

stream. That single maneuver causes conflict with both directions of travel. Where ever possible, points of conflict should be reduced so drivers are only exposed to one conflict or decision at a time. This can be done by using stop signs, traffic signals, grade separations, and channelization. Channelization separates and clearly defines points of conflict within the intersection.

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404.05 SPEED-CHANGE LANES

Speed-change lanes improve intersection safety and efficiency. Entering traffic merges most efficiently with through traffic when the merging angle is less than 15° and speed differentials are at a minimum.

Speed change lanes for diverging traffic should permit vehicles to decelerate after leaving the through lanes.

404.06 TURNING MOVEMENTS

A separate right turning lane removes turning movements from the intersection area, increasing safety and capacity. Also adding dedicated left turn lanes removes left turn traffic from the thru lanes which also increases safety and capacity. Abrupt changes in alignment or sight distance should be avoided.

404.07 REFUGE AREAS

Properly sized traffic islands can provide refuge for vehicles and pedestrians. The shadowing effect of islands provides refuge for vehicles waiting to cross or enter an uncontrolled traffic stream.

Channelization can also provide a safer crossing of two or more traffic streams by permitting drivers to select adequate gaps in one traffic stream at a time. Channelization should also provide ample storage for vehicles to make the turning or crossing movements.

404.08 PROHIBITED TURNS

Traffic islands may be used to divert traffic streams in desired directions and prevent specific undesirable movements.

404.09 EFFECTIVE SIGNAL CONTROL

At intersections with complex turning movements, channelization is required for effective signal control. Channelization enables sorting and storing of approach traffic for orderly movement through the intersection during separate signal phases. Channelization is particularly effective when used with traffic-actuated signal controls.

404.10 INSTALLATION OF TRAFFIC CONTROL DEVICES

Traffic islands enhance the effectiveness of, and provide space for, traffic control devices such as signals and signs. Dimensions and clearances for traffic control devices should be considered when sizing traffic islands.

404.11 GUIDELINES

- Striping is preferable to curbed islands, especially adjacent to high-speed traffic where curbing can be an obstruction to out-of-control vehicles.
- Where curbing must be used, first consideration should be given to mountable curbs. Barrier curbs should only be used where pedestrian protection is a primary concern.
- Avoid complex intersections that present multiple movement options or decisions.
- Accident records provide a valuable guide to the type of channelization needed.
- The Standard Drawings include details for a channelized free right turn and typical pavement markings at intersections.