1800 At-Grade, Unsignalized 1600 intersections S=Storage Length Required 1400 OPPOSING VOLUME (VPH) 1200 1000 800 600 400 200 0 200 500 100 300 400 600

Warrants for Left Turn Storage Lanes on Four-Lane Highways

FIGURE 3-3 WARRANTS FOR LEFT TURN STORAGE LANES ON FOUR-LANE **HIGHWAYS**

LEFT TURNING VOLUME (VPH)

Figure 3-3 was derived from Highway Research Report No. 211.

Opposing volume and left turning volume in vehicles per hour (VPH) are used for left turn storage lane warrants on four-lane highways.*

For plan detail requirements when curb and/or gutter are used, see VDOT's Road Design Manual, Section 2E-3 on the VDOT web site: http://www.virginiadot.org/business/locdes/rdmanual-index.asp.

Left-turn lanes should also be established on two-lane highways where traffic volumes are high enough to warrant them.

The No. 211 study was undertaken to provide consistent volume warrants for left-turn storage lanes at unsignalized intersections.

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