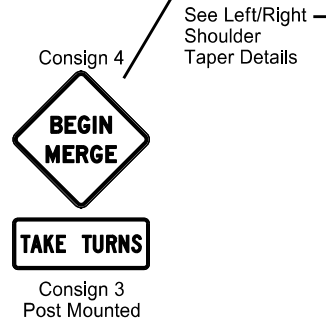
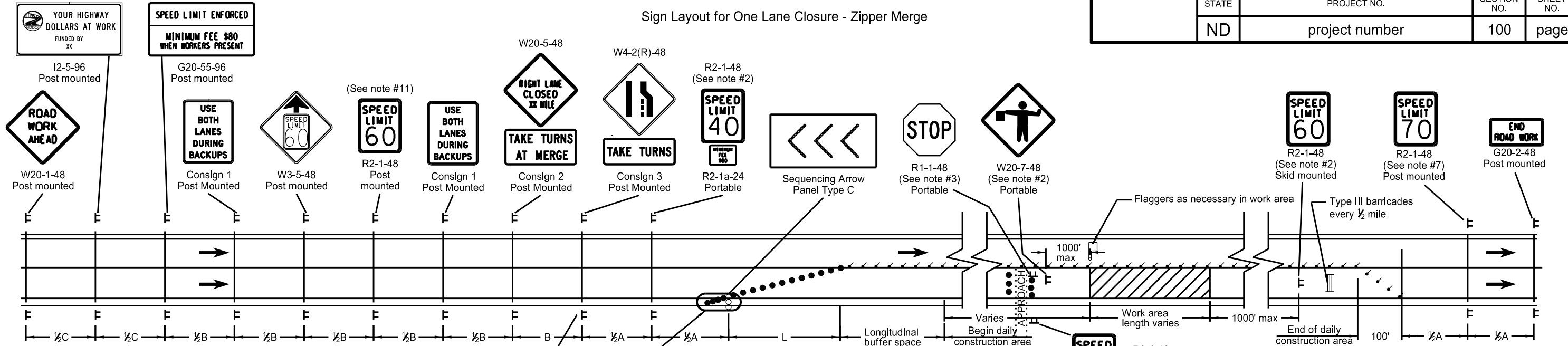


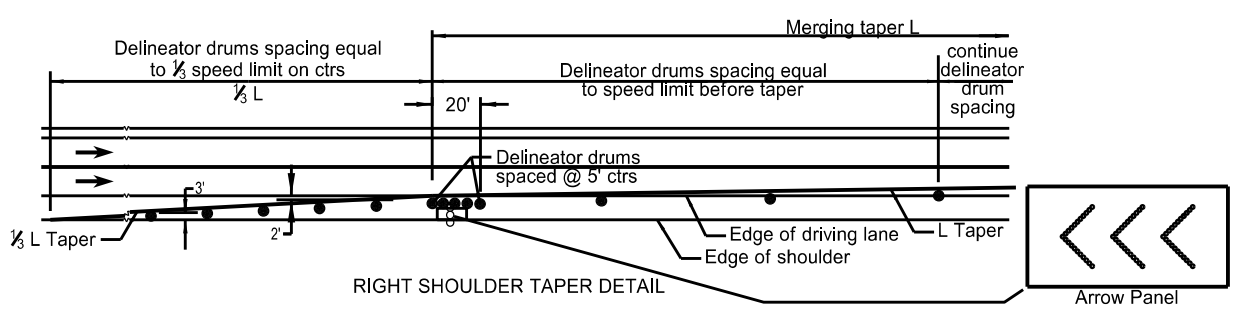
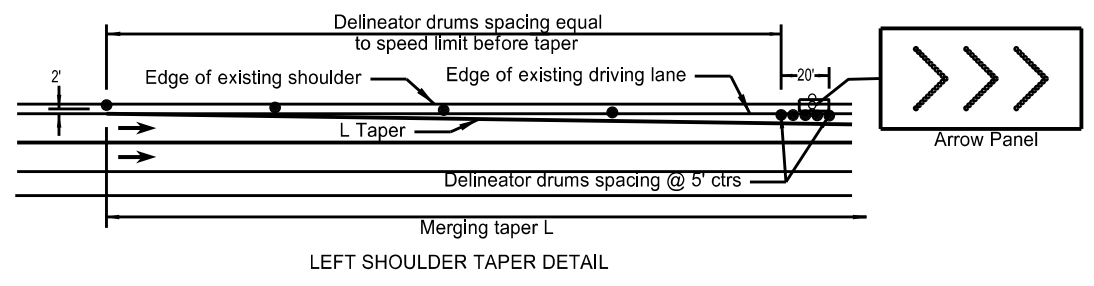
Sign Layout for One Lane Closure - Zipper Merge



