- Coordinate design and traffic control. Maneuvers at intersections accomplished at low relative speeds require a minimum of traffic control devices. Maneuvers accomplished at high relative speeds are undesirable unless traffic controls such as stop signs or traffic signals are provided. Designs should separate vehicles making conflicting movements. Intersection design should be accomplished simultaneously with the development of traffic control plans.

- Avoid multiple and compound merging or diverging movements. These require complex driver decisions and create additional conflicts.

- Separate conflict points. Intersection hazards and delays are increased when intersection maneuver areas are too close together or when they overlap. Conflicts should be separated to provide drivers with sufficient time (and distance) between successive maneuvers for them to cope with the traffic conflicts one at a time.

- Favor the heaviest and fastest flows. The heaviest volume and higher speed flows should be given preference in intersection design to minimize hazard and delay.

- Minimize the area of the conflict. Excessive intersection area causes driver confusion and inefficient operations. Large areas are inherent with long curb return radii and in skewed and multiple-approach intersections. Channelization should be employed to limit the intersection and to guide drivers.

- Segregate movements. Separate lanes should be provided at intersections when there are appreciable volumes of traffic traveling at different speeds. Separate turning lanes should be provided for left and right turning vehicles. Left turns necessitate direct crossings of opposing vehicle paths and are usually made at speeds of 10 mph or less for reasons of safety and economy.

  Right turns are also usually made at minimum speeds. However, right turns do not involve potential conflicts of such severity as left turns, and are more suited to individual treatment because they take place at the outside of the intersection area. Therefore, right turns may be designed for higher than minimum speeds where adequate right-of-way is available for wider turns.

- Accommodate the needs of pedestrians and bicyclists. For example, when pedestrians must cross wide streets, refuge islands are important for pedestrian safety. See Figures 3-25 and 3-28 for illustrations. The VDOT web page *Bicycling and Walking in Virginia* provides information on VDOT policies for accommodating pedestrians and bicyclists on state highways.

  A detailed discussion on adapting highways for pedestrians and bicyclists is presented later in this section.