

2017 Bike Accessibility Report: Florida

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

May 31, 2019



**ACCESSIBILITY
OBSERVATORY**

UNIVERSITY OF MINNESOTA

Driven to DiscoverSM

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1 Introduction

This report presents the results of an evaluation of accessibility to jobs by bike 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, one of the most significant non-home travel destinations. 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.

[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: Bike 2017 Methodology*, describes the methodology and data sources in greater detail.

2 Accessibility Evaluation Results

2.1 Statewide Accessibility

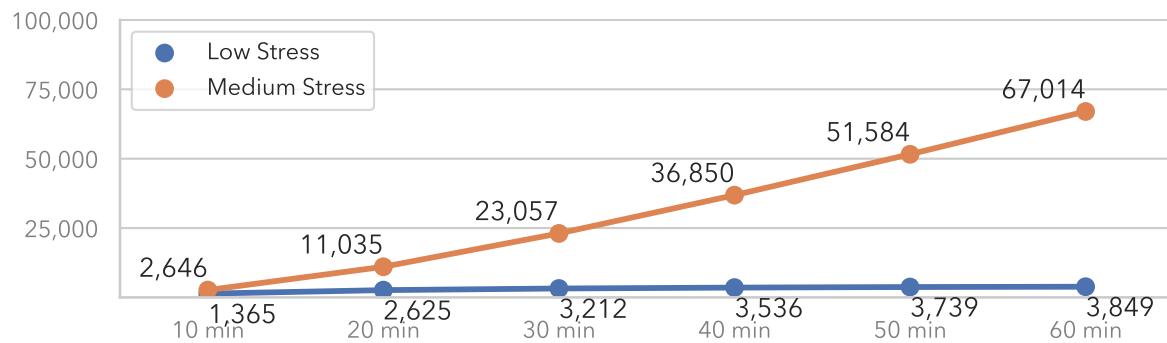
Florida

Job Accessibility Results—Bike, 2017

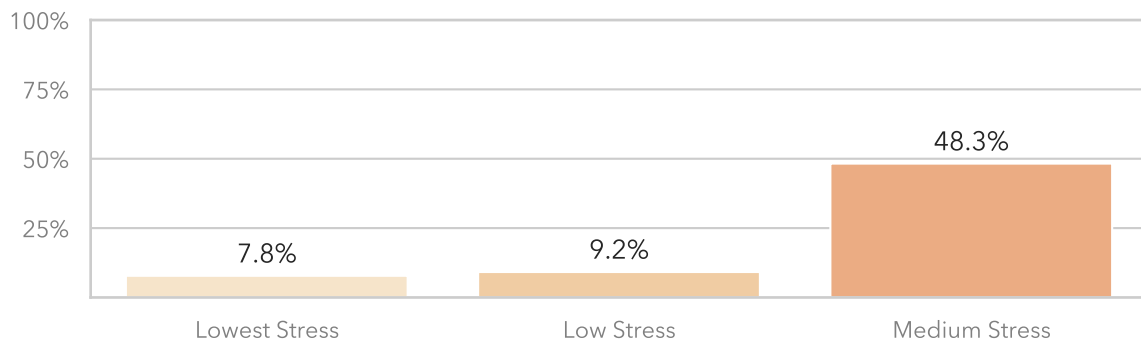
Total Jobs	8,010,018
Average Job Density (per mi ²)	147
Total Workers	8,014,483
Average Worker Density (per mi ²)	147

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

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



Weighted Biking Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



2.2 Accessibility in Metropolitan Areas

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

- Bay County Transportation Planning Organization
- Broward MPO
- Capital Region Transportation Planning Agency
- Charlotte-Punta Gorda MPO
- Collier MPO
- Florida-Alabama Transportation Planning Organization
- Forward Pinellas
- Gainesville MTPO
- Heartland Regional TPO
- Hernando/Citrus MPO
- Hillsborough MPO
- Indian River County MPO
- Lake-Sumter MPO
- Lee County MPO
- METROPLAN Orlando
- Martin MPO
- Miami-Dade TPO
- North Florida Transportation Planning Organization
- Ocala - Marion County Transportation Planning Organization
- Okaloosa-Walton Transportation Planning Organization
- Palm Beach MPO
- Pasco County MPO

- Polk County Transportation Planning Organization
- River to Sea Transportation Planning Organization
- Sarasota-Manatee MPO
- Space Coast Transportation Planning Organization
- St. Lucie Transportation Planning Organization

[Table 1](#) provides the average (worker-weighted; see [Section 3.5](#)) job accessibility by bike for each MPO on low-stress bicycle networks, and [Table 2](#) provides the average job accessibility by bike for each MPO on medium-stress bicycle networks (see [Section 3.1](#) for bike network definitions and discussion of Level of Traffic Stress (LTS)). The following pages provide additional details and maps for each MPO. The first map for each MPO jurisdiction shows 30-minute biking accessibility values at the Census block level, on medium-stress bicycle networks; areas of more intense color have higher access to jobs. The second map shows the ratio of low-stress accessibility to “open streets” (LTS 4) accessibility; areas of more intense, deeper color have lower access to jobs, on low-stress bicycle networks, as a percentage of the maximum access possible (LTS 4), and lighter-colored areas have higher low-stress access to jobs. Areas colored in light grey on the second map reflect census blocks where “open streets” bicycle accessibility is 0.

On the data summary pages, up to four different chart scales are used in the first chart to accommodate the wide range of accessibility values across MPO jurisdictions. All charts using the same scale are plotted in the same colors. The second chart for each MPO shows the accessibility ratios for lowest-stress, low-stress, and medium-stress bicycle networks compared to the maximum of “open streets” access. MPOs with lower percentages for low-stress and medium-stress accessibility may have lower-performing bicycle networks, and areas with higher percentage ratios for low-stress and medium-stress accessibility may have more extensive, well-performing bicycle networks.

Table 1: Average Job Accessibility by Travel Time Threshold for Metropolitan Areas (Bike, Low-Stress)

MPO	10 min	20 min	30 min	40 min	50 min	60 min
Bay County Transportation Planning Organization	672	1,233	1,330	1,340	1,341	1,341
Broward MPO	2,019	4,027	4,784	5,014	5,140	5,229
Capital Region Transportation Planning Agency	856	1,455	1,527	1,536	1,537	1,537
Charlotte-Punta Gorda MPO	440	884	974	988	988	988
Collier MPO	780	1,923	2,538	2,755	2,835	2,863
Florida-Alabama Transportation Planning Organization	574	1,001	1,074	1,090	1,096	1,096
Forward Pinellas	1,576	2,613	3,047	3,273	3,329	3,332
Gainesville MTPO	2,854	15,118	32,138	48,242	61,492	70,580
Heartland Regional TPO	297	410	424	425	426	426
Hernando/Citrus MPO	234	433	477	486	489	491
Hillsborough MPO	1,367	2,325	2,575	2,613	2,617	2,619
Indian River County MPO	344	479	499	506	508	508
Lake-Sumter MPO	415	778	867	903	904	904
Lee County MPO	775	1,680	2,075	2,157	2,181	2,195
METROPLAN Orlando	1,170	2,600	3,341	3,772	4,105	4,143
Martin MPO	536	703	710	712	712	712
Miami-Dade TPO	3,347	5,948	6,879	7,214	7,252	7,258
North Florida Transportation Planning Organization	949	1,780	2,033	2,154	2,220	2,248
Ocala - Marion County Transportation Planning Organization	276	407	427	435	437	437
Okaloosa-Walton Transportation Planning Organization	1,055	2,072	2,388	2,523	2,576	2,599
Palm Beach MPO	1,432	2,747	3,182	3,319	3,356	3,367
Pasco County MPO	335	508	532	536	537	537
Polk County Transportation Planning Organization	490	677	697	699	699	699
River to Sea Transportation Planning Organization	403	606	632	635	636	637
Sarasota-Manatee MPO	779	1,218	1,289	1,305	1,313	1,318
Space Coast Transportation Planning Organization	483	687	716	722	724	724
St. Lucie Transportation Planning Organization	392	556	578	590	590	590

Table 2: Average Job Accessibility by Travel Time Threshold for Metropolitan Areas (Bike, Medium-Stress)

MPO	10 min	20 min	30 min	40 min	50 min	60 min
Bay County Transportation Planning Organization	1,211	5,483	11,143	16,364	20,772	24,347
Broward MPO	3,445	15,223	32,308	53,102	77,433	103,850
Capital Region Transportation Planning Agency	2,191	10,222	21,407	32,153	41,553	49,152
Charlotte-Punta Gorda MPO	877	4,149	8,077	11,647	14,047	15,605
Collier MPO	1,164	4,070	7,307	10,120	12,980	15,714
Florida-Alabama Transportation Planning Organization	1,248	5,341	9,744	13,979	17,154	19,209
Forward Pinellas	3,254	14,680	31,773	52,429	71,152	88,241
Gainesville MTPO	3,612	18,311	39,920	61,100	79,146	90,290
Heartland Regional TPO	610	1,557	2,386	3,162	3,941	4,751
Hernando/Citrus MPO	389	1,413	2,501	3,458	4,314	5,185
Hillsborough MPO	3,297	16,310	36,803	62,400	92,824	124,656
Indian River County MPO	1,111	4,904	9,859	15,097	18,931	21,712
Lake-Sumter MPO	688	2,565	4,536	6,125	7,380	8,152
Lee County MPO	1,251	4,780	8,924	13,482	18,274	22,169
METROPLAN Orlando	2,443	10,038	20,596	33,404	46,371	59,155
Martin MPO	1,195	3,490	5,980	8,258	9,567	10,624
Miami-Dade TPO	6,627	26,299	55,671	89,399	126,268	169,106
North Florida Transportation Planning Organization	1,695	6,897	14,035	20,846	26,530	31,540
Ocala - Marion County Transportation Planning Organization	736	3,160	6,612	10,160	13,396	16,621
Okaloosa-Walton Transportation Planning Organization	1,390	4,051	5,578	6,531	7,156	7,587
Palm Beach MPO	2,388	9,150	18,214	28,060	39,912	51,898
Pasco County MPO	717	2,764	5,106	7,602	10,213	12,994
Polk County Transportation Planning Organization	1,295	4,939	9,368	13,553	17,703	21,758
River to Sea Transportation Planning Organization	949	4,016	7,520	10,799	13,773	16,839
Sarasota-Manatee MPO	1,802	7,968	17,312	28,242	38,373	47,541
Space Coast Transportation Planning Organization	886	3,360	6,330	9,045	11,375	13,135
St. Lucie Transportation Planning Organization	992	4,355	7,694	10,970	15,072	18,799

Bay County Transportation Planning Organization

Job Accessibility Results—Bike, 2017

Total Jobs **75,086**

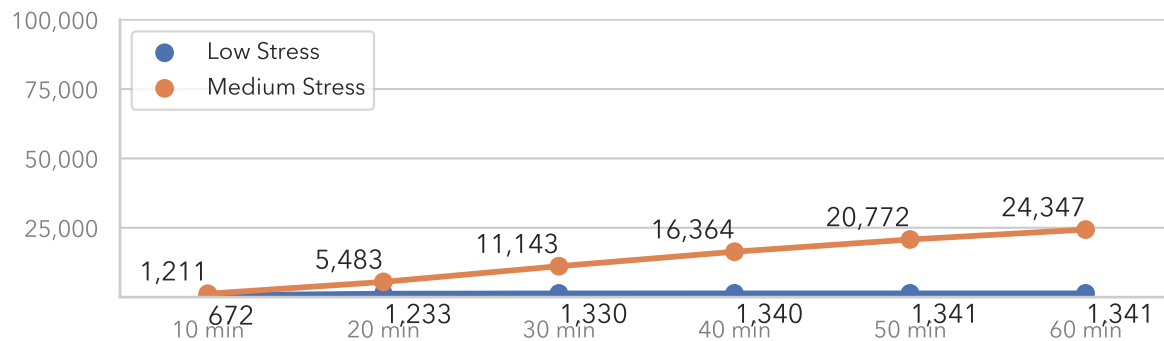
Average Job Density (per mi²) **188**

Total Workers **71,517**

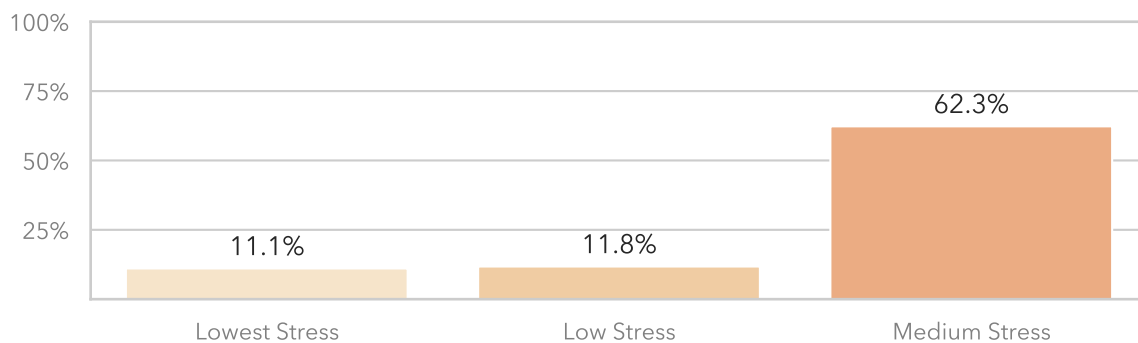
Average Worker Density (per mi²) **179**

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

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

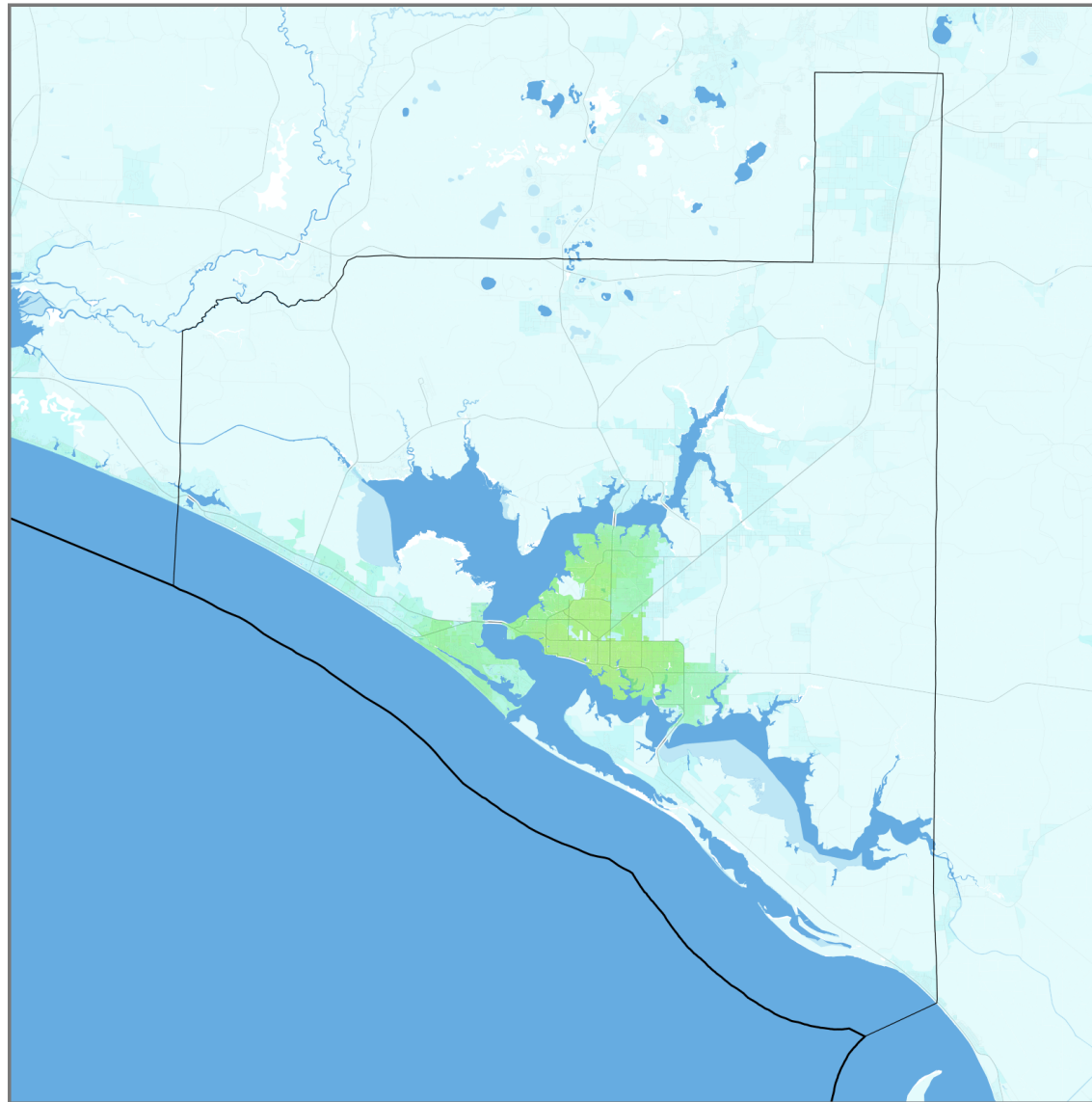


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

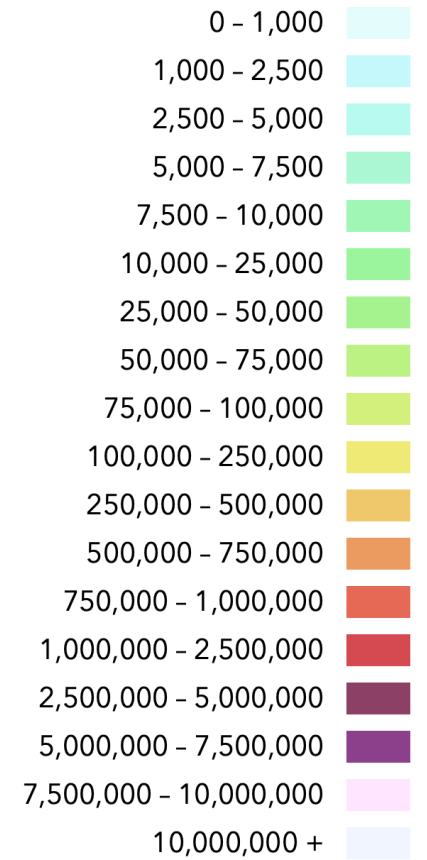


Bay County Transportation Planning Organization

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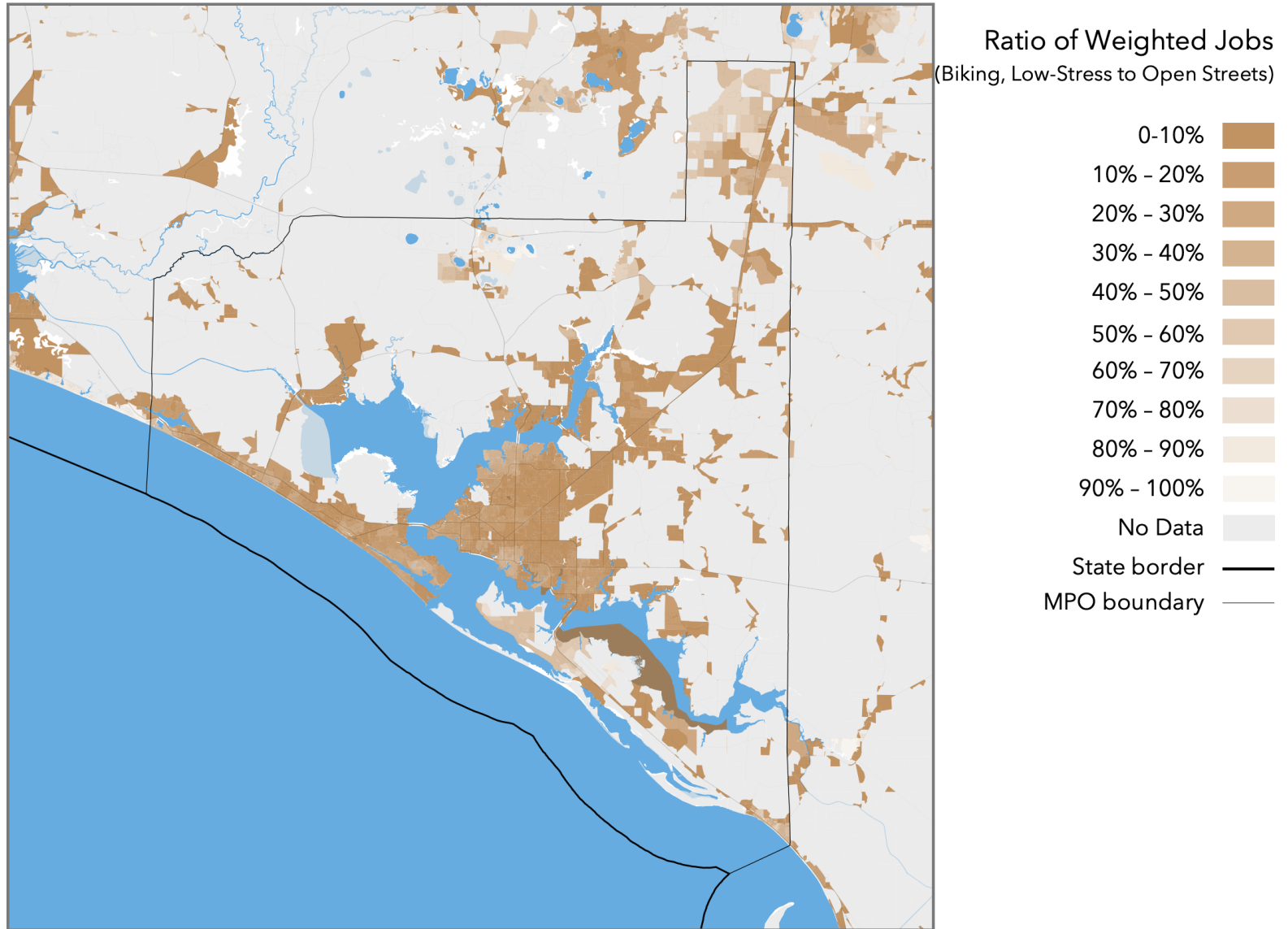


Jobs within 30 minutes
(Biking, medium stress)



State border —
MPO boundary —

Bay County Transportation Planning Organization



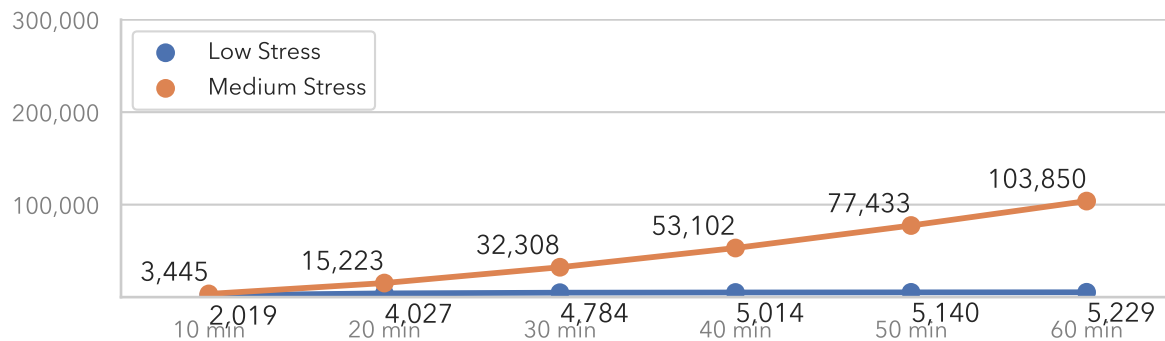
Broward MPO

Job Accessibility Results—Bike, 2017

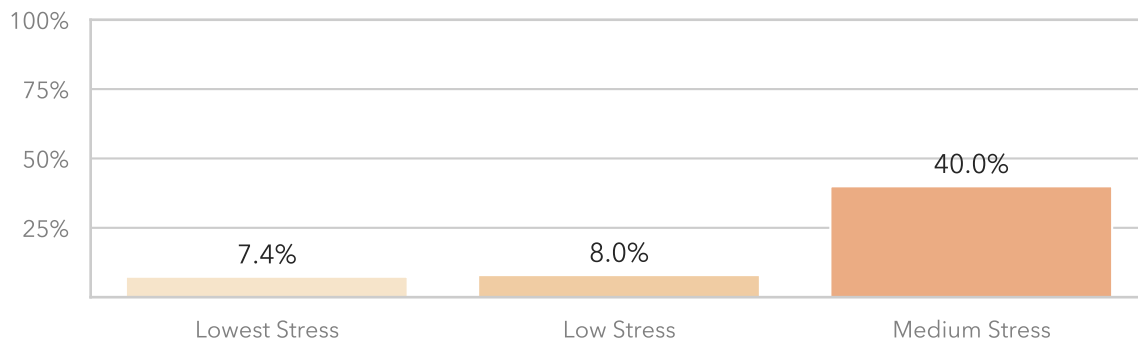
Total Jobs	798,605
Average Job Density (per mi ²)	1688
Total Workers	812,934
Average Worker Density (per mi ²)	1718

