

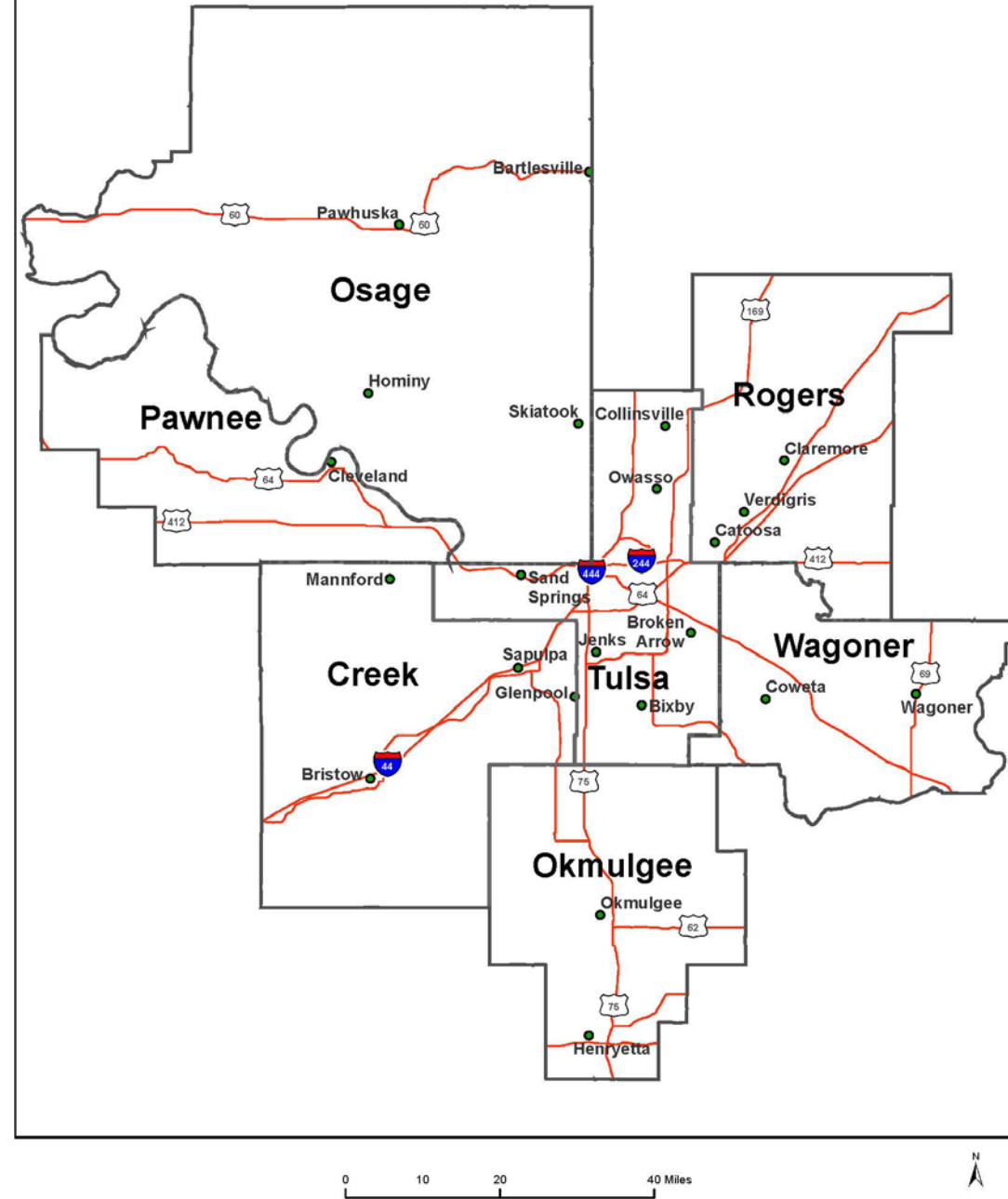
Pains, Trains and Automobiles

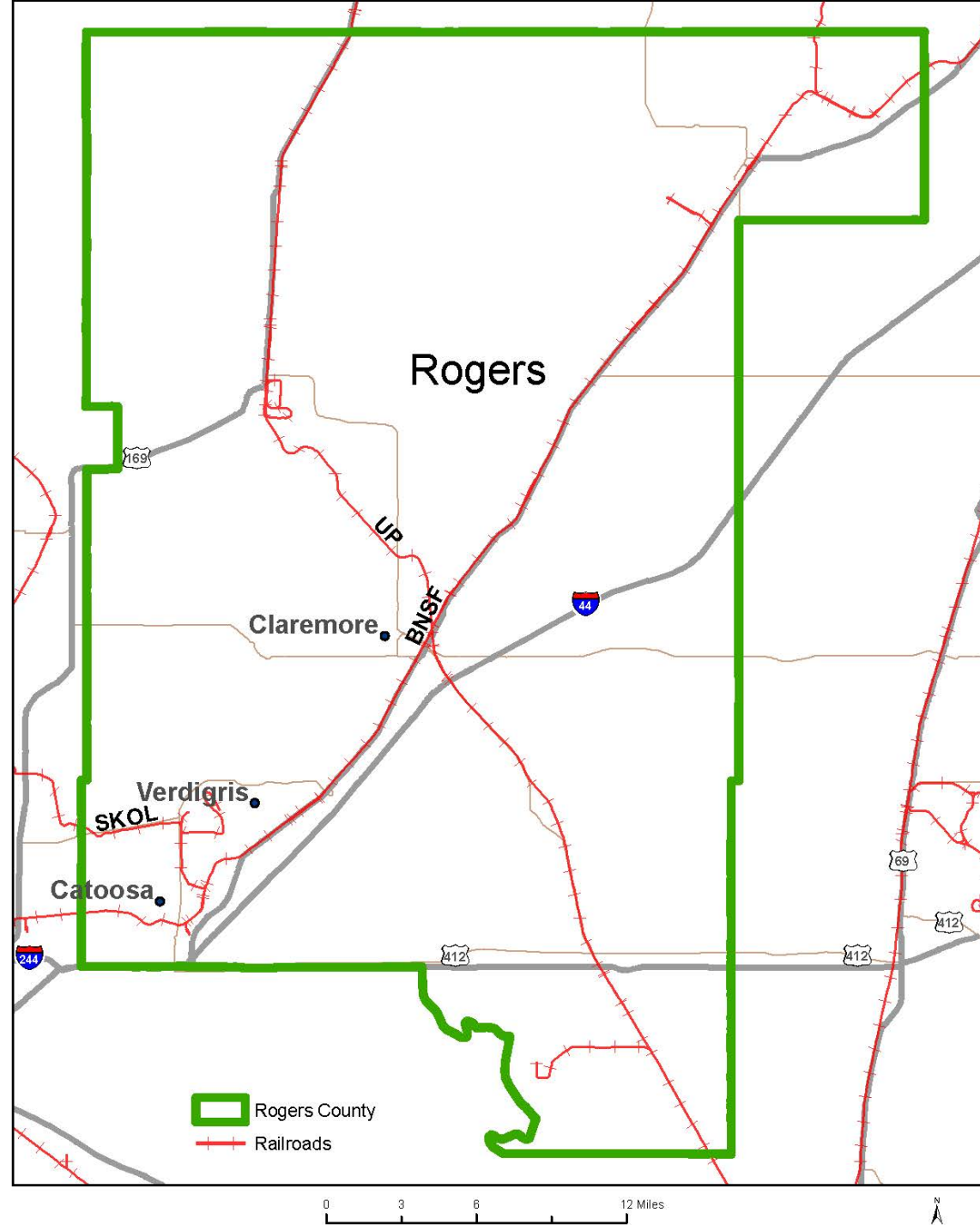
Assessing the Economic Impact of Multiple Rail Crossings in
Claremore, OK

