High Speed Detection
(≥40 mph)
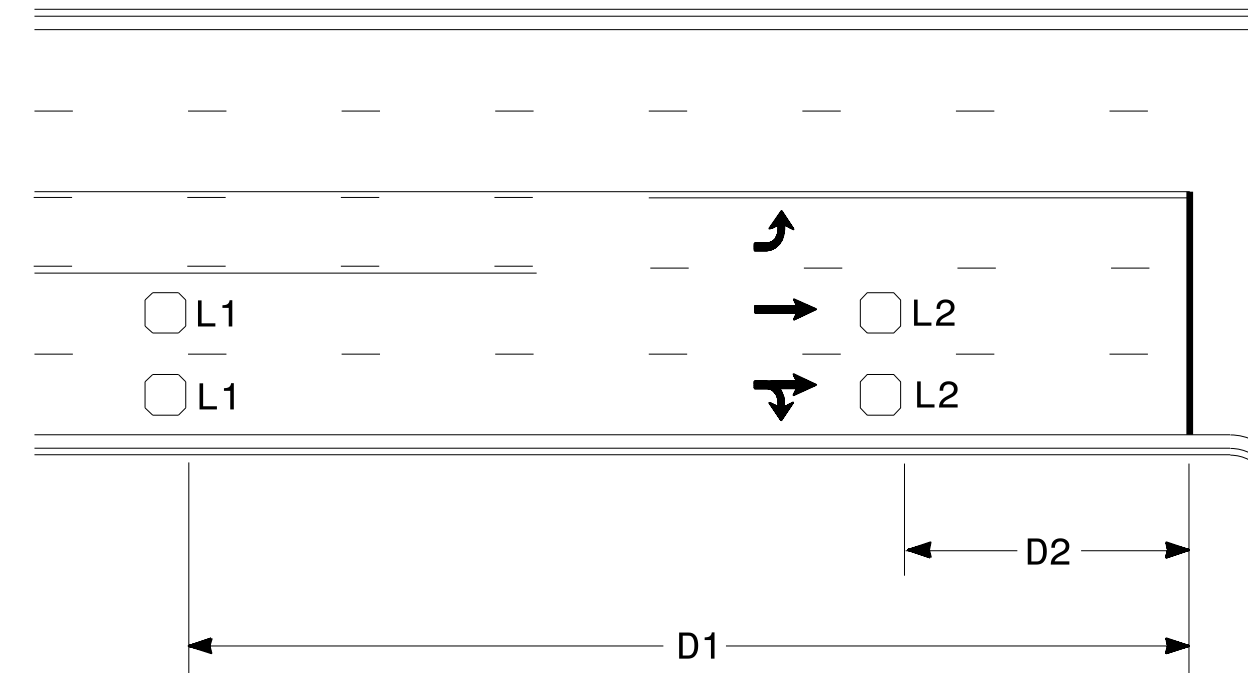

OR

Volume Density Operation

L = 6ft X 6ft
Wired in series for TS1 Controllers
Wired separately for TS2, 170, and 2070L Controllers
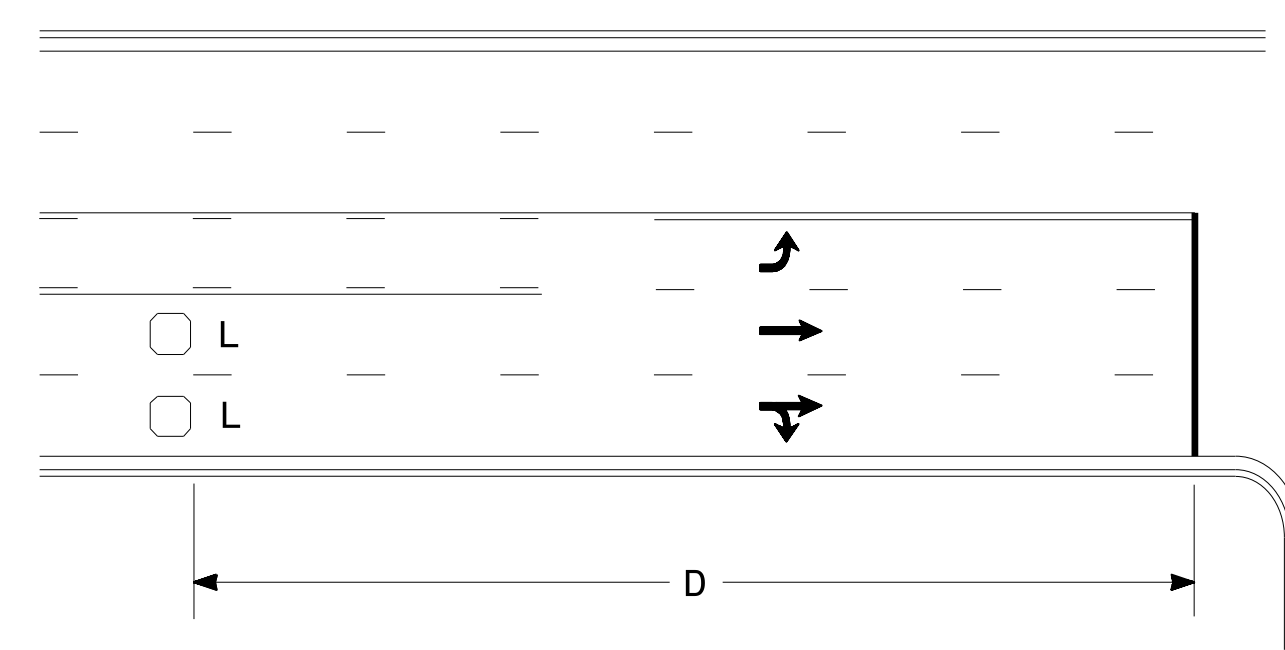
Speed Limit mph	D ft
40	250
45	300
50	355
55	420

