

# MEMO

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**To:** Cary Minnis, Southern Illinois Metropolitan Planning Organization  
**From:** Dustin Riechmann, Lochmueller Group  
**Date:** June 30, 2014  
**Subject:** Long-Range Traffic Projections

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Lochmueller Group developed long-range traffic projections for roads classified as “Major Collector” or higher within the Southern Illinois Metropolitan Planning Organization (SIMPO) planning area. These forecasts reflect two-way Average Daily Traffic (ADT) volumes for the Year 2040.

The purpose of these traffic projections is to inform the Long-Range Transportation Plan (LRTP) to be developed by SIMPO in the near future. These projections can also be utilized by SIMPO and other planning entities in the region to make informed decisions for programming improvements to the road system.

The 2040 traffic projections were developed using a manual approach that considered a variety of factors, including:

- National and local lifestyle and behavioral trends
- Historic traffic and population trends
- Planning data (comprehensive plans, employment forecasts, freight projections, etc.)
- Economic development mechanisms
- Current and anticipated infrastructure improvements
- Development constraints (environmental obstacles, zoning, etc.)

This memorandum details the methodology that was employed to develop the traffic projections and elaborates on the key inputs that were considered.

As an initial step in this process, more recent lifestyle and behavioral trends occurring nationally were researched in an effort to identify potential cultural shifts that could affect traffic patterns over the next 25 years:

- Declining Household Size: Over the past 60 years, the number of people per household nationally has decreased from 3.37 in 1950 to 2.63 in 2010 resulting in additional trips per person.
- Plateauing Vehicle Miles Traveled (VMT): National VMT peaked in 2006. Since that time, annual declines of 1 to 2 percent have occurred. While this trend may reverse in the future, VMT is not likely to increase at rates seen in the past.

Additionally, the following local trends and their potential impact on traffic growth were also considered:

- Inside-Out Growth: Across SIMPO, populations in historic town centers have declined in favor of newer subdivisions and larger lots on the periphery. Consequently, traffic volumes have increased on roads near the edges, while traffic corridors within older areas have experienced flat or declining traffic volumes. This trend seems likely to continue into the future.
- Decline in Manufacturing: The economies of many towns within the SIMPO planning area have historically been based on manufacturing. Mirroring national trends, numerous large manufacturing operations have closed or vacated the SIMPO area, resulting in population losses and a transition to service sector jobs. This has contributed to declining traffic volumes in historic areas and traffic growth in areas dominated by service-oriented businesses. A major trend reversal does not appear likely.
- Emergence of Carterville: The largest rates of population growth have occurred in Carterville, as the town has emerged as a bedroom community for those working in the larger towns nearby. Development in the area along Route 13 between Carbondale, Herrin, and Marion should persist into the future.

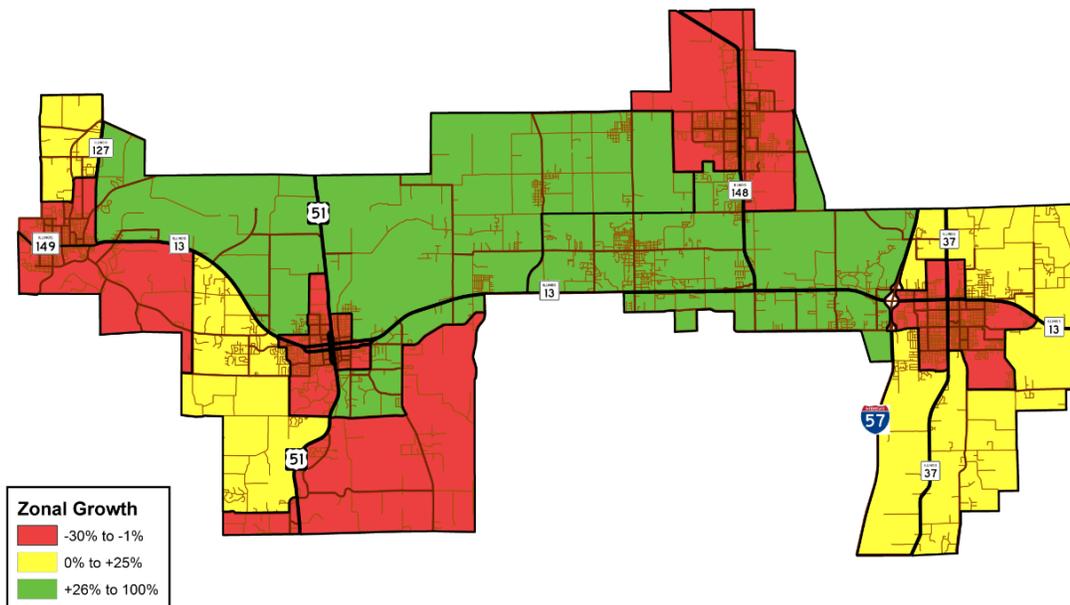


Figure 1: Historic Traffic Trends Consolidated into Common Pattern Aggregations

The broader trends noted in the preceding pages were supplemented by more detailed data illustrating the growth profiles of individual towns and specific transportation corridors. This information, described below, facilitated the development of individual growth trajectories for roadways classified as “Collectors” and higher in the SIMPO planning area:

- **Historic Data**
  - **Historic Traffic Counts:** GIS files supplied by the Illinois Department of Transportation (IDOT) provided a historical record of traffic counts performed between 1996 and 2013. Utilizing these files, historic traffic trends were established for each roadway to serve as the baseline growth condition from which adjustments informed by additional information could be applied.
  - **Historic Population Trends:** Population totals were obtained from the Census to provide an indicator of overall economic conditions within each town. Note that a portion of the growth experienced in Carterville, Herrin, and Marion can be attributed to annexations.

