Table 9-1
SUGGESTED DETECTOR SETBACKS FROM LIMITLINE

Deceleration Rate $d = 3.05$ m per second^2

Deceleration Time $= \frac{V}{d}$

Deceleration Distance $= \frac{1}{2}dt^2$ or $\frac{1}{2}Vt$ or $\frac{V^2}{2d}$

Reaction Time $r = 1.00$ second

Reaction Distance $= Vr$

Total Time = Deceleration Time + Reaction Time $= t + r$ or $\frac{V}{d} + r$

Detector Setback = Deceleration Distance + Reaction Distance $= \frac{V^2}{2d} + Vr$

Yellow Interval $T = r + \frac{V}{2d}$

V = Speed (meter per second)

d = Deceleration Rate (meter per second^2)

t = Deceleration Time (seconds)

T = Yellow Interval (seconds)

SPEED			DEC. TIME	DEC. DIST.	TOTAL TIME	DETECTOR SETBACKS	
						ACTUAL	SUGGESTED
mph	km/h	m/s	Seconds	Meters	Seconds	Meters	Meters
25	40	11.18	3.67	20.49	4.67	31.67	30
30	48	13.42	4.40	29.51	5.40	42.93	45
35	56	15.65	5.13	40.17	6.13	55.82	55
40	64	17.89	5.87	52.46	6.87	70.35	70
45	72	20.13	6.60	66.40	7.60	86.52	85
50	80	22.36	7.33	81.97	8.33	104.33	105
55	89	24.60	8.06	99.18	9.06	123.78	125
60	97	26.83	8.80	118.04	9.80	144.87	145
65	105	29.07	9.53	138.53	10.53	167.60	170
70	113	31.29	10.27	160.50	11.27	191.79	190