

Alternative Intersection and Interchange Design and Operation
 Workshop for Planners and Designers
 August 15, 2017

Workshop Description

Many arterials and interchanges are terribly congested, and conventional measures offer little prospect for relief. Alternative designs offer some potential for relatively inexpensive improvements to those congested arterials and interchanges. These are designs that have been used in some state or have been researched but have not been placed into widespread use. Examples include the median u-turns that Michigan has used for many years, the superstreets being installed in North Carolina, and the diverging diamond interchanges now open in about 15 states. In the right place with the details designed well, an alternative design can deliver great safety, efficiency, environmental, and cost benefits to motorists and transportation agencies.

The purpose of this workshop will be to discuss the best of the alternative intersection and interchange options in some depth. We will explore the history, planning, design, and operation of the major designs. By the end of the workshop participants should understand which design has a realistic chance to help in a particular spot.

Workshop Agenda

Time	Unit	Topic
8:00		CHECK-IN
8:30	1	Course introduction
9:00	2	Why alternative designs should work
		BREAK
10:00	3	Median U-Turn intersections
11:00	4	Superstreet
11:30	5	Continuous Flow Intersections
12:00		Lunch
1:00	6	Quadrant Roadway Intersections
1:30	7	Grade-Separated Intersections
		BREAK
2:30	8	Diverging Diamond Interchange
3:30	9	Alternative Service Interchanges (three-point, contraflow, displaced left, I-894, etc.)
4:30	10	Wrap-up

Who Should Attend

The workshop should be of interest to any planners, designers, and operations professionals who work on intersections and interchanges. No prior knowledge of intersection or interchange design or operations is needed. Only basic math skills are needed to follow the examples used in the workshop.

Instructor

The workshop instructor, Professor Joseph E. Hummer, Chair of the Department of Civil and Environmental Engineering at Wayne State University, is one of the foremost authorities on alternative intersection and interchange designs practicing today. He began researching the designs in 1990, has published numerous articles about them, and has invented dozens of new intersection and interchange designs. His two-part series in the *ITE Journal* in 1998 helped spark interest in the area. More recently, he was a co-author of the 2009 FHWA informational report on six of the most promising designs and the primary author of the 2014 FHWA guidebook on superstreets. He was lead author of the FHWA report on the safety of the diverging diamond interchange is currently the Principal Investigator on the FHWA research project investigating the safety effects of signalized superstreets.