<i>City</i>	<i>1990</i>	<i>2000</i>	<i>2010</i>	<i>Growth (%)</i>
Carbondale	27,033	25,597	25,902	-4%
Carterville	3,630	4,616	5,496	51%
Herrin	10,857	11,298	12,501	15%
Marion	14,545	16,035	17,193	18%
Murphysboro	9,176	13,295	7,970	-13%

- **Interviews with Community Officials**
  - Interviews were held with planners, engineers, and economic development officials with each of the primary towns within the SIMPO planning area. The purpose of the interviews was to identify local perspectives on future growth, including locations and timeframes of future development, schedule of infrastructure projects, planning efforts, development constraints, policies and economic development mechanisms, zoning, etc.
- **Planning Data**
  - **Comprehensive Plans:** Carbondale is the only town with a Comprehensive Plan and it focuses on renewing historic areas of the city with emphasis on the Downtown. The plan also encourages alternatives to driving such as walking, biking, and transit. Southern Illinois University is a major supporter of these planning objectives and will likely help contribute to their eventual success.
  - **Employment Projections:** County-level employment projections were researched from Woods & Poole – a private source of economic forecasts. Jackson County is projected to experience a minor amount of employment

growth (approximately 2,000 additional jobs) over the next 25 years, whereas strong employment growth is anticipated in Williamson County (approximately 15,000 additional jobs).

- Freight Forecasts: 2040 national freight forecasts from the Freight Analysis Framework Version 3 (FAF<sup>3</sup>) – a national policy tool maintained by the Federal Highway Administration – were reviewed to consider the potential effect of truck traffic on overall traffic growth. According to FAF<sup>3</sup>, significant growth in commercial vehicles is forecasted for IL Route 13 and IL Route 127, whereas I-57 is expected to experience more modest increases in truck traffic.
- Economic Development Mechanisms
  - STAR Bond: A portion of Marion adjacent to the Morgan Street interchange with I-57 is a designated STAR Bond District, which allows a portion of future state sales taxes to be applied to defer the costs of development. While development plans have thus far remained in neutral, the completion of the Morgan Street interchange on I-57 is expected to help ultimately attract a major retail development to the district.
  - Herrin TIF Districts: Most of Herrin is located within a Tax-Increment Financing (TIF) district. The TIF proceeds are being used to improve antiquated infrastructure throughout Herrin and to attract new development by offsetting development costs.
  - Carbondale Downtown Planning: Carbondale is acting on a renewed interest in redeveloping and improving their historic downtown. Plans are advancing for a new multi-modal transportation facility and an impending downtown master plan is expected to produce actionable results that will help attract development, which in turn will generate future traffic growth.
- Infrastructure Projects
  - Upgrade of IL Route 127: IDOT and the municipalities of Jackson County plan to upgrade IL Route 127 to four lanes between Murphysboro and I-64. This project will effectively designate Route 127 as the preferred route to metropolitan St. Louis and other destinations to the west.
  - Enhancements to IL Route 13: Large sections of IL Route 13 have either already been or are in the process of being upgraded to six lanes between Marion and Carbondale. As additional portions are completed, the expanded capacity will enable the corridor to serve additional traffic.
  - Marion Interchanges: IDOT is currently completing major interchange improvements on I-57 in Marion that will provide better access to regional shopping destinations in the area as well as the adjacent STAR Bond District.
  - Rushing Road: The area at IL Route 13 and IL Route 148 has emerged as a hub for medical services owing to the proximity of nearby Heartland Regional Medical Center. Improvements to Rushing Road and a new road connection north to Grand Avenue are planned in order to introduce access to

development sites for future medical uses as well as single-family residential homes.

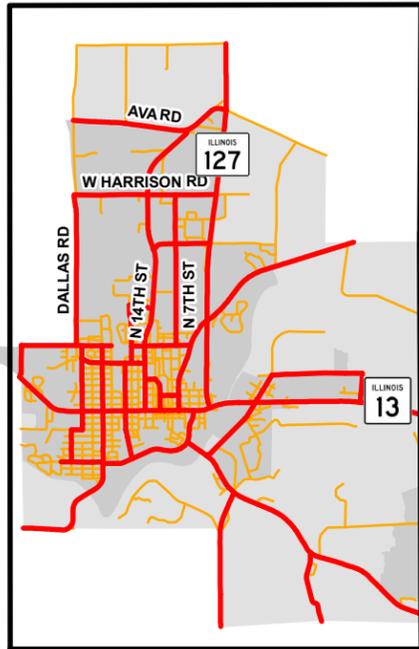
- Reed Station Road: This corridor is to be reconstructed in the near future and should serve as a vital link between Carbondale and Carterville, helping to accommodate increased traffic due to continuing growth in Carterville.
- Airport Road: This corridor is also to be reconstructed in the near future. Coupled with recent investments to Southern Illinois Airport and the recent reconstruction of New Era Road, this project may attract development to the area.
- **Development Constraints**
  - Zoning/Land Ownership: Several locations were identified where zoning designations or land ownership would inhibit growth. A prime example is the south side of Chautauqua Road to the west of the SIU campus. Owned by SIU, this land will likely not be developed. As a result, traffic increases along the Chautauqua Road corridor will be restrained; most of the land along the north side of the road is already developed.
  - Environmental Obstacles: Other areas are not suitable for development because of environmental or topographical constraints such as flooding or residual issues from past land uses. For example, the area north of Crab Orchard Lake is prone to flooding, rendering it unsuitable for development. Likewise, the area to the north and northeast of the Williamson County Airport has limited development potential due to the effects of historic mining operations.