Bob Ball, Economist
Tulsa Regional Chamber



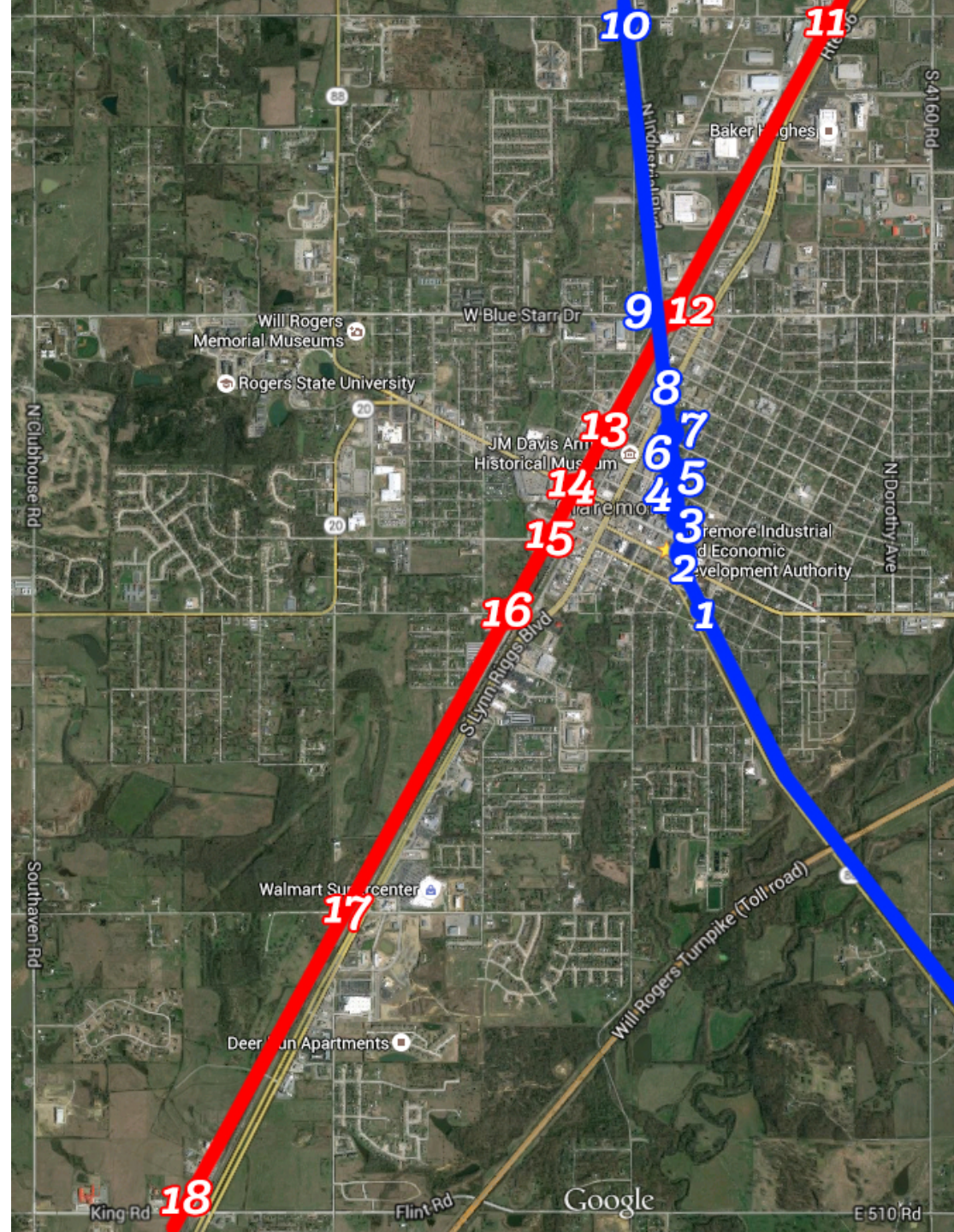
Tulsa MSA





Ground-transportation and other Claremore facts

- Three state highways intersect in the middle of town.
- Two Class 1 railways intersect in the middle of town.
- Rail traffic yields 40 trains per day.
- Claremore has 18 at-grade rail crossings within a two-mile span.
- Population of Claremore is 19,069



Data collected at the 18 crossings for 31 consecutive days in summer 2015 revealed delays:

- 5,861 minutes
- 3 hours 9 minutes daily
- Emergency responders delayed 9 hours 6 minutes
 - 17 minutes 37 seconds daily
 - Duration of delay ranged from 20 minutes to 2 hours 40 minutes.

