High Speed Detection
(≥35 mph)
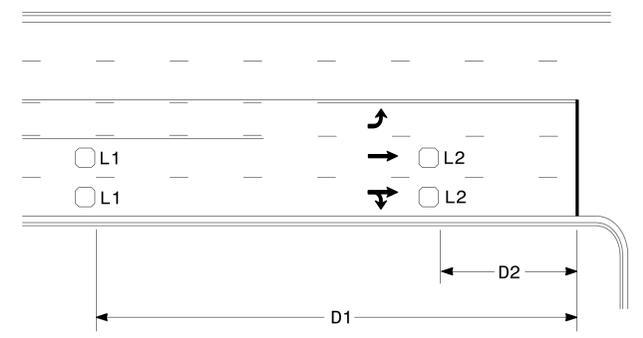
OR

Speed Limit mph	D ft
35	200
40	250
45	300
50	355
55	420
60	475
65	550

L = 6ft X 6ft
Wired separately

Volume Density Operation

Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110
60	475	120
65	550	130

L1 = 6ft X 6ft
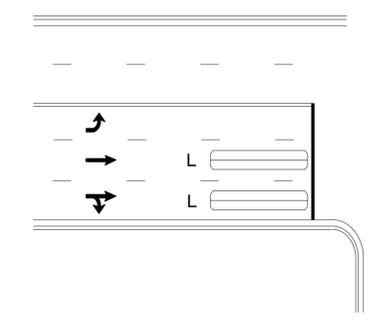Wired in series

L2 = 6ft X 6ft
Wired in series

"Stretch" Operation
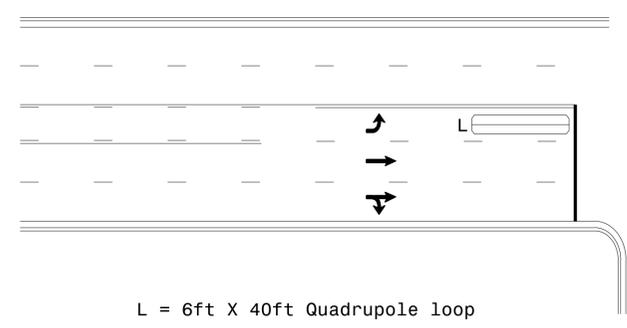
Low Speed Detection
(≤35 mph)

OR

70 ft
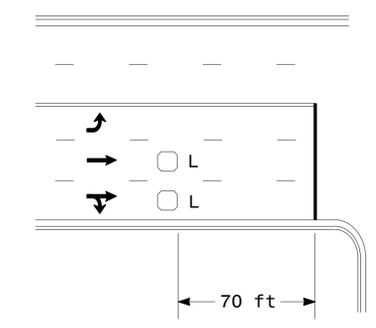
L = 6ft X 6ft
Wired in series

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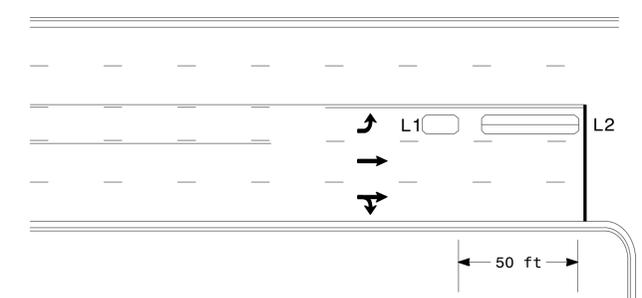Quadrupole loop, wired separately

Left Turn Lane Detection

OR

L = 6ft X 40ft Quadrupole loop
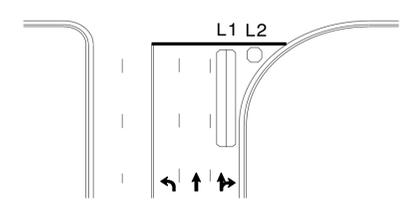
Presence Loop Detection

50 ft

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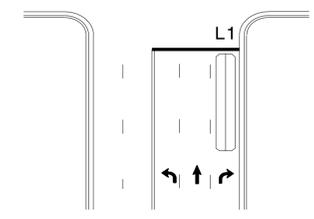L2 = 6ft X 40ft Quadrupole loop

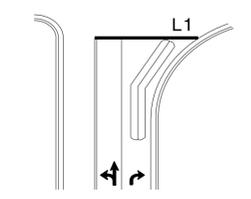**Queue Loop Detection**

Right Turn Lane Detection

L1 = 6ft X 40ft Quadrupole loop
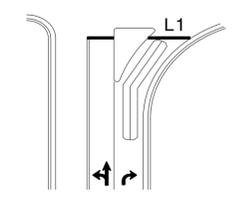L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately

**Shared Lane/
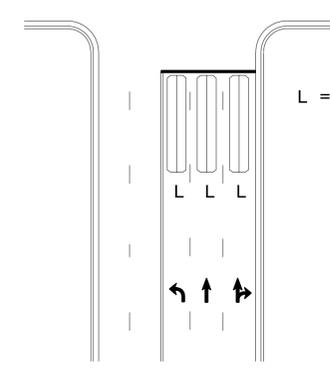Wide Radius Turn**

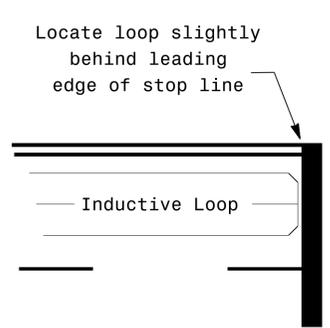**Standard Turn**

Wide Radius Turn

Channelized Turn

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