After accumulating and accounting for the information listed above, manual traffic growth rates were established for each corridor and 2040 ADT forecasts were developed using Geographic Information Systems (GIS). Following the finalization of the forecasts, a series of five maps was created to illustrate the 2040 ADTs for every road classified as “Major Collector” or higher, as follows:

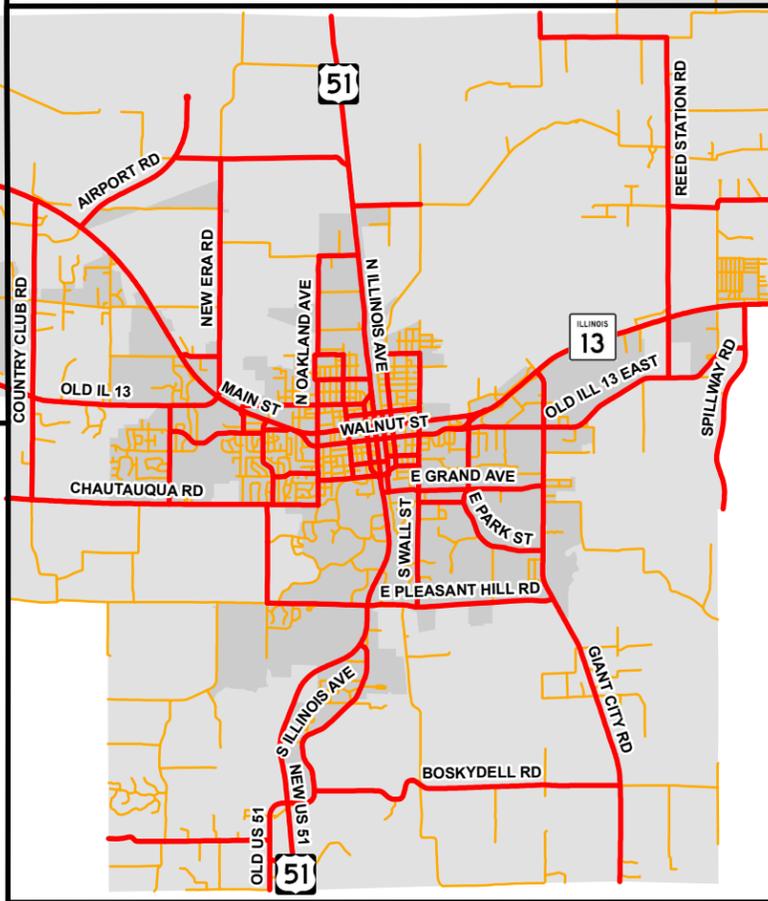
1. MPA Map: This map shows an overall view of the metropolitan planning area and the boundaries of the subsequent maps.
2. Murphysboro: This map illustrates the projected 2040 ADTs as well as the latest IDOT counts for Murphysboro and surrounding area.
3. Carbondale: This map illustrates the projected 2040 ADTs as well as the latest IDOT counts for Carbondale and surrounding area.
4. Herrin / Carterville: This map illustrates the projected 2040 ADTs as well as the latest IDOT counts for Herrin and Carterville and surrounding area.
5. Marion: This map illustrates the projected 2040 ADTs as well as the latest IDOT counts for Marion and surrounding area.

The GIS files utilized to create these maps are also provided for electronic reference.

