2050 MTP – Alternatives Analysis
Isochrone Maps

Isochrone travel maps connect the points that have the same travel time from a specified center. They resemble contour maps, and are useful for illustrating the households, employment and other markets that are within a specified travel time of the center. The maps explain mobility at a regional, jurisdiction-wide and corridor level, but not at a project or smaller community level. These markets can also be depicted in tables that show the number of jobs, households, or population within a specified travel time. The MPO could produce the tables if there is ample interest in them.

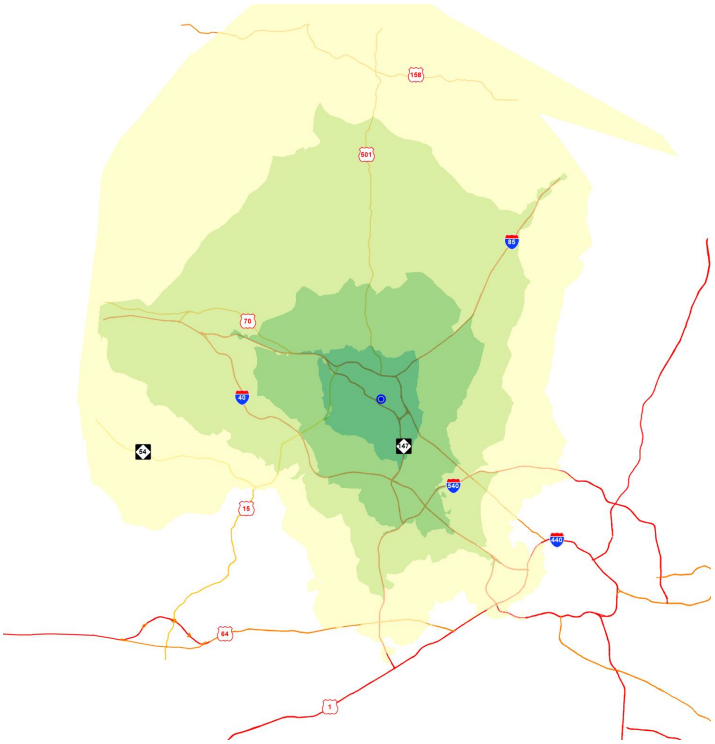
The travel time for four centers, including Durham, Raleigh, Chapel Hill and the Research Triangle Park (RTP), are depicted on pages 2 to 5. These maps show the afternoon peak hour travel time, which generally is the most congested time of the day. Each page has four maps, with a general comment at the top, that shows the isochrones of that center for four scenarios, including:

- E+C, which could be called *No Build*;
- Plans & Trends, which could be called *Business-as-Usual*;
- Shared Leadership, which could be called *We Can Do Better*; and,
- All Together, which could be called *Balanced and Equitable*.

