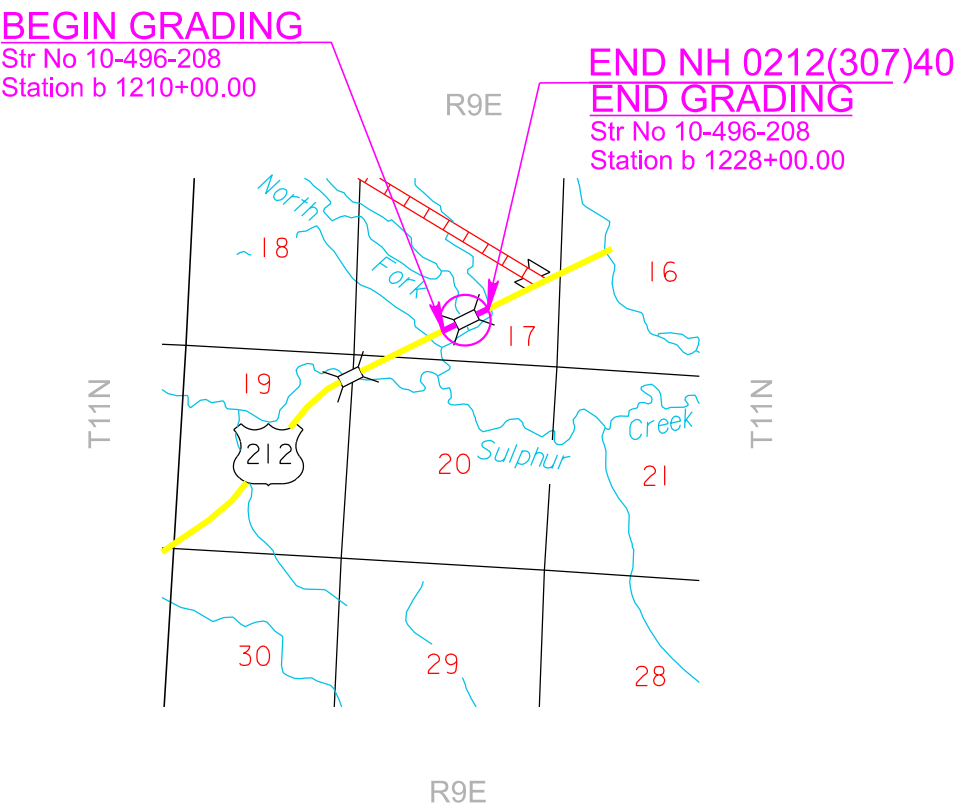
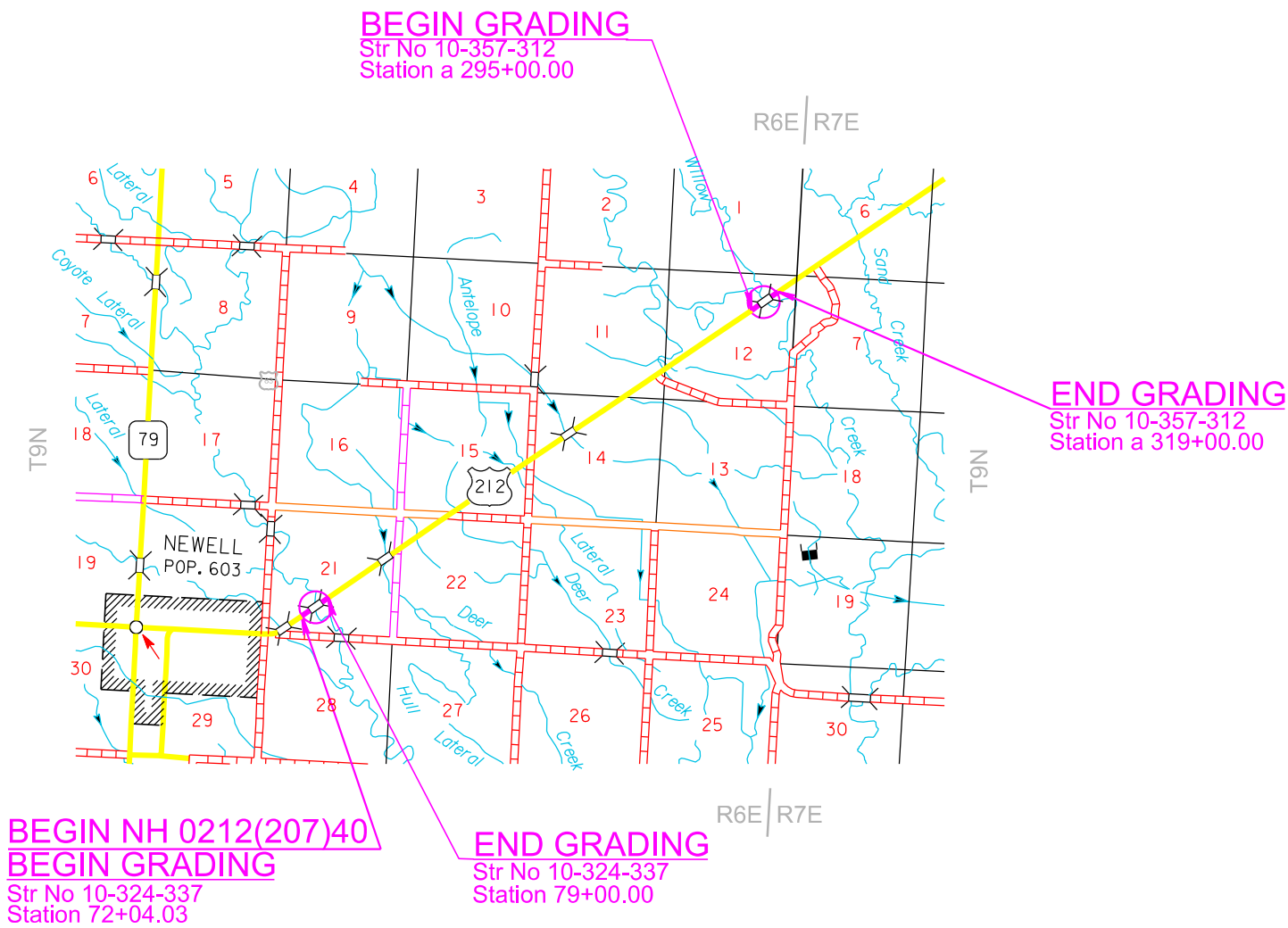