	Delay in minutes, all intersections
0-5 minutes	1,403
6-10 minutes	2,008
11-15 minutes	897
16-20 minutes	612
21-25 minutes	184
26-30 minutes	168
Longer than 30 minutes	589
Total minutes in 31-day period*	5,861
	189.05 = minutes per day
	3.15 = hours per day

** Delay in minutes calculated as the product of the mid-point of each range and its frequency per intersection and time.*

There have been tragedies.

- 17 train accidents in the last 10 years
- 3 train/pedestrian accidents resulted in fatalities

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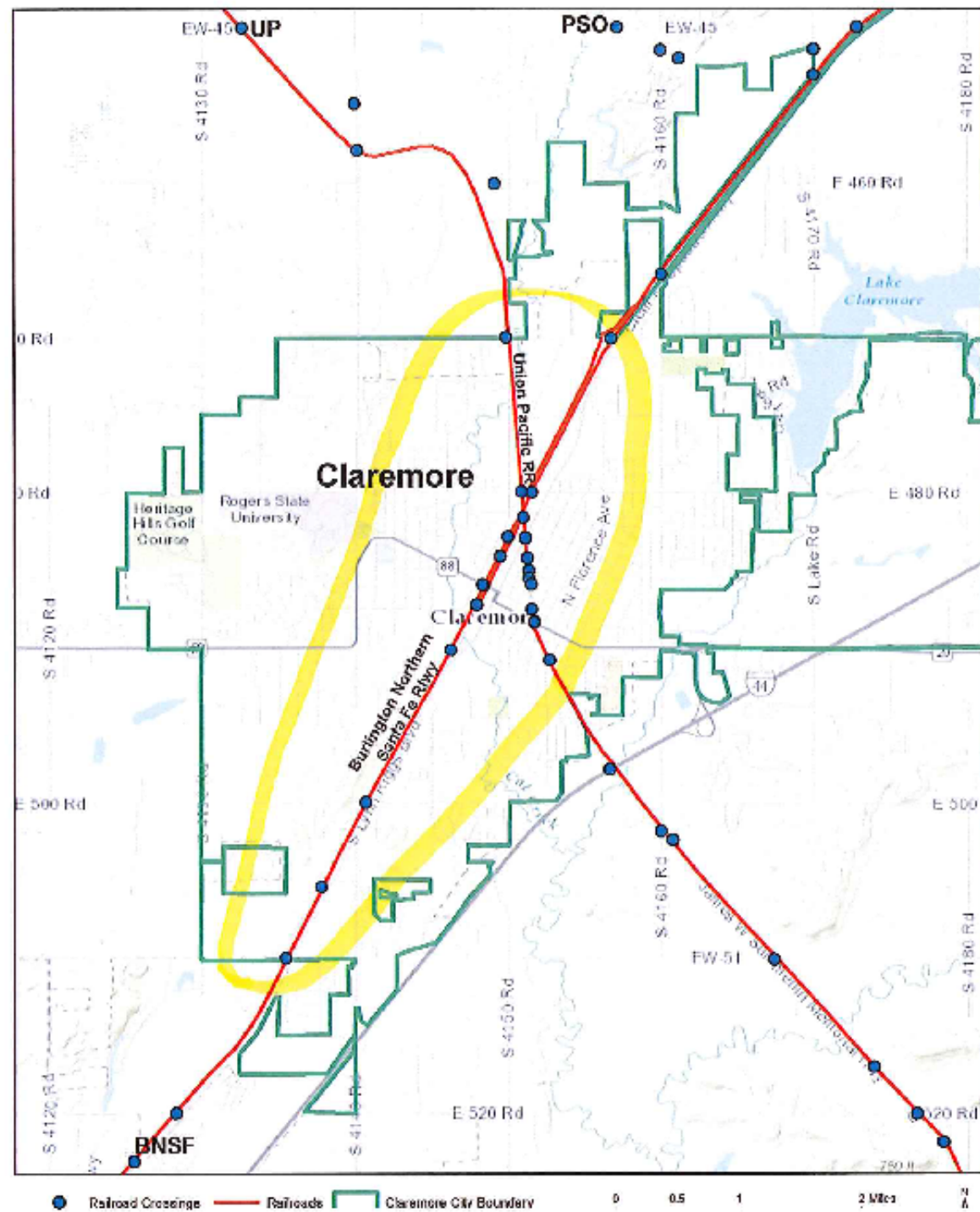
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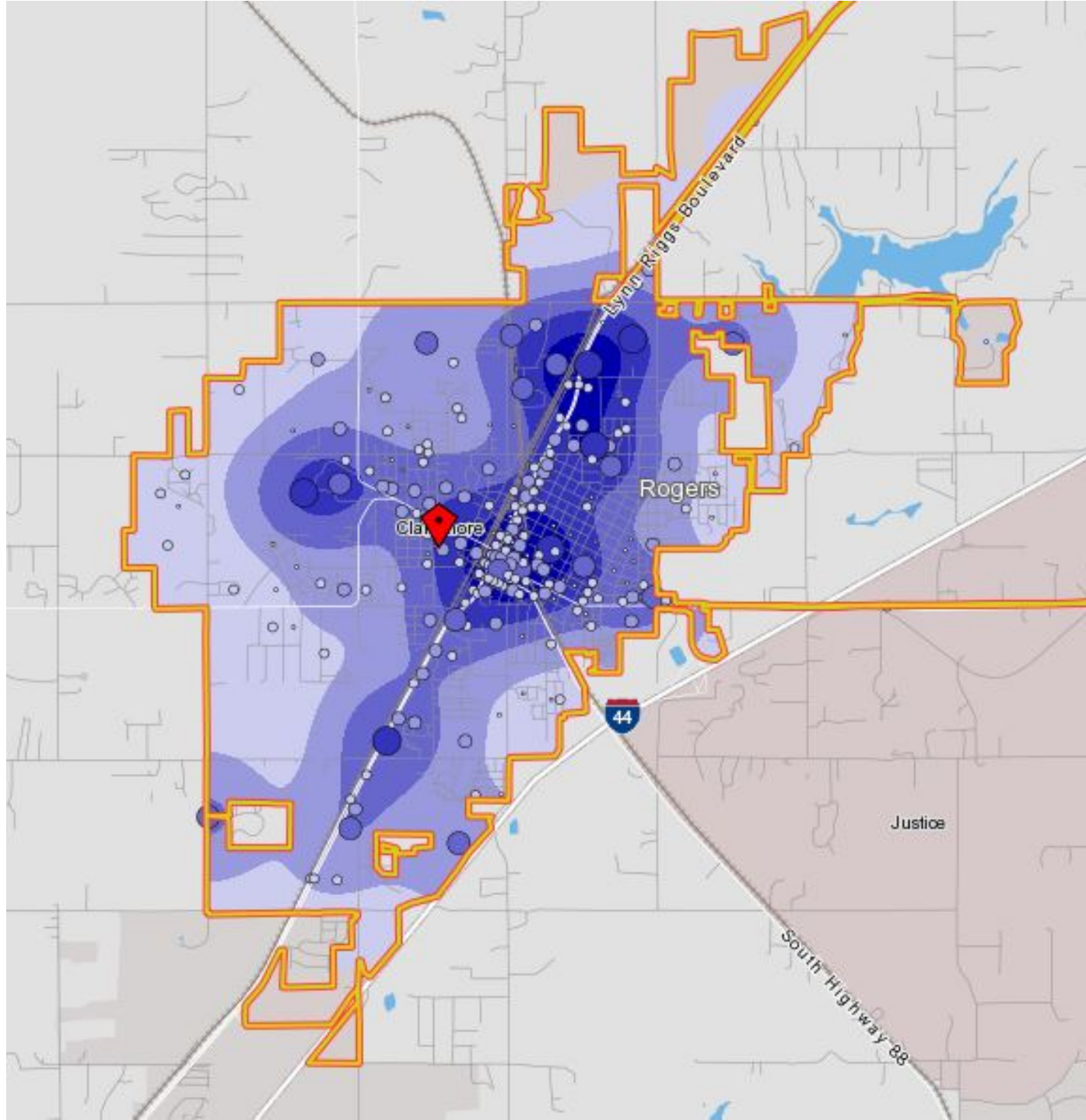
- Population in the Tulsa MSA between 2010 and 2016 grew at an average annual rate of 0.8 percent.
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- Tulsa suburbs grew between 1.6 percent and 3.5 percent.