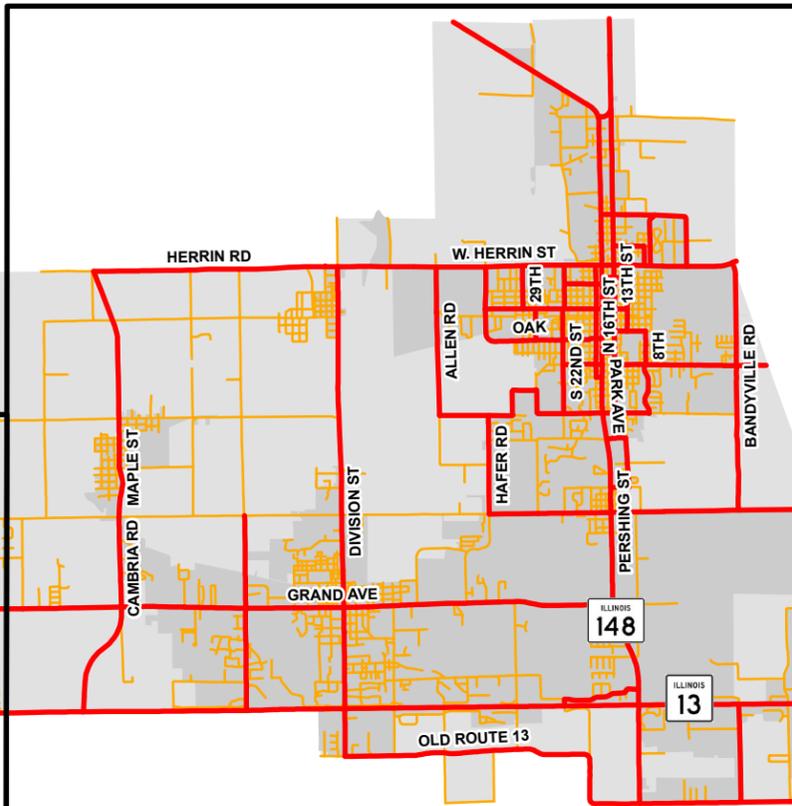
# Metropolitan Planning Area



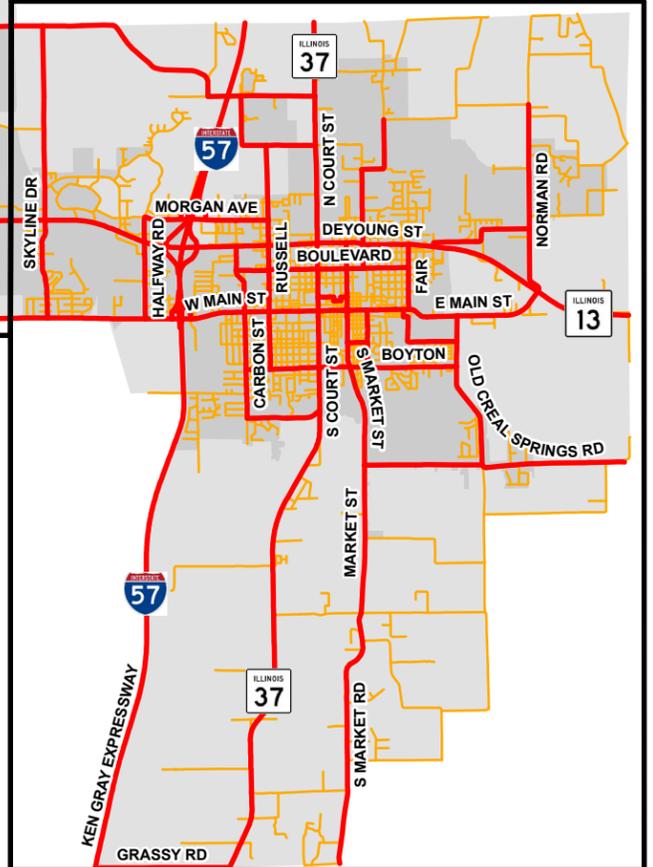
Murphysboro Map Area



Carbondale Map Area

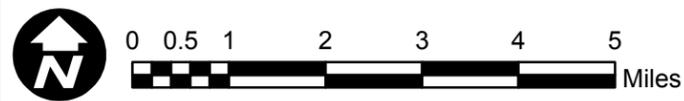


Herrin/Carterville Map Area



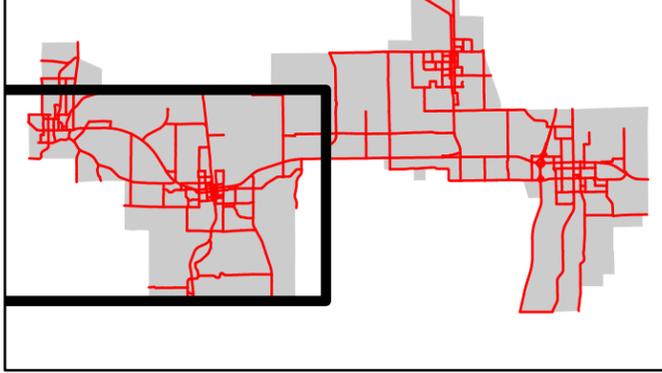
Marion Map Area

-  Inset Map Boundary
-  Major Roads
-  Other Roads
-  Urbanized Area Boundary
-  Metropolitan Planning Area Boundary