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

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

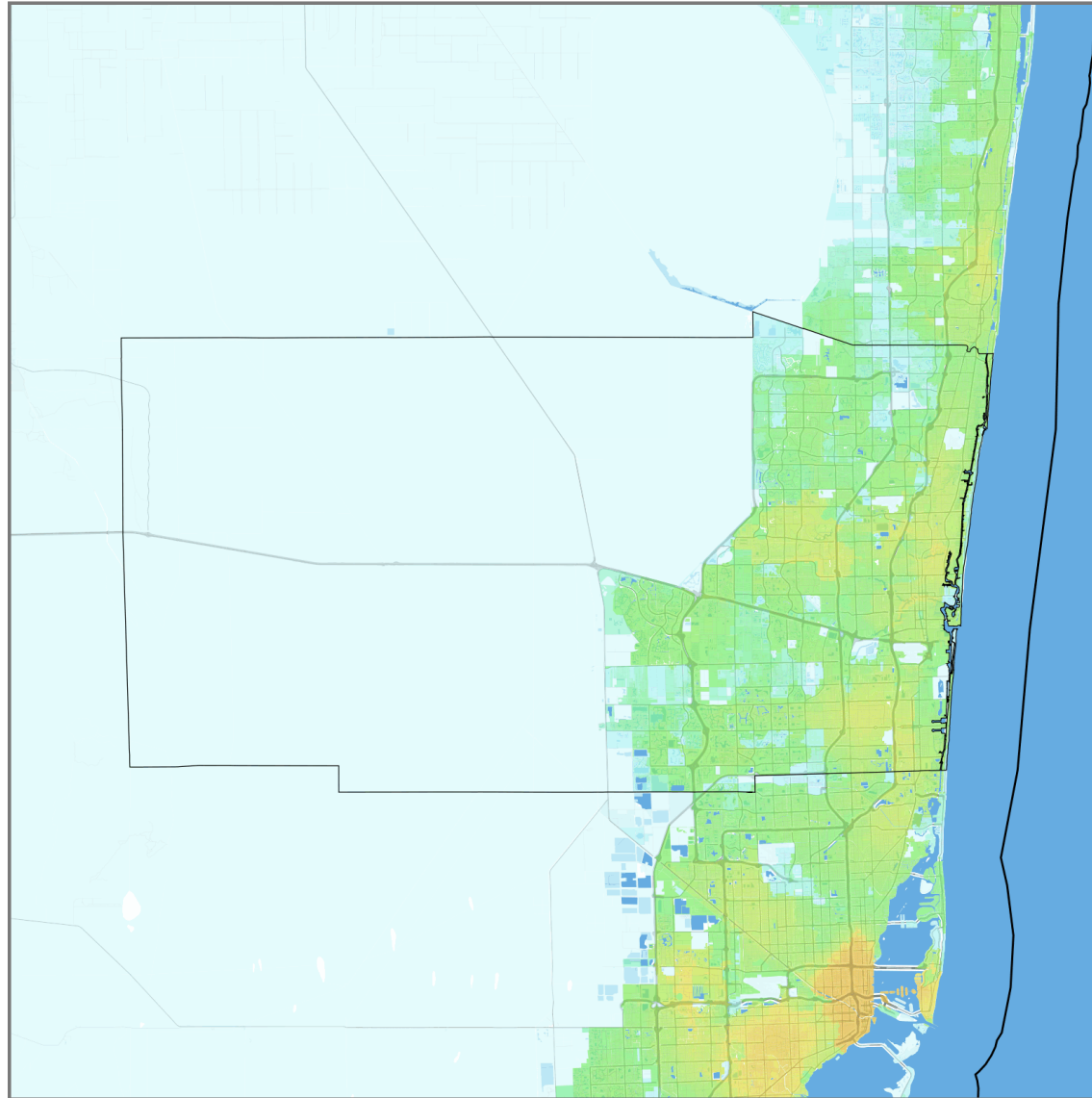


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

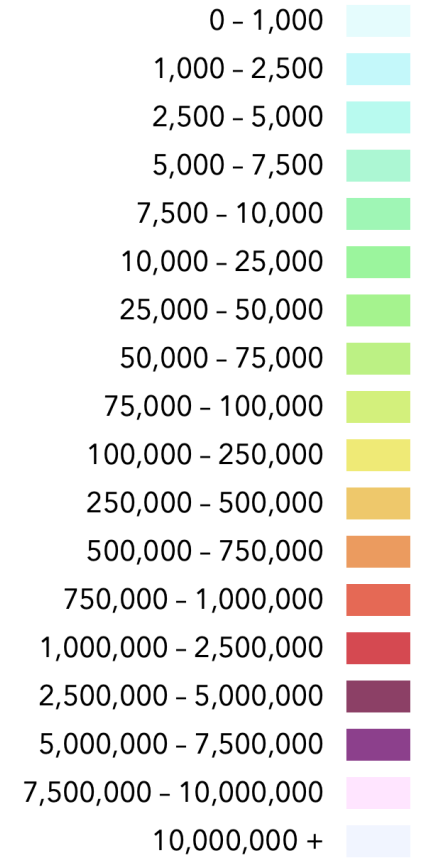


Broward MPO

11



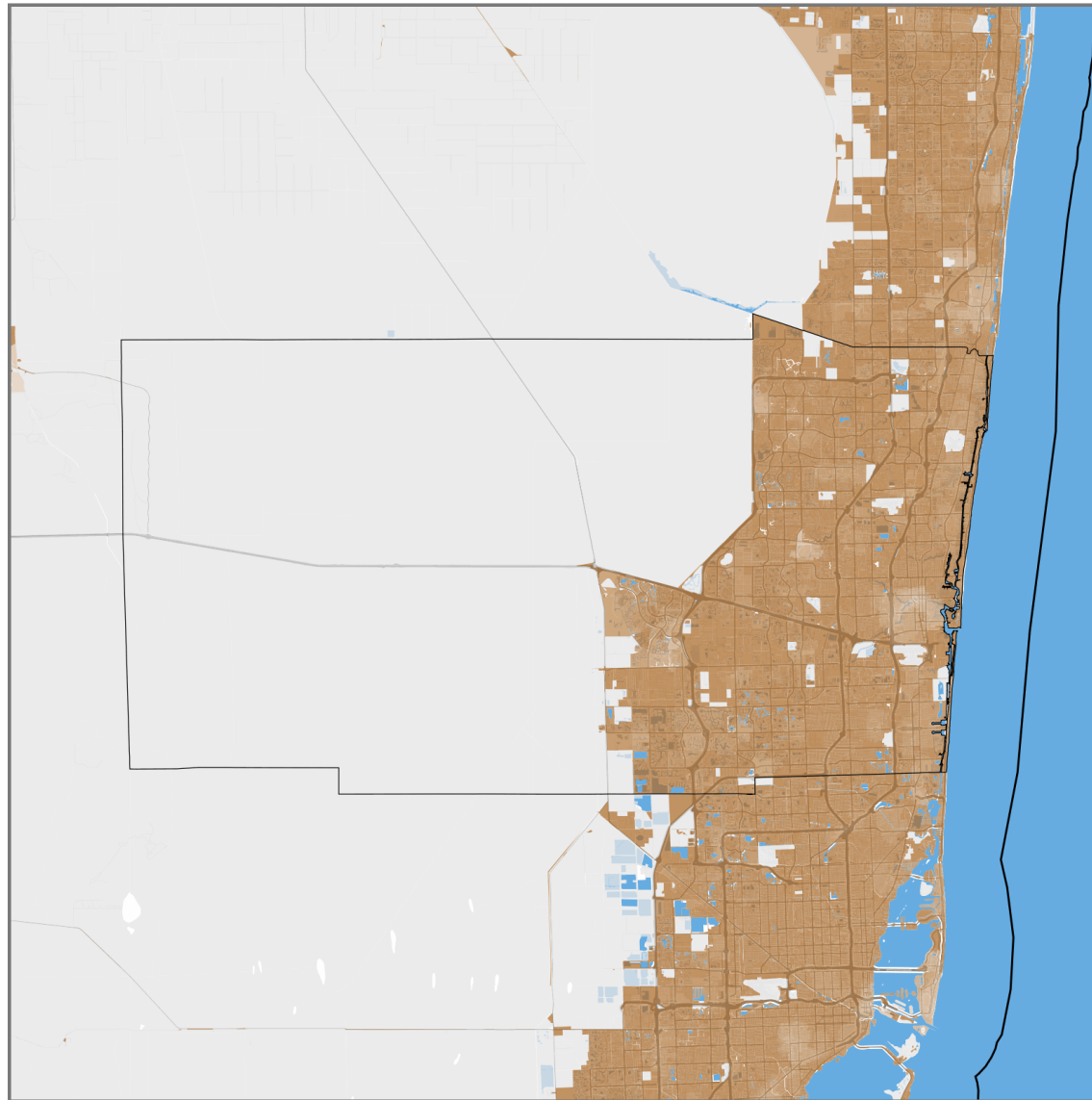
Jobs within 30 minutes
(Biking, medium stress)



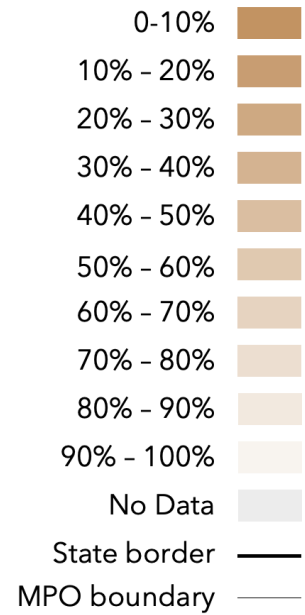
State border

MPO boundary

Broward MPO



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



Capital Region Transportation Planning Agency

Job Accessibility Results—Bike, 2017

Total Jobs **169,408**

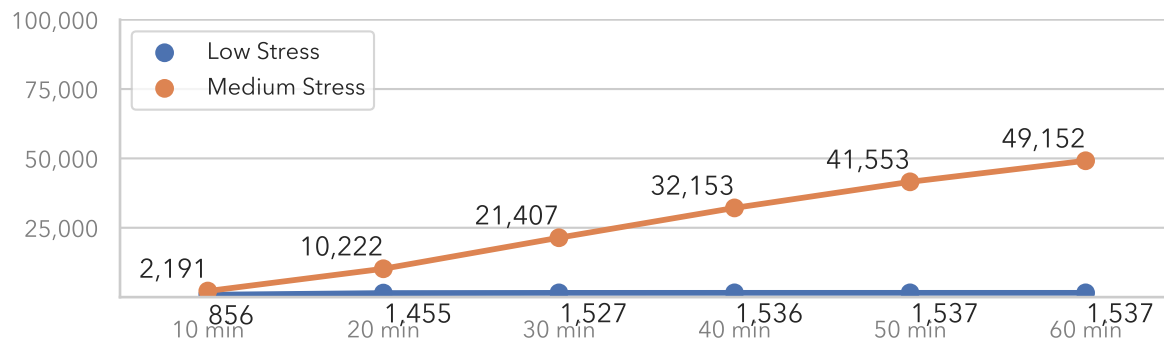
Average Job Density (per mi²) **178**

Total Workers **154,307**

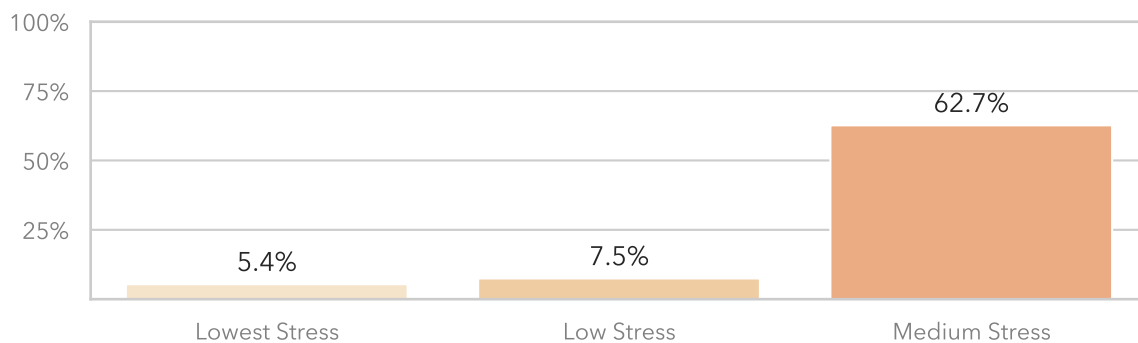
Average Worker Density (per mi²) **162**

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

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

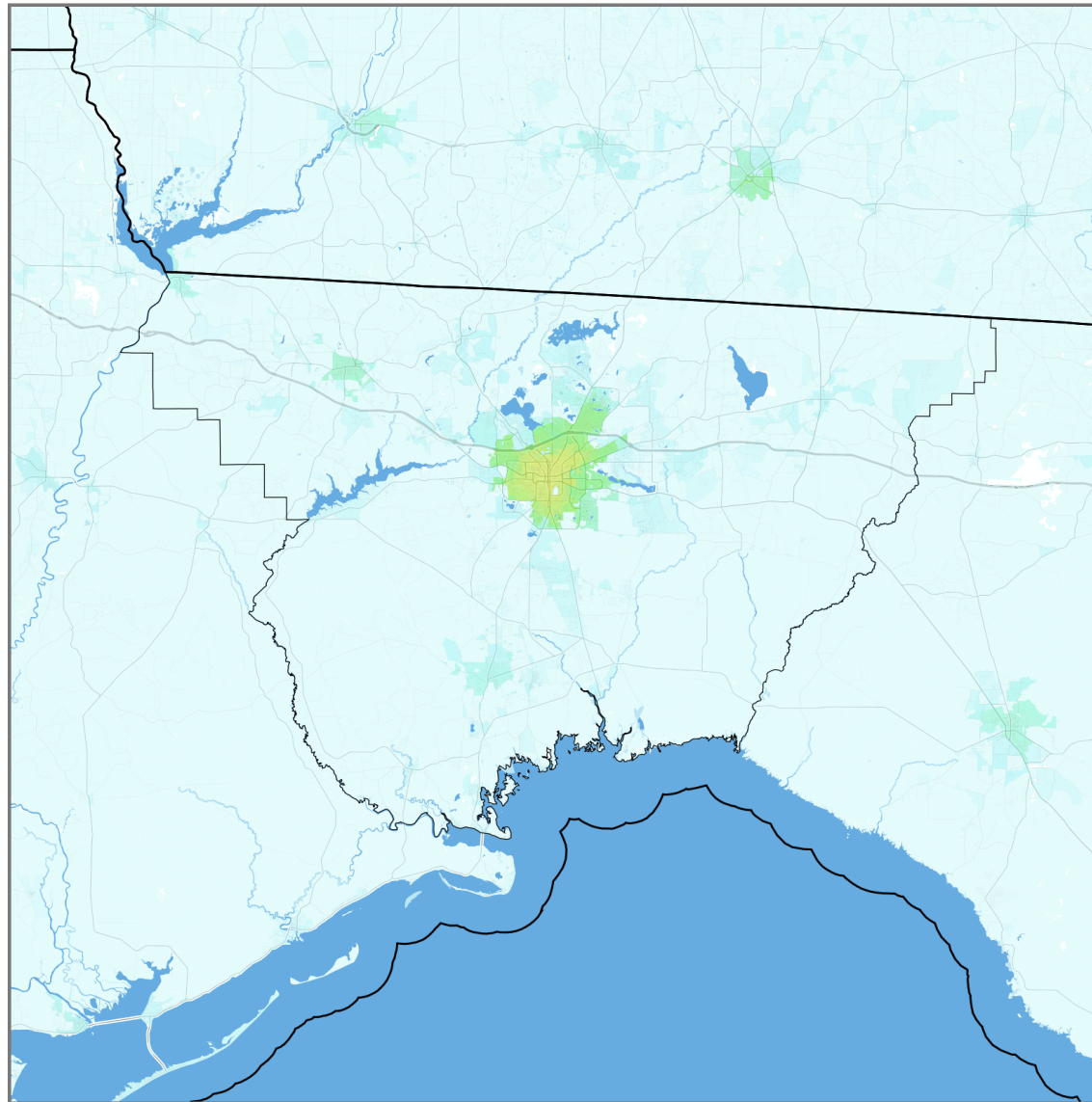


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

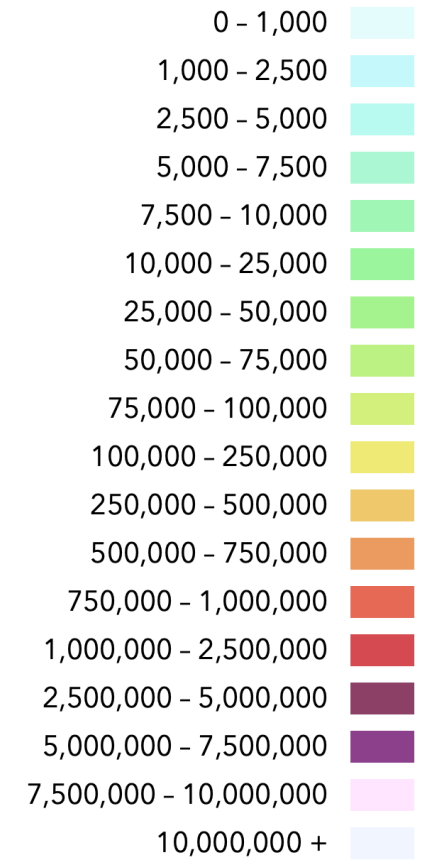


Capital Region Transportation Planning Agency

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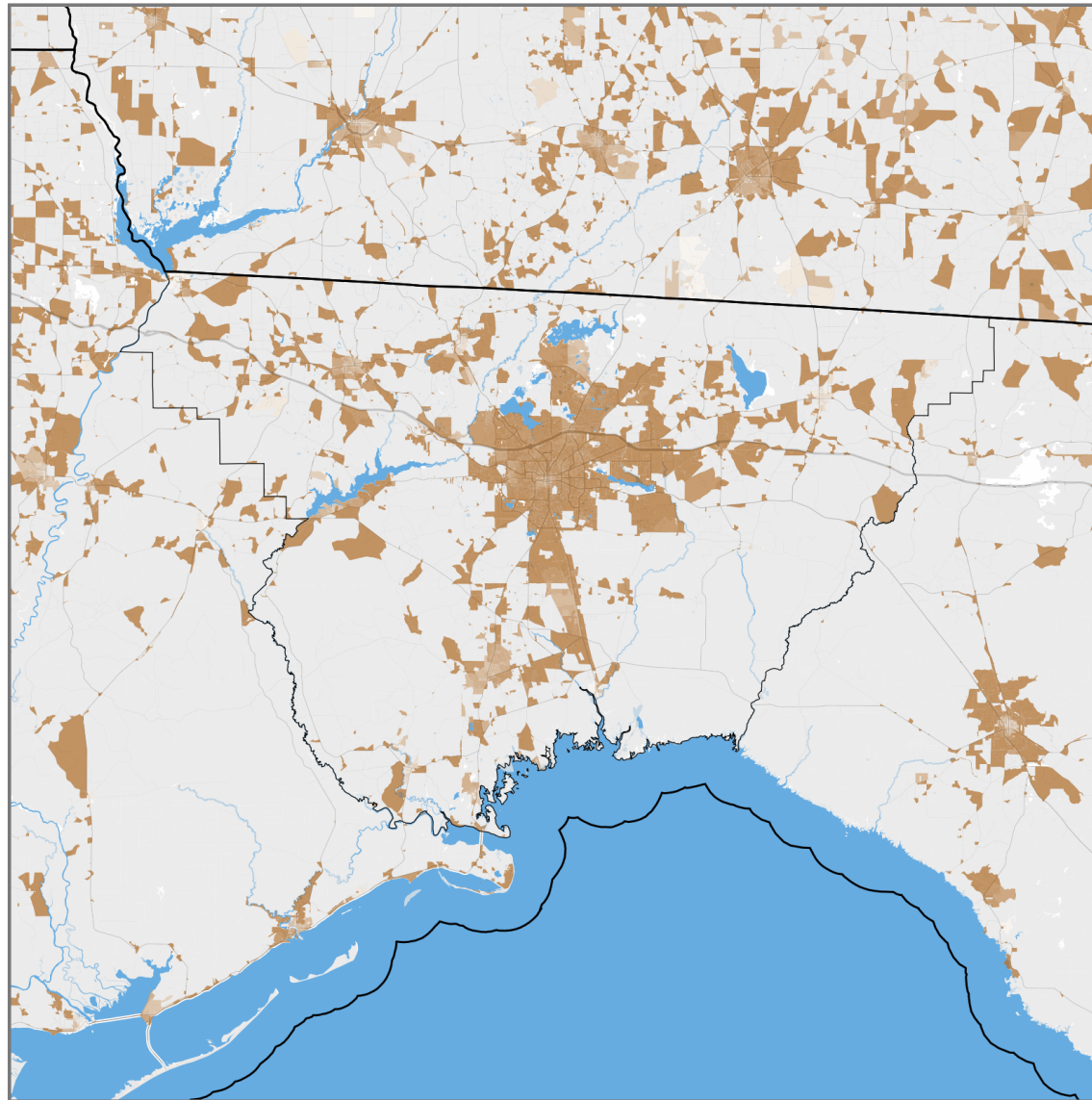


Jobs within 30 minutes
(Biking, medium stress)

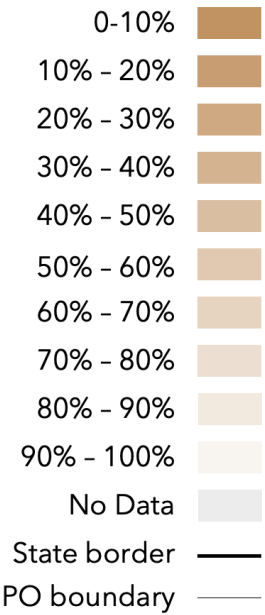


State border —
MPO boundary —

Capital Region Transportation Planning Agency



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



Charlotte-Punta Gorda MPO

Job Accessibility Results—Bike, 2017

Total Jobs **46,792**

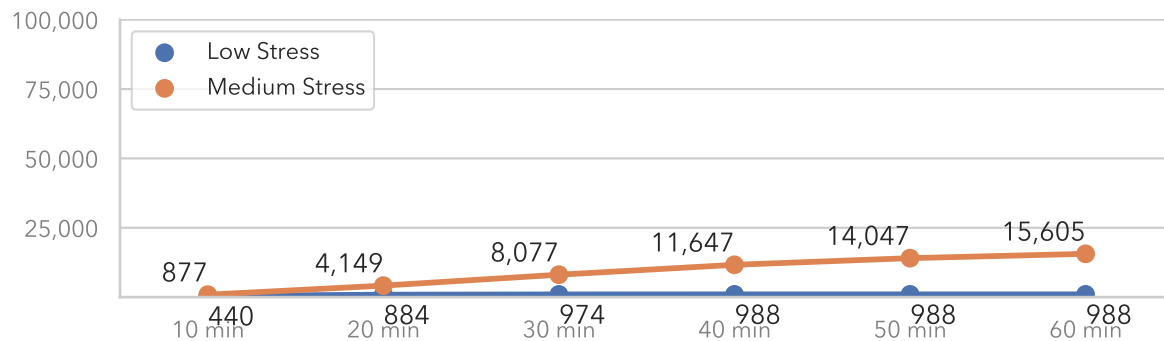
Average Job Density (per mi²) **169**

Total Workers **53,072**

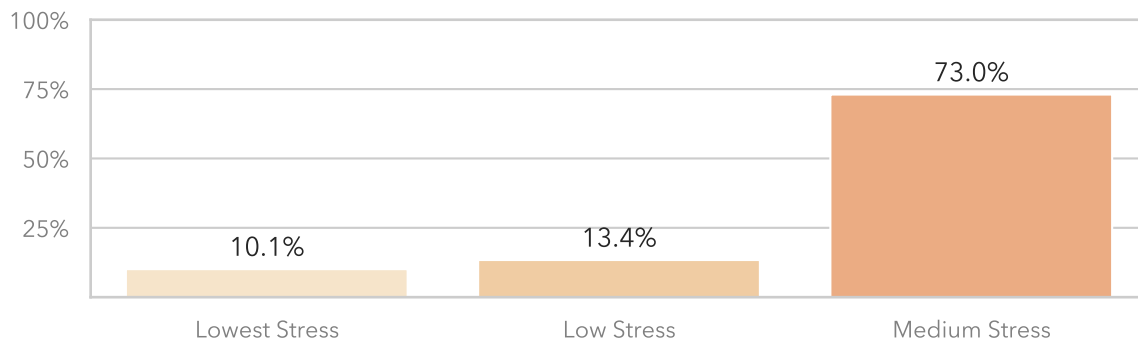
Average Worker Density (per mi²) **192**

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

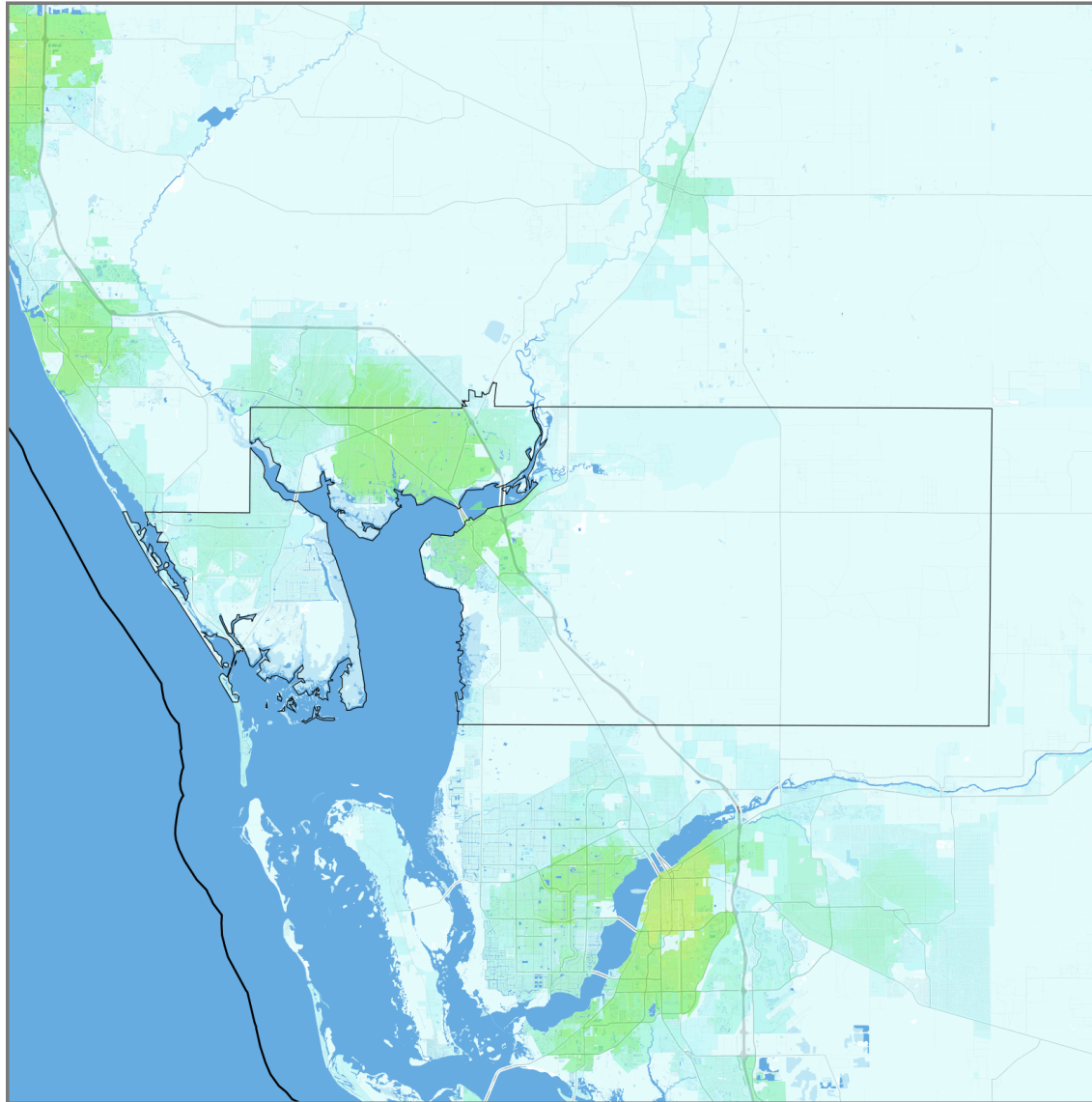
Average Job Accessibility by Travel Time Threshold (worker-weighted)



