotting Date: 6/20/2024			



B End of Zone Marker



Note: A TWO "GUN" SYSTEM WILL BE USED TO OBTAIN THIS PATTERN
 WHEN A SINGLE SKIP LINE EXISTS, THE SKIP WILL BE PLACED TO THE SOUTH OR THE EAST OF THE CENTERLINE JOINT.




Plot Scale - 1:16.7747

Plotted From - evanwolf

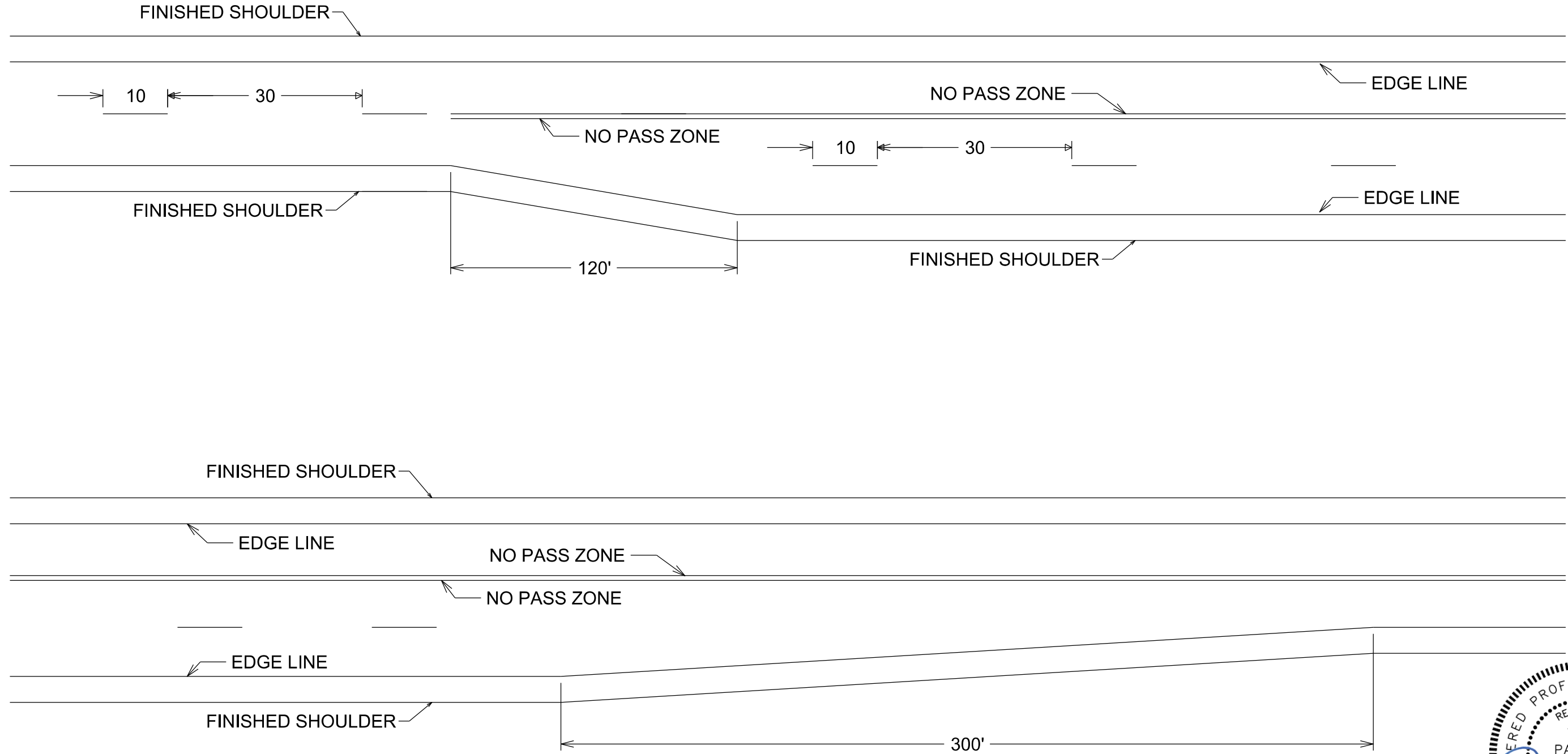
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PAVEMENT MARKING LAYOUT FOR LANE TAPERS

FOR BIDDING PURPOSES ONLY

 STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0012(230)171...+	M9	M10
Plotting Date: 6/20/2024			

Plot Scale - 1:16.7747



Plotted From - evanwolf

File - ...Section M\striping detail.dgn



