
Roundabouts 101

Having driven in many places around the world, I always especially enjoyed roundabouts. So, when I first encountered them in Encinitas, I thought this was weird but potentially fun. The first one I remember is the one on Santa Fe. I enjoyed the chicane-style driving needed to navigate this tiny roundabout but I also thought, this is really dumb. Why is there a roundabout here in this tiny space? Somebody's brother-in-law must be a roundabout contractor, I imagined. After a time it became clear that local drivers have no understanding of roundabout rules-of-the-road: you are supposed to use turn signals if you are not 'going through'. No matter, I rationalized, they'll eventually learn. Soon after, someone was killed¹ driving straight through apparently not realizing that a roundabout was there. Saddened, I thought why didn't the city take more care to emphasize such a novel structure on, at the time, a relatively minor side road? Now that multiple roundabouts are proposed for 101, in association with increased traffic congestion, I did some research about them and their suitability to various traffic conditions and settings. This is what I find: *(a) roundabouts help reduce the severity of 4-wheel vehicle collisions but (b) increase the frequency and severity of other accidents, mainly pedestrians and bicyclists.* For example, in England, municipalities are adding traffic lights to roundabouts or *completely replacing roundabouts with signalized intersections* because they are trying to make the roads safer for bicyclists². That's right, as an increasing number of people use bicycles for transportation, the roundabouts have become a problem because of bicycle accidents. Quoting the article, *...Congestion is greater. Cyclists are more numerous.* In California, Caltrans³ refers the interested reader to a report published by the National Academy of Science, Engineering, and Medicine⁴. This report states (p. 5-20) that although: *(i) Two-wheel vehicles were involved in injury crashes more often (+77%) at signalized intersections than at roundabouts. (ii) People were more frequently killed and seriously injured per crash (+25%) at roundabouts than at signalized intersections. (iii) Proportionally, two-wheel vehicle users were more often involved in crashes (+16%) at roundabouts than at signalized intersections. Furthermore, the consequences of such crashes were more serious.* One wonders what the City Council is thinking, or if they are thinking. Among the rationales for the Streetscape project seem to be *traffic-calming* and *bike-friendly* roads. Here is evidence that the opposite will occur as the City flaunts the will and wisdom of local residents. I imagine the first wrongful death lawsuit after Streetscape is implemented will be based on the City Council's culpability in creating a hazardous and deadly road configuration despite clear prior evidence of the hazard. Or, maybe just because the emergency vehicles cannot get through.

¹<http://www.sandiegouniontribune.com/sdut-man-dies-in-solo-crash-at-santa-fe-drive-2007oct09-story.html>

²<https://www.theguardian.com/cities/2015/oct/19/traffic-lights-roundabouts-way-out>

³<http://www.dot.ca.gov/design/lap/livability/roundabouts.html>

⁴http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_672.pdf