"Stretch" Operation

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

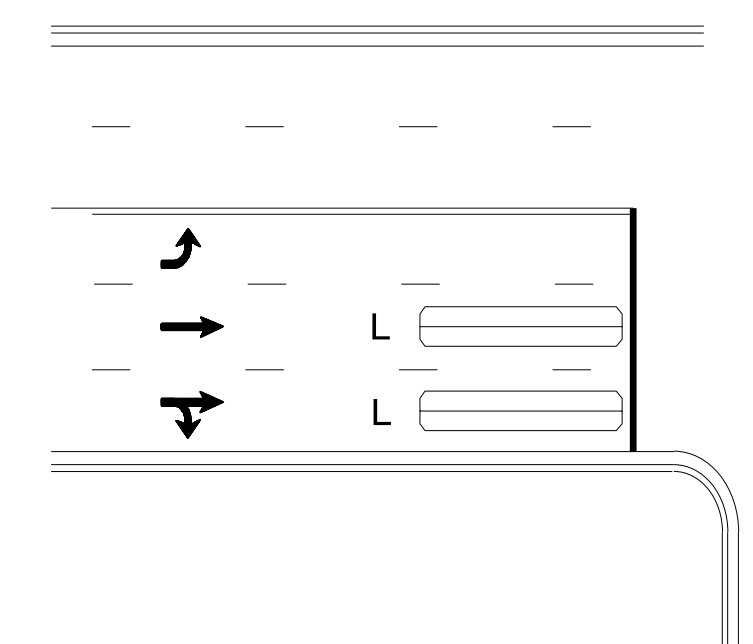| Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

Low Speed Detection
(≤35 mph)