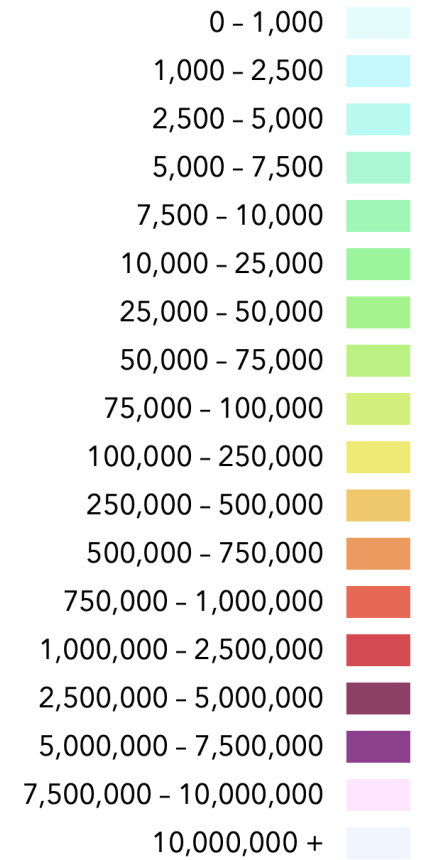
Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



Charlotte-Punta Gorda MPO



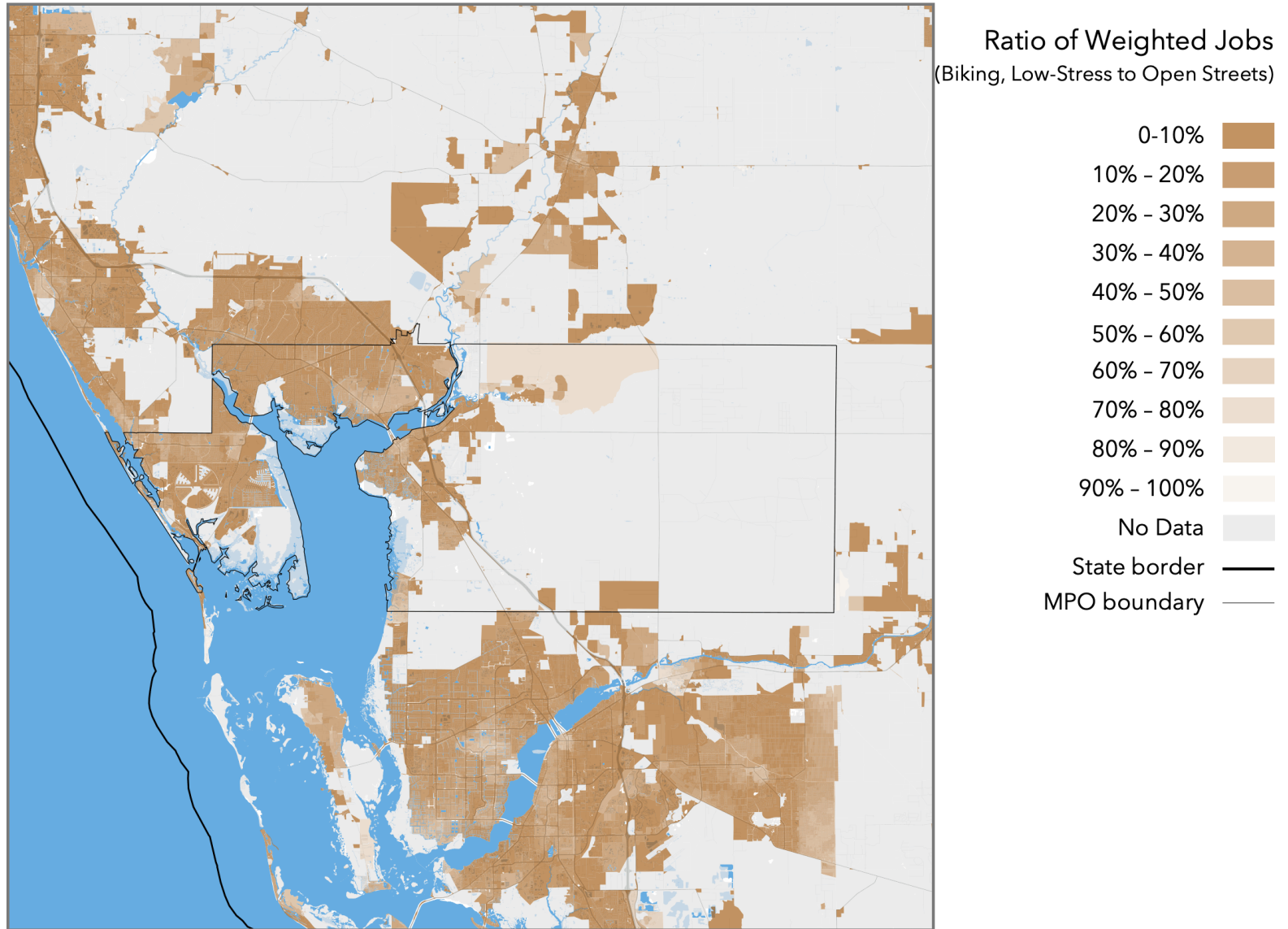
Jobs within 30 minutes
(Biking, medium stress)



State border —
MPO boundary —

Charlotte-Punta Gorda MPO

18



Collier MPO

Job Accessibility Results—Bike, 2017

Total Jobs **133,371**

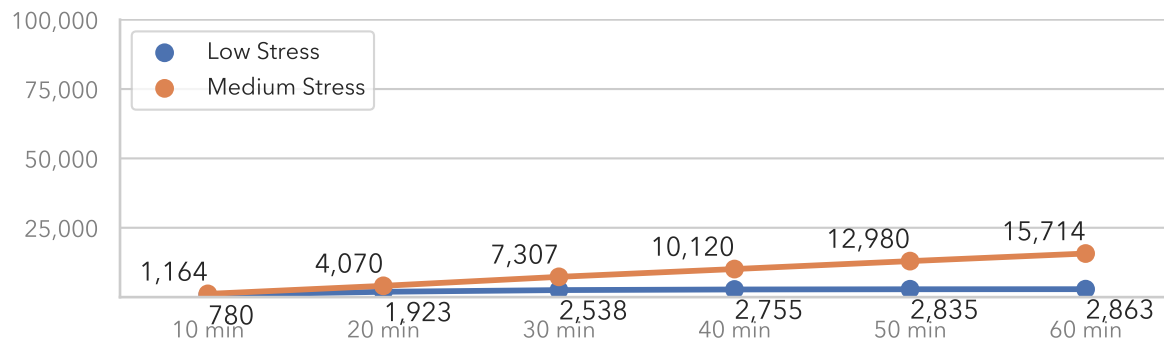
Average Job Density (per mi²) **167**

Total Workers **131,626**

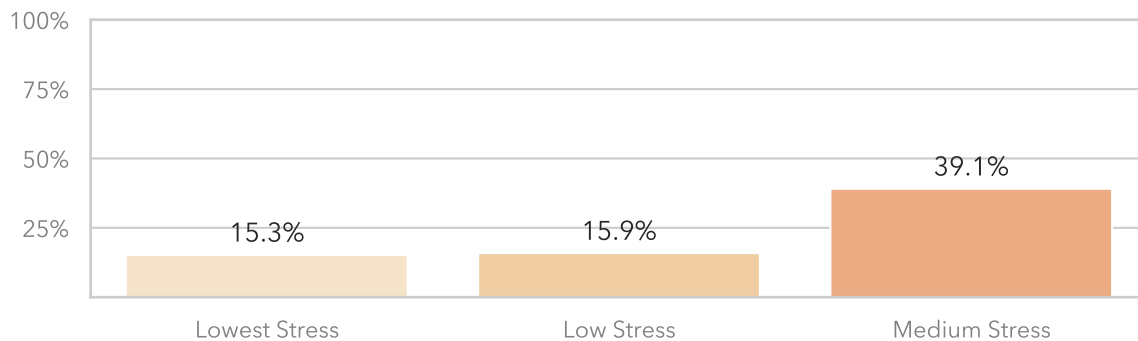
Average Worker Density (per mi²) **164**

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

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

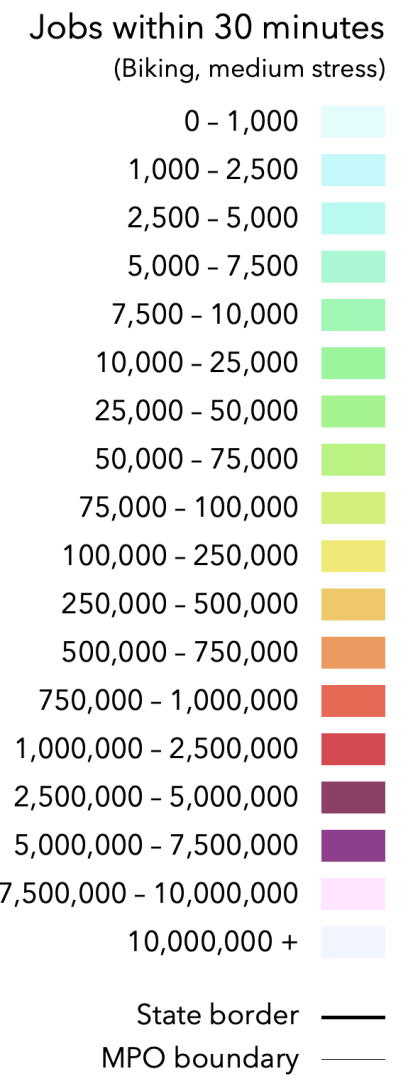
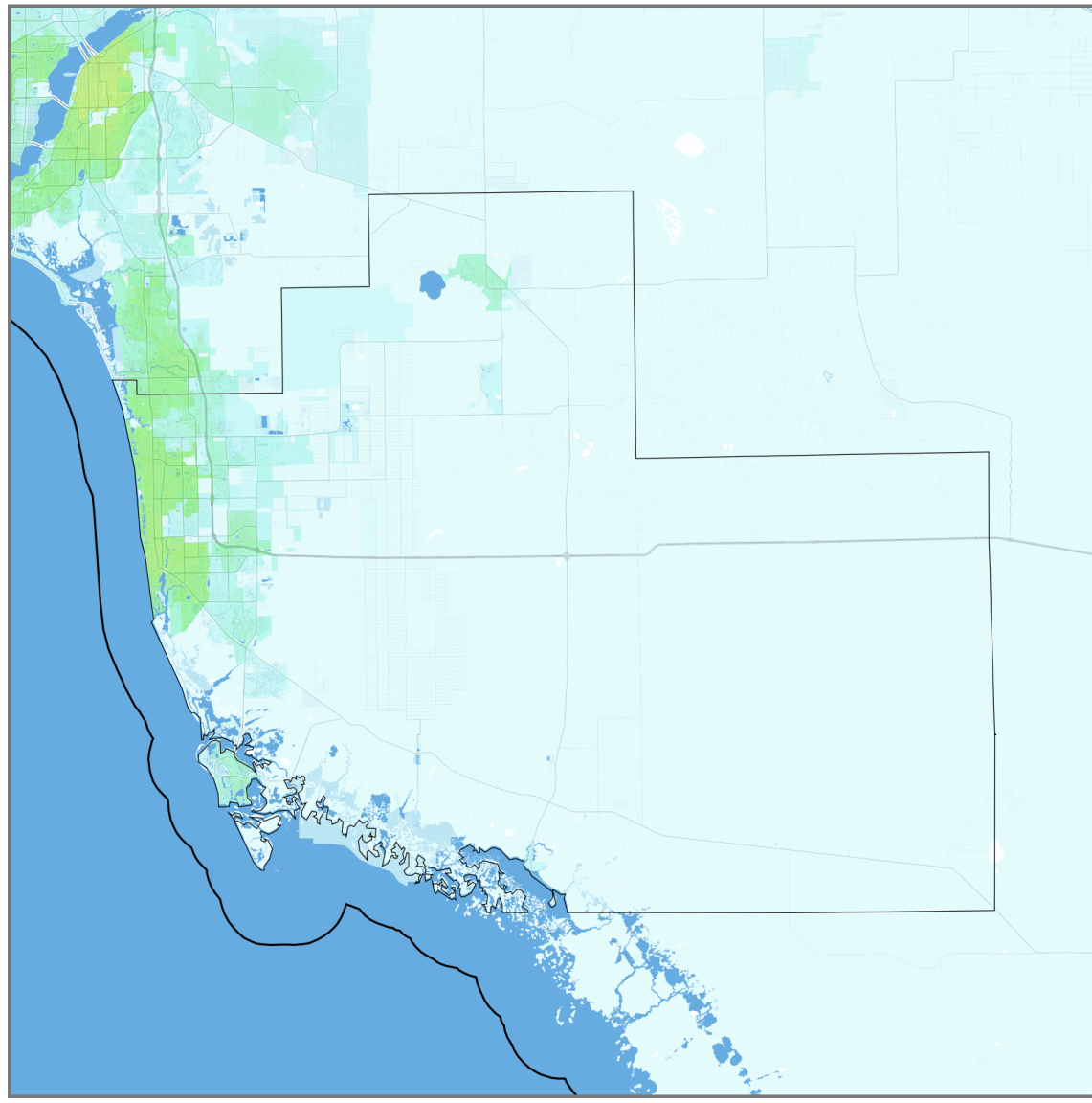


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

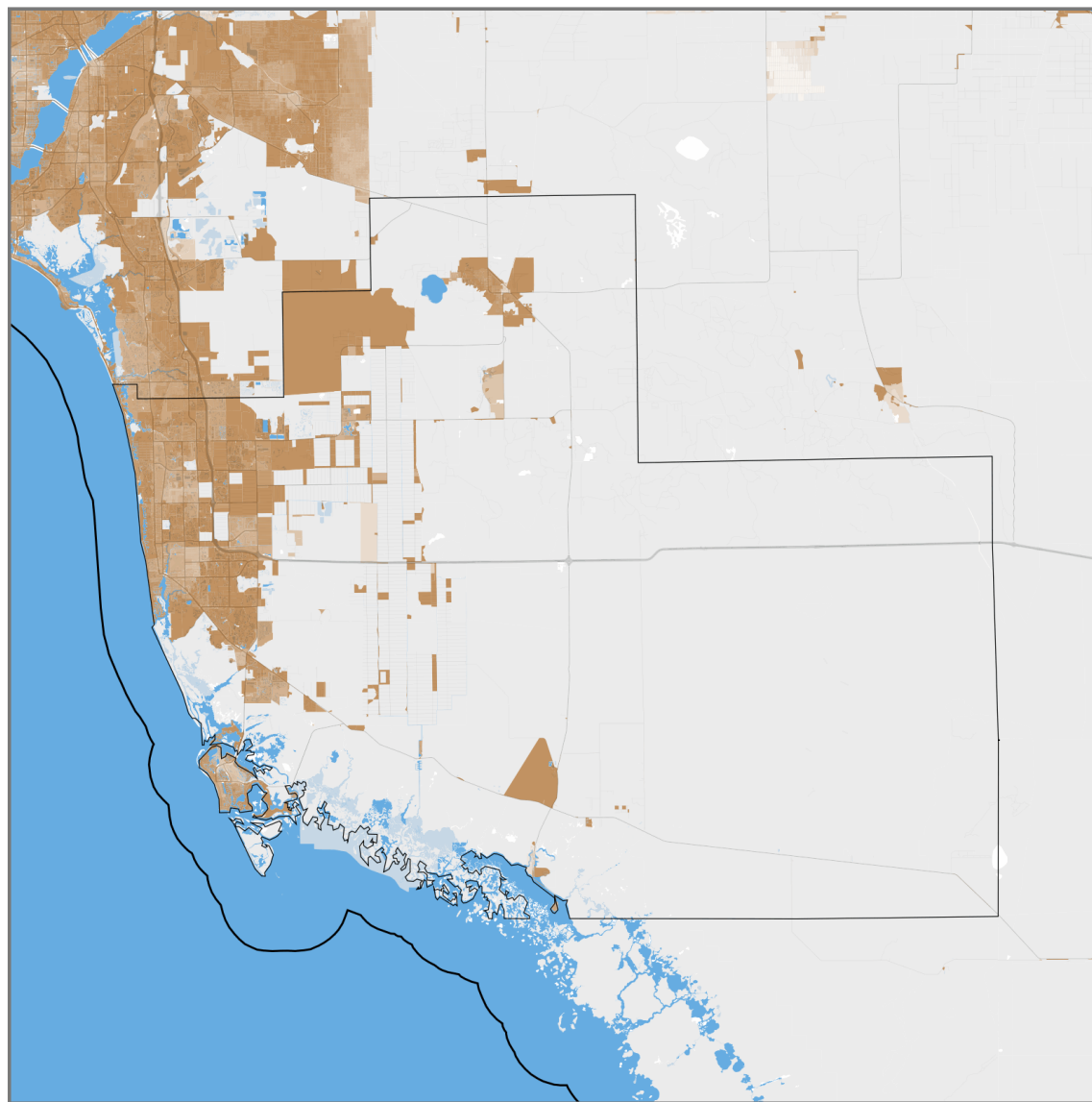


Collier MPO

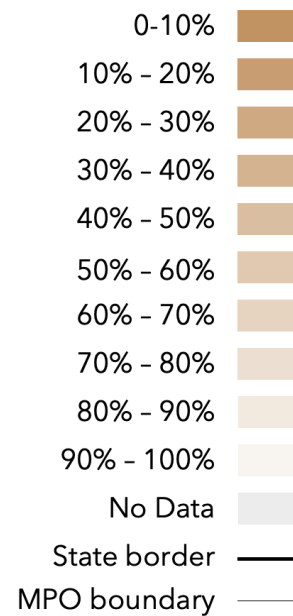
20



Collier MPO



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



Florida-Alabama Transportation Planning Organization

Job Accessibility Results—Bike, 2017

Total Jobs **175,246**

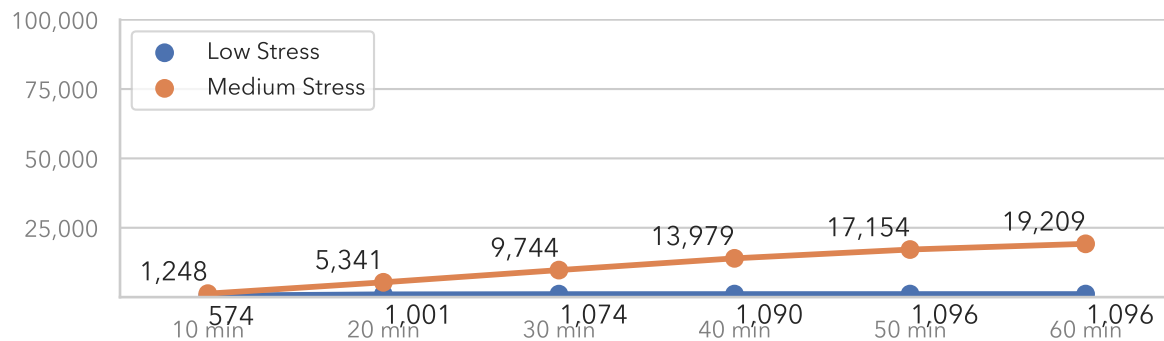
Average Job Density (per mi²) **379**

Total Workers **173,324**

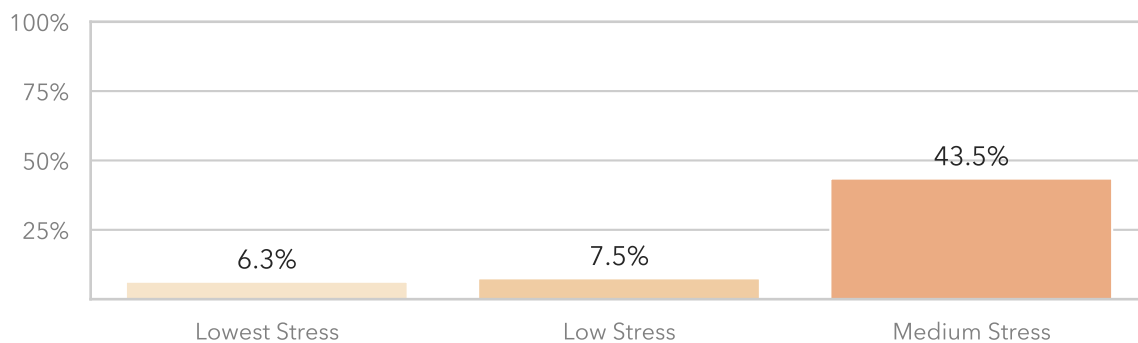
Average Worker Density (per mi²) **375**

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

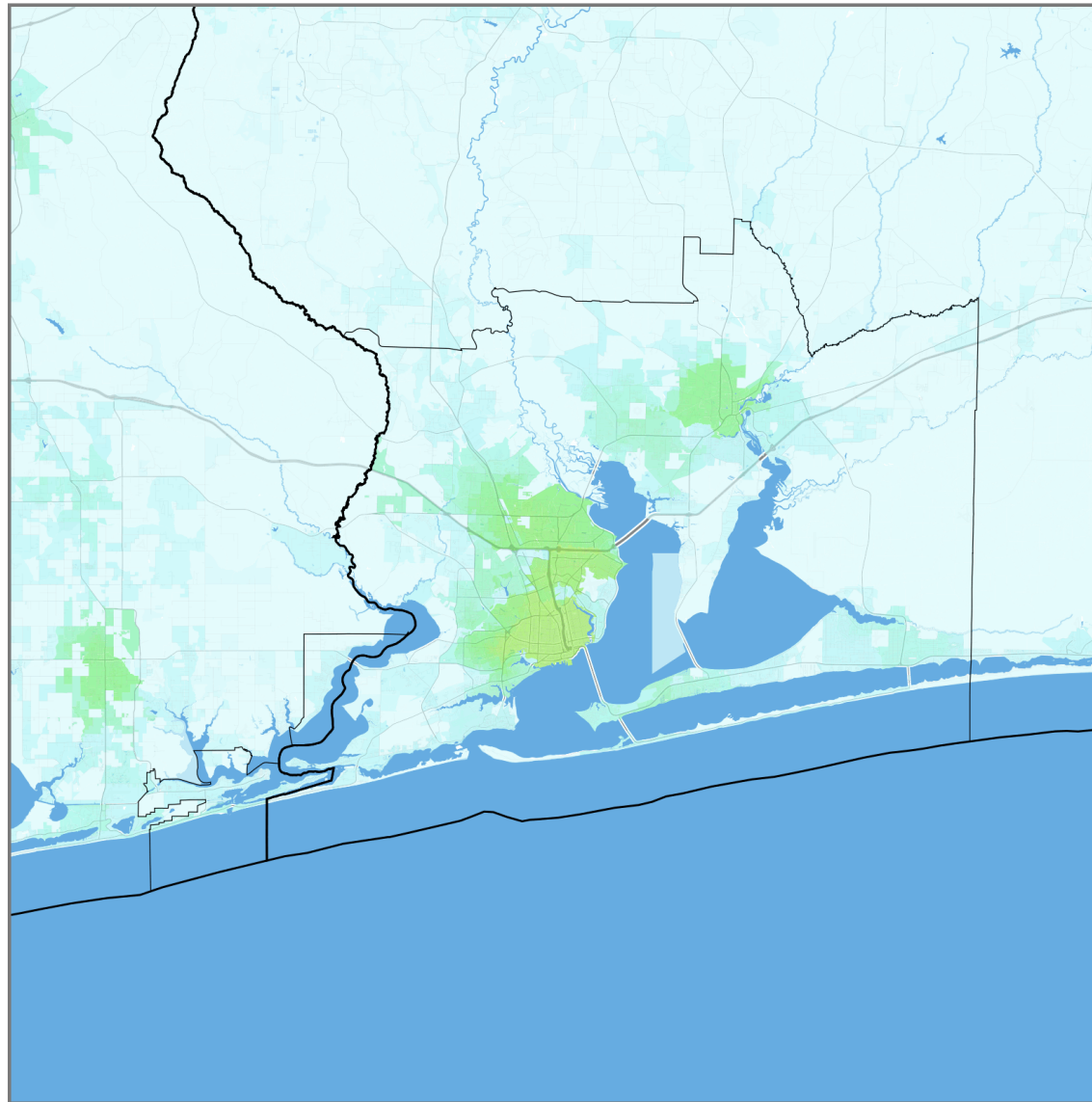
Average Job Accessibility by Travel Time Threshold (worker-weighted)



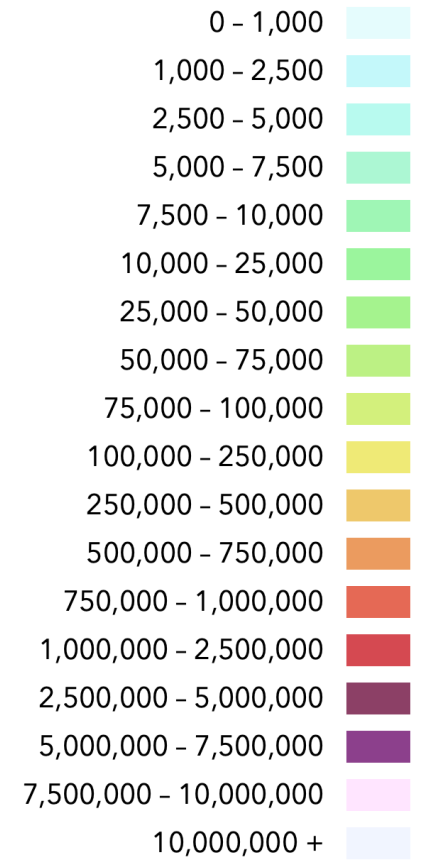
Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