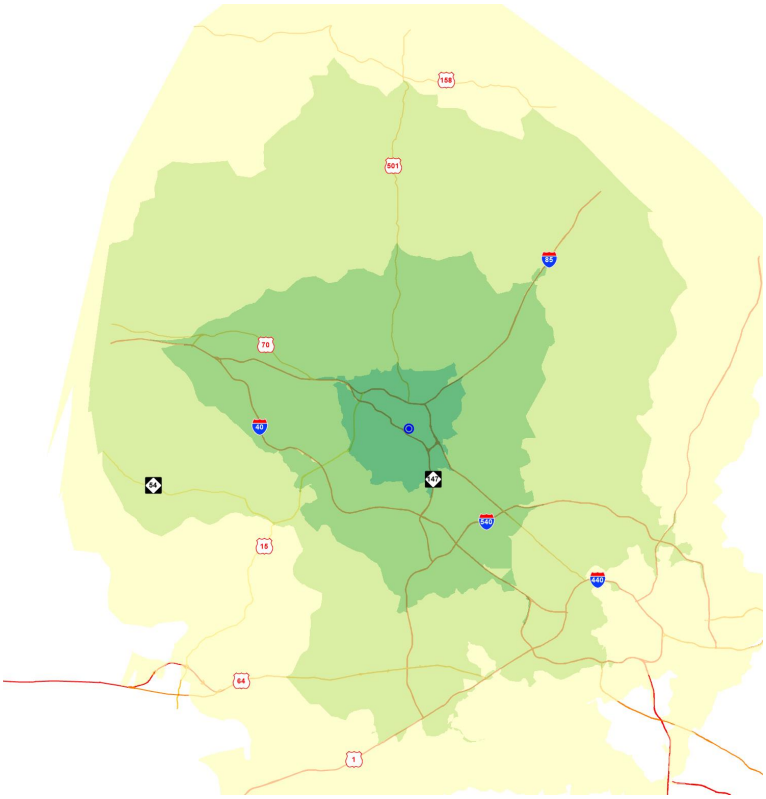
Overall, the map contours change significantly when comparing the E+C scenario with the other three scenarios, which have larger commute areas than the E+C. However, the contours do not change appreciably among the Plans & Trends, Shared Leadership and All Together scenarios because the major roadway projects, e.g., I-40 and I-85, are mostly the same among those scenarios. The contour lines narrow, i.e., more congested corridors, between the major municipalities such as Raleigh, Durham, Chapel Hill, and Cary, and are the narrowest east and south of Raleigh.

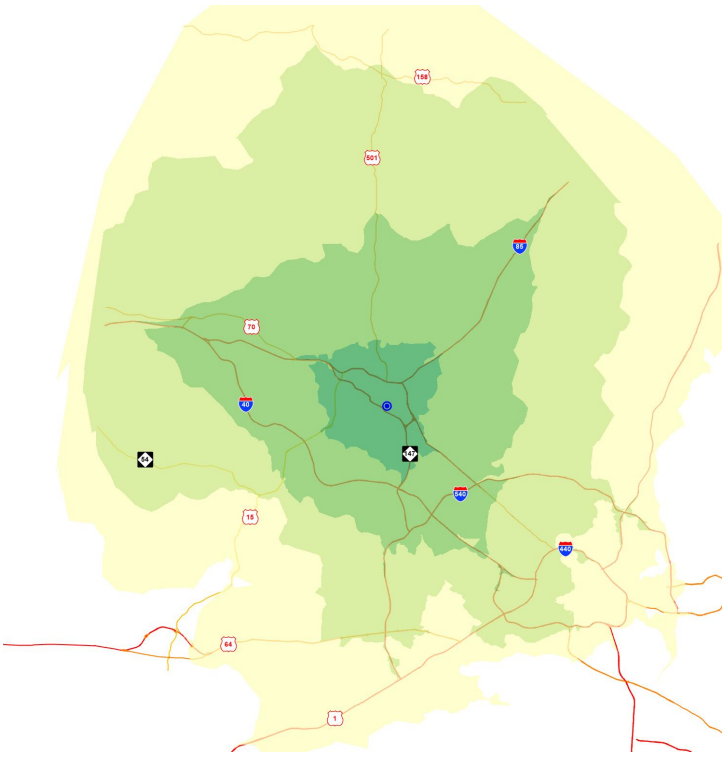
The faster commutes are to the north, northeast and northwest of Durham. Corridors to Chapel Hill and Raleigh have higher congestion.