OR
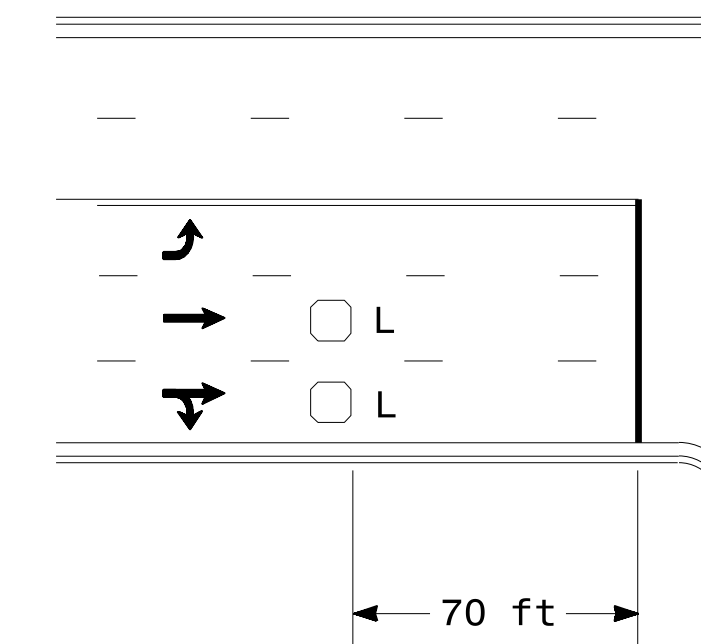
L = 6ft X 6ft
Wired in series

L = 6ft X 40ft
Quadrupole loop, wired separately
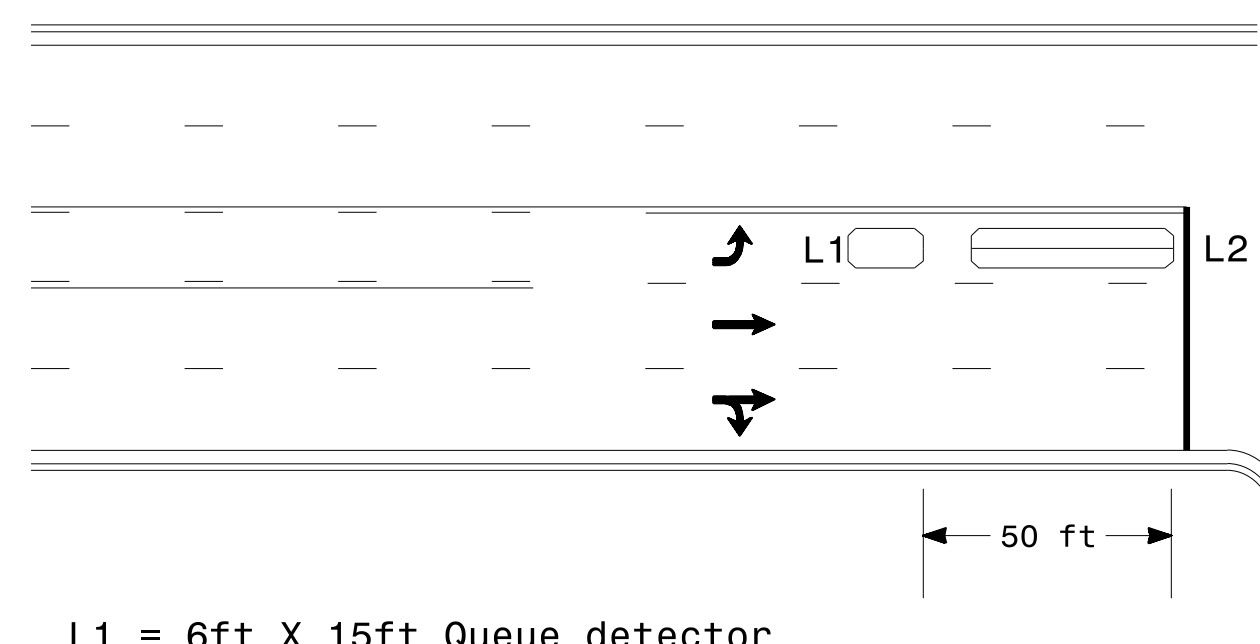
70 ft

Left Turn Lane Detection
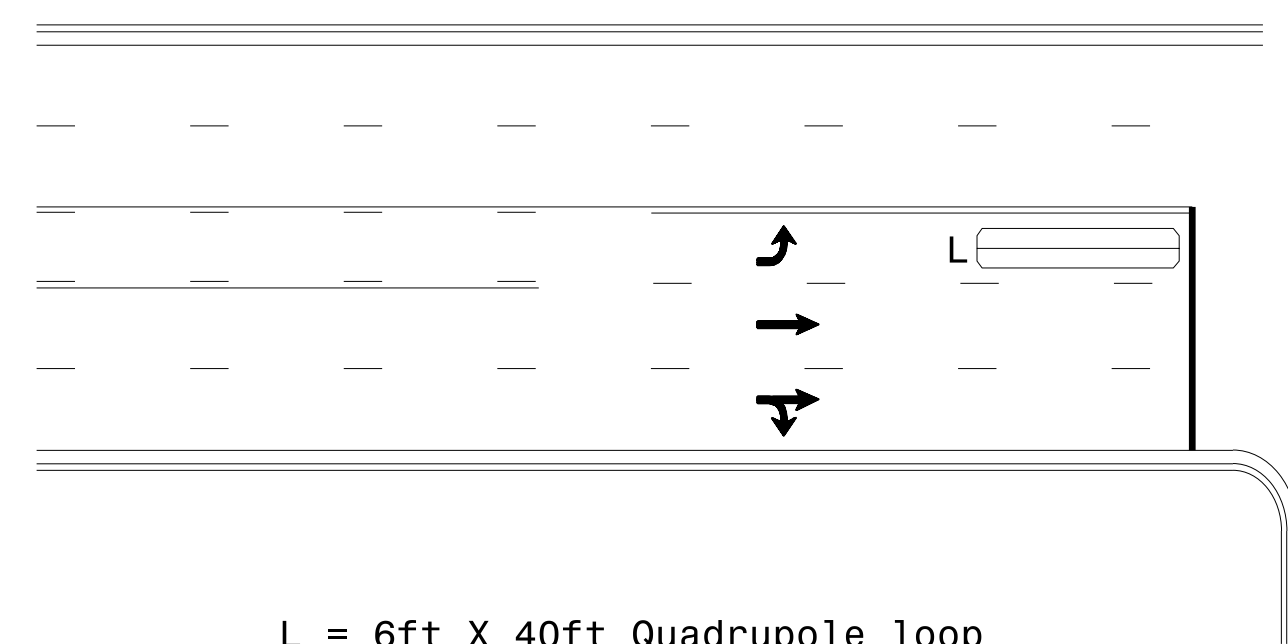
Presence Loop Detection

