

**406.05 RIGHT-TURN
CHANNELIZATION**

General - Right-turn lanes improve intersection capacity and safety. As for left-turn lanes, right-turn lanes should be laid out such that a right-turning vehicle must make a definite move to enter the lane.

The desirable length of the right-turn lane is the sum of storage requirements and deceleration length, including bay taper.

Width - The desirable right-turn lane width should be 3.65 m. Three meter wide right-turn lanes may be used on low speed urban roadways. The width is measured from the adjacent edge of travelled way, excluding shy distance.

The normal shoulder should be provided at the right-turn lane although, if right of way is severely constrained, a minimum 1.2 m wide shoulder may be used. The normal curb should be carried through the right-turn section.

Approach Tapers - Generally right-turn lane approach tapers are not required because the lane is added to the outside of the travelled way and the travel lanes are not shifted. However, if the travel lanes must be shifted to accommodate a right-turn lane, the taper should be the same as for left-turn lanes.

Bay Tapers - The bay taper which guides the motorist into the right-turn lane is a straight line along the right edge of the travelled way. Generally the taper length should be 15:1.

Deceleration Length - Whenever feasible, the right-turn lane should provide deceleration clear of the through lanes. The minimum deceleration lengths, exclusive of bay taper and vehicle storage, for 50, 60 and 80 kph are 70, 100 and 130 m, respectively.

In urban areas, it may not be possible to provide the deceleration lengths and maintain the storage and approach taper lengths required. In these situations, these lengths should be used as a desirable goal.

Storage Length - Storage requirements and goals are the same as for left-turns.

Free Right-Turns - Uncontrolled “free” right-turns improve capacity of an intersection with a heavy right-turn demand. The right-turn is made “free” by channelizing the turning movement outside of the intersection controls. Free right-turns shall only be provided where the turning movement can be made into an auxiliary or acceleration lane.

406.06 TRAFFIC ISLANDS

General - Traffic islands are located between traffic lanes and are commonly designated using paint, raised pavement markers, or curbs. They serve to:

- confine specific traffic movements into definite channels;
- separate traffic moving in the same or opposite direction;
- aid and protect pedestrians crossing the intersection; and,
- discourage or prohibit undesirable movements.

Design - Traffic islands must be large enough to be seen and to command the attention of the driver. Islands for channelizing should preferably be at least 9.0 m². Curbed islands for separating traffic streams should not be less than 1.0 m wide and 8.0 m long.

Curbed islands should be offset from the through traffic lanes by a minimum shy distance of 0.6 m and 0.9 m is preferable for approach speeds greater than 25 kph.

The approach end of a curbed island should be rounded at 0.5 to 1.0 m radius and tapered at 15:1 to guide the driver into the channelization.

Where there is an approach shoulder (1.2 m or wider), the curbed island should be offset from the through lane by the width of the shoulder. With an approach shoulder the flared approach is not necessary, except where a deceleration or turning lane has been provided.