

2045 MTP

Congestion Maps (V/C maps)

Understanding Congestion Maps

The Performance Measures provide a general indicator of the overall transportation system. On the other hand, the Congestion Maps show the forecasted level of service on specific road segments based on the daily traffic volume and capacity. These maps are sometimes called “V/C” maps (V over C maps) because the level of service, or existence of congestion, is derived by dividing the traffic volume by the traffic capacity of the road segment. For example, a volume of 9,000 vehicles on a road that is capable of carrying 10,000 vehicles will produce a V/C of 0.9. A V/C of 1.0 is equal to a Level of Service (LOS) of “E”, which can be described as:

Limit of acceptable delay, unstable flow, poor signal progression, traffic near roadway capacity, frequent cycle failures.

Although the term traffic congestion is subjective in that it means different levels of delay to different people, it can be said that any road segment approaching a V/C of 1.0, which is indicated on the maps with a **yellow color**, experiences some delays. A V/C greater than 1.0, which is indicated on the maps by the **orange color**, means frequent delays for the motorist and when the V/C exceeds a value of 1.2, the **red color**, most motorists experience what might be termed unacceptable travel delays.

The Triangle Regional Model (the travel demand model for the Triangle Region) uses travel behavior data for the Triangle Region, future transportation system networks, and future population and employment data, to forecast the volume and capacity values needed to produce these maps. The forecasts are for the year 2045.

Of particular importance is the comparison of the Preferred Option with the **E+C map** (Existing plus Committed), which can be considered a benchmark. The E+C map uses a transportation network with the current roadways and transit services plus any others that have been committed to being implemented, and the Socioeconomic Data (i.e., population and employment) for the year 2045. This map shows the level of service to be experienced if no additional roadways improvements or transit services are implemented, and thus helps to answer the question, “When we make our next transportation investment decision, where do we need to focus our investment?” Furthermore, by comparing the E+C Congestion Map with the Preferred Option, you can see how well the transportation investments in that Preferred Option address the congestion in the E+C.

You can find the E+C and the 2015 congestion maps on the following MPO Web page:
www.bit.ly/DCHC-MTP-Deficiency

The 2015 congestion map gives an additional benchmark. The 2015 basically represents current conditions because it is based on the current transportation network and socioeconomic data.