Durham 2050 E+C

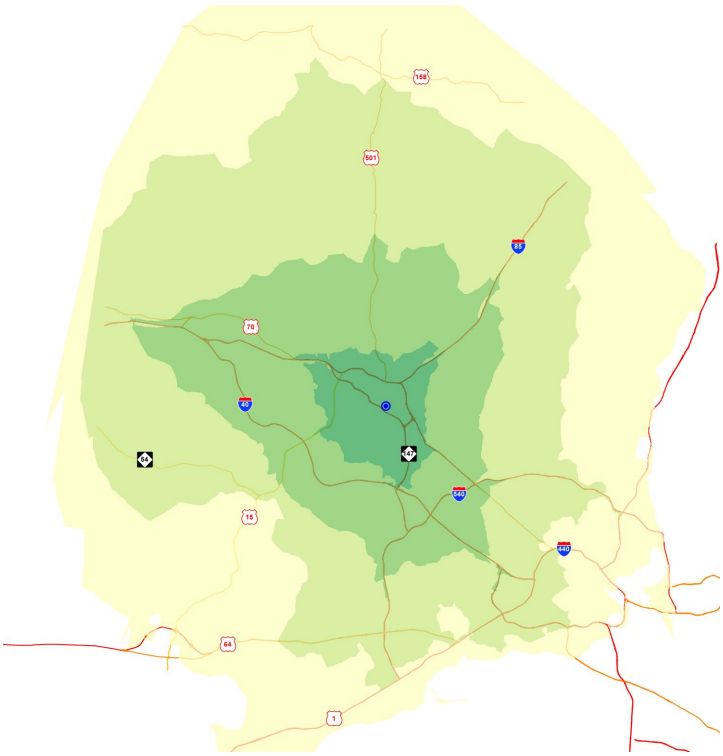


Durham 2050 All Together





Durham 2050 Shared Leadership

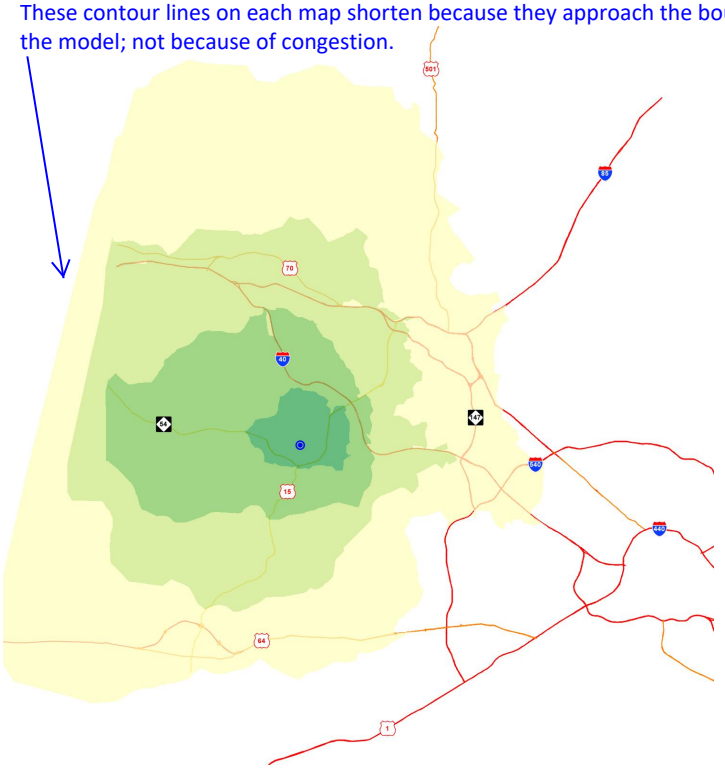


Durham 2050 Trends

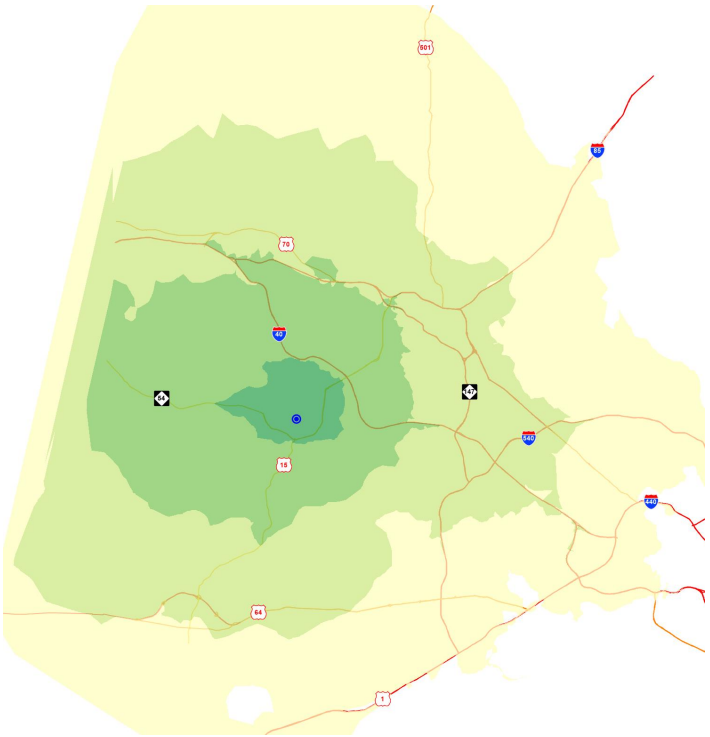
