

# **2016 Auto Accessibility Report: Florida**

Prepared for the state of Florida by  
**Accessibility Observatory at the University of Minnesota**

April 25, 2018



**ACCESSIBILITY  
OBSERVATORY**

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UNIVERSITY OF MINNESOTA

**Driven to Discover<sup>SM</sup>**

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# 1 Introduction

This report presents the results of an evaluation of accessibility to jobs by auto throughout the state of Florida. *Accessibility* refers to the ease of reaching valued destinations. It combines the simpler metric of mobility with the understanding that travel is driven by a desire to reach destinations. Accessibility can be measured for various transportation modes, to different types of destinations, and at different times of day. There are a variety of ways to define accessibility, but the number of destinations reachable within a given travel time is highly comprehensible and transparent—as well as the most directly comparable across locations.

This study focuses on access to jobs, the most significant non-home travel destination. Accessibility is calculated at the Census block level by computing the travel time from each block to surrounding blocks, and then adding up the total number of jobs that can be reached within different travel time thresholds. This process is repeated for every block within the state of Florida, and the results are aggregated to provide accessibility summaries for each county, and the jurisdiction of each metropolitan planning organization (MPO), within the state.

Additionally, the impact of traffic congestion on job accessibility is estimated by comparing accessibility during congested periods with accessibility during free-flow periods. This congestion impact metric shows the reduction in job access that travelers experience when congestion reduces road and highway speeds.

[Section 2](#) presents these results, summarized statewide, by MPO, and by county. [Section 3](#) provides an overview of the data sources and methodology used in this study. A separate document, *Access Across America: 2016 Auto Methodology*, describes the methodology and data sources in greater detail.

## 2 Accessibility Evaluation Results

### 2.1 Statewide Accessibility

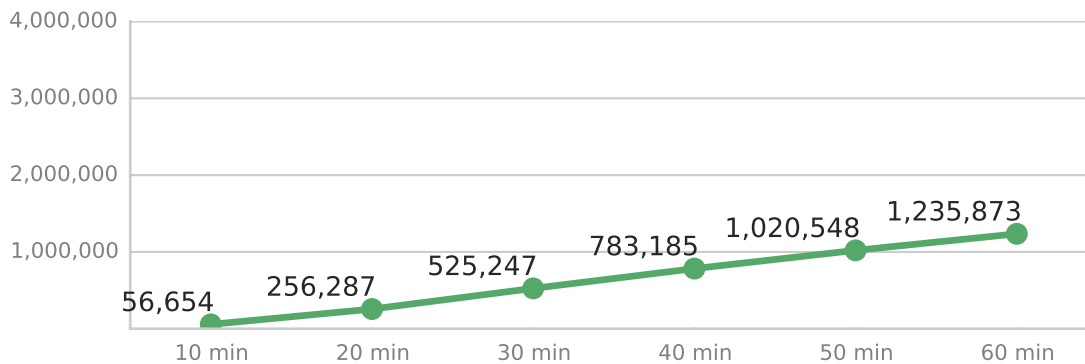
#### Florida

Job Accessibility Results – Auto, 2016

Total Jobs	7,758,933
Average Job Density (per mi <sup>2</sup> )	144
Total Workers	7,758,710
Average Worker Density (per mi <sup>2</sup> )	144

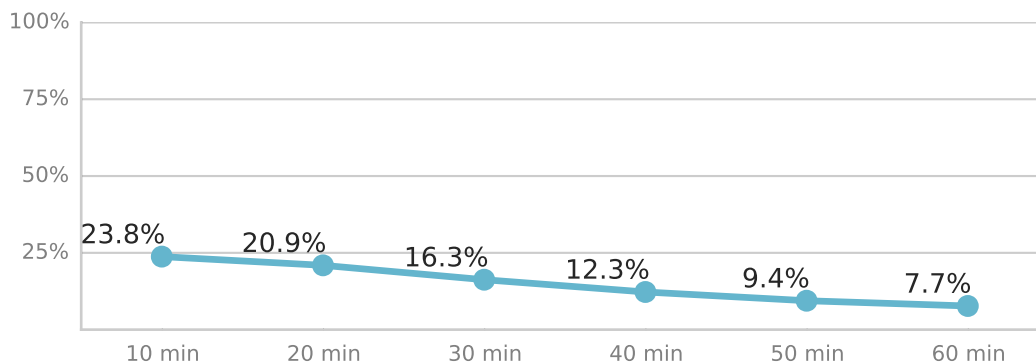
*Job and worker totals are based on LEHD estimates and may not match other sources.*

#### Average Job Accessibility by Travel Time Threshold (worker-weighted)

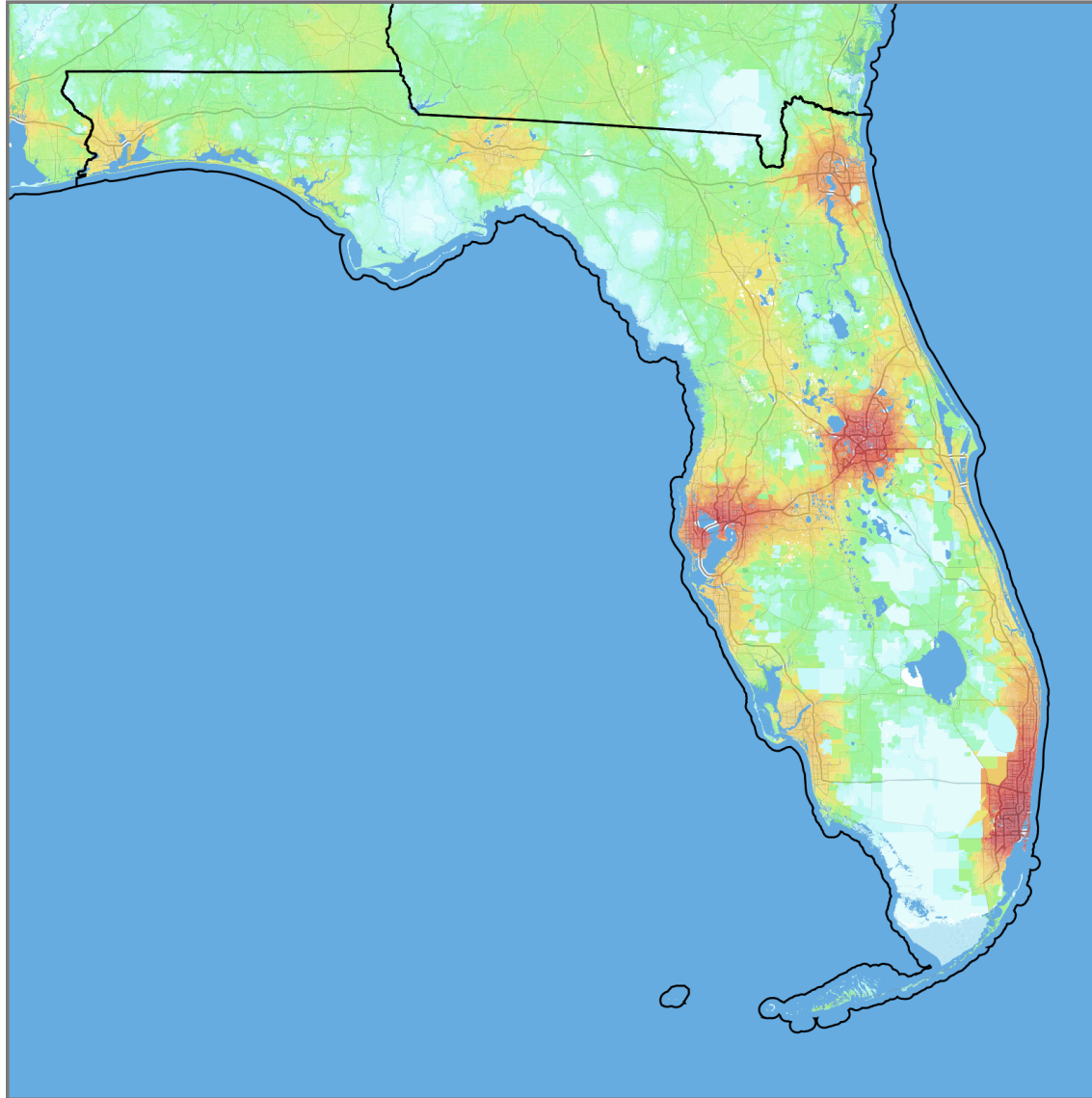


#### Average Congestion Impact by Travel Time Threshold (worker-weighted)

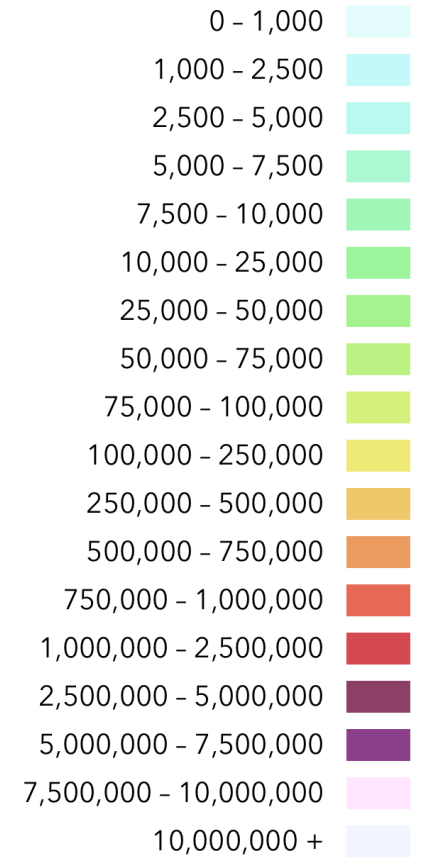
*Higher numbers indicate greater job access loss due to congestion*



# Florida



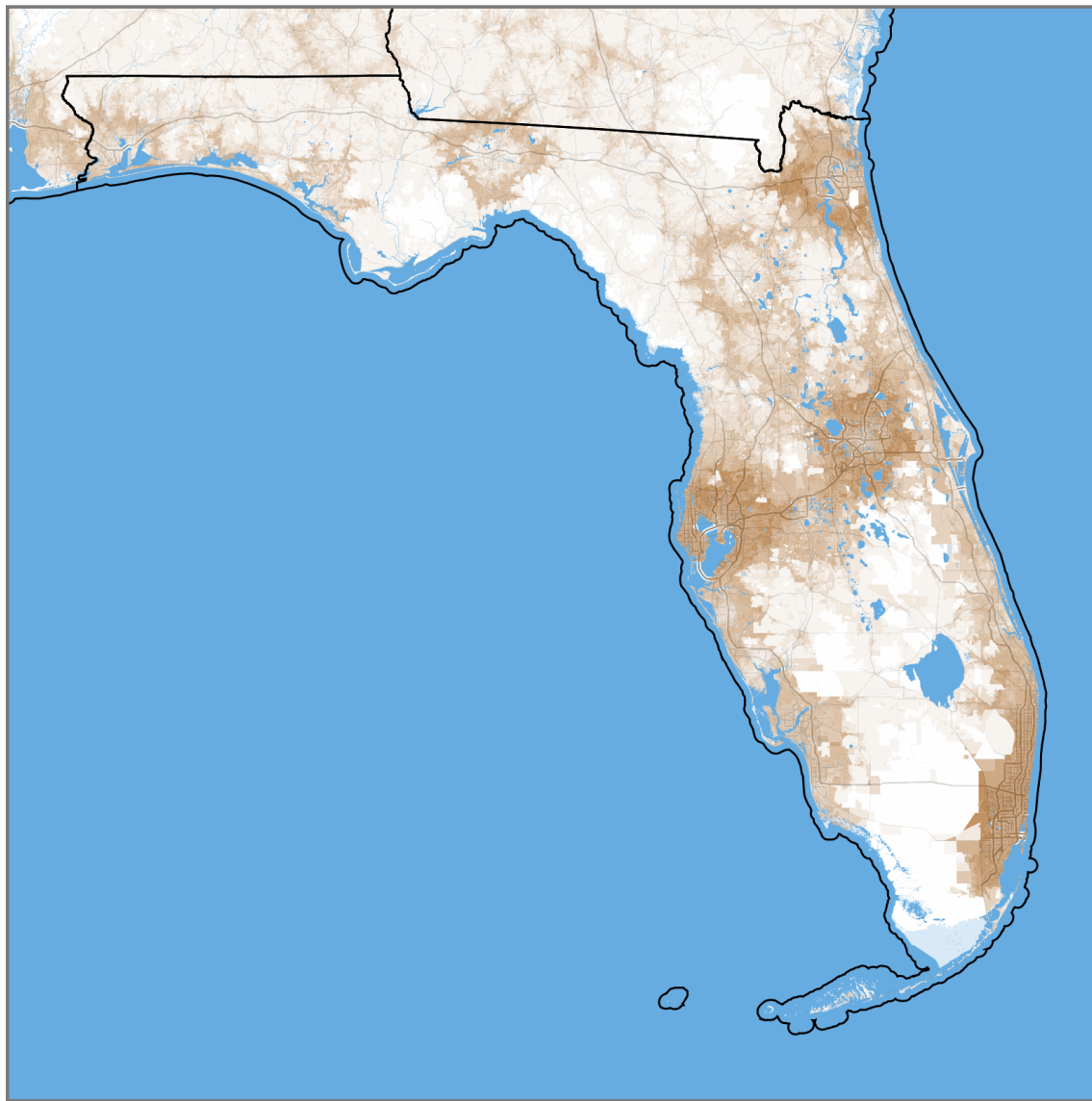
Jobs within 30 minutes  
(Driving, AM peak)



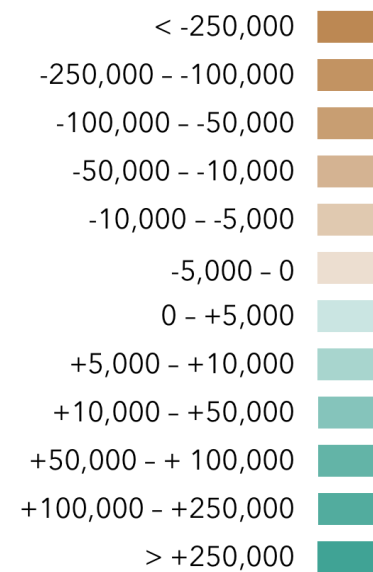
State border —

MPO boundary —

# Florida



Change in jobs within  
30 minutes  
(Driving, congestion impact)



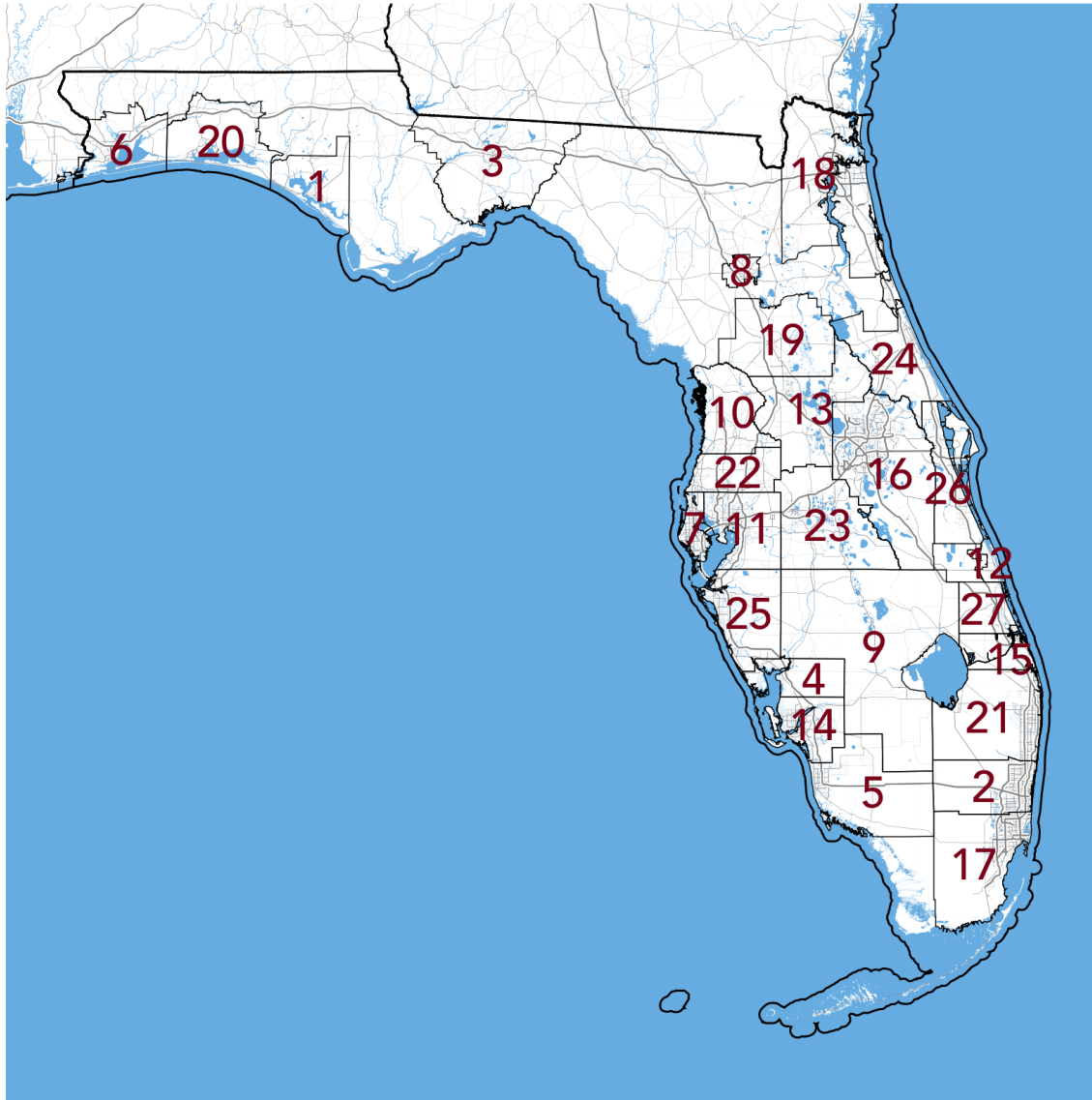
State border

MPO boundary

## **2.2 Accessibility in Metropolitan Areas**

The following sections analyze accessibility in the metropolitan areas (as defined by jurisdictions of metropolitan planning organizations (MPOs)) that lie within or partially within the state of Florida. The following MPO jurisdictions are included:

# Florida



## MPOs Included:

1. Bay County Transportation Planning Organization
2. Broward MPO
3. Capital Region Transportation Planning Agency
4. Charlotte-Punta Gorda MPO
5. Collier MPO
6. Florida-Alabama Transportation Planning Organization
7. Forward Pinellas
8. Gainesville MTPO
9. Heartland Regional TPO
10. Hernando/Citrus MPO
11. Hillsborough MPO
12. Indian River County MPO
13. Lake-Sumter MPO
14. Lee County MPO
15. Martin MPO
16. METROPLAN Orlando
17. Miami-Dade TPO
18. North Florida Transportation Planning Organization
19. Ocala - Marion County Transportation Planning Organization
20. Okaloosa-Walton Transportation Planning Organization
21. Palm Beach MPO
22. Pasco County MPO
23. Polk County Transportation Planning Organization
24. River to Sea Transportation Planning Organization
25. Sarasota-Manatee MPO
26. Space Coast Transportation Planning Organization
27. St. Lucie Transportation Planning Organization

Table 1 provides the average (worker-weighted) job accessibility by auto during the AM peak period for each MPO, and Table 2 indicates the accessibility congestion impact. The following pages provide additional details and maps for each MPO.

Table 1: Average Job Accessibility by Travel Time Threshold for Metropolitan Areas (Auto, AM Peak)

MPO	10 min	20 min	30 min	40 min	50 min	60 min
Bay County Transportation Planning Organization	21,016	51,632	69,530	79,469	91,922	118,888
Broward MPO	96,437	470,498	993,321	1,562,719	2,026,132	2,228,627
Capital Region Transportation Planning Agency	36,503	100,527	140,020	170,706	194,668	215,025
Charlotte-Punta Gorda MPO	13,671	35,190	62,689	137,241	256,830	411,519
Collier MPO	23,254	82,135	133,940	221,021	293,461	332,515
Florida-Alabama Transportation Planning Organization	29,538	89,781	138,860	175,270	220,727	310,531
Forward Pinellas	83,641	298,326	652,165	992,079	1,207,603	1,391,922
Gainesville MTPO	41,347	101,599	117,304	160,661	229,953	273,601
Heartland Regional TPO	5,069	11,261	21,849	48,297	108,595	223,986
Hernando/Citrus MPO	7,586	28,071	65,264	146,330	366,427	695,889
Hillsborough MPO	77,260	335,343	693,911	1,028,258	1,310,092	1,554,442
Indian River County MPO	17,127	46,844	88,416	157,331	248,162	342,353
Lake-Sumter MPO	11,187	43,413	177,284	514,950	890,292	1,259,368
Lee County MPO	25,422	110,364	192,706	264,155	333,731	375,988
METROPLAN Orlando	67,985	378,995	757,914	1,004,469	1,196,289	1,414,992
Martin MPO	20,694	63,370	155,680	318,540	489,847	652,936
Miami-Dade TPO	105,790	494,553	1,028,490	1,426,427	1,693,609	1,897,032
North Florida Transportation Planning Organization	45,065	214,593	394,260	511,737	598,275	657,070
Ocala - Marion County Transportation Planning Organization	15,258	51,794	95,049	155,925	246,062	376,017
Okaloosa-Walton Transportation Planning Organization	14,952	33,518	59,975	86,121	129,145	190,052
Palm Beach MPO	61,318	259,326	527,072	823,270	1,174,385	1,573,490
Pasco County MPO	15,306	68,412	239,143	609,004	1,000,274	1,251,925
Polk County Transportation Planning Organization	22,392	96,978	225,481	541,794	1,016,005	1,594,341
River to Sea Transportation Planning Organization	19,215	64,576	154,821	336,810	559,690	899,419
Sarasota-Manatee MPO	34,261	114,674	202,854	338,008	636,511	1,008,746
Space Coast Transportation Planning Organization	21,523	77,169	134,285	213,613	446,965	786,035
St. Lucie Transportation Planning Organization	16,480	73,532	123,365	201,381	352,202	538,345



Table 2: Average Accessibility Congestion Impact by Travel Time Threshold for Metropolitan Areas (Auto, AM Peak)

<b>MPO</b>	10 min	20 min	30 min	40 min	50 min	60 min
Bay County Transportation Planning Organization	16.63%	8.45%	3.87%	2.38%	5.90%	7.89%
Broward MPO	29.84%	30.15%	27.12%	18.46%	6.62%	2.42%
Capital Region Transportation Planning Agency	18.19%	7.48%	4.32%	3.35%	2.15%	2.66%
Charlotte-Punta Gorda MPO	10.40%	6.82%	11.87%	14.99%	15.39%	12.86%
Collier MPO	17.81%	8.17%	9.42%	8.75%	4.19%	2.88%
Florida-Alabama Transportation Planning Organization	15.05%	9.39%	5.98%	4.96%	8.40%	10.18%
Forward Pinellas	20.22%	23.26%	20.02%	9.10%	6.73%	5.00%
Gainesville MTPO	19.93%	3.87%	2.10%	10.02%	3.99%	7.44%
Heartland Regional TPO	6.79%	5.00%	8.89%	15.20%	16.92%	17.78%
Hernando/Citrus MPO	10.94%	9.46%	12.21%	26.83%	27.14%	16.52%
Hillsborough MPO	28.50%	23.15%	17.01%	10.99%	6.59%	4.66%
Indian River County MPO	12.10%	10.22%	11.85%	14.10%	8.39%	8.96%
Lake-Sumter MPO	11.87%	15.88%	26.79%	15.22%	9.87%	6.87%
Lee County MPO	18.73%	13.61%	8.18%	8.46%	5.50%	2.72%
METROPLAN Orlando	29.20%	20.26%	10.55%	5.22%	3.96%	4.63%
Martin MPO	16.71%	11.20%	16.32%	14.42%	11.66%	14.77%
Miami-Dade TPO	42.32%	37.79%	21.06%	12.99%	8.64%	6.41%
North Florida Transportation Planning Organization	27.36%	21.00%	10.25%	6.24%	3.41%	2.94%
Ocala - Marion County Transportation Planning Organization	15.27%	10.29%	7.88%	9.96%	9.81%	12.29%
Okaloosa-Walton Transportation Planning Organization	9.01%	8.70%	7.32%	6.54%	10.24%	13.65%
Palm Beach MPO	22.39%	19.39%	18.01%	17.67%	18.81%	17.76%
Pasco County MPO	15.98%	28.53%	37.95%	27.19%	13.11%	7.94%
Polk County Transportation Planning Organization	15.70%	12.44%	16.42%	17.60%	16.75%	13.39%
River to Sea Transportation Planning Organization	12.16%	12.64%	26.82%	21.21%	20.55%	14.01%
Sarasota-Manatee MPO	18.57%	12.11%	7.93%	13.74%	15.70%	9.18%
Space Coast Transportation Planning Organization	16.82%	10.39%	7.61%	14.98%	14.88%	10.23%
St. Lucie Transportation Planning Organization	15.75%	13.85%	7.52%	11.15%	12.18%	11.88%

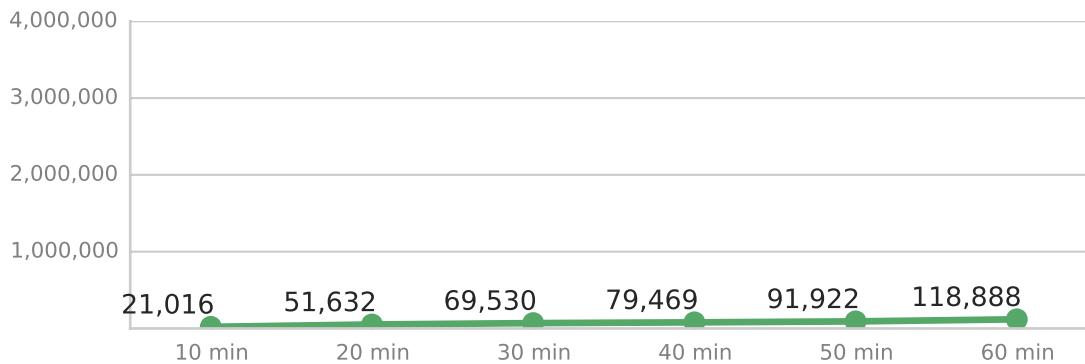
# Bay County Transportation Planning Organization

## Job Accessibility Results – Auto, 2016

Total Jobs	76,628
Average Job Density (per mi <sup>2</sup> )	191
Total Workers	70,003
Average Worker Density (per mi <sup>2</sup> )	175

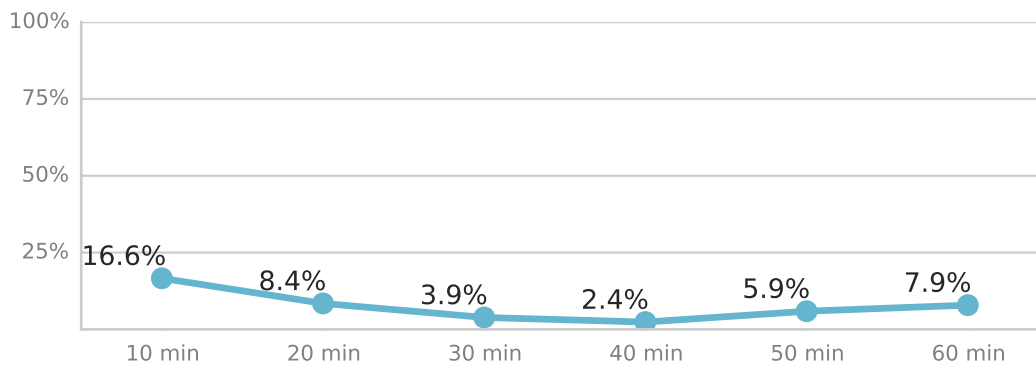
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)

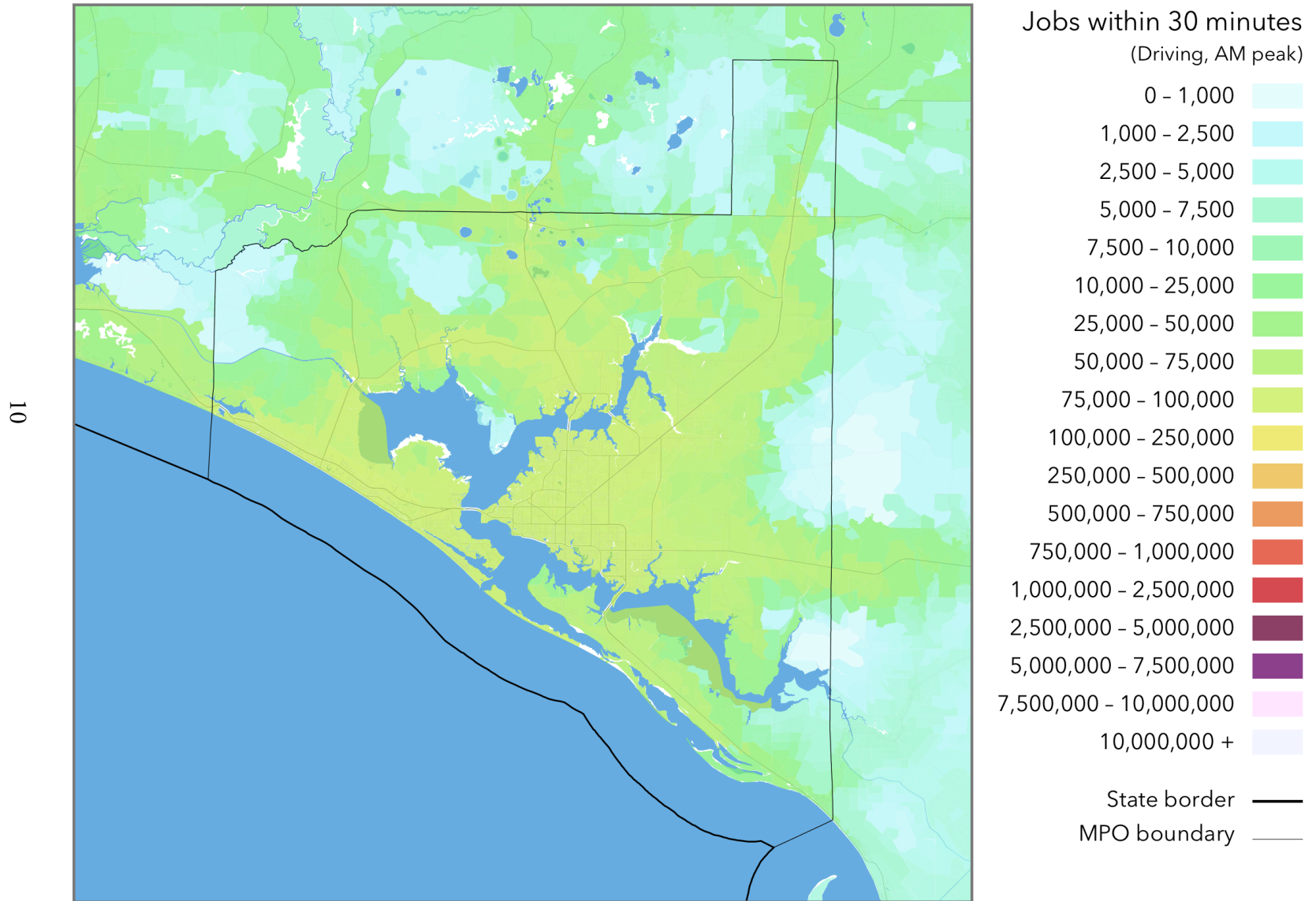


### Average Congestion Impact by Travel Time Threshold (worker-weighted)

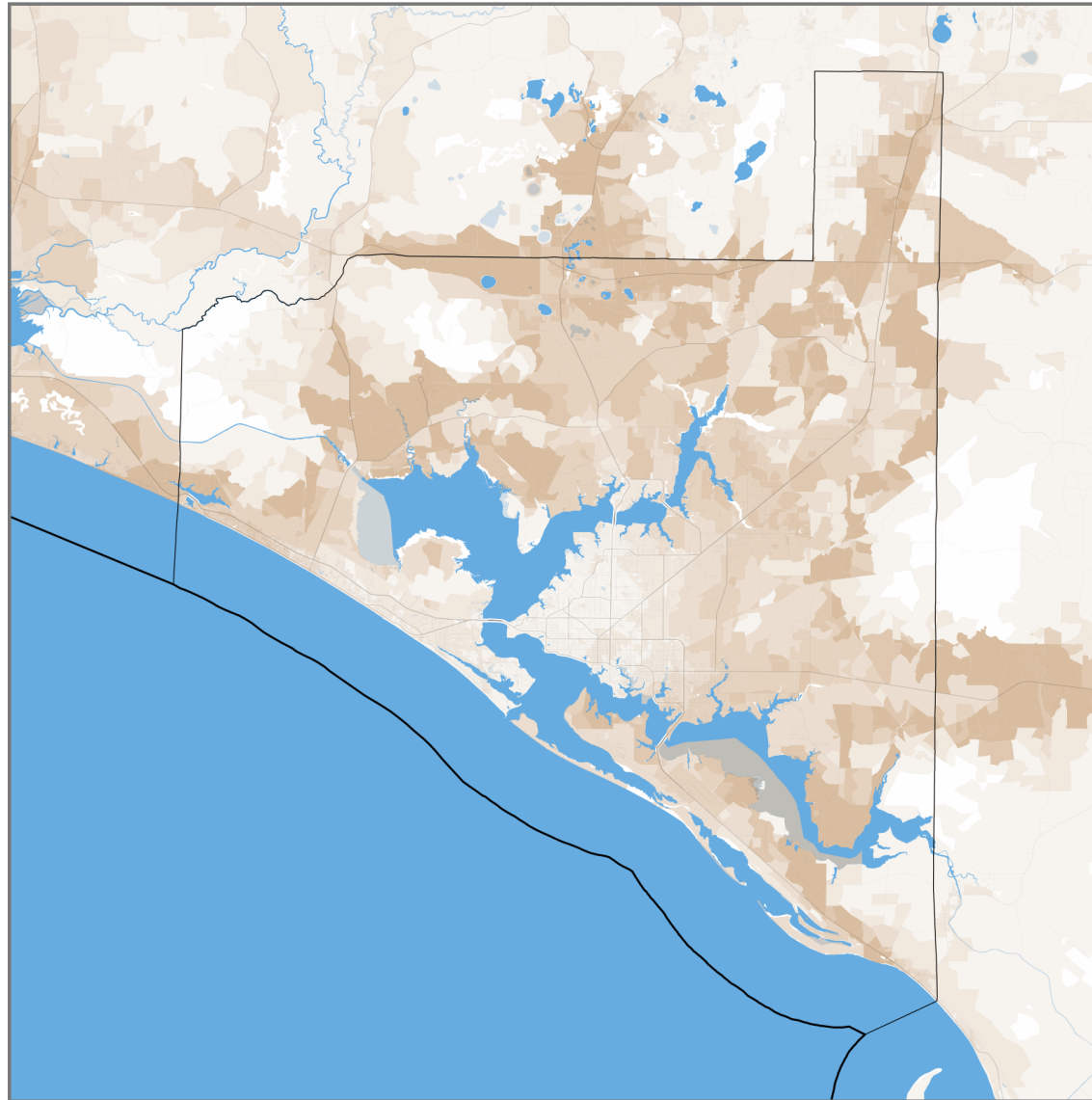
*Higher numbers indicate greater job access loss due to congestion*



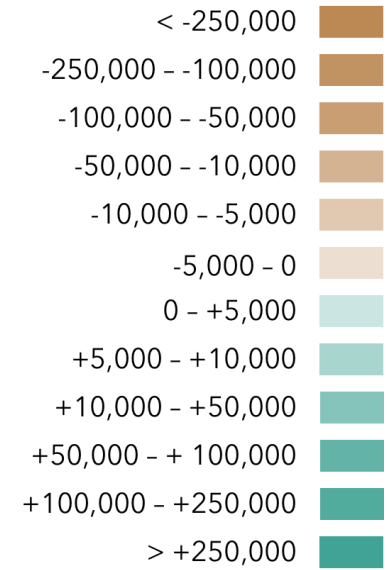
# Bay County Transportation Planning Organization



# Bay County Transportation Planning Organization



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border —  
MPO boundary —

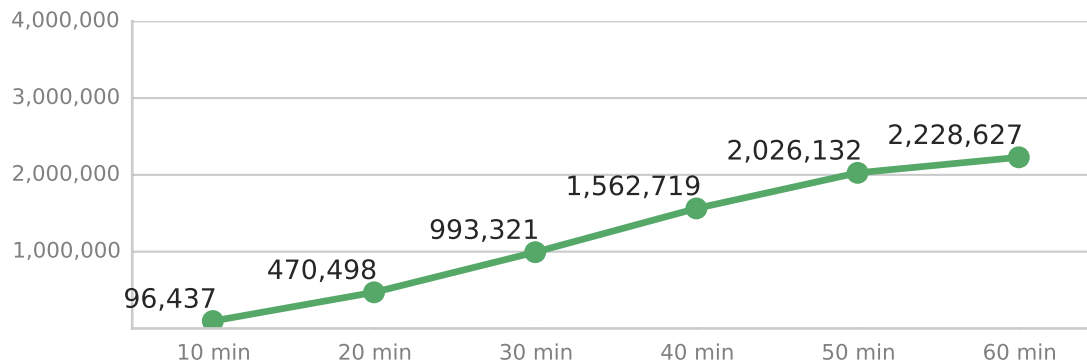
# Broward MPO

## Job Accessibility Results – Auto, 2016

Total Jobs	763,097
Average Job Density (per mi <sup>2</sup> )	1,612
Total Workers	788,764
Average Worker Density (per mi <sup>2</sup> )	1,667

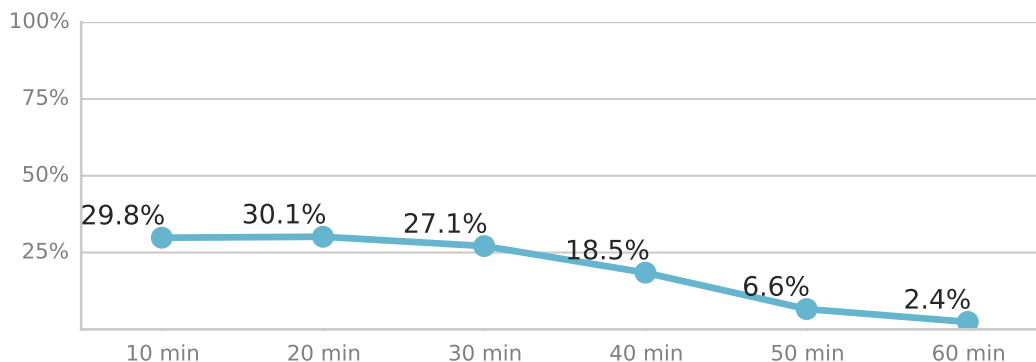
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)



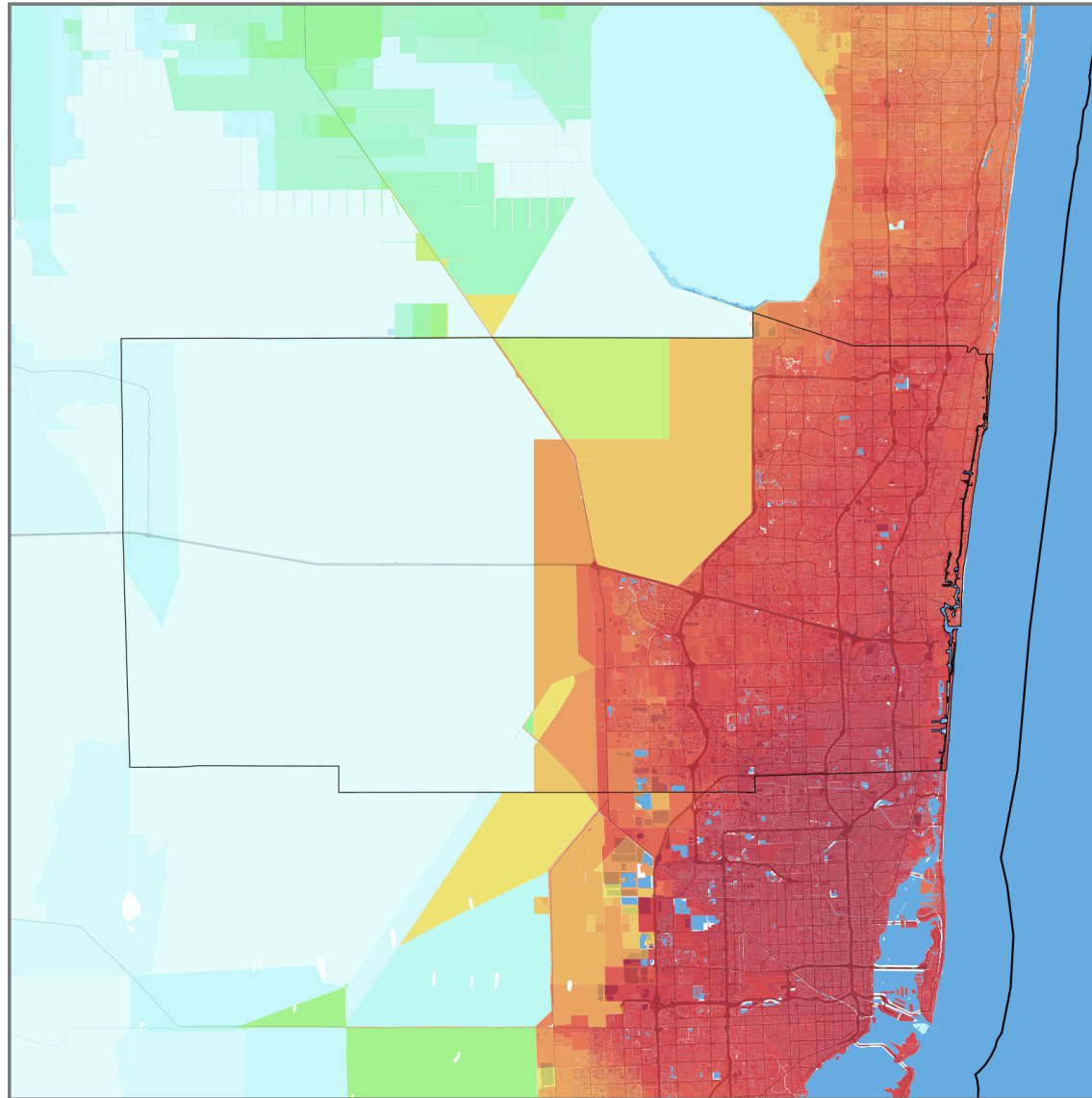
### Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*

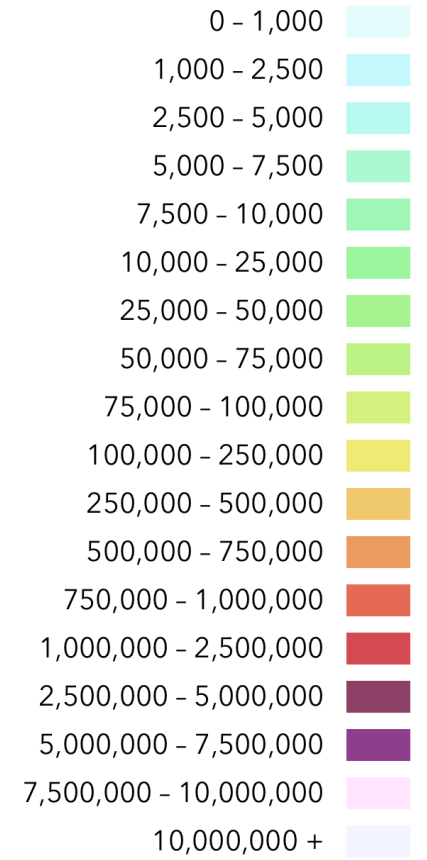


# Broward MPO

13



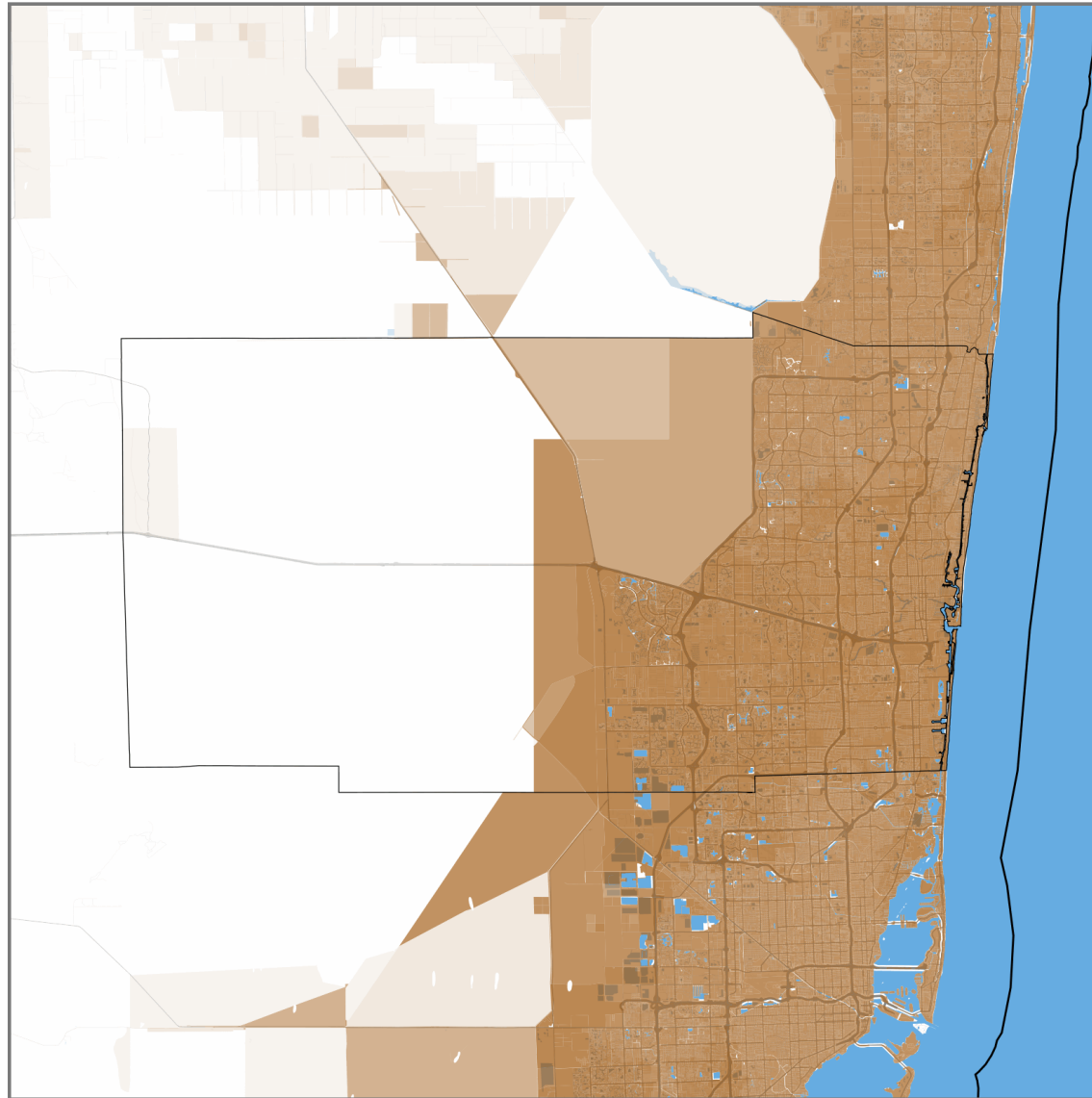
Jobs within 30 minutes  
(Driving, AM peak)