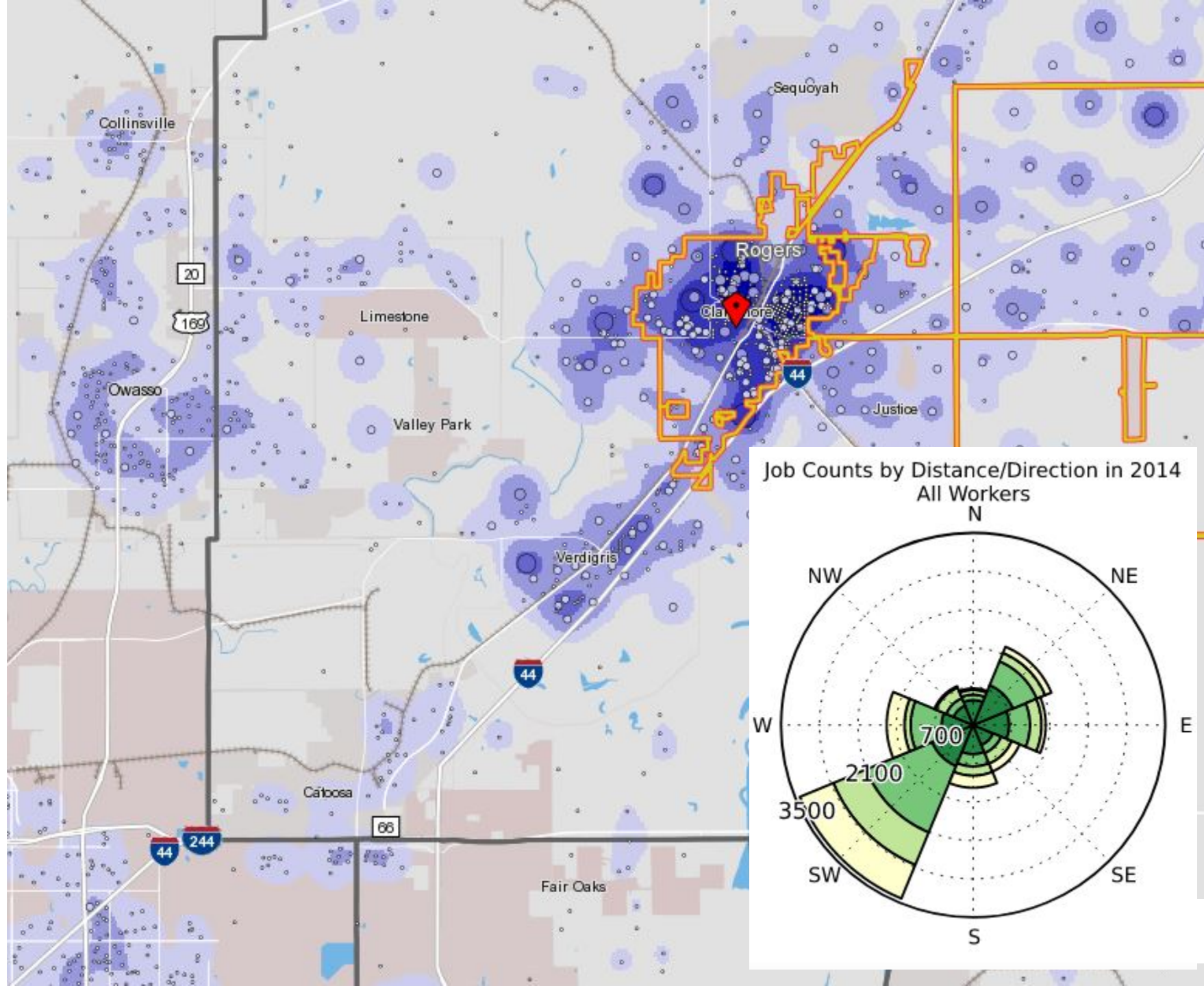
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- Claremore is a suburb of Tulsa – avg annual growth of 0.6 percent.