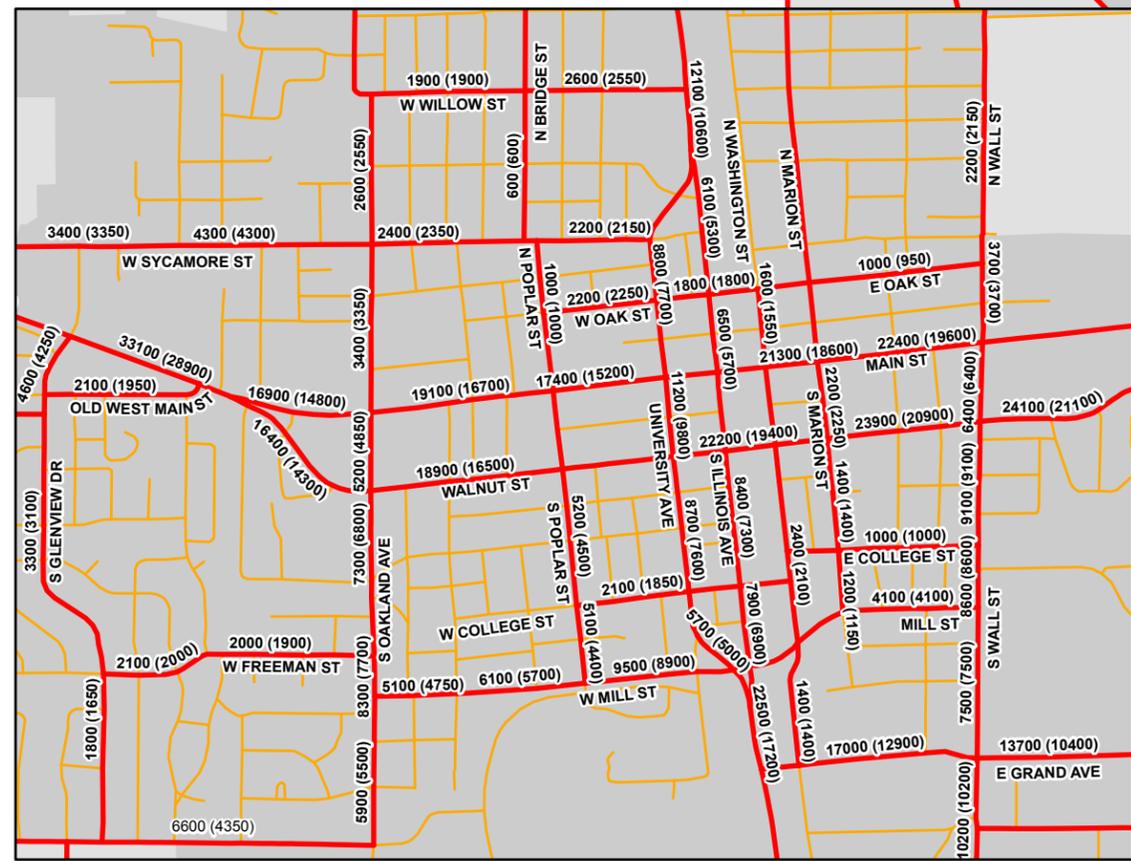
# Carbondale

## MPA

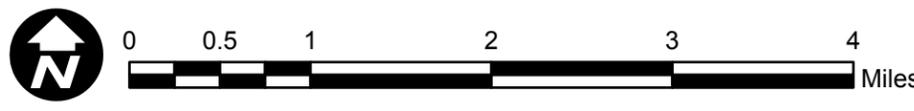
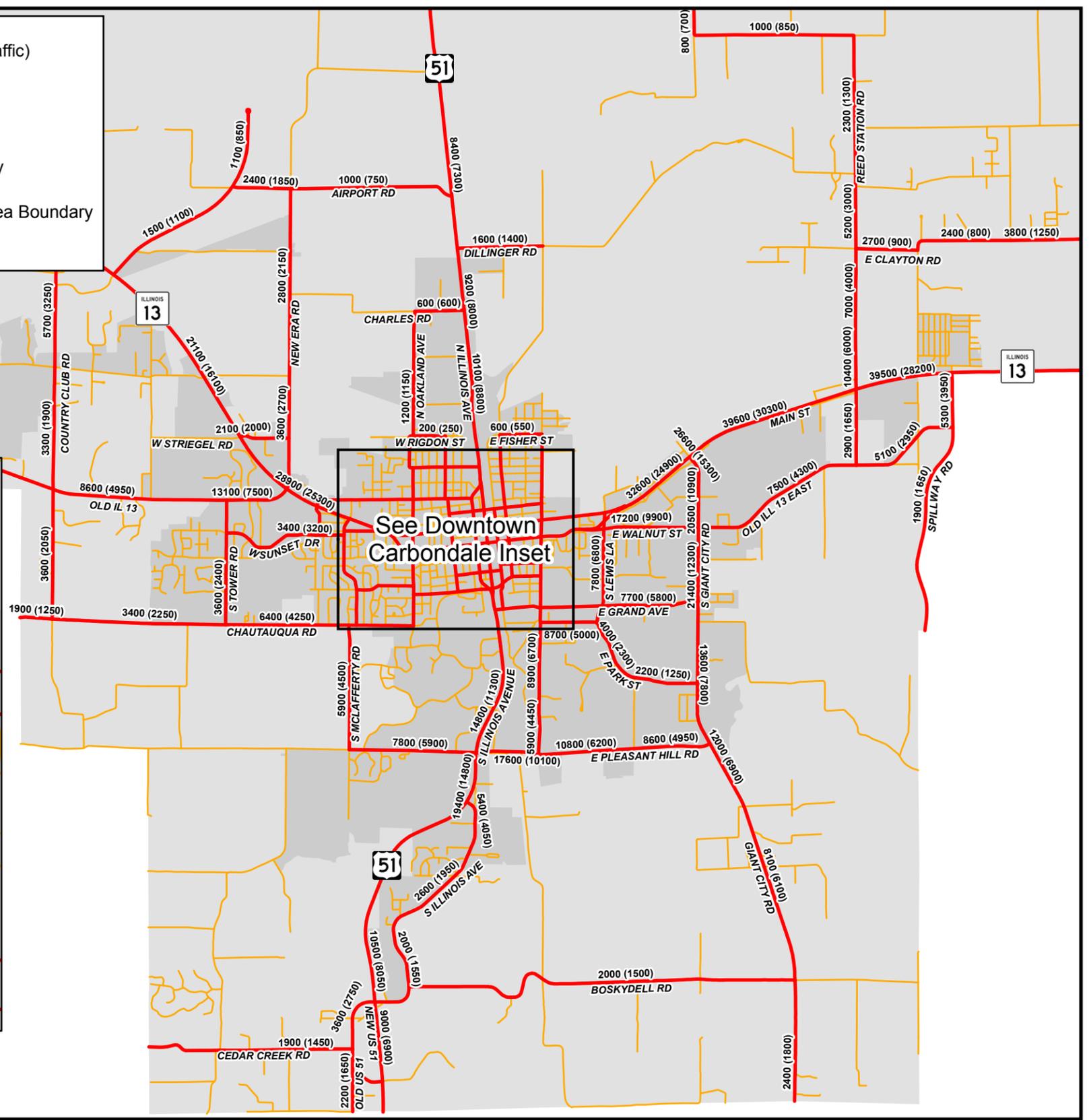


- xxx (xxx) 2040 Average Daily Traffic  
(Current Average Daily Traffic)
- Major Roads
- Other Roads
- Urbanized Area Boundary
- Metropolitan Planning Area Boundary