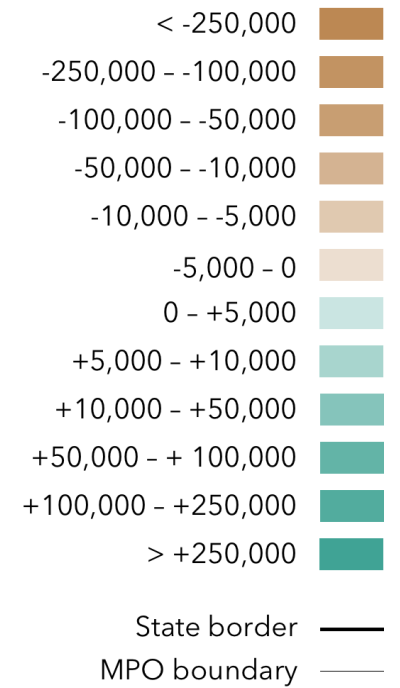
State border

MPO boundary

# Broward MPO



Change in jobs within  
30 minutes  
(Driving, congestion impact)



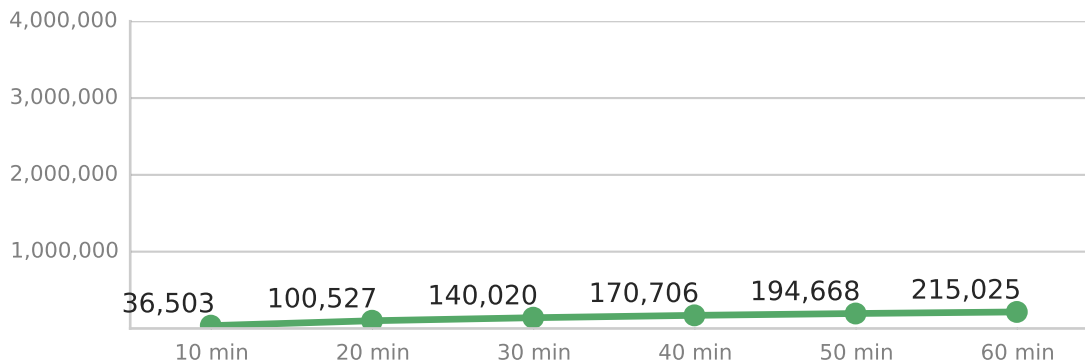
# Capital Region Transportation Planning Agency

## Job Accessibility Results – Auto, 2016

Total Jobs	173,445
Average Job Density (per mi <sup>2</sup> )	182
Total Workers	149,055
Average Worker Density (per mi <sup>2</sup> )	156

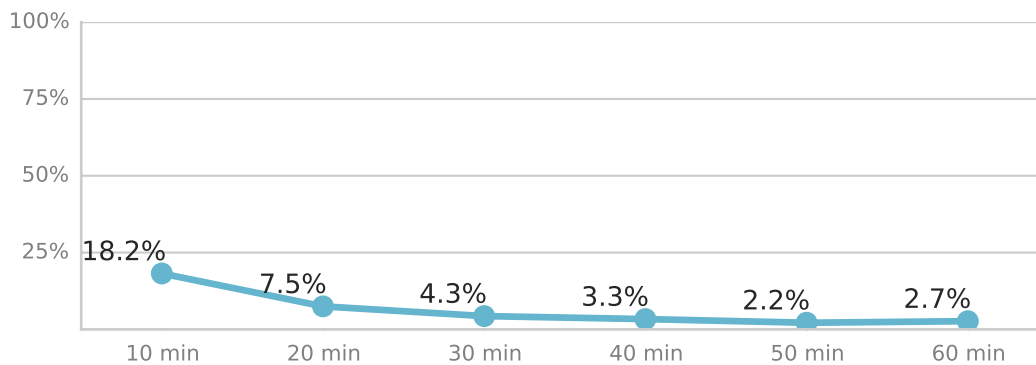
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)



### Average Congestion Impact by Travel Time Threshold (worker-weighted)

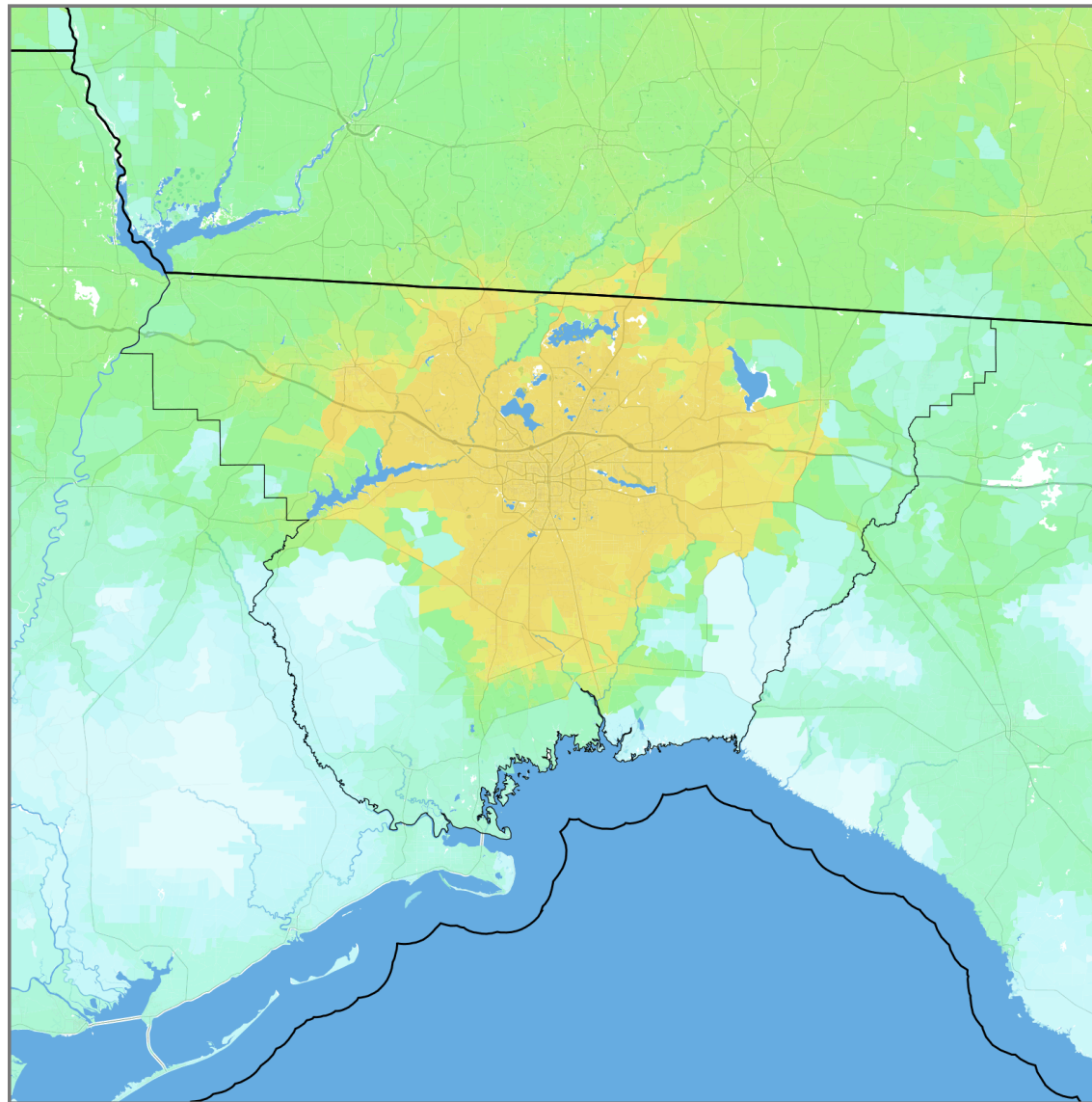
*Higher numbers indicate greater job access loss due to congestion*



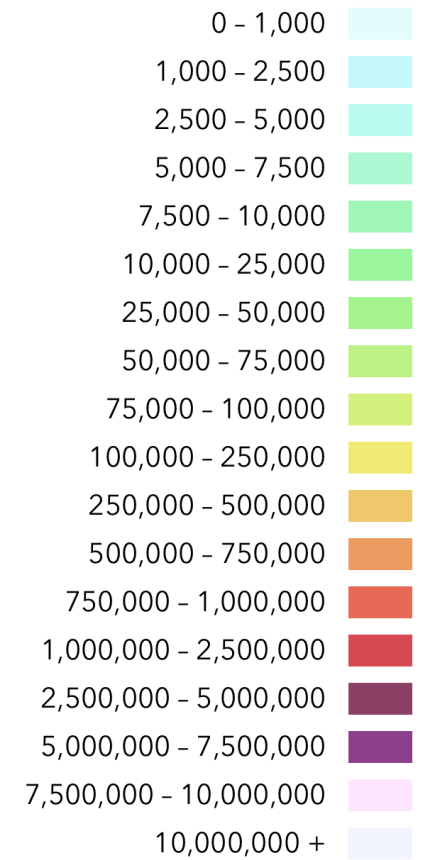


# Capital Region Transportation Planning Agency

16

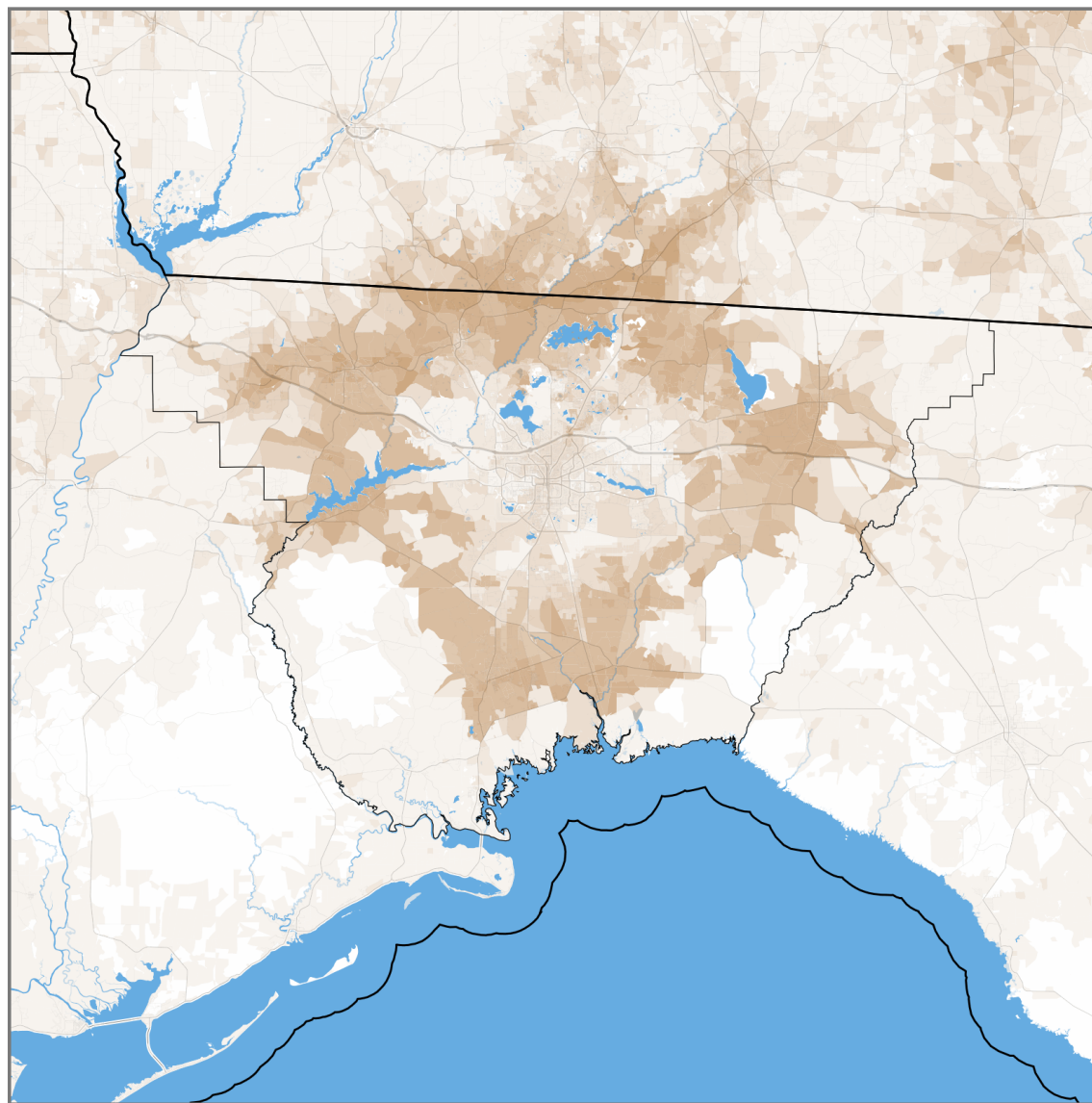


Jobs within 30 minutes  
(Driving, AM peak)

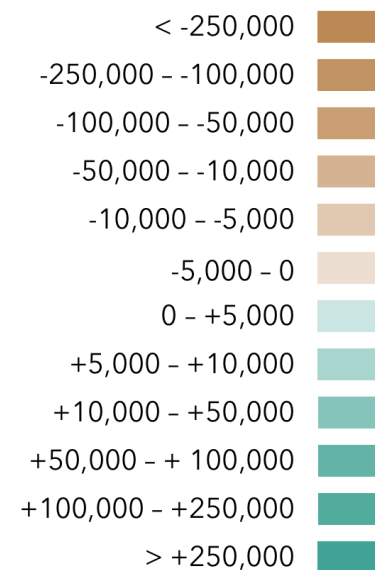


State border —  
MPO boundary —

# Capital Region Transportation Planning Agency



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border ———  
MPO boundary ———

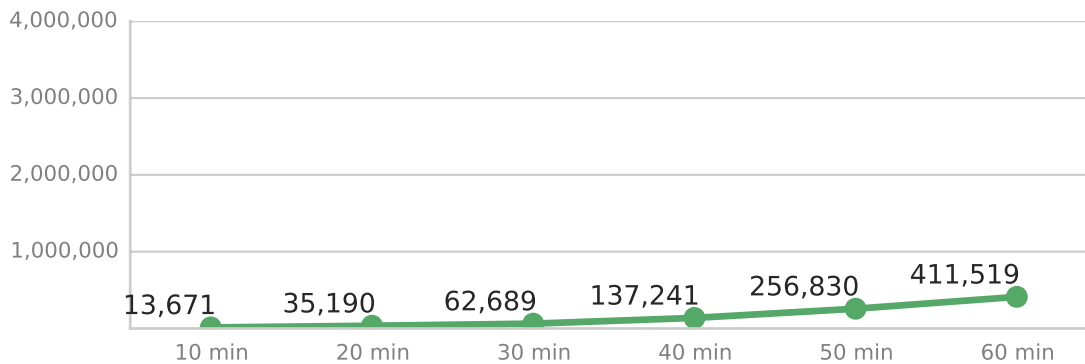
# Charlotte-Punta Gorda MPO

Job Accessibility Results – Auto, 2016

Total Jobs	43,345
Average Job Density (per mi <sup>2</sup> )	156
Total Workers	50,362
Average Worker Density (per mi <sup>2</sup> )	181

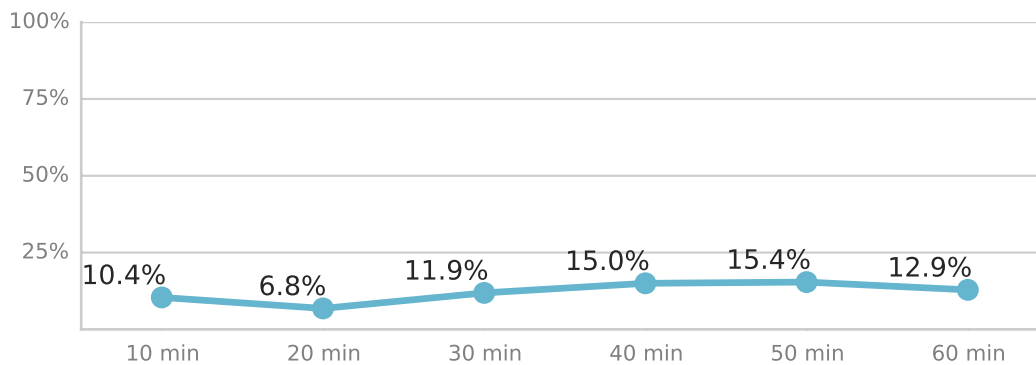
*Job and worker totals are based on LEHD estimates and may not match other sources.*

## Average Job Accessibility by Travel Time Threshold (worker-weighted)



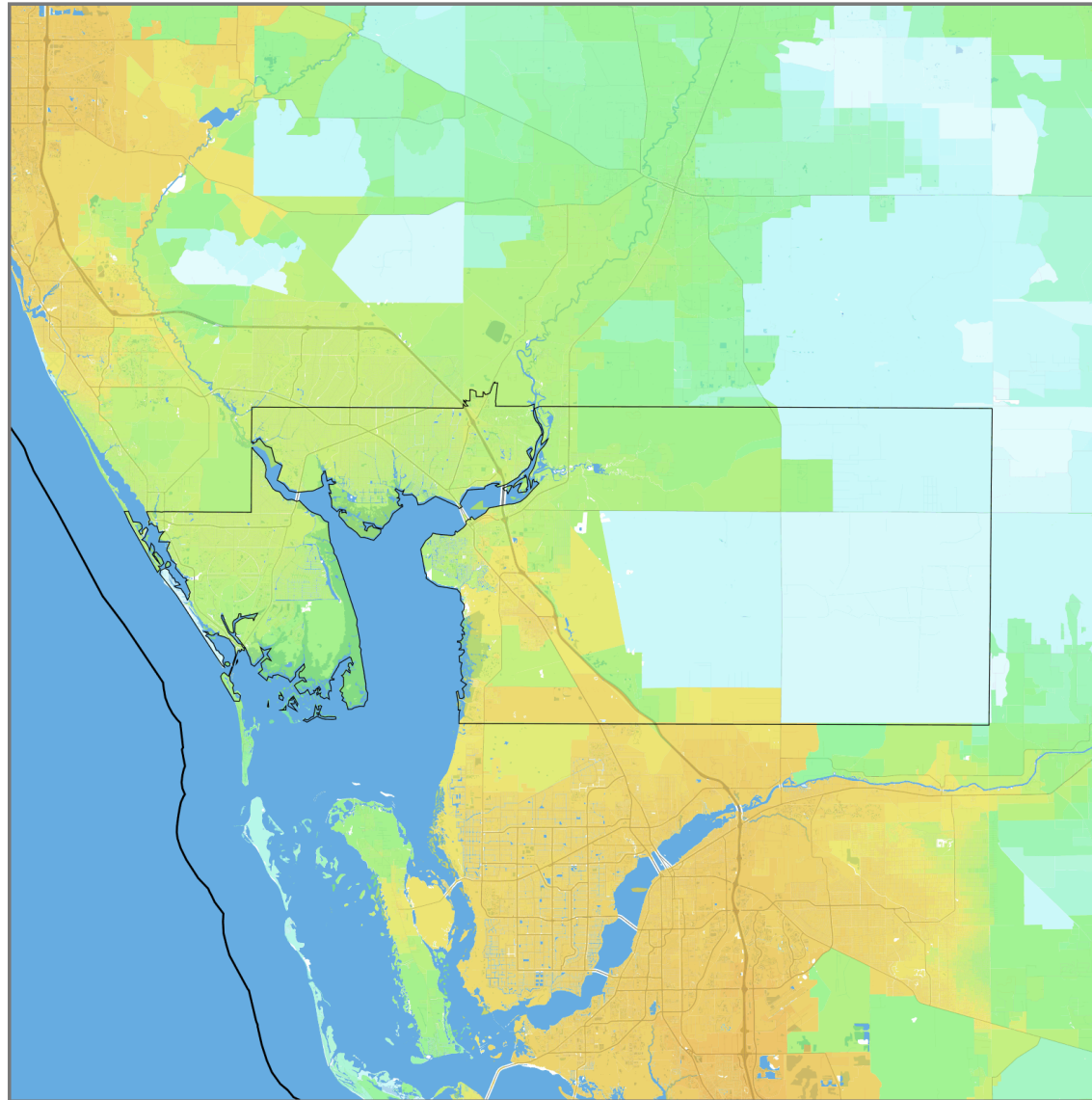
## Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*

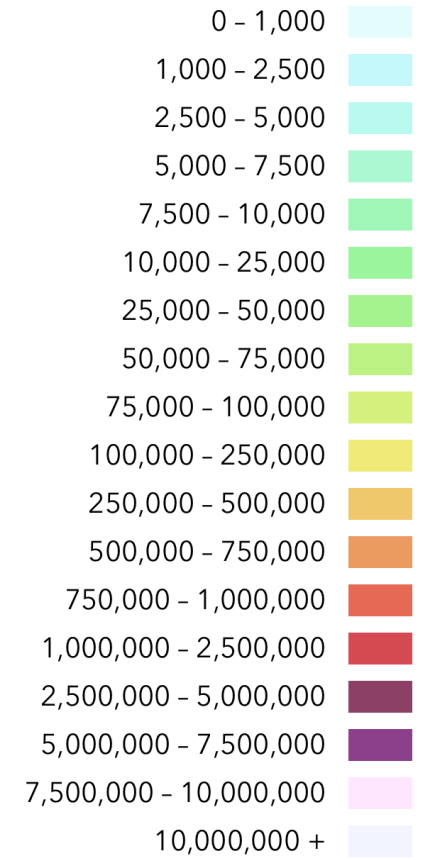


# Charlotte-Punta Gorda MPO

19



Jobs within 30 minutes  
(Driving, AM peak)

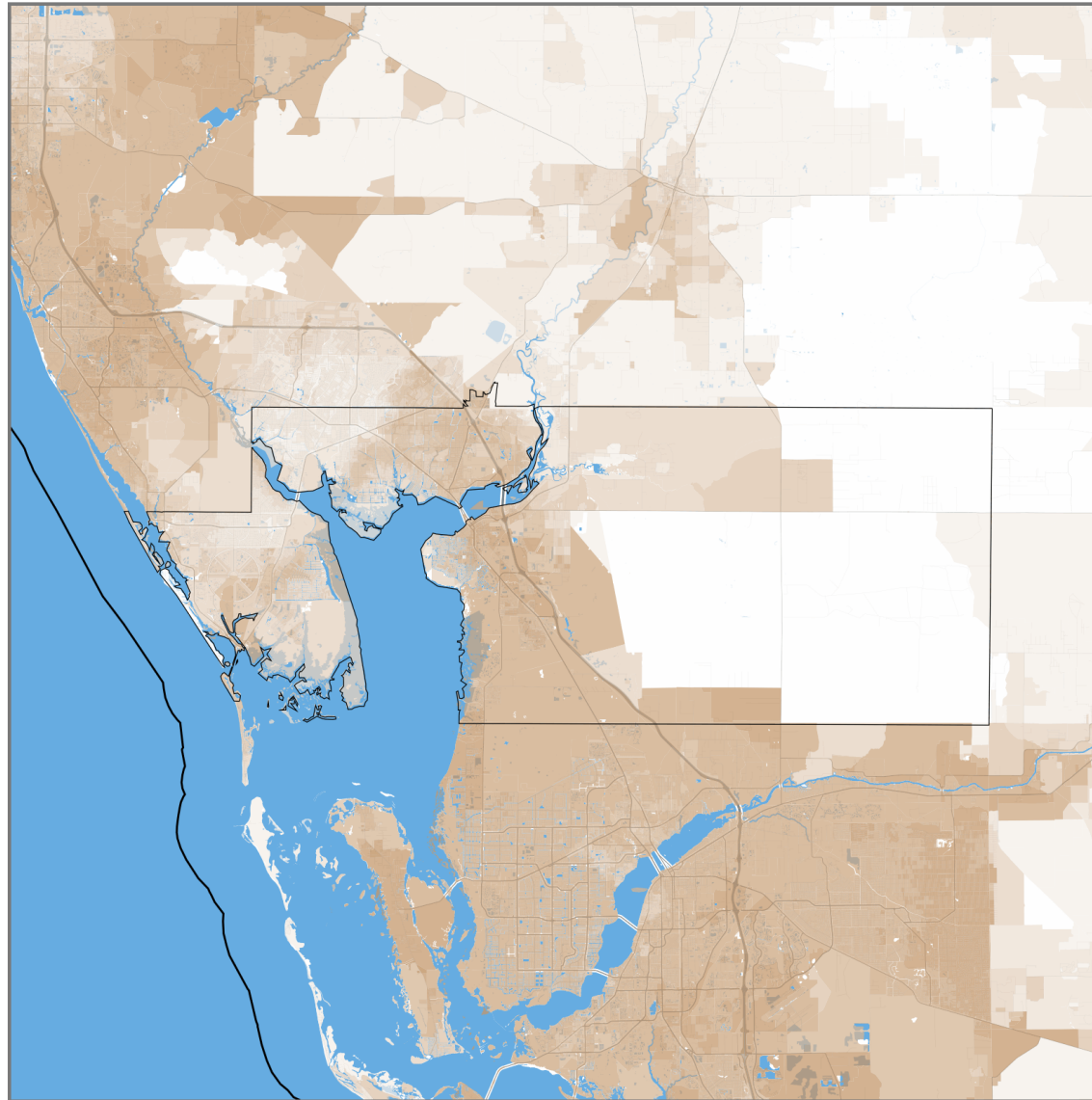


State border ———  
MPO boundary ———

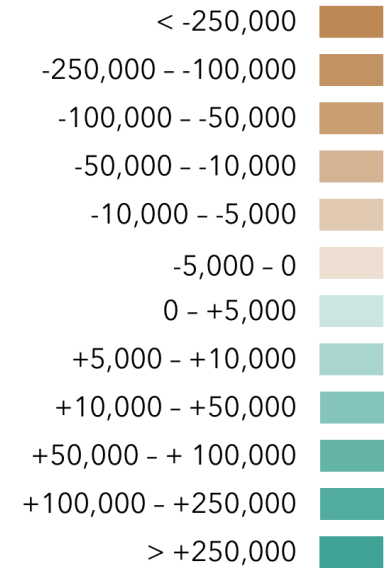


# Charlotte-Punta Gorda MPO

20



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border

MPO boundary

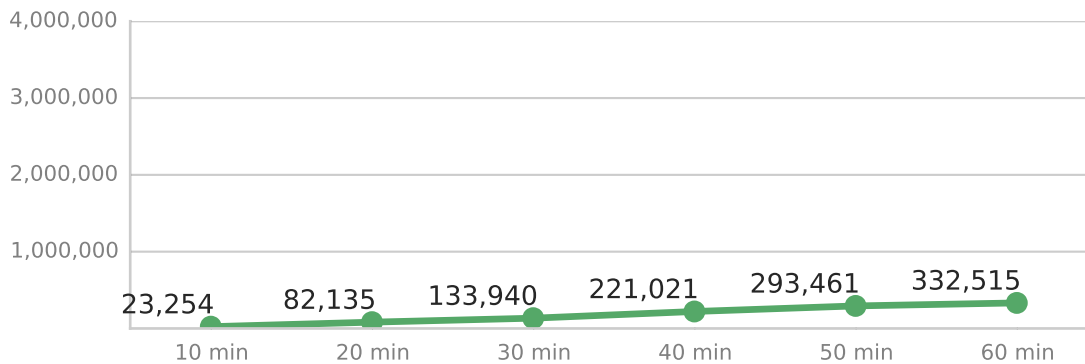
# Collier MPO

## Job Accessibility Results – Auto, 2016

Total Jobs	125,470
Average Job Density (per mi <sup>2</sup> )	156
Total Workers	125,803
Average Worker Density (per mi <sup>2</sup> )	157

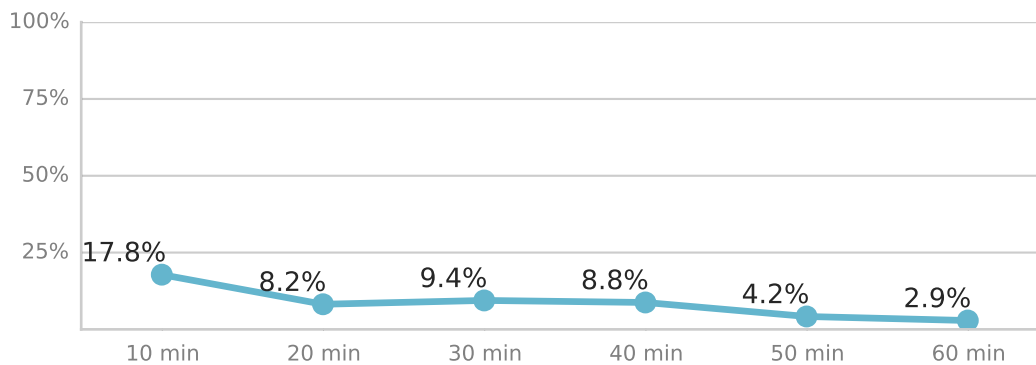
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)

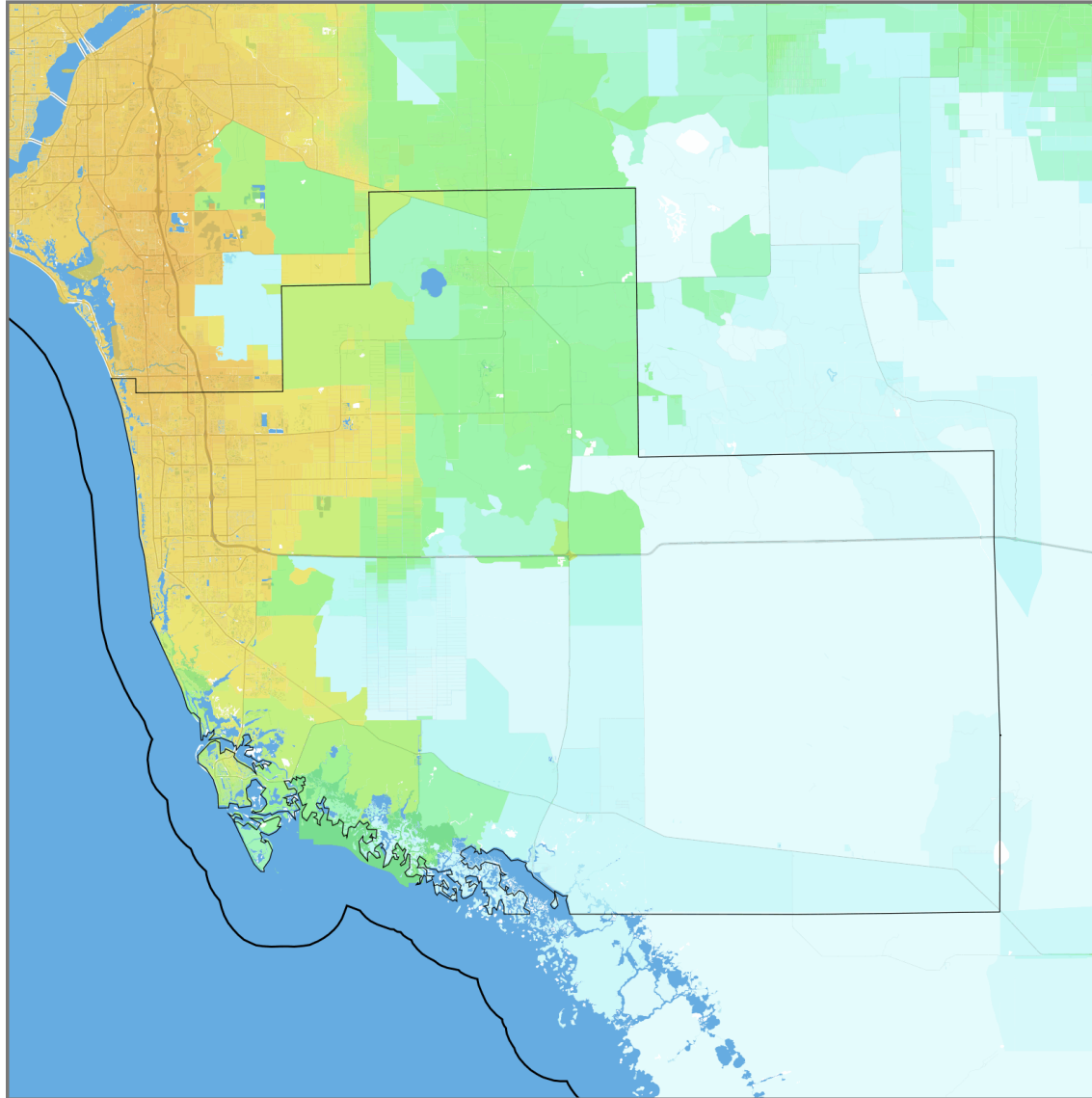


### Average Congestion Impact by Travel Time Threshold (worker-weighted)

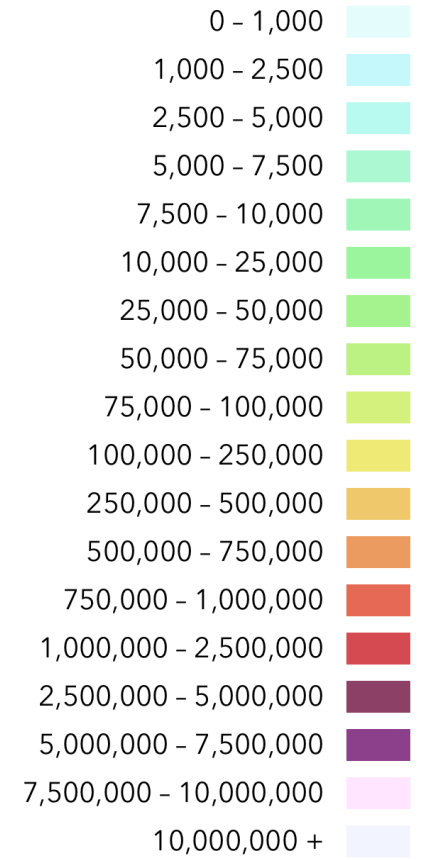
*Higher numbers indicate greater job access loss due to congestion*



# Collier MPO



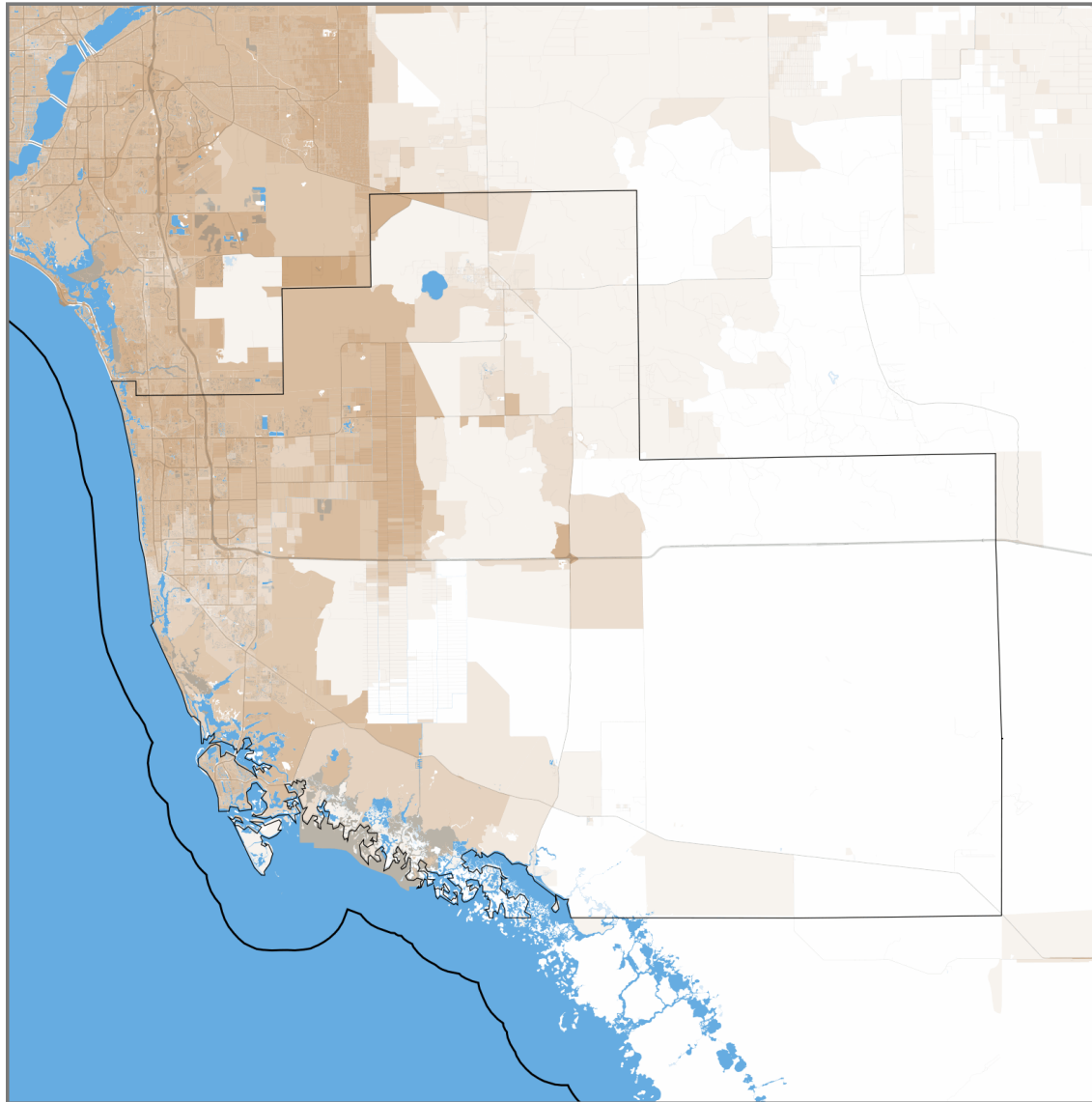
Jobs within 30 minutes  
(Driving, AM peak)



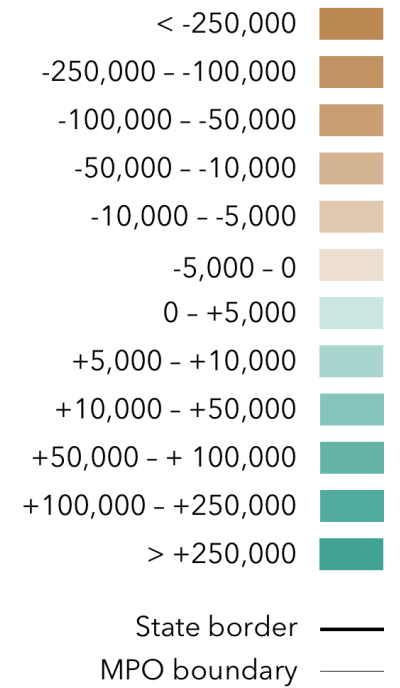
State border

MPO boundary

# Collier MPO



Change in jobs within  
30 minutes  
(Driving, congestion impact)





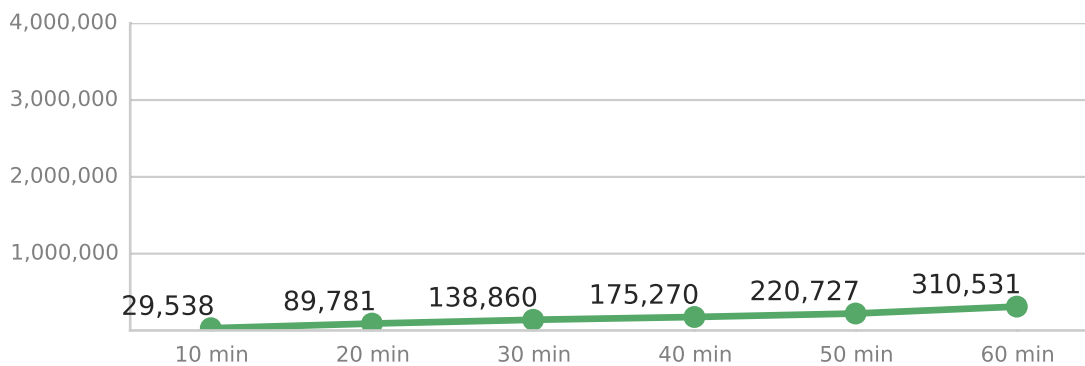
# Florida-Alabama Transportation Planning Organization

## Job Accessibility Results – Auto, 2016

Total Jobs	182,228
Average Job Density (per mi <sup>2</sup> )	393
Total Workers	168,636
Average Worker Density (per mi <sup>2</sup> )	364

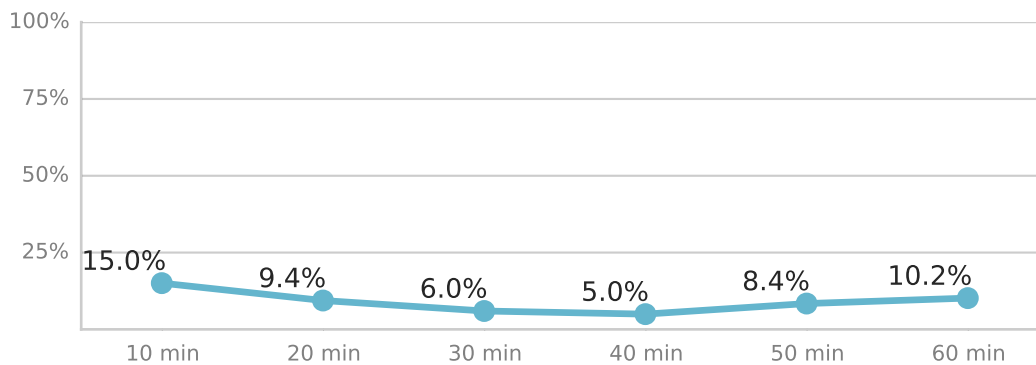
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)

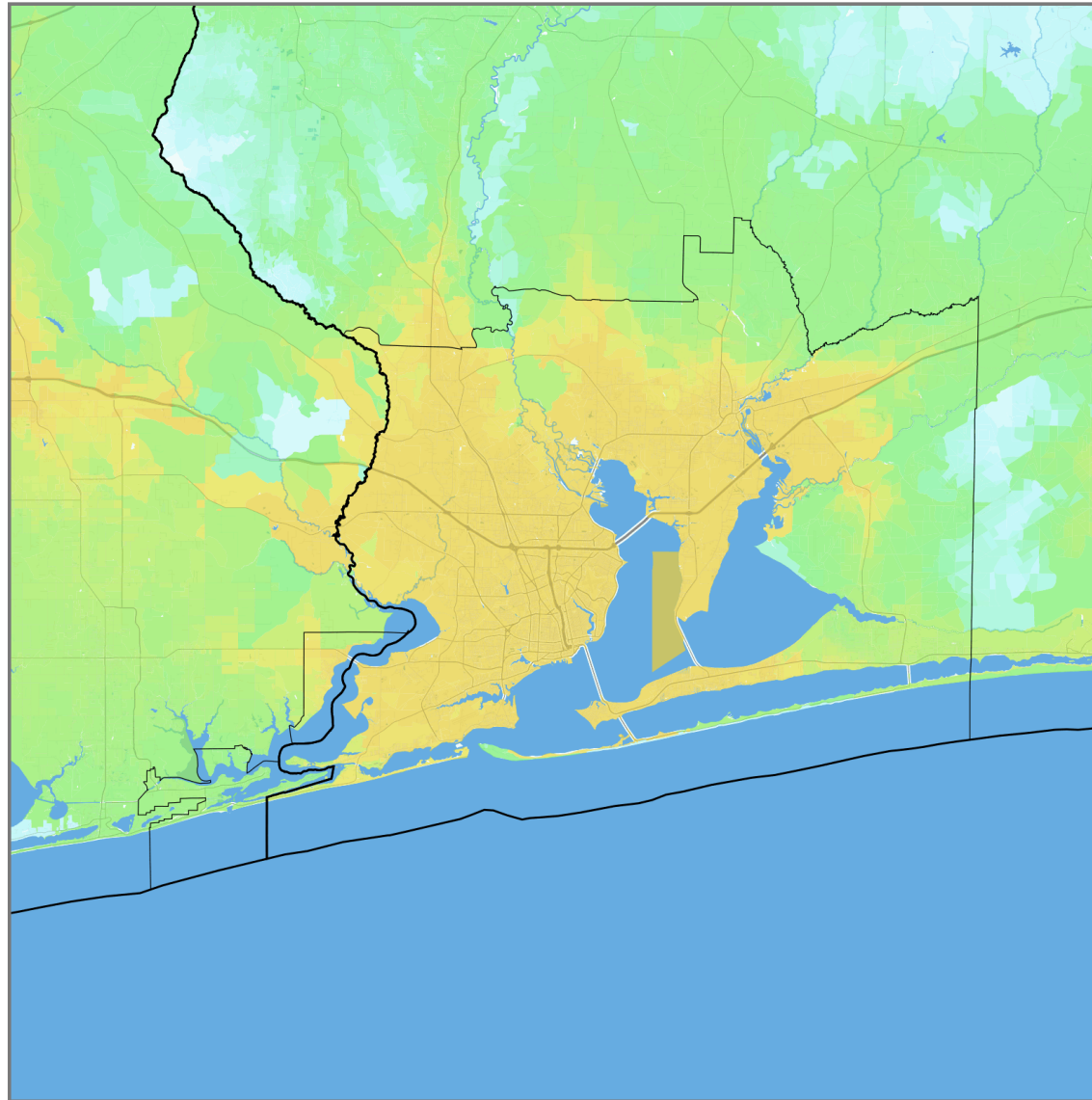


### Average Congestion Impact by Travel Time Threshold (worker-weighted)

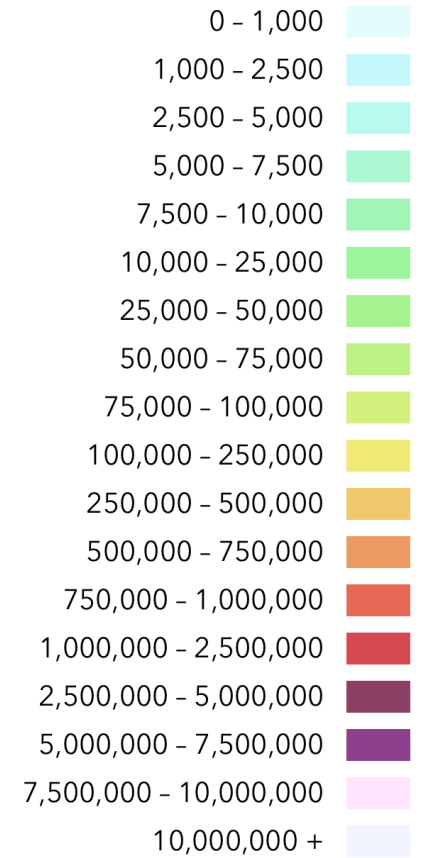
*Higher numbers indicate greater job access loss due to congestion*