Florida-Alabama Transportation Planning Organization

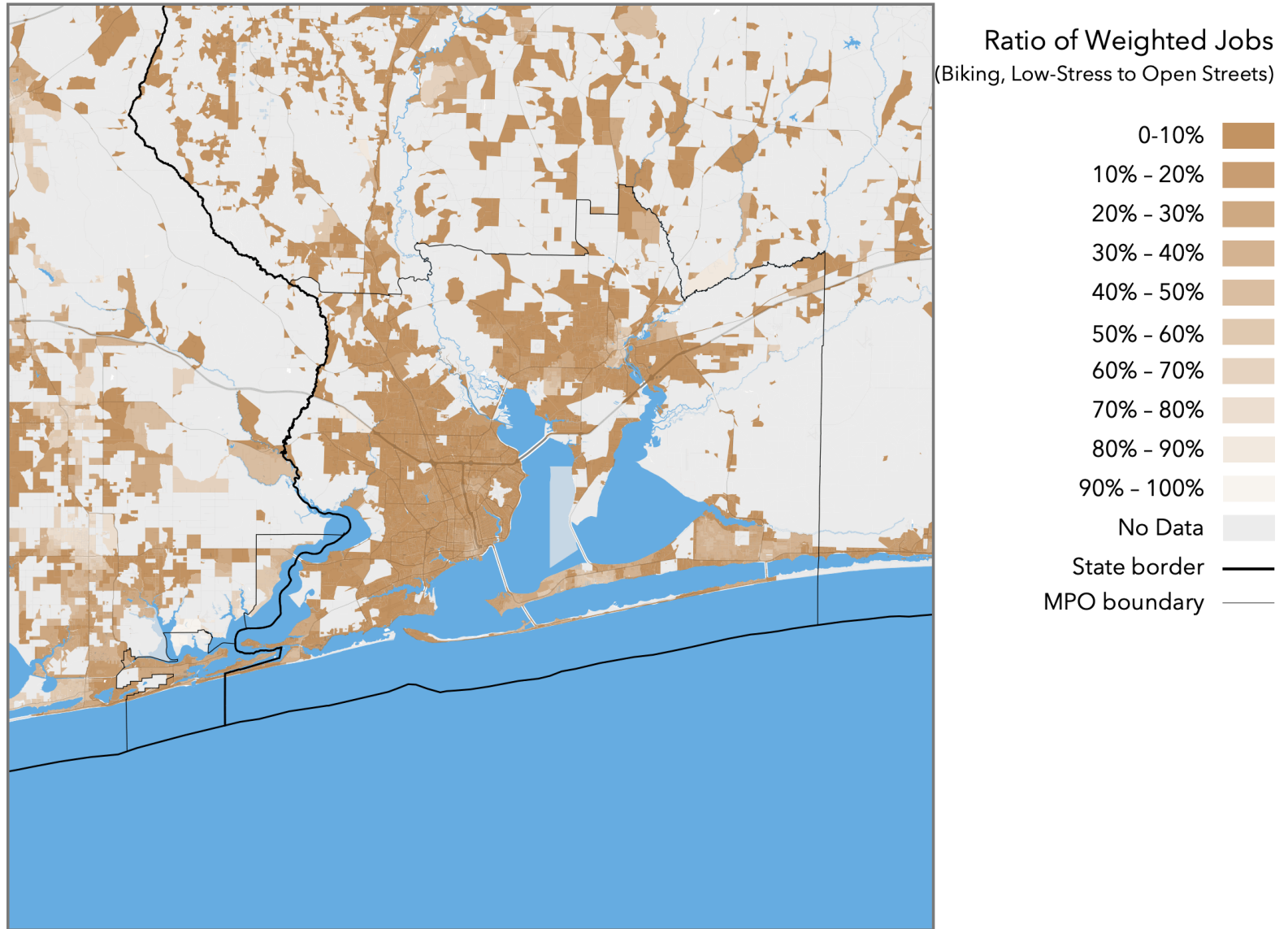


Jobs within 30 minutes
(Biking, medium stress)



State border —
MPO boundary —

Florida-Alabama Transportation Planning Organization



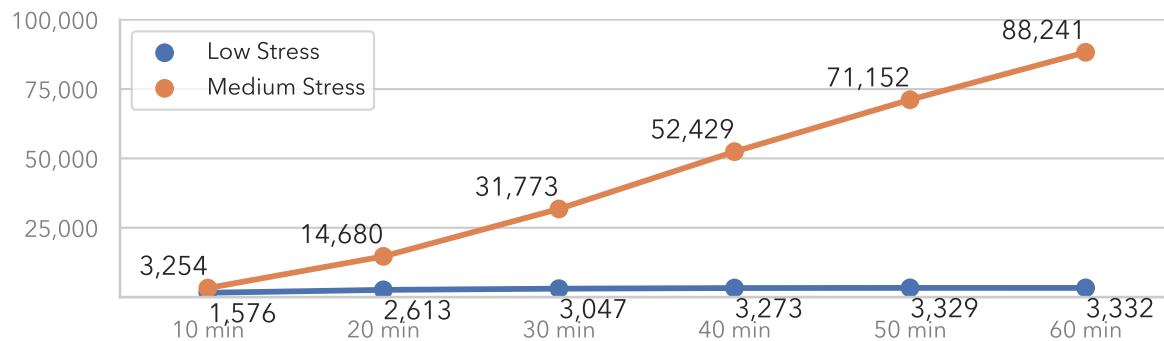
Forward Pinellas

Job Accessibility Results—Bike, 2017

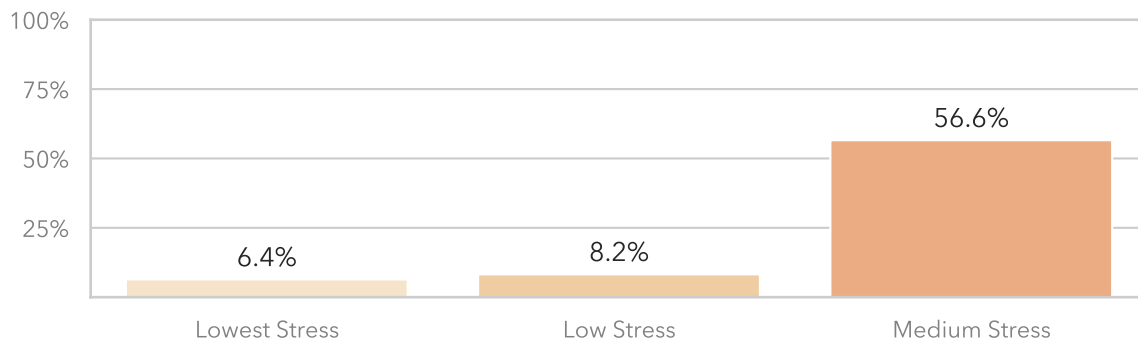
Total Jobs	425,530
Average Job Density (per mi ²)	3791
Total Workers	398,936
Average Worker Density (per mi ²)	3554

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

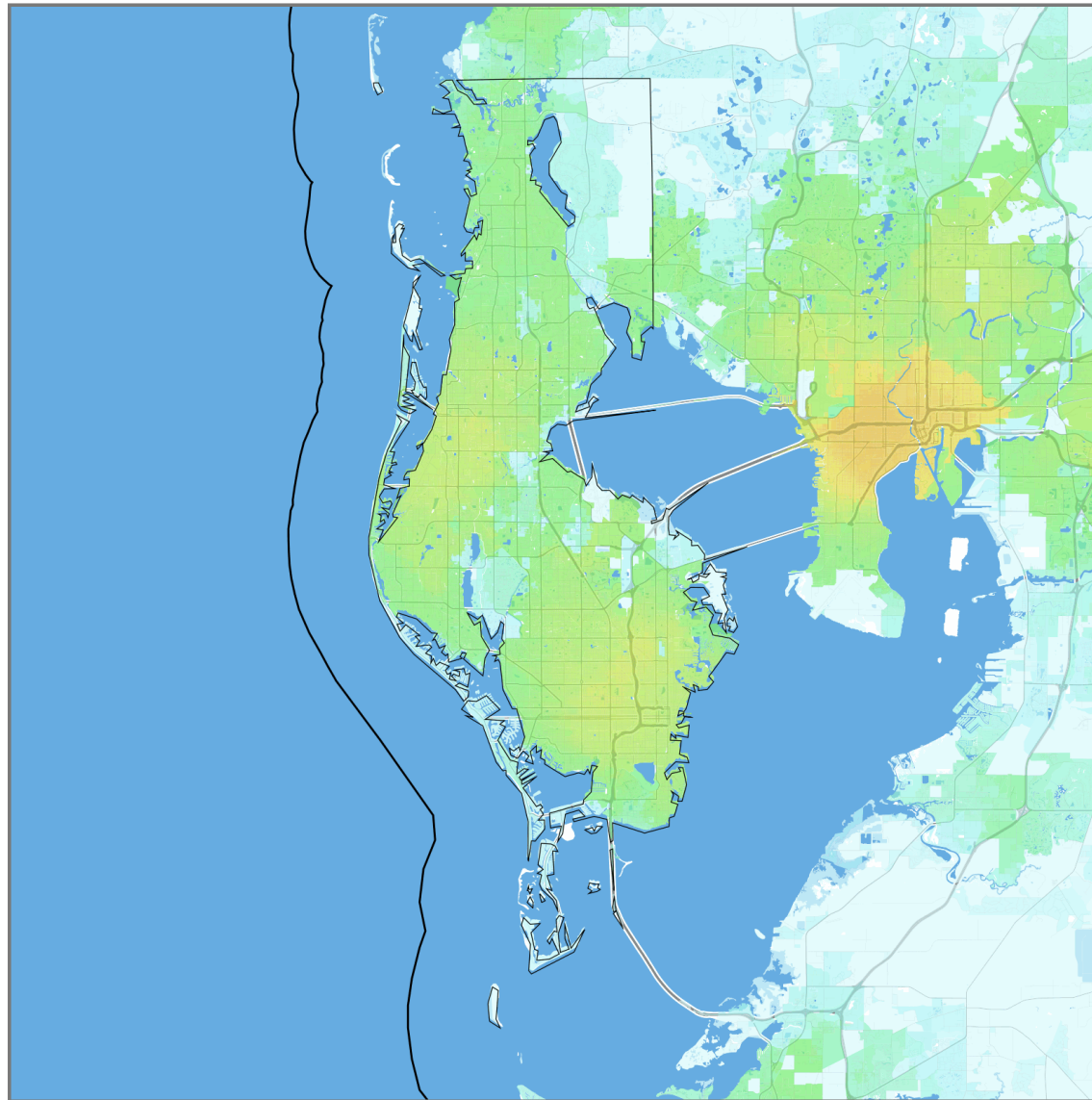
Average Job Accessibility by Travel Time Threshold (worker-weighted)



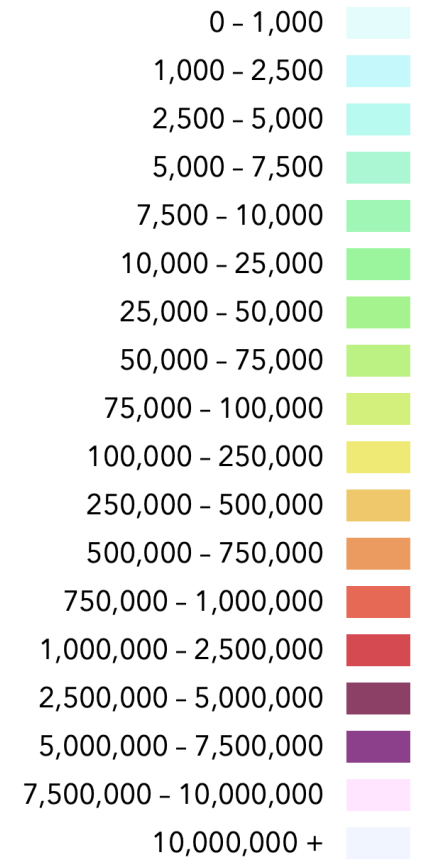
Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



Forward Pinellas



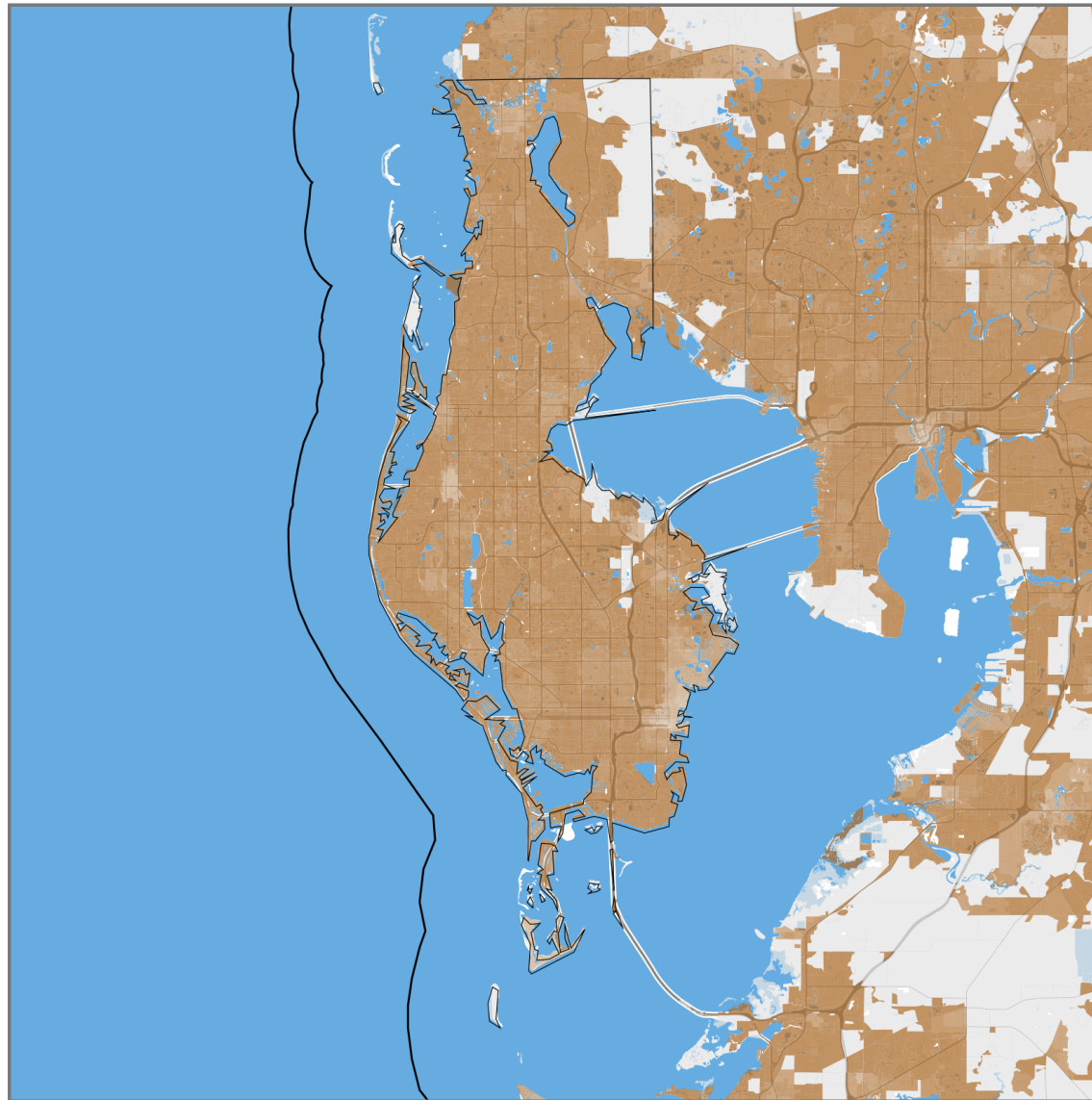
Jobs within 30 minutes
(Biking, medium stress)



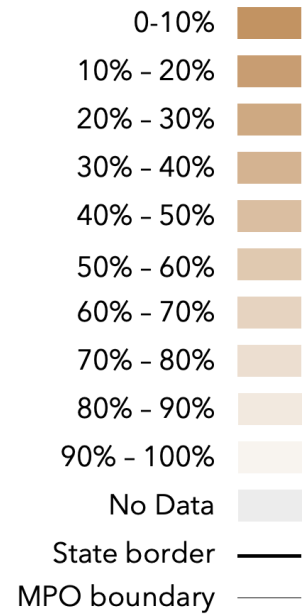
State border

MPO boundary

Forward Pinellas



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



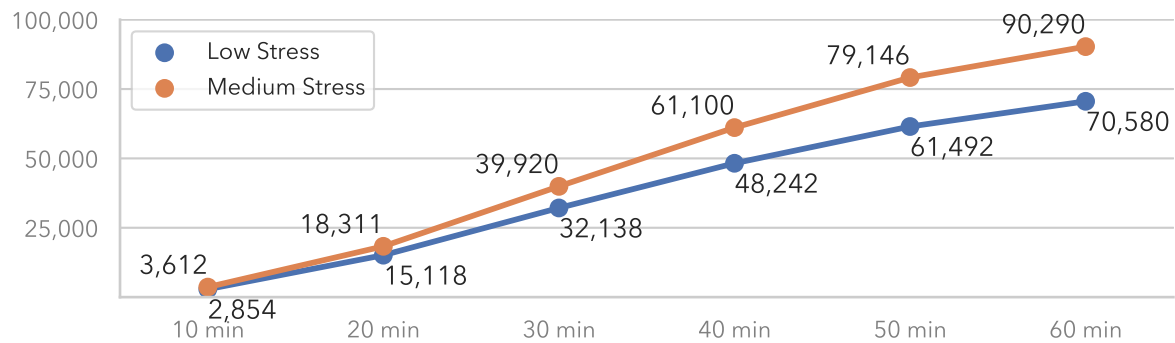
Gainesville MTPo

Job Accessibility Results—Bike, 2017

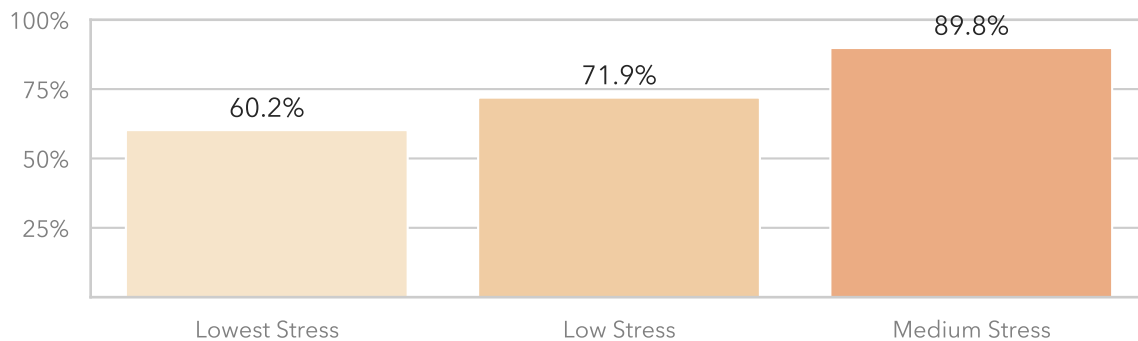
Total Jobs	108,569
Average Job Density (per mi ²)	1493
Total Workers	79,966
Average Worker Density (per mi ²)	1100

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

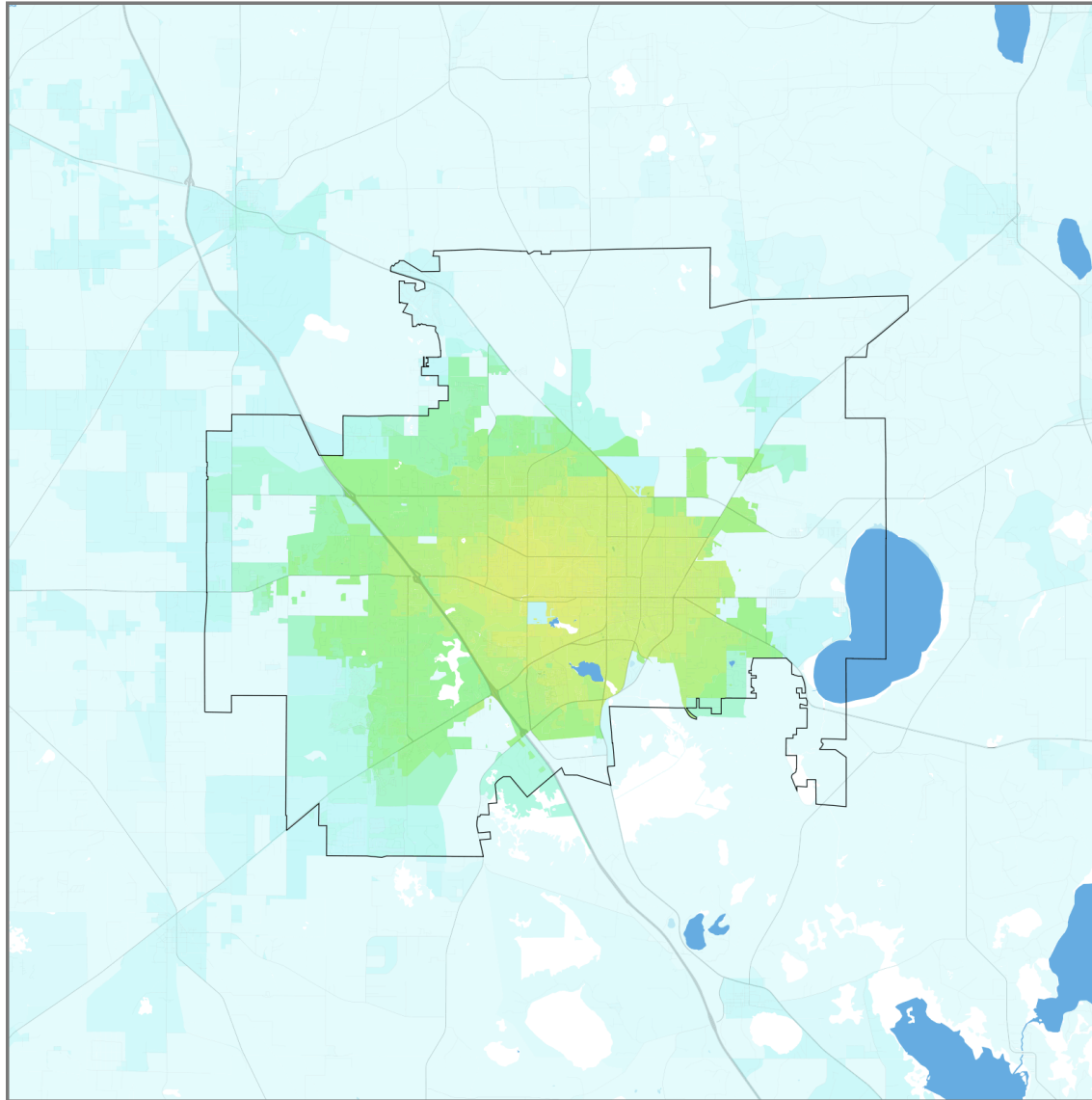
Average Job Accessibility by Travel Time Threshold (worker-weighted)



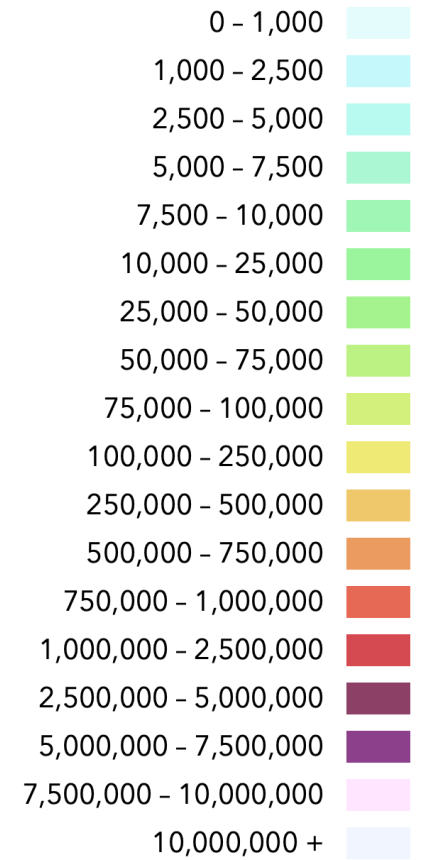
Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



Gainesville MTPo



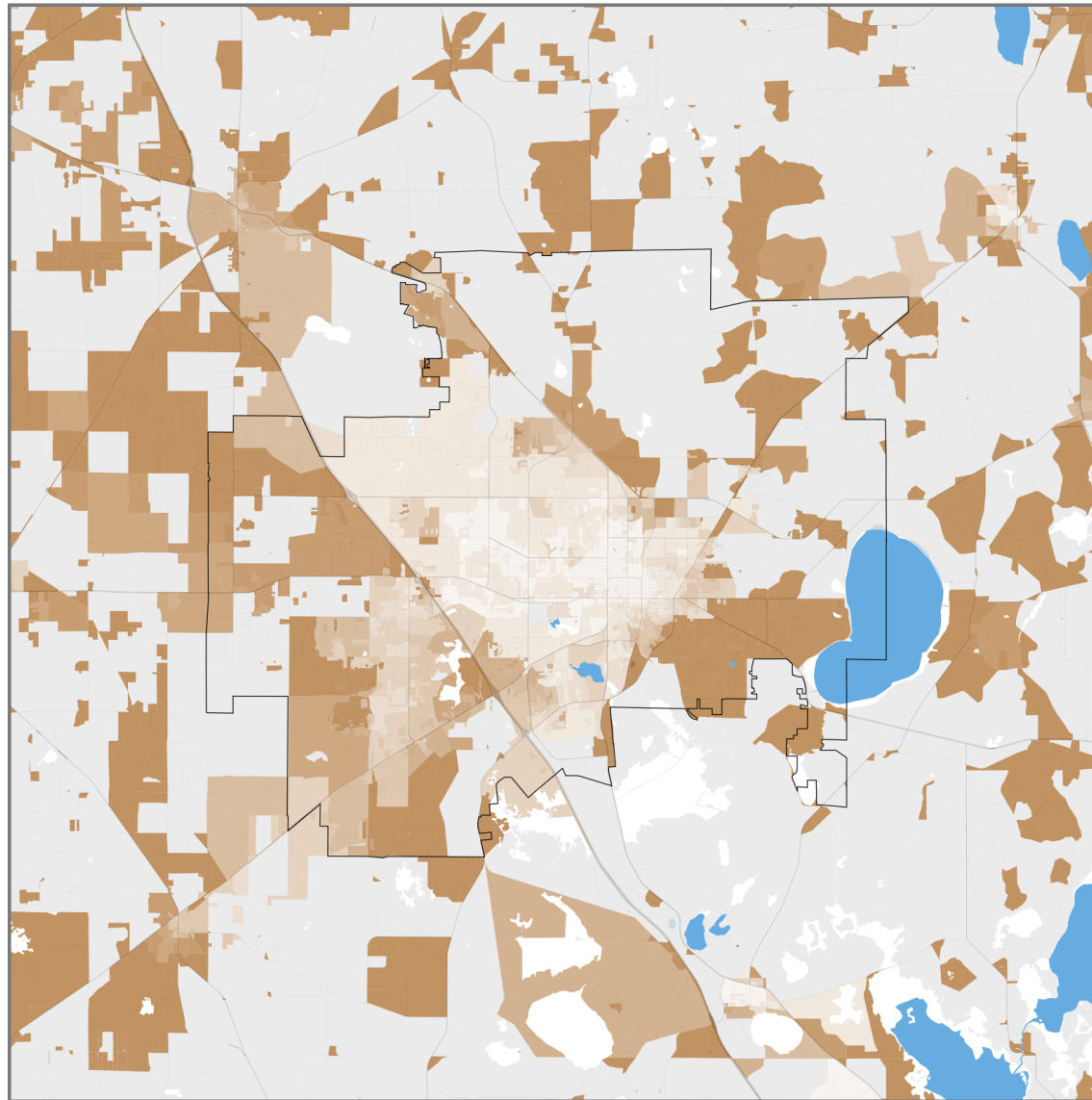
Jobs within 30 minutes
(Biking, medium stress)



