

There are three basic categories of roundabouts based on size and number of lanes: mini-roundabouts, single-lane roundabouts and multi-lane roundabouts.

MINI-ROUNDBABOUTS

Mini-Roundabouts are applicable in urban environments with speeds less than or equal to 30 mph. They adapt to existing boundaries by providing a fully traversable central island, a mini-roundabout can be a low-cost solution for improving intersection capacity and safety without the need for acquiring additional right of way. The suitability of a mini-roundabout depends on:

- 1) Traffic Volumes (comparable ADT from each approach roadway)
- 2) Truck Volumes < 5%
- 3) Frequency of School Bus use

Mini-Roundabouts should meet the following geometric design criteria:

- 1) Central island diameter* of 25 to 50 feet, which is fully mountable
- 2) Central island and splitter island curb height is less than 2 inches high and is flush (traversable) and painted when frequently used by buses
- 3) Central island that are raised should be domed using 5% - 6% cross slope, with maximum height of 5 inches
- 4) Circular roadway width of 12 feet (may be wider for intersections with acute angles)
- 5) Approach lanes 10 to 11 feet (to reduce speeds)

The majority of traffic (usually estimated at 97%) should be able to pass through the mini-roundabout while staying within the circulatory roadway. The fully traversable central island and splitter islands allow larger vehicles to pass through. Mini-Roundabouts can conservatively handle 1,600 VPH (all approaches) while providing an adequate level of service.

Sources: ITE Journal, November 2012, Article by Lochrane, Zhang and Bared;
Public Roads Magazine, Nov. /Dec. 2012, "They're Small But Powerful" at:
[NCHRP Report 672, Roundabouts: An Informational Guide](#), Second Edition,
Chapter 6, Section 6.6

* Rev. 1/19