Mobility north, west and south is better than towards Durham and Raleigh, which have relatively congested roadways.

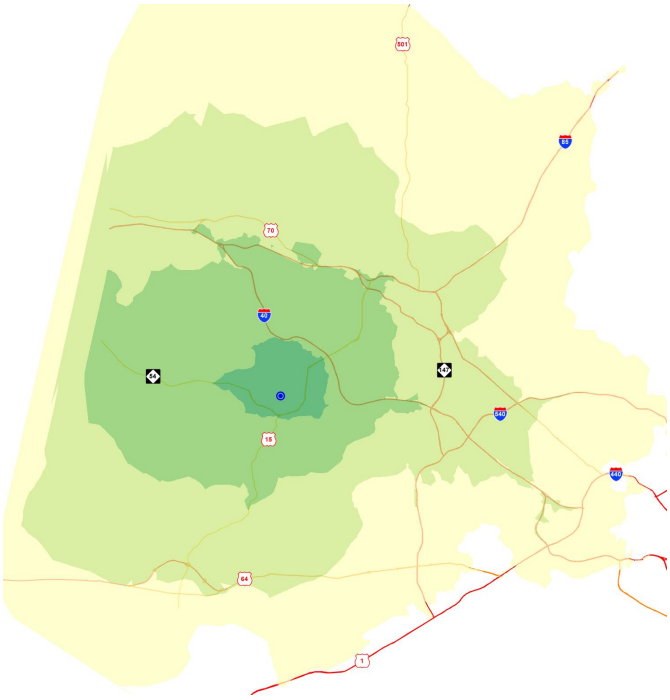
Chapel Hill 2050 E+C

These contour lines on each map shorten because they approach the boundary of the model; not because of congestion.

