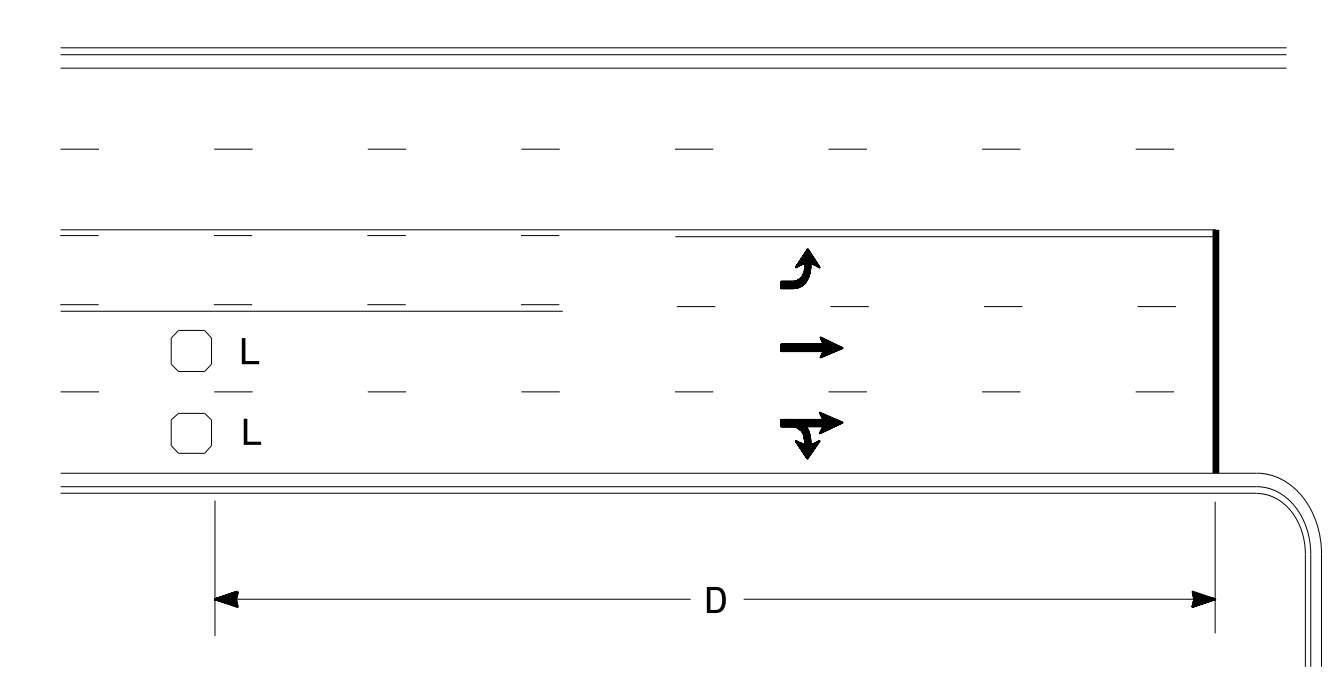


High Speed Detection (≥40 mph)

