

Capacity Analyses

The following analyses were undertaken using SIDRA, the most widely used program in the U.S. and around the world for analyzing roundabouts, signals, and stop controlled intersections.

Analyses were prepared using traffic counts that were available at the time. Counts were adequate to show that the existing traffic volumes along 87th Street is low and is mostly due to vehicles moving to or from I-435. Local traffic and traffic from adjacent developments is also relatively low.

Based on the provided traffic volumes replacing the signalized intersections with two lane roundabouts would provide good levels-of-service at each of the intersections. With the current design, the proposed roundabouts are over-designed. In doing so, roundabouts provide a consistency of along the 87th Street with considerable spare capacity.

Copies of the analyses are in Appendix A.

Layout Plans

A copy of the proposed cross-section for 87th Street with a plan view of the cross-section showing the various elements and suggested dimensions is included in Appendix B

Following the proposed cross-section is a suggested plan for the layout of 87th Street from Hillcrest Road west to Newton Avenue. This plan shows the four proposed roundabout, their impact, and the proposed changes in between the roundabouts with a representation of the trees that are recommended to be planted along the street.