# Florida-Alabama Transportation Planning Organization

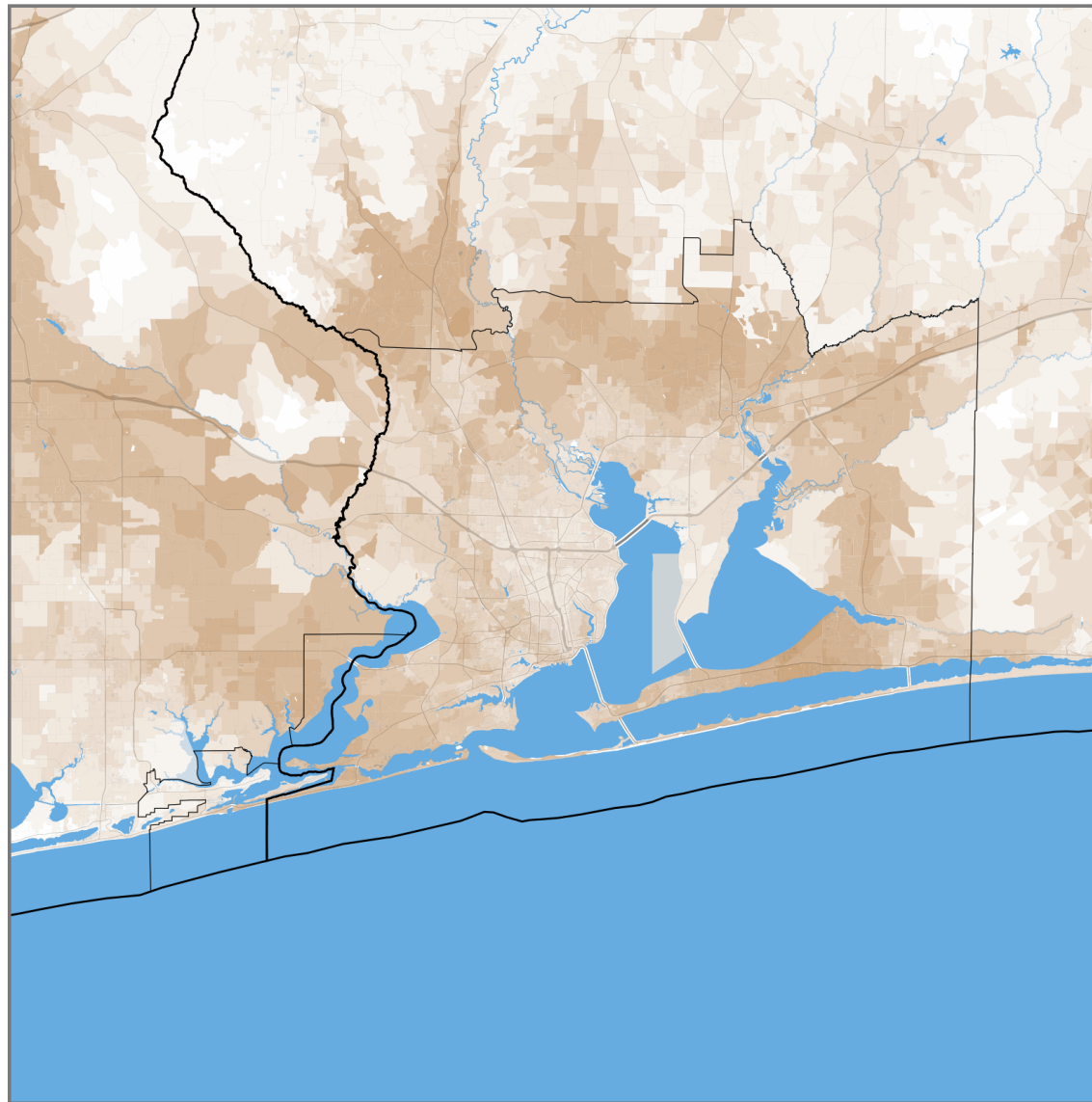


Jobs within 30 minutes  
(Driving, AM peak)

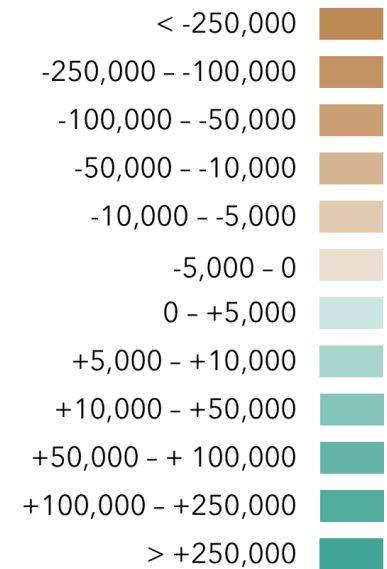


State border —  
MPO boundary —

# Florida-Alabama Transportation Planning Organization



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border

MPO boundary

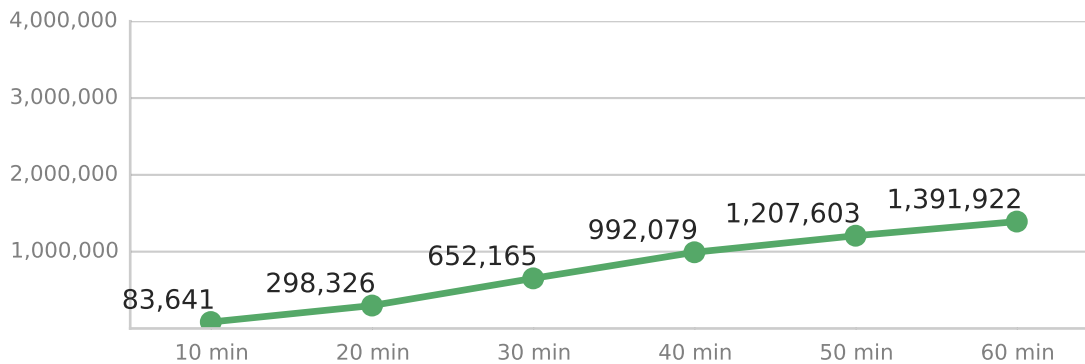
# Forward Pinellas

Job Accessibility Results – Auto, 2016

Total Jobs	413,768
Average Job Density (per mi <sup>2</sup> )	3,686
Total Workers	388,064
Average Worker Density (per mi <sup>2</sup> )	3,457

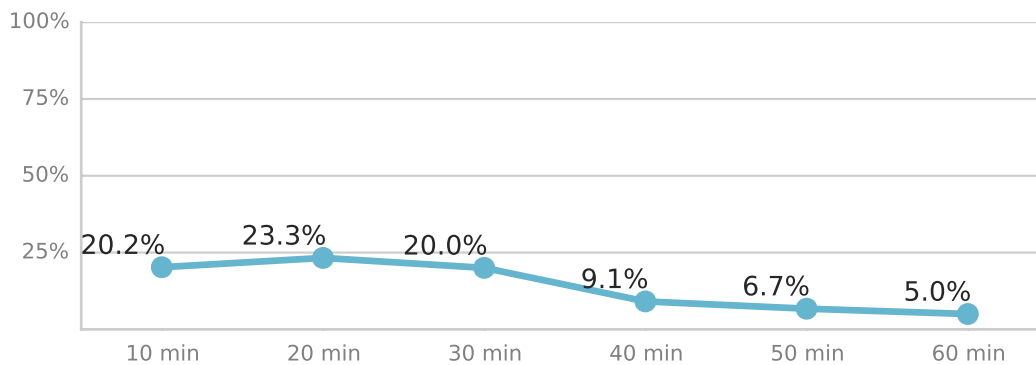
*Job and worker totals are based on LEHD estimates and may not match other sources.*

## Average Job Accessibility by Travel Time Threshold (worker-weighted)

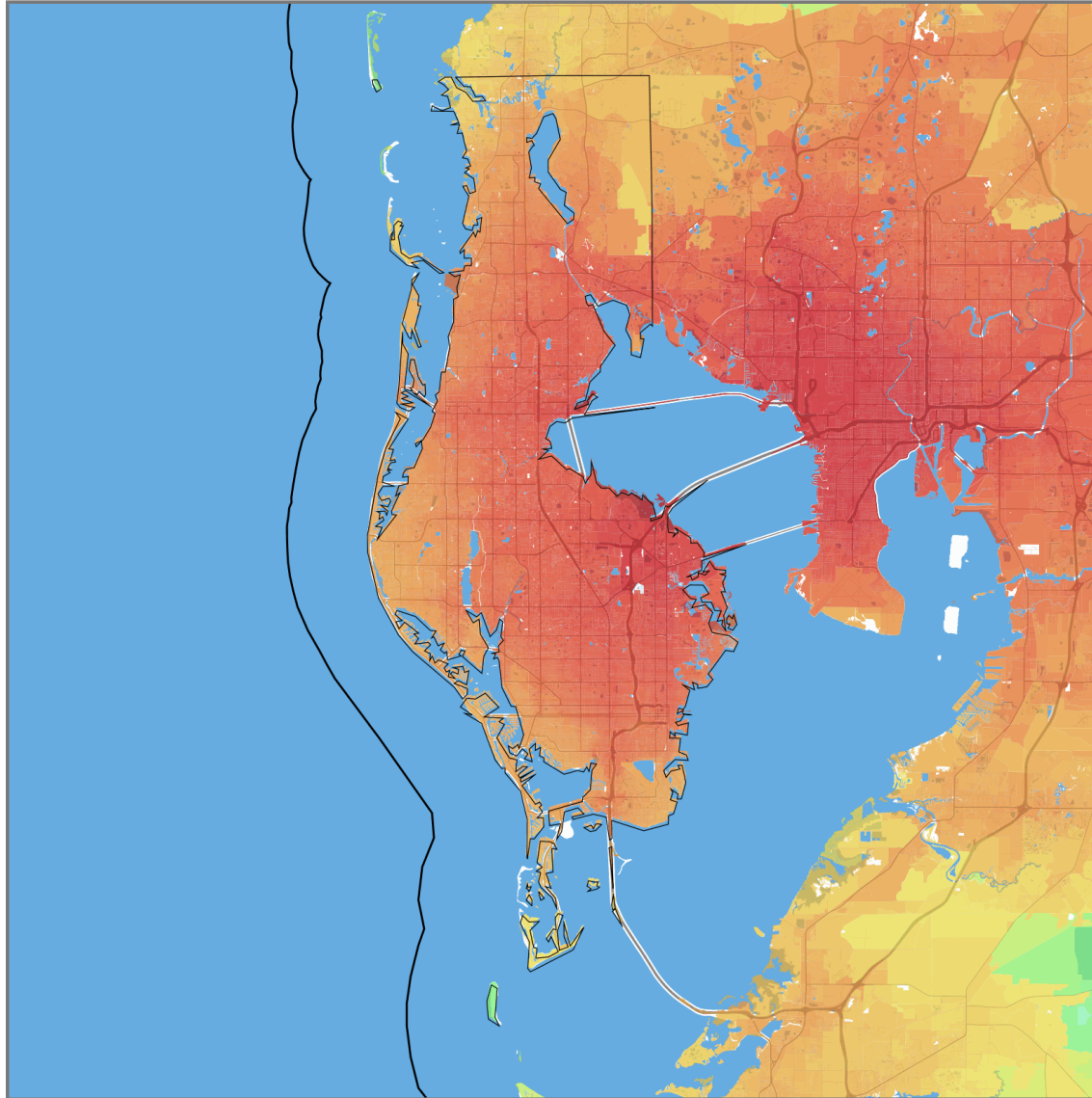


## Average Congestion Impact by Travel Time Threshold (worker-weighted)

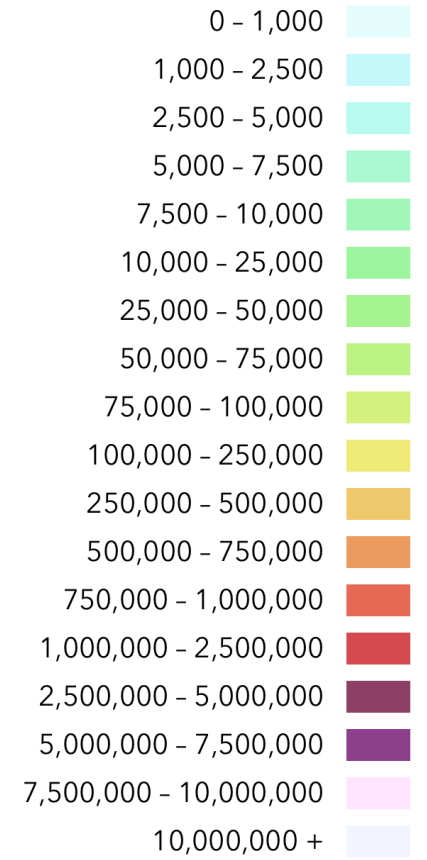
*Higher numbers indicate greater job access loss due to congestion*



# Forward Pinellas



Jobs within 30 minutes  
(Driving, AM peak)

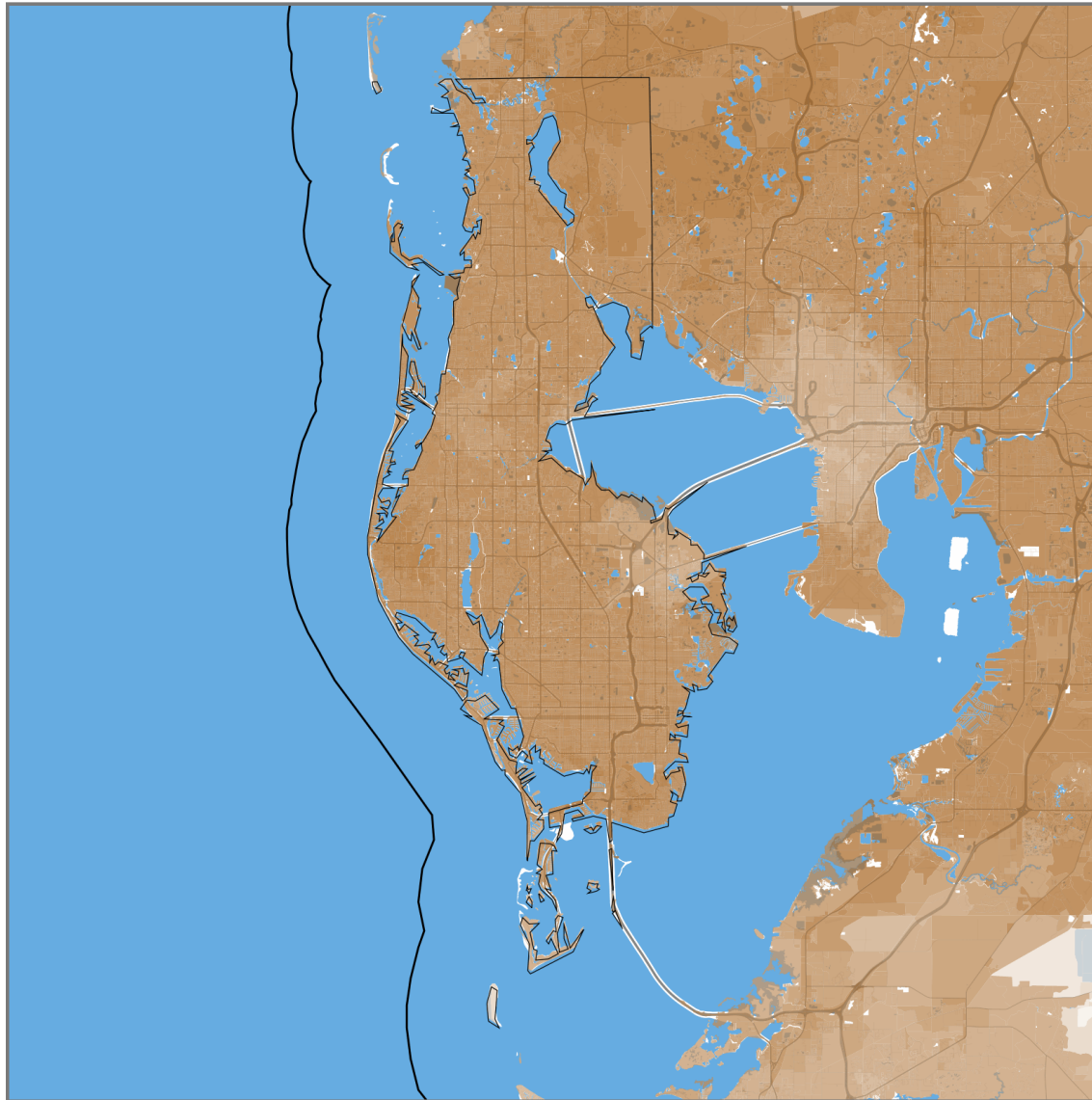


State border

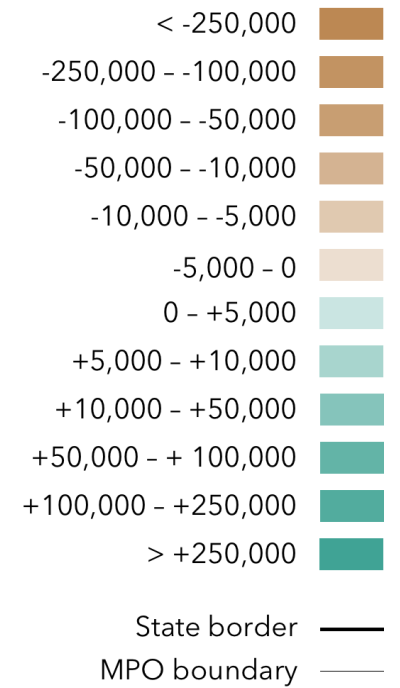
MPO boundary



# Forward Pinellas



Change in jobs within  
30 minutes  
(Driving, congestion impact)



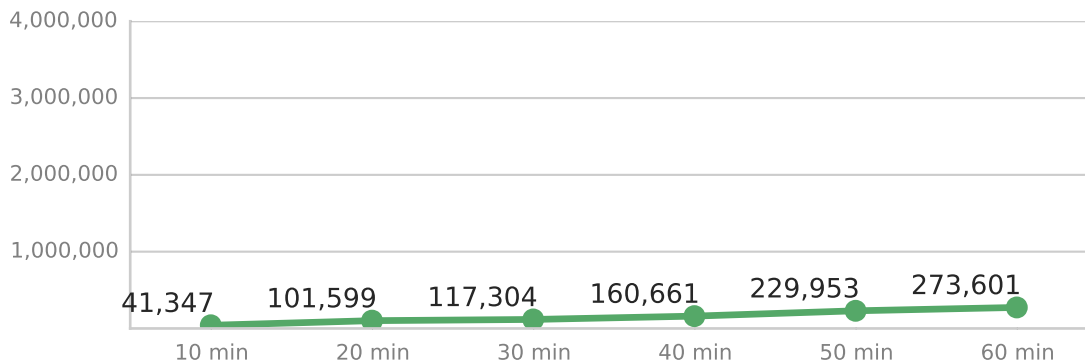
# Gainesville MTPO

## Job Accessibility Results – Auto, 2016

Total Jobs	105,983
Average Job Density (per mi <sup>2</sup> )	1,457
Total Workers	73,540
Average Worker Density (per mi <sup>2</sup> )	1,011

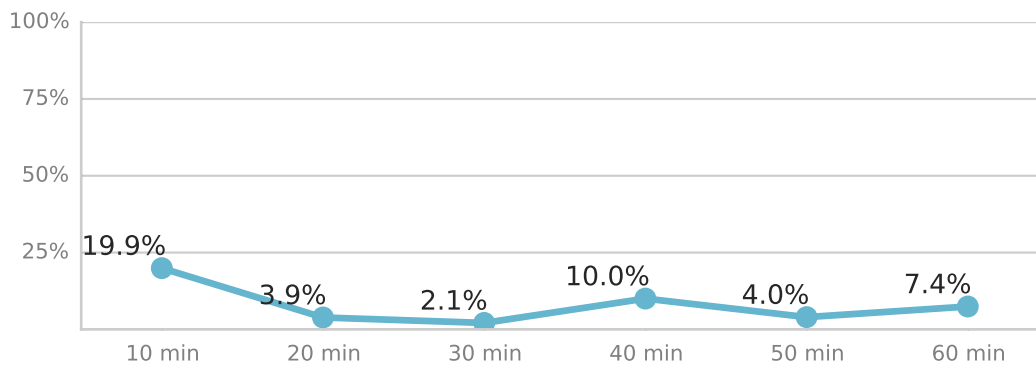
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)



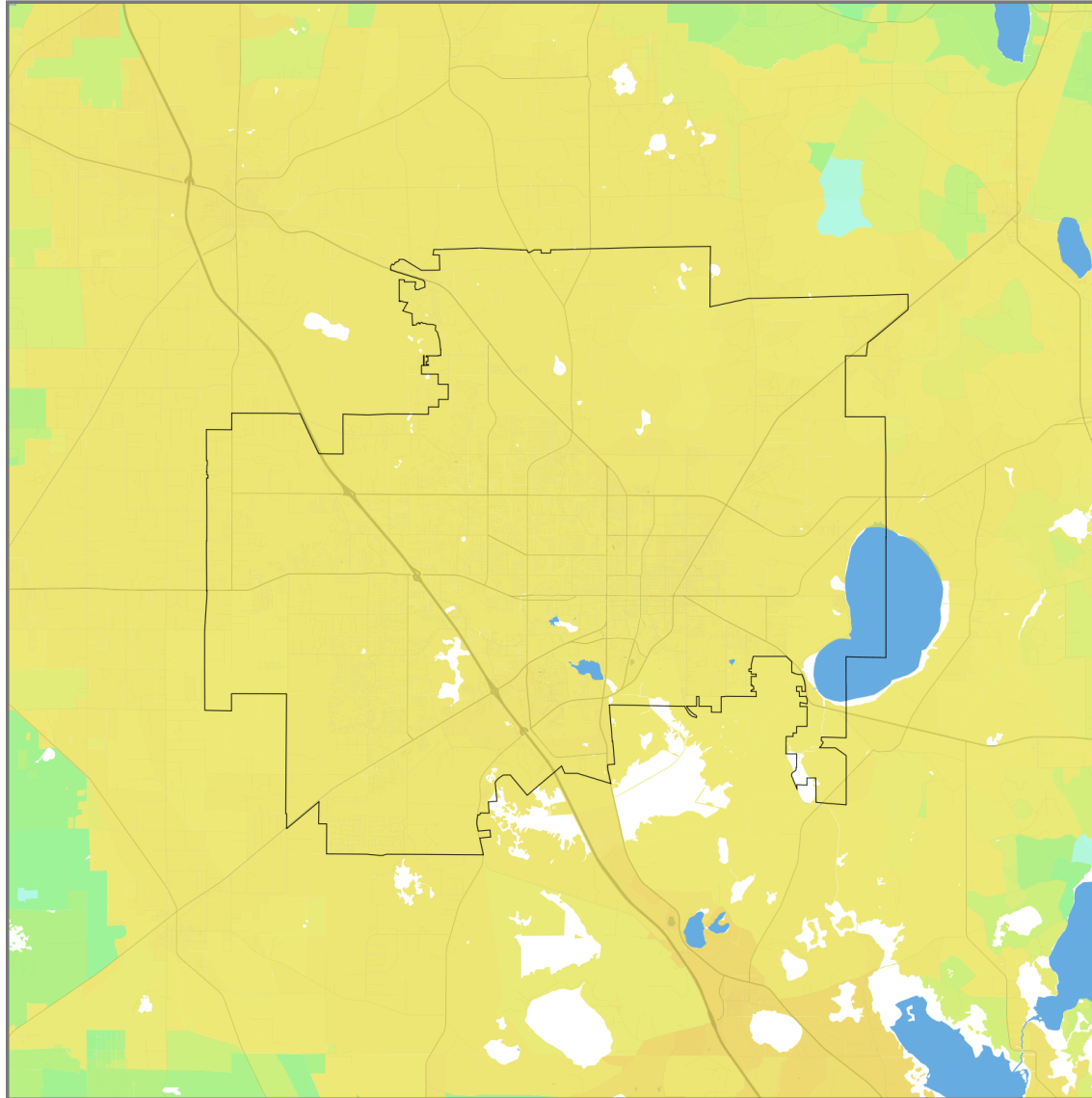
### Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*

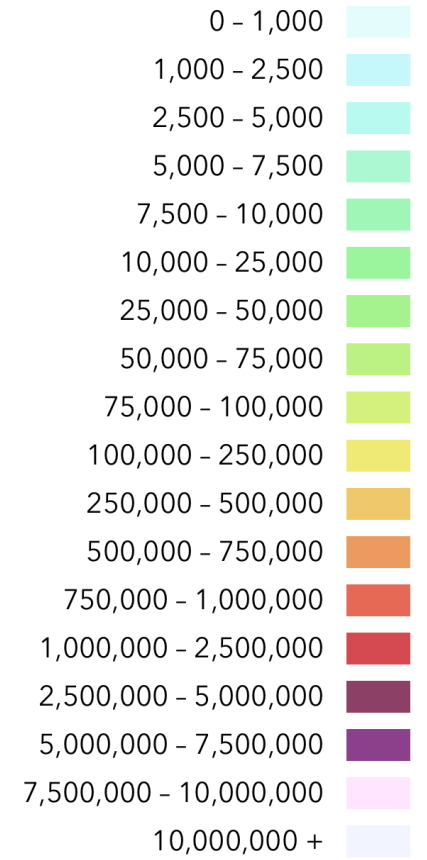


# Gainesville MTP0

31



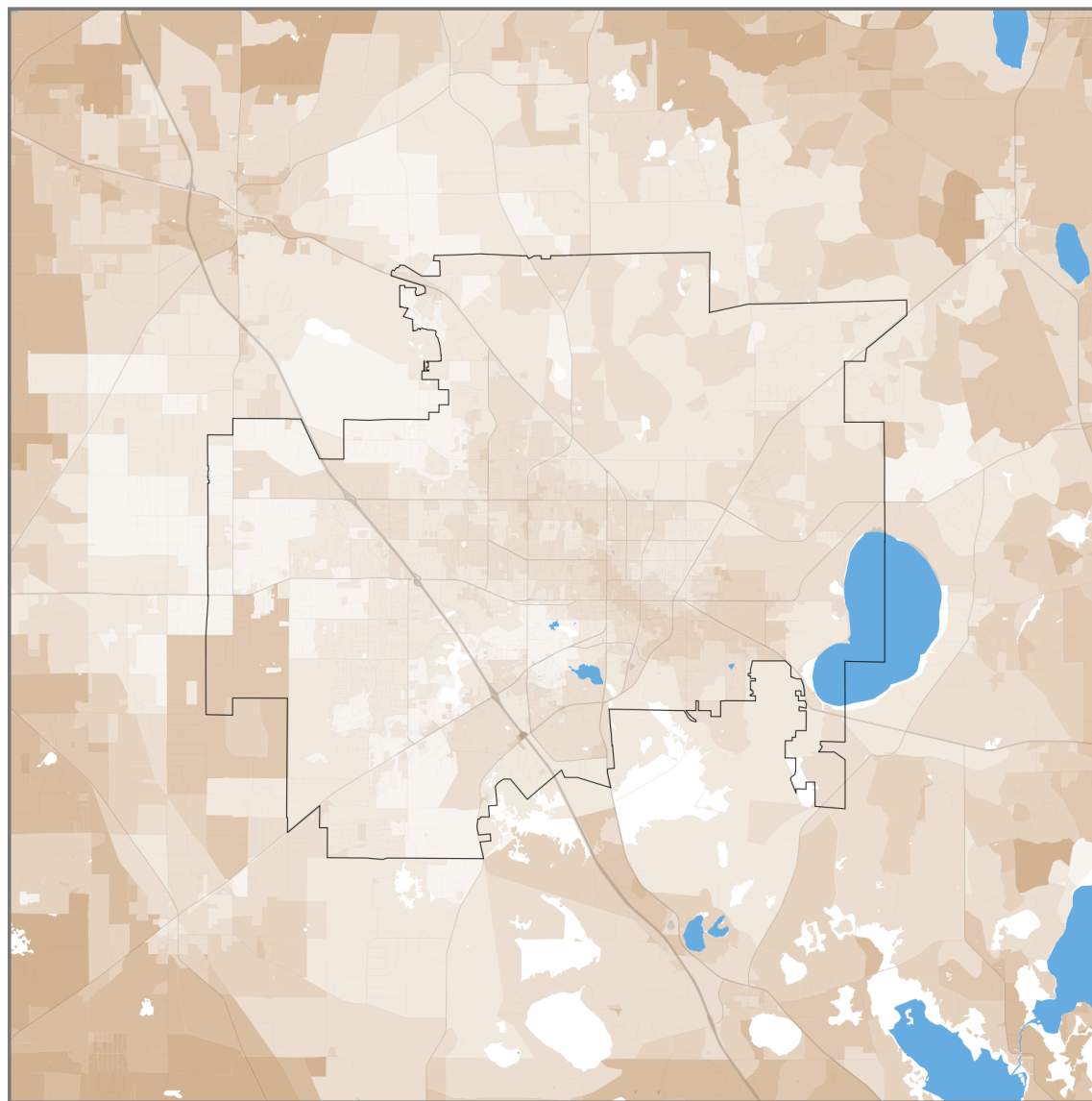
Jobs within 30 minutes  
(Driving, AM peak)



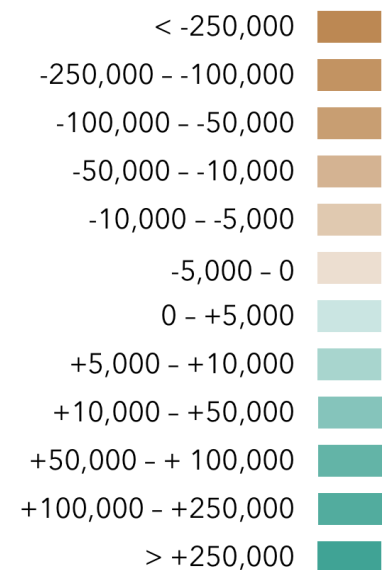
State border ———  
MPO boundary ———



# Gainesville MTP0



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border

MPO boundary

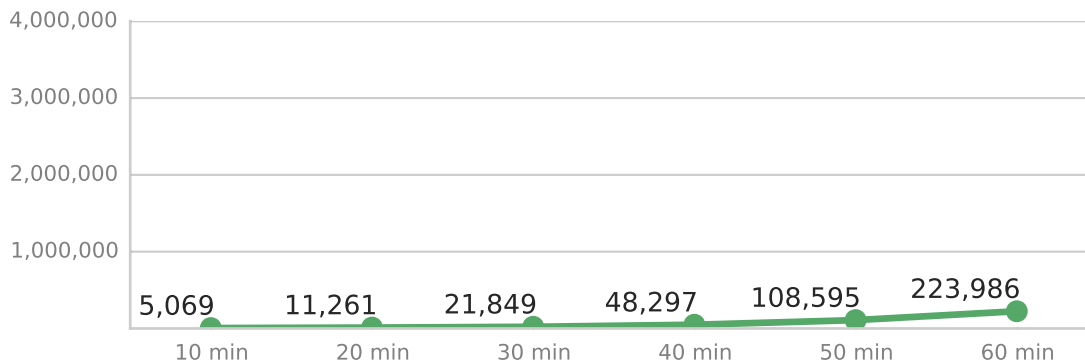
# Heartland Regional TPO

## Job Accessibility Results – Auto, 2016

Total Jobs	66,118
Average Job Density (per mi <sup>2</sup> )	33
Total Workers	81,486
Average Worker Density (per mi <sup>2</sup> )	41

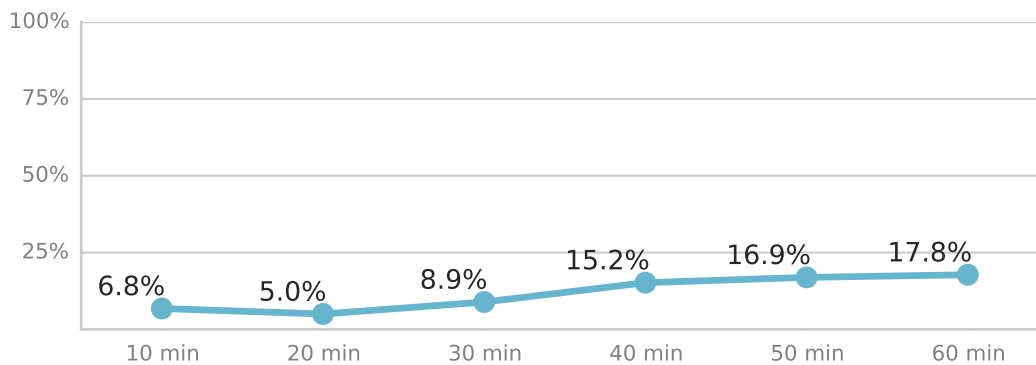
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)



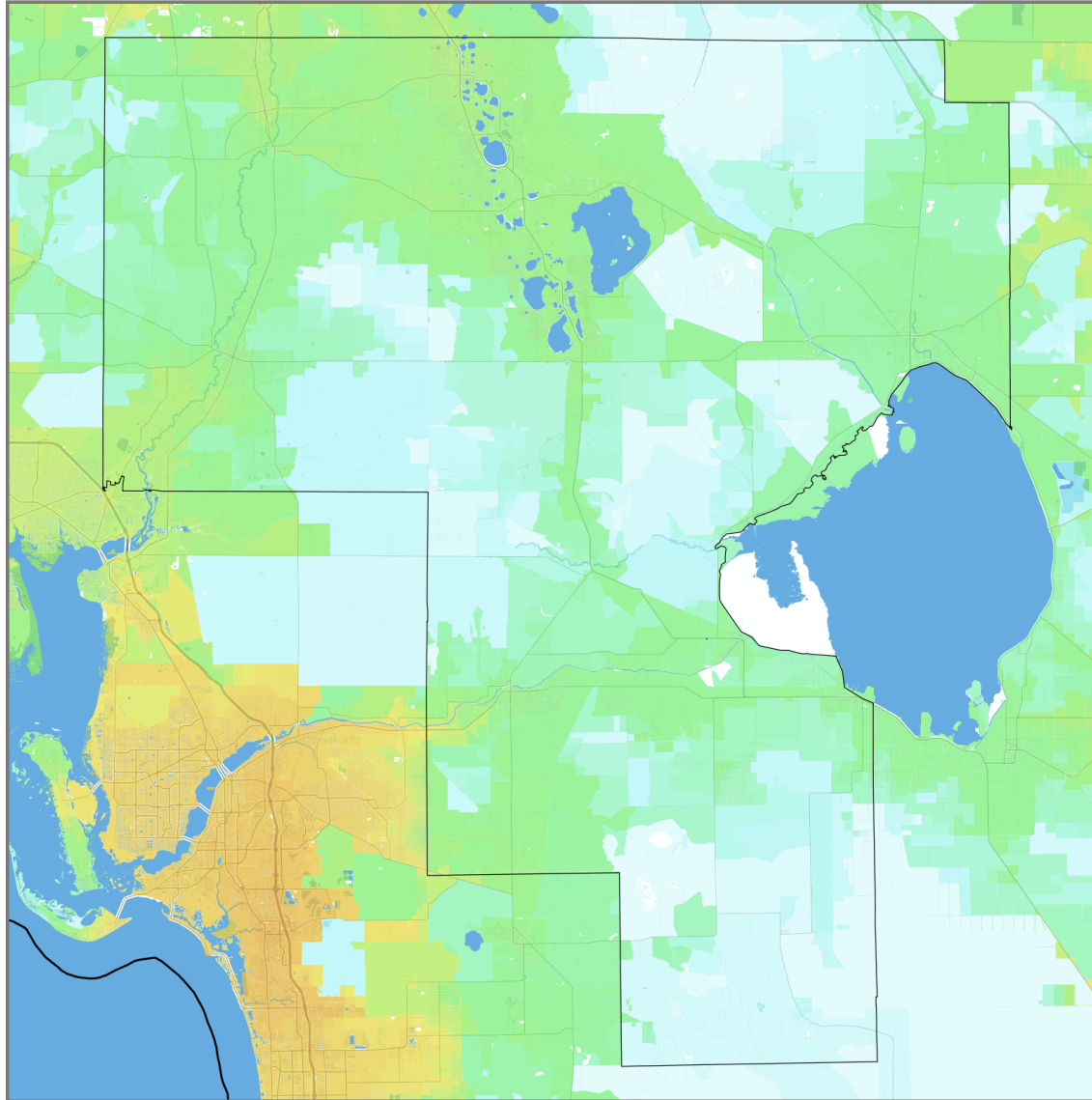
### Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*

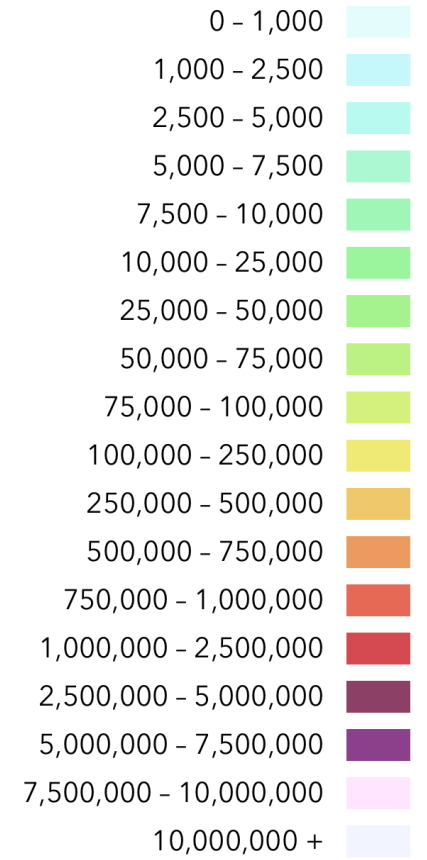


# Heartland Regional TPO

34



Jobs within 30 minutes  
(Driving, AM peak)

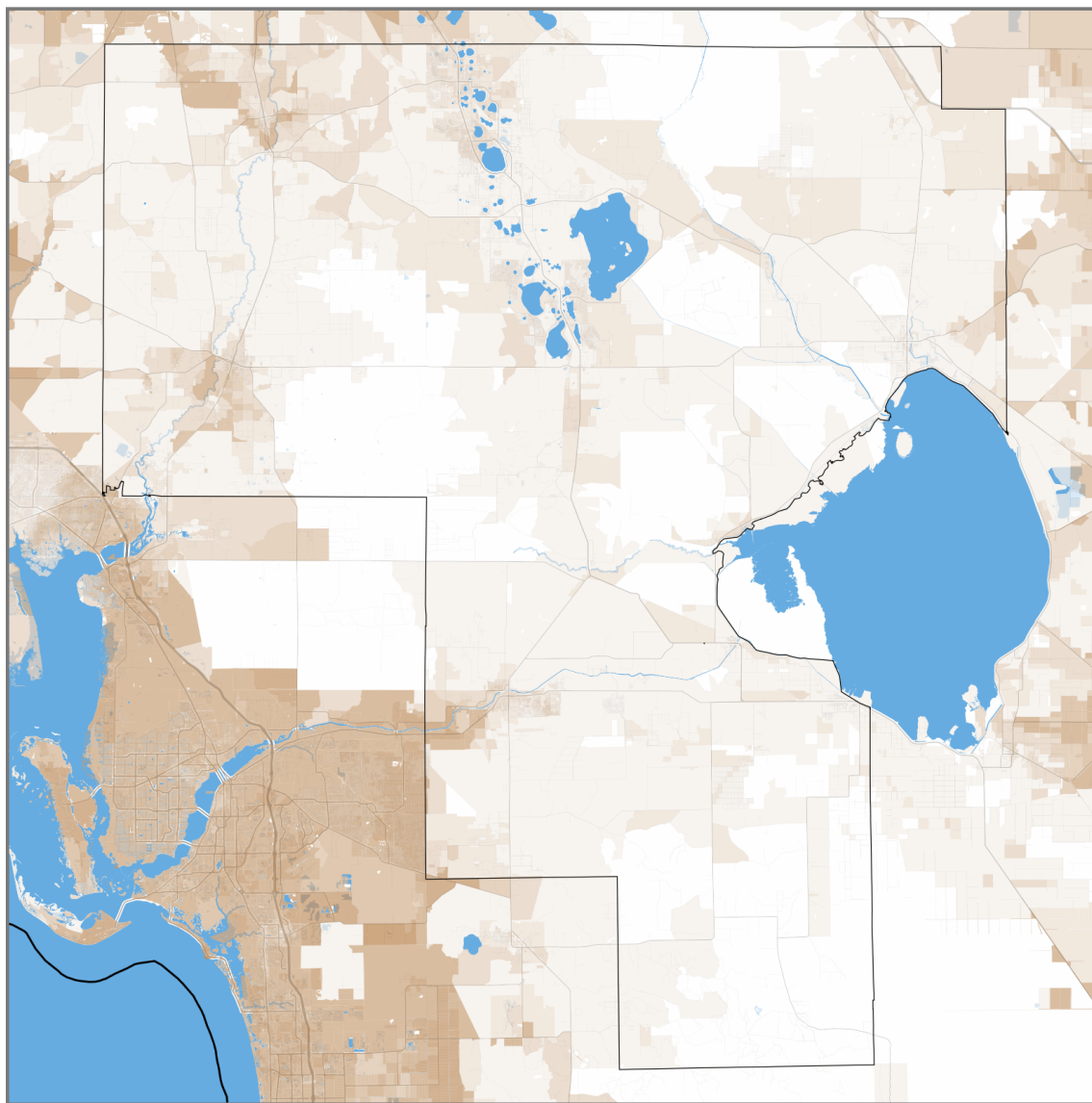


State border

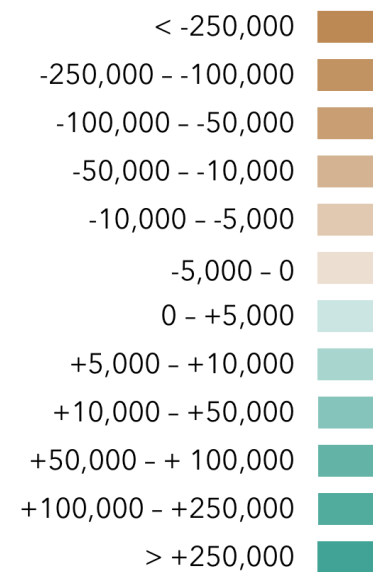
MPO boundary

# Heartland Regional TPO

35



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border ———  
MPO boundary ———

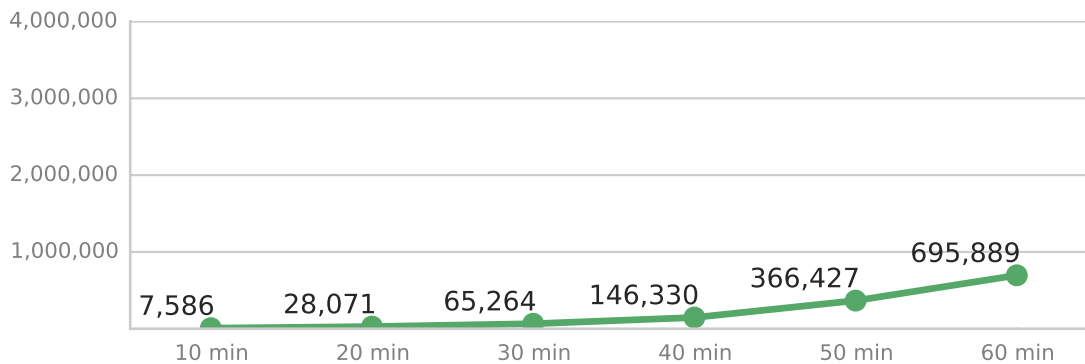
# Hernando/Citrus MPO

Job Accessibility Results – Auto, 2016

Total Jobs	72,194
Average Job Density (per mi <sup>2</sup> )	166
Total Workers	97,632
Average Worker Density (per mi <sup>2</sup> )	225

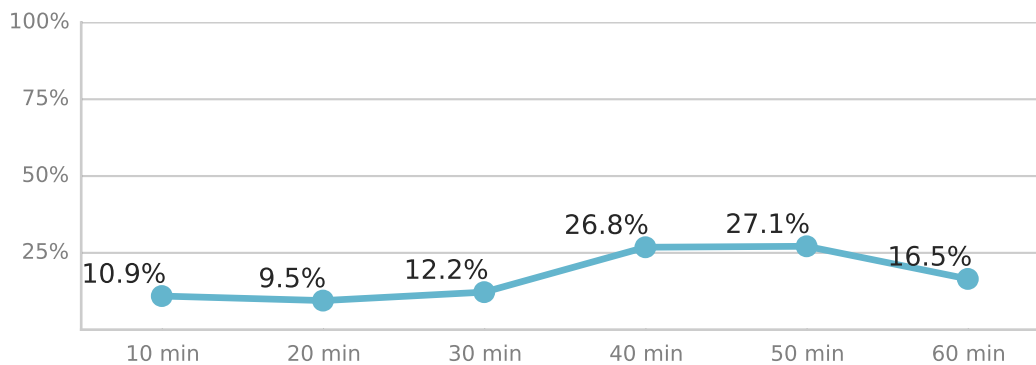
*Job and worker totals are based on LEHD estimates and may not match other sources.*