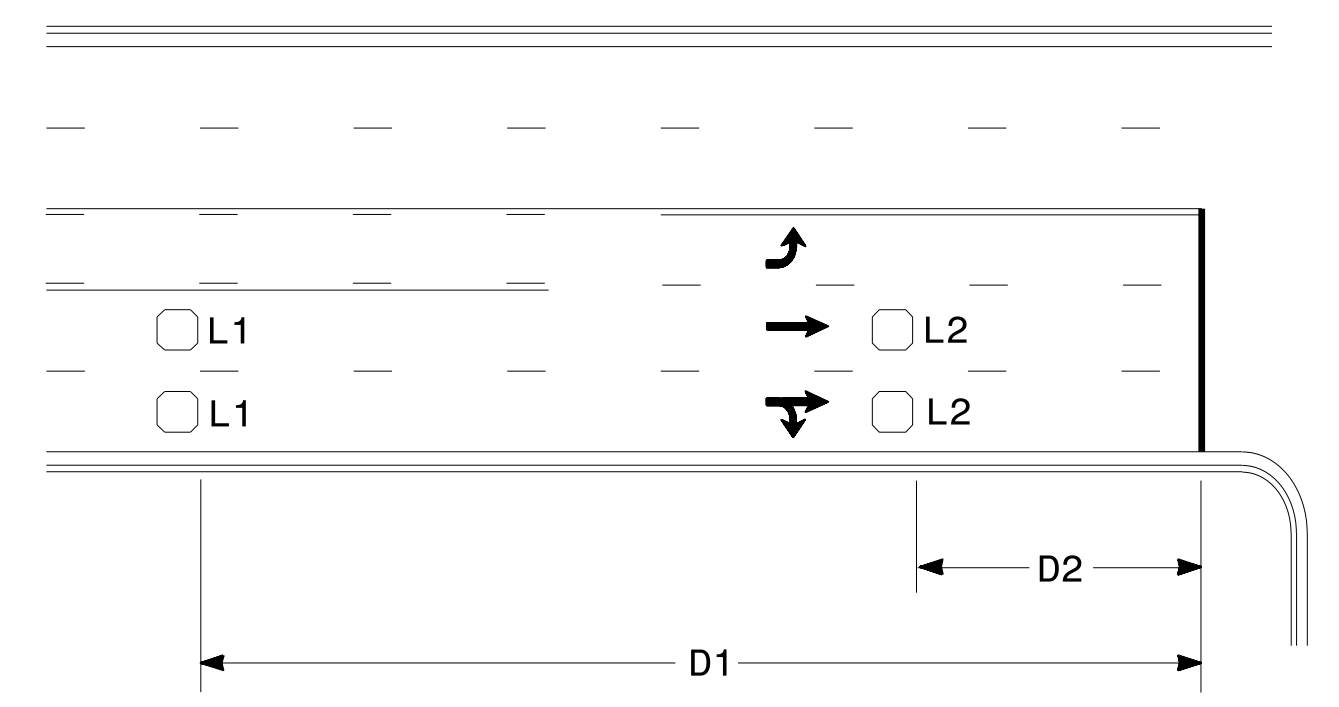


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
 Wired in series for TS1
 Controllers
 Wired separately for TS2,
 170, and 2070L Controllers

Volume Density Operation

OR

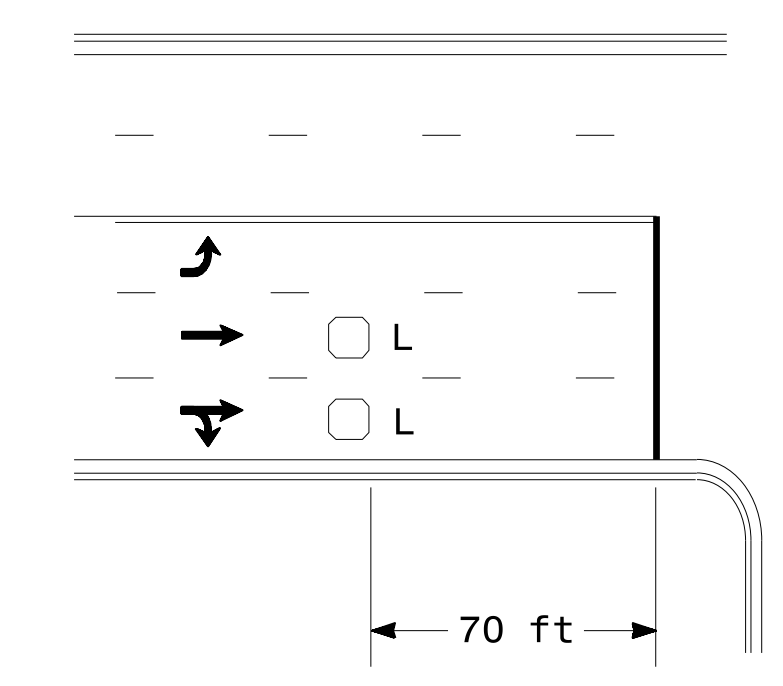


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
 Wired in series
 L2 = 6ft X 6ft
 Wired in series