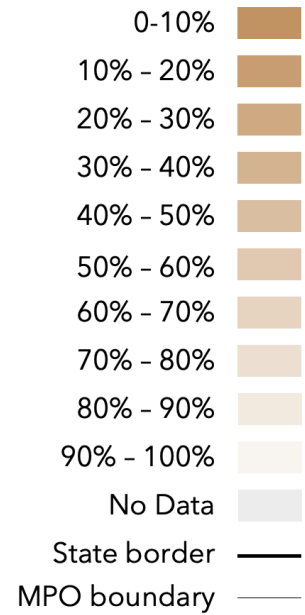
State border —
MPO boundary —

Gainesville MTPPO

30



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



Heartland Regional TPO

Job Accessibility Results—Bike, 2017

Total Jobs **67,409**

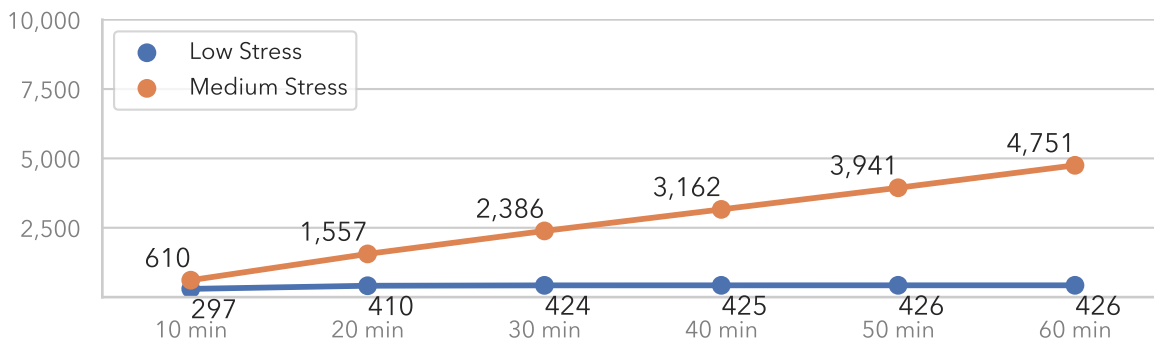
Average Job Density (per mi²) **34**

Total Workers **80,592**

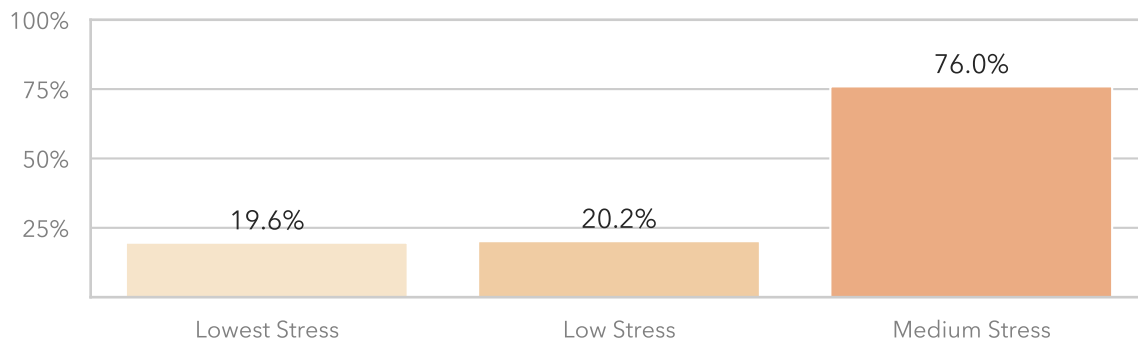
Average Worker Density (per mi²) **41**

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

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

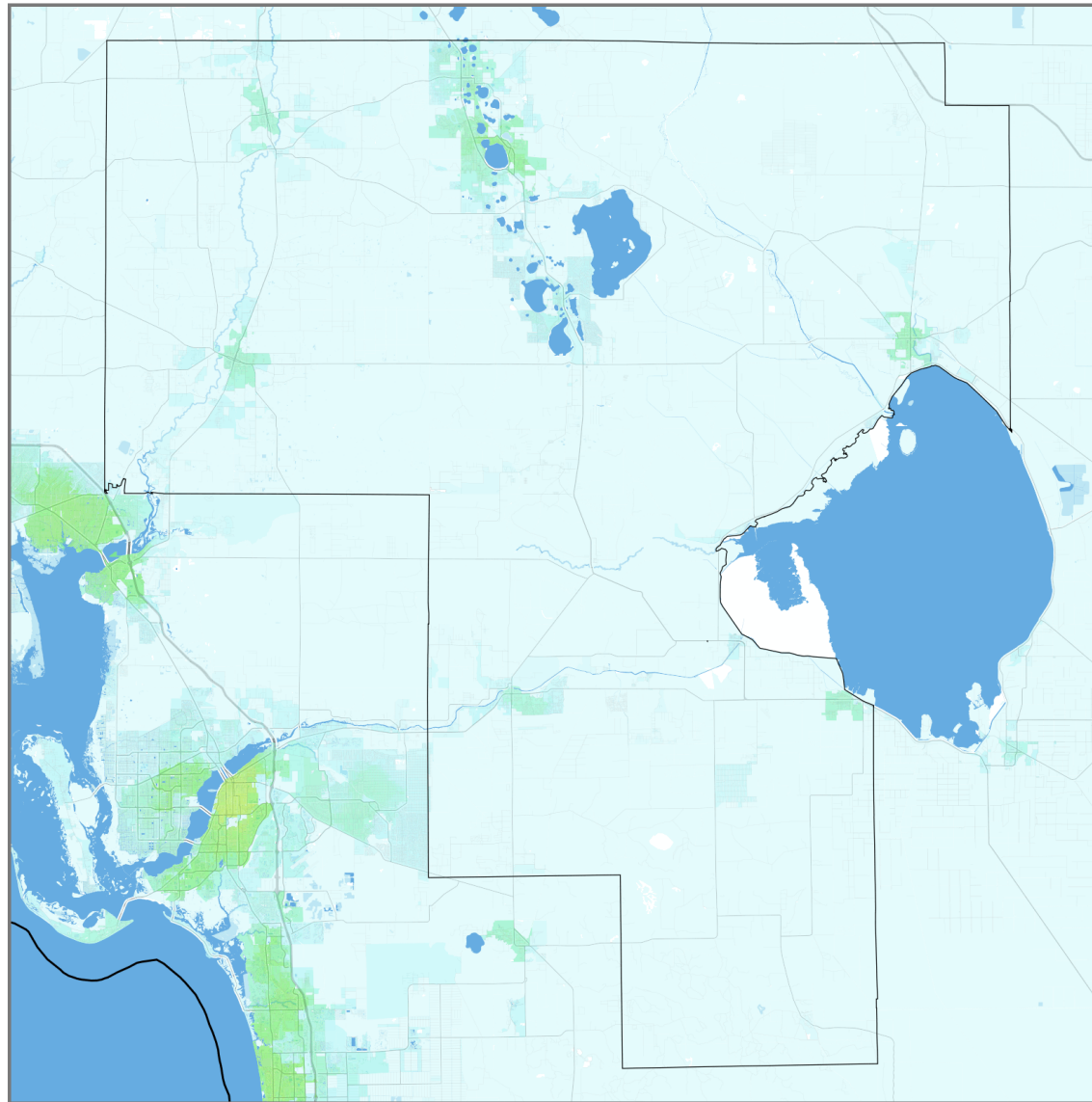


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

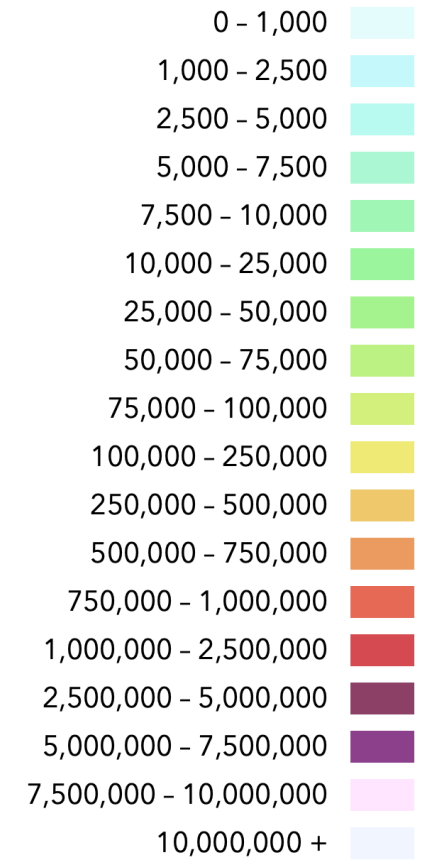


Heartland Regional TPO

32



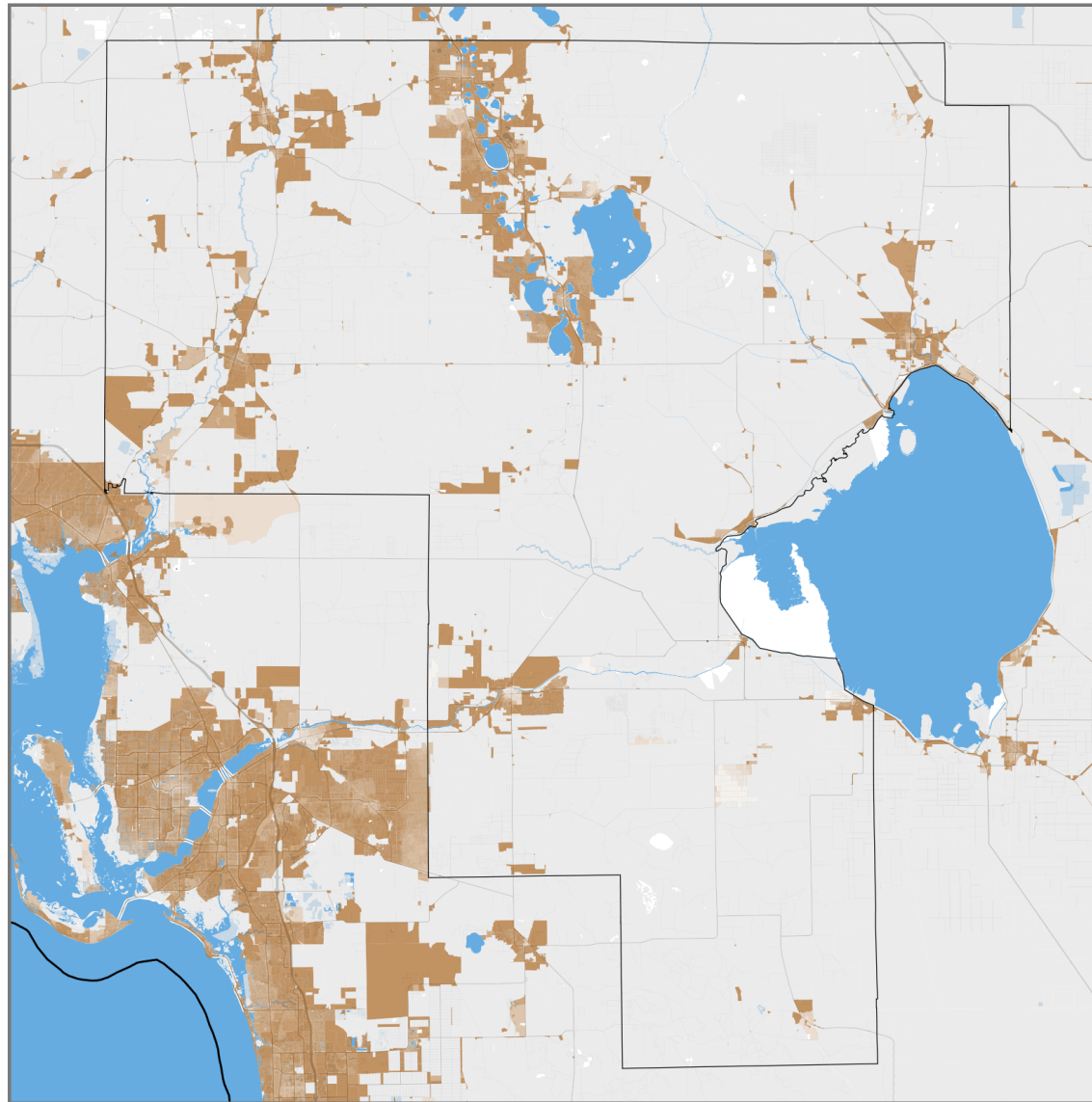
Jobs within 30 minutes
(Biking, medium stress)



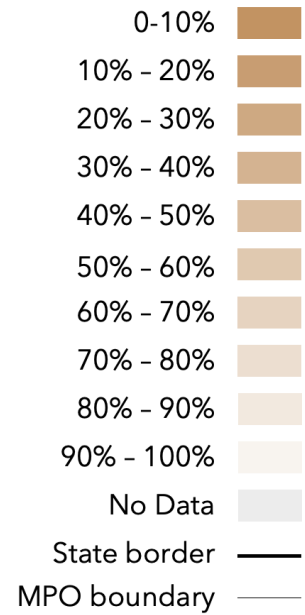
State border

MPO boundary

Heartland Regional TPO



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



Hernando/Citrus MPO

Job Accessibility Results—Bike, 2017

Total Jobs **74,113**

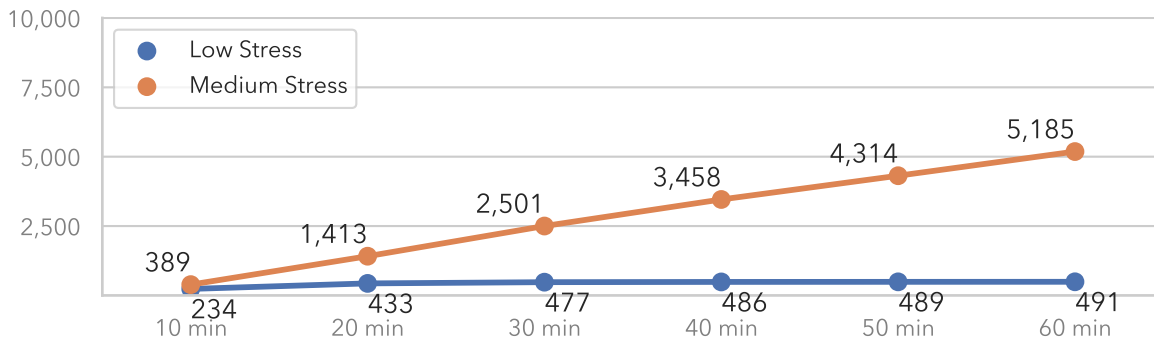
Average Job Density (per mi²) **171**

Total Workers **99,043**

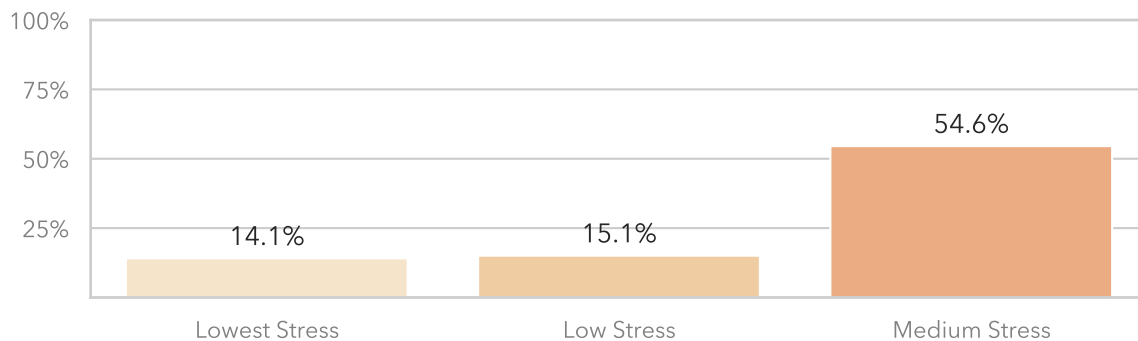
Average Worker Density (per mi²) **229**

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

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

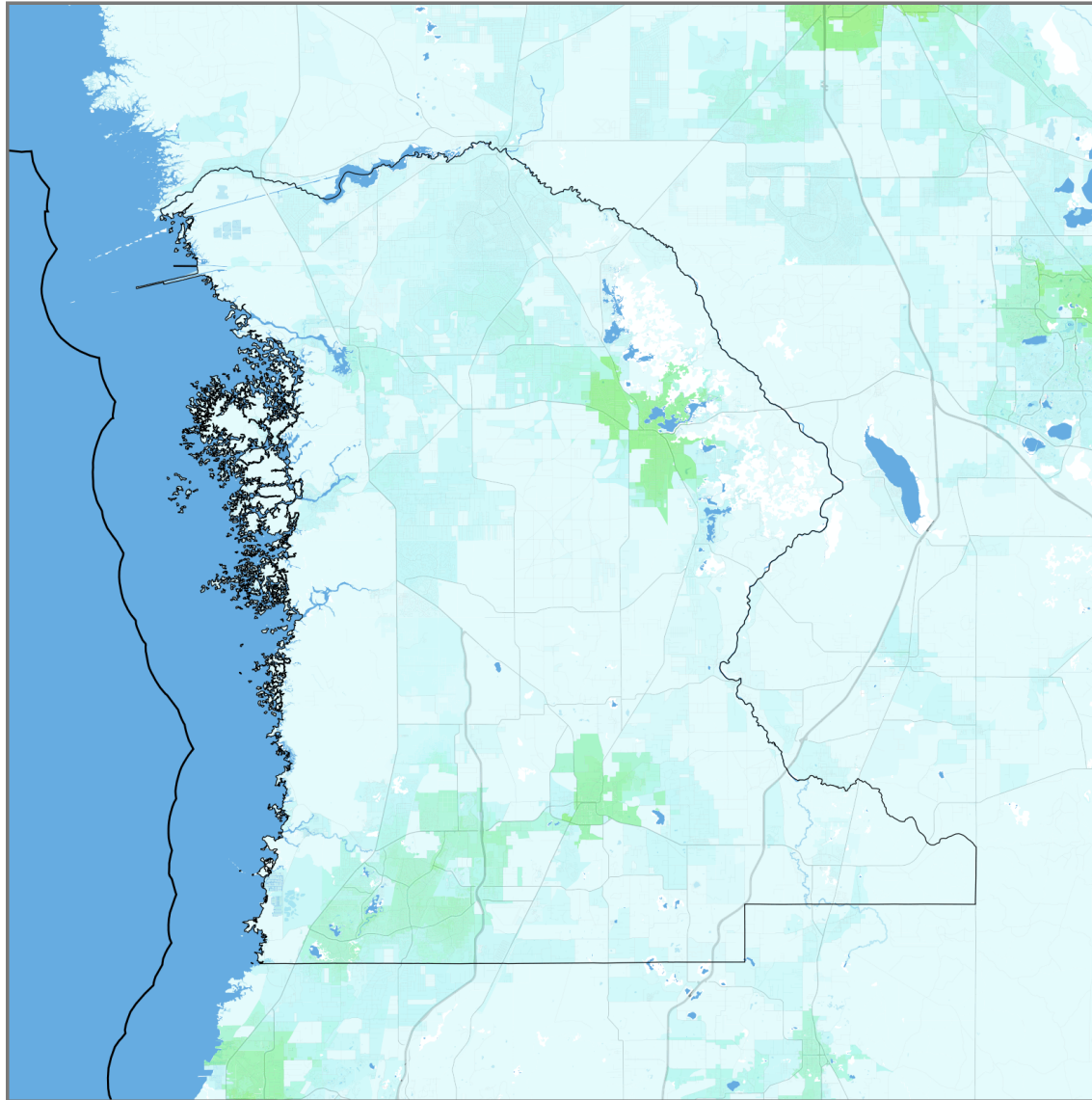


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

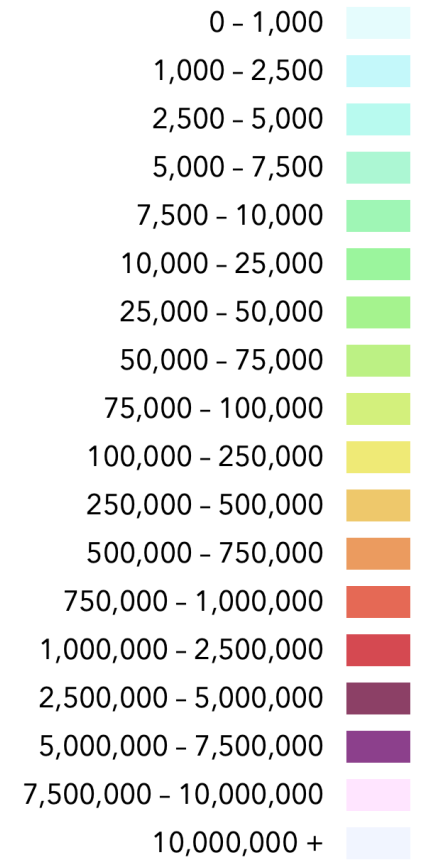


Hernando/Citrus MPO

35



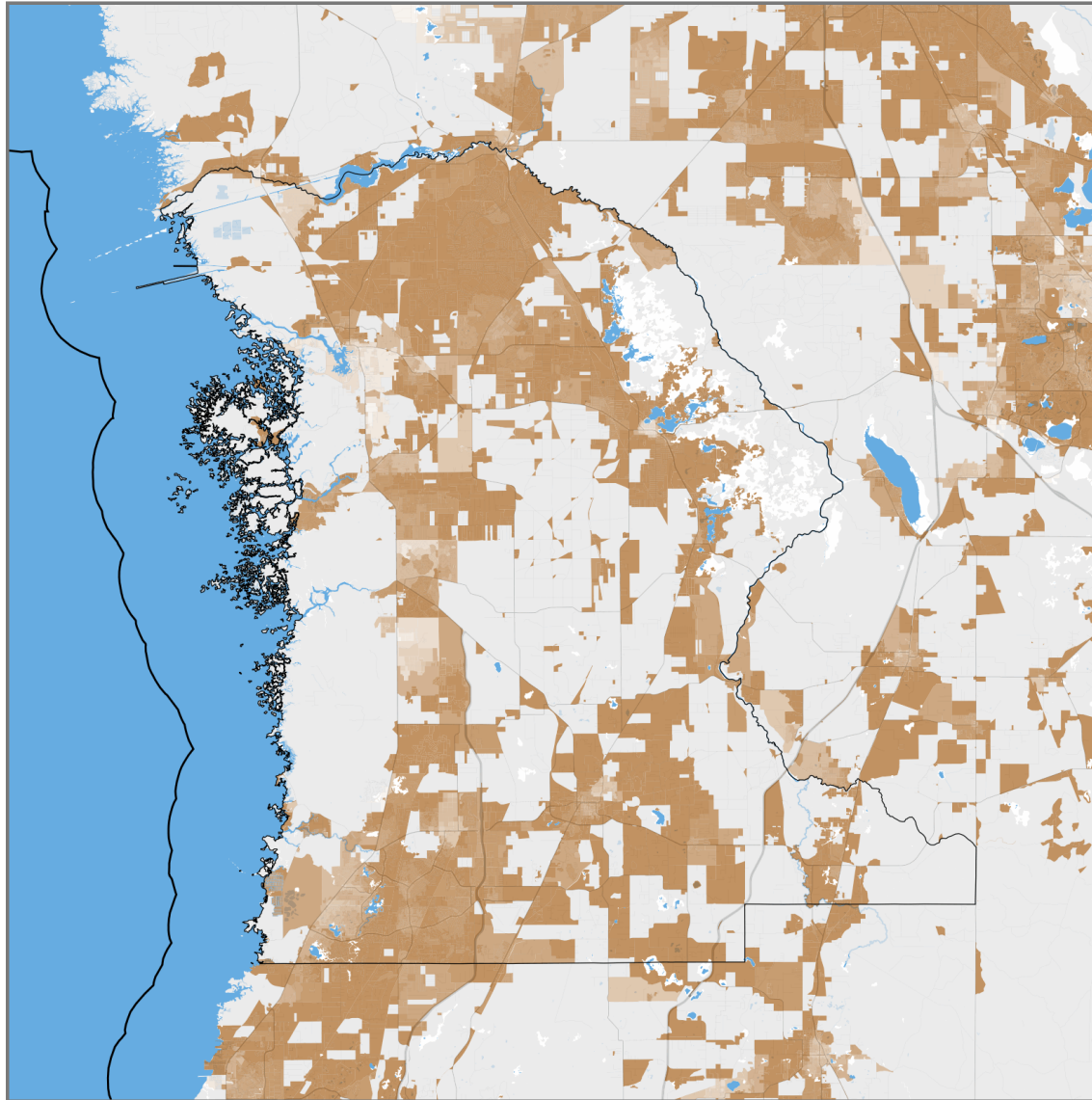
Jobs within 30 minutes
(Biking, medium stress)



