

# Lafayette MPO

## Roundabout Policies

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*PREPARED BY*



**Lafayette Consolidated Government  
Traffic and Transportation Dept.  
Metropolitan Planning Organization &  
Comprehensive Planning Division**

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### **1.0 Introduction**

Roundabouts offer unique solutions to traffic operations and safety problems at intersections. Generally, for the same traffic volume, delays are less at roundabouts as compared to other controlled intersections (typical delay reductions are 30-70%). Roundabouts will accommodate large volumes of left turn movements with less delay than signalized intersections. If left turns are minimal, or most of the traffic is making similar moves (i.e., there is a significantly dominant direction of traffic), then a conventional controlled intersection may offer less vehicular delay. With regard to safety, roundabouts reduce vehicle speeds and result in significantly fewer accidents. A study by the Insurance Institute for Highway Safety found that construction of roundabouts resulted in a 39% overall reduction in accidents; a 76% reduction in injury accidents and an 89% reduction in fatal or incapacitating accidents. No other intersection type has been found to provide that magnitude of safety improvement. See Figures No. 1-1, 1-2, and 1-3 for examples of a one-lane roundabout, a two-lane roundabout, and a roundabout corridor.

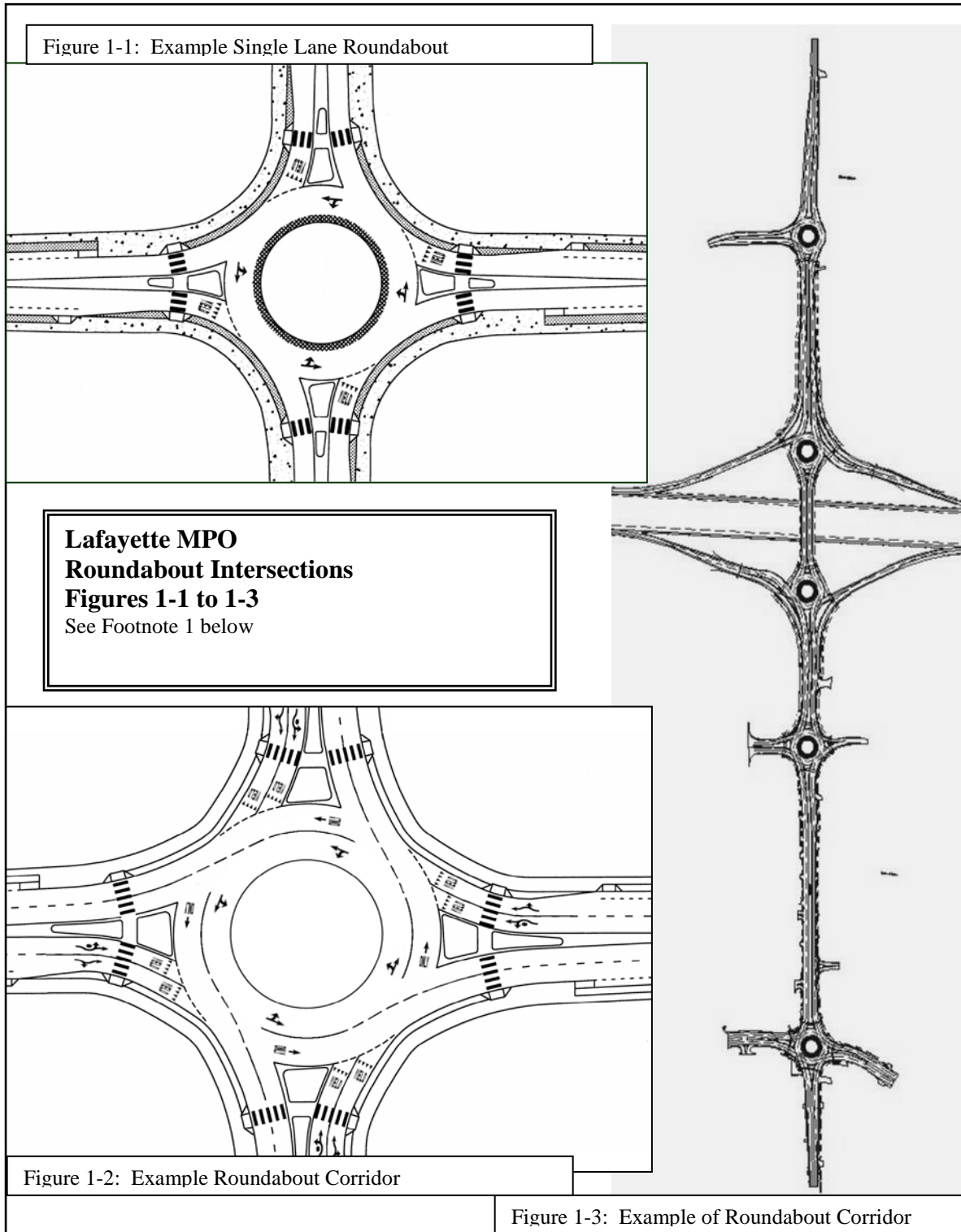
## **2.0 Proposed Roundabout Policies**

The Lafayette Metropolitan Planning Organization (MPO) advises that:

- 1) When a transportation improvement project includes reconstructing or constructing new intersections, a roundabout alternative is to be analyzed to determine if it is a feasible solution based on site constraints, including ROW, environmental factors, and other design constraints. Exceptions to this requirement are where the intersection:
  1. Has no current or anticipated safety, capacity, or other operational problems.
  2. Is within a well working coordinated signal system in a low-speed (<49 mph) urban environment with acceptable accident histories.
  3. Is where signals will be installed solely for emergency vehicle preemption.
  4. Has steep terrain that makes providing an area, graded at 5% or less for the circulating roadways, infeasible.
  5. Has been deemed unsuitable for a roundabout by the Design engineers.

When the analysis shows that a roundabout is a feasible alternative, it should be considered the preferred alternative due to the proven substantial safety benefits and other operational benefits.

- 2) The Lafayette Metropolitan Planning Organization shall maintain a comprehensive long range Roundabout Plan for the MPO Study Area. The MPO Roundabout Plan shall be updated and expanded on a minimum five year cycle or as determined necessary by a MPO advisory committee.
- 3) Landscaping and related facilities (fountains, lighting, statuary, etc.) shall also be considered upon design of a roundabout, and the required infrastructure shall be extended to the roundabout if landscaping appears to be a feasible option.



Footnote 1: New York State Department of Transportation (NYSDOT), Highway Design Manual, Chapter 5, Basic Design, Section 5.1.9.C, Page 5-100, Exhibit 5-19, Roundabout Intersections, (Revision 50, dated 8/23/2006).