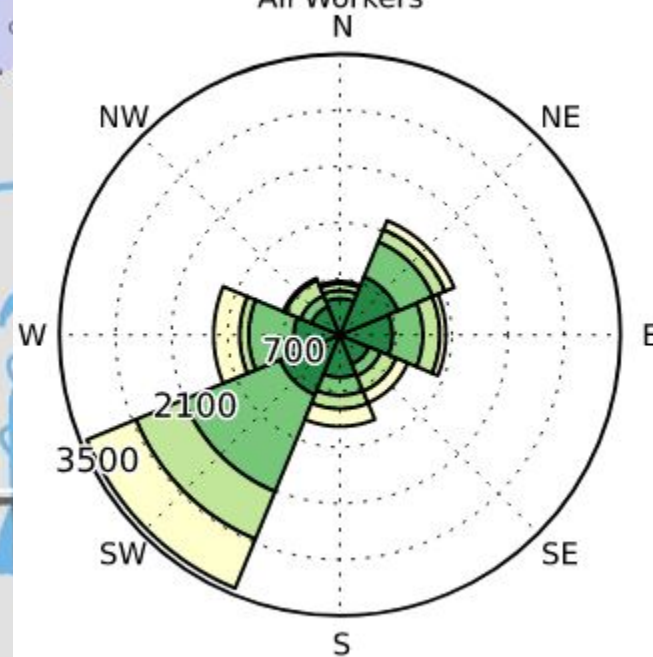
- Gross-product loss of \$77.9 million in 2015