## Average Job Accessibility by Travel Time Threshold (worker-weighted)

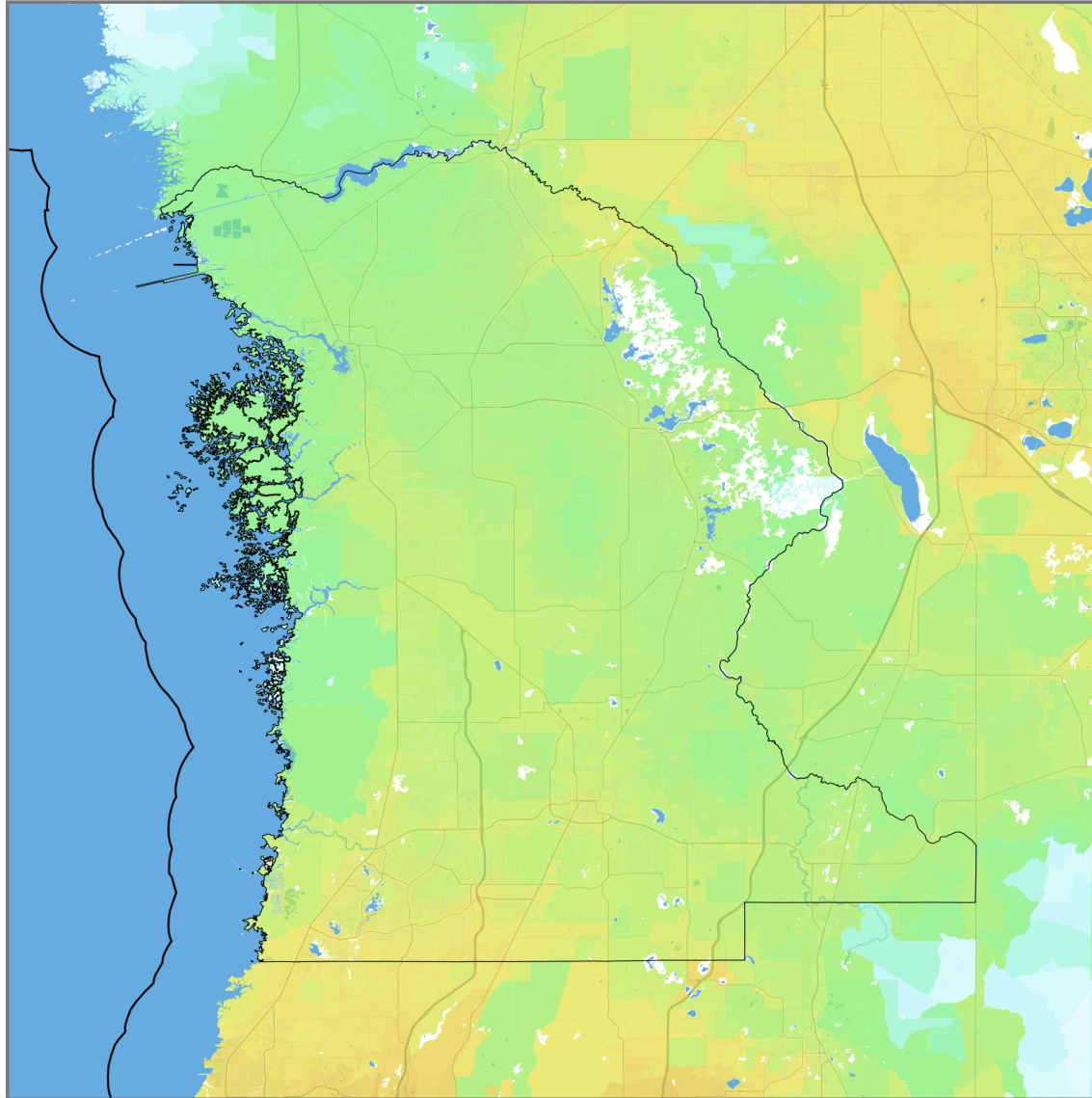


## Average Congestion Impact by Travel Time Threshold (worker-weighted)

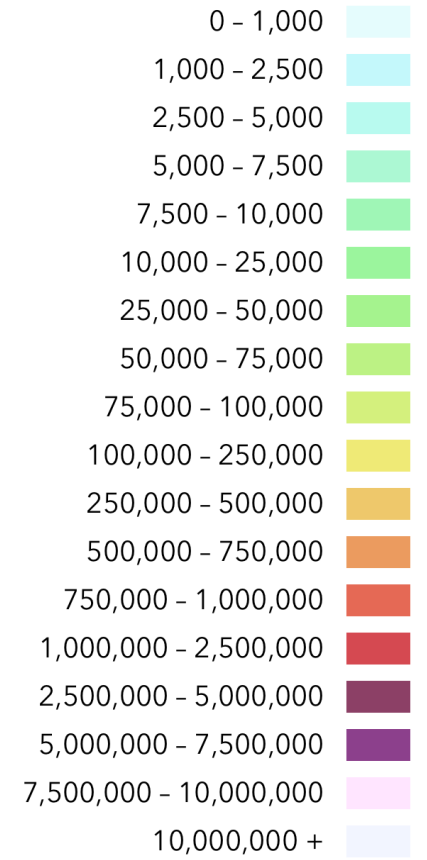
*Higher numbers indicate greater job access loss due to congestion*



# Hernando/Citrus MPO



Jobs within 30 minutes  
(Driving, AM peak)



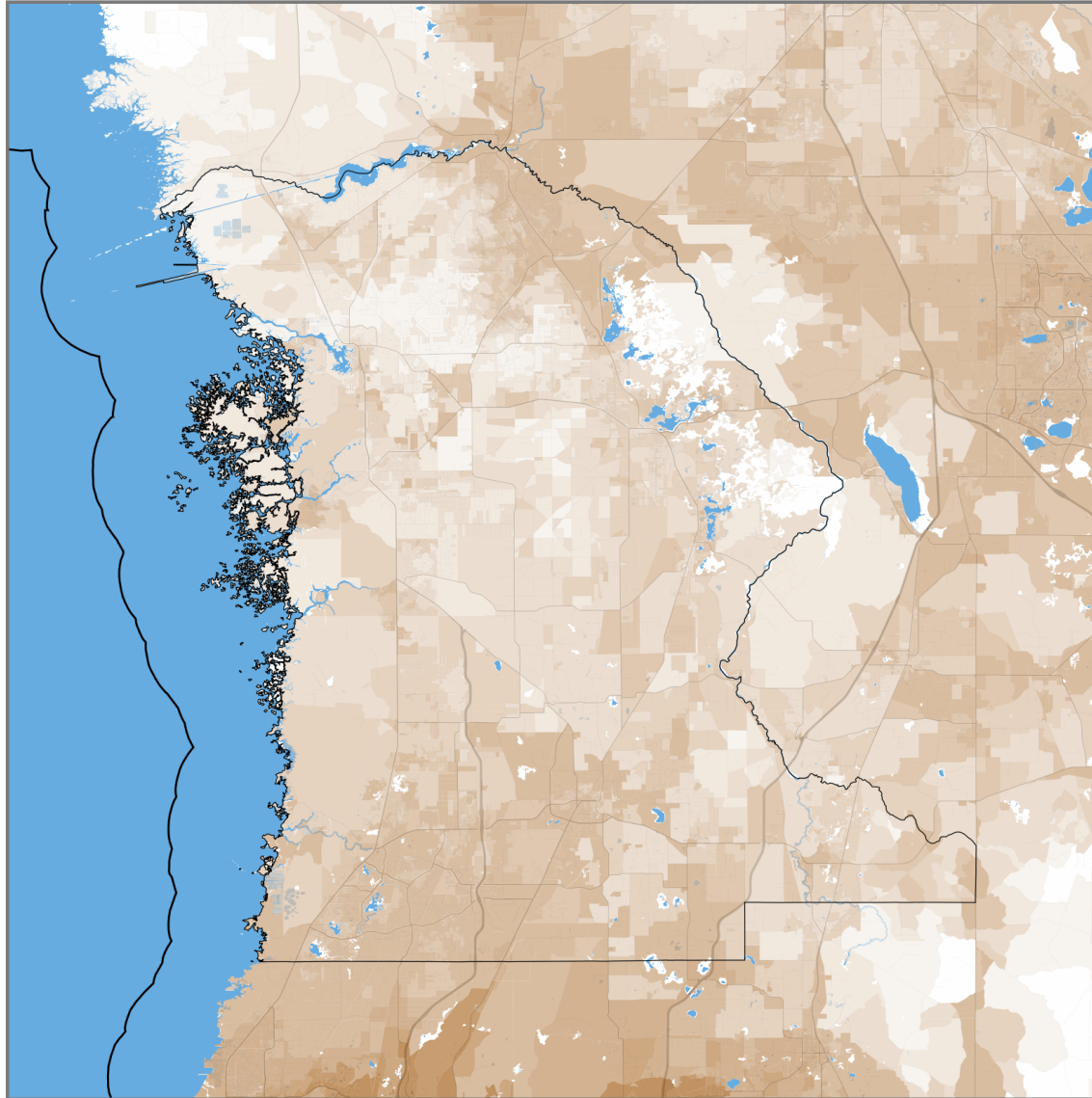
State border

MPO boundary

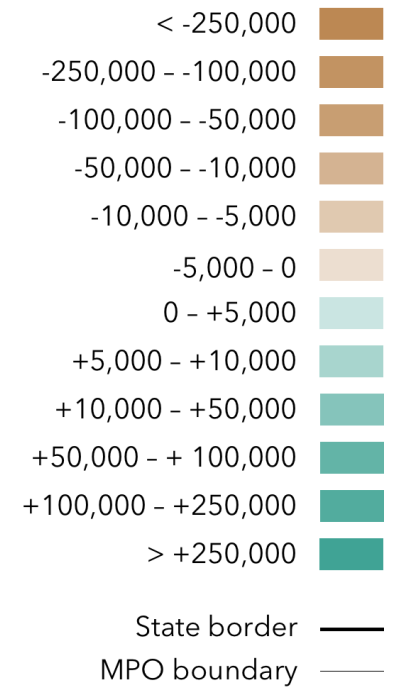


# Hernando/Citrus MPO

38



Change in jobs within  
30 minutes  
(Driving, congestion impact)





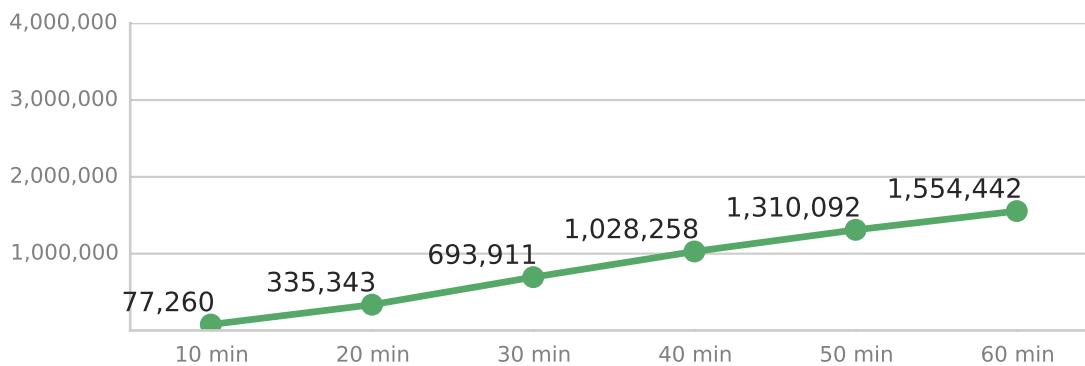
# Hillsborough MPO

Job Accessibility Results – Auto, 2016

Total Jobs	633,555
Average Job Density (per mi <sup>2</sup> )	1,477
Total Workers	550,669
Average Worker Density (per mi <sup>2</sup> )	1,283

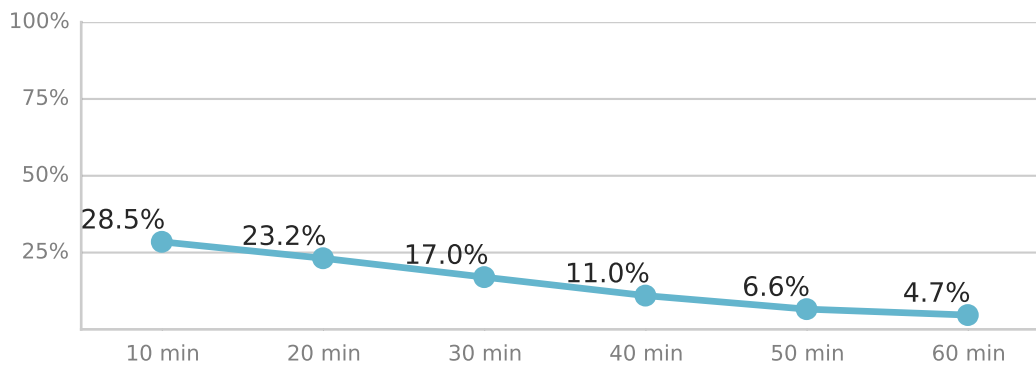
*Job and worker totals are based on LEHD estimates and may not match other sources.*

## Average Job Accessibility by Travel Time Threshold (worker-weighted)

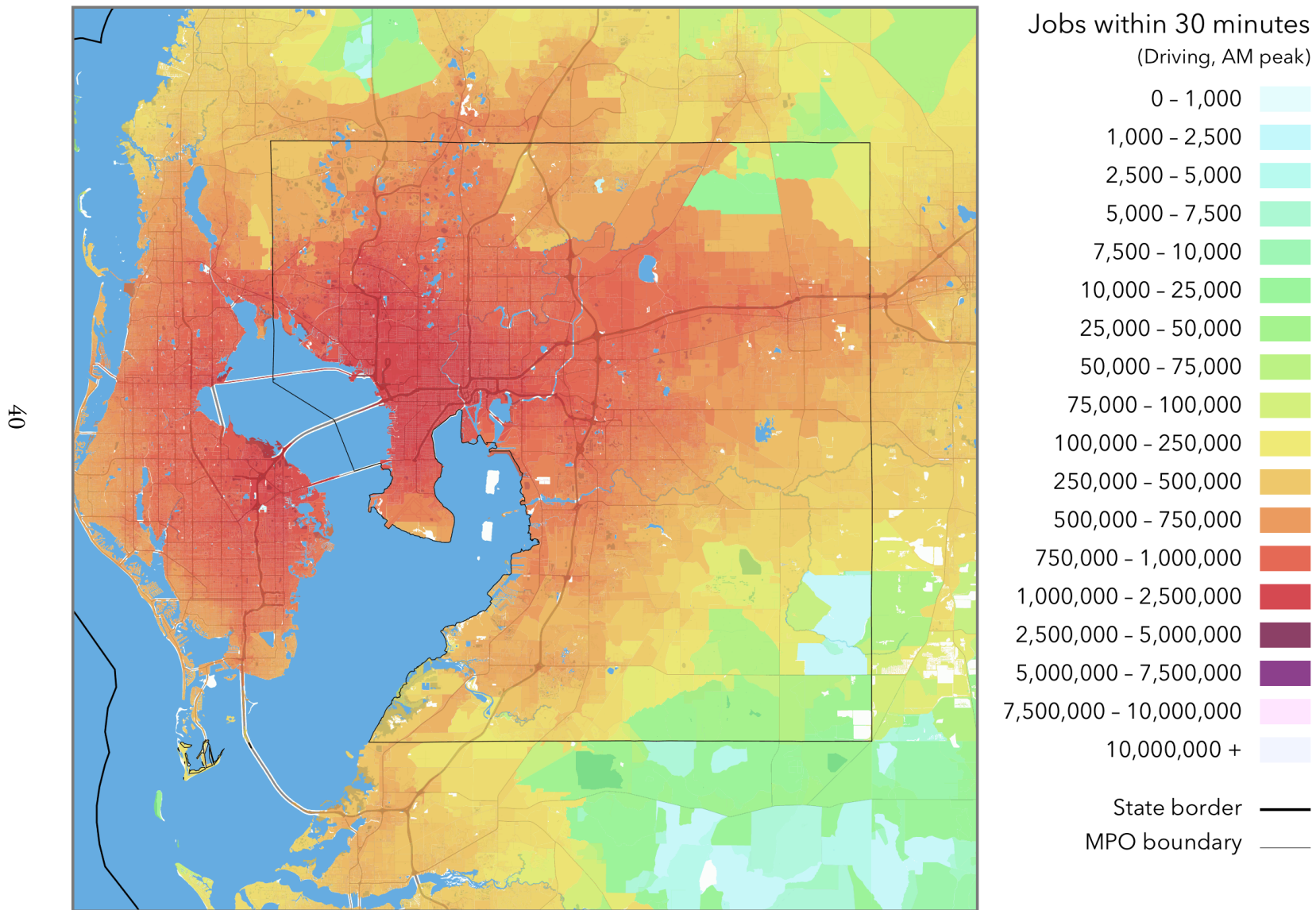


## Average Congestion Impact by Travel Time Threshold (worker-weighted)

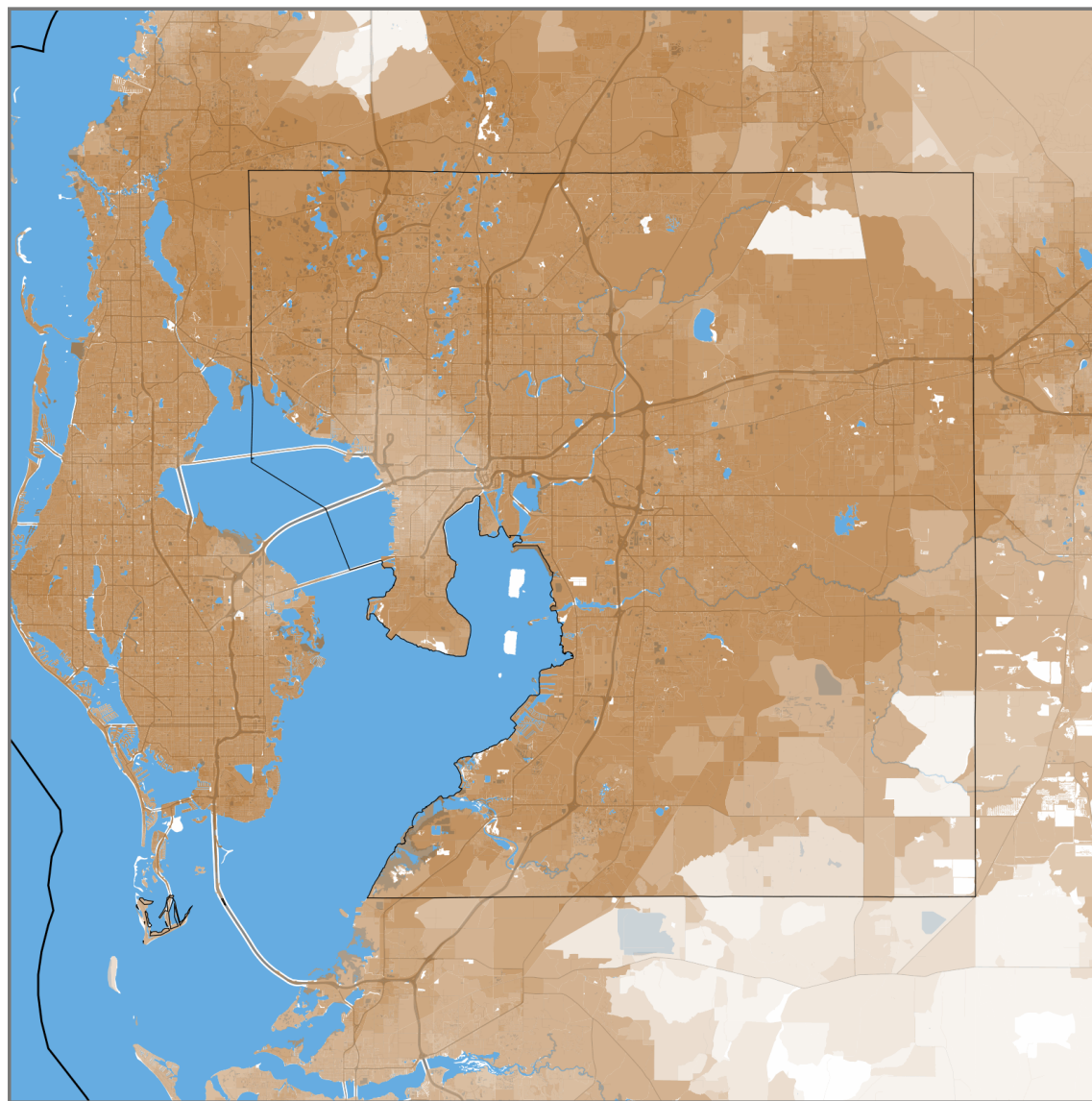
*Higher numbers indicate greater job access loss due to congestion*



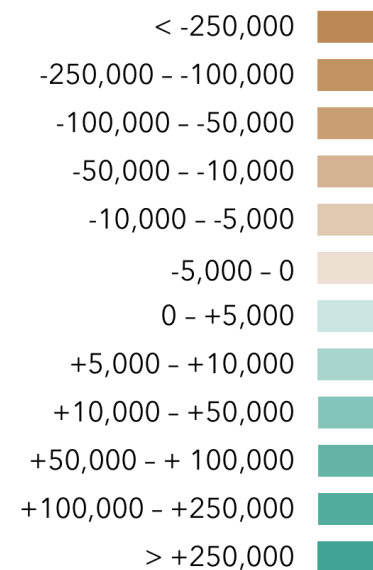
# Hillsborough MPO



# Hillsborough MPO



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border ———  
MPO boundary ———

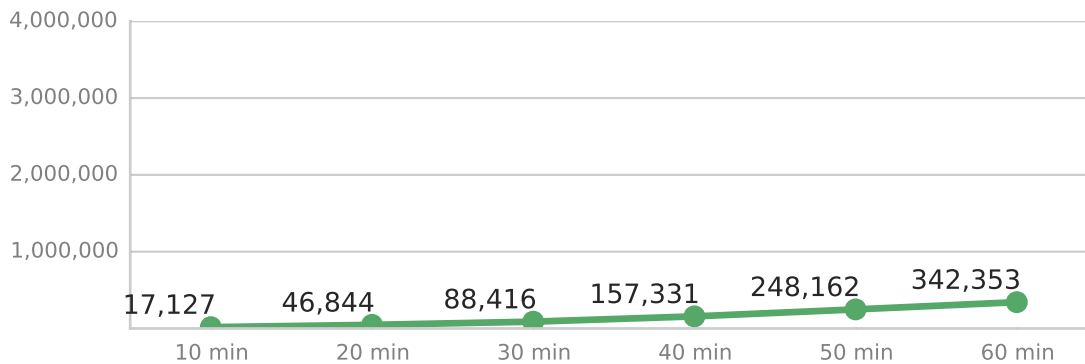
# Indian River County MPO

Job Accessibility Results – Auto, 2016

Total Jobs	45,420
Average Job Density (per mi <sup>2</sup> )	671
Total Workers	50,734
Average Worker Density (per mi <sup>2</sup> )	750

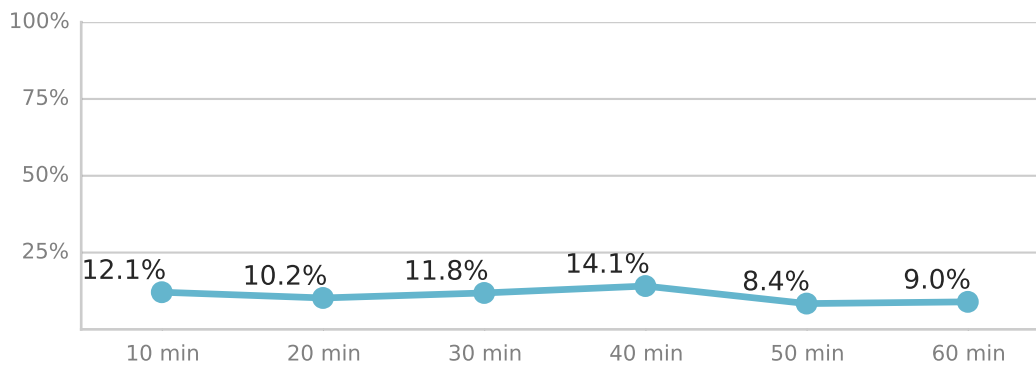
*Job and worker totals are based on LEHD estimates and may not match other sources.*

## Average Job Accessibility by Travel Time Threshold (worker-weighted)



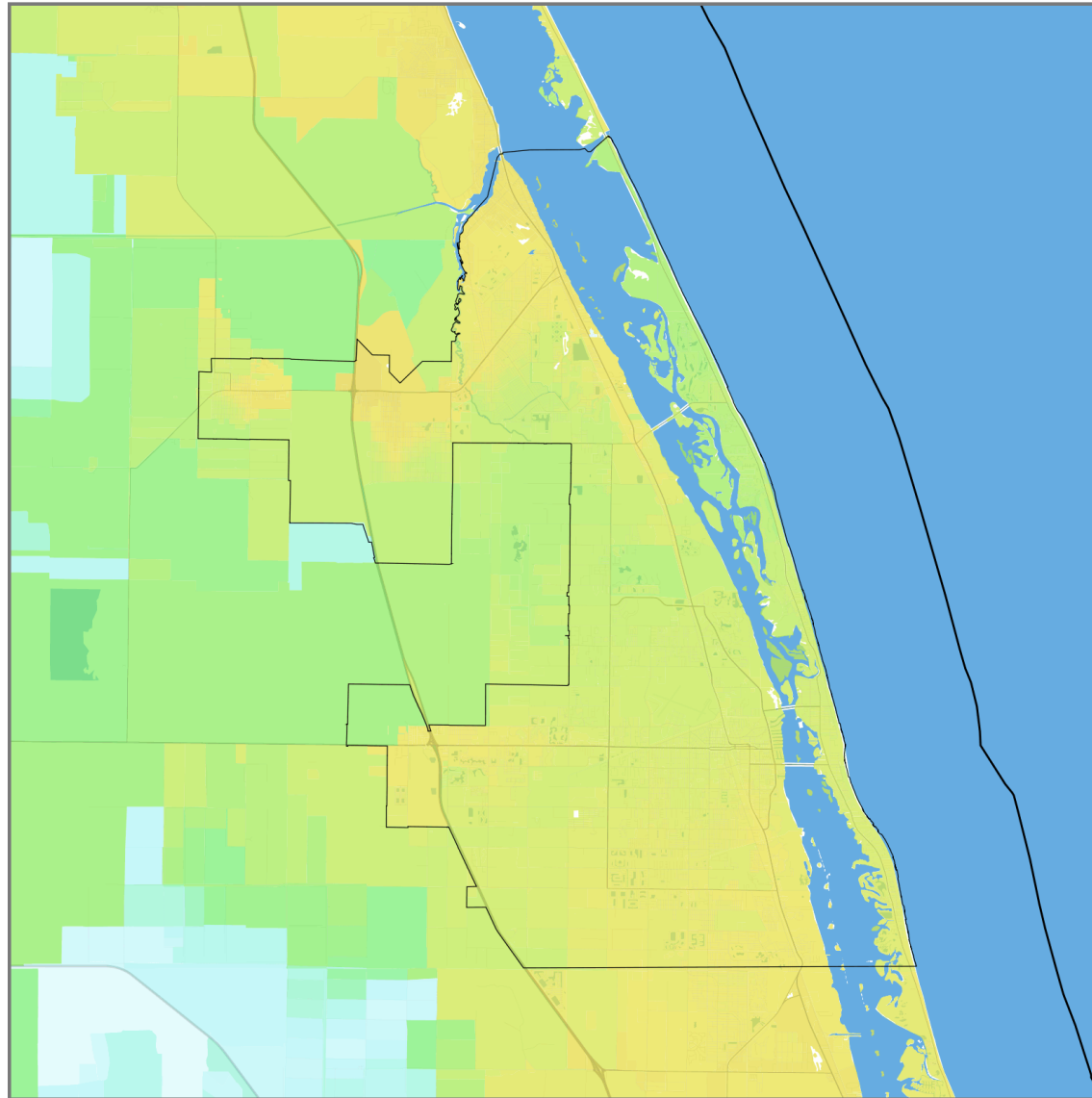
## Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*

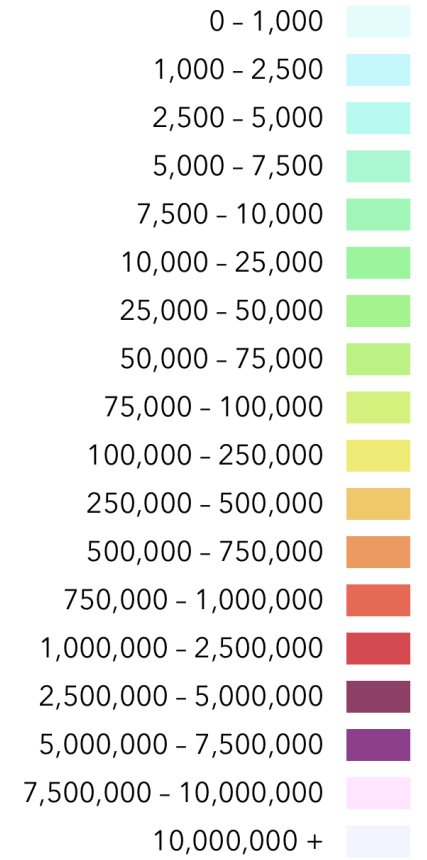


# Indian River County MPO

43



Jobs within 30 minutes  
(Driving, AM peak)

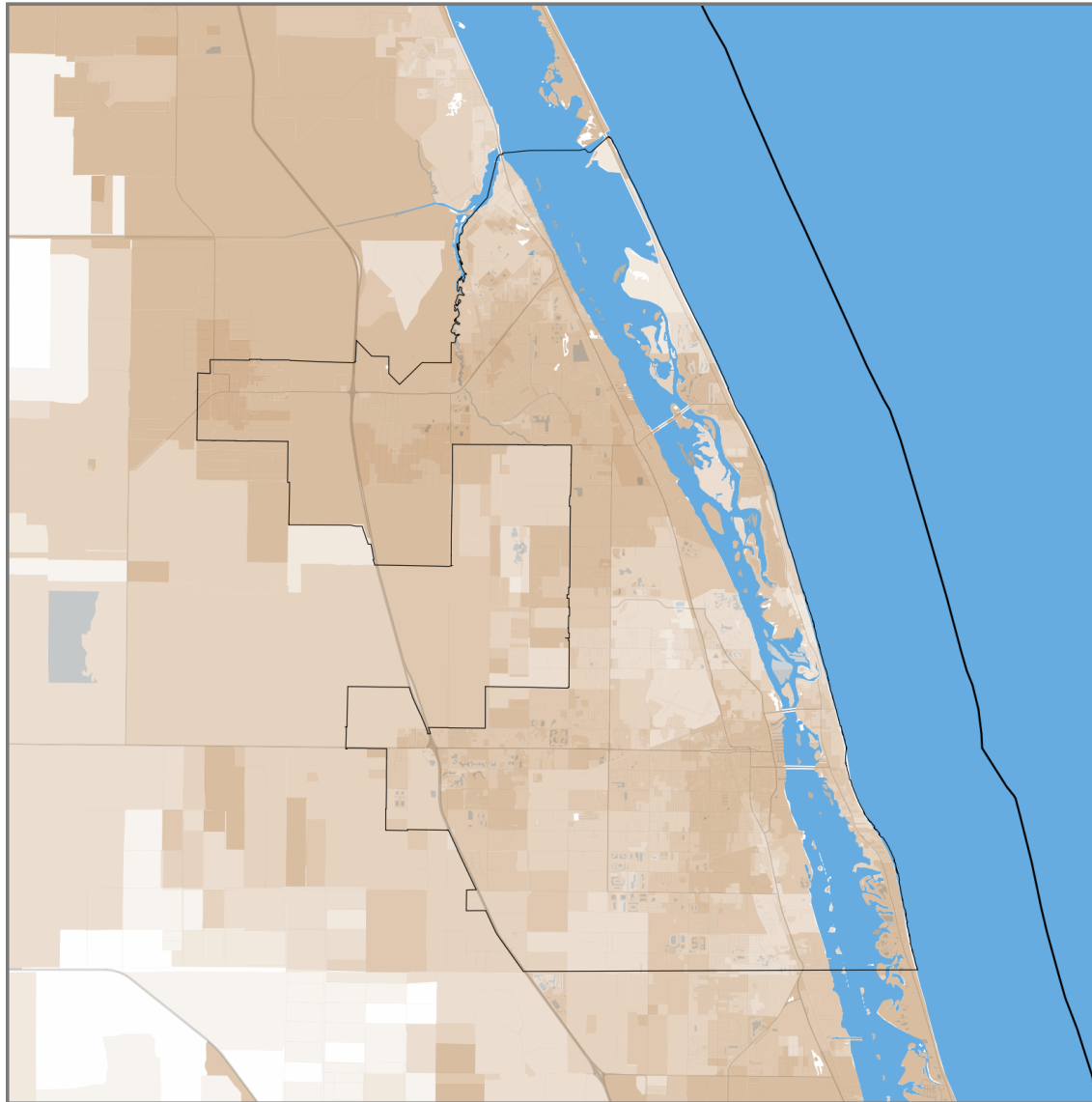


State border

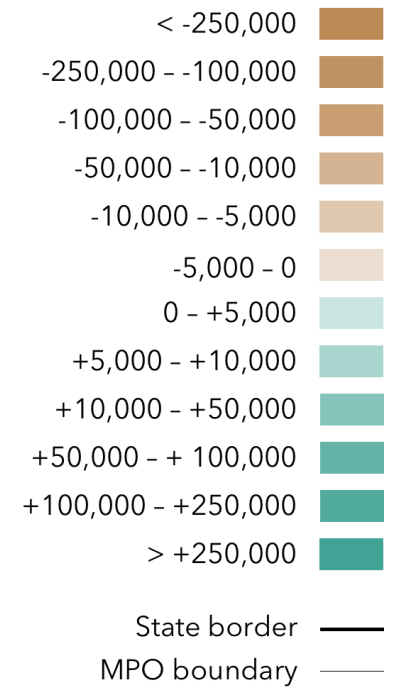
MPO boundary



# Indian River County MPO



Change in jobs within  
30 minutes  
(Driving, congestion impact)



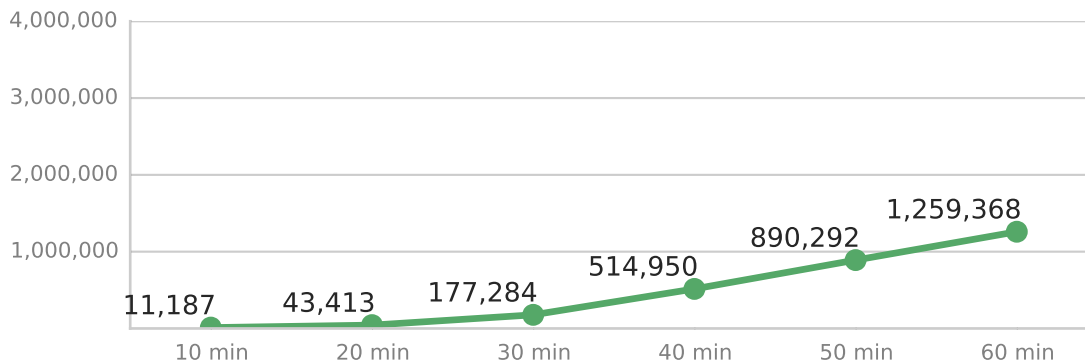
# Lake-Sumter MPO

## Job Accessibility Results – Auto, 2016

Total Jobs	110,894
Average Job Density (per mi <sup>2</sup> )	165
Total Workers	146,538
Average Worker Density (per mi <sup>2</sup> )	219

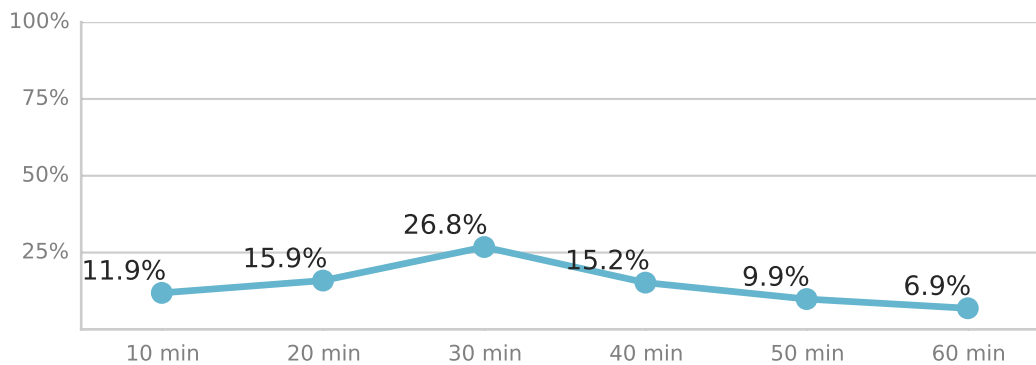
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)



### Average Congestion Impact by Travel Time Threshold (worker-weighted)

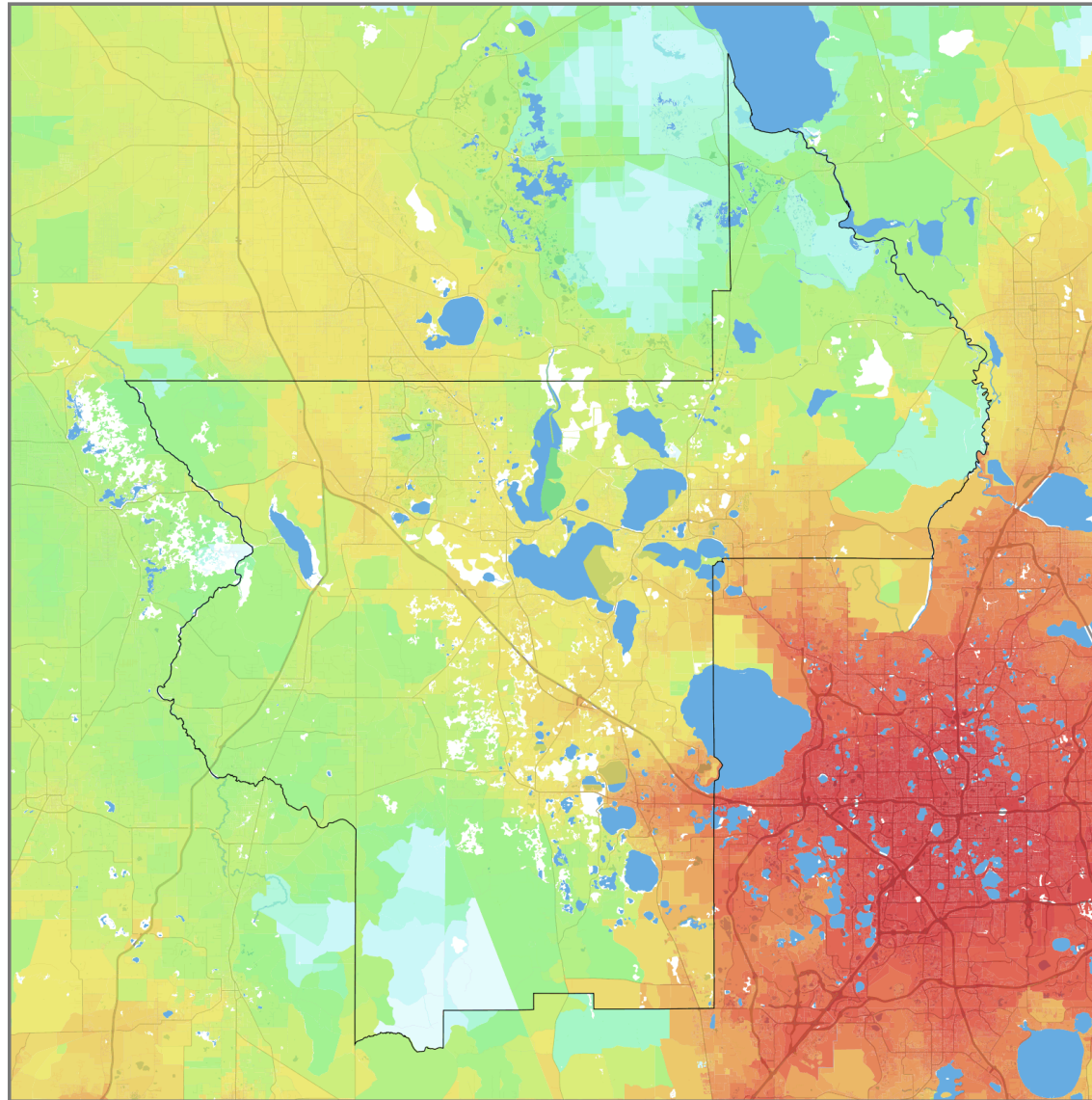
*Higher numbers indicate greater job access loss due to congestion*



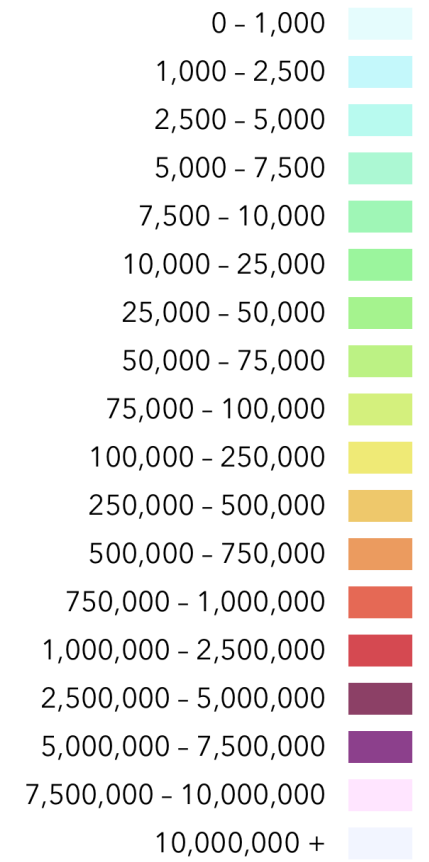


# Lake-Sumter MPO

46



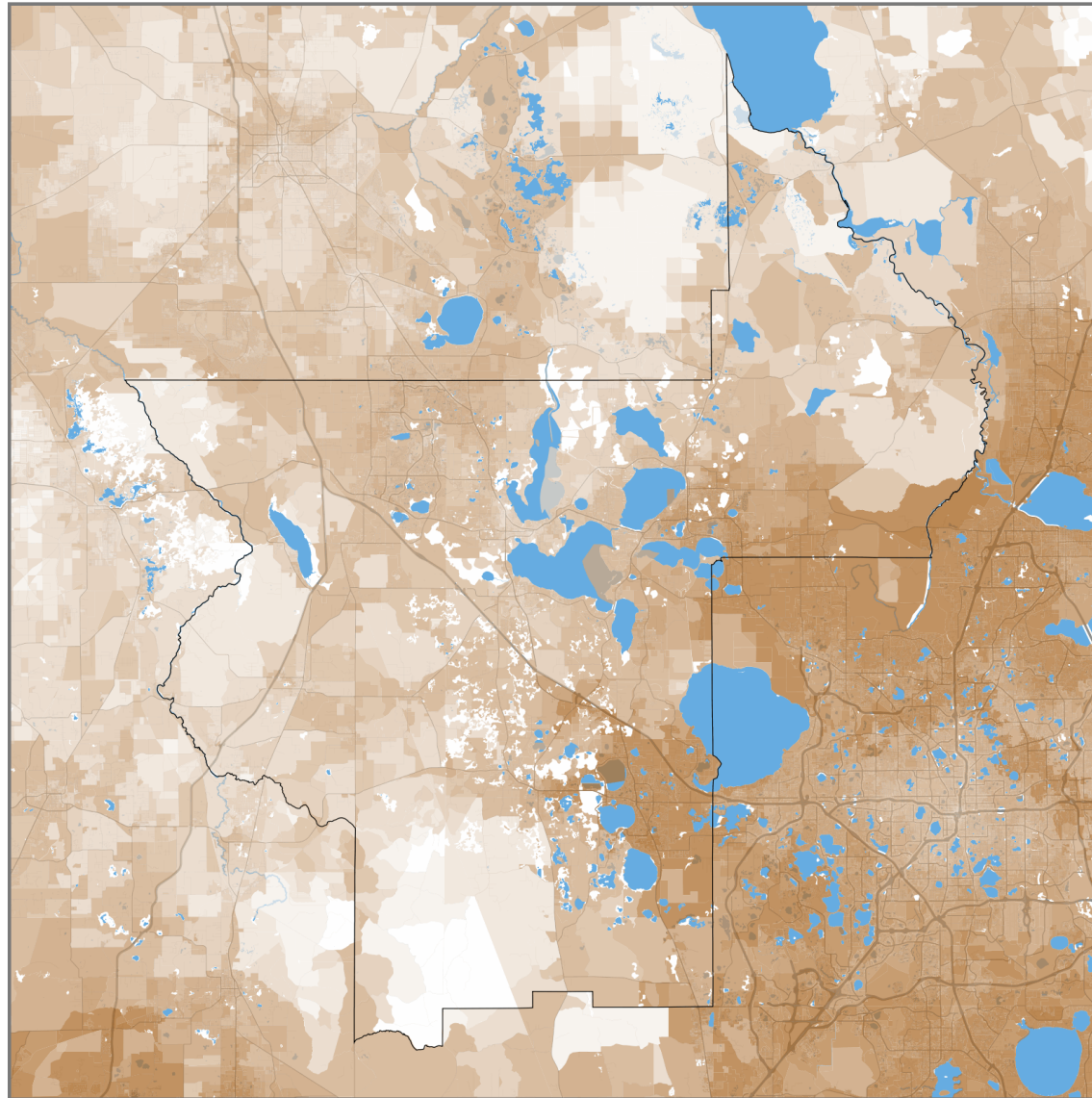
Jobs within 30 minutes  
(Driving, AM peak)



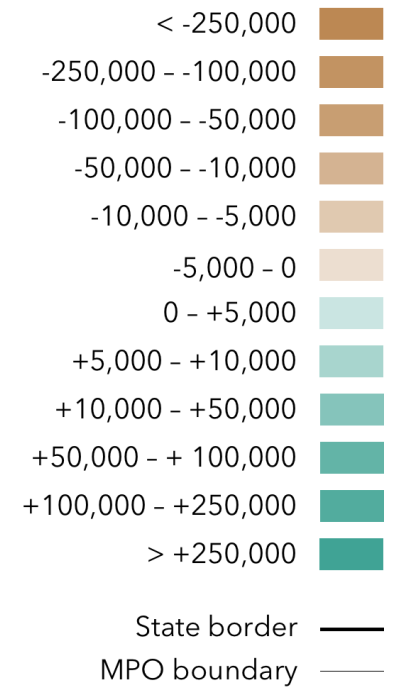
State border

MPO boundary

# Lake-Sumter MPO



Change in jobs within  
30 minutes  
(Driving, congestion impact)