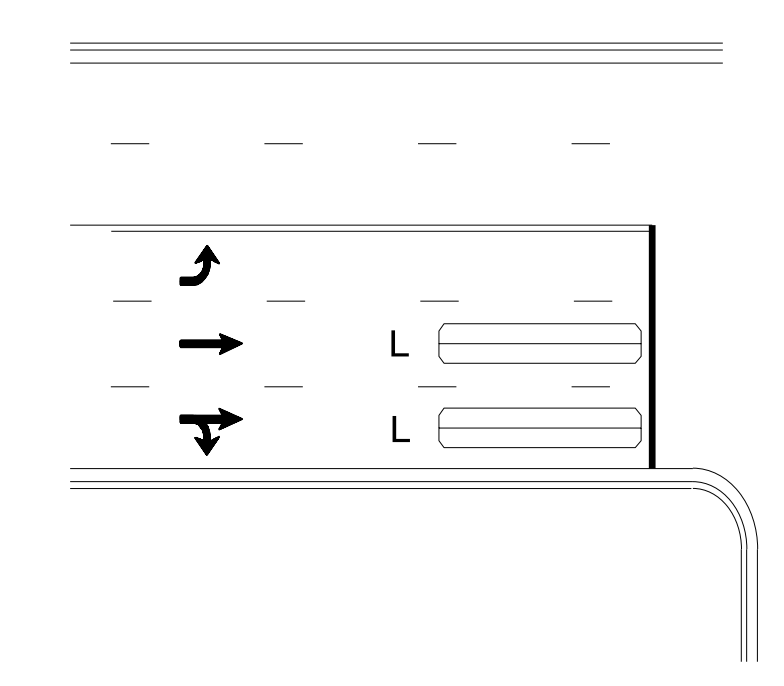
"Stretch" Operation

Low Speed Detection (≤35 mph)