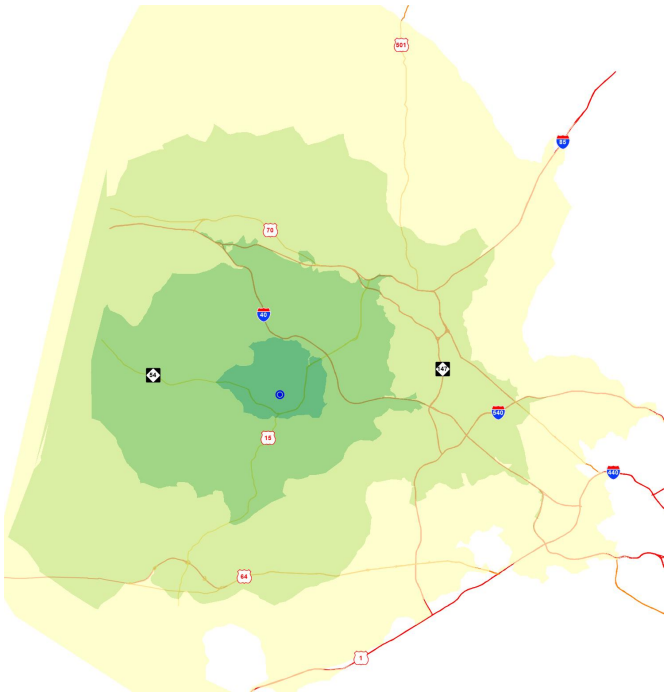


Chapel Hill 2050 All Together





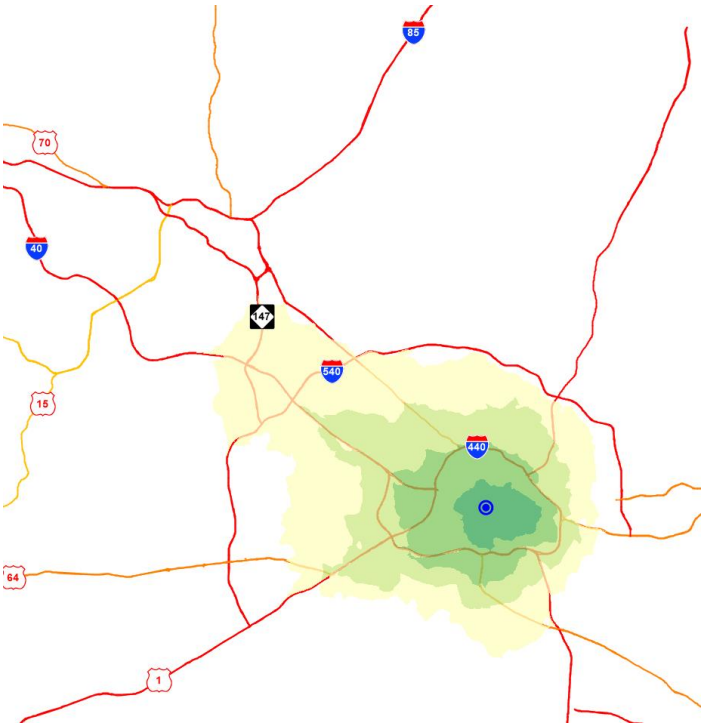
Chapel Hill 2050 Shared Leadership



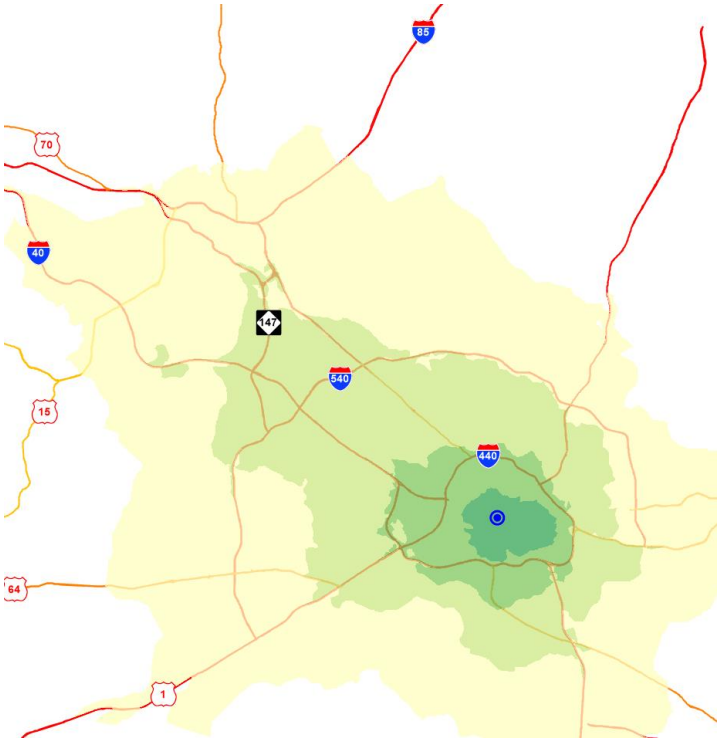
Chapel Hill 2050 Trends