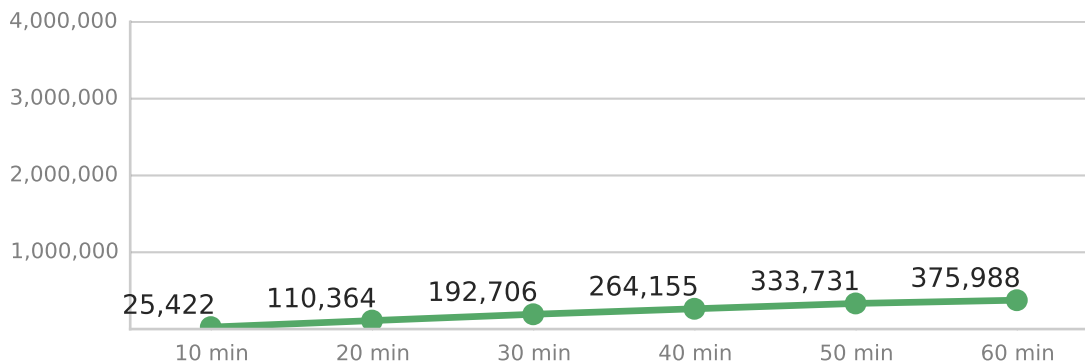
# Lee County MPO

## Job Accessibility Results – Auto, 2016

Total Jobs	213,026
Average Job Density (per mi <sup>2</sup> )	668
Total Workers	227,679
Average Worker Density (per mi <sup>2</sup> )	713

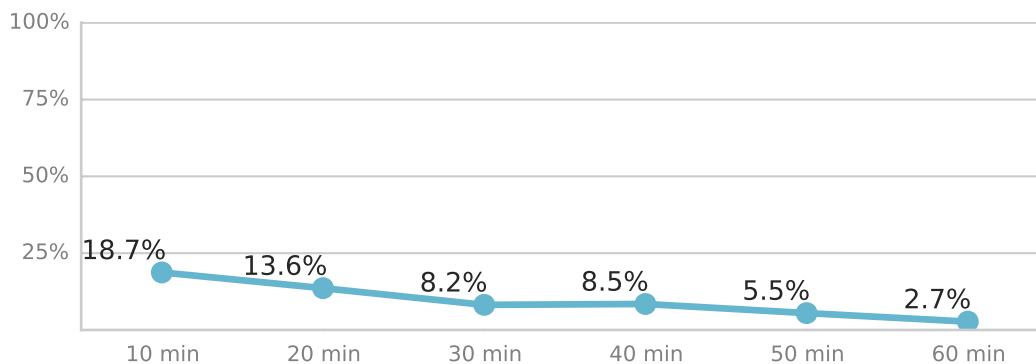
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)

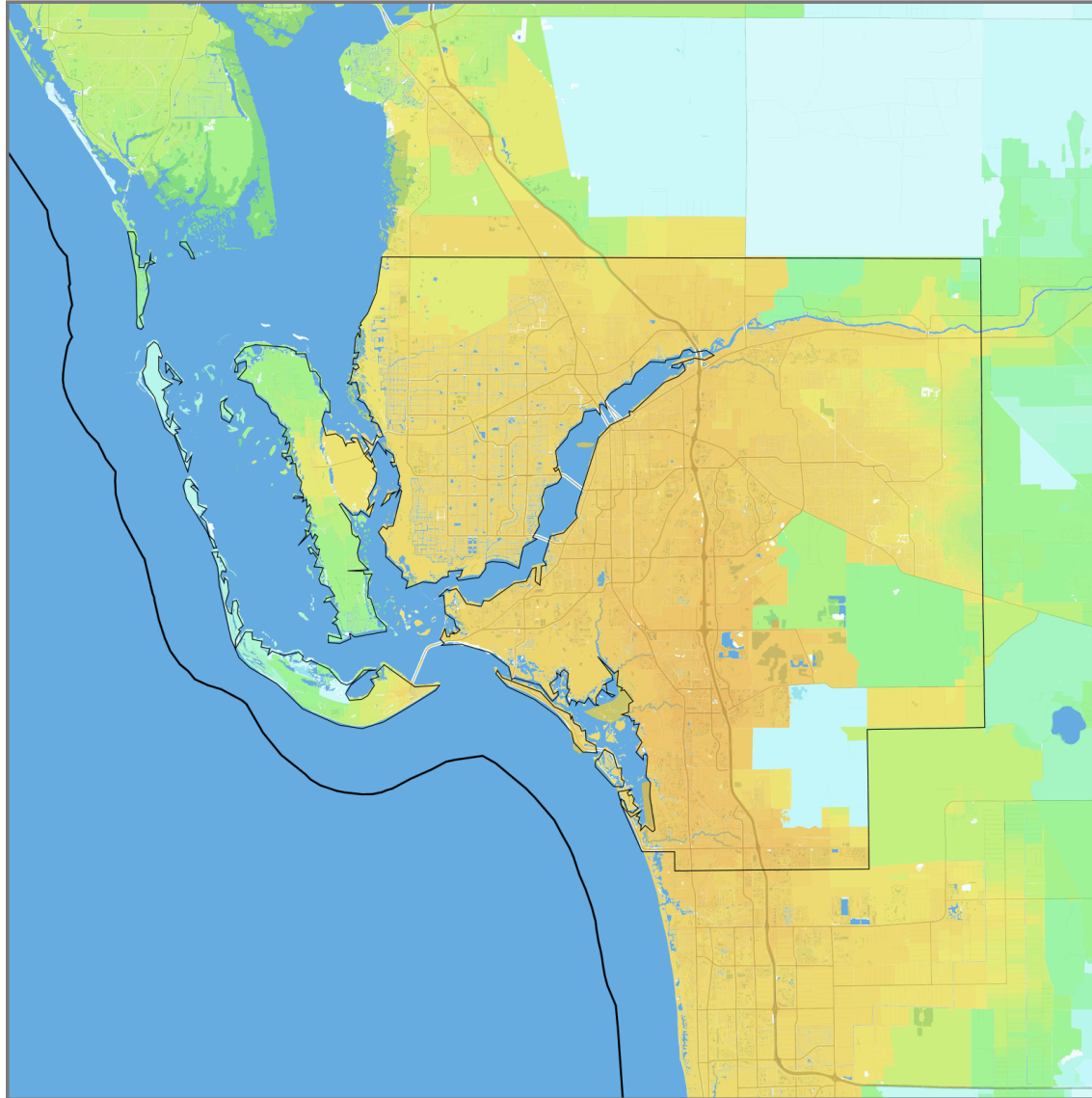


### Average Congestion Impact by Travel Time Threshold (worker-weighted)

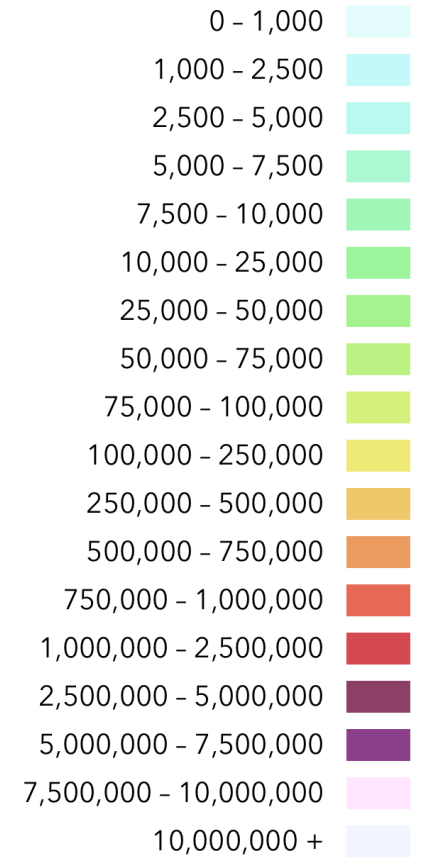
*Higher numbers indicate greater job access loss due to congestion*



# Lee County MPO



Jobs within 30 minutes  
(Driving, AM peak)

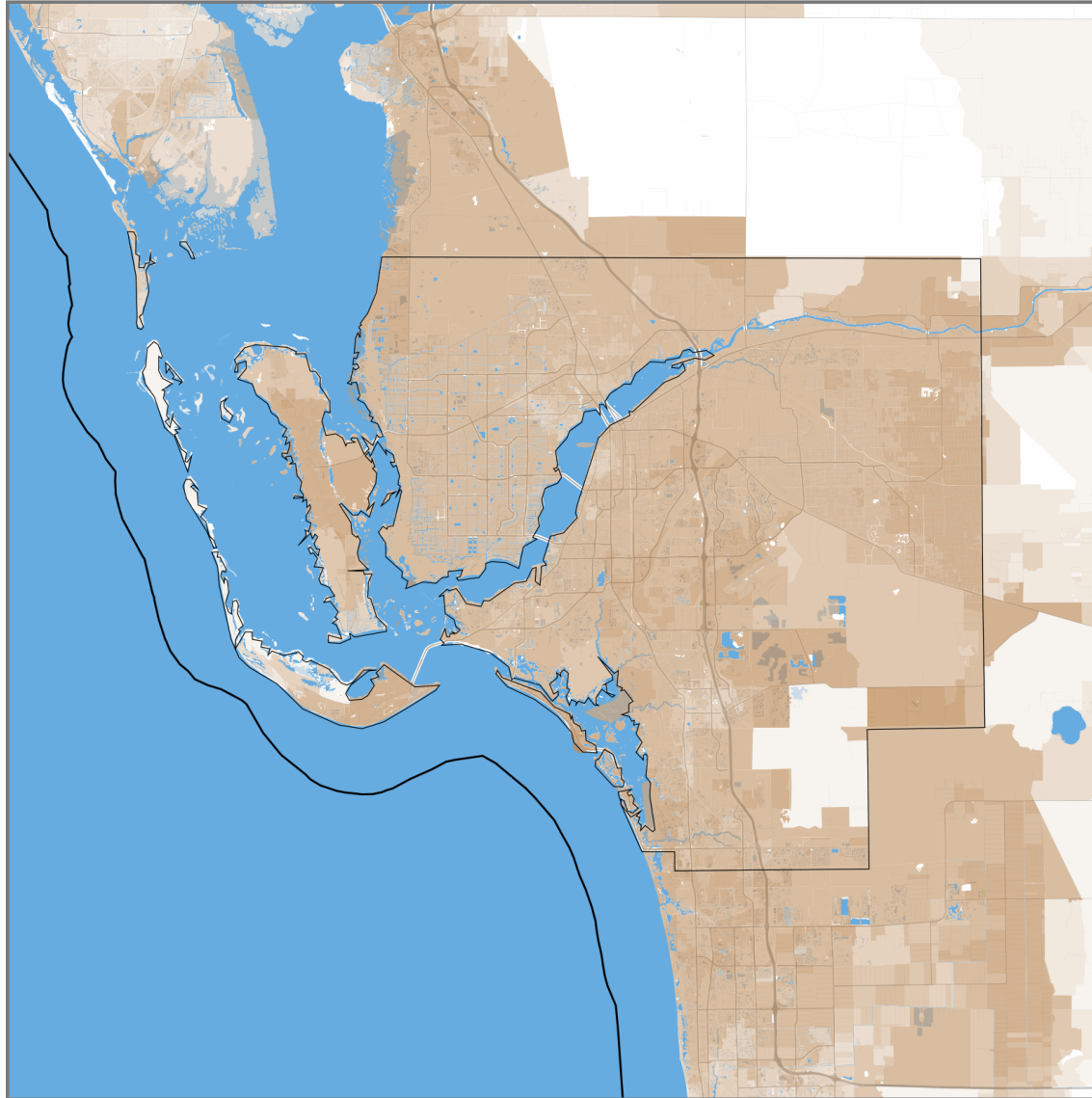


State border —  
MPO boundary —

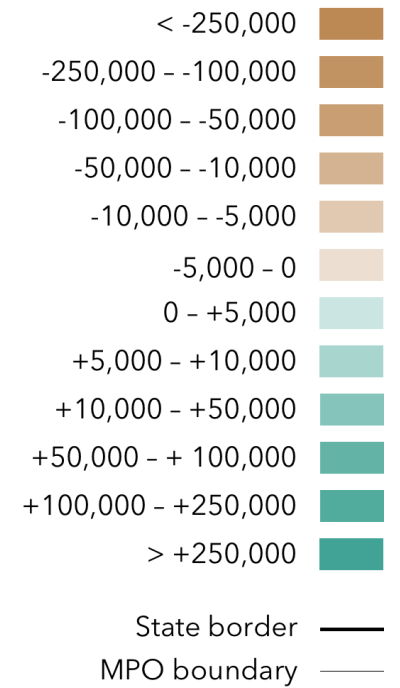


# Lee County MPO

50



Change in jobs within  
30 minutes  
(Driving, congestion impact)



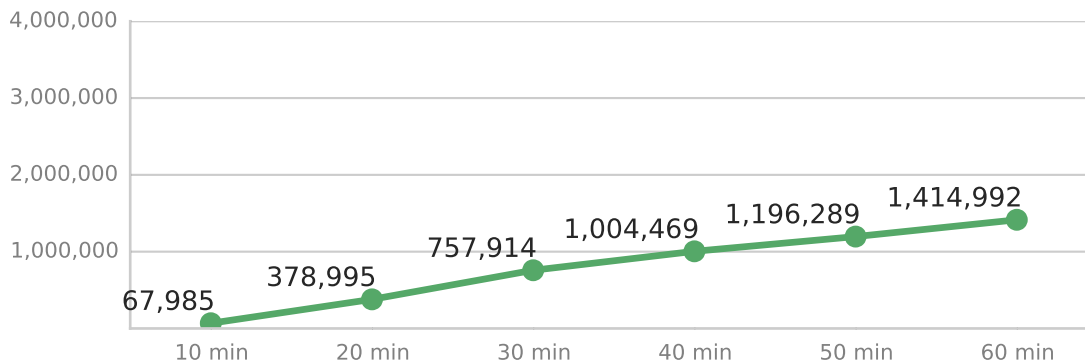
# METROPLAN Orlando

## Job Accessibility Results – Auto, 2016

Total Jobs	1,040,872
Average Job Density (per mi <sup>2</sup> )	942
Total Workers	893,266
Average Worker Density (per mi <sup>2</sup> )	809

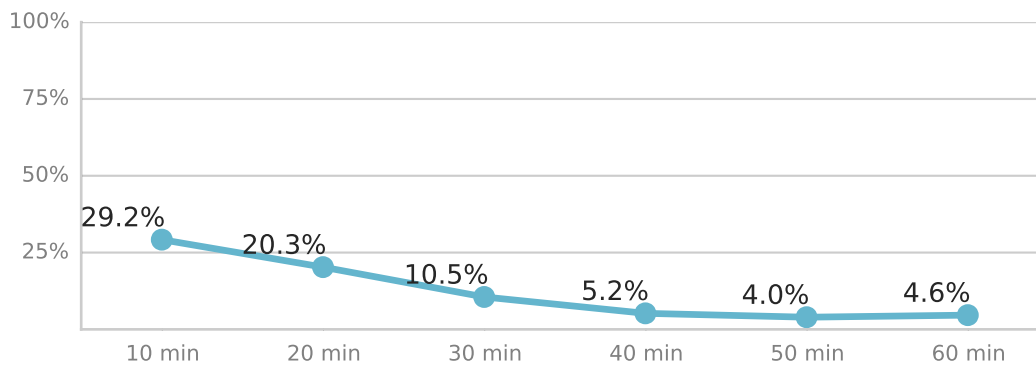
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)

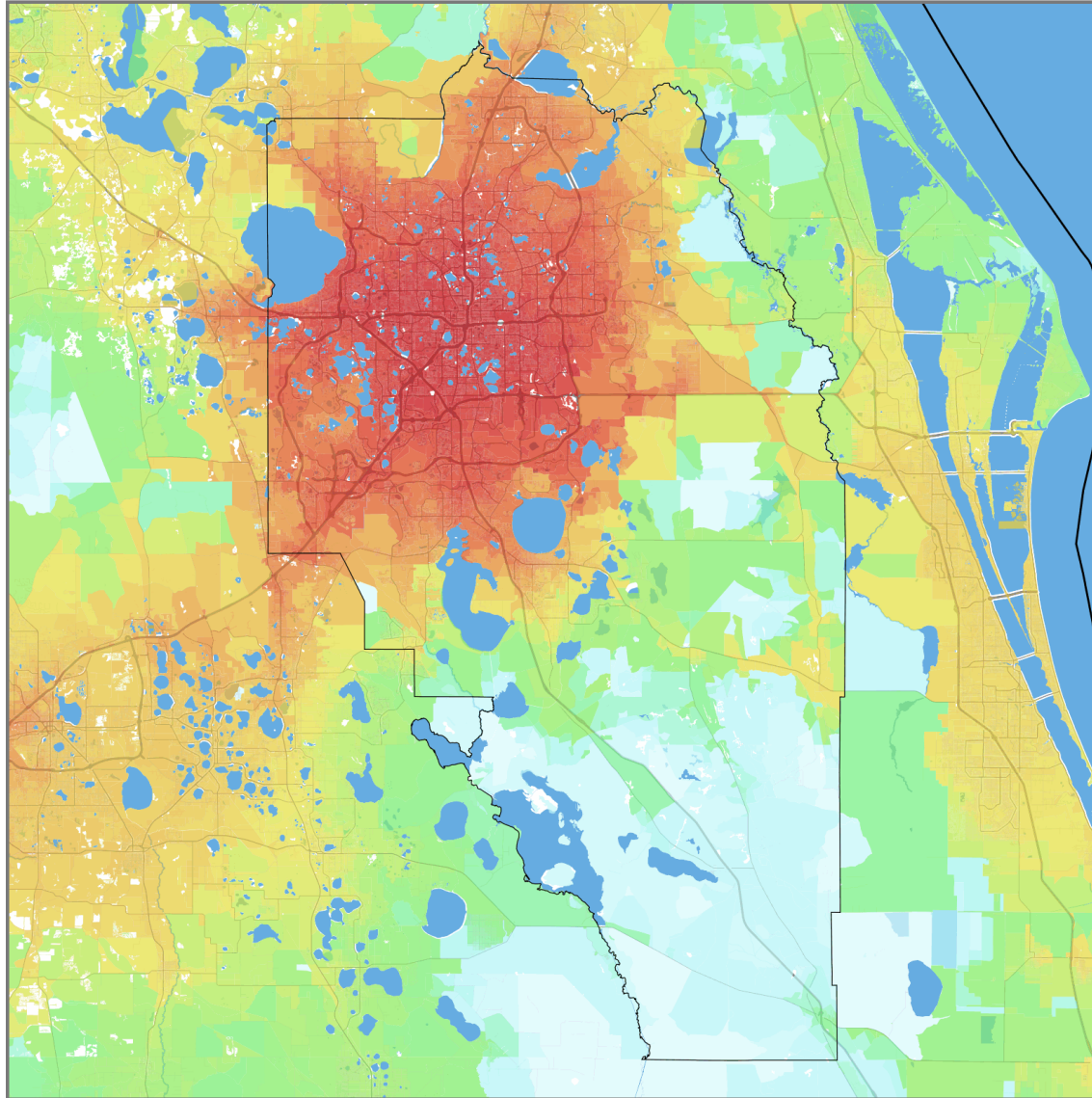


### Average Congestion Impact by Travel Time Threshold (worker-weighted)

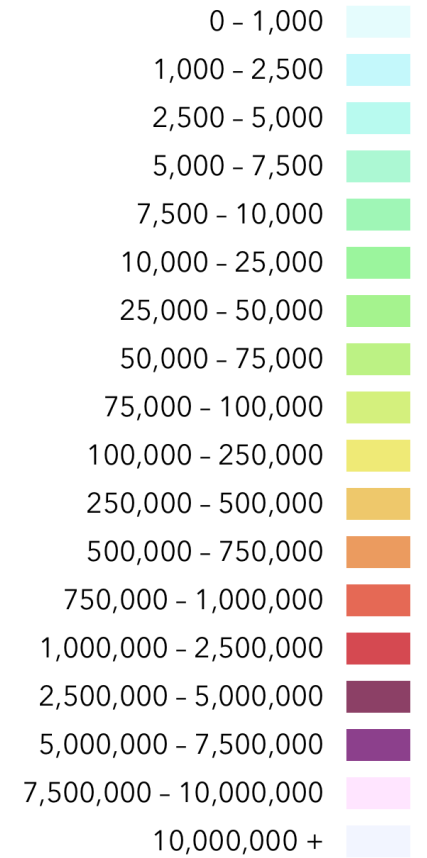
*Higher numbers indicate greater job access loss due to congestion*



# METROPLAN Orlando



Jobs within 30 minutes  
(Driving, AM peak)



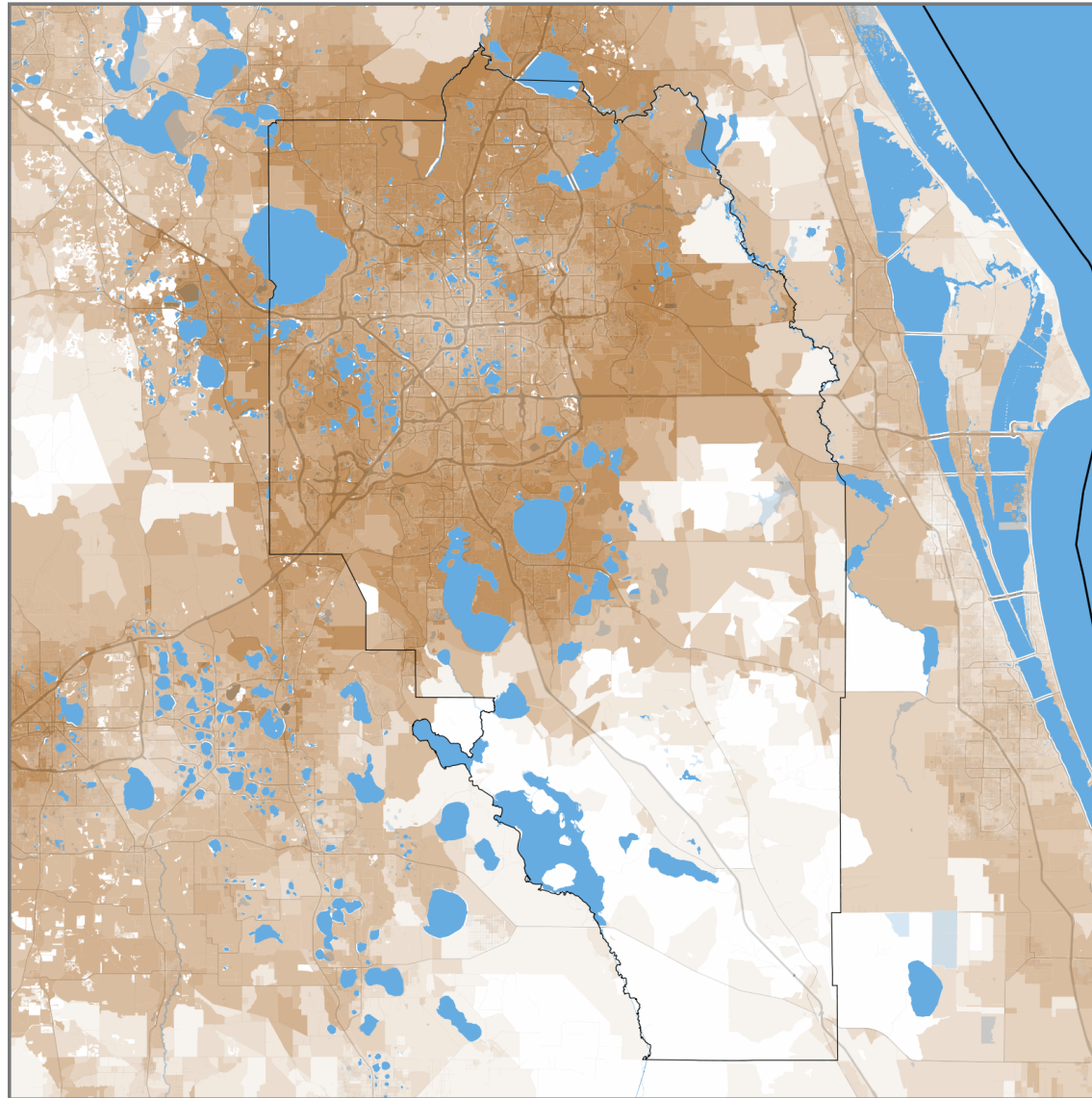
State border

MPO boundary

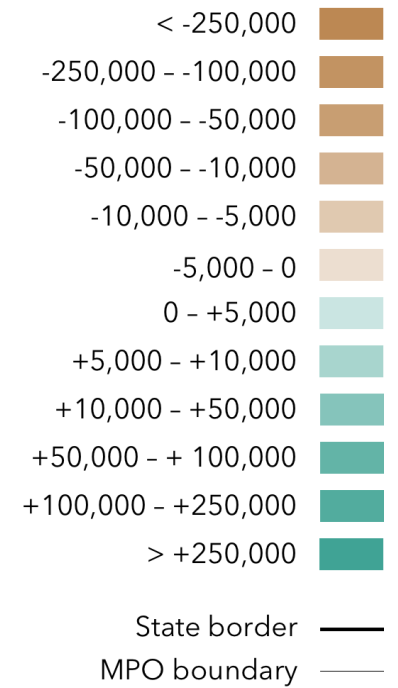


# METROPLAN Orlando

53



Change in jobs within  
30 minutes  
(Driving, congestion impact)



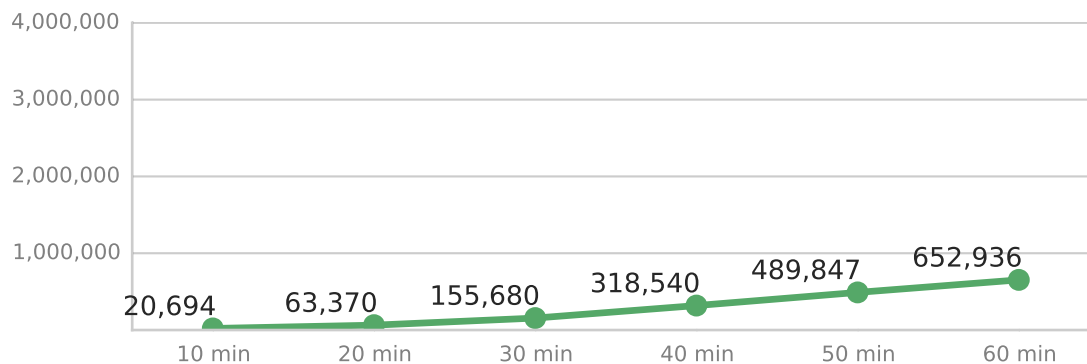
# Martin MPO

## Job Accessibility Results – Auto, 2016

Total Jobs	58,079
Average Job Density (per mi <sup>2</sup> )	275
Total Workers	55,348
Average Worker Density (per mi <sup>2</sup> )	262

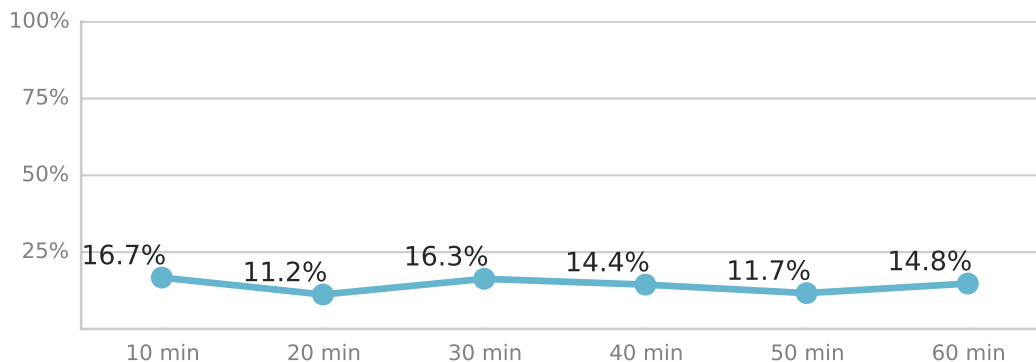
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)



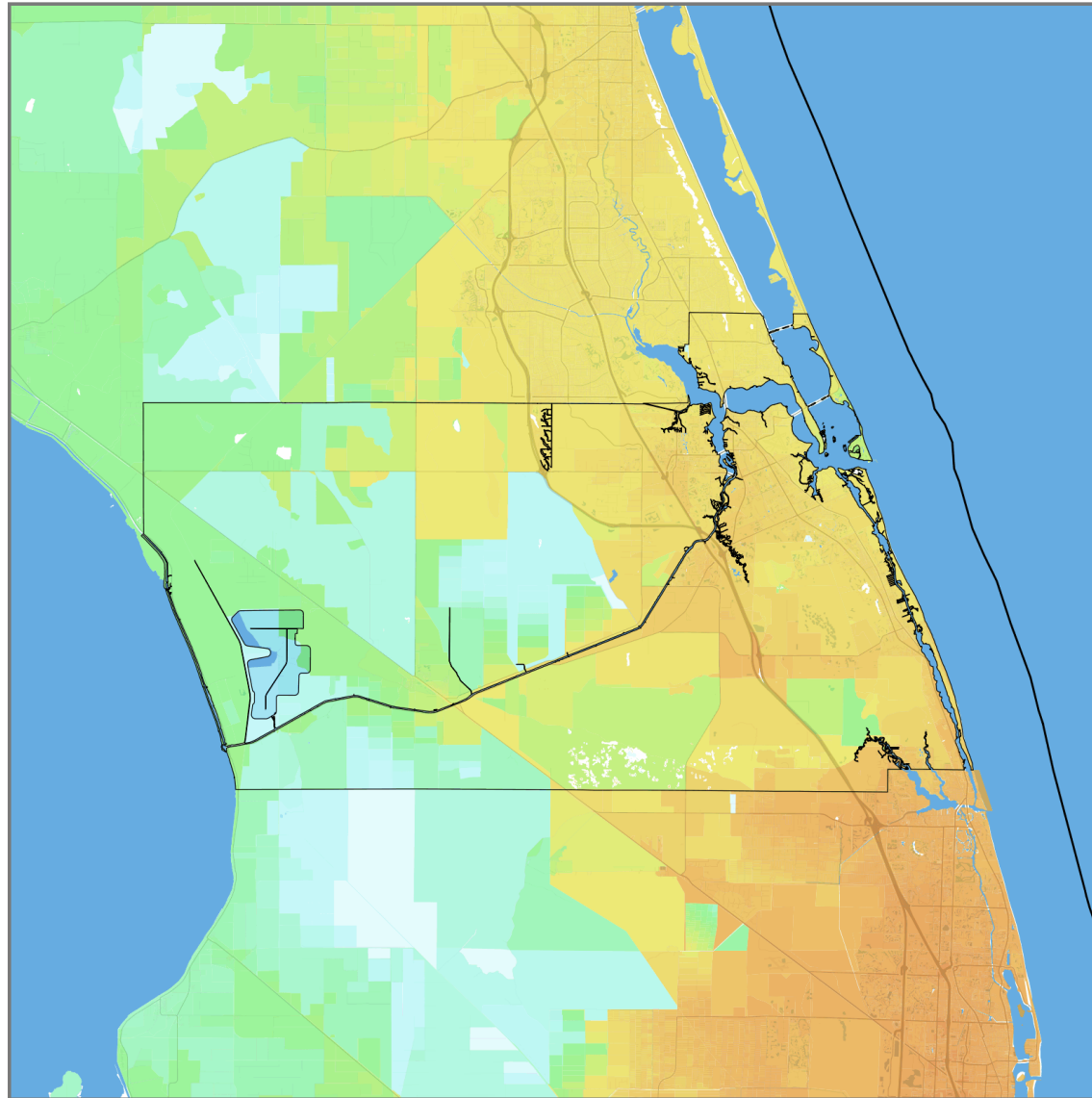
### Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*

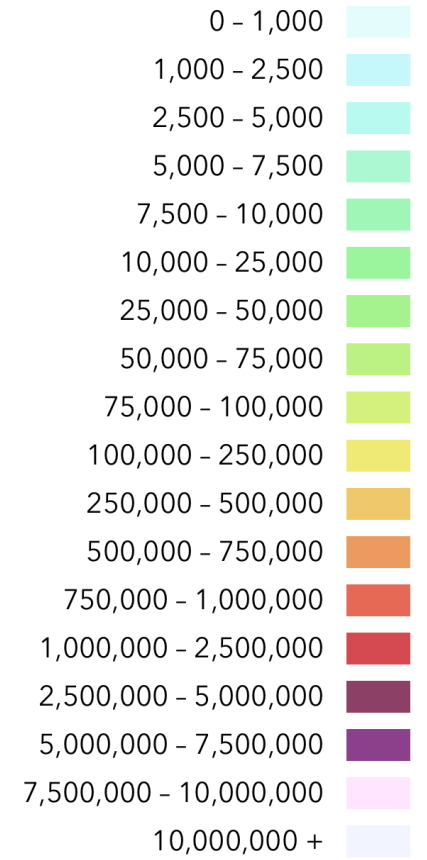


# Martin MPO

55



Jobs within 30 minutes  
(Driving, AM peak)

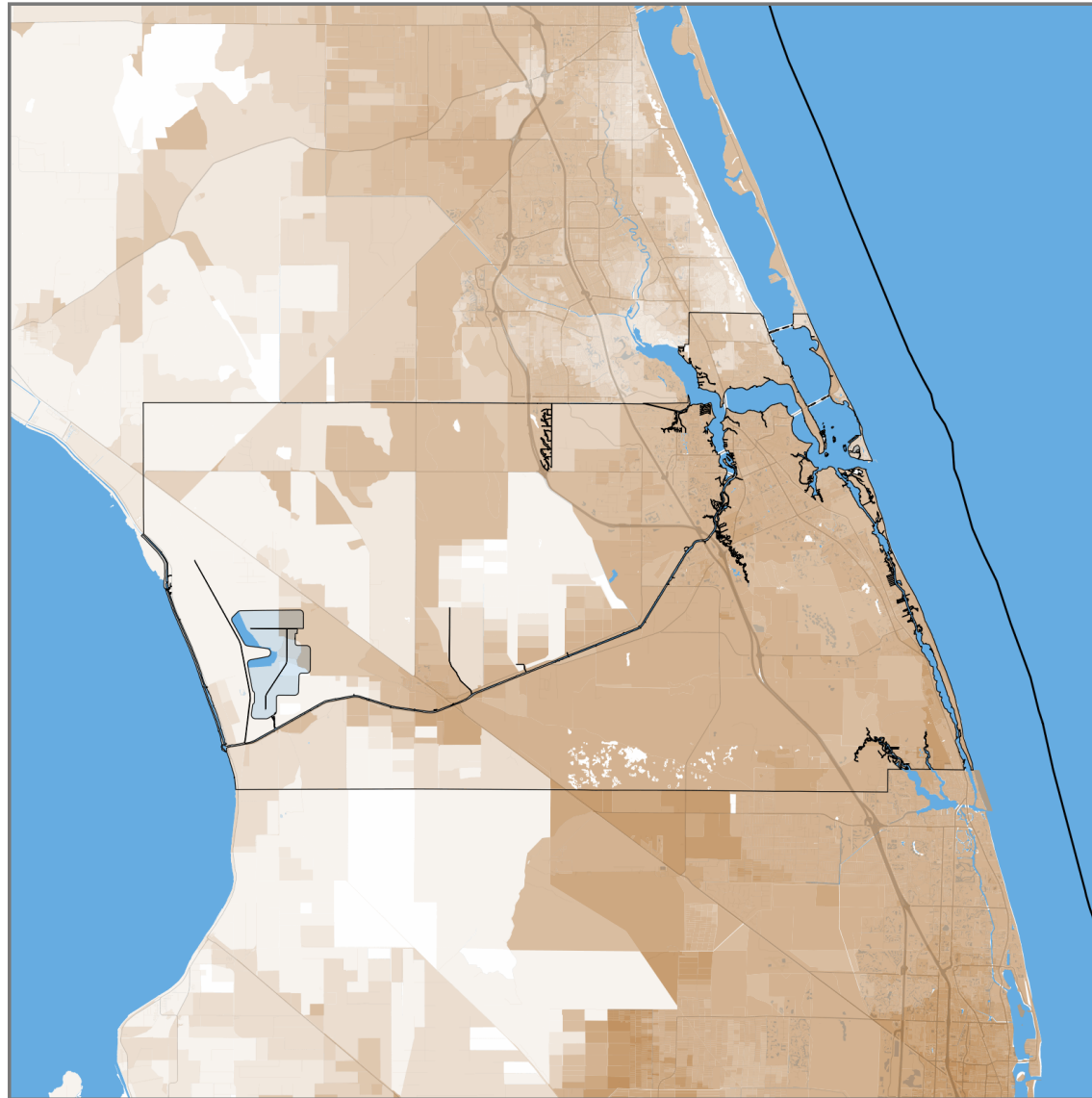


State border

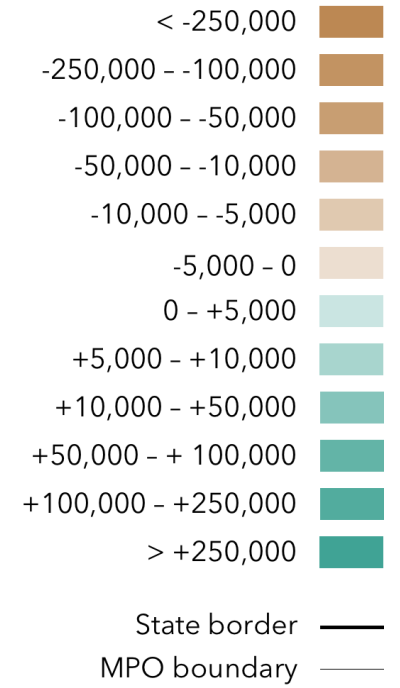
MPO boundary

# Martin MPO

56



Change in jobs within  
30 minutes  
(Driving, congestion impact)



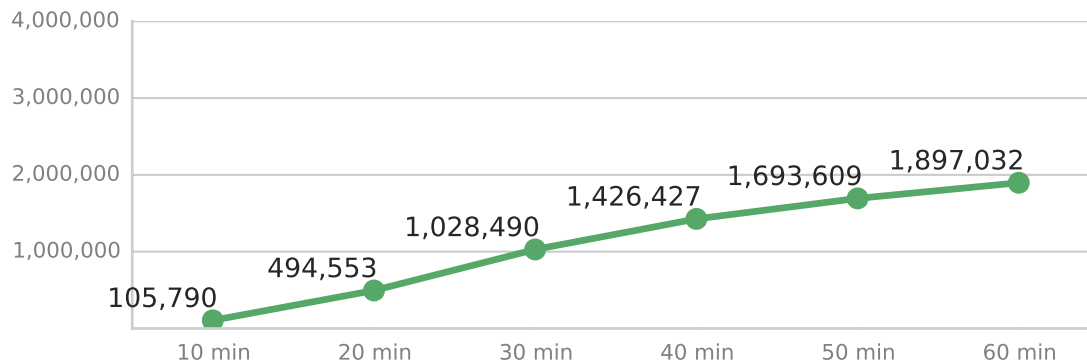
# Miami-Dade TPO

Job Accessibility Results – Auto, 2016

Total Jobs	1,051,693
Average Job Density (per mi <sup>2</sup> )	1,348
Total Workers	1,004,042
Average Worker Density (per mi <sup>2</sup> )	1,287

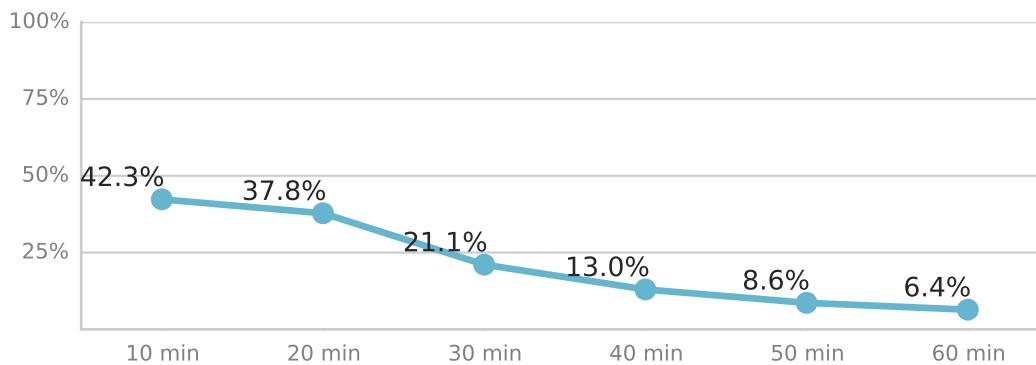
*Job and worker totals are based on LEHD estimates and may not match other sources.*

## Average Job Accessibility by Travel Time Threshold (worker-weighted)



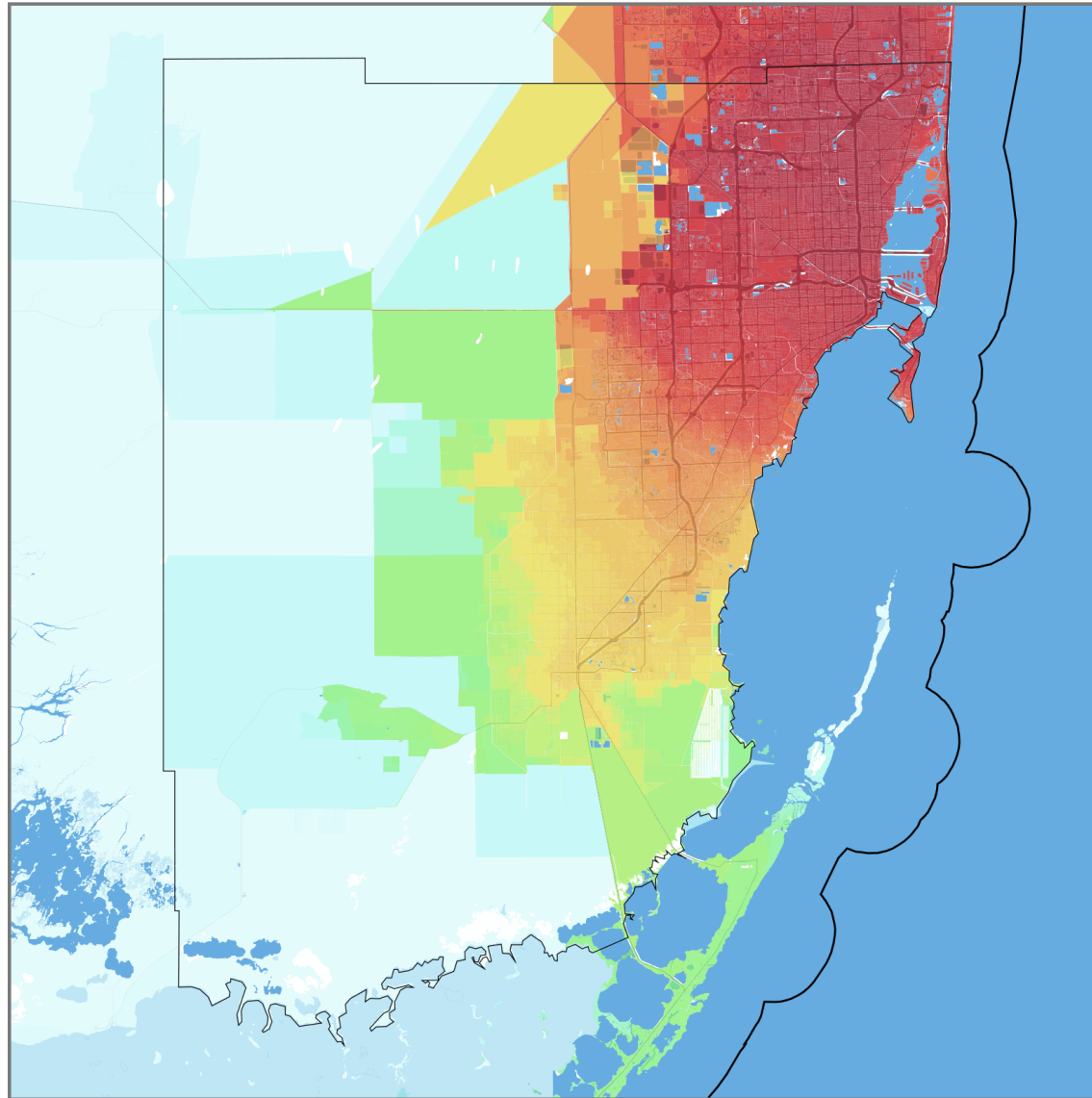
## Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*

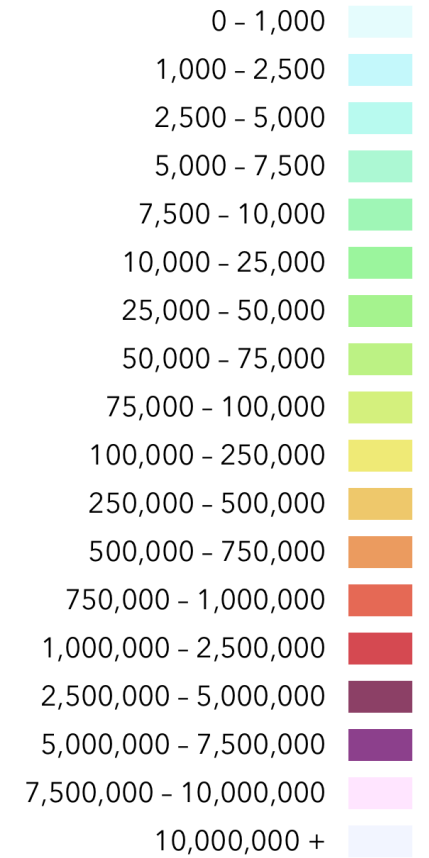


# Miami-Dade TPO

58



Jobs within 30 minutes  
(Driving, AM peak)