- Notes:
- Install advance signs for flagging when flaggers are present.
 - Move the advanced flagger sign and the speed limit signs as the work area moves through the construction zone. When the work area is not visible from the flagger, move the flagger station so the work area is visible. Space the 40 mph speed limit sign at 1/2 A in advance of the flagger sign and move the 60 mph speed limit sign. Cover or remove the 40 mph speed limit and the Minimum Fee \$80 signs. Determine the exact speed limit in the field, dependent on location and conditions.
 - Approaches: When the work area encompasses an approach, install a 40 mph speed limit sign to control the approach. If this approach is on the side of the lane closure, cover the existing stop sign and install a new portable stop sign. When the main line 40 mph speed zone is moved past the approach, remove the approach speed limit sign.
 - Variables:
 - S=Numerical value of speed limit or 85th percentile
 - W=The width of taper.
 - L=Minimum length of taper, or SxW for freeways, expressways, and all other roads with speeds of 45 mph or greater, or (WxSxS)/60 for urban, residential, and other streets with speeds of 40 mph or less.
 - Space delineator drums for tapering traffic at the dimension "S". Space tubular markers used for tangents at 2 times dimension "S".
 - Place sequencing arrow panels at the beginning of the taper when possible. Where shoulder width does not provide sufficient room, move the panel closer to the work area and place on the roadway surface.
 - Use Type A on roadways with slow moving traffic speeds and low volume (25 mph or less and 750 ADT or less).
 - Use Type B on roadways with moderate traffic speeds and volumes (40 mph or less and 5000 ADT or less).
 - Type C shall be used on roadways with high traffic speeds and volumes (over 40 mph or over 5000 ADT).
 - Re-establish the speed limit. Determine the exact speed limit in the field, dependent on location and conditions.
 - Cover existing speed limit signs within a reduced speed zone.
 - Install flags when warning signs are used in urban areas and the signs are not portable. Mount 24 inches square flags perpendicular to the edges of the diamond sign, and at such a distance above the edge that the flag does not touch the sign when limp. Rural areas will not require flags.
 - Determine the reduced speed limit dependent on the in place speed limit before construction. Do not exceed a speed limit reduction of 10 mph below the existing speed limit, unless the design speed of the work zone exceeds has been reduced the 10 mph. When speed limits are reduced more than 30 mph, install a second speed limit sign jso no single speed reduction exceeds 30 mph. Place the second speed limit sign at 1/2 B.
 - The contractor has the option of using portable sign supports in lieu of post mounted signs in accordance with NDDOT Standard Specifications.
 - Sign G20-55-96 is not required if this layout is part of other traffic control that contains this sign, or the work is less than 15 days.
 - Sign I2-5-96 is not required if this layout is part of other traffic control that contains this sign.

KEY

—	Type I barricade	▨	Work area
—	Type II barricade	□	Flagger
—	Type III barricade	∞	Sequencing arrow panel
F	Sign	•	Tubular markers
•	Delineator drum		



Speed (mph)*	Length Min (feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

Road Type	Distance Between Signs Min (ft)		
	A	B	C
Urban - Low Speed (30 mph or less)	150	150	150
Urban - Low Speed (over 30 to 40 mph)	280	280	280
Urban - High Speed (over 40 mph to 50 mph)	360	360	360
Rural - High Speed (over 50 mph to 65 mph)	720	720	720
Urban Expressway and Freeway (55 mph to 60 mph)	850	1350	2200
Rural Expressway and Freeway (70 mph to 75 mph)	1000	1500	2640
Interstate/4-Lane Divided (Maintenance and Surveying)	750	1000	1500

*Posted speed, off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.

This document was originally issued and sealed by the North Dakota Department of Transportation. This document is preliminary and not for implementation purposes.

Sign Layout for One Lane Closure
Zipper Merge System
Multi-Lane Divided Roadway