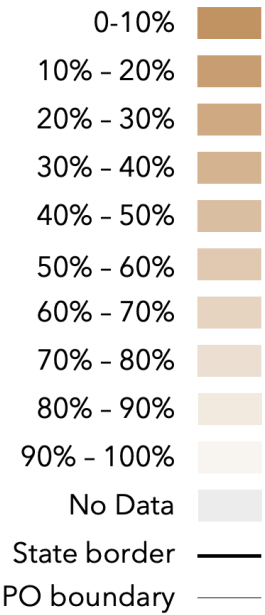
State border

MPO boundary

Hernando/Citrus MPO



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



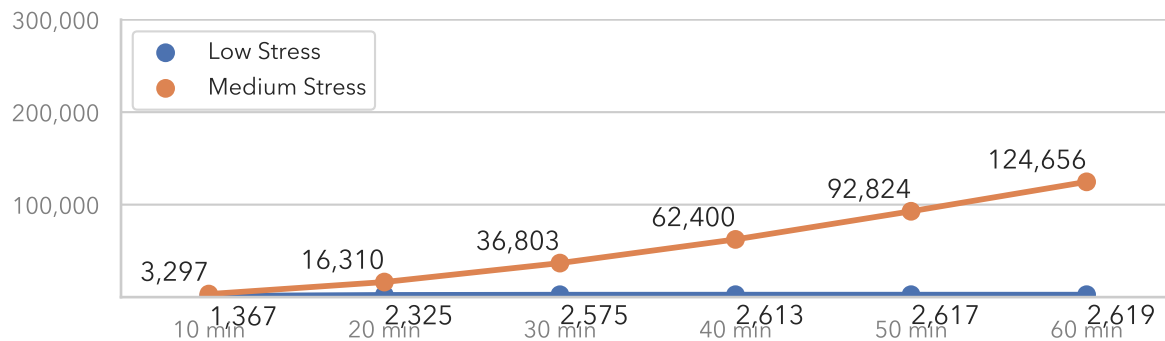
Hillsborough MPO

Job Accessibility Results—Bike, 2017

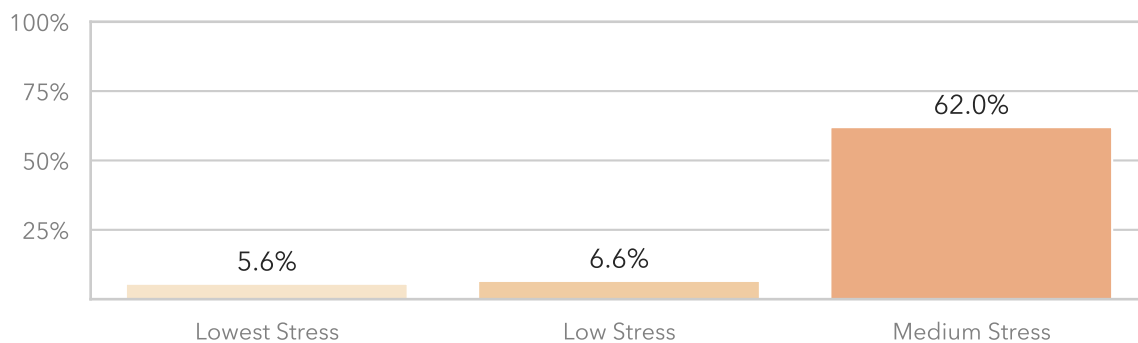
Total Jobs	670,700
Average Job Density (per mi ²)	1564
Total Workers	576,668
Average Worker Density (per mi ²)	1344

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

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

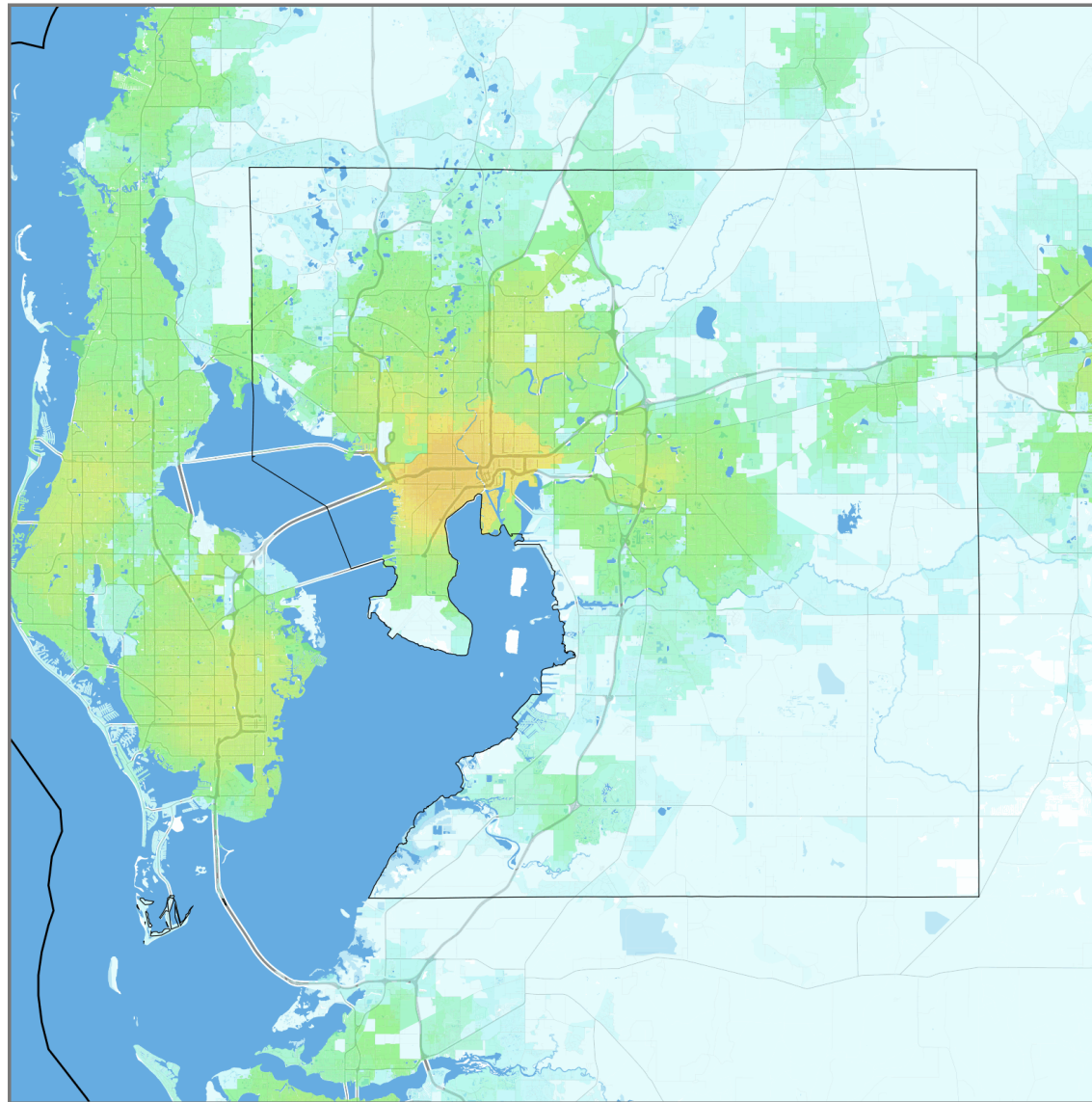


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

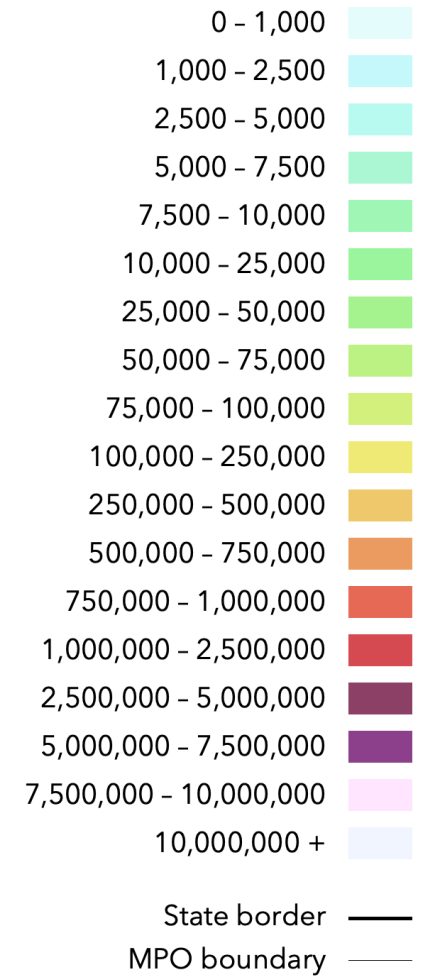


Hillsborough MPO

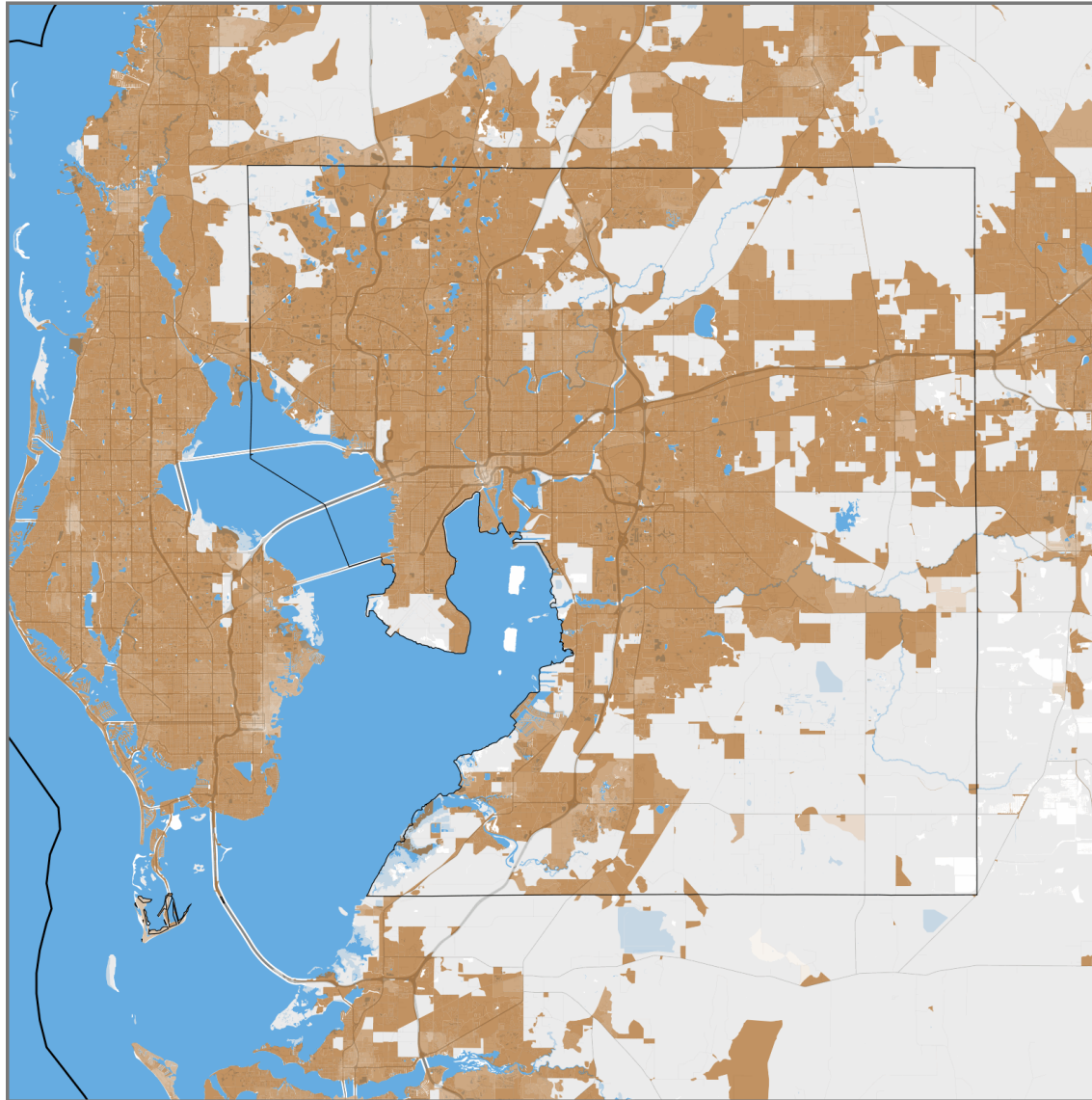
38



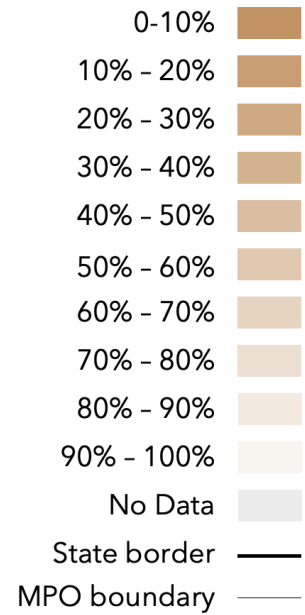
Jobs within 30 minutes
(Biking, medium stress)



Hillsborough MPO



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



Indian River County MPO

Job Accessibility Results—Bike, 2017

Total Jobs **46,511**

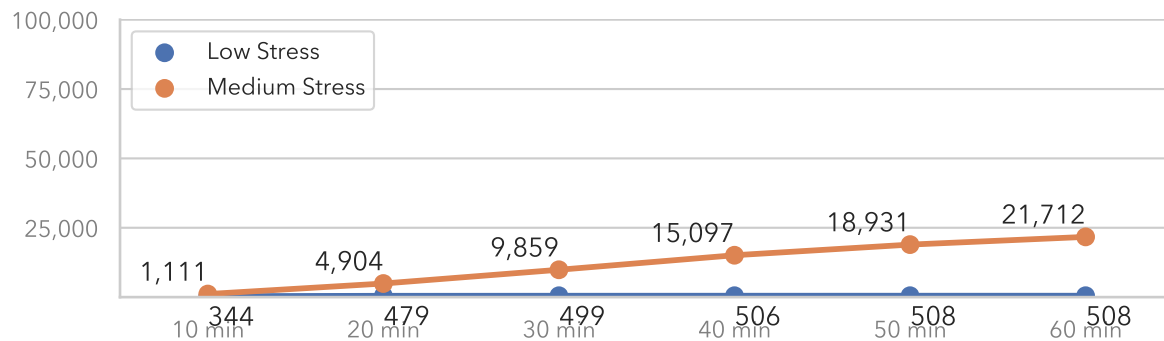
Average Job Density (per mi²) **688**

Total Workers **51,489**

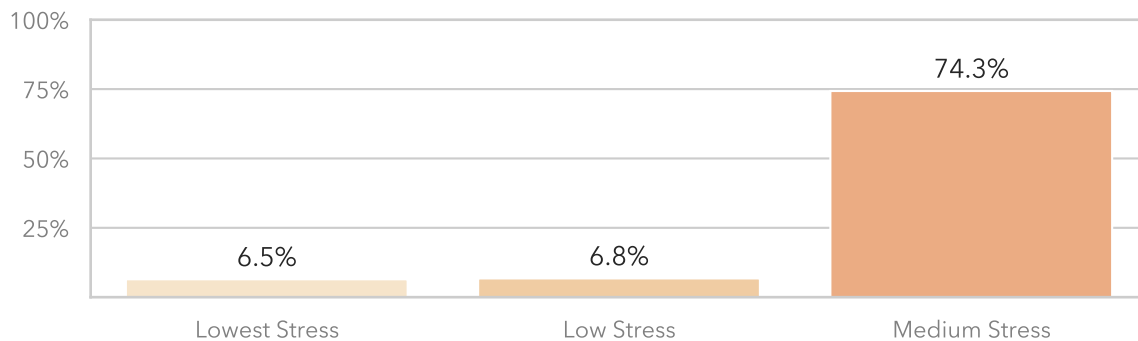
Average Worker Density (per mi²) **762**

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

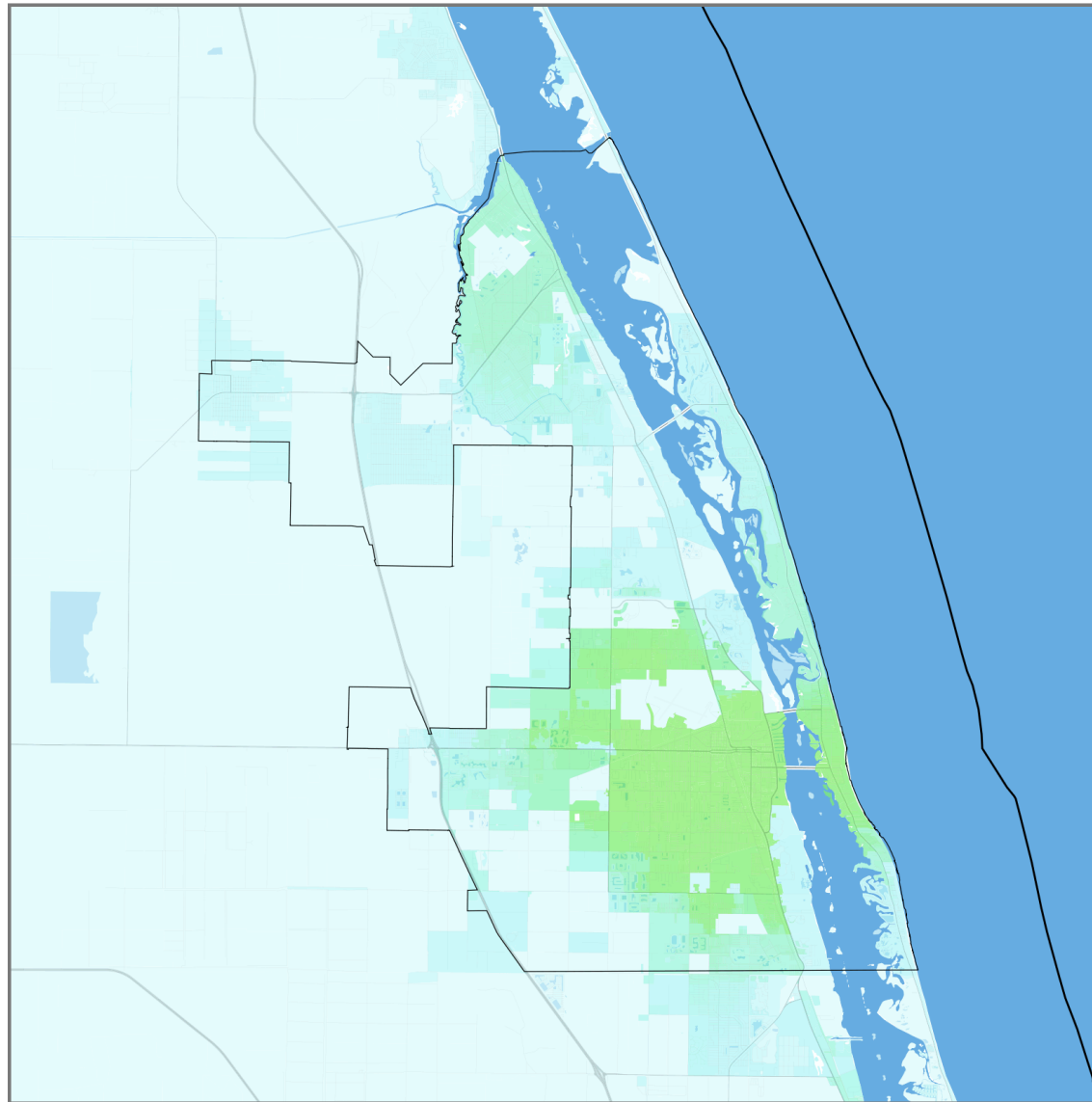
Average Job Accessibility by Travel Time Threshold (worker-weighted)



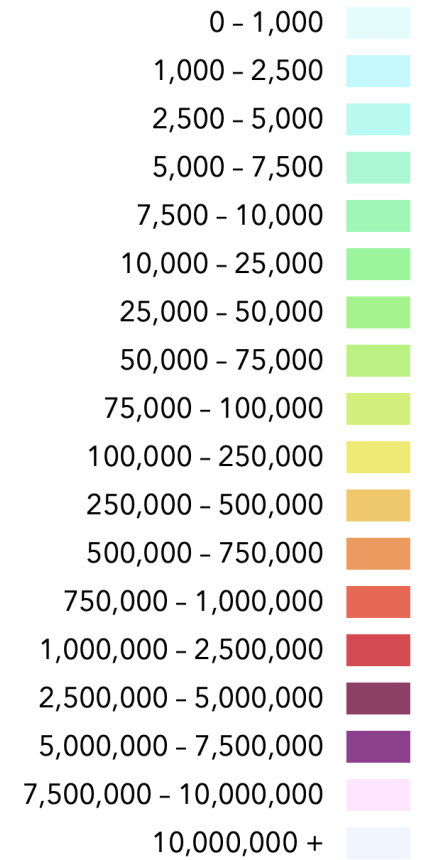
Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



Indian River County MPO

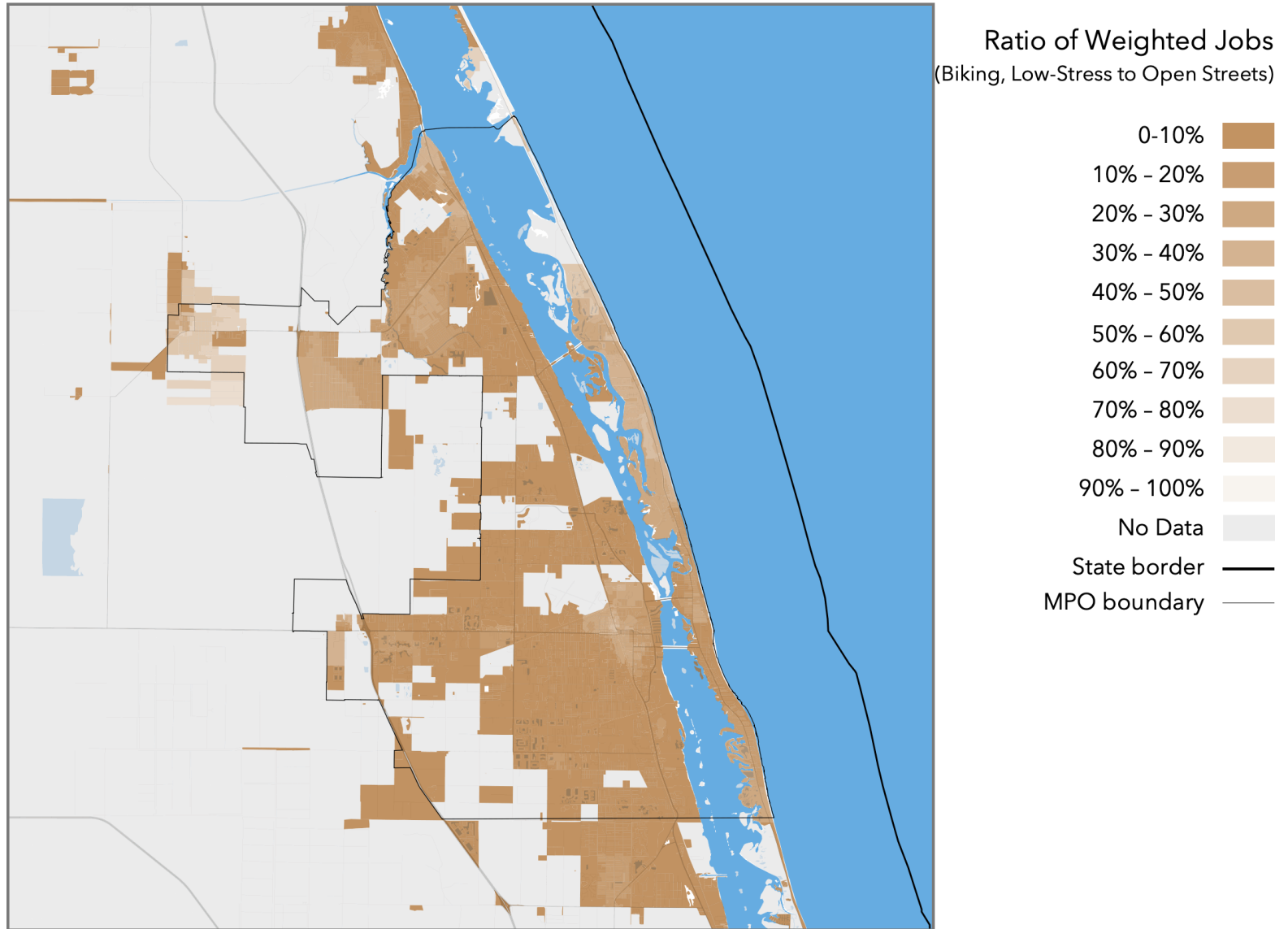


Jobs within 30 minutes
(Biking, medium stress)



State border —
MPO boundary —

Indian River County MPO



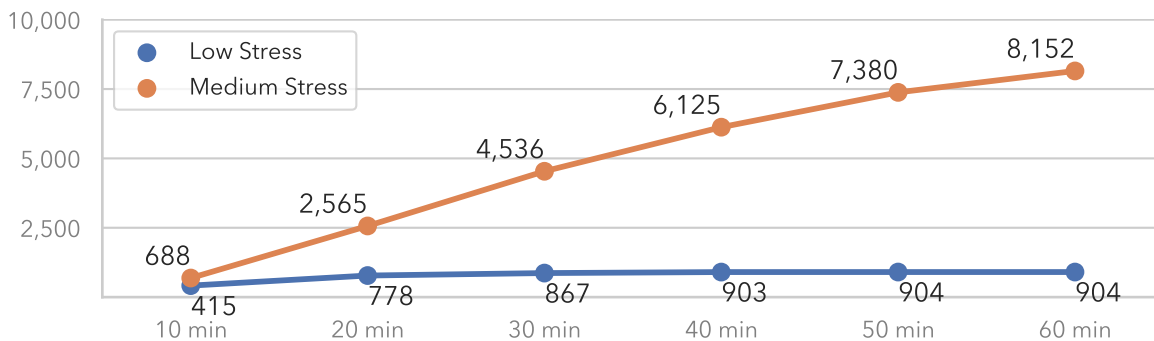
Lake-Sumter MPO

Job Accessibility Results—Bike, 2017

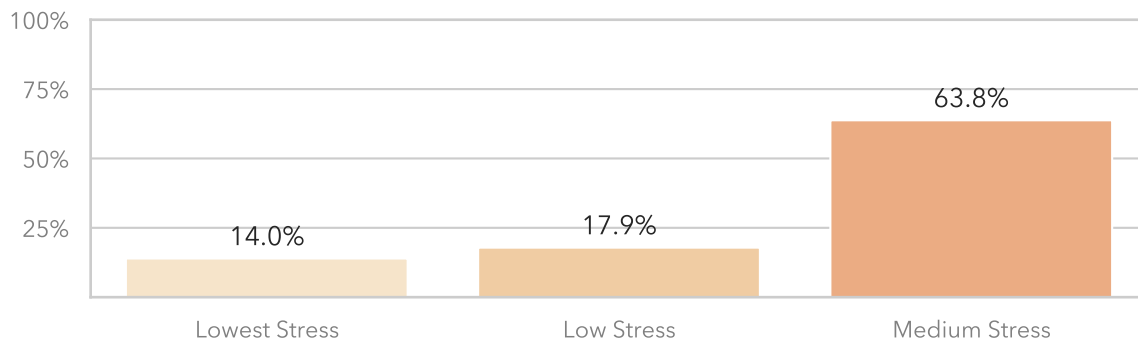
Total Jobs	116,884
Average Job Density (per mi ²)	175
Total Workers	147,012
Average Worker Density (per mi ²)	220