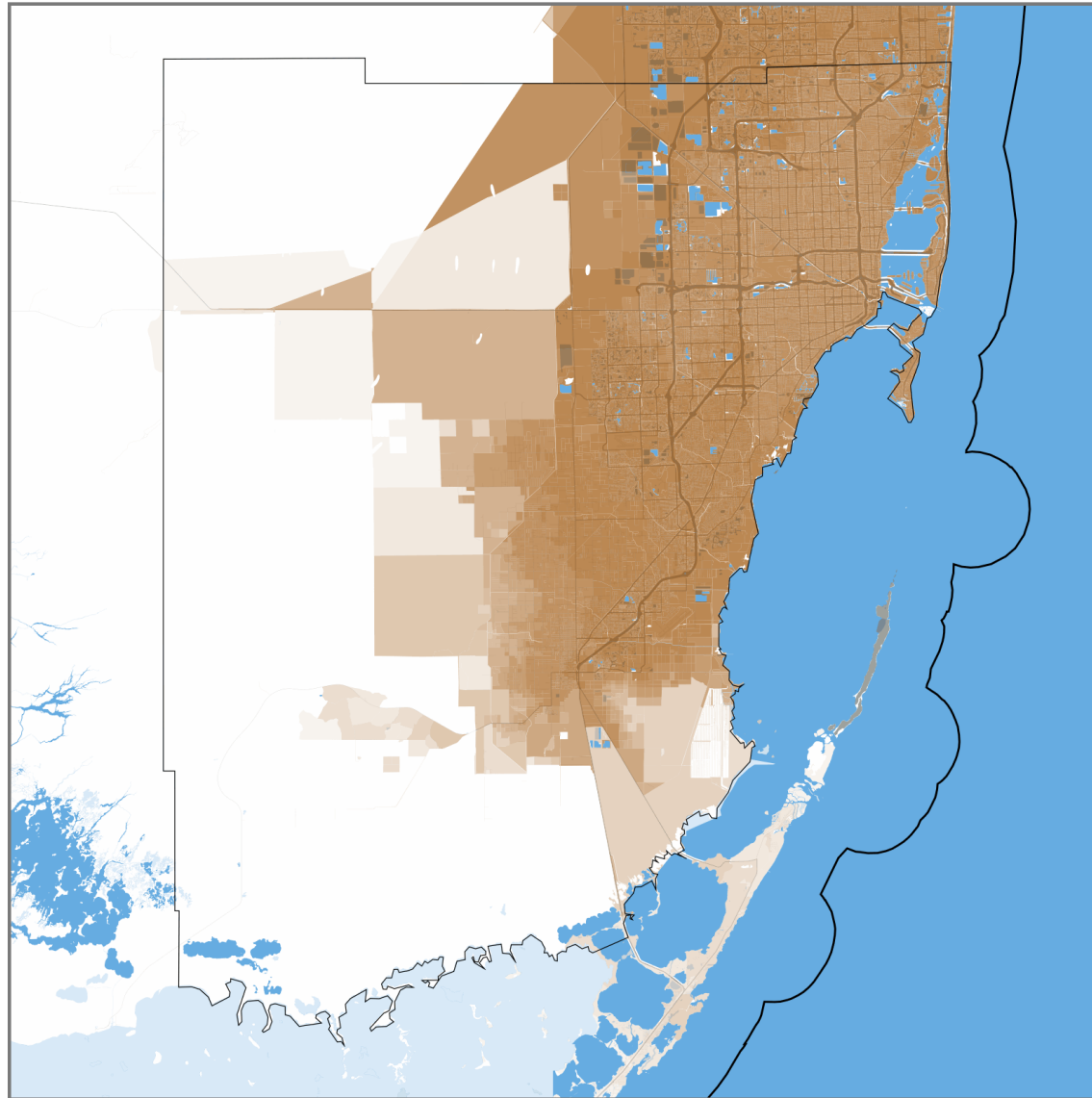


State border —  
MPO boundary —

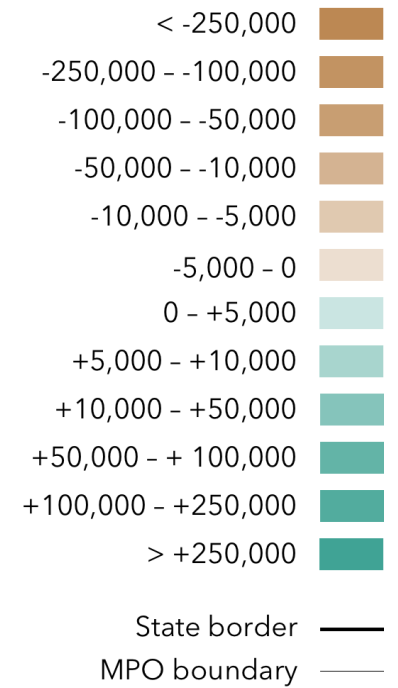


# Miami-Dade TPO

59



Change in jobs within  
30 minutes  
(Driving, congestion impact)





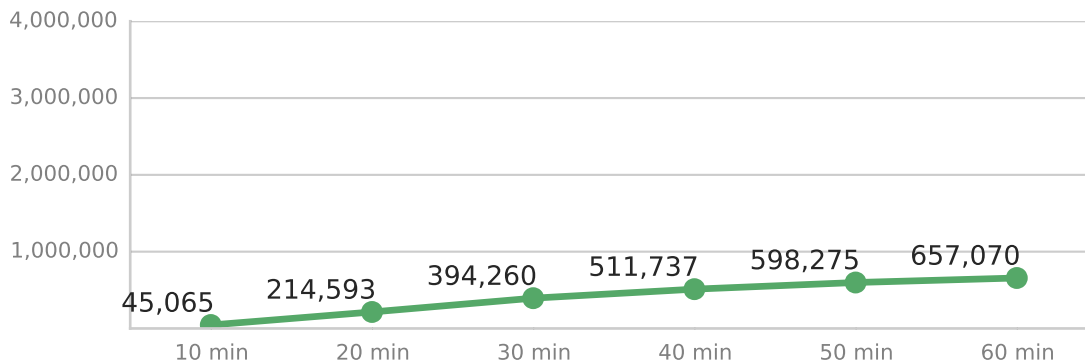
# North Florida Transportation Planning Organization

Job Accessibility Results – Auto, 2016

Total Jobs	640,995
Average Job Density (per mi <sup>2</sup> )	619
Total Workers	597,258
Average Worker Density (per mi <sup>2</sup> )	576

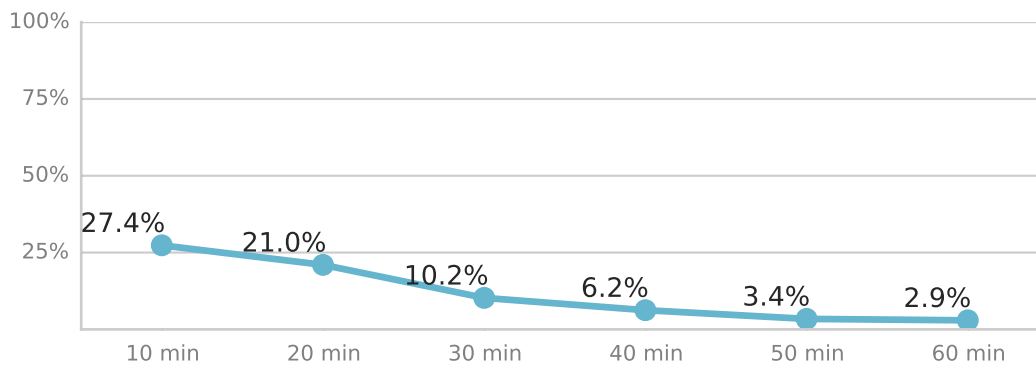
*Job and worker totals are based on LEHD estimates and may not match other sources.*

## Average Job Accessibility by Travel Time Threshold (worker-weighted)

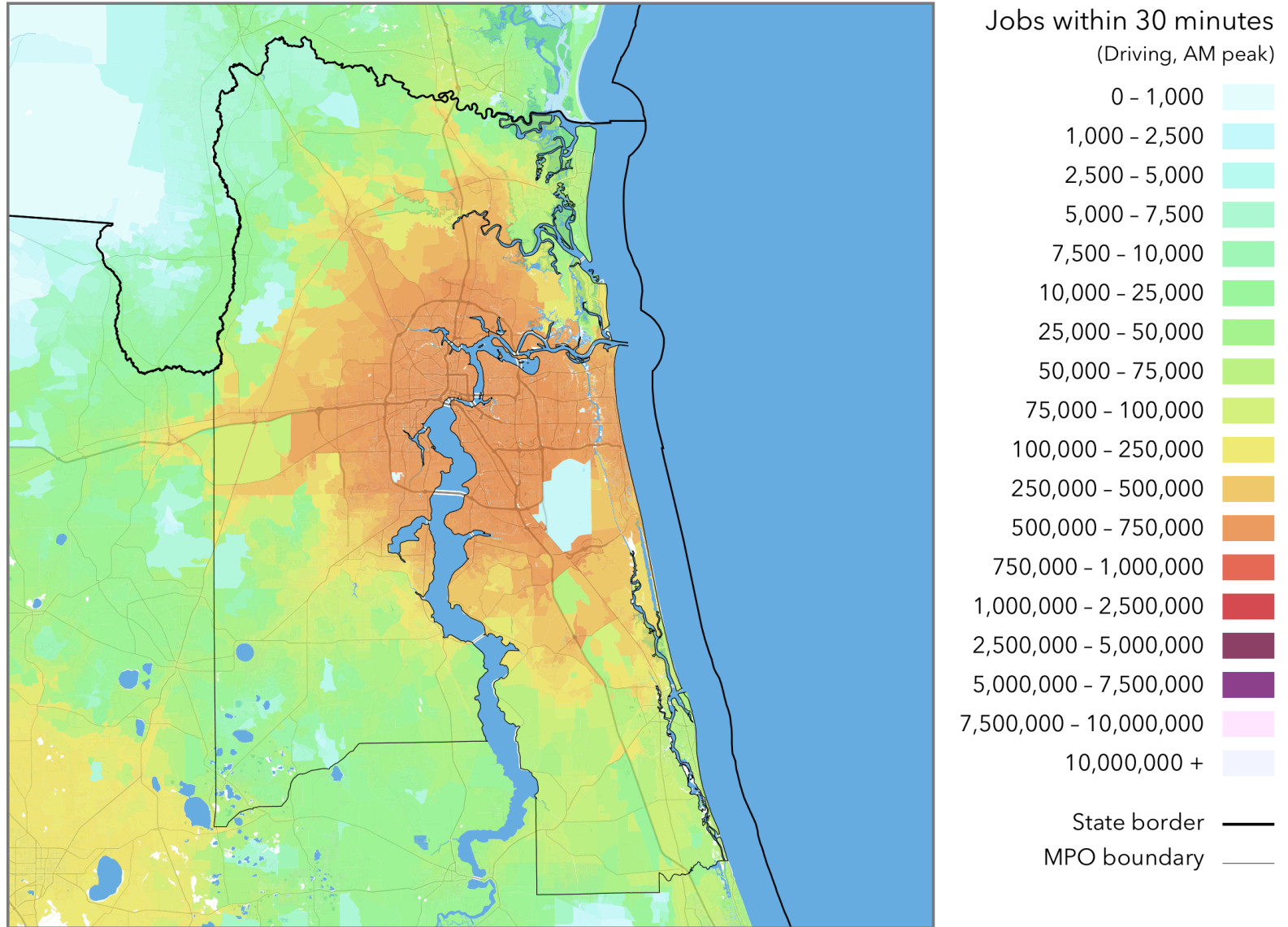


## Average Congestion Impact by Travel Time Threshold (worker-weighted)

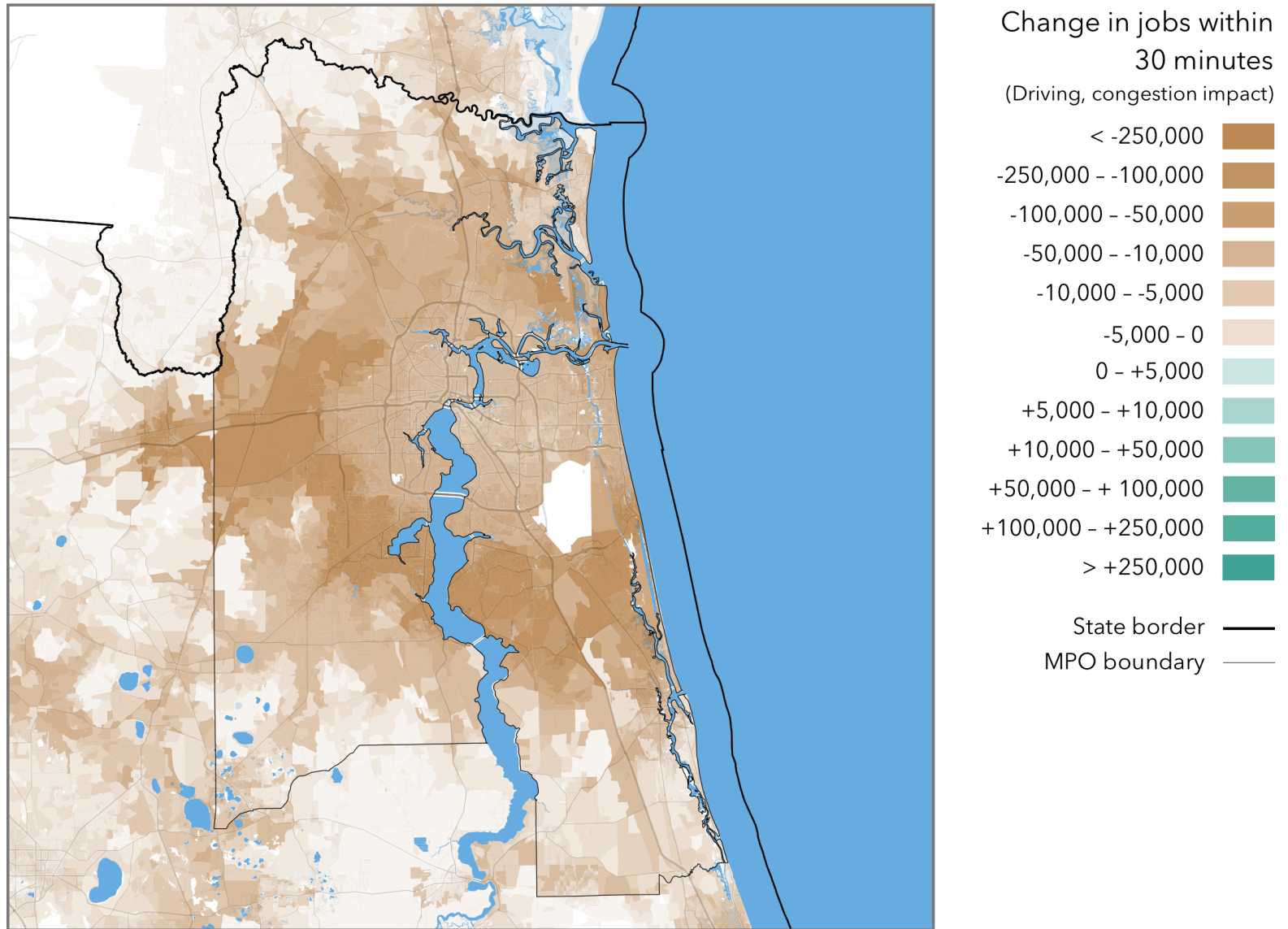
*Higher numbers indicate greater job access loss due to congestion*



# North Florida Transportation Planning Organization



# North Florida Transportation Planning Organization



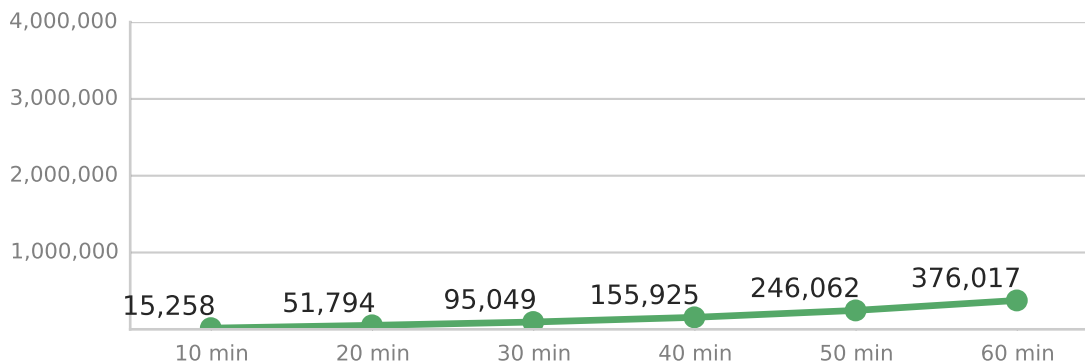
# Ocala - Marion County Transportation Planning Organization

Job Accessibility Results – Auto, 2016

Total Jobs	92,214
Average Job Density (per mi <sup>2</sup> )	143
Total Workers	108,168
Average Worker Density (per mi <sup>2</sup> )	168

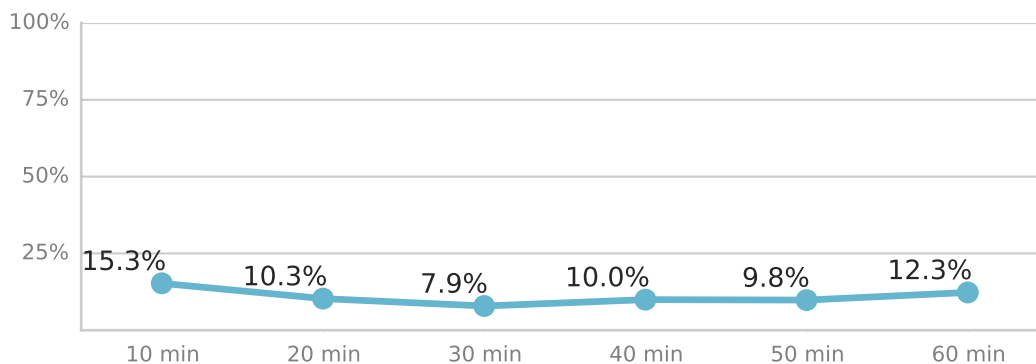
*Job and worker totals are based on LEHD estimates and may not match other sources.*

## Average Job Accessibility by Travel Time Threshold (worker-weighted)

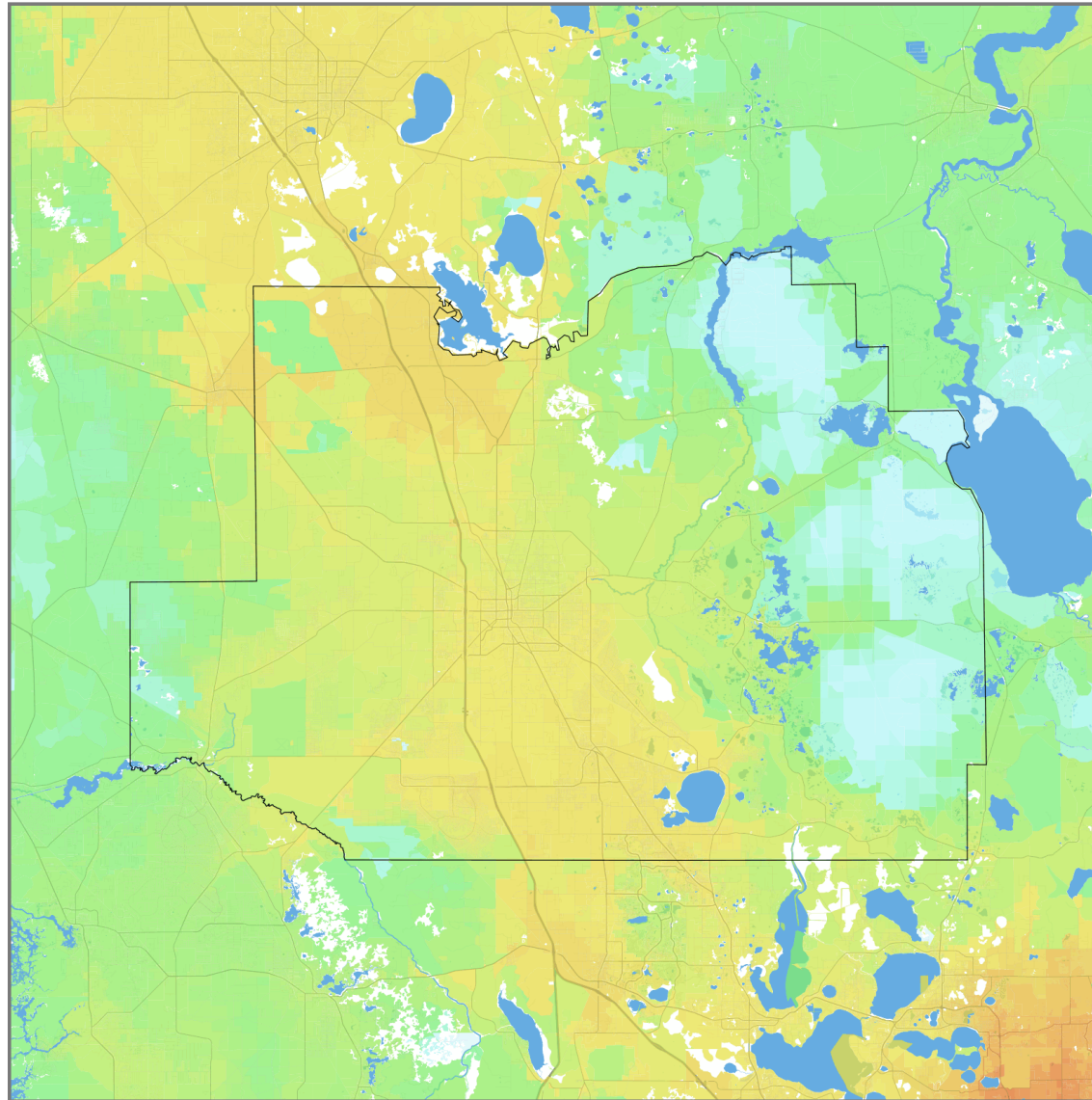


## Average Congestion Impact by Travel Time Threshold (worker-weighted)

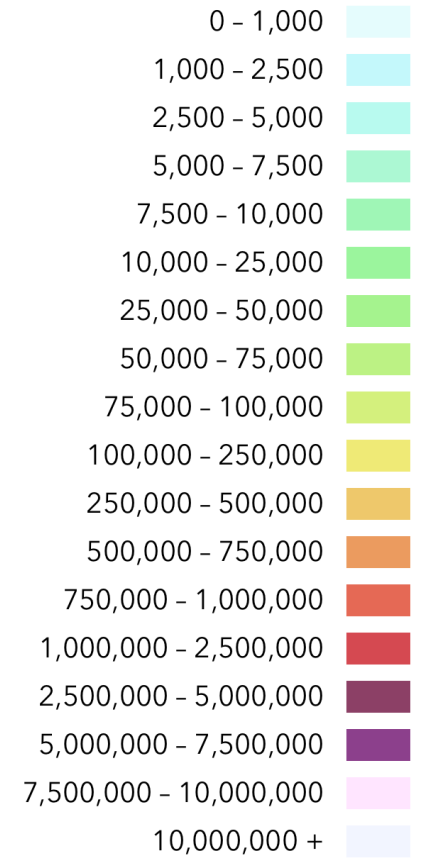
*Higher numbers indicate greater job access loss due to congestion*



# Ocala - Marion County Transportation Planning Organization



Jobs within 30 minutes  
(Driving, AM peak)

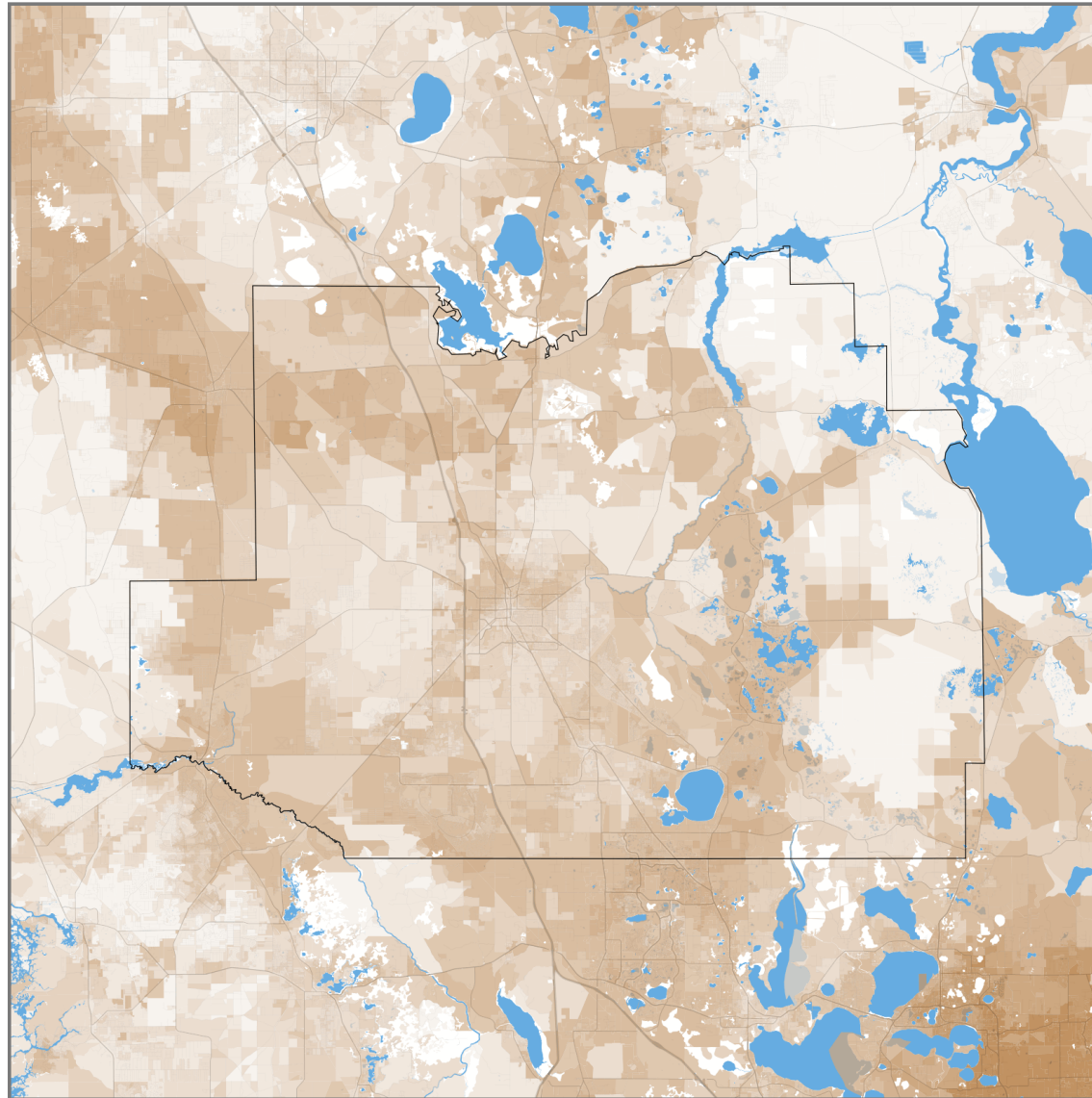


State border —  
MPO boundary —

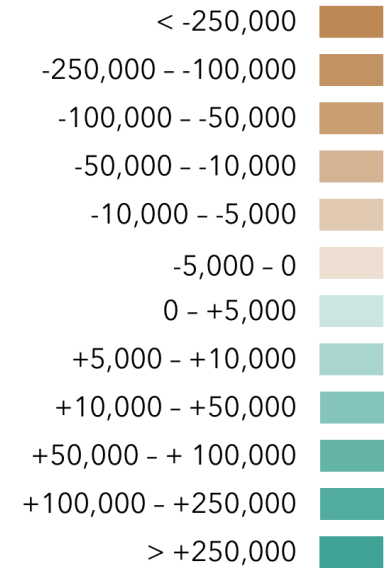


# Ocala - Marion County Transportation Planning Organization

65



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border ———  
MPO boundary ———



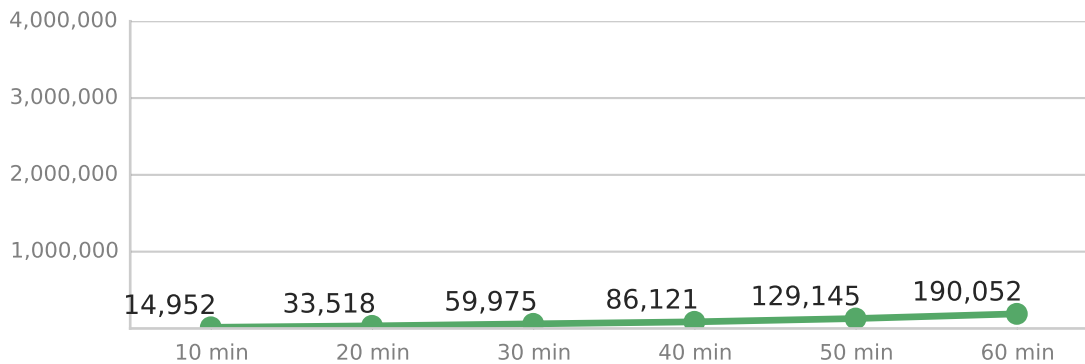
# Okaloosa-Walton Transportation Planning Organization

## Job Accessibility Results – Auto, 2016

Total Jobs	104,371
Average Job Density (per mi <sup>2</sup> )	184
Total Workers	87,290
Average Worker Density (per mi <sup>2</sup> )	154

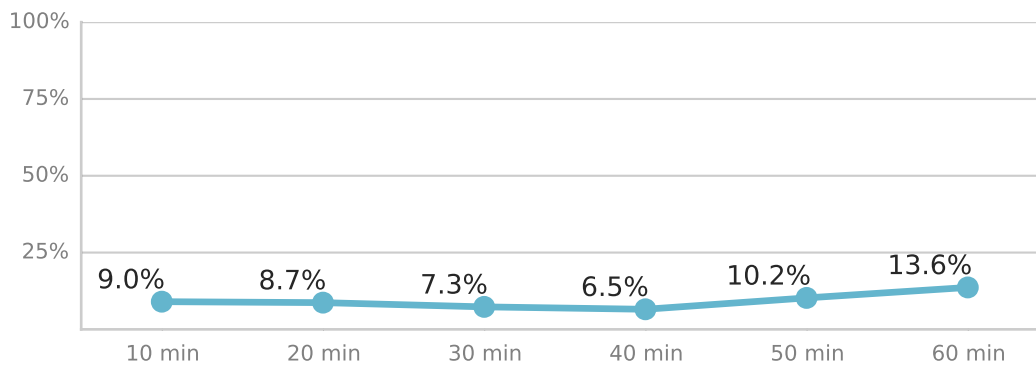
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)



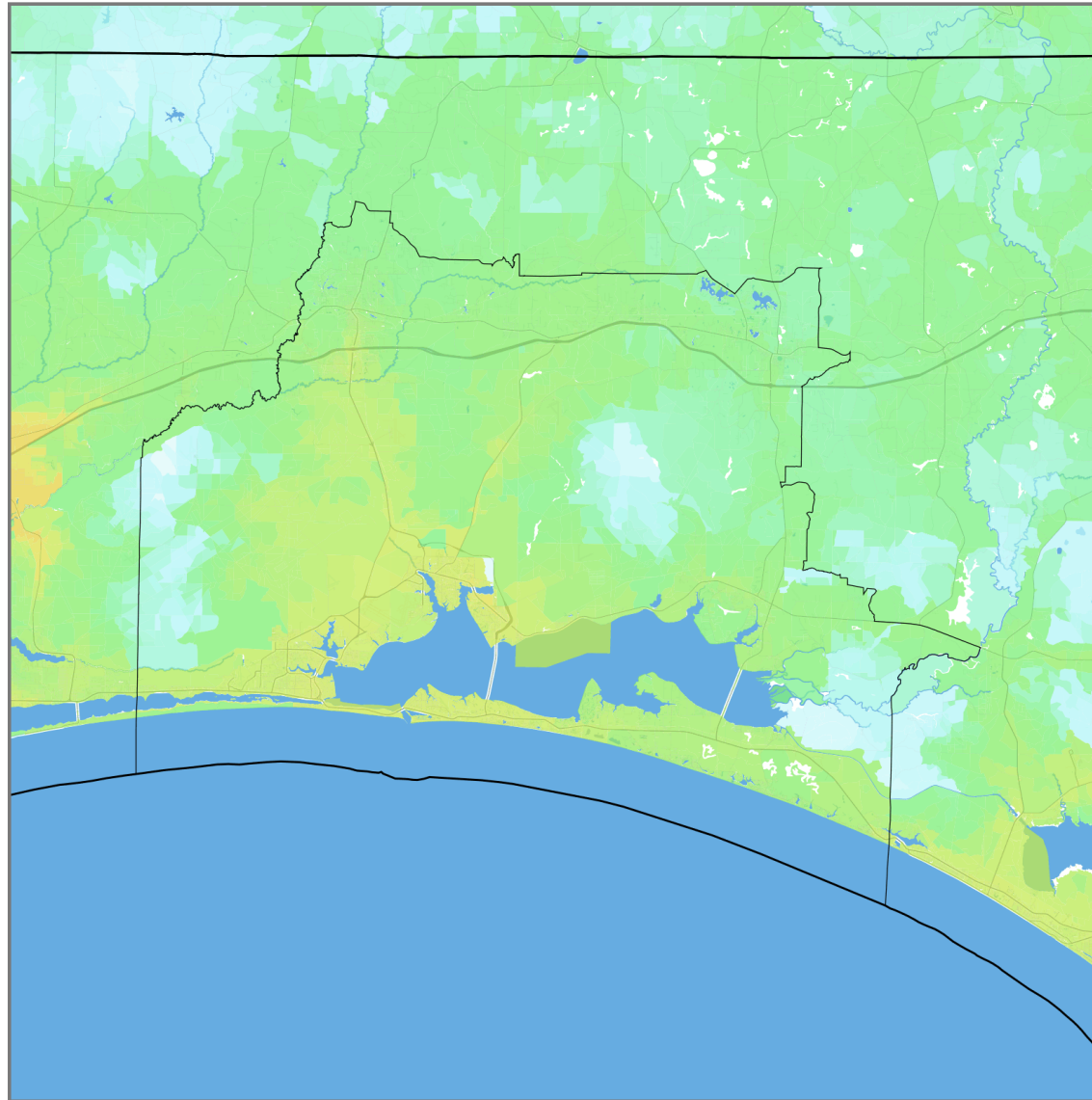
### Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*

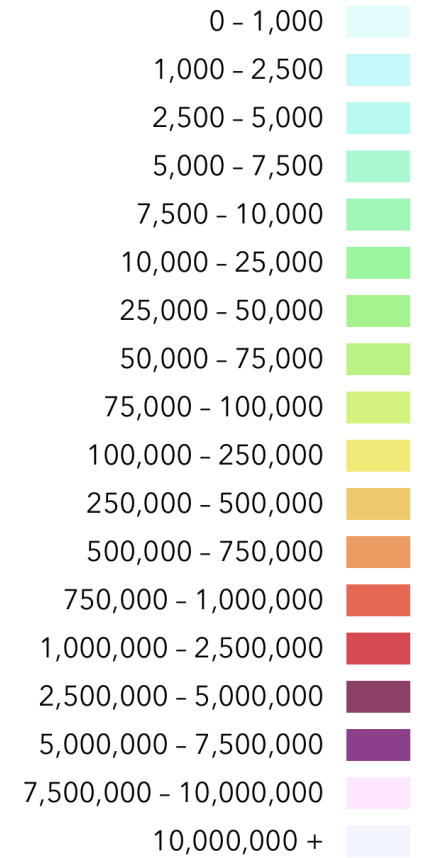


# Okaloosa-Walton Transportation Planning Organization

67



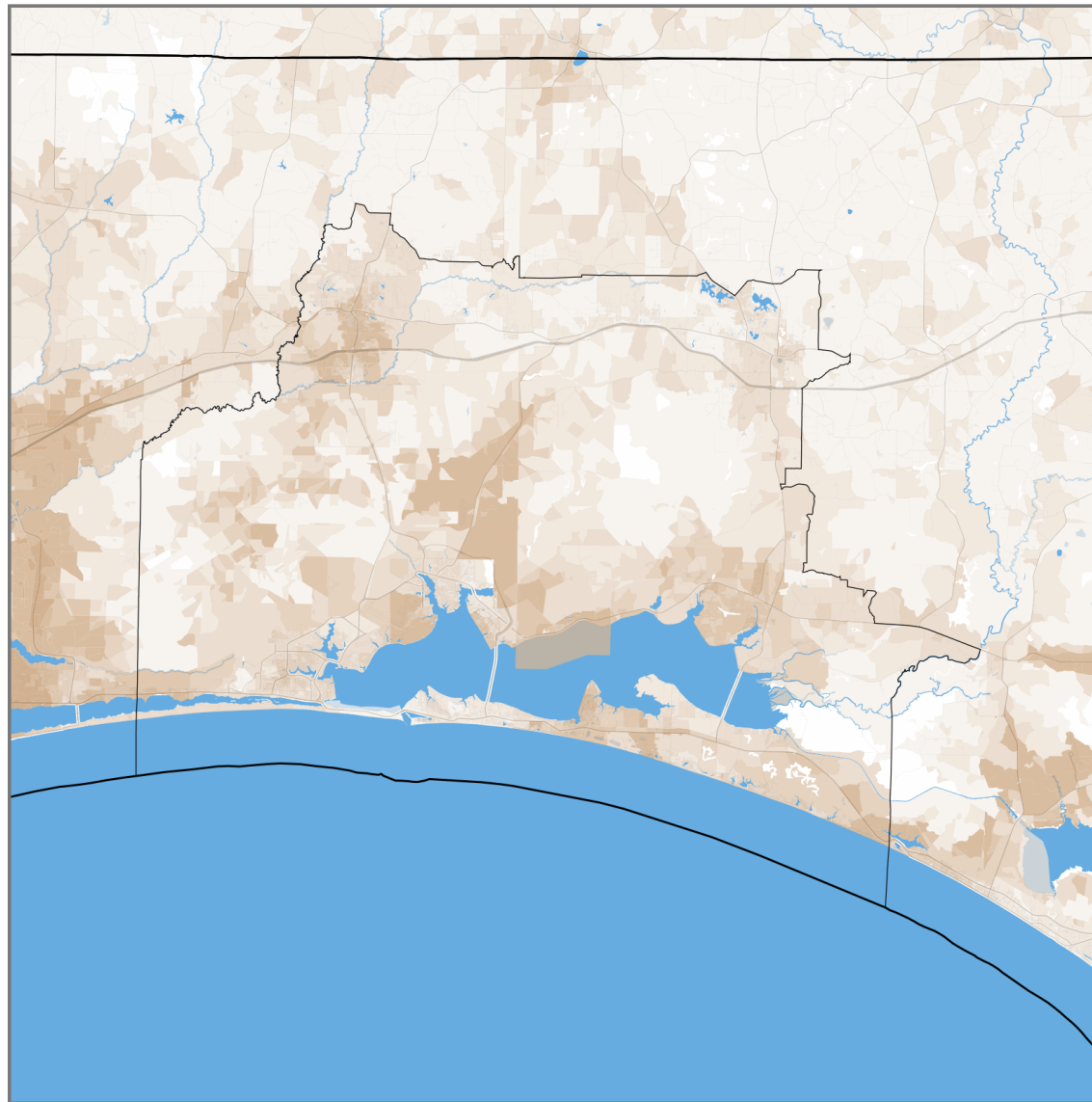
Jobs within 30 minutes  
(Driving, AM peak)



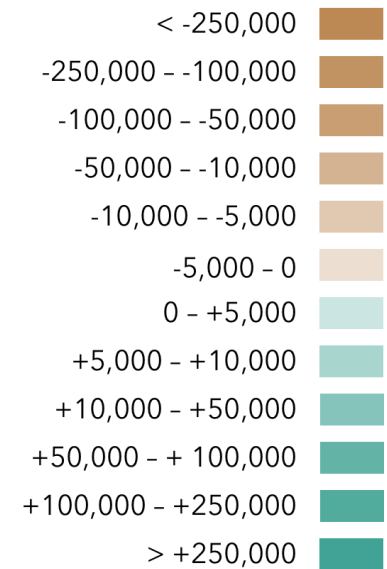
State border ———  
MPO boundary ———

# Okaloosa-Walton Transportation Planning Organization

89



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border

MPO boundary

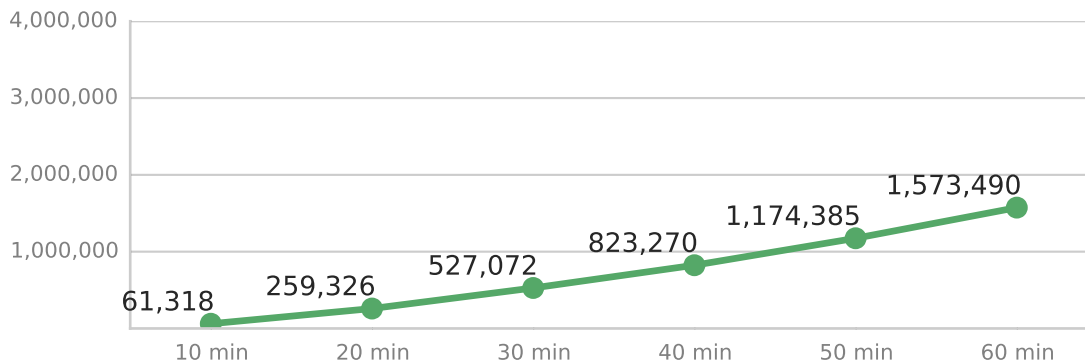
# Palm Beach MPO

Job Accessibility Results – Auto, 2016

Total Jobs	549,830
Average Job Density (per mi <sup>2</sup> )	719
Total Workers	532,683
Average Worker Density (per mi <sup>2</sup> )	696

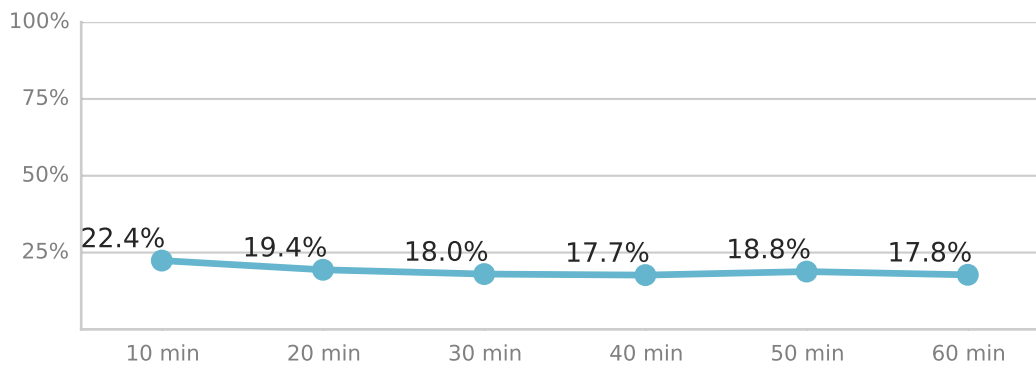
*Job and worker totals are based on LEHD estimates and may not match other sources.*

## Average Job Accessibility by Travel Time Threshold (worker-weighted)



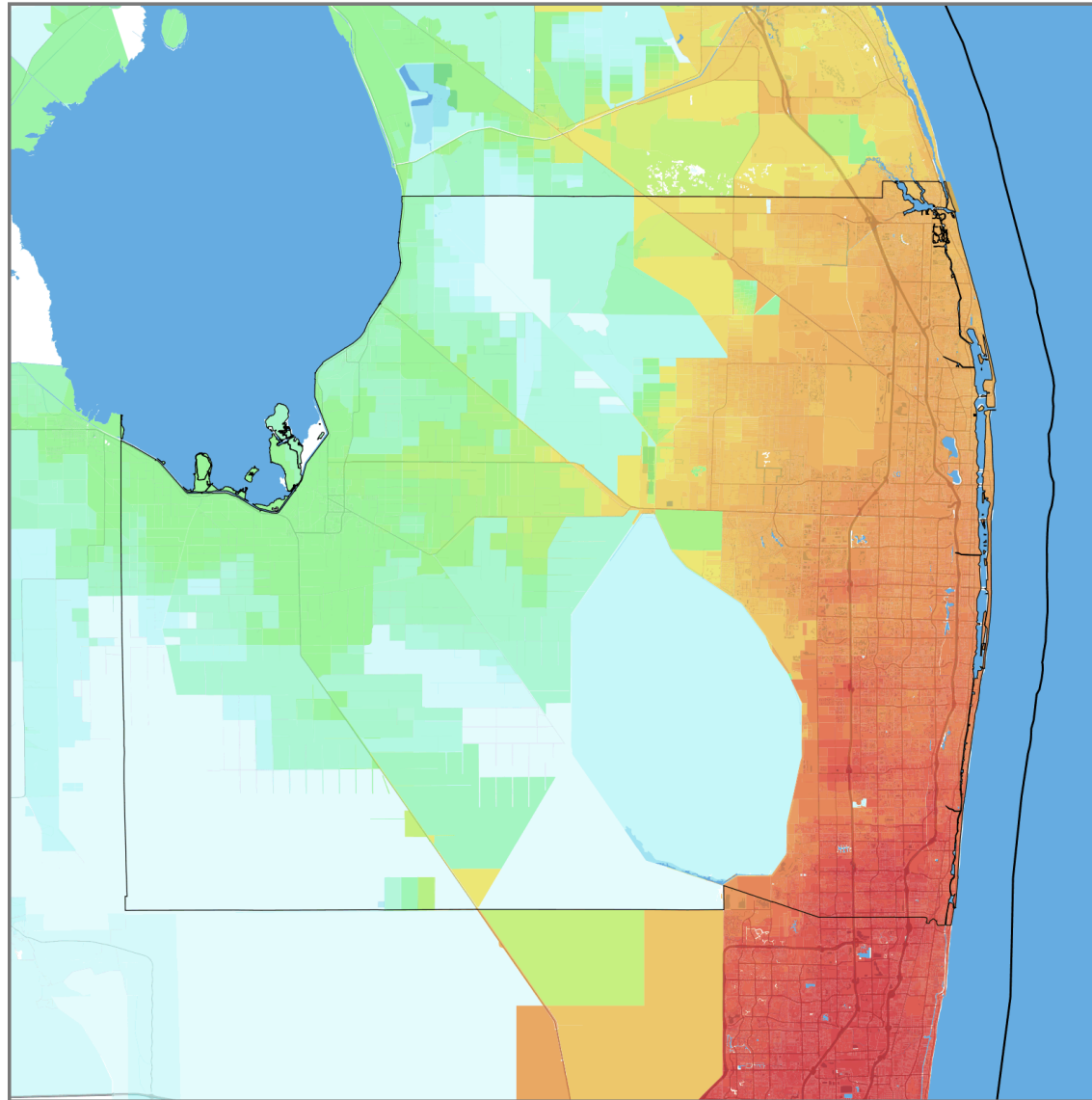
## Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*