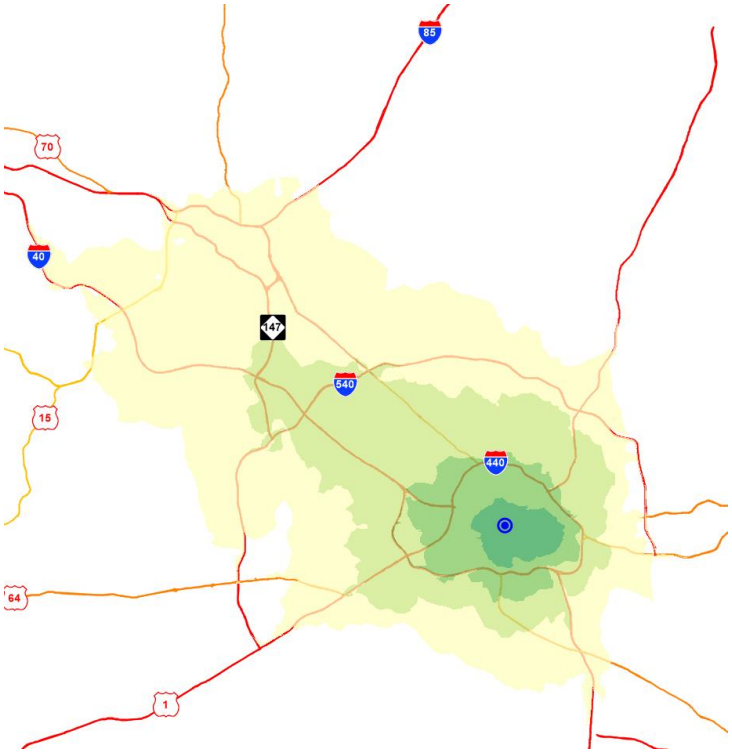
Raleigh travel corridors have higher congestion and therefore the shortest travel time contours. Note the especially narrow travel contour lines to the east and south of Raleigh.

