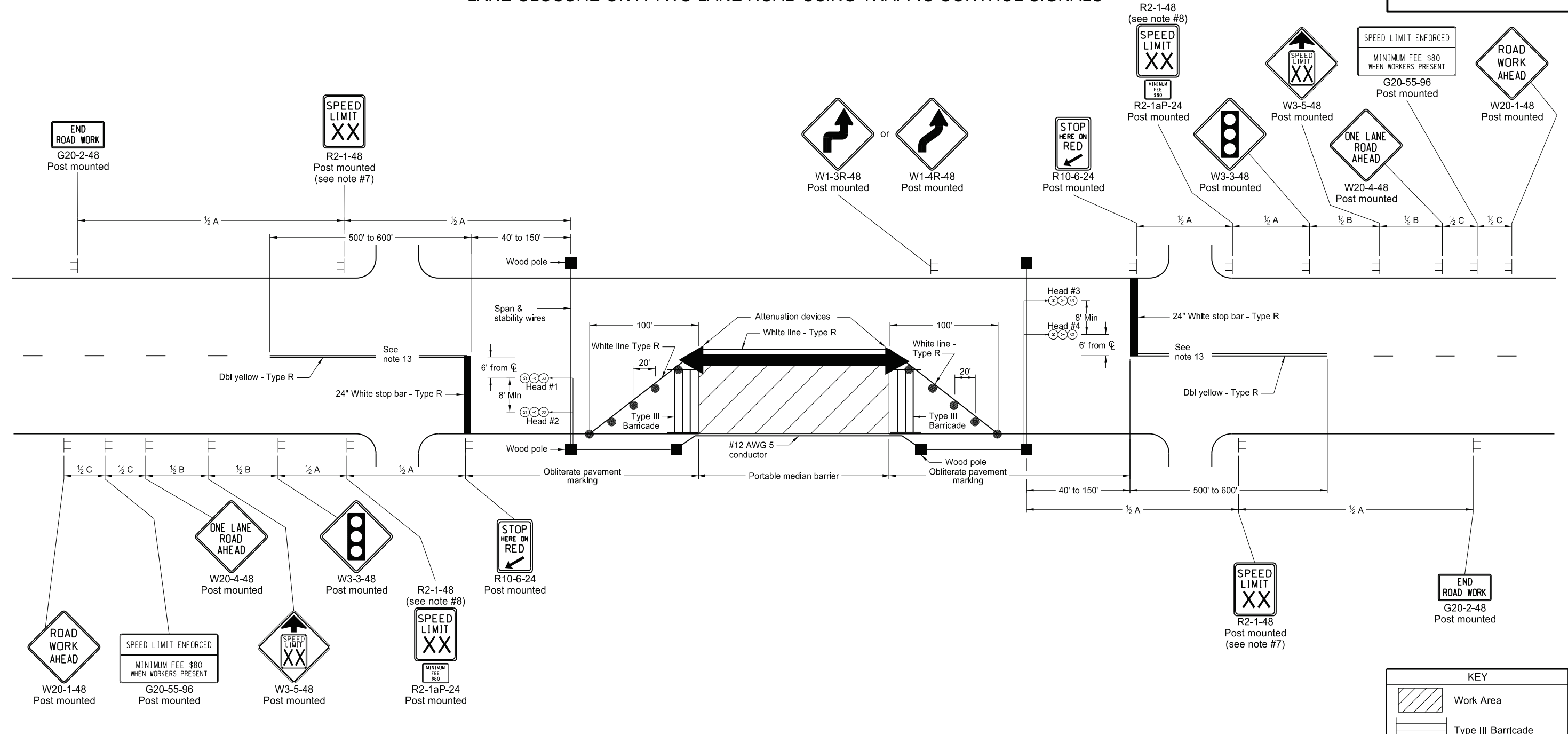


LANE CLOSURE ON A TWO LANE ROAD USING TRAFFIC CONTROL SIGNALS

D-704-16



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

	Green		Yellow		Red	
	Time	Percent of Cycle	Time	Percent of Cycle	Time	Percent of Cycle
Heads 1 & 2	18.0	20	4.5	5	22.5	25
Heads 3 & 4	18.0	20	4.5	5	22.5	25

- Notes:
- Span conductor overhead between poles except on bridges, where it may alternately be attached and supported by the bridge structure. When conductor is supported by the bridge structure, attach conductor to avoid interference with bridge construction. Attach conductor on either side of bridge as determined by field personnel.
 - Locate controller on a wood pole in the cable run between signal heads for through traffic movements. The timing schedule is suggested trial setting. Check signals frequently to obtain the most efficient timing schedule.
 - Place wood poles a minimum of 16 feet from edge of driving lane. Provide a minimum 16 to 19 feet clearance from the center line of the roadway to the bottom of traffic signal heads suspended over the roadway.
 - Place traffic signal heads with 12 inch red, yellow and green lenses and 5 inch louvered backplates.
 - See standard drawing "Span Wire Mounted Traffic Signals" for interim traffic construction details.
 - Re-establish speed limit. Determine exact speed limit in the field, dependent on location and conditions.
 - Determine the reduced speed limit based on the in-place speed limit before construction. Where speed reductions exceed 30 MPH, install a second speed limit sign with the desired speed reduction (not to exceed 30 MPH.) Place the second speed limit sign at 1/2 B.
 - Install flags on warning signs in urban areas when signs are not portable. Mount 24 inch square flags perpendicular to the edges of the sign, and at such a distance above the edge that the flag does not touch the sign when limp.
 - Cover existing speed limit signs within a reduced speed zone.
 - Place barricades on moveable assemblies and signs on portable assemblies when located on roadway.
 - As an option, use portable sign supports in lieu of post mounted signs in accordance with NDDOT Standard Drawing D-704-14.
 - Continue double yellow centerline thru private drives.
 - Sign G20-55-96 is not required if this layout is part of other traffic control that contains this sign, or if work is less than 15 days.
 - Recommend using 40 mph speed limit in vicinity of workers, unless location and conditions dictate otherwise.
 - As an option, use solar powered signals instead of wood pole signal system.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
9-27-13	
REVISIONS	
DATE	CHANGE
11-20-15	Revised Note 6 & Renumbered Minimum Fee plaque.
08-17-17	Revised notes & added note.
11-01-19	Revised sign #s & pvmt mk type.
12-08-21	Switched order of Road Work Ahead and Spd Limit Enforced & added Dollars At Work.
11-29-22	Removed Dollars At Work.
08-31-23	Corrected Note 14 grammar.
08-21-24	Pvmt Mkg Wldth & Med Barrier.

KEY

- Work Area
- Type III Barricade
- Sign
- Delineator Drum
- Wood Pole

NORTH DAKOTA REGISTERED PROFESSIONAL ENGINEER PE-4683

KIRK J. HOFF

08/21/24