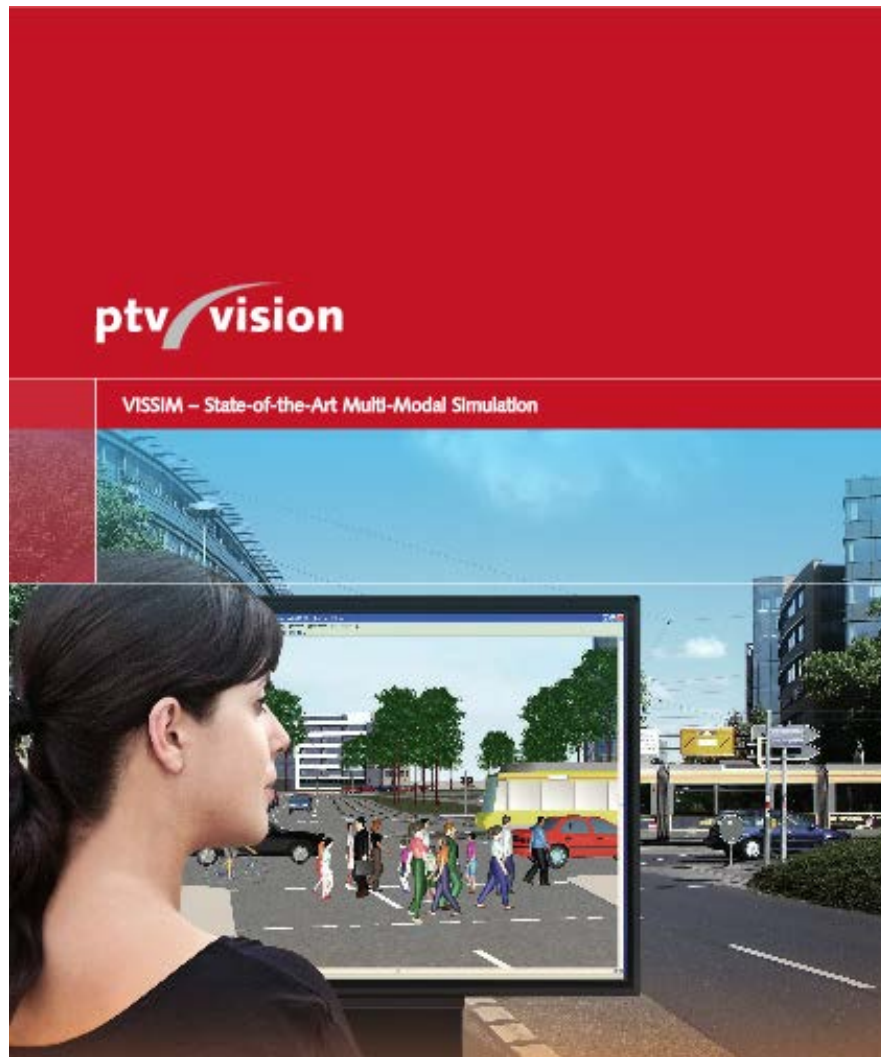


# Designing Roundabouts In VISSIM



**Version 1.0**

**December 4, 2013**

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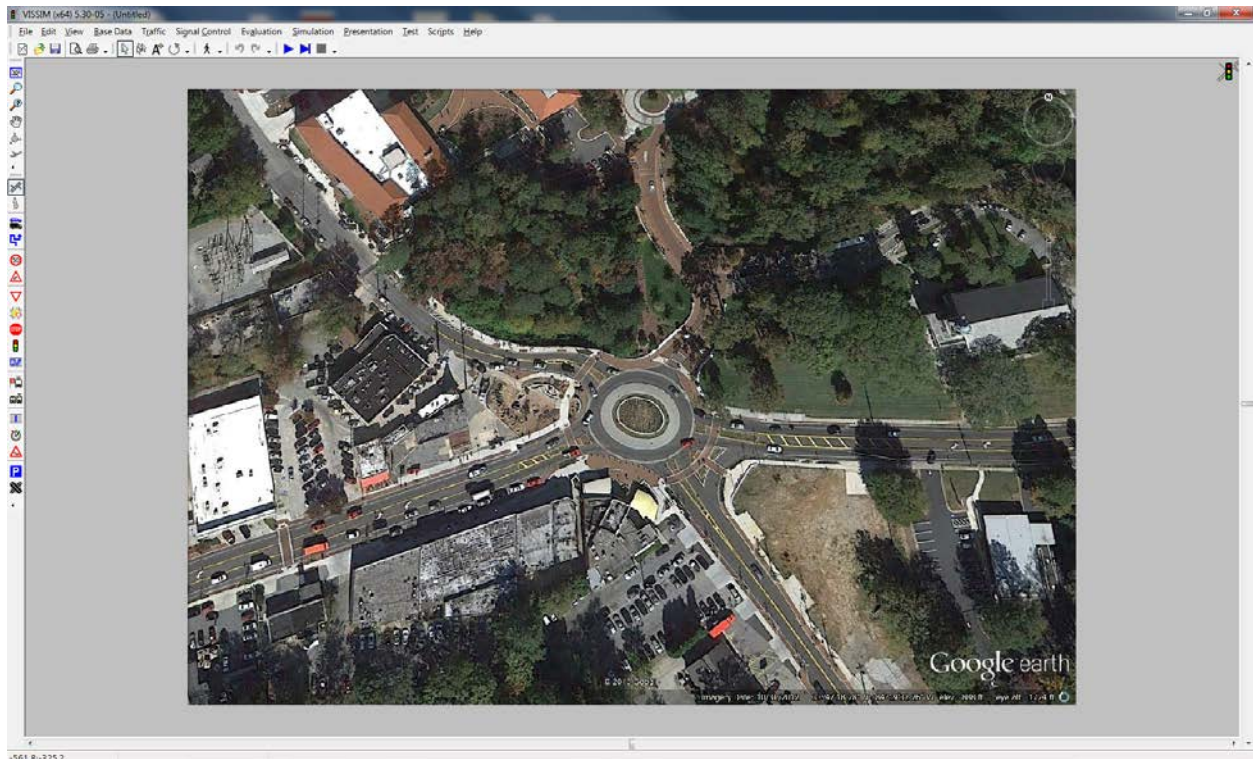
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# Section 1: Intro

**Designing Roundabouts in VISSIM** was designed to address the specific concerns of modeling a roundabout. The guide assumes