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

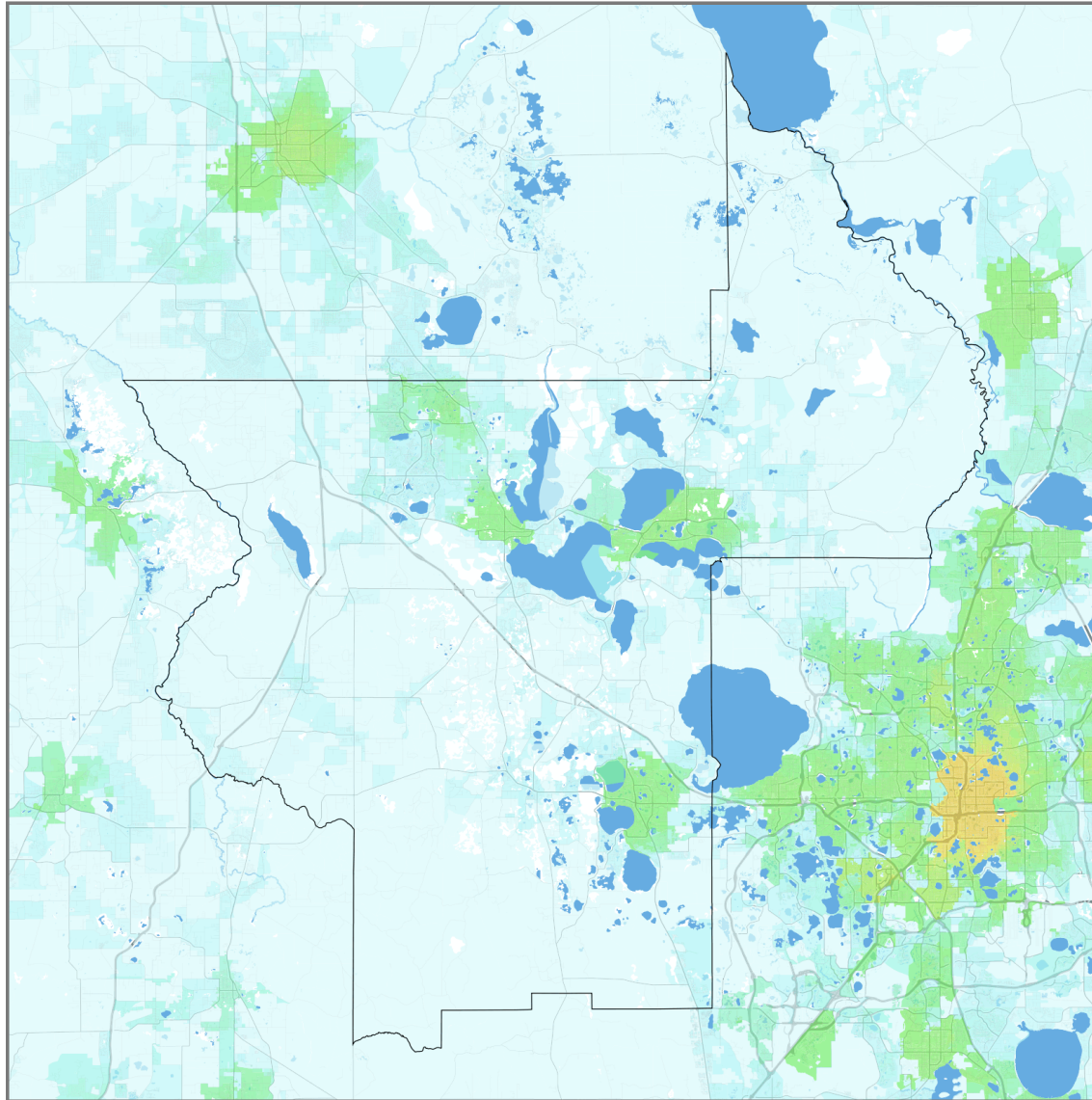
Average Job Accessibility by Travel Time Threshold (worker-weighted)



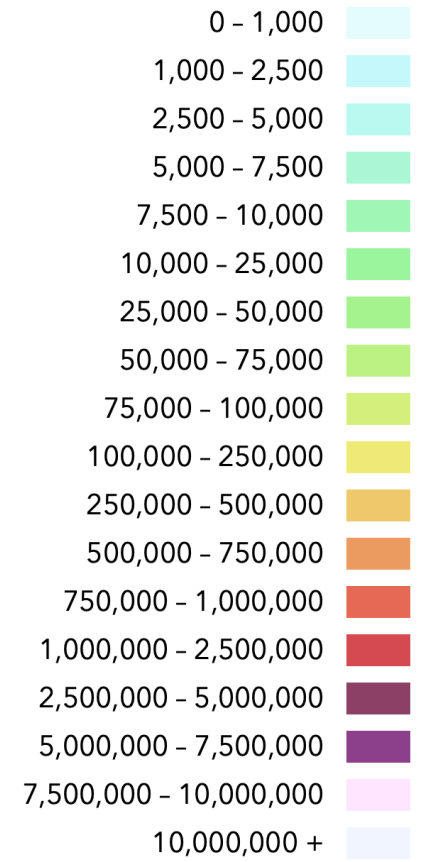
Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



Lake-Sumter MPO



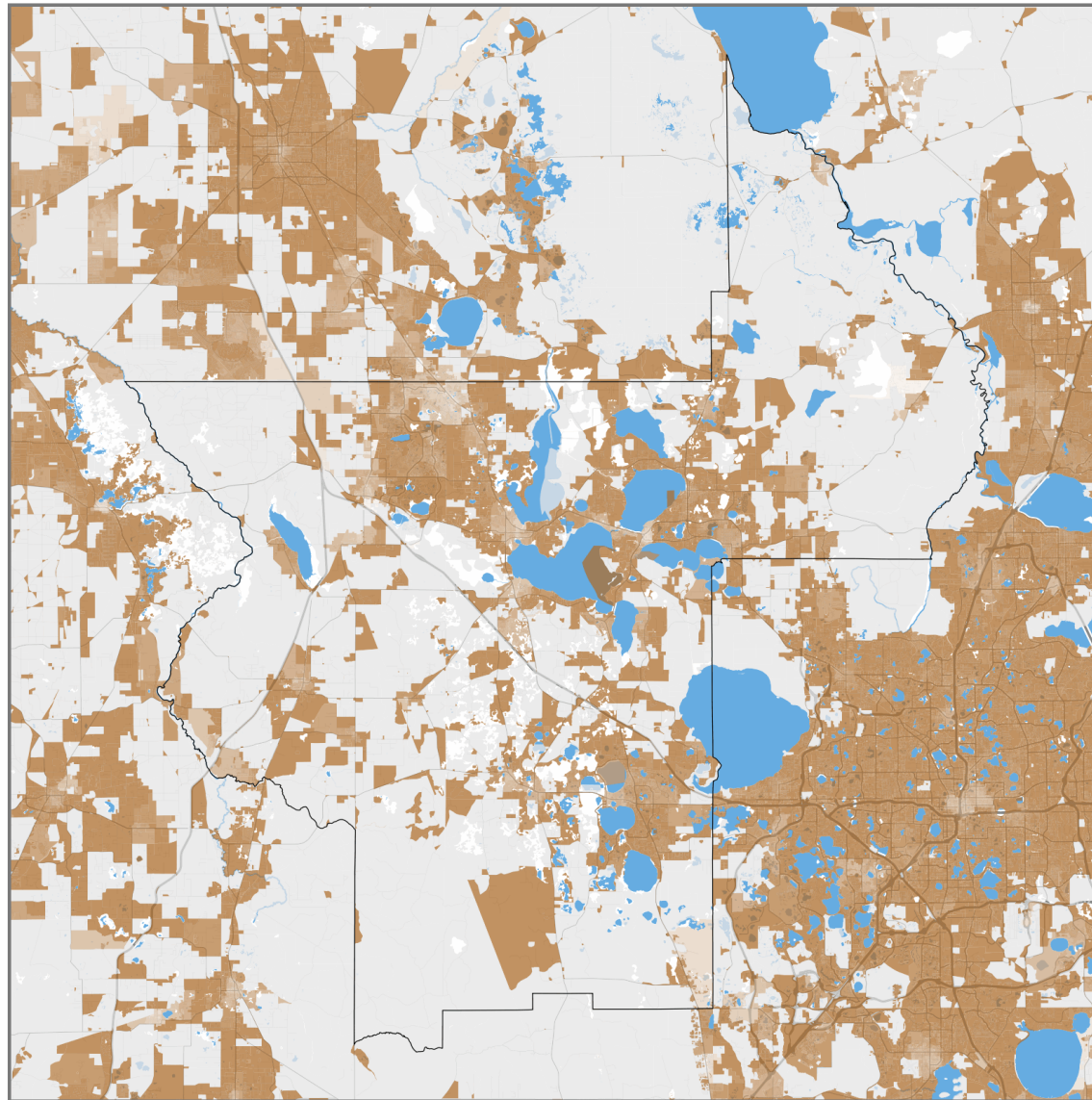
Jobs within 30 minutes
(Biking, medium stress)



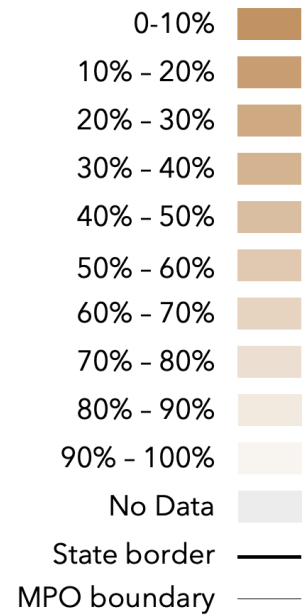
State border

MPO boundary

Lake-Sumter MPO



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



Lee County MPO

Job Accessibility Results—Bike, 2017

Total Jobs **231,984**

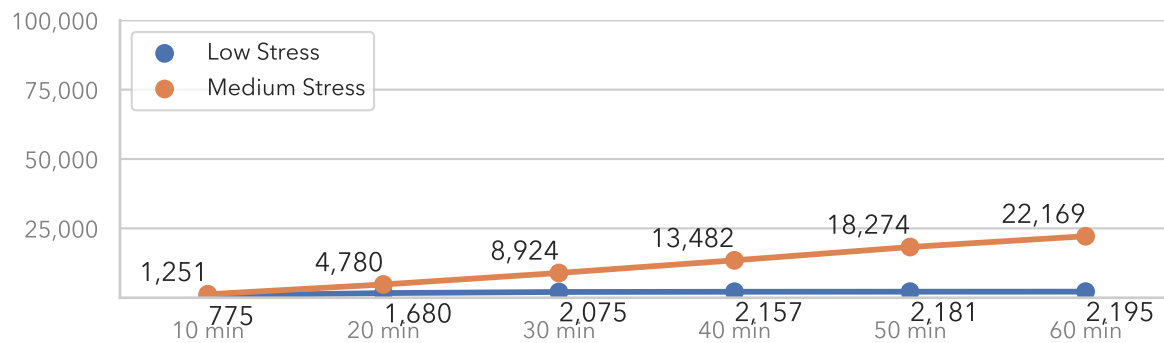
Average Job Density (per mi²) **727**

Total Workers **243,169**

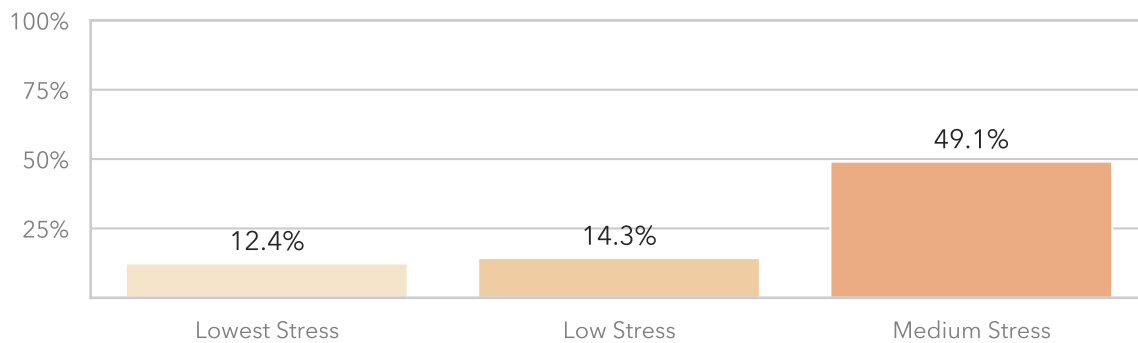
Average Worker Density (per mi²) **763**

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

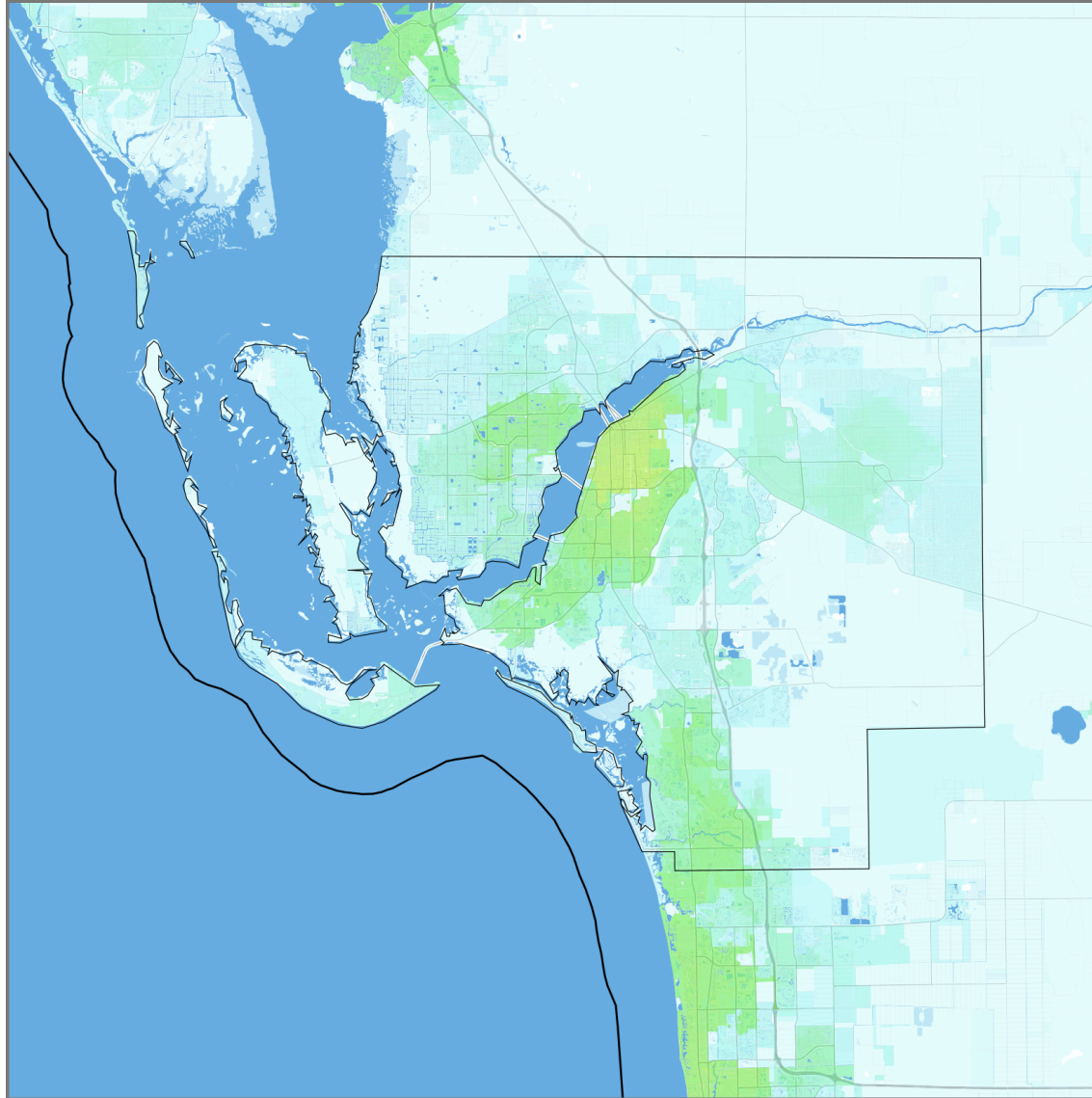
Average Job Accessibility by Travel Time Threshold (worker-weighted)



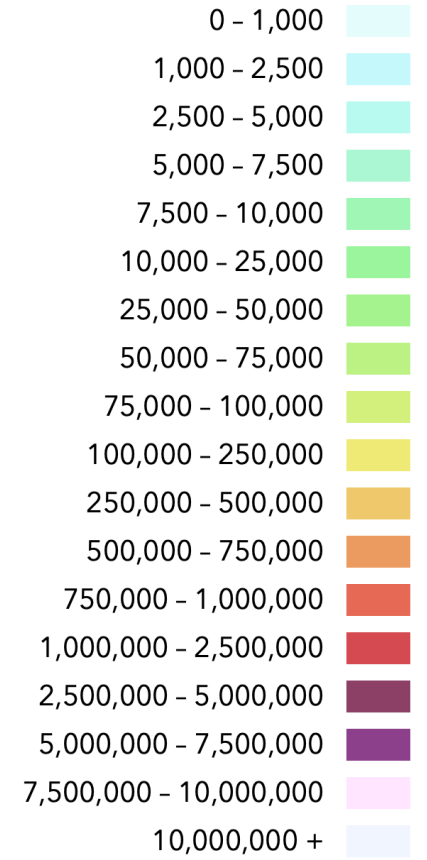
Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



Lee County MPO

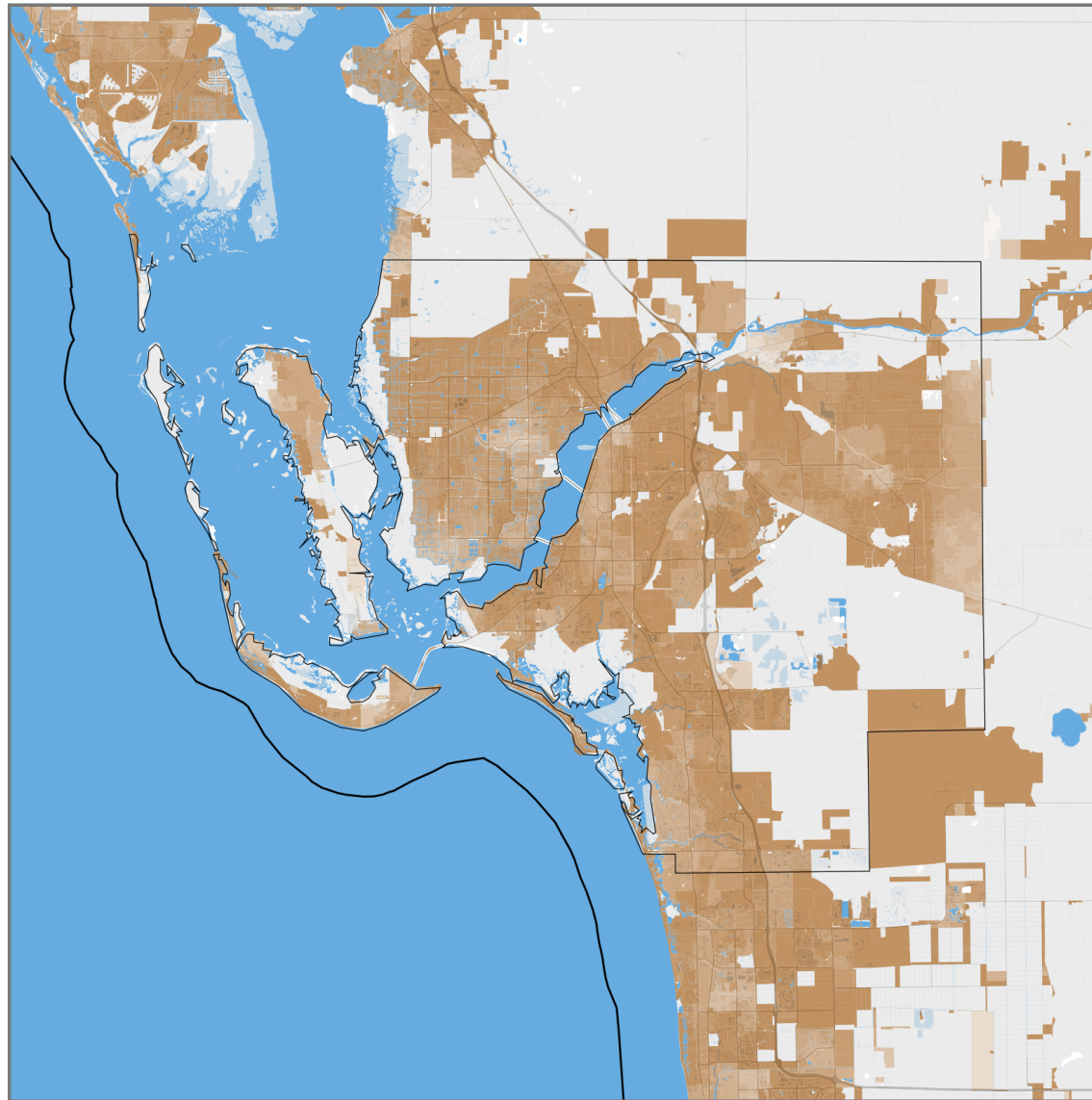


Jobs within 30 minutes
(Biking, medium stress)

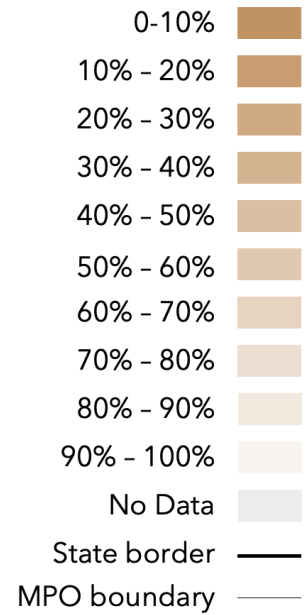


State border —
MPO boundary —

Lee County MPO



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



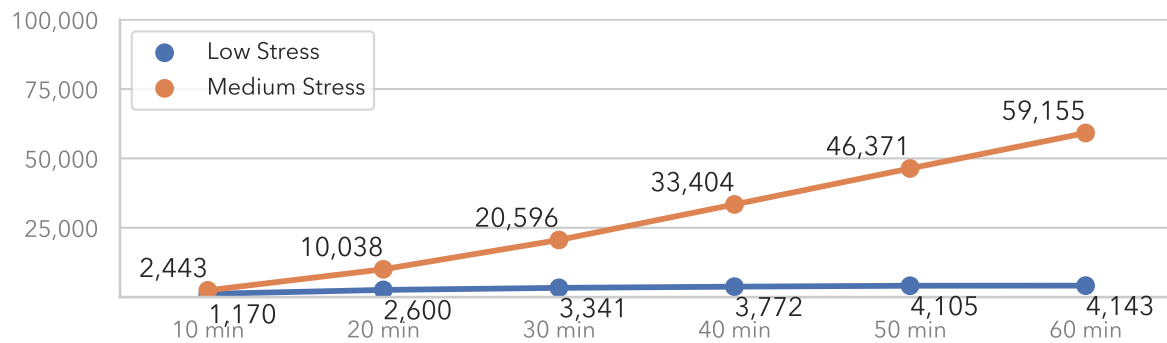
METROPLAN Orlando

Job Accessibility Results—Bike, 2017

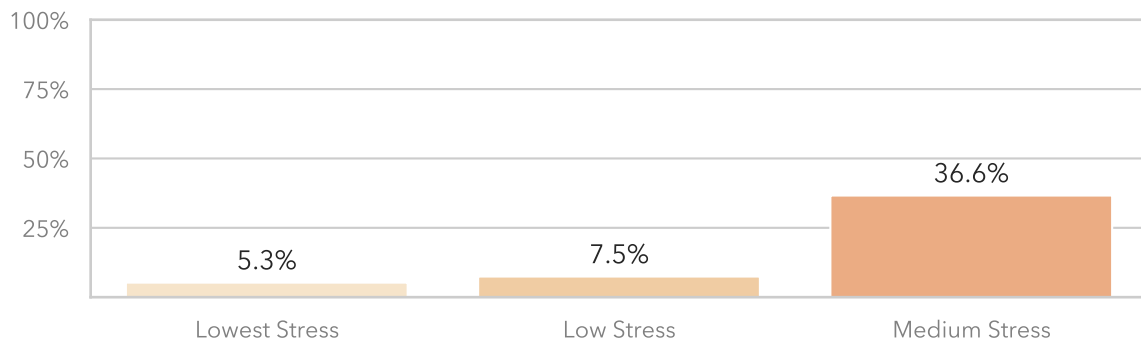
Total Jobs	1,064,495
Average Job Density (per mi ²)	964
Total Workers	925,070
Average Worker Density (per mi ²)	838