L = 6ft X 40ft Quadrupole loop

OR

Queue Loop Detection

L1 = 6ft X 15ft Queue detector
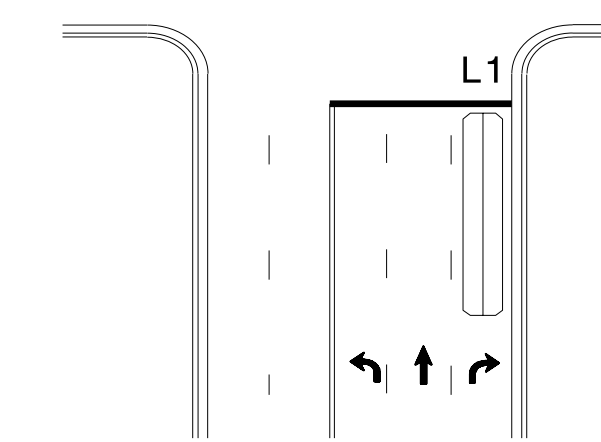L2 = 6ft X 40ft Quadrupole loop

50 ft

Right Turn Lane Detection

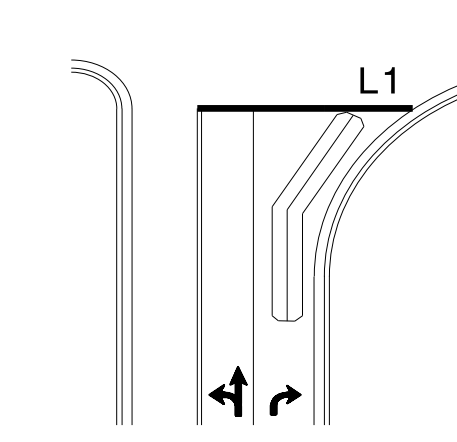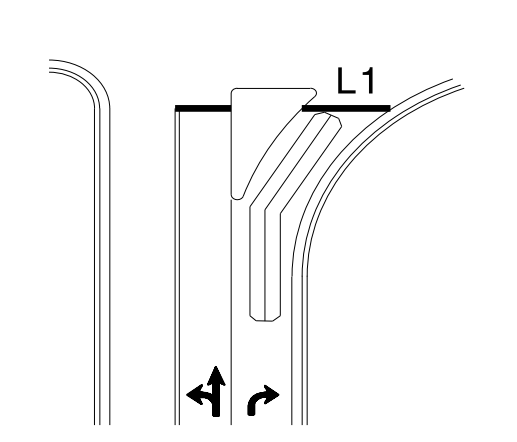L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately
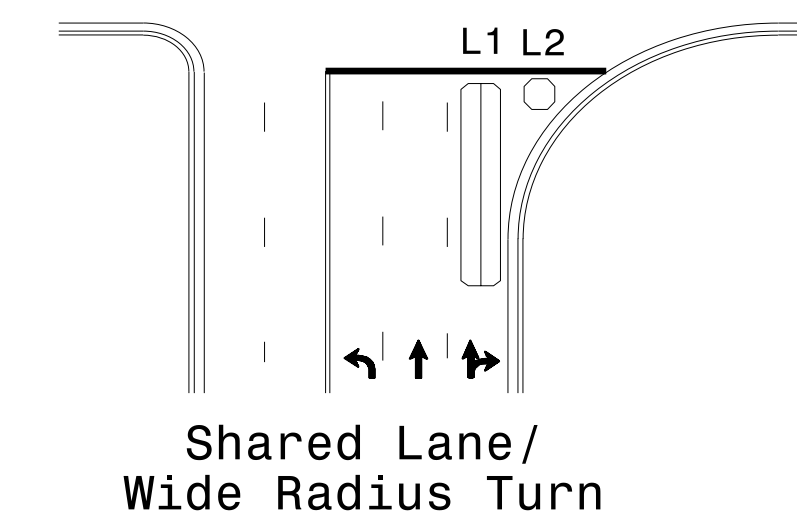
Shared Lane/ Wide Radius Turn

