Right Turn Lanes

An exclusive right-turn lane shall* be considered when the warrants in Figures 3-26 and 3-27 are met. Double exclusive right-turn lanes may be provided when capacity analysis warrants. Safety implications associated with pedestrians and bicyclists should always be considered.

These warrants are to be used as an aid in selecting appropriate treatments for right turn movements. (Reference material attained from Virginia Highway and Transportation Research Council Report "*The Development of Criteria For the Treatment of Right Turn Movements on Rural Roads*" dated March 1981).

1. Number of Lanes – Warrants are differentiated on the basis of the number of lanes on the major roadway. Refer to Figure 3-26 for 2-lane roadways and Figures 3-27 for 4-lane roadways. The minor roadway is a 2-lane road. Discussion on both figures is provided. All volumes refer to the volumes on the approach under consideration for right turn treatments.

2. Radius Treatment – Refer to Warrants for right turn treatment on 2-lane roadways. The predominant treatment for 2-lane roadways is the radius. Arterial roadways tend to carry higher volumes of traffic traveling at higher speeds as compared to local roadways.

   The traffic on local roadways tends to include a higher number and percentage of right turning vehicles than that on arterials. An adjustment is needed to permit local roadways to handle more right turns (at lower speeds) compared to arterial roads. The following adjustment is made for posted speeds at or under 45 mph.

   Adjusted Number of Right Turns = Number of Right Turns - 20 for number right turns > 40 and total volume < 300

   For example, Total volume = 200 vph, Right turn volume = 70 vph and Posted speed = 40 mph. Then adjusted number of right turns - r = 70 - 20 = 50. Therefore, projecting a total volume 200 vph and r = 50 vph in the table, a radius is recommended for the right turn treatment.

3. Four lane Roadways – Four lane roadways tend to have a taper or full width lane to facilitate right turn movements. Many of these roads are divided highways with a speed limit of 55 mph.

4. Curb Channelized Island – Curb channelized island should be considered to separate right turn lanes from thru traffic based on capacity analysis.

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