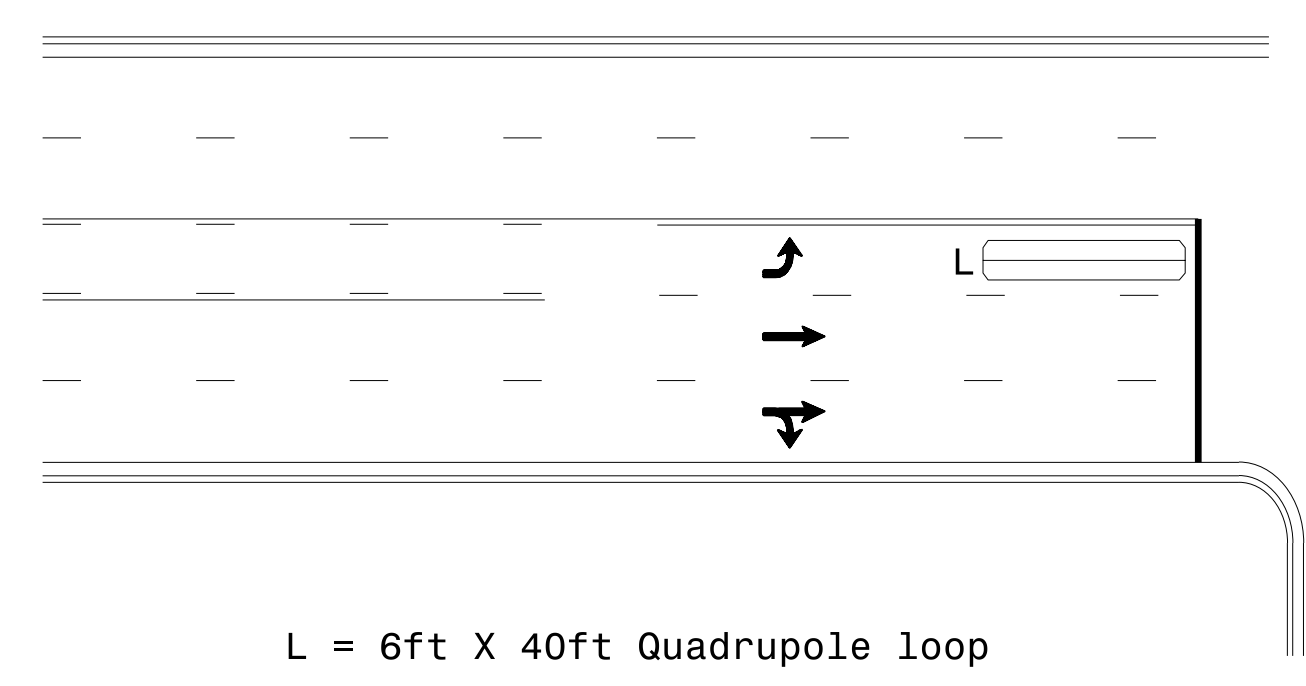
L = 6ft X 6ft
 Wired in series

OR



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

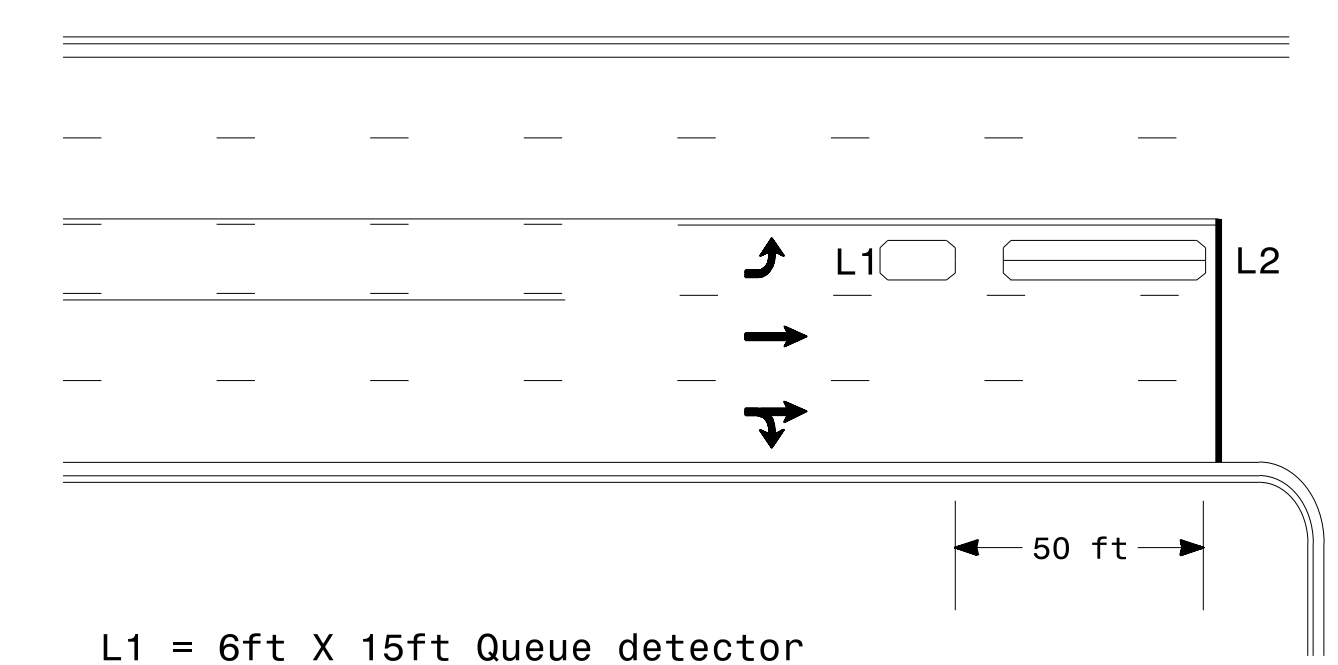
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