L1 L2

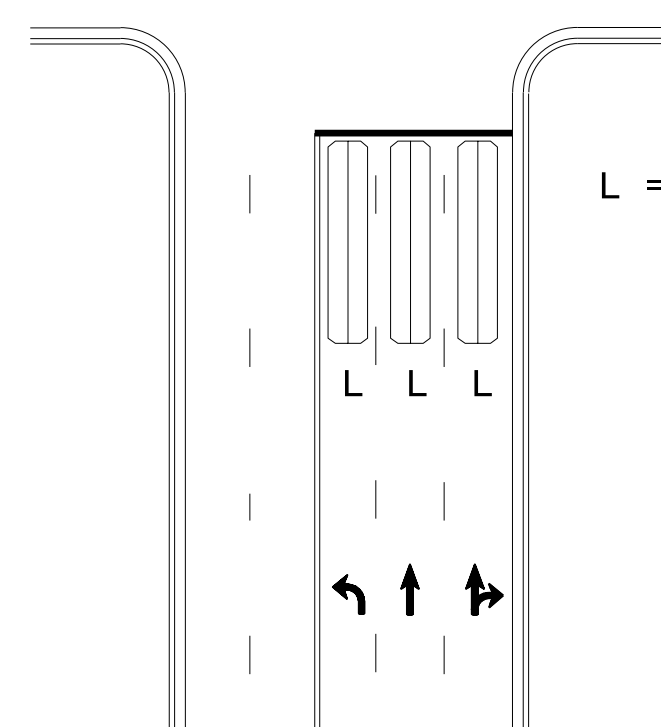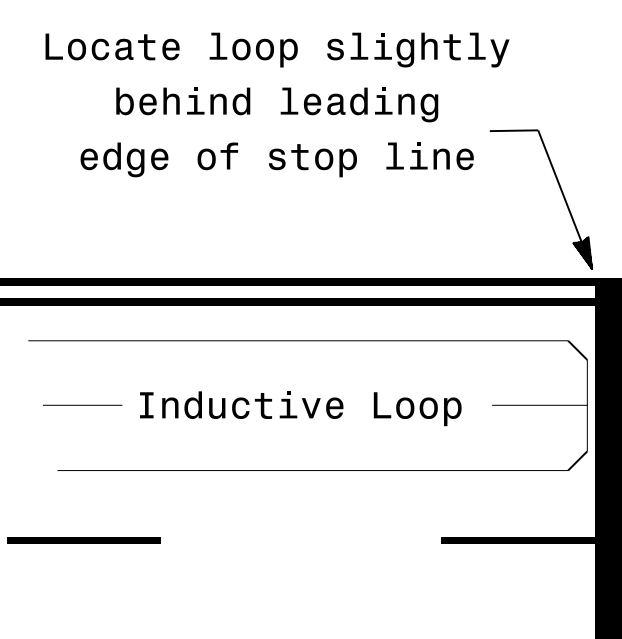### Standard Turn

L1

Wide Radius Turn

L1

Channelized Turn

L1

Side Street Detection

L = 6ft X 40ft
Quadrupole loop
Wired to separate detectors/channels

Presence Loop Placement at Stop Lines

Locate loop slightly behind leading edge of stop line

Inductive Loop

Note:
Loop may be located in advance of stop line under any of the following conditions:
1) stop line is greater than 15' from edge of intersecting roadway
2) loop detects a permissive or protected/permissive left turn
3) for an exclusive right turn lane

Recommended Number of Turns

Quadrupole loops: Use 2-4-2 turns

6' X 15' Loops:
Lead-in < 150', use 2 turns
Lead-in > 150', use 3 turns

Single 6' X 6' loop
(when wired separately):

Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Typical Signal Loop Locations