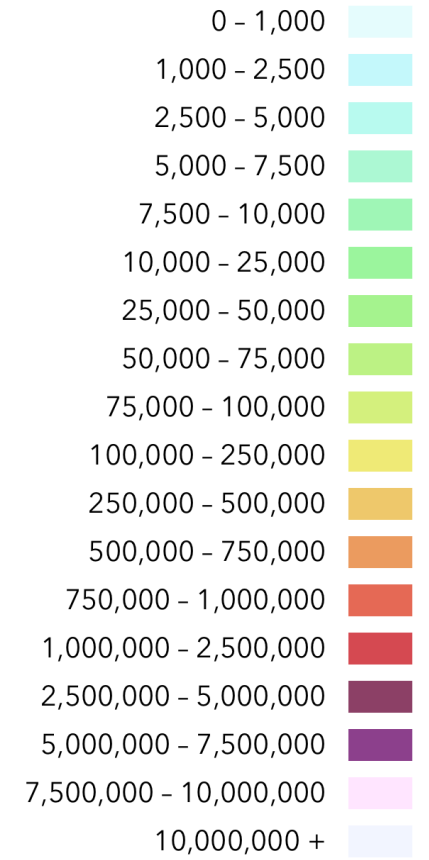


# Palm Beach MPO

70



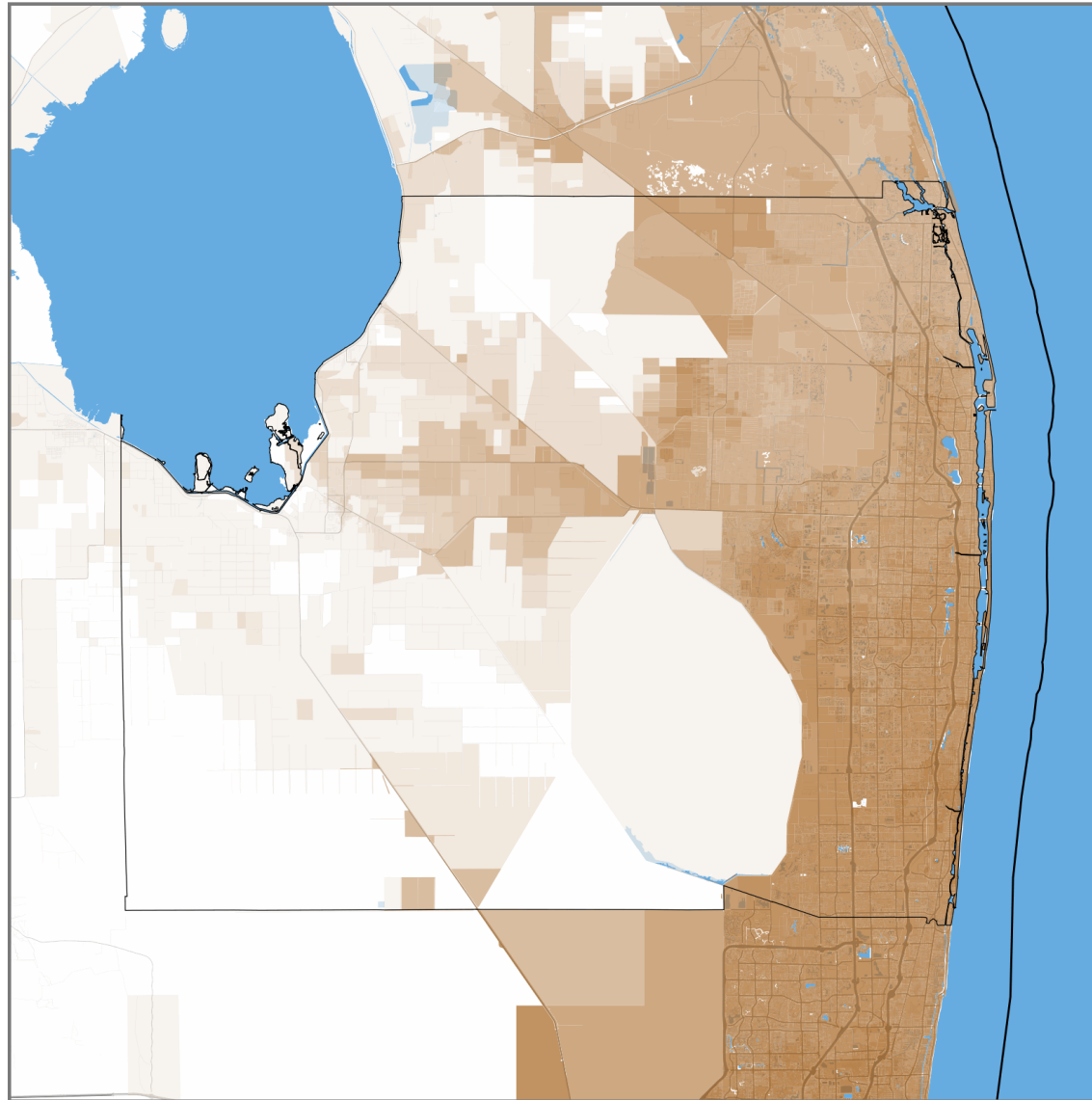
Jobs within 30 minutes  
(Driving, AM peak)



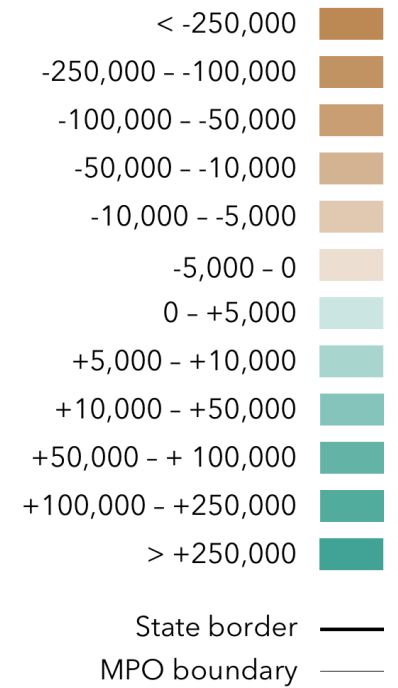
State border

MPO boundary

# Palm Beach MPO



Change in jobs within  
30 minutes  
(Driving, congestion impact)





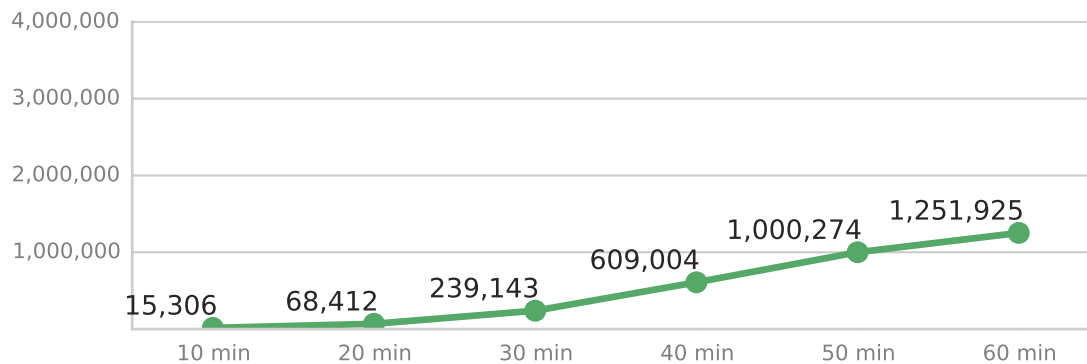
# Pasco County MPO

Job Accessibility Results – Auto, 2016

Total Jobs	107,865
Average Job Density (per mi <sup>2</sup> )	364
Total Workers	178,181
Average Worker Density (per mi <sup>2</sup> )	601

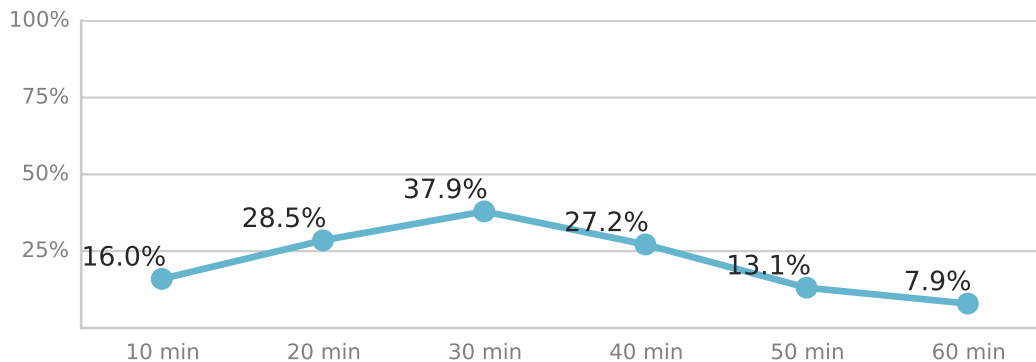
*Job and worker totals are based on LEHD estimates and may not match other sources.*

## Average Job Accessibility by Travel Time Threshold (worker-weighted)



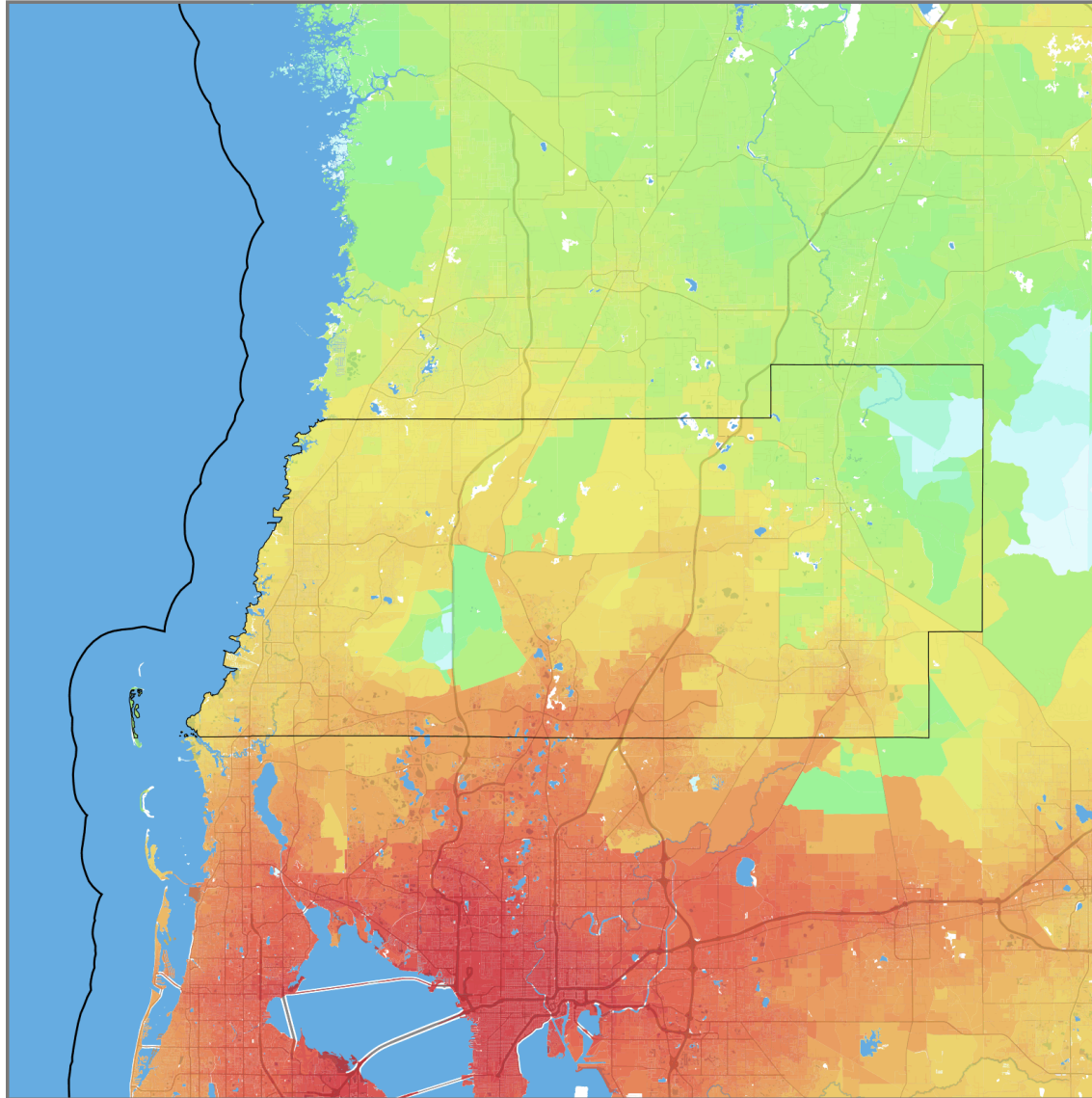
## Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*

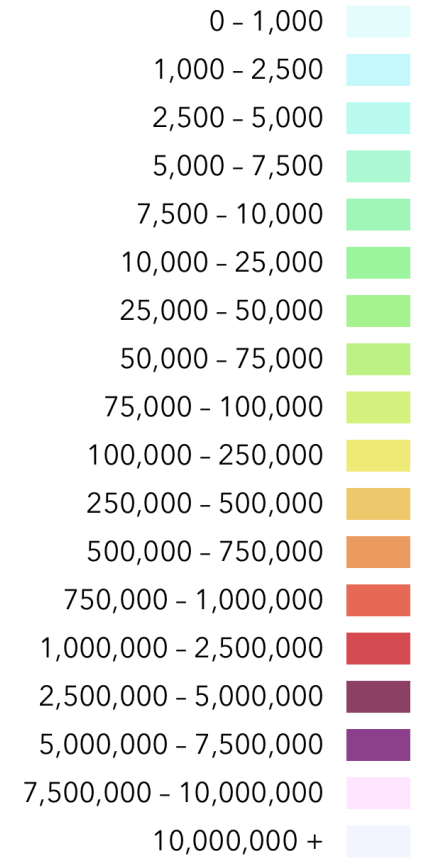


# Pasco County MPO

73



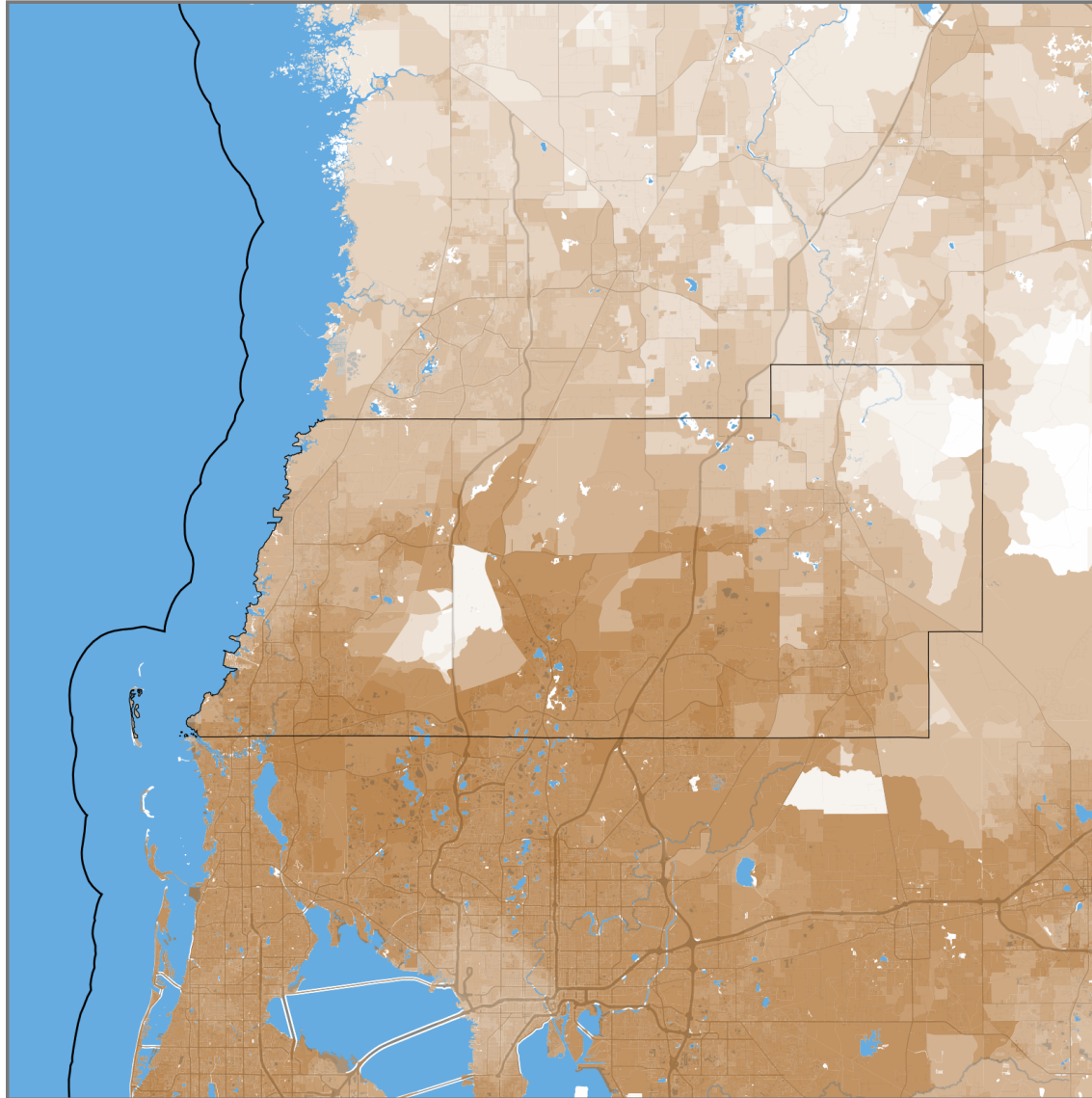
Jobs within 30 minutes  
(Driving, AM peak)



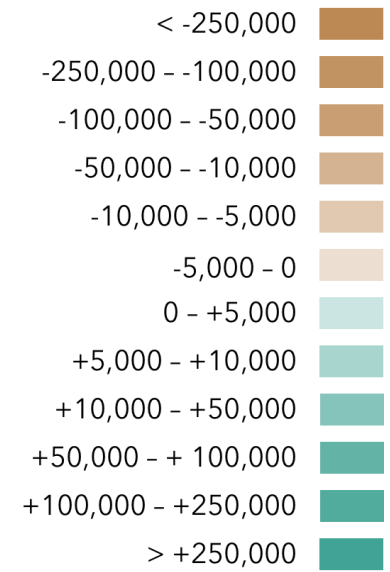
State border

MPO boundary

# Pasco County MPO



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border

MPO boundary

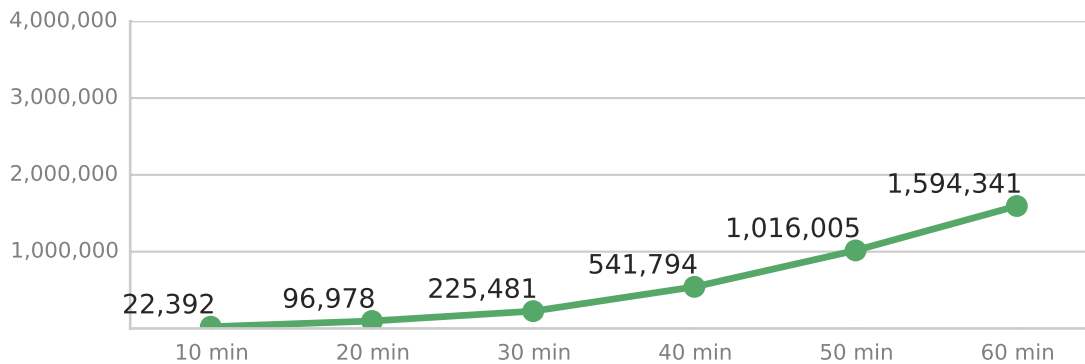
# Polk County Transportation Planning Organization

## Job Accessibility Results – Auto, 2016

Total Jobs	209,496
Average Job Density (per mi <sup>2</sup> )	269
Total Workers	245,026
Average Worker Density (per mi <sup>2</sup> )	315

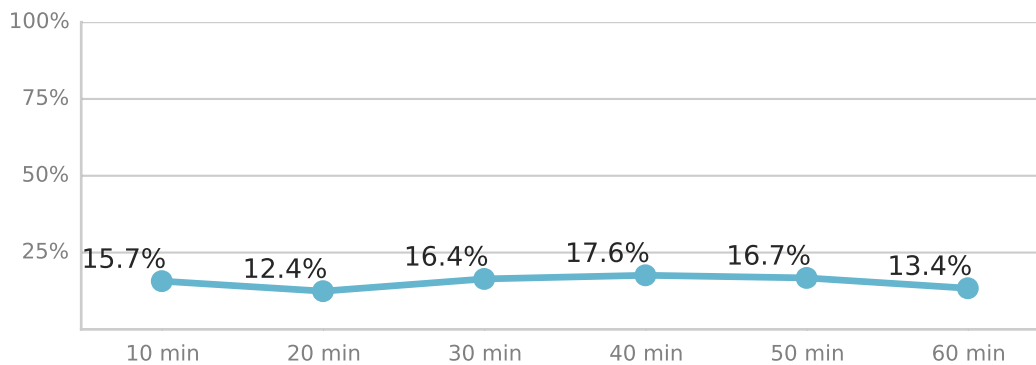
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)

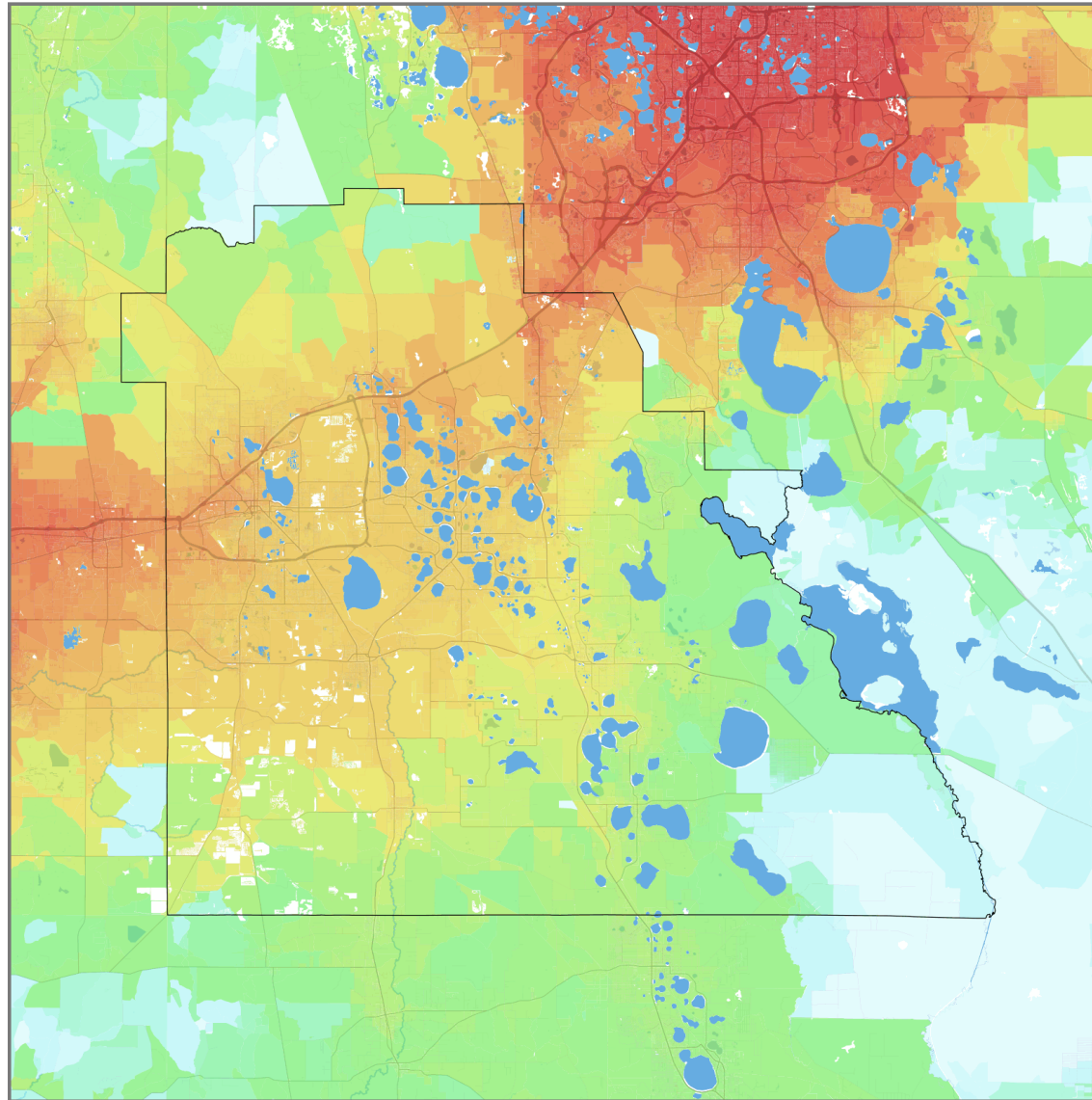


### Average Congestion Impact by Travel Time Threshold (worker-weighted)

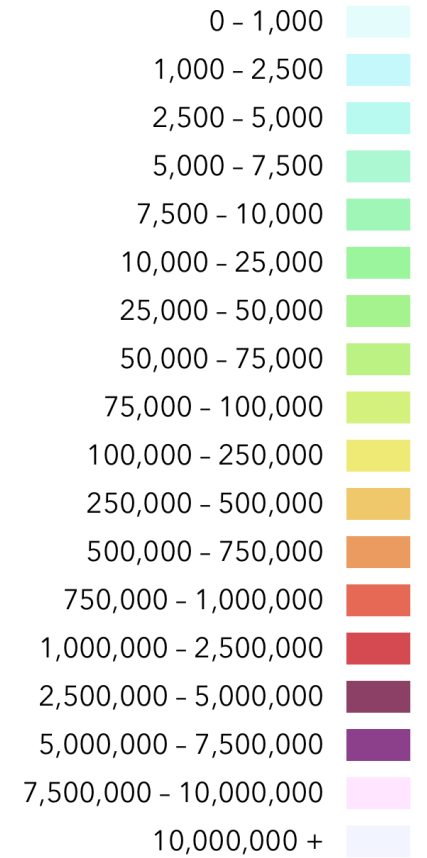
*Higher numbers indicate greater job access loss due to congestion*



# Polk County Transportation Planning Organization



Jobs within 30 minutes  
(Driving, AM peak)

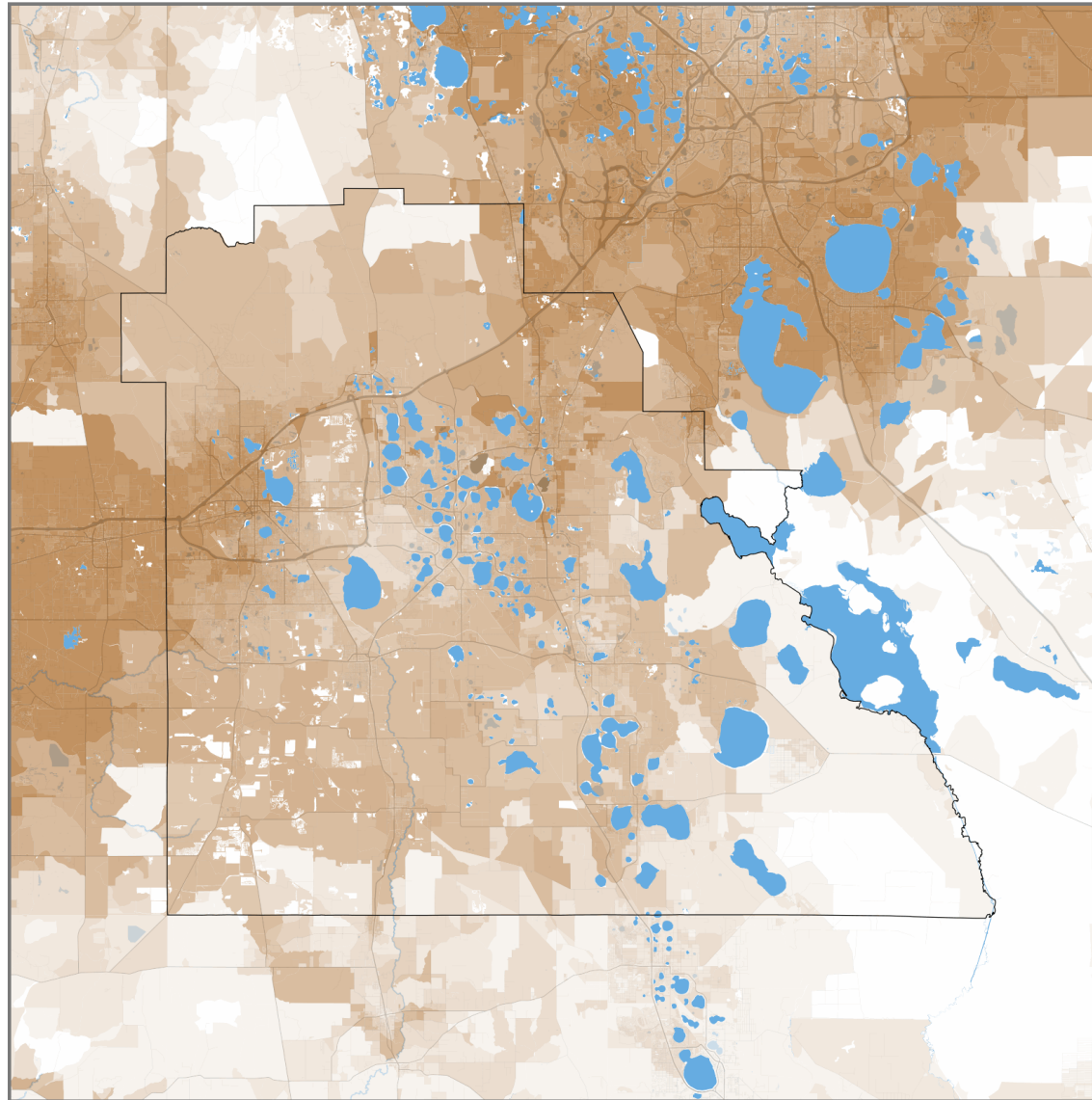


State border

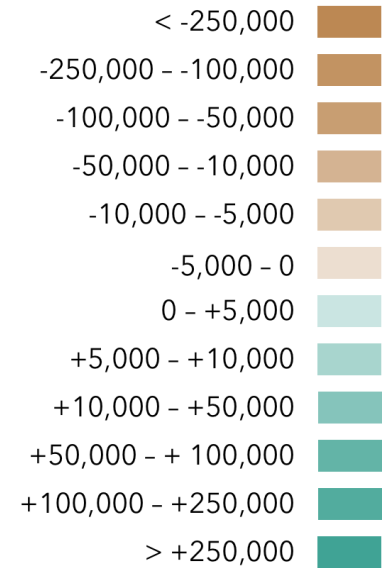
MPO boundary



# Polk County Transportation Planning Organization



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border

MPO boundary



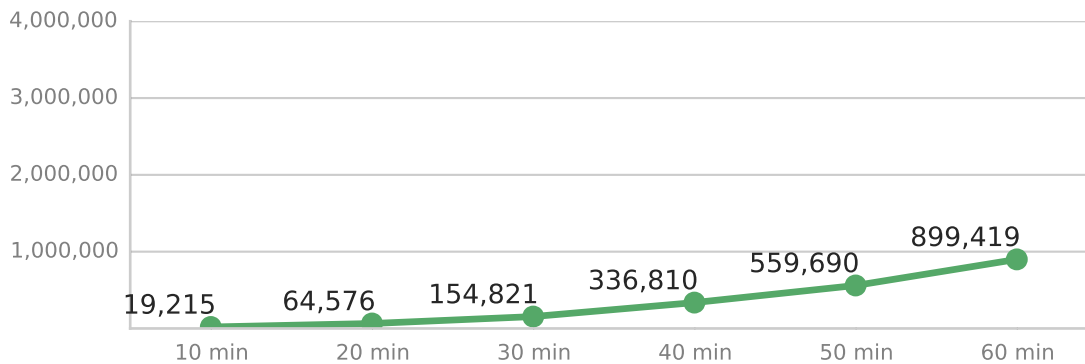
# River to Sea Transportation Planning Organization

Job Accessibility Results – Auto, 2016

Total Jobs	174,481
Average Job Density (per mi <sup>2</sup> )	332
Total Workers	225,468
Average Worker Density (per mi <sup>2</sup> )	430

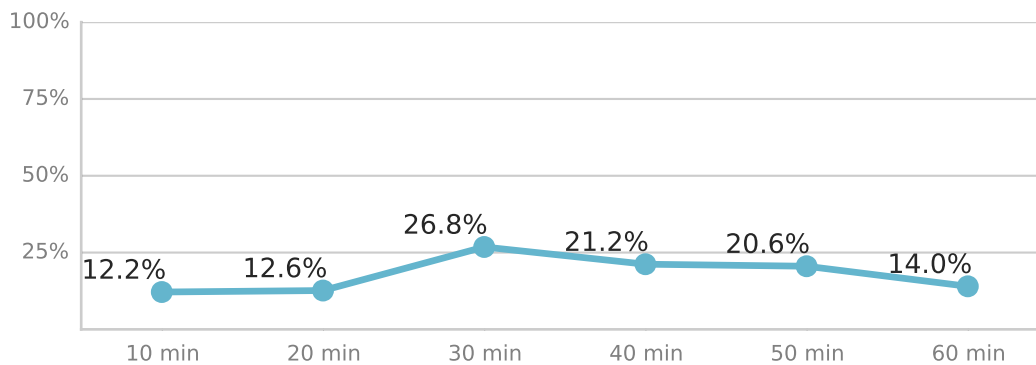
*Job and worker totals are based on LEHD estimates and may not match other sources.*

## Average Job Accessibility by Travel Time Threshold (worker-weighted)



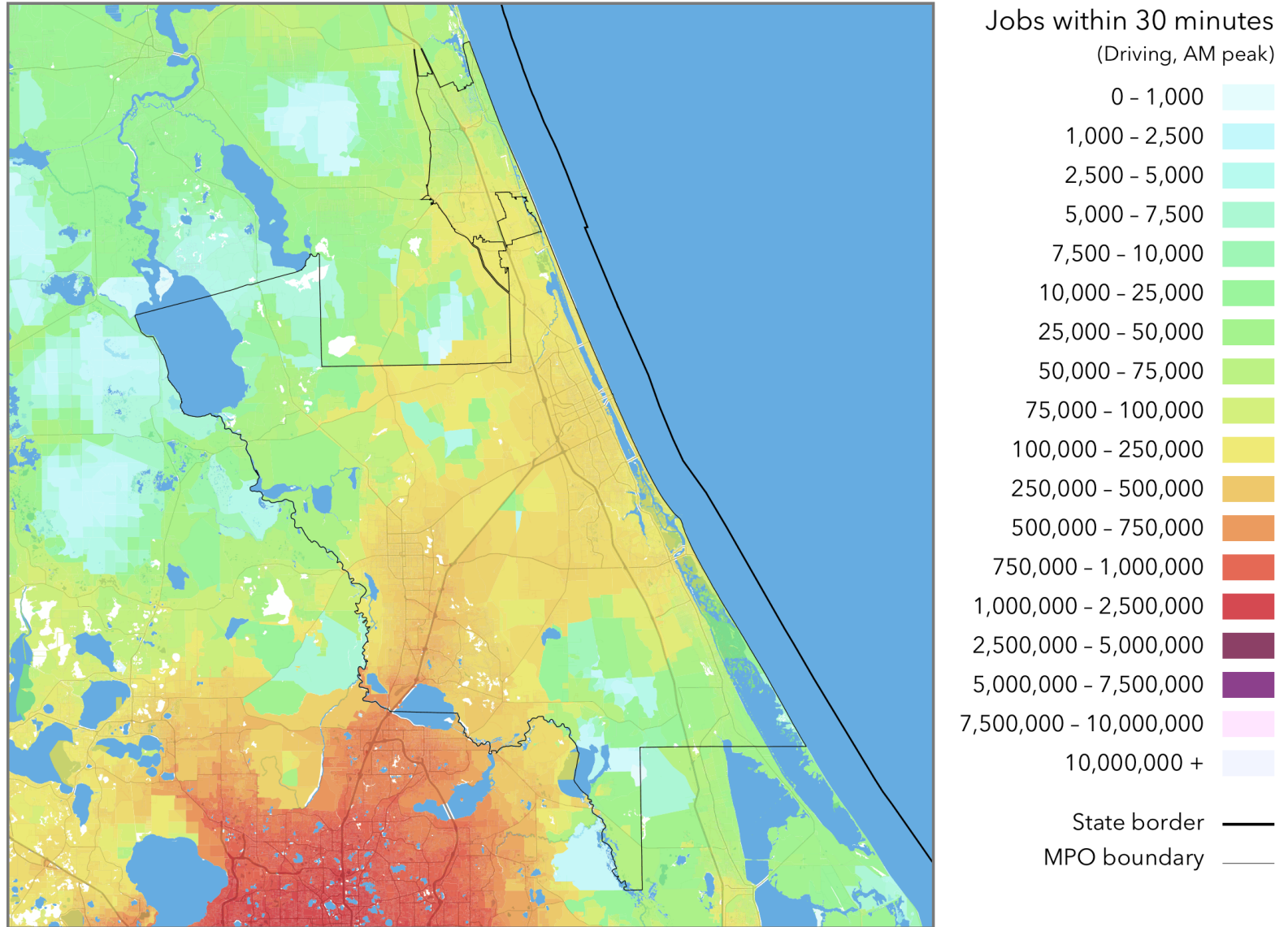
## Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*



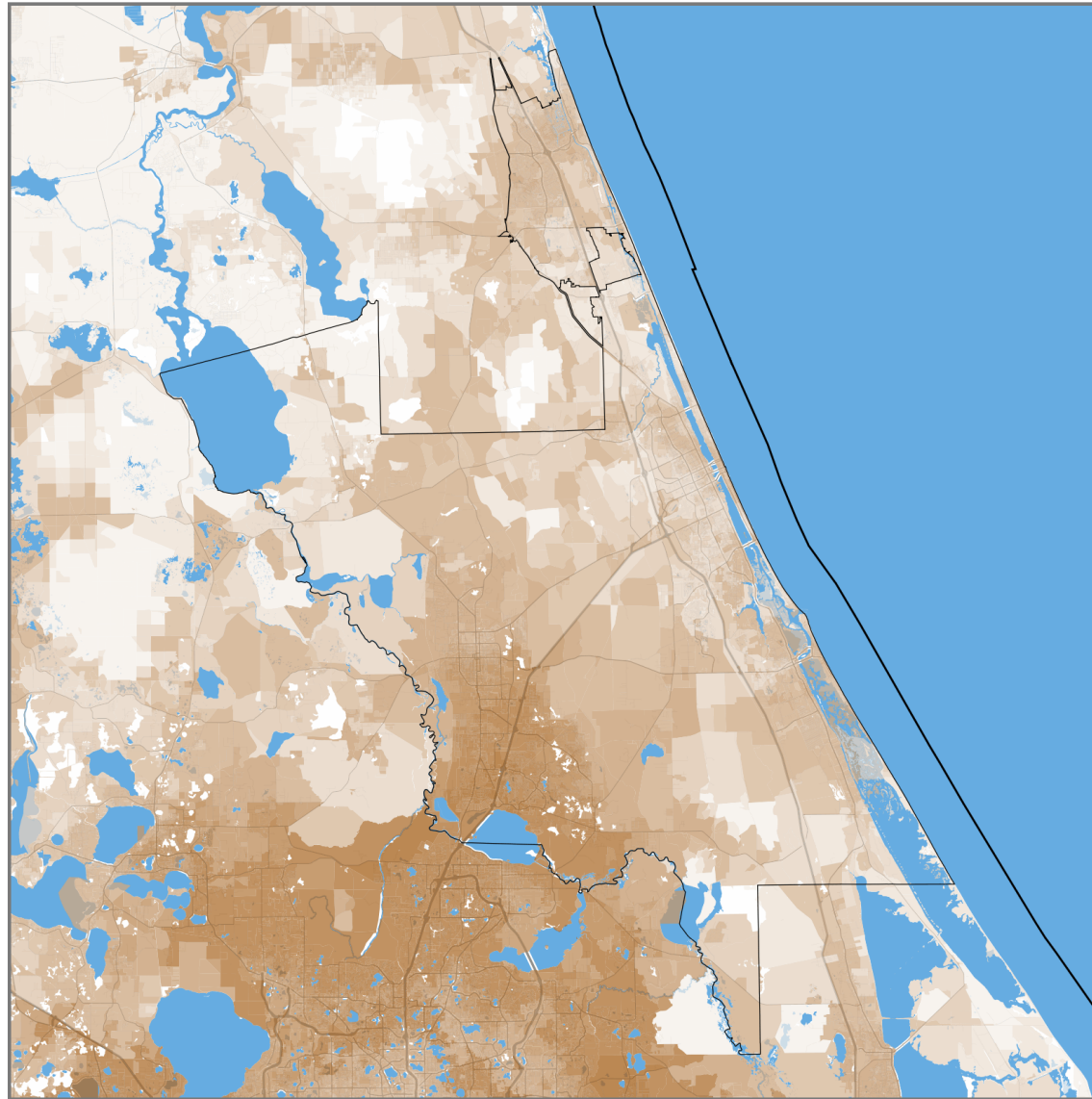
# River to Sea Transportation Planning Organization

79

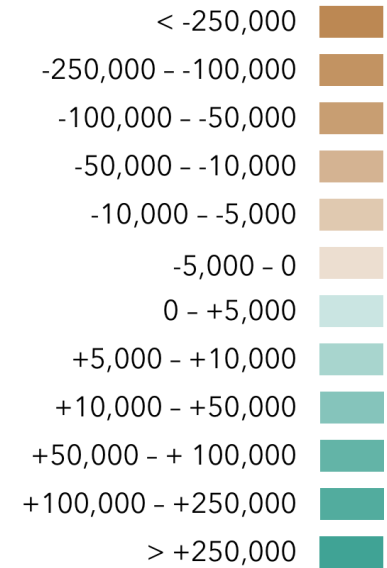


# River to Sea Transportation Planning Organization

80



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border

MPO boundary

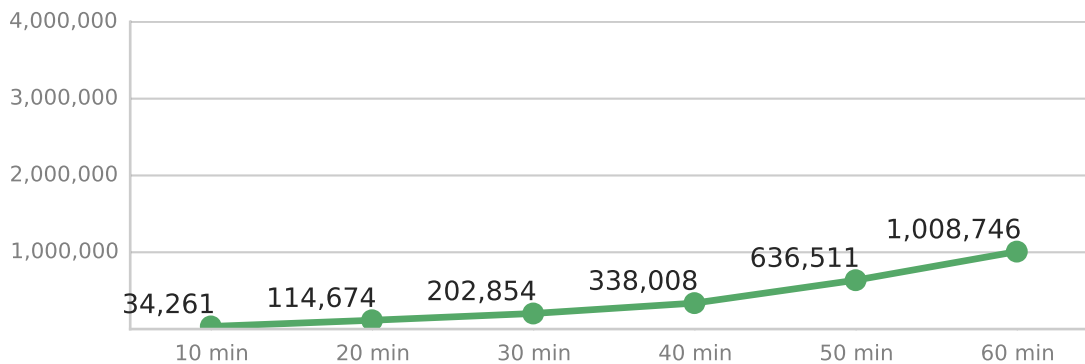
# Sarasota-Manatee MPO

## Job Accessibility Results – Auto, 2016

Total Jobs	253,206
Average Job Density (per mi <sup>2</sup> )	491
Total Workers	269,552
Average Worker Density (per mi <sup>2</sup> )	522

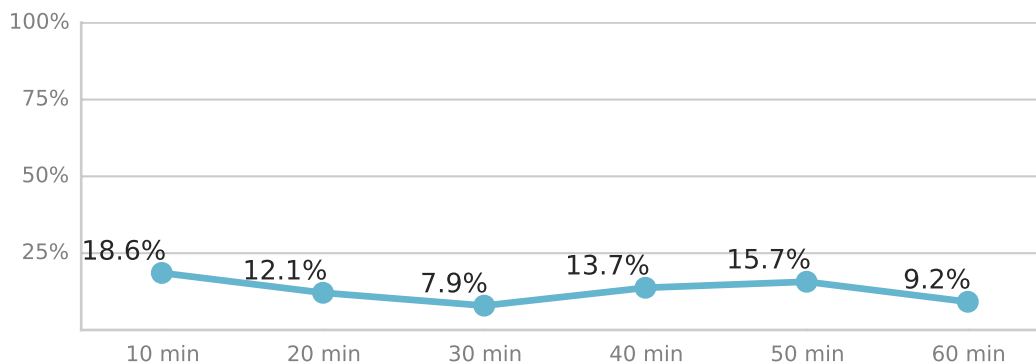
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)