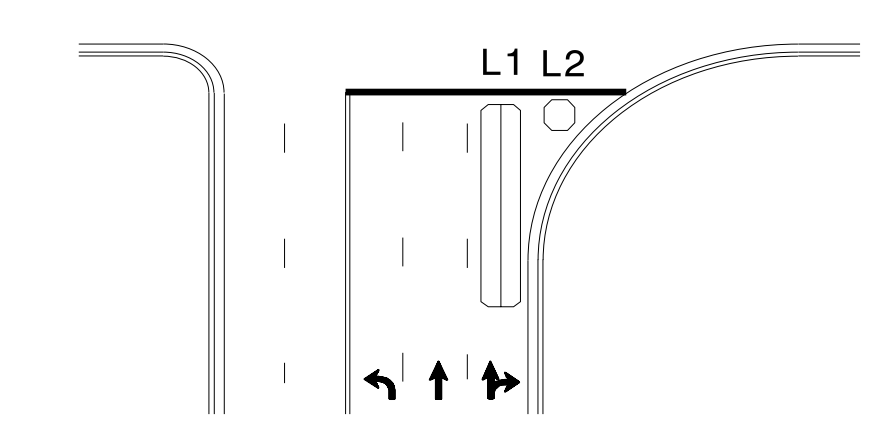
OR



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

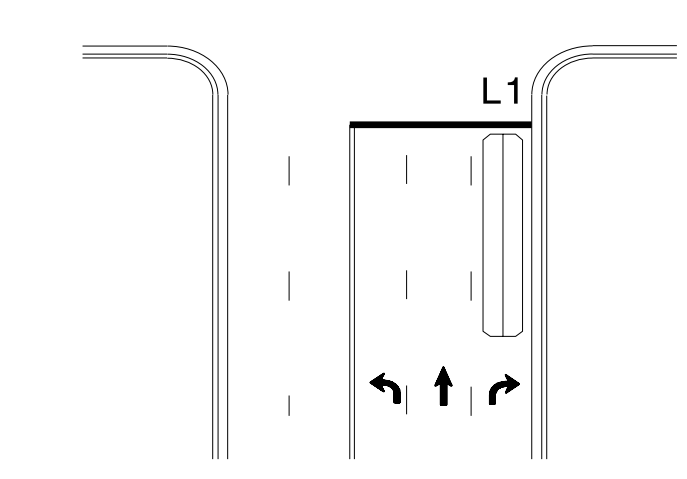
Queue Loop Detection

Right Turn Lane Detection

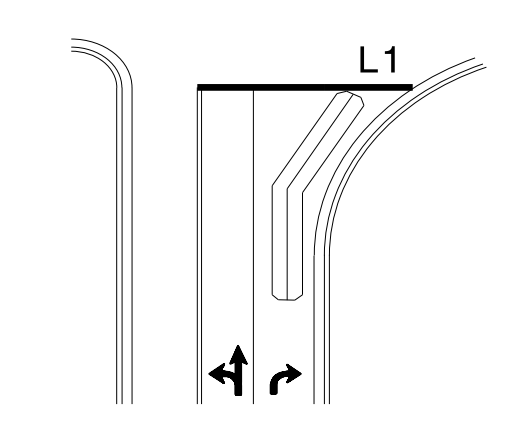


Shared Lane/
Wide Radius Turn

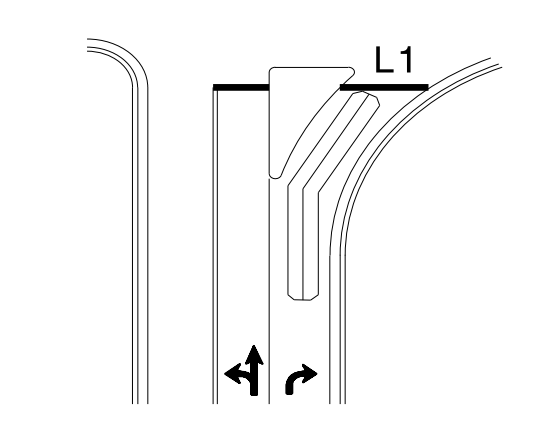
L1 = 6ft X 40ft Quadrupole loop
 L2 = 6ft X 6ft [Minimum] Presence loop
 Wired separately