the reader has previous experience in VISSIM and as such does not cover the full process of modeling a network. If a reader is working in VISSIM for the first time to model a roundabout he/she should read the Getting Started: VISSIM guide first in order to become familiar with the software. This guide focuses only on link layout and conflict areas.

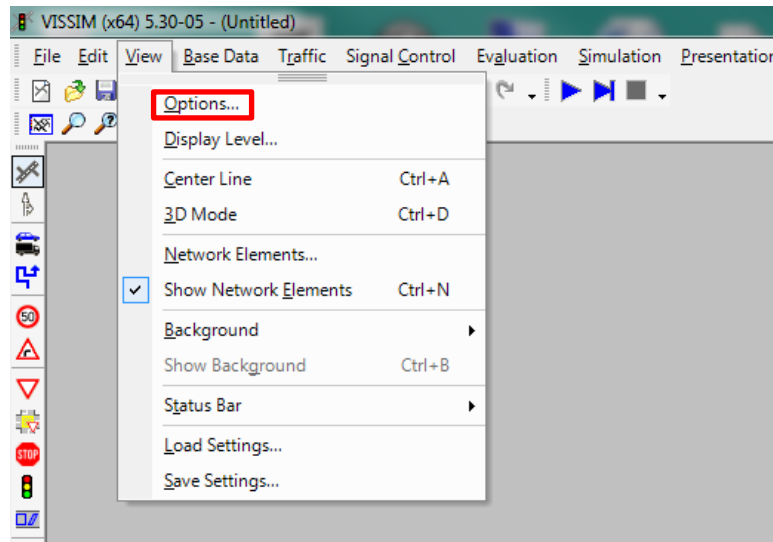
## Section 2:

# Build a Roundabout

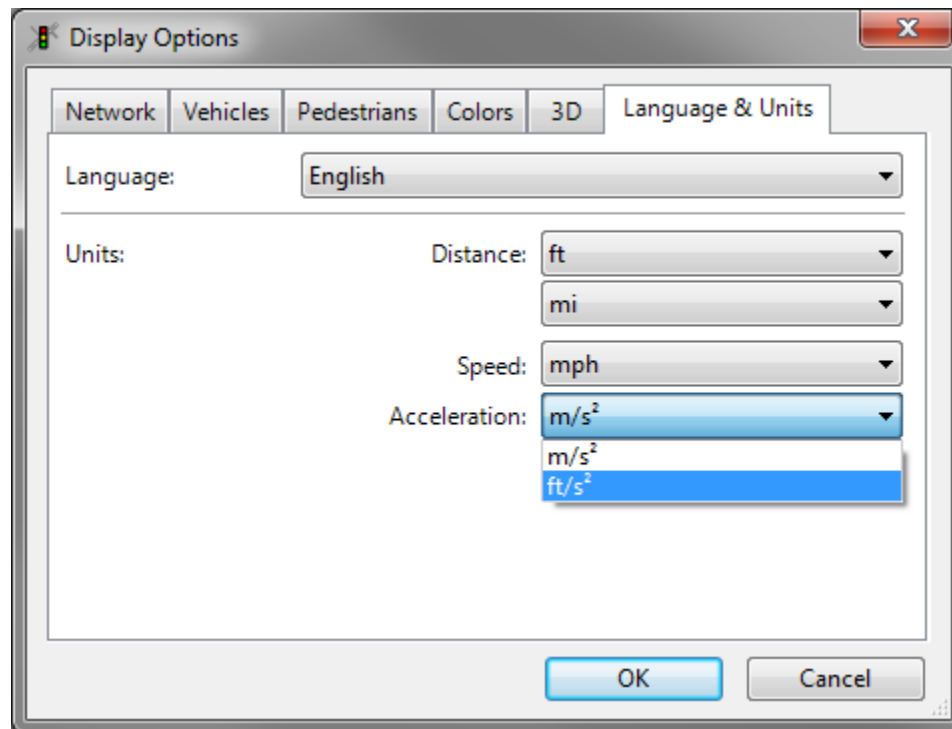


Switch to English units:

1. Go to **View**, then **Options**



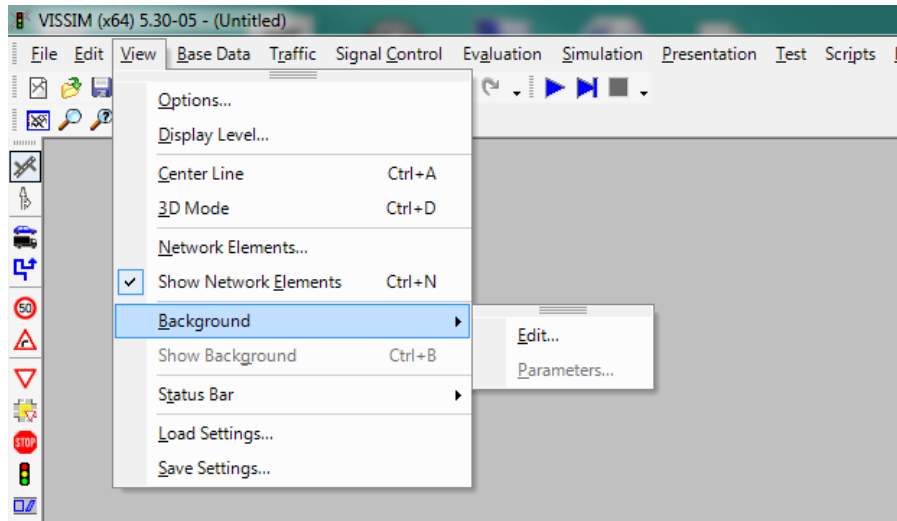
2. Select the **Language & Units** tab



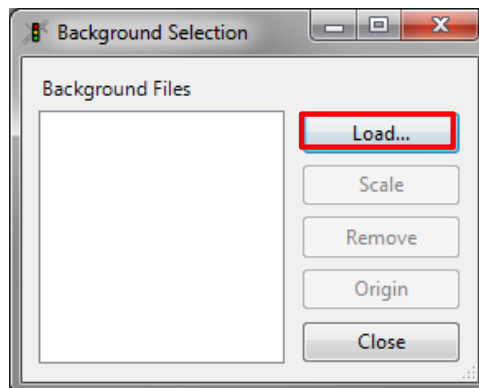
3. Change **Distance**, **Speed** and **Acceleration** to English units.

## Lesson 1: Add a background image

1. Go to **View > Background> Edit**



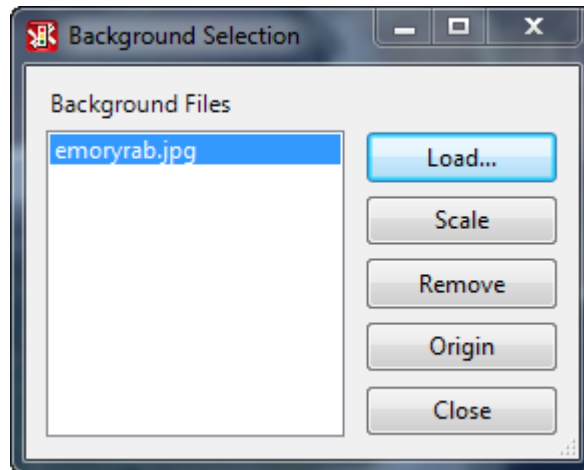
2. Click **load** and navigate to image file and select **Open**.



*\* supported background formats*

Supported bitmap formats	Supported vector formats
BMP	DWG <sup>1)</sup>
JPG	DXF <sup>1)</sup>
PNG	EMF
TGA	WMF
TIF (uncompressed & packbits)	SHP (shape files)

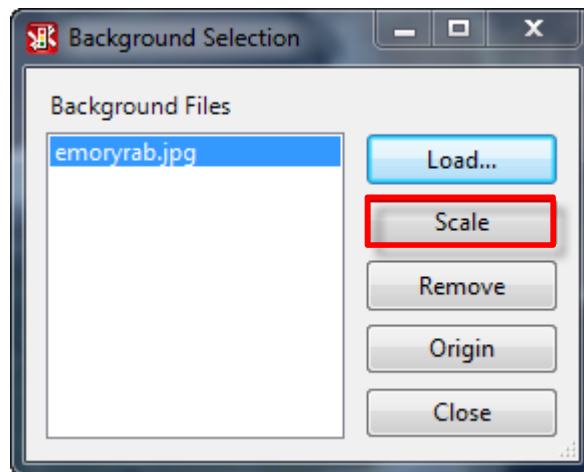
3. The image name displays in the background files list and loads in the bottom right hand corner of the screen



*\*click the show entire network button to locate image*



4. Select **Scale** to scale the image.

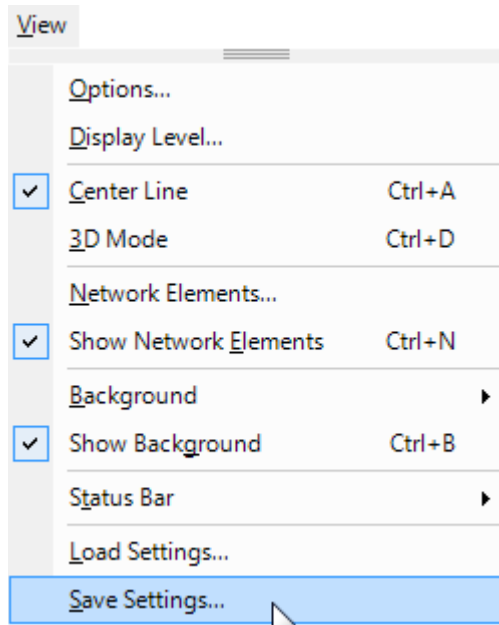


5. A scale will replace the mouse icon. Click and drag the scale over a known distance (ex across one 12ft lane, top of a building, width of a parking lot or space)
6. Then enter the known distance in the scale window. Click **OK**

