

## **Cascade Road – Roundabout Interchange Alternative**

### **Simulation Background and Narrative**

This alternative features a diamond interchange in which the intersections of the I-285 ramps and Cascade Road are controlled with roundabouts. The spacing between the two I-285 ramp intersections is about 465 feet. A roundabout is also shown for the intersection at Shanter Trail, and a traffic signal intersection is shown at Utoy Springs Road.

The video simulation starts with an aerial view of the Cascade Road/I-285 Interchange area. The traffic patterns shown in the simulation are representative of the evening peak hour projected for the year 2030.

As the video pans to Utoy Springs Road, you will see the following changes to the intersection configuration. First, the approaches on the north and south sides have been aligned to allow a smoother through movements for northbound and southbound vehicles, and to provide safer conditions. Next, the right turn only lane for westbound Cascade Road traffic has been shifted to the north and a third lane for traffic wanting to travel through the intersection to the west has been created. This third westbound lane is carried to Fairburn Road where it becomes a right turn only lane.

As the video pans to the east, you see an eastbound right turn only lane develop for access to the southbound I-285 on-ramp. You also see the three westbound travel lanes along Cascade Road. The third rightmost westbound lane is developed from a free flow right turn bypass lane from the I-285 southbound off ramp.

As we move to see fully the southbound ramps intersection, you will notice that there are two lanes for each approach to the roundabout and two lanes circulating for most of the roundabout. Each approach would have a Yield sign to indicate that drivers should yield to the vehicles already inside the roundabout.

As you begin to view the roundabout for the northbound I-285 ramps, you see that it also features two lanes on each approach and circulating for most of the roundabout. Right turn bypass lanes are provided for the northbound and westbound traffic movements.

As we move further to the east to Cascade Parkway, you will notice that the intersection for the I-285 northbound ramps has moved closer to Cascade Parkway. As a result, traffic movements from Cascade Parkway will be restricted to only right turns in and out. However, for those drivers coming out of Cascade Parkway and wanting to go east, they only need to make a right turn, go to the I-285 northbound ramp and make a “U-turn” through the roundabout to then travel east. Likewise, a driver traveling eastbound wanting to go north on Cascade Parkway will only need to make a “U-turn” through the roundabout at Shanter Trail.

Finally, the video pans to the roundabout at Shanter Trail. You can see two lanes on Cascade Road traveling continuously from Cascade Parkway through the Shanter Trail intersection. East of Shanter Trail the eastbound lanes merge into a single lane prior to Melbenan Drive. Only one lane is needed for the Shanter Trail entries.