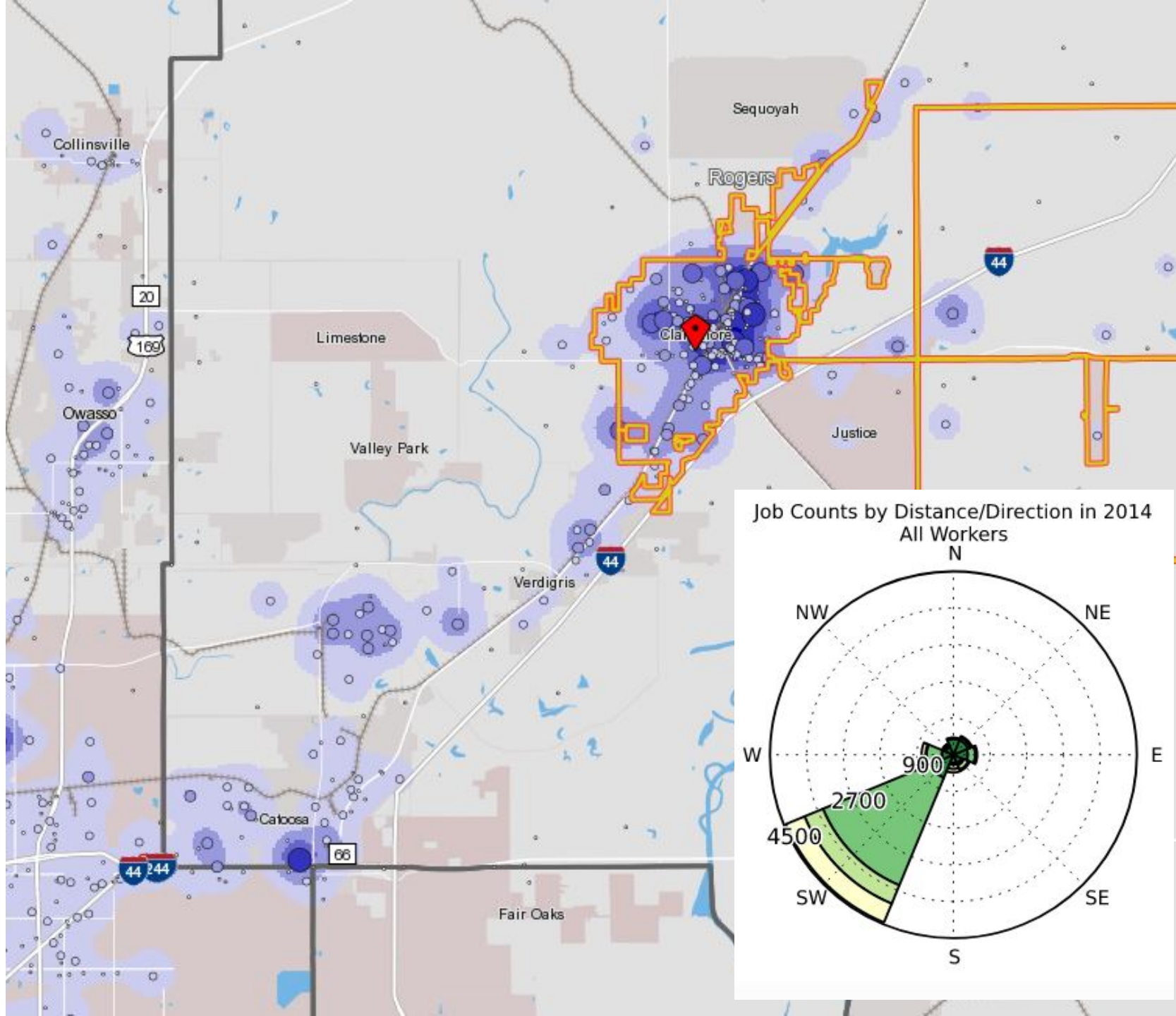




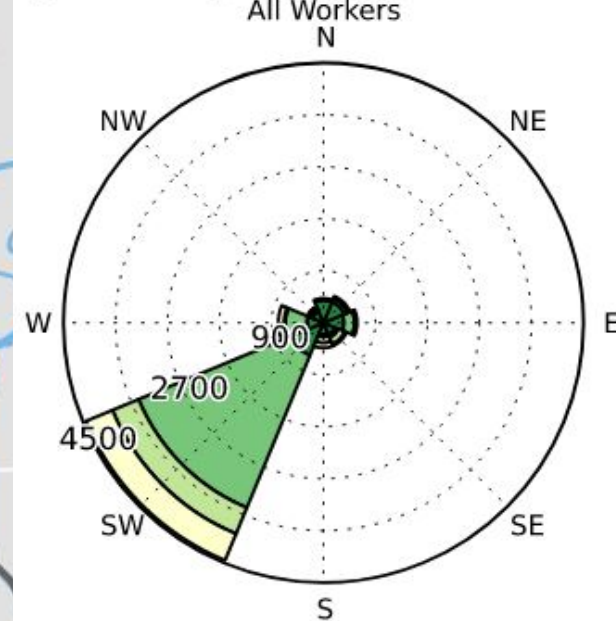


Job Counts by Distance/Direction in 2014
All Workers





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All Workers



FINDINGS

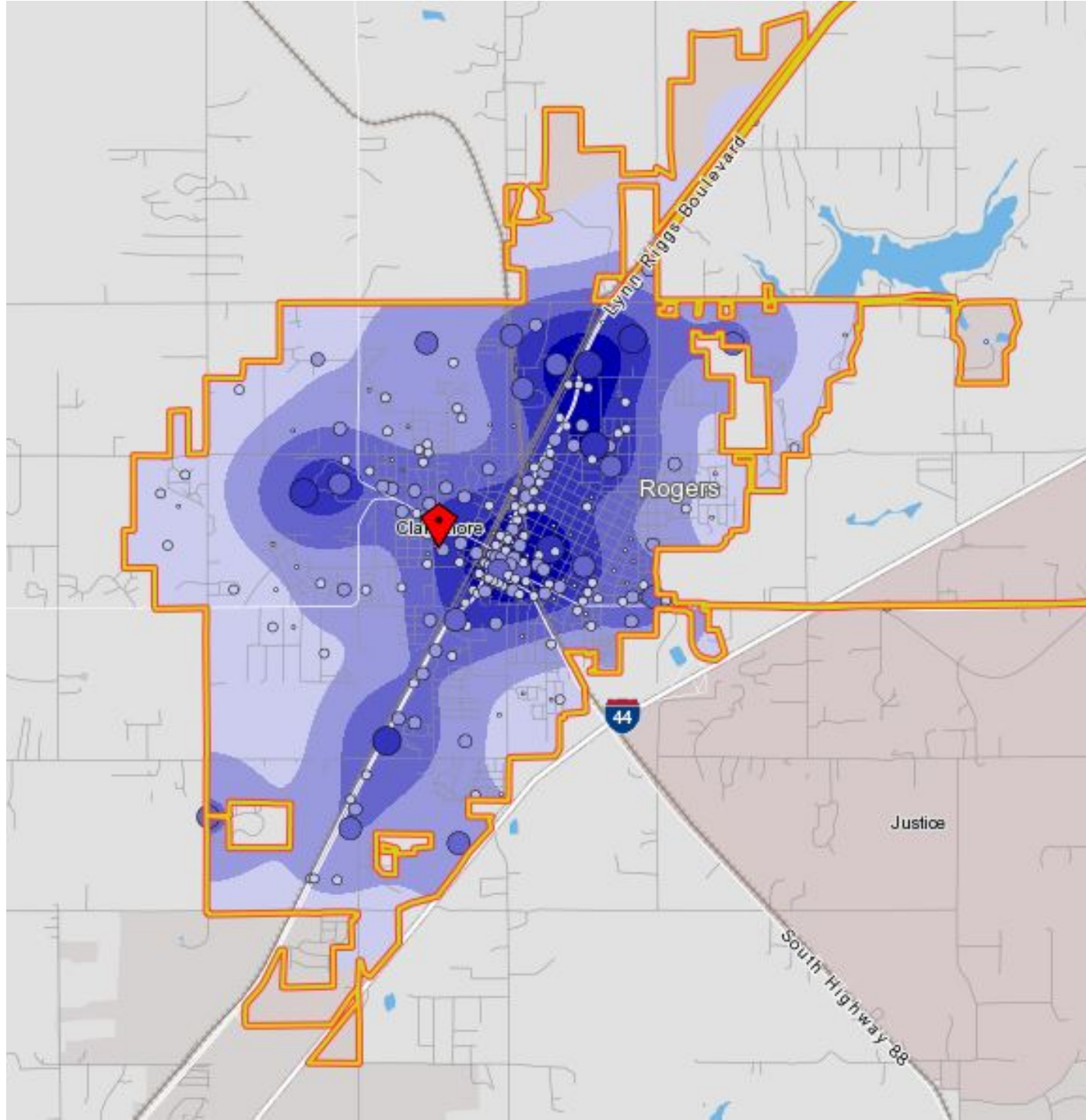
- 1,403 Claremore workers, or 10 percent of all Claremore wage-earners, commute across tracks daily to work.
- The 2015 estimate of gross product of \$1.95 billion for the Claremore study area is 3.8 percent below its potential due to delays at the 18 BNSF and Union Pacific crossings in the city of Claremore.