7. The image is now scaled. Click the show entire network button.



8. Go to **View > Save Settings**



9. Name and save your layout settings

*\* You must load settings each time you open a new session.*



## Lesson 2: Draw/Edit links for each leg:



1. Click the **link** button
2. Click and Hold the right mouse button and drag in the direction of travel to create a link.  
*\*draw the link in the center of the direction of travel. If one lane- the middle or the lane, if two lanes-the center line, if three lanes-the middle of the center lane, etc....*
3. Enter the following in the **Link Data** Window
  - a. **Name:** Street Name
  - b. **No. of Lanes** : # of lanes in one direction (thru lanes)
  - c. **Behavior Type:** Urban or Freeway
  - d. **Lane Width:** leave at 12ft (unless)

Link Data

No.: 1 Name: North Avenue (EB)

No. of Lanes: 2 Behavior type: 1: Urban (motorized)

Link Length: 1432.894 ft Display type: 1: Road surface gray

Lanes Display Other

Lane width: 12.00 ft

Various Lane Widths...

Lane Closure...

No Lane Change...

Change Direction

☒ Generate opposite direction

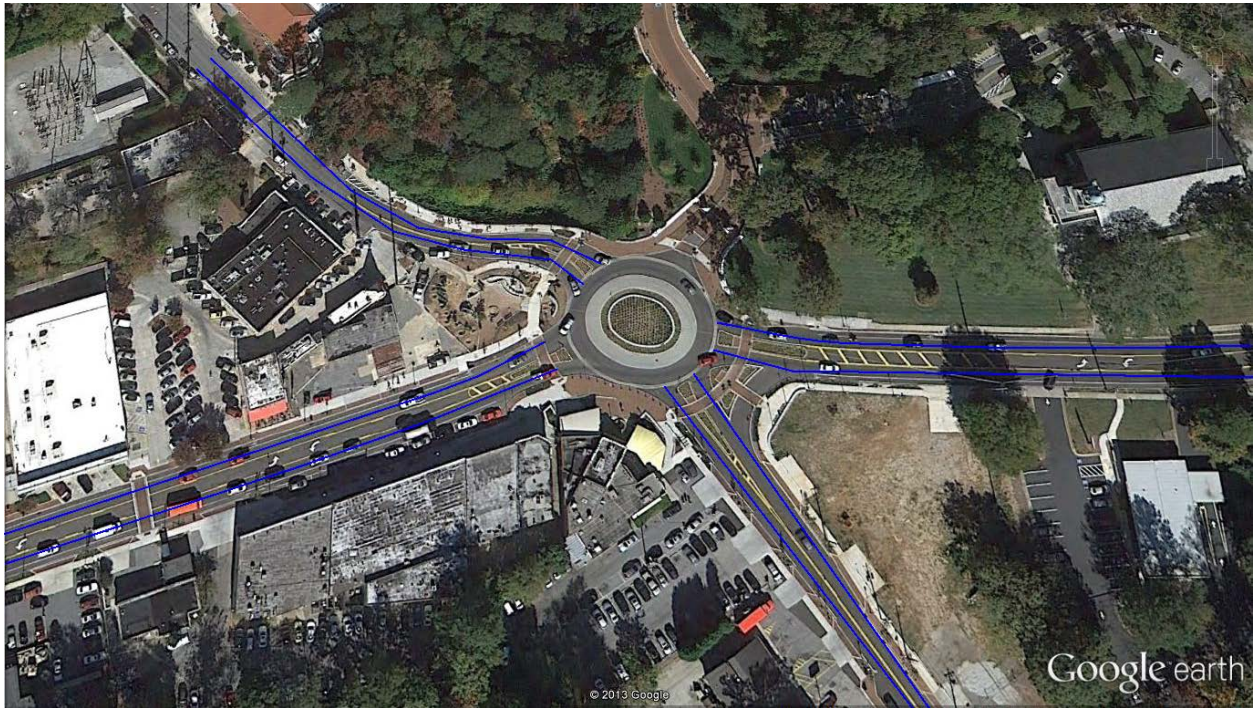
No. of Lanes: 2

☐ Use as pedestrian area

OK Cancel

**\*SEE** the Getting Started: VISSIM guide to learn how to copy, move and curve links.

4. Repeat for all the legs




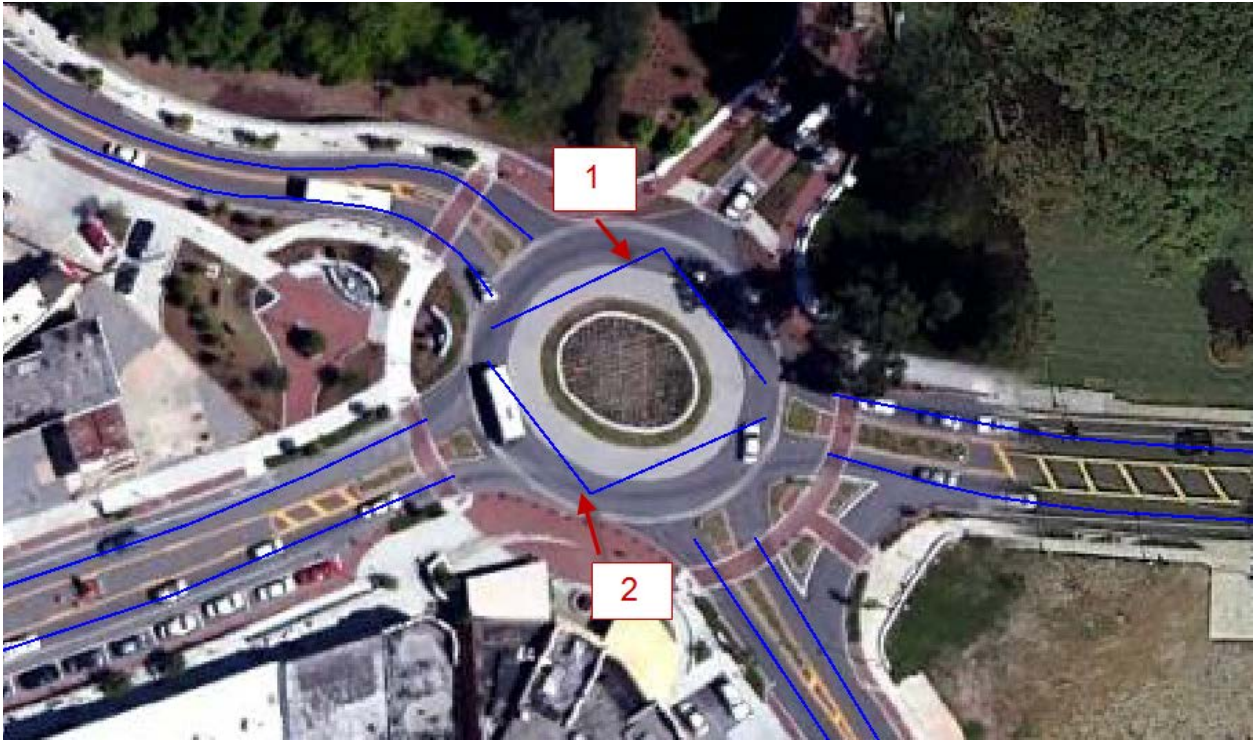
\*CTRL + A will change the link view from centerline (above) to lane (below)





### Lesson 3: Draw/Edit links for the circulatory lanes:

1. Click the **link** button 
2. Draw two links on each side of the center island and then create a middle point along the curve.



