

## The Instructor:

The trainer/consultant for the Roundabout Design Workshops, Howard McCulloch – owner of NE ROUNDABOUTS, has conducted numerous roundabout design workshops throughout the United States and works full time in the roundabout design field. Mr. McCulloch has designed roundabouts all over the country, including the award-winning re-design of the Latham Traffic Circle in New York State utilizing modern roundabout technology.

“Howard's approach to providing the assistance also has helped the... staff become more knowledgeable about roundabout design and analysis tools.”

“The valuable expertise that he brings to the roundabouts community within the United States is greatly appreciated.”

Jeffrey B. Shaw, P.E., PTOE, PTP  
FHWA Office of Safety  
Intersections Program Manager

NE ROUNDABOUTS would greatly appreciate the opportunity to provide any roundabout design training that your organization or company might be interested in. Customized roundabout related classes beyond the courses listed in this flyer can be developed if requested.

Please contact NE ROUNDABOUTS to determine what type of training assistance we can provide.

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# ROUNDABOUT DESIGN & ANALYSIS WORKSHOPS

THE NUMBER OF MODERN  
ROUNDABOUTS IN THE  
UNITED STATES IS  
RAPIDLY INCREASING.  
ROUNDABOUTS ARE  
QUICKLY BECOMING THE  
PREFERRED INTERSECTION  
CONTROL DEVICE.

WE WILL HELP YOU  
GET READY.

[WWW.ROUNDABOUTS.CC](http://WWW.ROUNDABOUTS.CC)

## LEVEL 1

### “WHAT EVERYBODY NEEDS TO KNOW ABOUT ROUNDABOUTS”

The Level 1 workshop will present what a roundabout actually is, compare it to other circular intersections, and discuss some of the policies in place to assist with their implementation. The use of roundabouts in corridors and/or for access management will be demonstrated and lessons learned from previous projects relating to public involvement will be discussed. Capacity software programs will be compared, construction and maintenance issues shown, and lighting guidance will be presented. The various pavement marking and signing techniques being used will be evaluated and the accommodation of pedestrians and bicyclists at modern roundabouts will be covered. Design of single and multi-lane roundabouts will be demonstrated with hands-on use of circle templates over base mapping.

This course is appropriate for transportation planners, traffic engineers, public officials in charge of traffic control alternative evaluations, and intersection/road design professionals.

**"Thanks to Howard's valuable assistance I believe MDT has developed sufficient internal capabilities to confidently propose roundabout intersections."**

**Lloyd H. Rue  
Design-Traffic Safety Engineer  
FHWA Montana Division**

## Agenda Overviews

### LEVEL 1

#### *Day One*

##### Lecture and Discussion

- ◆ Roundabout Safety Performance
- ◆ Corridors & Access Management
- ◆ Public Involvement & Education
- ◆ Roundabout Capacity Models
- ◆ Construction and Maintenance
- ◆ Signing and Striping
- ◆ Ped and Bicyclist Accommodations

#### *Day Two*

##### Hands-On Design Training

- ◆ Single Lane Roundabouts
- ◆ 2 and 1 lane (major/minor)
- ◆ Multi-Lane Roundabouts

### LEVEL 2

#### *Day One*

- ◆ SIDRA Overview
- ◆ SIDRA Single Lane Example
- ◆ CAD Overview & Example
- ◆ VISSIM Overview

#### *Day Two*

- ◆ VISSIM Class Example 1
- ◆ SIDRA Class Example 2
- ◆ CAD Multi-Lane Example
- ◆ VISSIM Class Example 2

## LEVEL 2

### “HANDS-ON USE OF ROUNDABOUT DESIGN AND ANALYSIS SOFTWARE”

This two-day workshop covers the use of current design and analysis software from a practitioners perspective. SIDRA, CAD, and VISSIM will be utilized during this training using step-by-step techniques that can be easily applied to other roundabout projects. SIDRA ([www.sidrasolutions.com](http://www.sidrasolutions.com)) is an intersection analysis program that is used by many state DOTs throughout the US to quickly and accurately analyze roundabouts. MicroStation ([www.bentley.com/en-US/Products/MicroStation](http://www.bentley.com/en-US/Products/MicroStation)) will be used to develop the 2D layouts but the same techniques are easily completed in AutoCAD ([usa.autodesk.com/autocad](http://usa.autodesk.com/autocad)) as well. VISSIM ([www.ptvamerica.com](http://www.ptvamerica.com)) is an excellent tool for roundabout analysis and for creating realistic traffic simulations. These simulations can be extremely helpful with getting internal and external buy-in for the roundabout alternative. No prior experience with any of the software programs is required but previous roundabout training would be beneficial.

Upon completion of the Level 2 workshop participants will have a better understanding of how to use SIDRA, CAD, and VISSIM to properly scope, analyze, and design single and multi-lane roundabouts to the extent necessary for planning and preliminary design purposes.