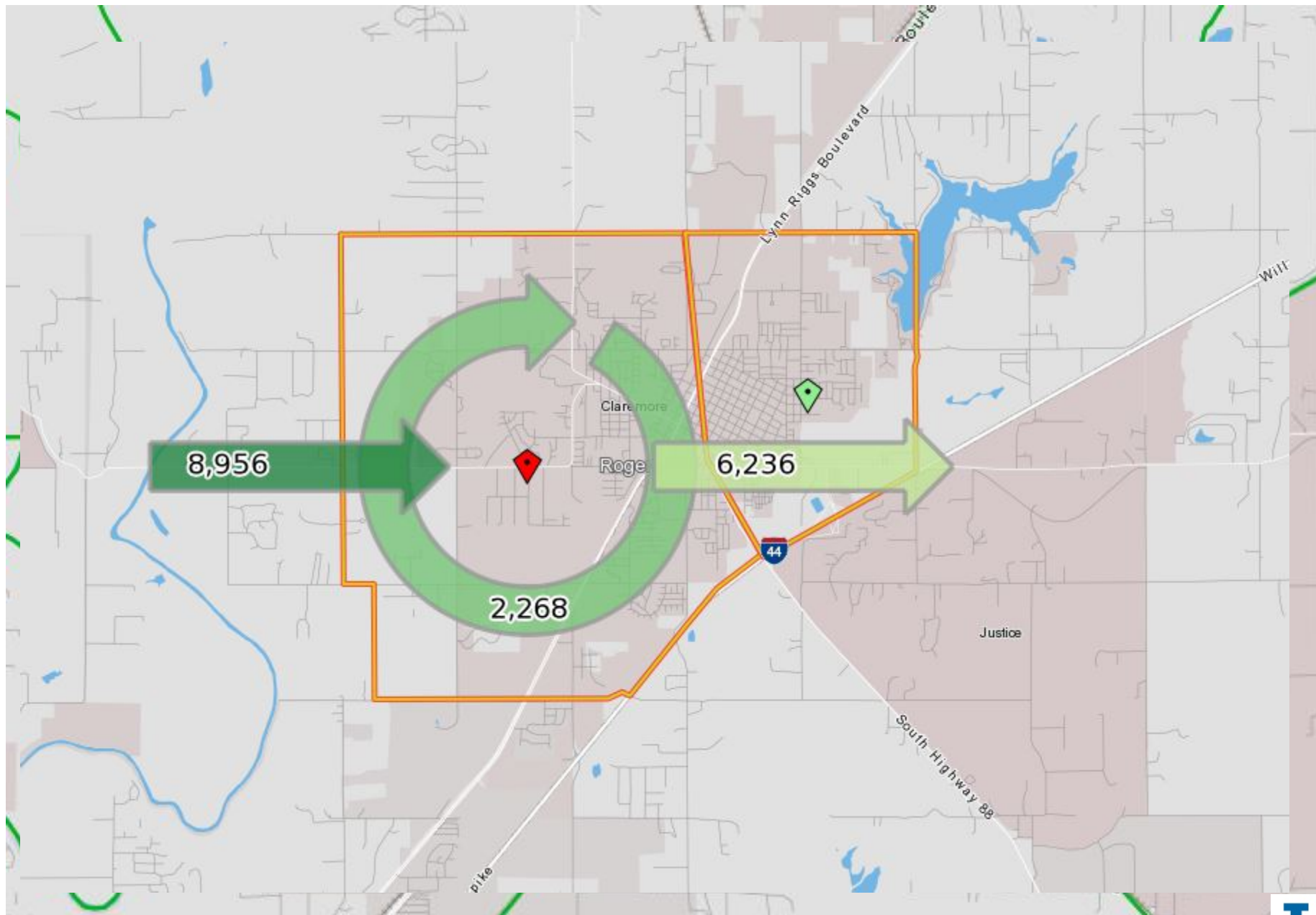
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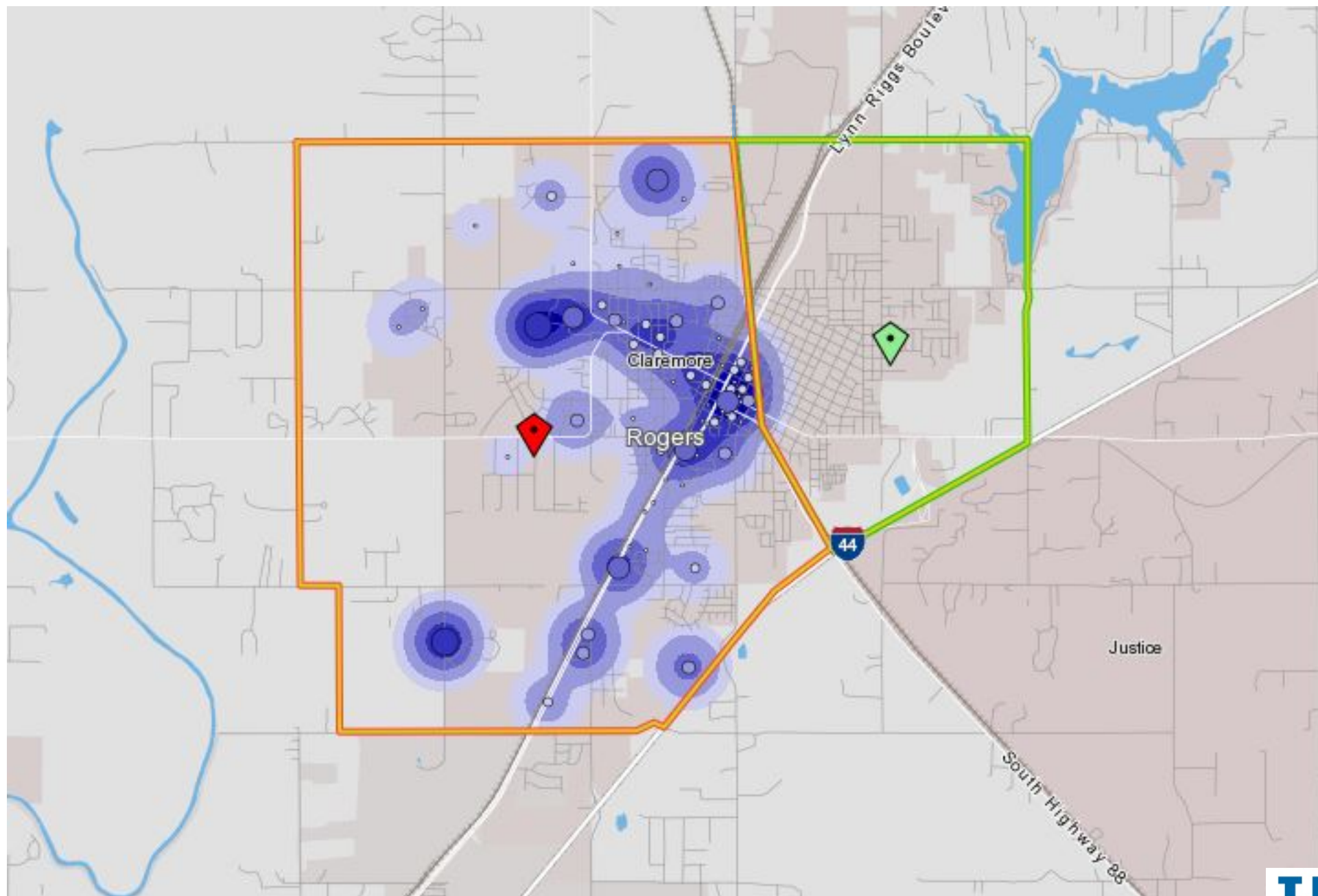
- Based on an estimate of 2015 gross product per worker of \$139,193 and a full work year of 2,080 hours per worker, the 1,403 track-crossing workers account for lost gross product daily of \$299,493.
- The gross product lost in 2015 due to delays at Claremore railroad crossings is estimated to be \$77.9 million.