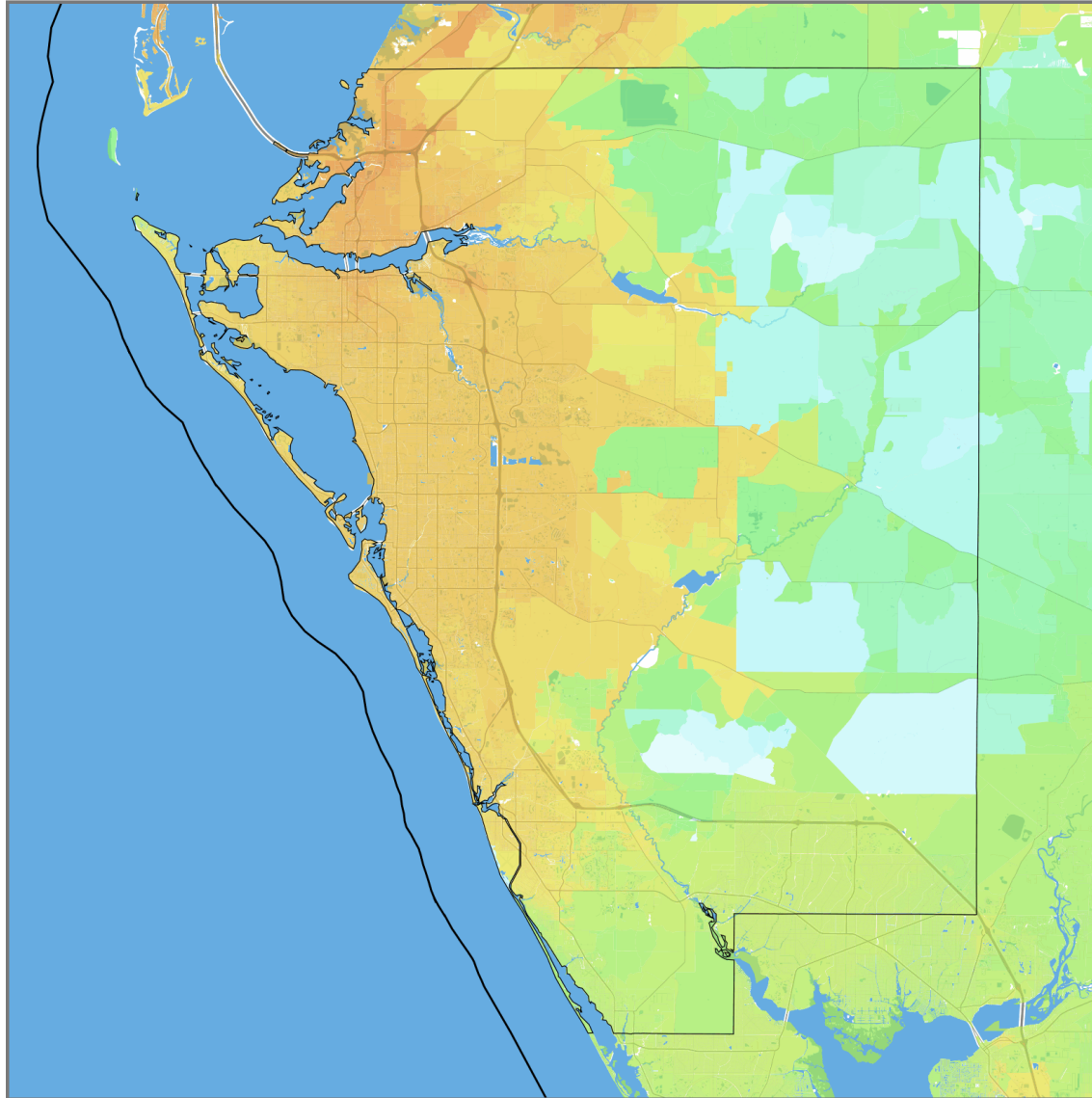


### Average Congestion Impact by Travel Time Threshold (worker-weighted)

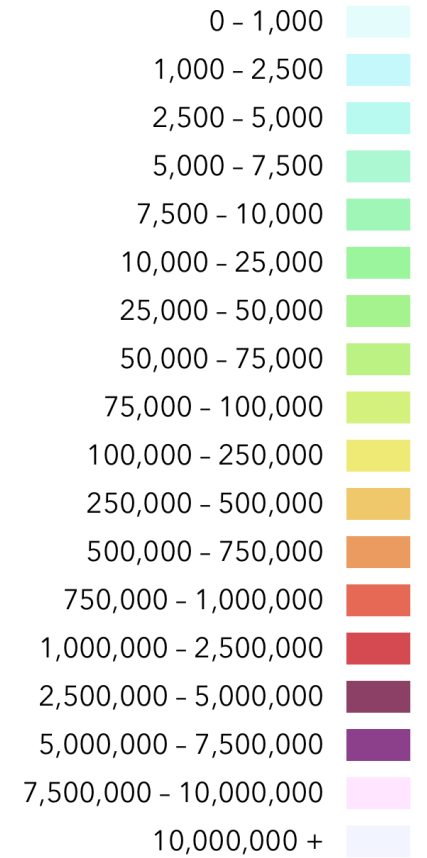
*Higher numbers indicate greater job access loss due to congestion*



# Sarasota-Manatee MPO



Jobs within 30 minutes  
(Driving, AM peak)

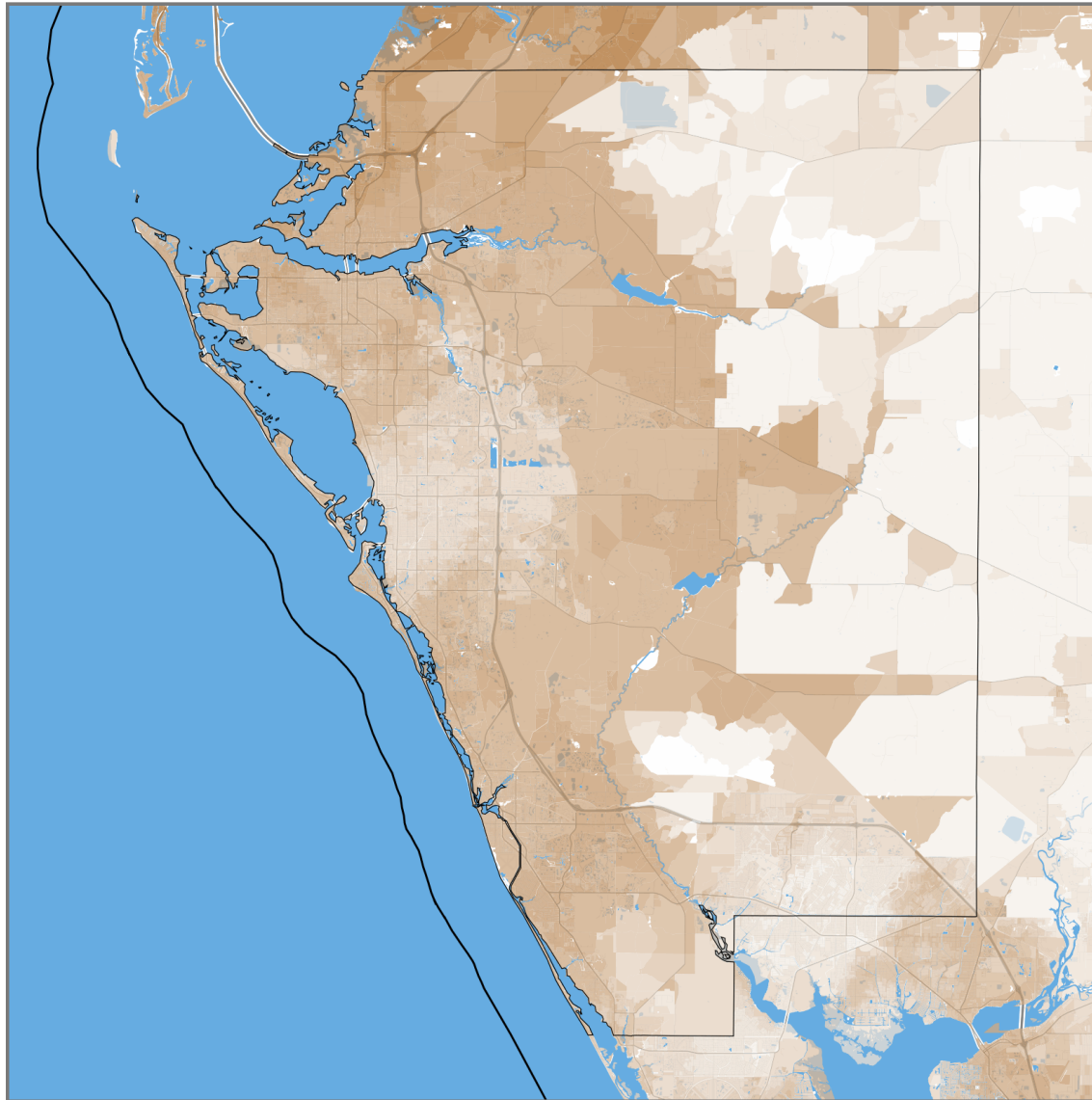


State border

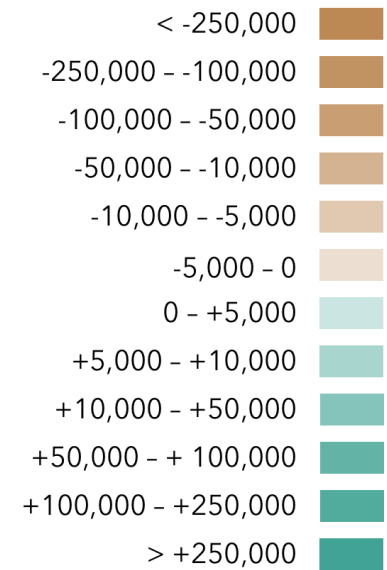
MPO boundary



## Sarasota-Manatee MPO



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border

MPO boundary



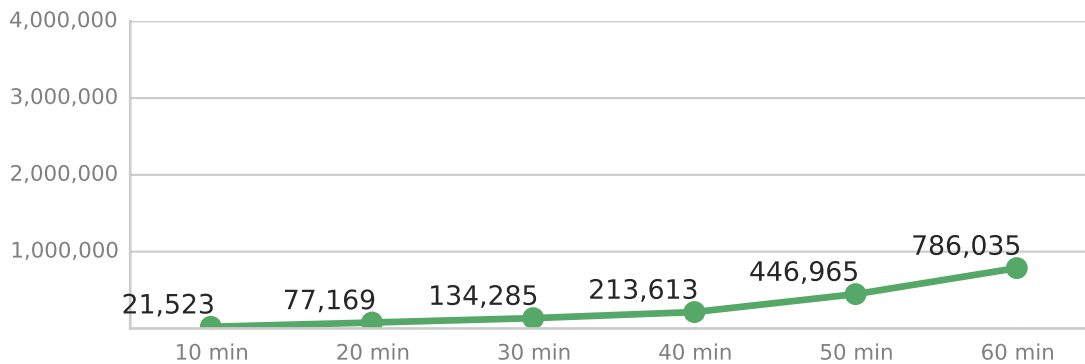
# Space Coast Transportation Planning Organization

## Job Accessibility Results – Auto, 2016

Total Jobs	185,395
Average Job Density (per mi <sup>2</sup> )	449
Total Workers	211,504
Average Worker Density (per mi <sup>2</sup> )	513

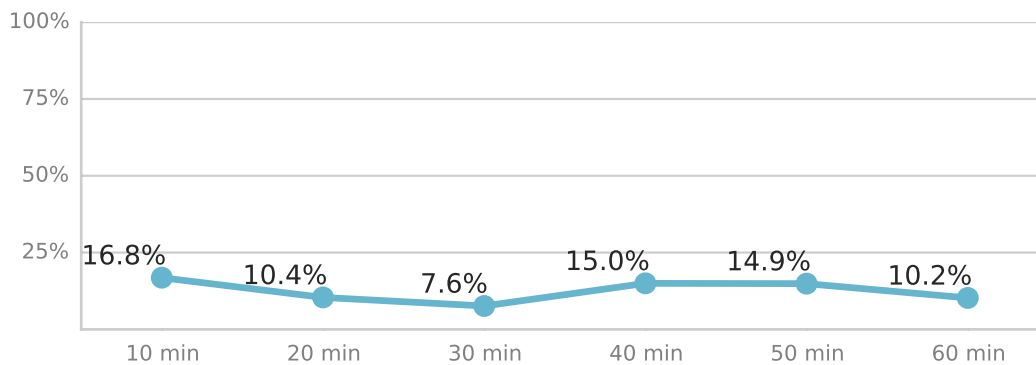
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)



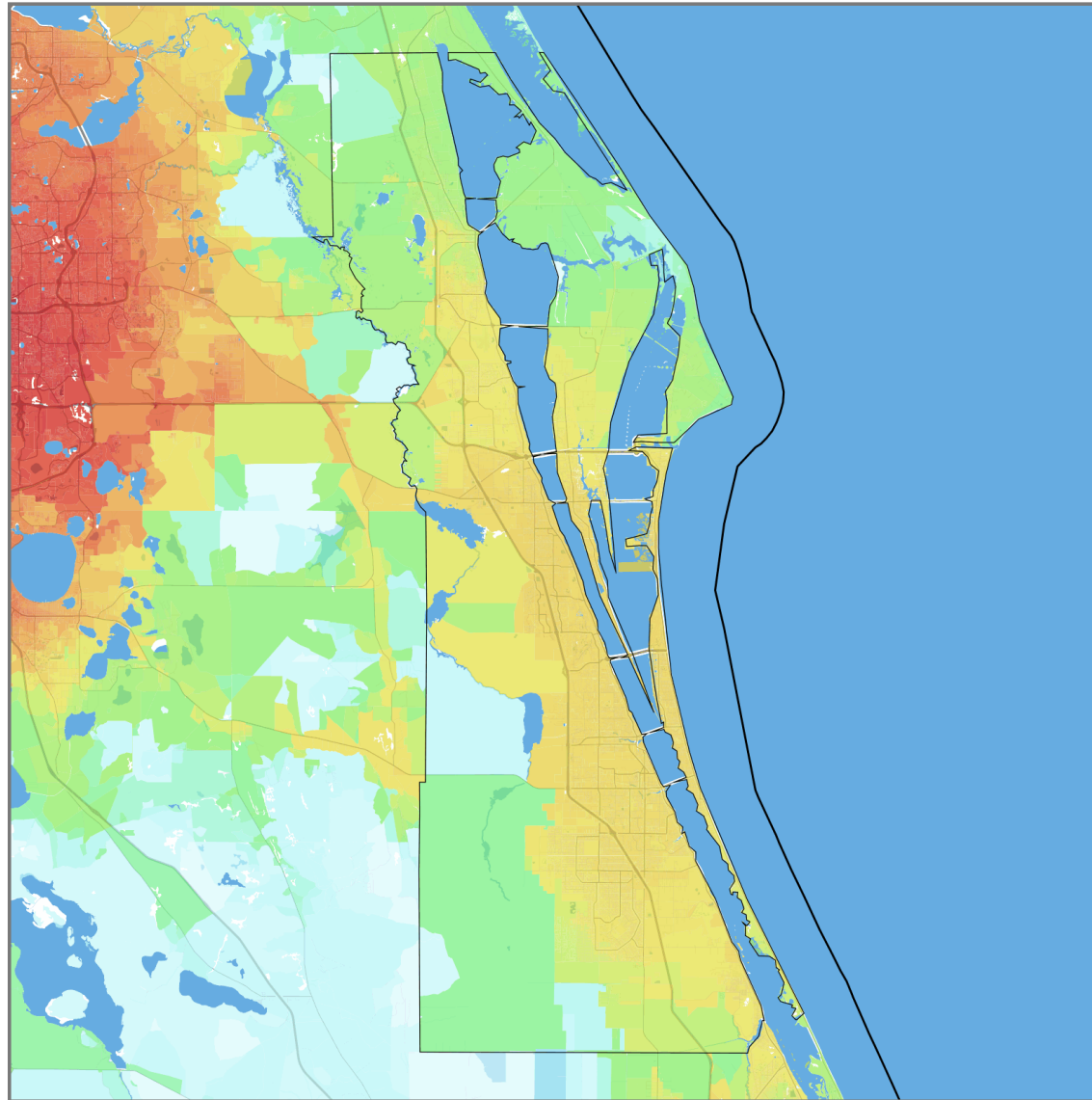
### Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*

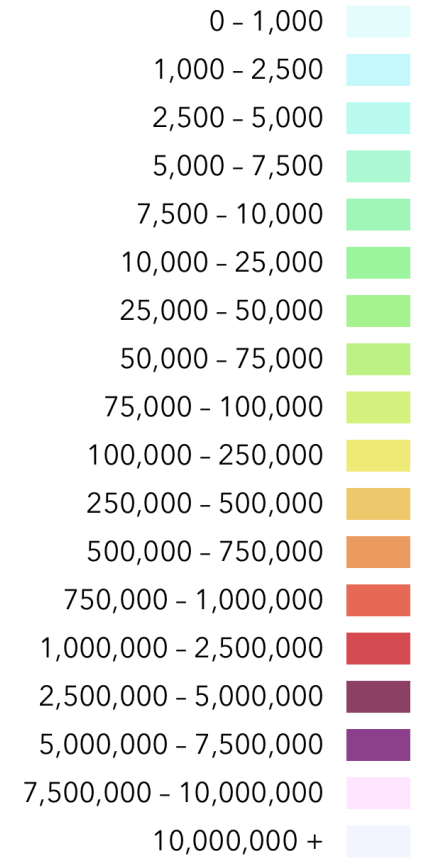


# Space Coast Transportation Planning Organization

85



Jobs within 30 minutes  
(Driving, AM peak)

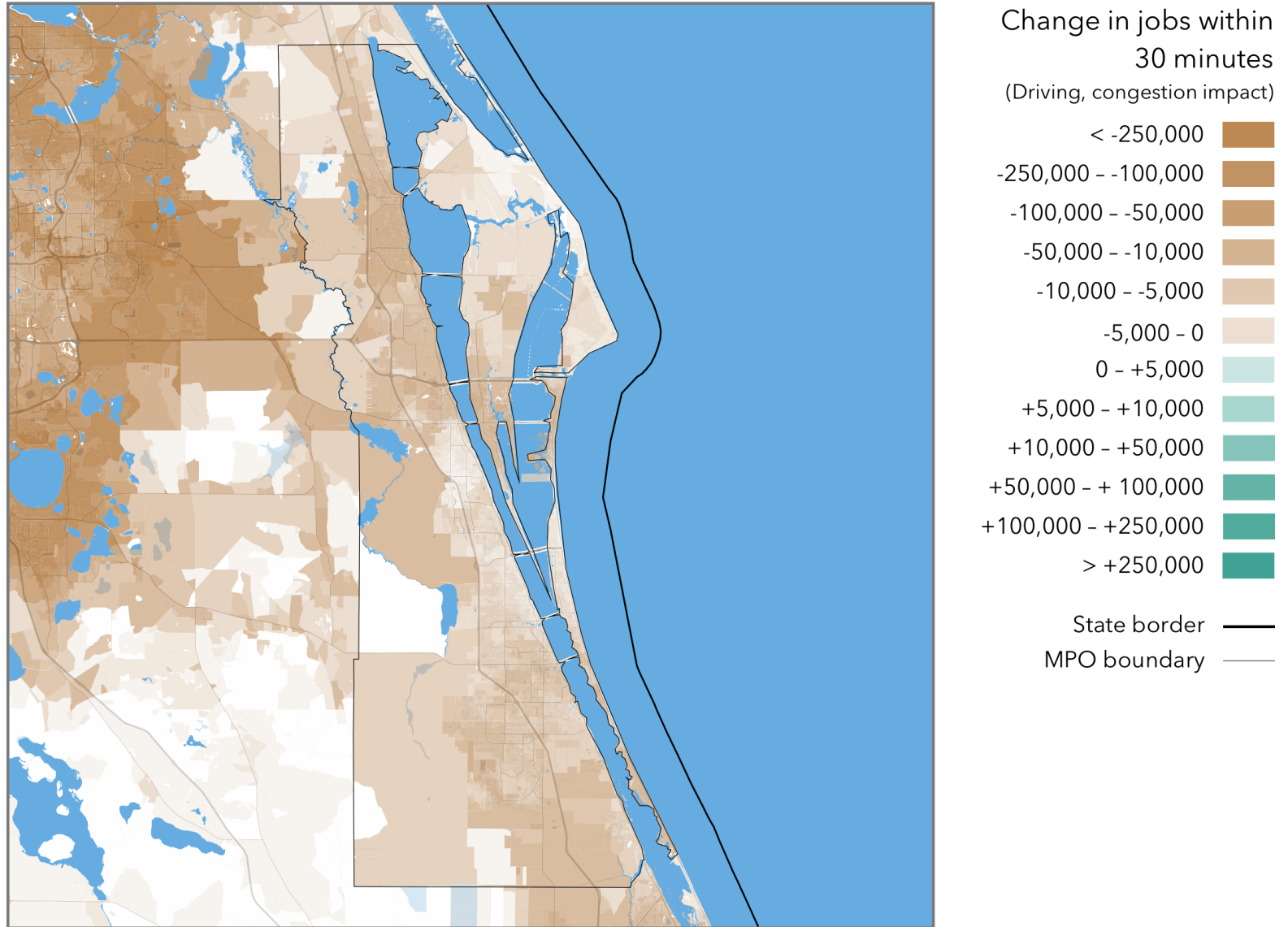


State border

MPO boundary

# Space Coast Transportation Planning Organization

98



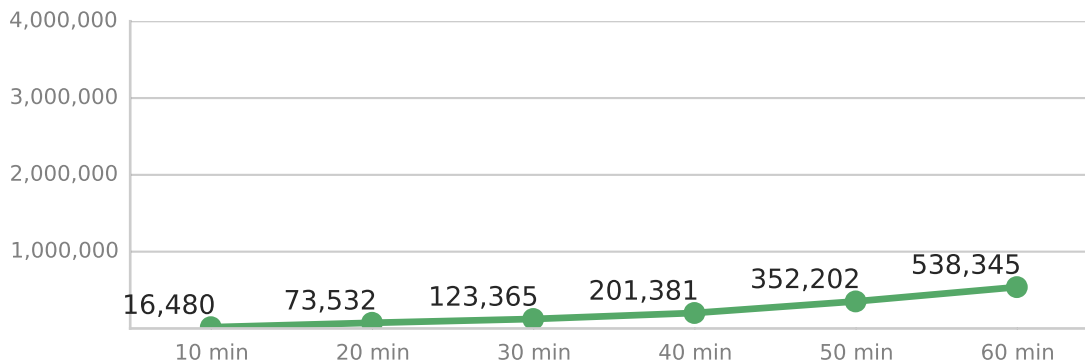
# St. Lucie Transportation Planning Organization

## Job Accessibility Results – Auto, 2016

Total Jobs	68,403
Average Job Density (per mi <sup>2</sup> )	305
Total Workers	102,514
Average Worker Density (per mi <sup>2</sup> )	457

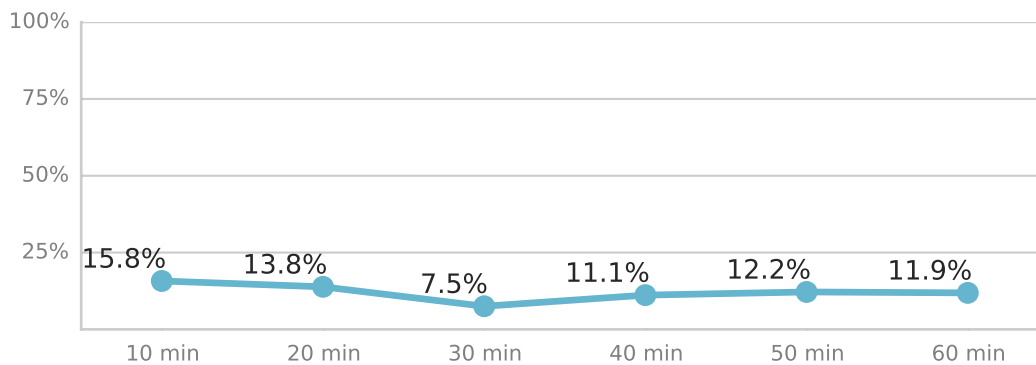
*Job and worker totals are based on LEHD estimates and may not match other sources.*

### Average Job Accessibility by Travel Time Threshold (worker-weighted)



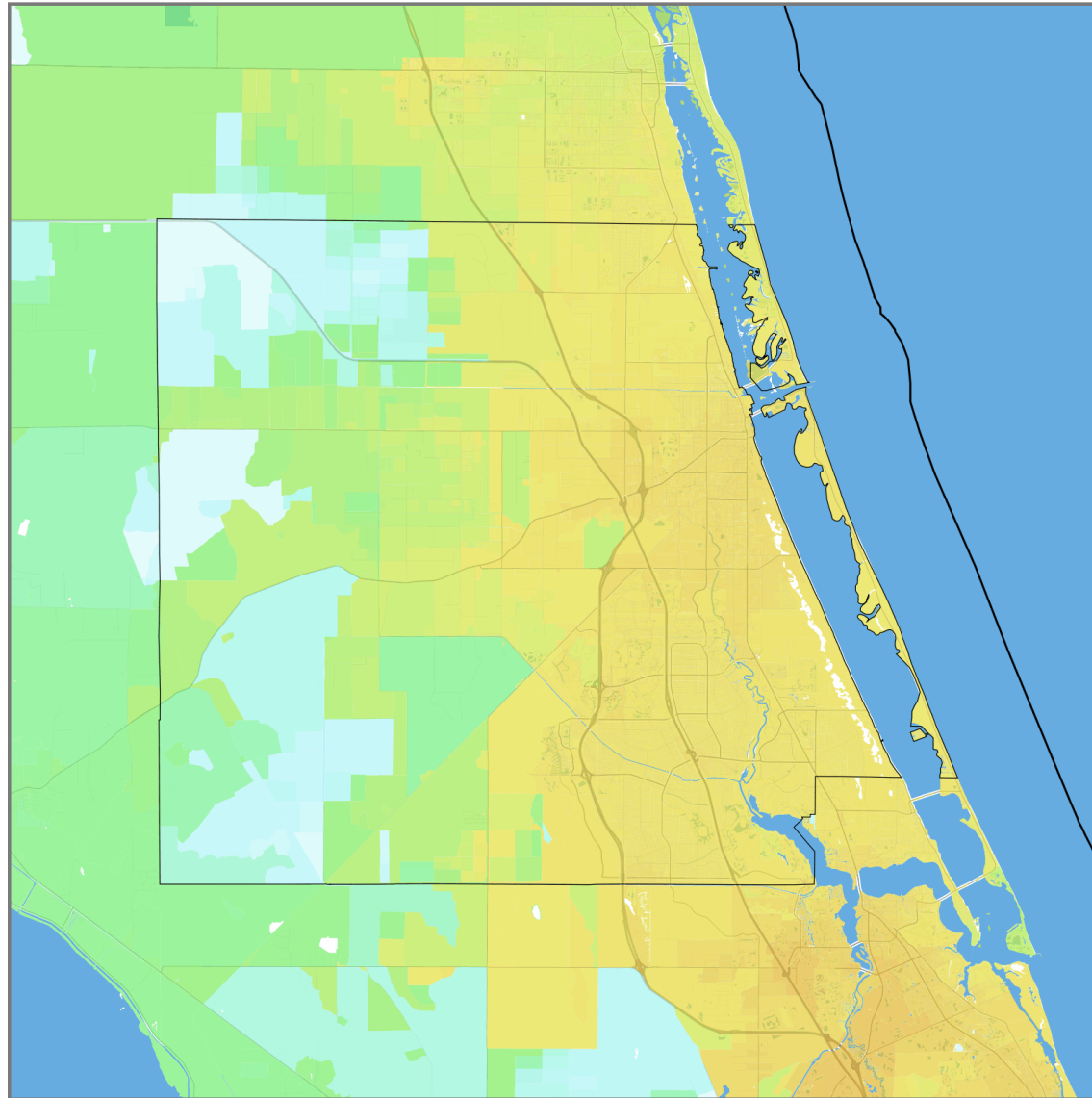
### Average Congestion Impact by Travel Time Threshold (worker-weighted)

*Higher numbers indicate greater job access loss due to congestion*

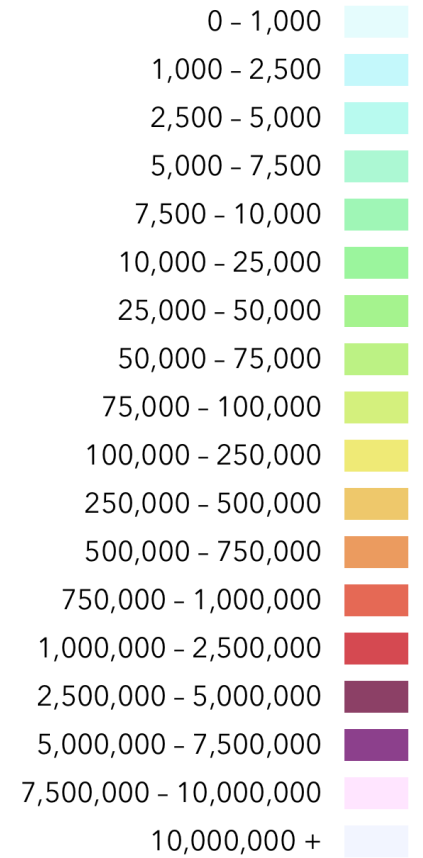


# St. Lucie Transportation Planning Organization

88

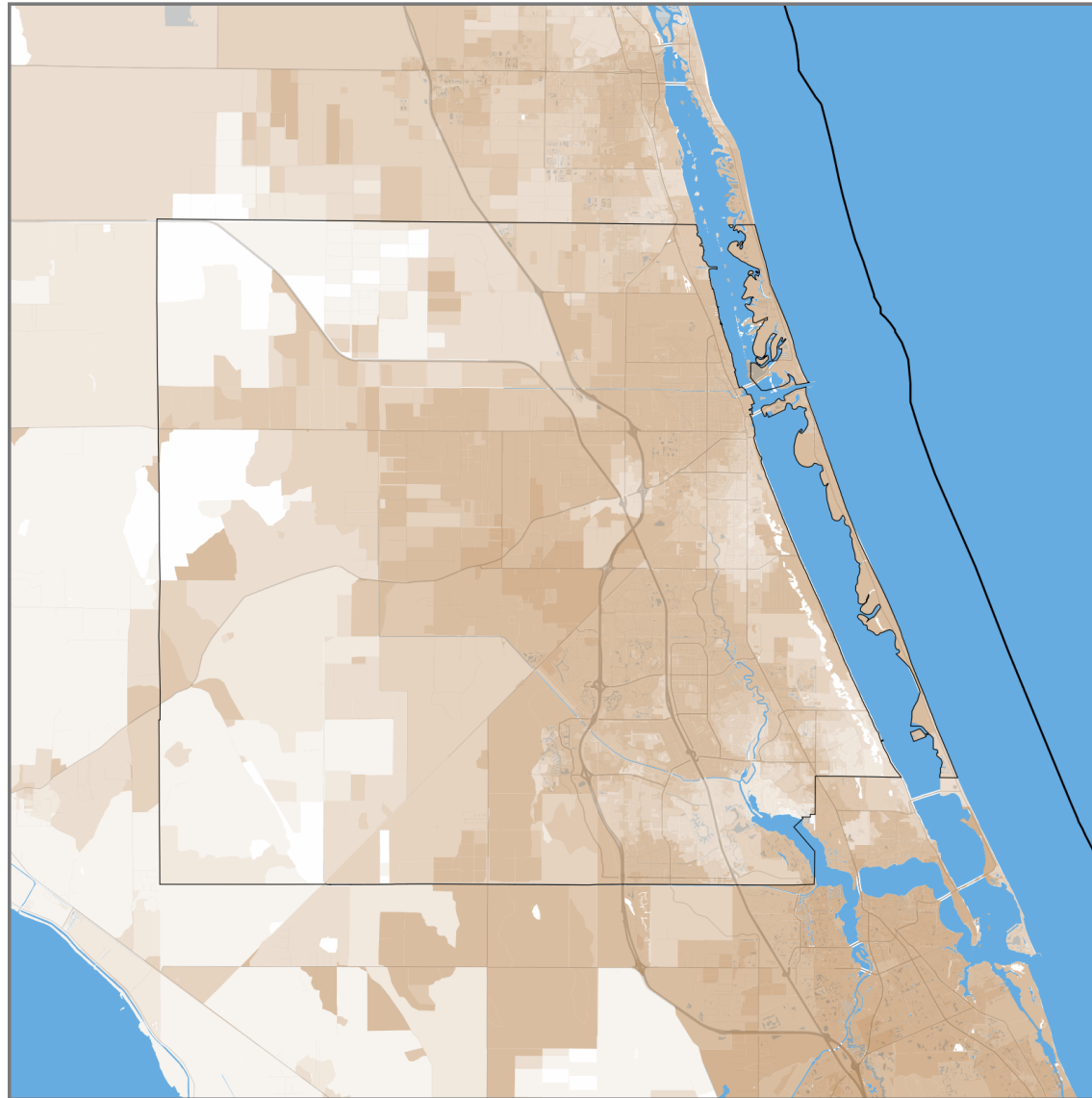


Jobs within 30 minutes  
(Driving, AM peak)

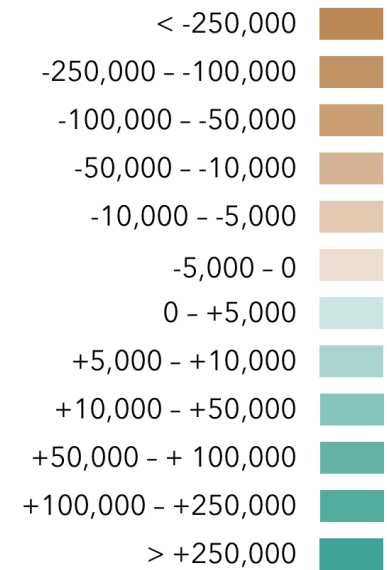


State border ———  
MPO boundary ———

# St. Lucie Transportation Planning Organization



Change in jobs within  
30 minutes  
(Driving, congestion impact)



State border

MPO boundary



## 2.3 Accessibility by County

Table 3 provides the average (worker-weighted) job accessibility by auto during the AM peak period for each county, and Table 4 indicates the accessibility congestion impact.

Table 3: Average Job Accessibility by Travel Time Threshold for Counties (Driving, AM Peak)

County	Travel time (minutes)					
	10	20	30	40	50	60
Alachua	32,692	85,954	115,642	157,164	222,082	271,239
Baker	3,267	8,374	54,670	263,465	476,946	618,049
Bay	21,016	51,632	69,530	79,469	91,922	118,888
Bradford	3,239	8,193	39,043	155,833	378,875	631,140
Brevard	21,484	77,120	134,310	213,472	446,439	785,743
Broward	96,435	470,528	993,423	1,562,782	2,026,136	2,228,628
Calhoun	1,362	3,871	10,702	26,054	62,435	175,649
Charlotte	13,704	35,157	62,644	137,052	256,459	411,175
Citrus	5,044	17,946	43,138	97,574	185,876	320,695
Clay	11,618	60,941	226,755	428,792	560,368	657,496
Collier	23,182	81,867	133,713	220,632	292,865	332,129
Columbia	7,843	18,262	32,148	68,991	151,321	265,691
DeSoto	3,388	8,983	22,394	55,114	150,199	418,090
Dixie	663	2,895	6,576	12,218	32,305	101,804
Duval	62,864	297,228	492,160	567,443	619,139	659,007
Escambia	40,131	113,430	147,578	175,157	223,097	331,820
Flagler	6,300	20,106	61,277	149,821	264,995	580,724
Franklin	1,014	1,905	3,567	5,338	6,990	16,223
Gadsden	2,781	21,005	97,352	159,514	197,185	219,718
Gilchrist	783	5,091	21,392	77,675	131,825	181,989
Glades	852	4,664	9,145	21,458	55,622	128,114
Gulf	1,042	1,788	5,156	26,398	49,700	75,832
Hamilton	523	4,053	19,612	58,559	84,433	113,786
Hardee	3,513	7,575	33,364	93,994	200,324	370,662
Hendry	3,625	5,577	13,460	41,217	93,310	167,510
Hernando	9,448	35,486	81,468	182,035	498,646	970,647
Highlands	7,256	17,740	28,134	47,013	84,072	153,842
Hillsborough	77,256	335,327	693,885	1,028,230	1,310,067	1,554,415
Holmes	937	4,689	14,300	33,880	71,596	134,183
Indian River	16,942	46,599	88,084	157,213	247,855	342,029
Jackson	2,994	9,238	23,082	46,421	93,430	167,393
Jefferson	921	6,065	67,728	155,116	199,150	244,456
Lafayette	689	1,955	7,377	22,129	43,149	80,909
Lake	12,163	45,960	195,078	574,901	980,764	1,306,046
Lee	25,542	110,457	192,595	264,166	333,752	375,921

Table 3: (continued)

Leon	47,310	127,403	157,060	177,180	197,860	216,889
Levy	1,491	5,718	43,305	102,629	163,567	232,311
Liberty	1,177	3,695	8,471	28,773	114,666	192,074
Madison	1,635	3,981	12,965	45,422	98,993	202,910
Manatee	33,835	124,780	235,860	447,814	891,264	1,292,896
Marion	15,251	51,773	95,049	155,917	246,048	375,857
Martin	20,681	63,351	155,728	318,662	489,979	653,237
Miami-Dade	105,809	494,391	1,028,405	1,426,708	1,693,581	1,896,753
Monroe	6,016	9,736	12,471	18,688	34,566	79,695
Nassau	4,708	23,235	114,200	318,843	516,216	605,467
Okaloosa	16,725	36,707	63,724	88,631	132,359	195,762
Okeechobee	4,738	7,566	9,879	29,456	103,642	220,836
Orange	83,559	455,296	859,882	1,057,588	1,217,187	1,452,101
Osceola	20,754	158,334	464,162	815,274	1,105,462	1,392,979
Palm Beach	61,318	259,326	527,072	823,270	1,174,385	1,573,490
Pasco	15,306	68,412	239,143	609,003	1,000,274	1,251,926
Pinellas	82,718	296,987	648,841	989,671	1,206,370	1,390,655
Polk	22,391	96,973	225,470	541,768	1,015,960	1,594,286
Putnam	4,380	9,107	22,712	67,186	165,352	413,137
Santa Rosa	6,659	37,031	112,689	166,387	209,825	261,549
Sarasota	34,670	105,193	172,003	235,369	398,023	742,410
Seminole	56,869	317,268	674,667	985,631	1,200,027	1,327,243
St. Johns	10,408	53,999	209,991	407,673	569,282	666,956
St. Lucie	16,479	73,508	123,326	201,345	352,162	538,205
Sumter	5,914	29,628	80,885	190,048	399,517	1,004,705
Suwannee	2,071	5,989	18,387	35,461	63,200	115,433
Taylor	3,039	4,765	5,741	10,977	30,910	129,922
Union	1,076	5,812	36,018	126,494	221,192	405,670
Volusia	21,245	71,806	170,054	366,964	606,928	948,724
Wakulla	1,461	10,038	77,446	134,470	159,984	178,010
Walton	4,251	13,307	31,434	62,365	108,949	165,255
Washington	1,602	5,039	16,071	44,135	90,363	153,297

Table 4: Average Accessibility Congestion Impact by Travel Time Threshold for Counties (Driving, AM Peak)

County	Travel time (minutes)					
	10	20	30	40	50	60
Alachua	19.84%	6.31%	3.21%	8.91%	4.88%	7.30%
Baker	5.19%	8.27%	48.18%	25.82%	10.31%	6.76%
Bay	16.63%	8.45%	3.87%	2.38%	5.90%	7.89%
Bradford	5.54%	7.52%	20.59%	22.78%	20.82%	10.90%
Brevard	16.81%	10.43%	7.61%	14.94%	14.88%	10.24%
Broward	29.85%	30.15%	27.11%	18.46%	6.62%	2.42%
Calhoun	6.13%	6.52%	9.27%	12.55%	23.51%	13.46%
Charlotte	10.33%	6.82%	11.86%	14.99%	15.42%	12.87%
Citrus	8.14%	10.13%	10.45%	13.12%	11.30%	16.70%
Clay	22.76%	43.92%	33.08%	15.46%	6.04%	6.22%
Collier	17.79%	8.19%	9.43%	8.74%	4.20%	2.91%
Columbia	8.56%	3.54%	11.35%	17.34%	11.63%	20.14%
DeSoto	6.36%	5.17%	13.31%	10.27%	25.58%	11.66%
Dixie	2.07%	5.98%	5.48%	13.00%	31.38%	22.14%
Duval	28.01%	19.00%	5.40%	3.13%	2.14%	2.11%
Escambia	15.00%	6.04%	3.89%	4.39%	9.49%	10.89%
Flagler	13.16%	7.27%	17.70%	9.16%	18.39%	18.88%
Franklin	3.98%	3.15%	4.19%	4.59%	7.47%	27.22%
Gadsden	6.17%	26.21%	13.95%	5.42%	2.36%	2.08%
Gilchrist	7.56%	13.61%	28.89%	15.83%	9.23%	7.59%
Glades	7.69%	4.31%	7.37%	15.36%	17.27%	15.31%
Gulf	2.80%	3.40%	17.57%	19.74%	17.91%	7.98%
Hamilton	1.51%	7.38%	9.44%	8.97%	5.09%	12.55%
Hardee	3.30%	11.85%	14.60%	18.74%	13.35%	19.61%
Hendry	1.25%	4.49%	13.38%	20.03%	13.19%	21.11%
Hernando	11.97%	9.21%	12.88%	31.09%	30.52%	16.47%
Highlands	8.90%	4.59%	5.06%	9.86%	13.36%	18.04%
Hillsborough	28.50%	23.15%	17.01%	11.00%	6.59%	4.66%
Holmes	8.50%	6.31%	11.10%	9.87%	12.61%	11.50%
Indian River	12.11%	10.18%	11.89%	14.07%	8.40%	8.94%
Jackson	5.52%	6.51%	7.47%	9.47%	11.35%	13.08%
Jefferson	4.06%	27.81%	21.77%	6.08%	3.81%	3.13%
Lafayette	3.91%	12.57%	17.79%	11.23%	13.69%	17.97%
Lake	11.79%	16.45%	27.54%	15.54%	9.29%	5.01%
Lee	18.68%	13.57%	8.18%	8.48%	5.47%	2.73%
Leon	18.34%	6.59%	1.91%	2.81%	1.98%	2.65%
Levy	4.55%	13.21%	22.45%	11.53%	9.29%	7.99%
Liberty	6.44%	4.55%	7.56%	28.01%	17.26%	6.70%

Table 4: (continued)

Madison	3.48%	4.00%	16.10%	14.59%	16.98%	11.67%
Manatee	18.65%	13.85%	9.62%	16.30%	15.72%	5.79%
Marion	15.26%	10.29%	7.87%	9.96%	9.81%	12.26%
Martin	16.74%	11.21%	16.33%	14.42%	11.67%	14.78%
Miami-Dade	42.25%	37.75%	21.04%	12.97%	8.62%	6.40%
Monroe	9.64%	2.09%	4.50%	8.63%	32.19%	45.32%
Nassau	6.61%	14.61%	19.84%	15.61%	6.16%	2.93%
Okaloosa	9.06%	8.48%	6.68%	6.37%	10.21%	15.00%
Okeechobee	5.49%	2.11%	5.87%	25.77%	19.75%	21.56%
Orange	29.78%	18.44%	7.55%	2.96%	3.59%	4.42%
Osceola	16.80%	20.63%	20.07%	10.85%	6.92%	5.93%
Palm Beach	22.39%	19.39%	18.01%	17.67%	18.81%	17.76%
Pasco	15.98%	28.53%	37.95%	27.19%	13.11%	7.94%
Pinellas	20.31%	23.21%	20.08%	9.18%	6.73%	5.03%
Polk	15.70%	12.44%	16.42%	17.60%	16.75%	13.39%
Putnam	3.86%	3.95%	11.39%	13.63%	19.17%	19.15%
Santa Rosa	15.83%	25.14%	11.23%	6.52%	6.18%	8.13%
Sarasota	18.48%	10.09%	5.66%	8.77%	15.63%	14.20%
Seminole	29.45%	26.65%	15.52%	8.31%	3.08%	4.33%
St. Johns	15.02%	33.96%	23.75%	11.88%	6.09%	3.53%
St. Lucie	15.76%	13.85%	7.52%	11.15%	12.17%	11.88%
Sumter	12.68%	10.77%	15.36%	9.58%	16.89%	18.17%
Suwannee	3.85%	7.79%	12.81%	7.40%	14.47%	13.83%
Taylor	1.65%	0.69%	3.07%	8.92%	34.10%	13.52%
Union	6.11%	11.29%	20.31%	11.92%	16.55%	17.80%
Volusia	12.11%	12.89%	27.24%	21.91%	20.65%	13.53%
Wakulla	3.50%	27.92%	18.13%	4.78%	2.84%	3.47%
Walton	8.74%	10.63%	11.89%	10.21%	10.56%	7.17%
Washington	5.76%	6.27%	16.98%	14.38%	12.41%	9.42%

## 3 Data Sources and Methodology

The following sections provide a brief overview of the data sources and methodology used to prepare this report. For a detailed description, please consult the Accessibility Observatory's *Access Across America: 2016 Auto Methodology* report.

### 3.1 Travel Times by Auto

Travel times by car were calculated using the June 2016 version of TomTom North America, Inc.'s MultiNet and Speed Profile data products. The road network dataset includes roadways of all functional classifications, including local streets through major highways. Speed data for each roadway segment are based on measurements collected by GPS devices during the June 2014 – June 2016 period. For road segments where speed data are provided separately for different days of the week, data for Wednesday are used.

### 3.2 Geography

Census blocks are the fundamental unit for travel time and accessibility calculation, and block-level accessibility results are aggregated over larger areas for analysis. When calculating accessibility for an individual origin, all potential destinations within 74.6 miles (120 km) are included, even if those destinations are located in a different state. Only locations within the United States are included. The metropolitan planning organization (MPO) jurisdictions used for aggregate analysis are based on data provided in the US Department of Transportation's National Transportation Atlas Database 2016<sup>1</sup>.

### 3.3 Population and Job Distribution

Data describing the distribution of labor and employment in the region are drawn from the U.S. Census Bureau's Longitudinal Employer-Household Dynamics program (LEHD)<sup>2</sup>. The LEHD Origin-Destination Employment Statistics (LODES) dataset, which is updated annually, provides Census block-level estimates of employee home and work locations. This analysis uses LODES data from 2014, the most recent available as of when the calculations were performed.

### 3.4 Accessibility Calculation

The accessibility metrics presented in this analysis are *cumulative opportunity* metrics—they reflect the total amount of opportunities (in this case, jobs) reachable within given travel time thresholds from an origin location. To calculate these metrics, the travel time calculations described above are performed first to identify the travel time from one origin to all surrounding destinations. Next, the number of jobs at each destination is summed for all destinations that can be reached within a given travel time threshold, providing the accessibility value for a single origin at a single departure time.

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<sup>1</sup>[http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national\\_transportation\\_atlas\\_database/index.html](http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_atlas_database/index.html)

<sup>2</sup><http://lehd.ces.census.gov/data/>

This process provides accessibility values for individual Census blocks. To summarize this block-level data to larger areas such as MPOs and states, the accessibility values for the relevant blocks are weighted by the number of workers living in each block and then averaged. This person-weighted approach allows the summary metric to reflect the distribution of residents within the area. For example, a person-weighted accessibility value of 134,173 indicates that a typical resident within the area can reach 134,173 jobs. Finally, the person-weighted accessibility is weighted by the travel time threshold so that accessibility at shorter travel times is valued more than accessibility at longer travel times.

Road and highways speeds vary throughout the day. The accessibility data presented in this report assume a departure time of 8 AM in order to represent job accessibility during the AM peak period.

### **3.5 Congestion Impact**

To estimate the impact that congestion has on job accessibility, a series of accessibility calculations are performed on the hour for a 24-hour period. The 24-hour maximum accessibility value is used to capture free-flow traffic conditions at the Census block level for comparison against the 8 AM peak period. The difference between the maximum job accessibility and accessibility at 8 AM is interpreted as the number of additional jobs that a traveler could reach (within a given travel time threshold) in free-flow conditions, but could not reach in congested conditions due to lower speeds. This can be expressed both as an absolute difference in job accessibility, as in the congestion impact maps presented in [Section 2](#), and as a percentage change in accessibility, as shown by the congestion impact plots in [Section 2](#). Expressing this metric as a percentage allows the degree of congestion impact to be compared across regions that have different absolute levels of accessibility. For example, a congestion impact of 9% at the 30 minute travel time threshold indicates that the average worker can reach 9% fewer jobs during congested periods than during free-flow periods.