## Downtown Carbondale



See Downtown  
Carbondale Inset

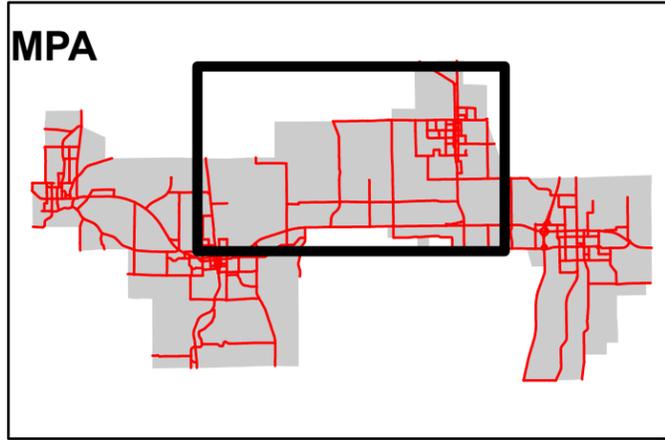


# Herrin / Cartersville

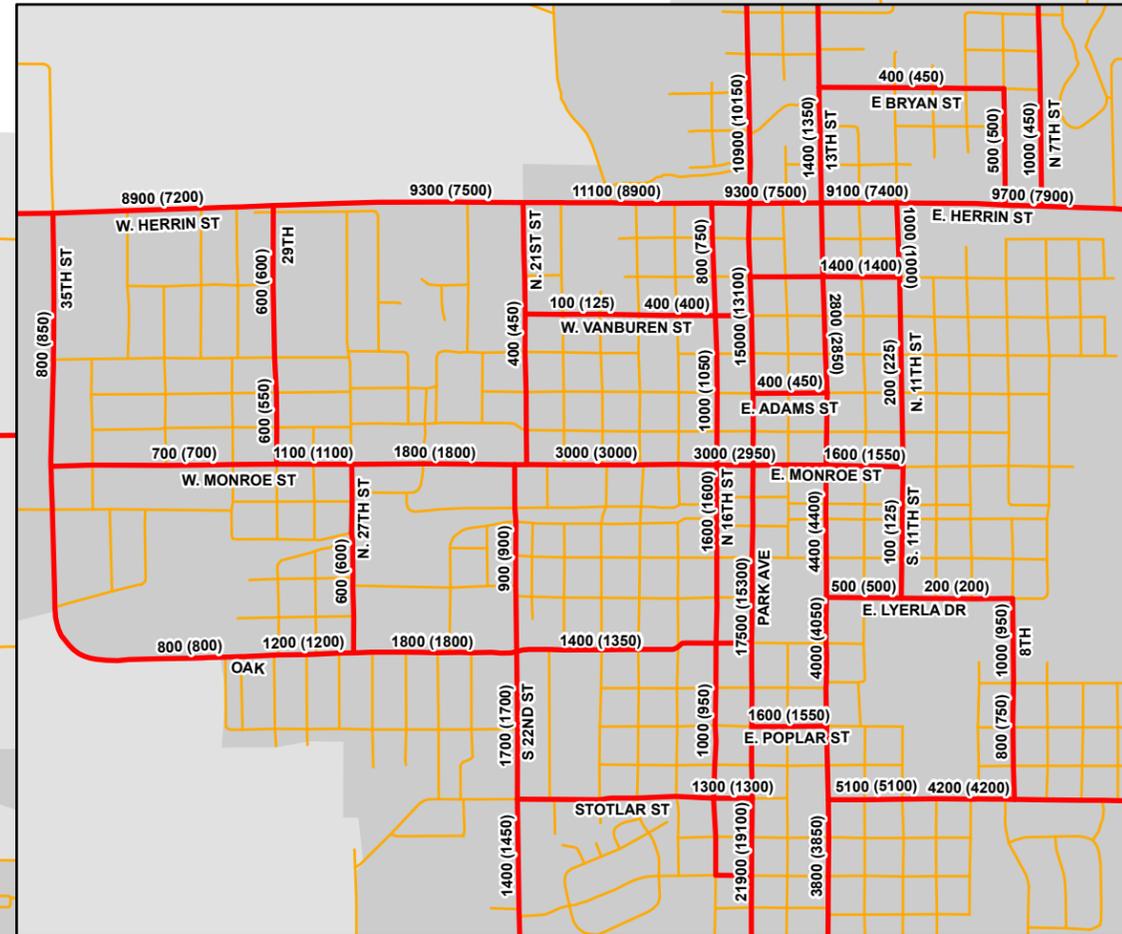
xxx (xxx) 2040 Average Daily Traffic (Current Average Daily Traffic)

- Major Roads
- Other Roads
- Urbanized Area Boundary
- Metropolitan Planning Area Boundary