SECTION M: PAVEMENT MARKING PLANS

SD DOT	PROJECT	SECTION	SHEET
	NH 0212(207)40	S	1/3
Plotting Date: 8/3/2025			

INDEX OF SHEETS

M1	General Layout with Index
M2	Estimate with General Notes & Tables
M3	Typical Details



SECTION M ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E1220	High Build Waterborne Pavement Marking Paint, 4" White	9,800	Ft
633E1222	High Build Waterborne Pavement Marking Paint, 4" Yellow	3,090	Ft
633E5100	Grooving for Durable Pavement Marking, 4"	12,890	Ft

PAVEMENT MARKING PAINT

Changes to the grade and alignment of the road are not expected to change the No Passing Zones. All markings are to be replaced in the same pattern as the existing markings. It will be the Contractor’s responsibility to document the existing markings for record when installing the new markings.

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.

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 14 days and within 42 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 readings will be taken on the edge lines and lane lines in the direction of application. The three readings will be averaged and become the reading for that test location. 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 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 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.

Grooving on bridge decks will start and stop a sufficient distance from the expansion joints so no damage occurs in these areas. Markings on bridge decks will be surface applied.



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TABLE OF PAVEMENT MARKINGS

TABLE OF PERMANENT PAVEMENT MARKINGS					
LOCATION	START STA	END STA	High Build Waterborne Pavement Marking Paint, 4" White	High Build Waterborne Pavement Marking Paint, 4" Yellow	Grooving for Durable Pavement Marking, 4"
US212 MRM 40.63	72+04	79+00	1400	300	1700
US212 MRM 44.91	295+00	319+00	4800	1570	6370
US212 MRM 62.15	1210+00	1228+00	3600	1220	4820
Total:			9800	3090	12890

TYPICAL PAVEMENT MARKING LAYOUT



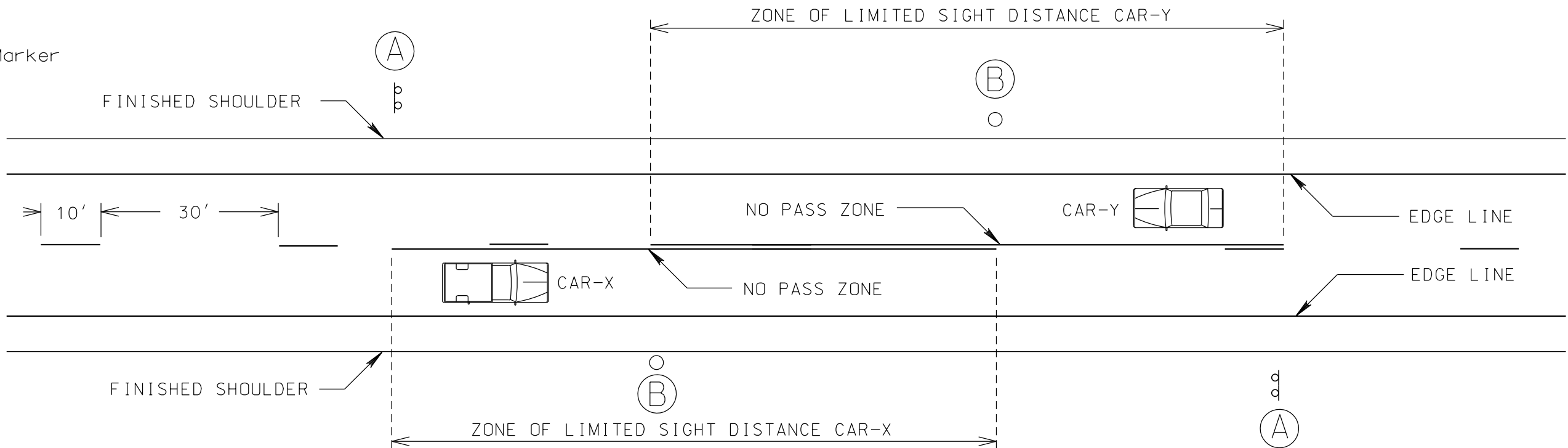
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SECTION SHEET
S 3/3



(B) End of Zone Marker



Centerline Detail



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 EAST OF THE CENTERLINE JOINT.

Centerline Detail

