

## G. ROUNDABOUTS

Roundabouts are also used at intersections to control traffic as well as to calm traffic. VDOT recognizes that roundabouts are frequently able to address safety and operational objectives better than other types of intersections. Therefore, it is VDOT policy that roundabouts be considered when a project includes reconstructing or constructing new intersection(s), signalized or unsignalized. The Engineer shall provide an analysis of each intersection to determine if a Roundabout is a feasible alternative based on site constraints, including right of way, environmental factors and other design constraints. The advantages and disadvantages of constructing a roundabout shall be documented for each intersection. When the analysis shows that a roundabout is a feasible alternative, it should be considered the Department's preferred alternative due to the proven substantial safety and operational benefits.

Roundabouts should not be considered as a feasible alternative when the following criteria exist:

- Where adequate horizontal and/or vertical approach sight distances cannot be met.
- When there are signalized intersections in close proximity to the proposed roundabout.
- Where high volume entrances are in close proximity (within 100') to the outer edge of the inscribed diameter.
- Where left turns are not the predominant turning movement.
- Has been deemed unsuitable by the District or Central Roundabout Review Committee.

The maximum daily service volume of a single-lane roundabout varies between 20,000 and 26,000 vehicles per day (2,000 -2,600 peak hour volume), depending on the left-turn percentages and the distribution of traffic between the major and minor roads. Roundabouts typically handle higher volumes with lower vehicle delays (queue) than traditional intersections at capacity.

Roundabout designs shall be based on NCHRP Report 672, Roundabouts: An Informational Guide, Second Edition\*. See the following link:

[http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_672.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_672.pdf)

Additional information can also be found in VDOT's Roundabout Brochure at <http://www.virginiadot.org/info/faq-roundabouts.asp>. See Figure 13 - Roundabout Details. When roundabout design is proposed, the District Administrator's Designee should consult the District Location and Design Engineer.

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\* Rev. 7/11