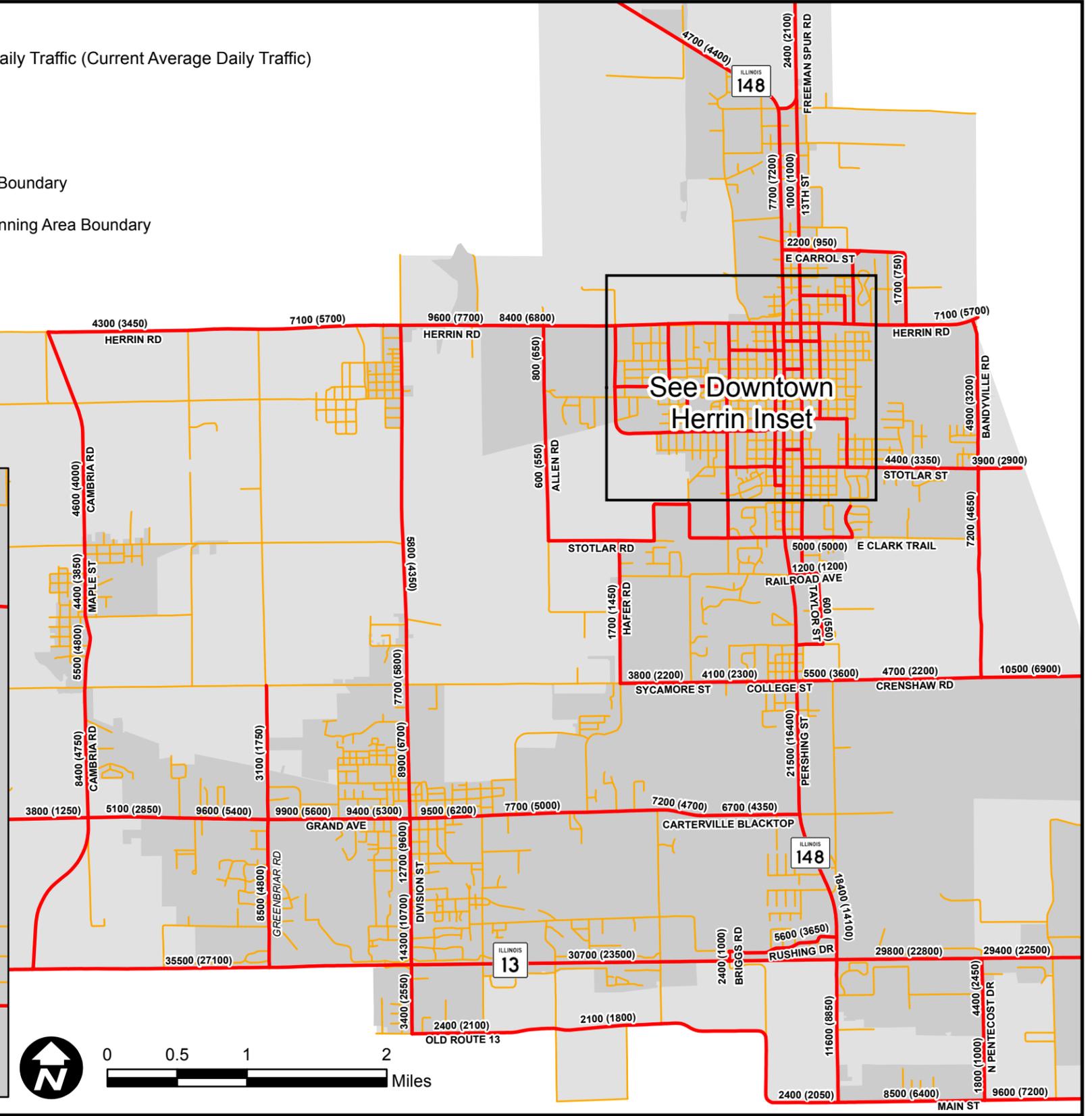
MPA



## Downtown Herrin



See Downtown Herrin Inset

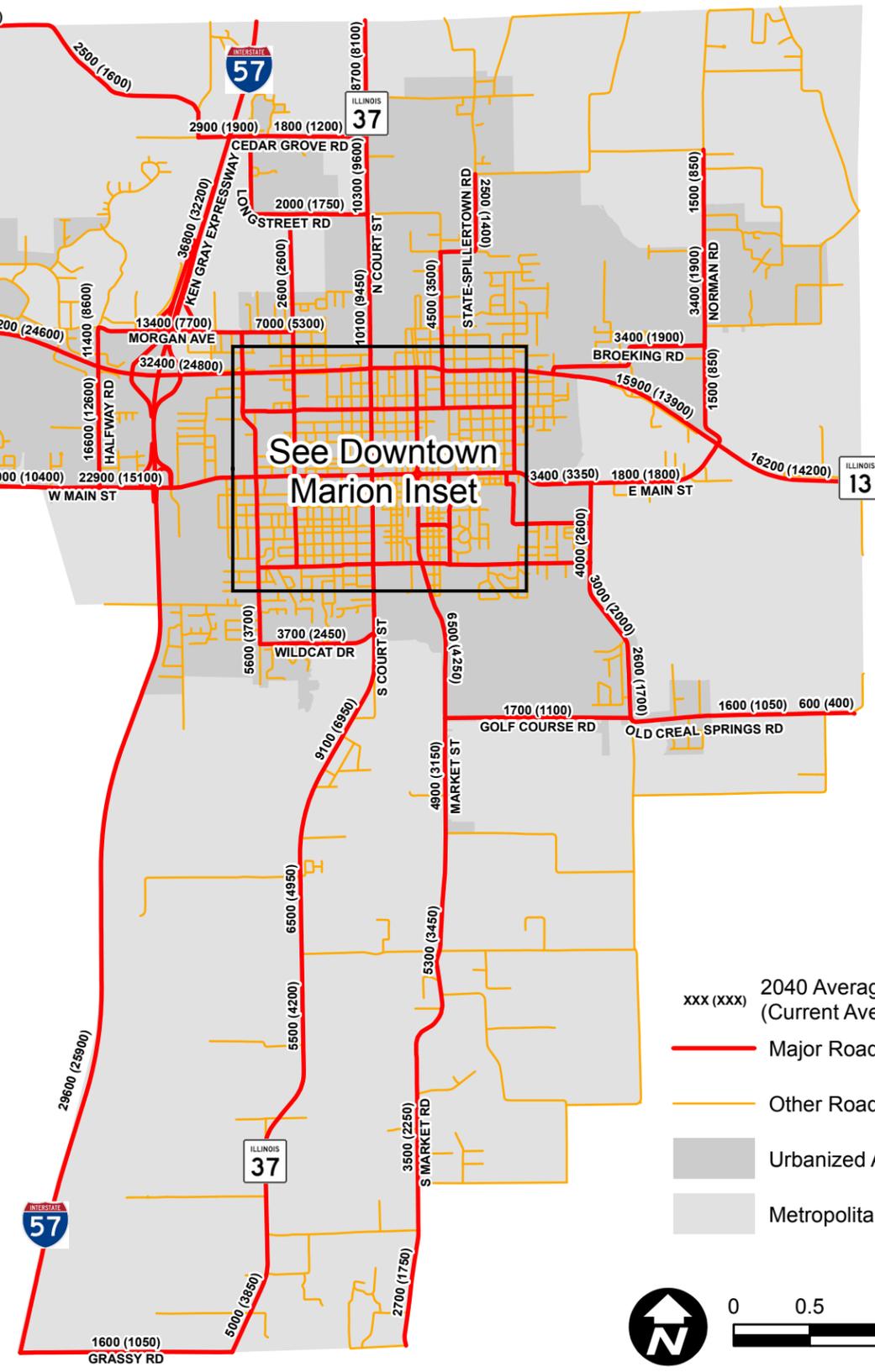
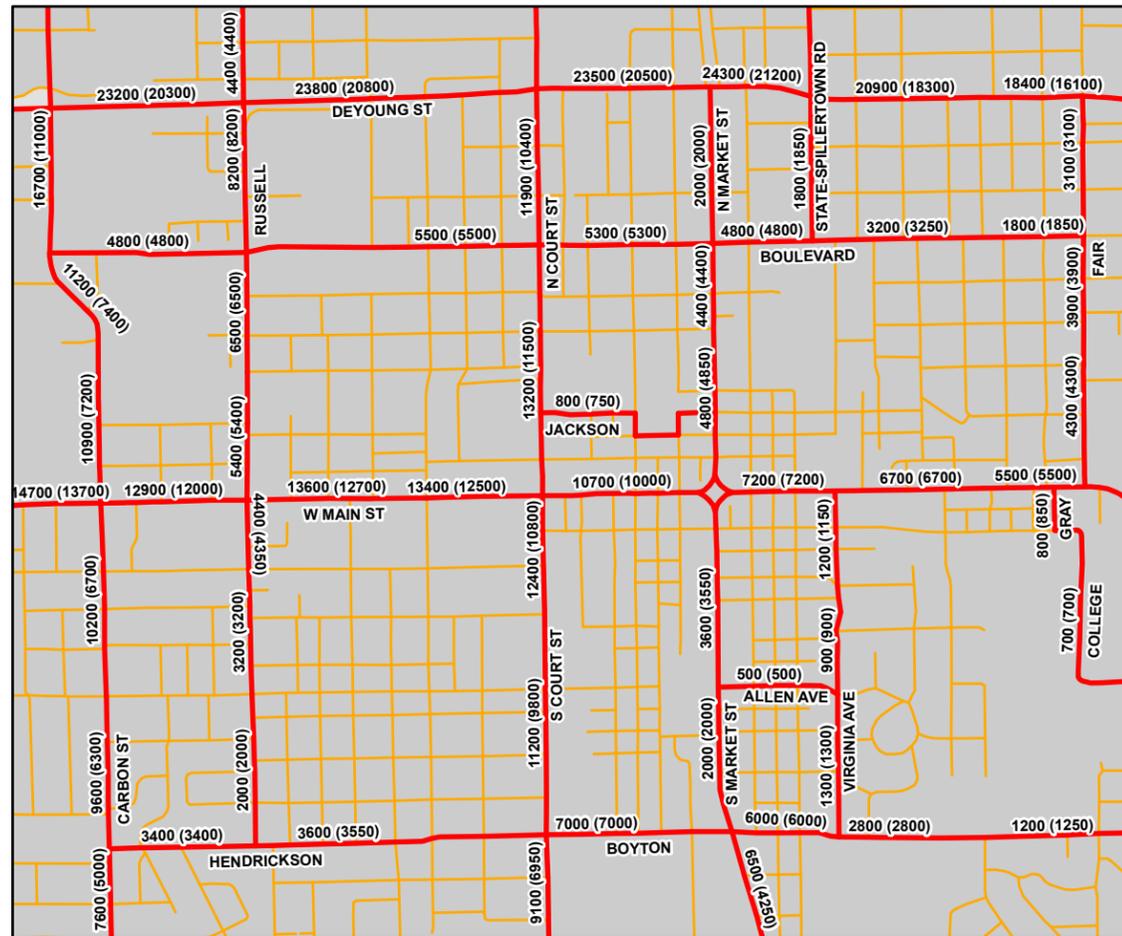


