TRB's National Cooperative Highway Research Program (NCHRP) Research Report 672:

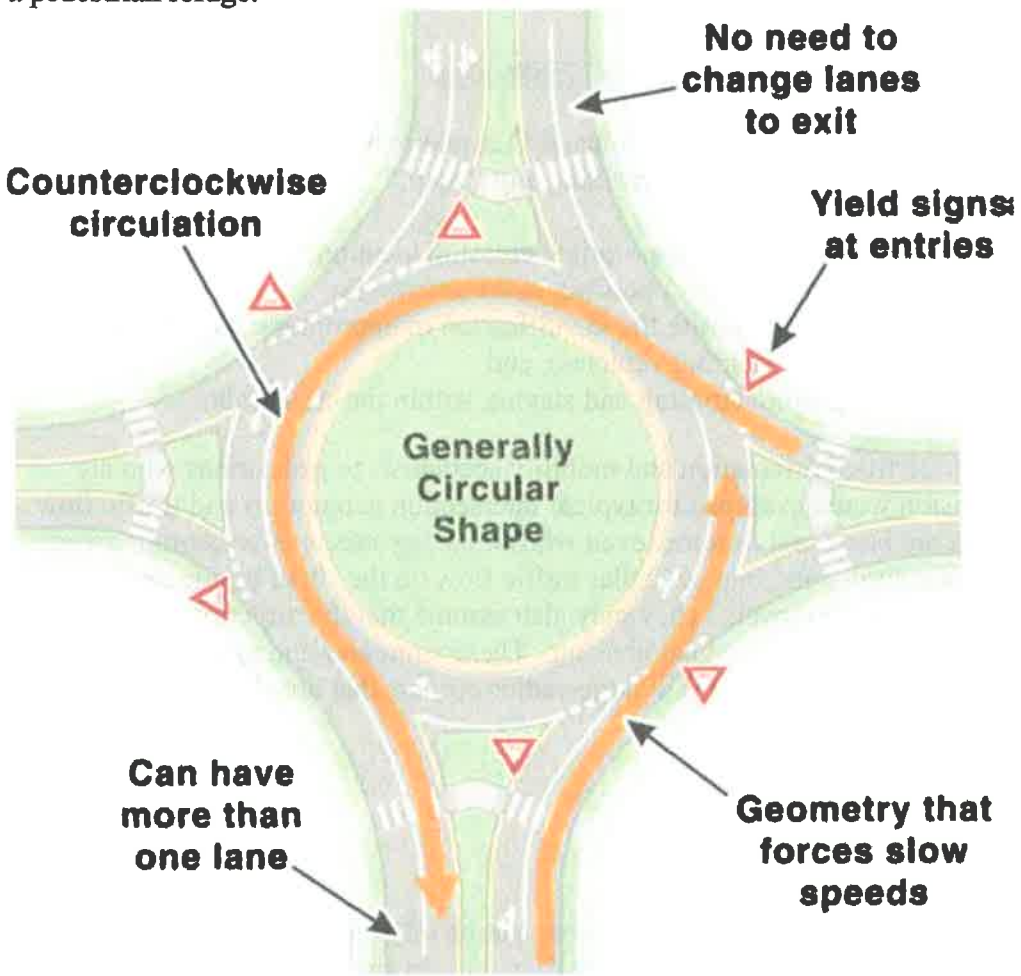
Roundabouts: An Informational Guide (Second Edition)

PDF is available at http://nap.edu/22914

A roundabout is a form of circular intersection in which traffic travels counterclockwise (in the United States and other right-hand traffic countries) around a central island and in which entering traffic must yield to circulating traffic.

DISTINGUISHING CHARACTERISTICS OF A ROUNDABOUT

Key roundabout features include a generally circular shape, yield control of entering traffic, and geometric curvature and features to induce desirable vehicular speeds. Splitter islands have multiple roles: separate entering and exiting traffic, deflect and slow entering traffic, and provide a pedestrian refuge.



City of Columbia, Mo Disabilities Commission (Mark R. Virkler, PE, PhD)

ROUNDABOUTS

SOME RESOURCES

Crossing Solutions at Roundabouts and Channelized Turn Lanes for Pedestrians with Vision Disabilities: A Guidebook (129 pages)

TRB's National Cooperative Highway Research Program (NCHRP) Research Report 834: Crossing Solutions at Roundabouts and Channelized Turn Lanes for Pedestrians with Vision Disabilities: A Guidebook presents guidance on the application of crossing solutions at roundabouts and channelized turn lanes at signalized intersections for pedestrians with vision disabilities. This publication will be of interest to engineers tasked with designing a particular site, planners and decision makers at the municipal and state government levels, and others.

http://www.trb.org/PedestriansAndBicyclists/Blurbs/175586.aspx

For pedestrians who are blind, crossing at roundabouts, CTLs, and other intersections consists of four task components, which are required for crossing any street:

1. Finding the crosswalk and determining the appropriate crossing location;
2. Aligning to cross and establishing the correct heading at the crosswalk;
3. Deciding when to initiate crossing (requiring the identification of appropriate gaps in traffic or crossing opportunities in front of yielding vehicles); and
4. Maintaining the correct heading while crossing and staying within the crosswalk.

Many strategies taught by certified orientation and mobility specialists to pedestrians who are blind or who have low vision were developed for typical intersection geometries and traffic flow patterns. Pedestrians who are blind may assume, even when crossing streets in unfamiliar areas, that the crossing will be at a corner and that vehicular traffic flow on the street beside them will be parallel to the direction of the crosswalk. They may also assume that the direction of traffic flow will be somewhat predictable due to signal phasing. These strategies and assumptions are not well-suited to the curvilinear traffic flow and large-radius corners that are characteristic of roundabouts and CTLs.

…good accessibility is best evaluated through direct observation of pedestrians with disabilities using a facility without a significant degree of perceived risk beyond that experienced by sighted pedestrians. A facility that is not accessible to and usable by pedestrians who are blind or who have low vision will often be avoided and thus may appear safe due to the lack of crashes involving pedestrians. But little or no pedestrian exposure may be equally or more related to this lack of crashes, as with any safety performance of the intersection.