

Superstreet FAQs

Prepared for the Moore County business community

by the Moore County Chamber of Commerce

Summary

Communities and transportation professionals strive to promote smooth and efficient travel flow that helps drivers along a street or corridor keep moving while providing safe access to and from various locations along the street for drivers and pedestrians. In 2019-2021 residents in Moore County will experience two (2) major construction projects on US 1 (from Southern Pines at Cam Square to Roseland Boulevard in Aberdeen) and US 15-501 (from US 1 to Brucewood/Kohls Shopping Plaza). These two construction projects are currently in the final stages of development.

As a member of the business community the Moore County Chamber of Commerce wanted to be sure that you had the necessary information to be prepared for these projects and the future traffic patterns once the projects are completed. You are strongly encouraged to review this document. If you have any specific questions please feel free to contact The Moore County Chamber of Commerce.

In summary, the current traffic patterns and ingress and egress that is currently used on these two roads will change. The new traffic pattern that is being proposed is a synchronized street, most often known as a superstreet. Superstreets are designed to improve travel by allowing simultaneous coordination of both travel directions at all times of day – while providing reasonable access to side streets with signal control.

Conventional Intersection

A conventional intersection is a traditional design for moving traffic through the crossing of roadways. Potential modifications could include improving signal timing, adding additional turn lanes or through lanes, and adding dedicated U-turn lanes to move more traffic through the intersection. The conventional intersection allows turn movements from side streets and allows thru movements onto side streets.



Superstreet

A superstreet is a type of intersection in which side-street traffic is redirected from going straight through or at a divided highway intersection. All side-street traffic must turn right, but can then access a U-turn to proceed in the desired direction. Other configurations of superstreets are possible based on site specific conditions. The Superstreet concept provides an alternative along heavily traveled regional arterials in areas with anticipated commercial and residential growth. The design concept is contingent upon a series of features that reduce potential conflict points while maintaining traffic flow.



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How do they work?

If a driver is approaching a Synchronized Street from a side street, he or she can't go straight across or turn left in front of approaching traffic. Instead, the driver will first turn right onto the synchronized street and then make a U-turn at a designated median opening a little further downstream. In general, it is believed the overall delay caused by a traditional signalized intersection is much greater than the delay associated with synchronized streets, even with the additional travel distance.

Why do they work?

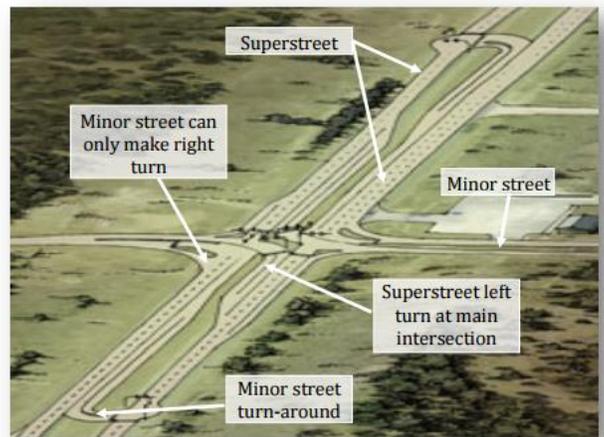
At a traditional intersection, a side street driver must look in both directions to cross a divided highway, and there are more threats to a left-turning driver. Conversely, a driver waiting to cross a Synchronized Street from a side street only needs to focus on one direction of traffic at a time. Synchronized Streets reduce the number of conflict points, which reduces the risk of severe "T-bone" crashes, especially for side-street drivers desiring to turn left or cross all lanes.

Where can they work?

The Synchronized Street design is well suited for urban or suburban areas with many traffic signals by enabling efficient coordination in both directions. In addition, the design can be applied to lower volume rural areas without signals, with through travel free-flow rather than synchronized.

Additional Information

The main intersection of the superstreet typically has traffic signals, but the U-turn may not. Standard warrants for applying traffic signs and signals are used to determine what type of traffic control devices should be used at that location. The design does require large quantities of signage to ensure driver understanding. Signs should be placed in particular areas to provide adequate warning and direction to help sustain the intersection and reduce congestion caused by improper use of the intersection. The superstreet intersection should be altered to accommodate pedestrians if they are expected to use the intersection regularly. Alterations include eliminating right-turn lanes or any channelizing islands to shorten the crossing distances.



Issues with Superstreets

The unique design of superstreets can cause driver confusion and may result in drivers ignoring the prohibited left turns at the main intersection or rejecting the concept all together. Responsible agencies should be vigilant to educate the public and get them used to the concept when it is being first introduced to the area. The additional right-of-way and paved surfaces required to construct the modified left turn facilities could have a substantial influence on cost. Adequate signing for road users is important to the operational success. The operation and maintenance of superstreets can be higher than other street designs. Left-turning vehicles can also experience larger delays and distances due to the displaced site.