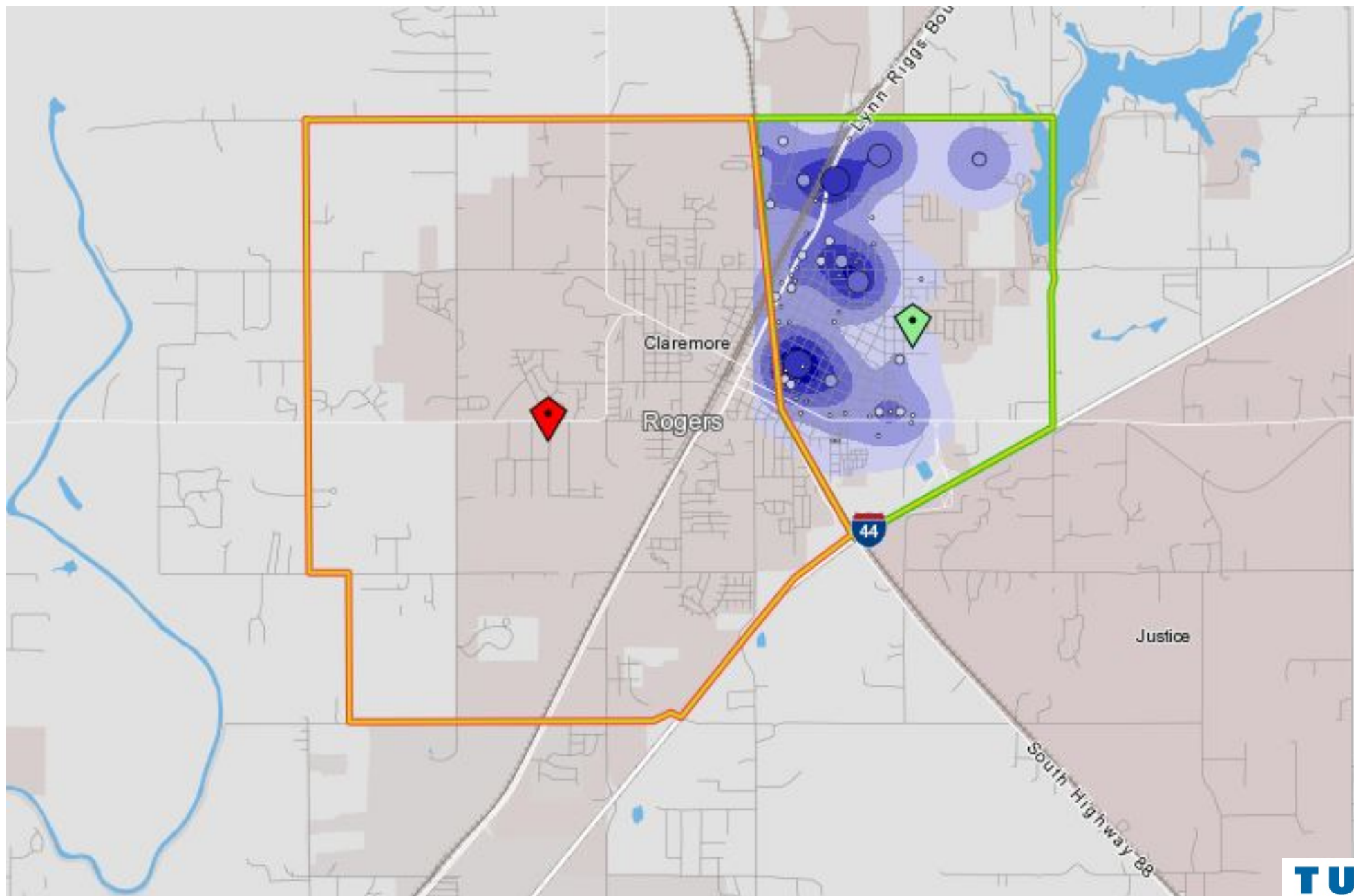
Use OnTheMap (<https://onthemap.ces.census.gov>)
to determine number of track-crossing commuters

- 1,403 workers
- Perform paired-area analysis on area divided by Union Pacific RR (UP)









Determine lost gross product for Claremore

- Use IMPLAN (www.implanonline.com) to get total 2015 gross product for Claremore zip codes (\$1.95 billion).
- Use OnTheMap zip code-based worker total of 14,024 to get annual gross product per worker.
- Use OnTheMap total of 1,403 resident-workers who cross tracks to get to work to get total affected gross product.

Action Taken Based on Economic Analysis

- Claremore transportation-development initiative was reinstated in Oklahoma Department of Transportation's Eight-year Plan.
 - Re-routing State Highway 20 around city to ease congestion (2019).
 - Construction over overpass at one southern crossing location (2019).
 - Construction of overpass at a prominent northern crossing location (2021).

Action Taken Based on Economic Analysis

- City has received agreements with BNSF and UP to begin construction of channelization.
- Development of Quiet Zone to create a more livable community.
 - UP and BNSF
 - Federal, state and local governments

Bob Ball

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