Standard Turn

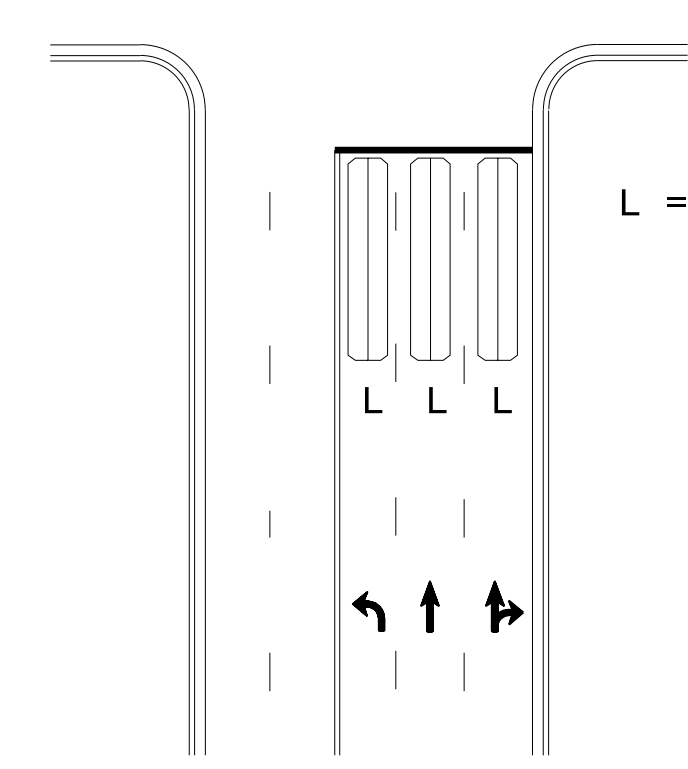


Wide Radius Turn



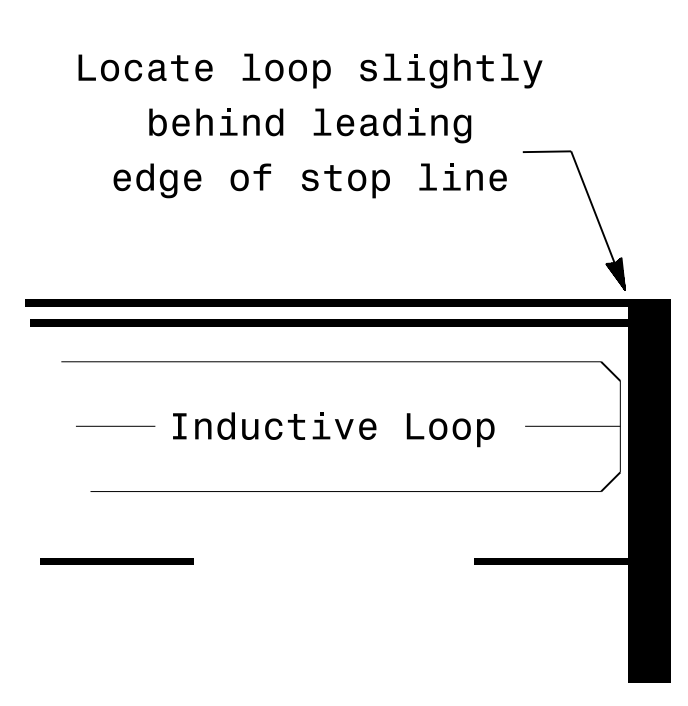
Channelized Turn

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

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

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

Quadrupole loops: Use 2-4-2 turns

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

750 N. Greenfield Pkwy, Garner, NC 27529

Typical Signal Loop Locations

PLAN DATE: January 2015	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
REVISIONS	INIT. DATE

SEAL
 NORTH CAROLINA
 PROFESSIONAL ENGINEER
 PAMELA L. ALEXANDER
 23489

DocuSigned by:
P. Alexander
 1/30/2015
 DATE

3D:\146-2015-12-29-SIGNAL\15-SIGNAL\Signal Design Section\Eastern Region\loop\typical\2015.dgn
 paalexander