# Marion

## MPA

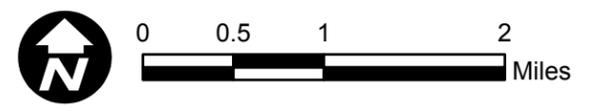


## Downtown Marion



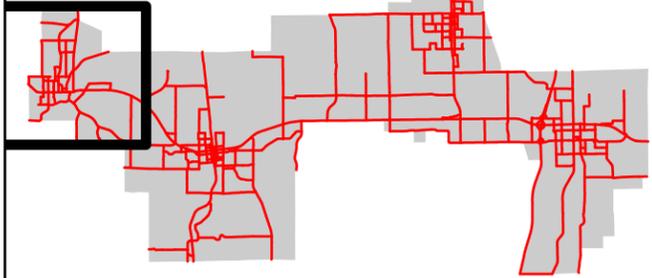
See Downtown  
Marion Inset

- xxx (xxx) 2040 Average Daily Traffic (Current Average Daily Traffic)
- Major Roads
- Other Roads
- Urbanized Area Boundary
- Metropolitan Planning Area Boundary



# Murphysboro

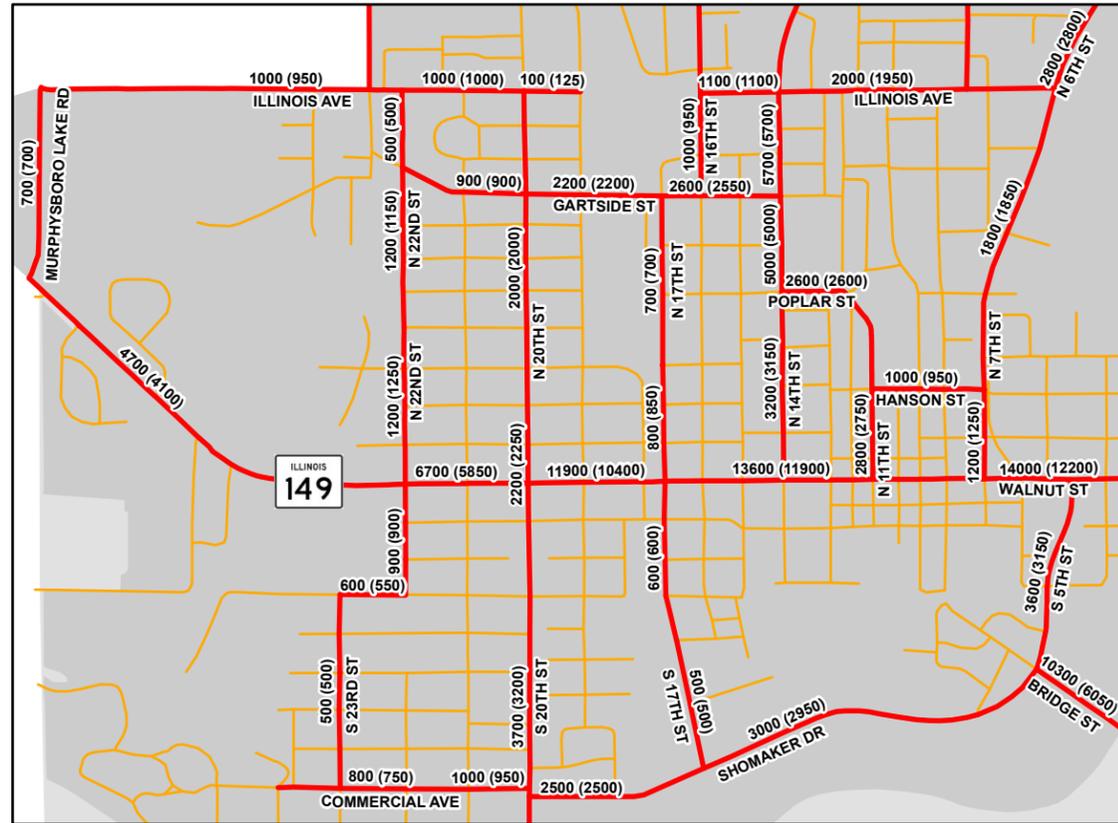
## MPA



xxx (xxx) 2040 Average Daily Traffic (Current Average Daily Traffic)

- Major Roads
- Other Roads
- Urbanized Area Boundary
- Metropolitan Planning Area Boundary

## Downtown Murphysboro



See Downtown  
Murphysboro Inset