3. Create curvature for those links to create the circulatory lanes for the roundabout.  
*\*see the Getting Started VISSIM Guide for instructions on creating curvature*





#### Lesson 4: Draw connectors

1. Click the **link** button
2. Connect the circulatory two links
3. Connect the leg links to the circulatory lanes




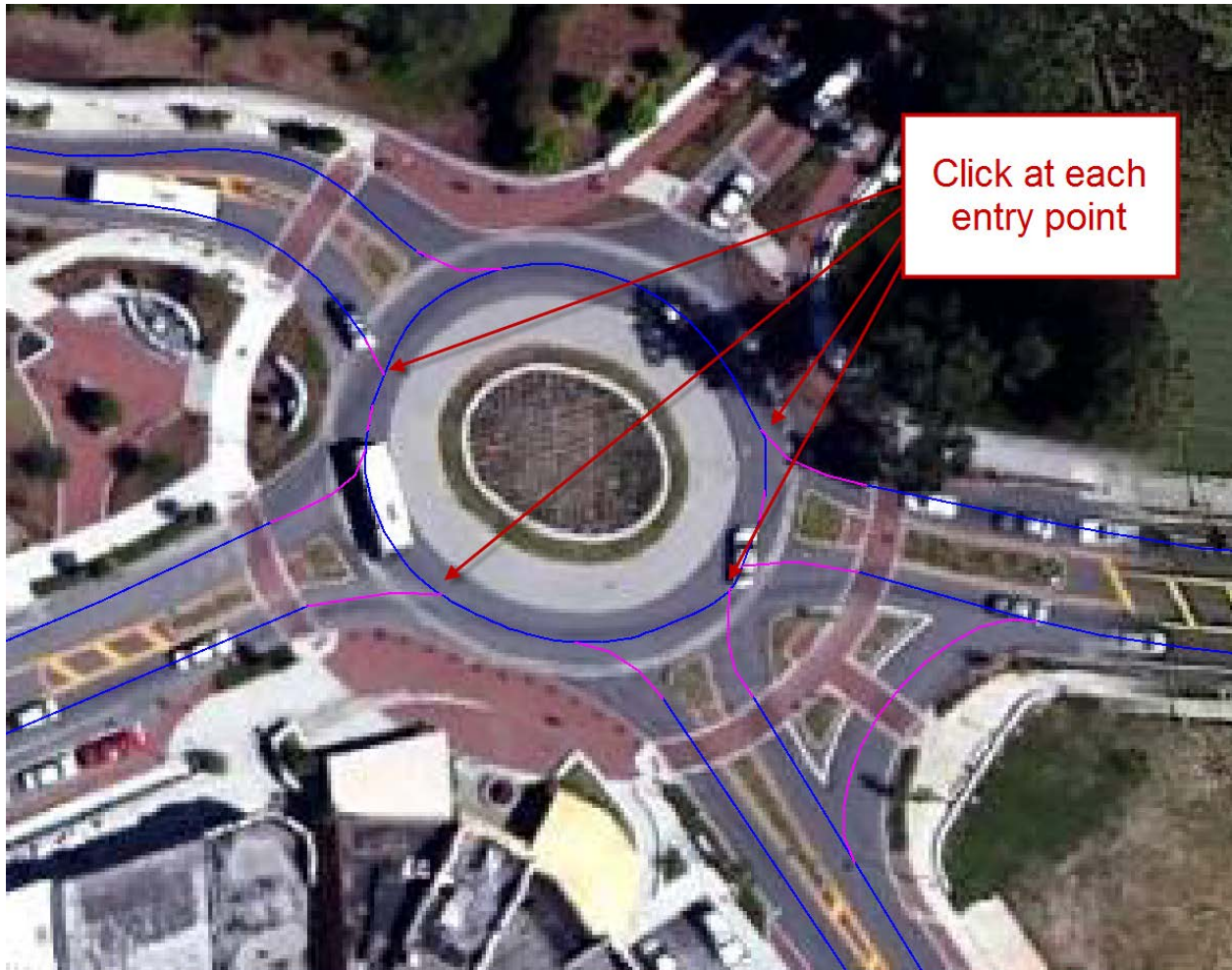
# **Section 3:**

## **Set Traffic Controls**



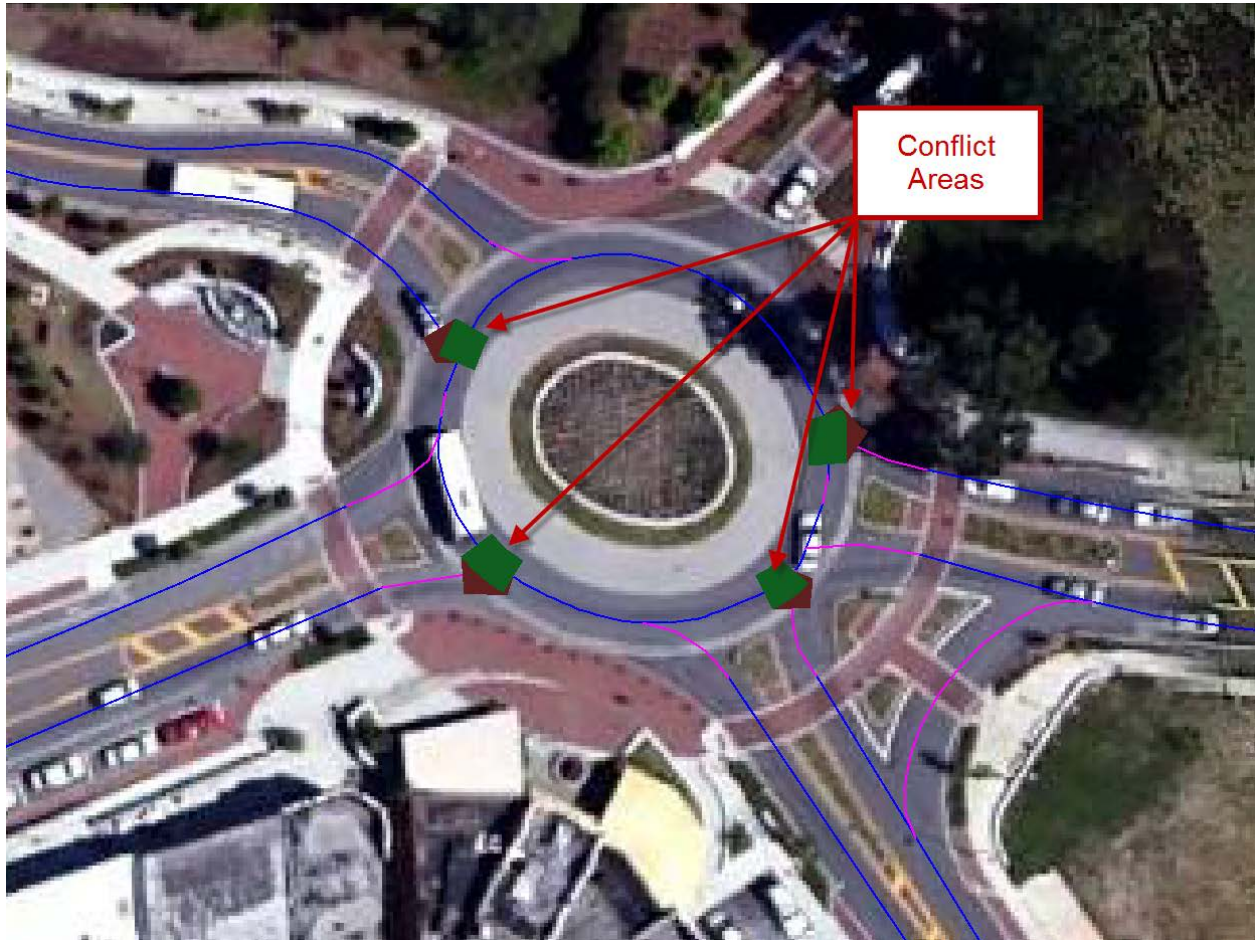
## Lesson 1: Set conflict areas

1. Select **Conflict Area** Button 
2. Set conflict decision for the entry at each leg by clicking at point where the entry connecting link intersects the circulating link.





3. The conflicting movements are now highlighted in all yellow. Right click on the area to rotate through the priority options. The movement highlighted in green has the right of way (ROW) while the movement in red has to yield/giveaway to the green movement. In a roundabout ROW should be given to the circulating traffic.





4. Set the conflict area for any bypass lanes.