Raleigh Hill 2050 E+C

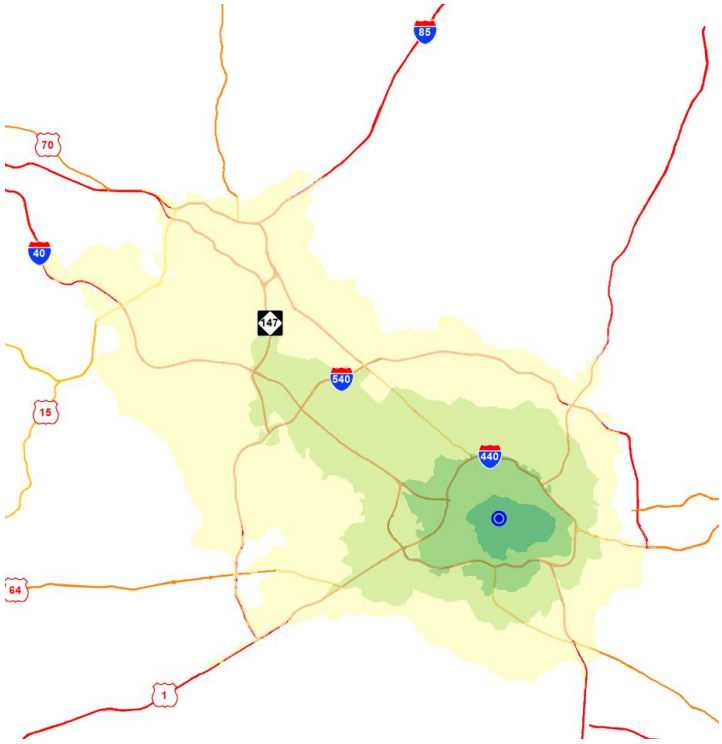


Raleigh 2050 All Together





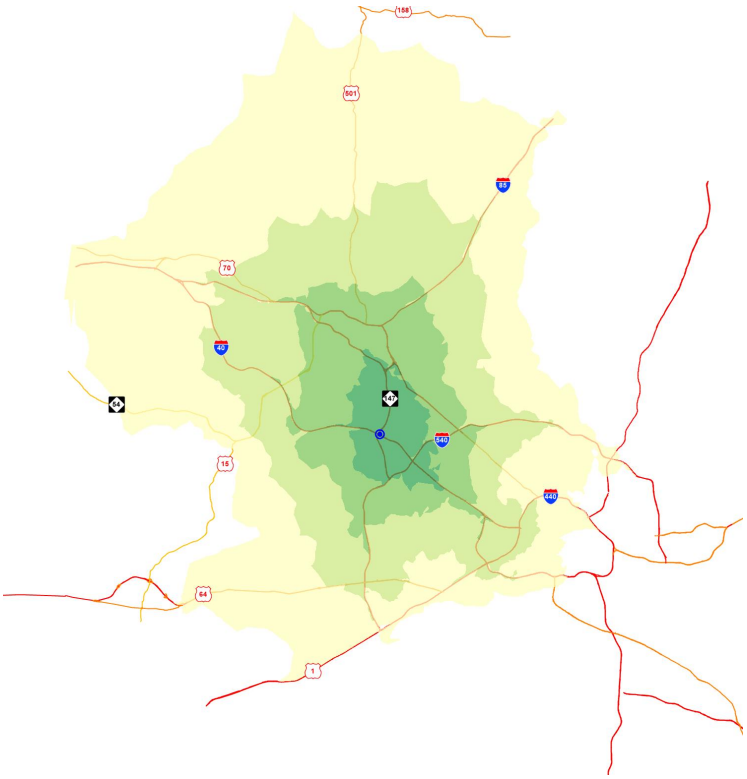
Raleigh 2050 Shared Leadership



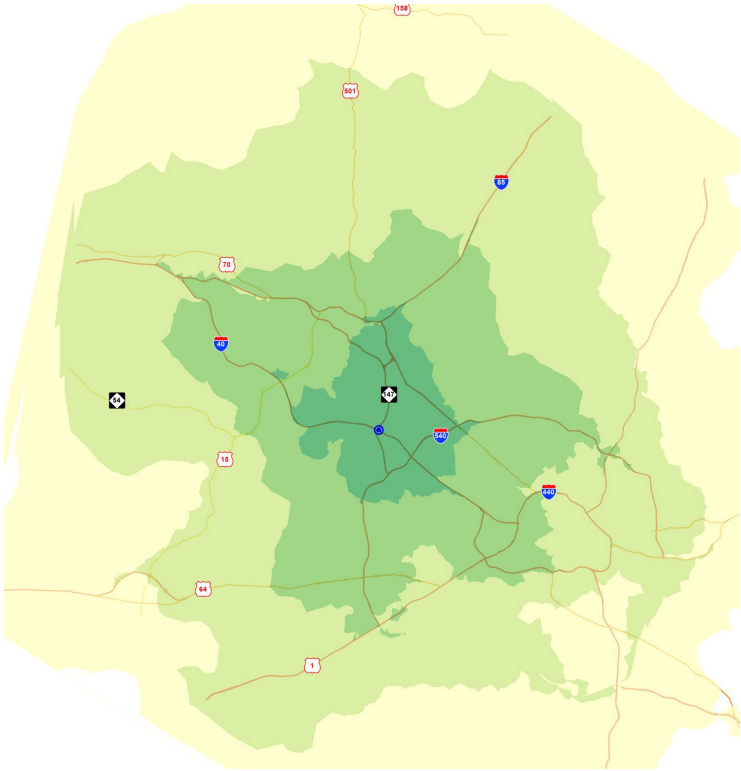
Raleigh 2050 Trends

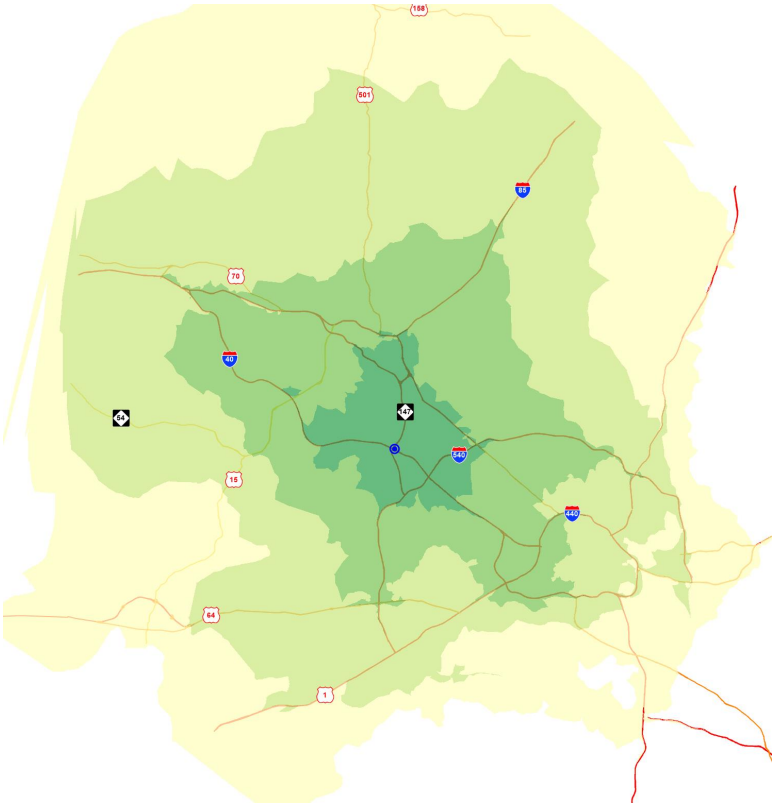
Jurisdictions south, southwest and southeast have especially longer commute times to and from the Research Triangle Park (RTP).

RTP 2050 E+C

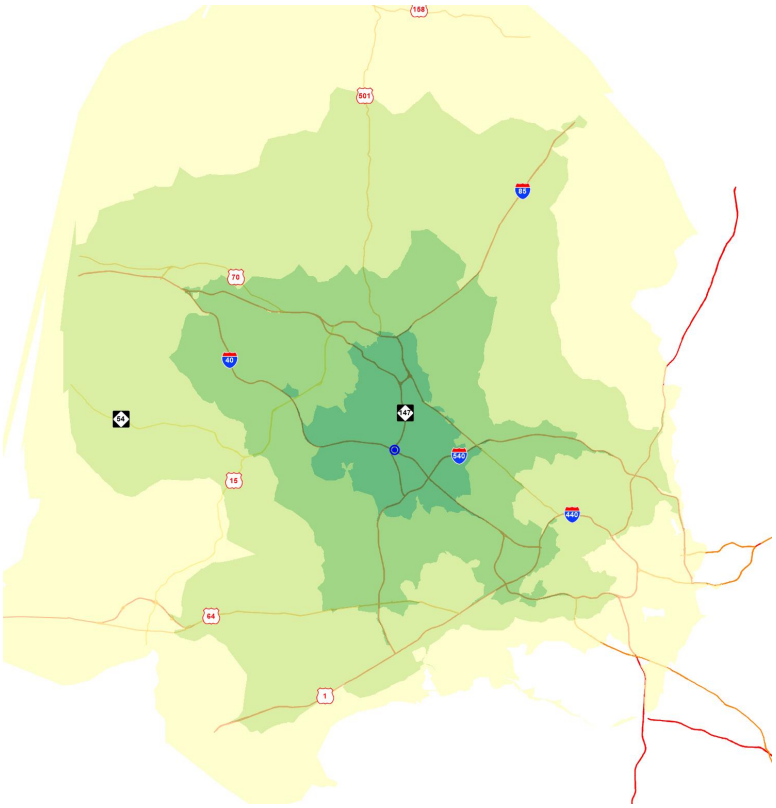


RTP 2050 All Together





RTP 2050 Shared Leadership



RTP 2050 Trends