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

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

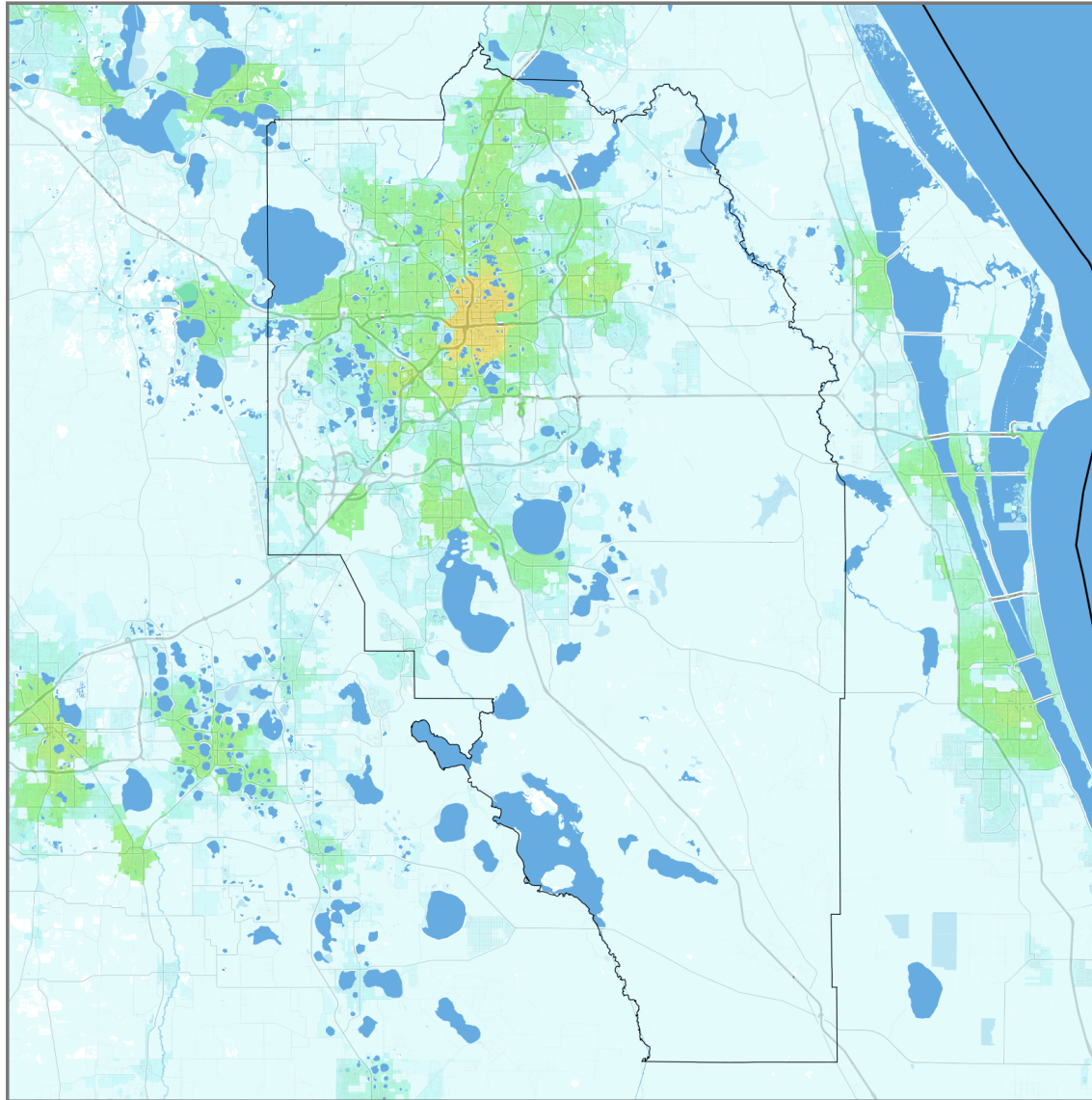


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

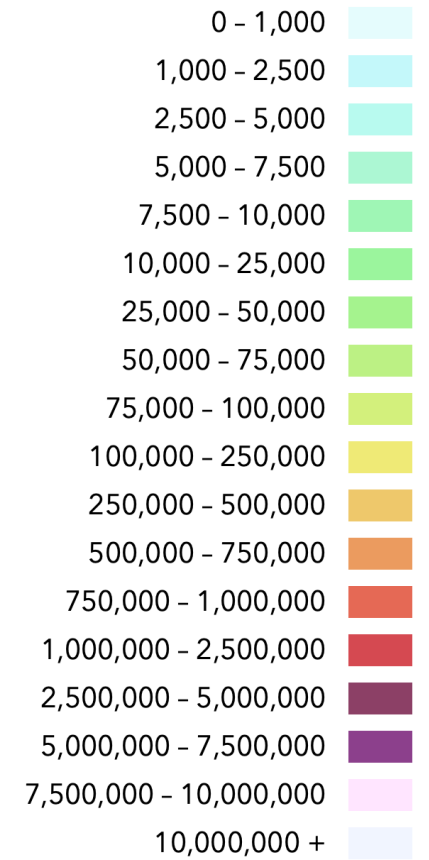


METROPLAN Orlando

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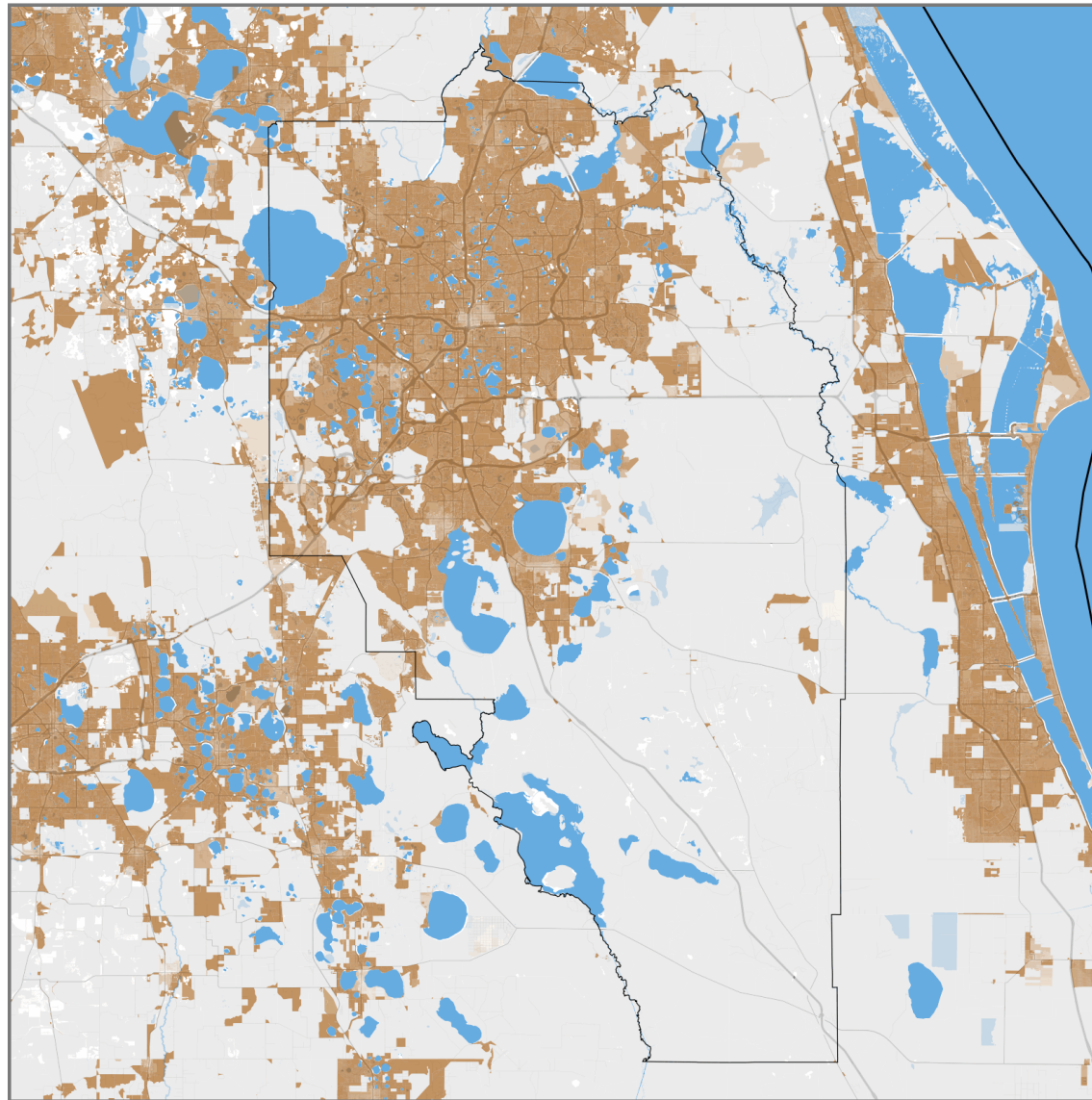
Jobs within 30 minutes
(Biking, medium stress)



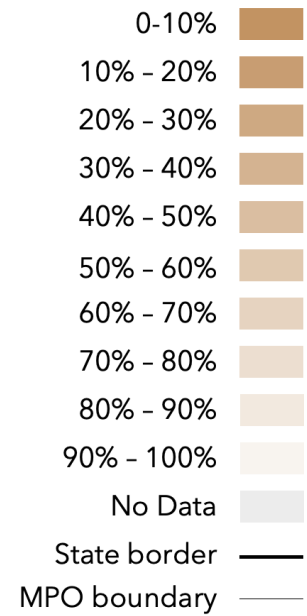
State border

MPO boundary

METROPLAN Orlando



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



Martin MPO

Job Accessibility Results—Bike, 2017

Total Jobs **61,916**

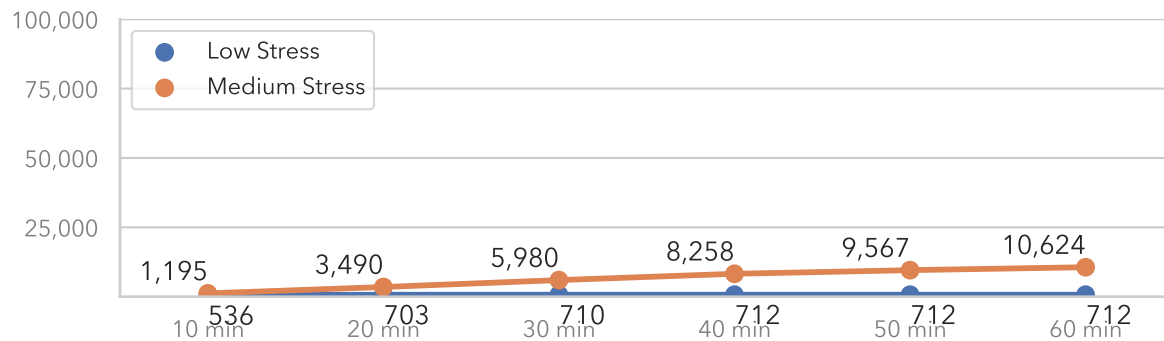
Average Job Density (per mi²) **294**

Total Workers **56,480**

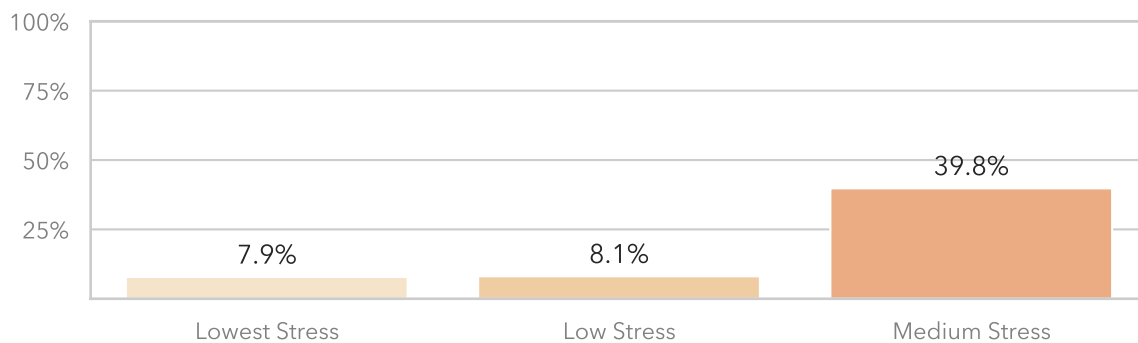
Average Worker Density (per mi²) **268**

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

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

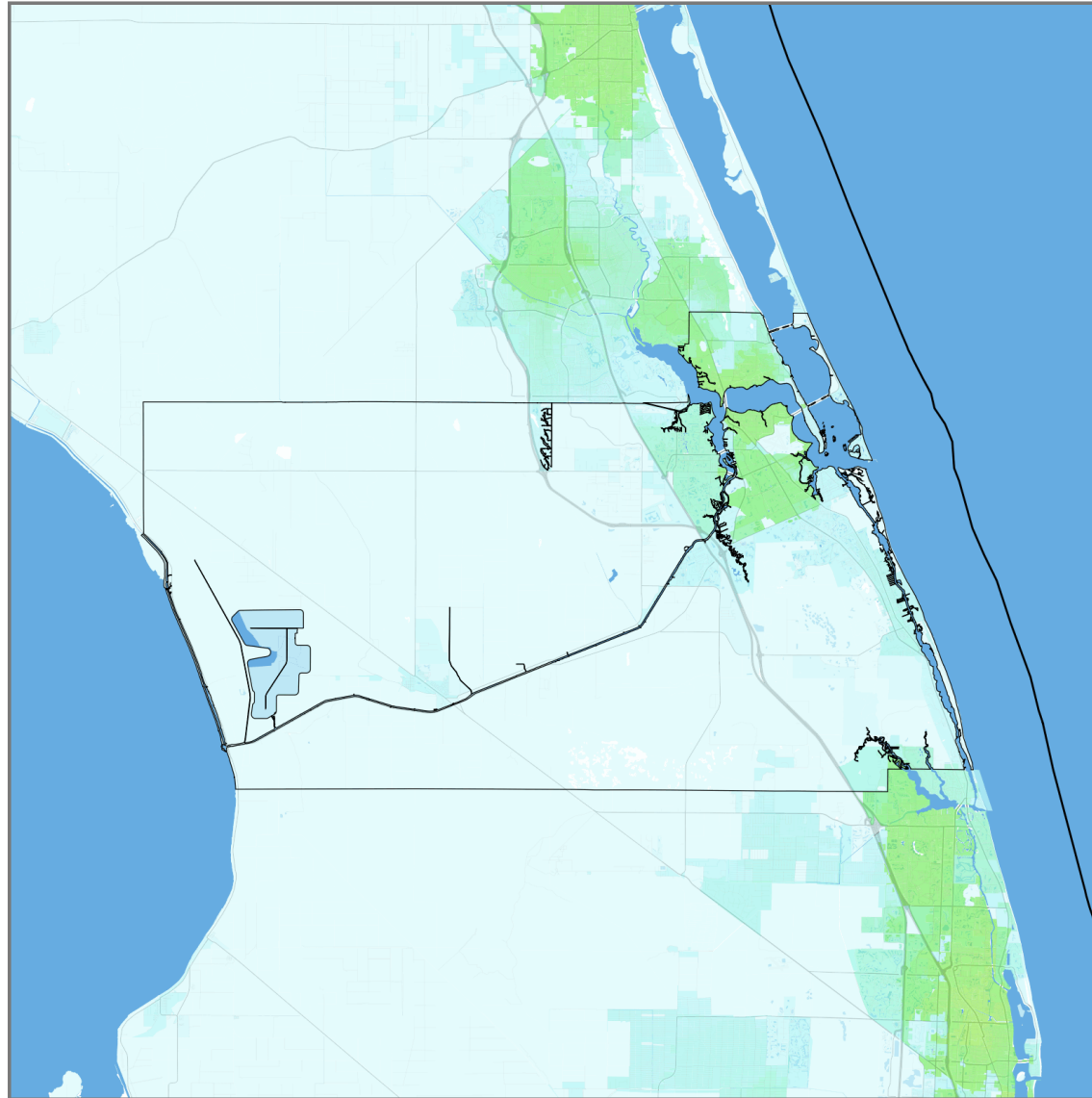


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

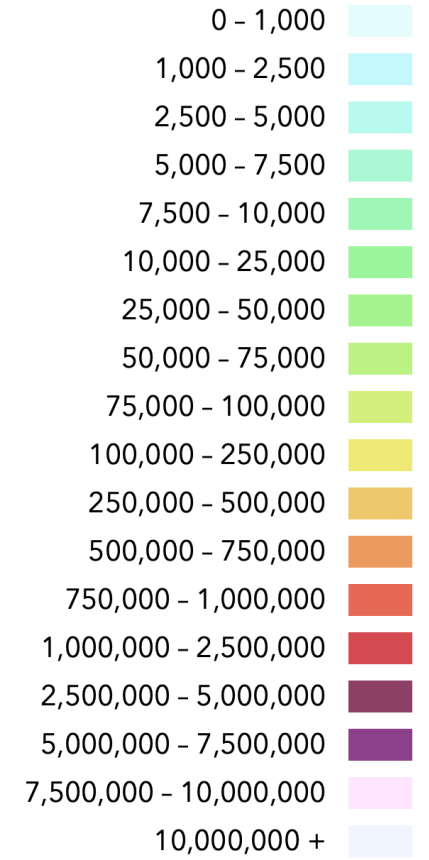


Martin MPO

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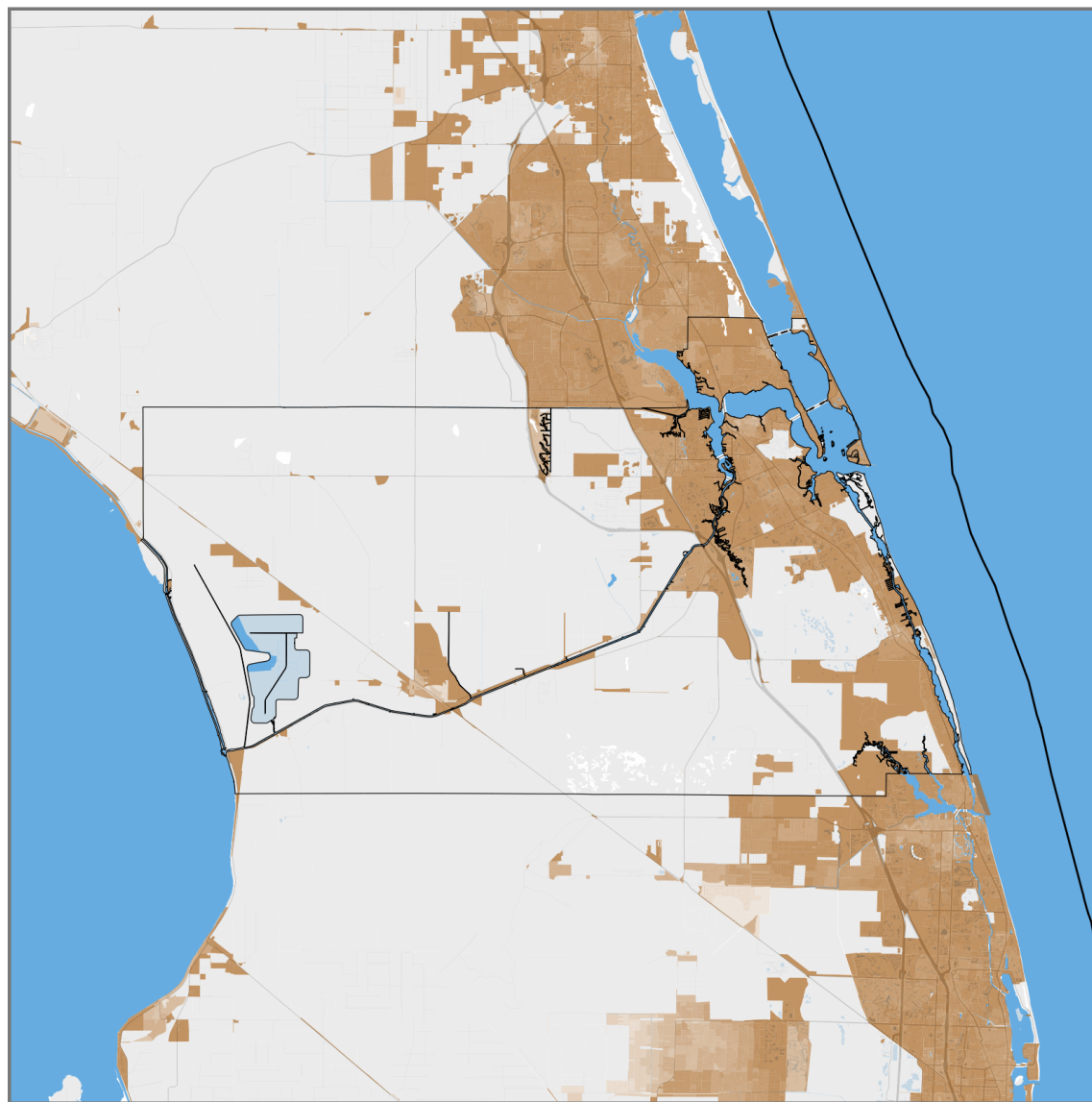
Jobs within 30 minutes
(Biking, medium stress)



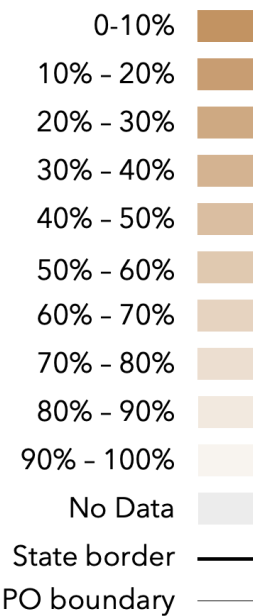
State border

MPO boundary

Martin MPO



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



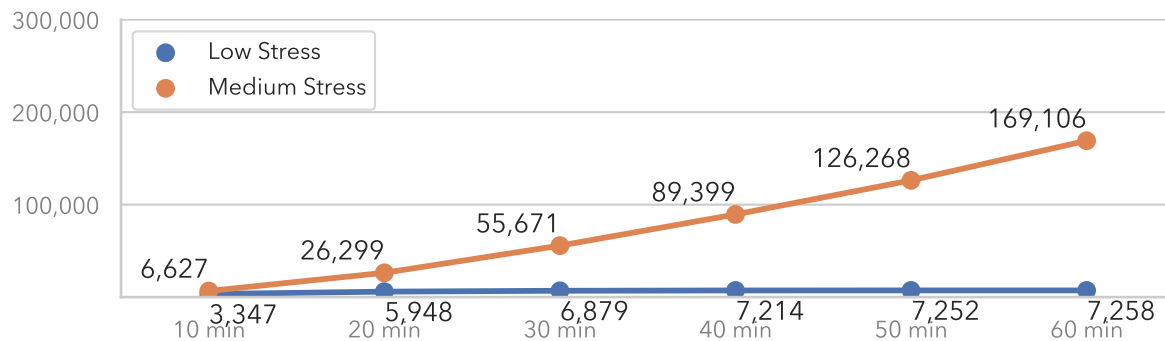
Miami-Dade TPO

Job Accessibility Results—Bike, 2017

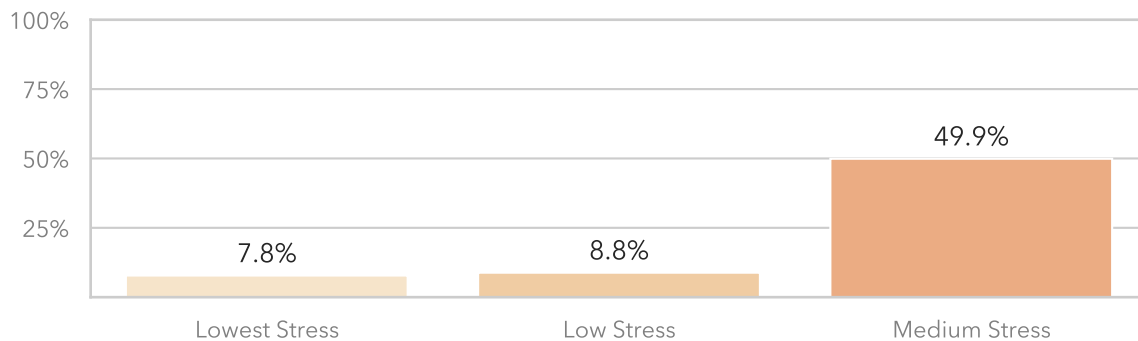
Total Jobs	1,090,089
Average Job Density (per mi ²)	1398
Total Workers	1,044,252
Average Worker Density (per mi ²)	1339

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

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

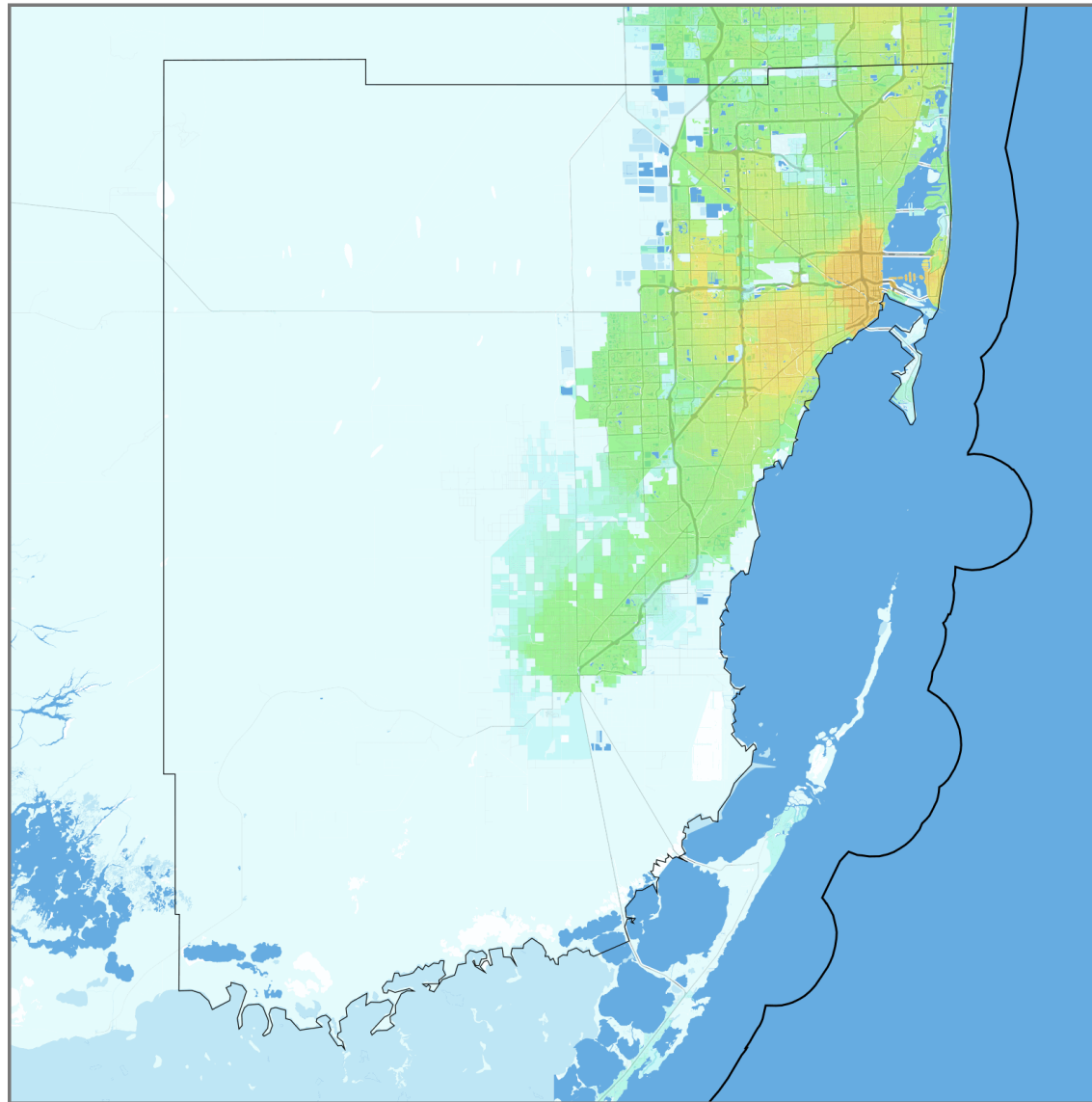


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

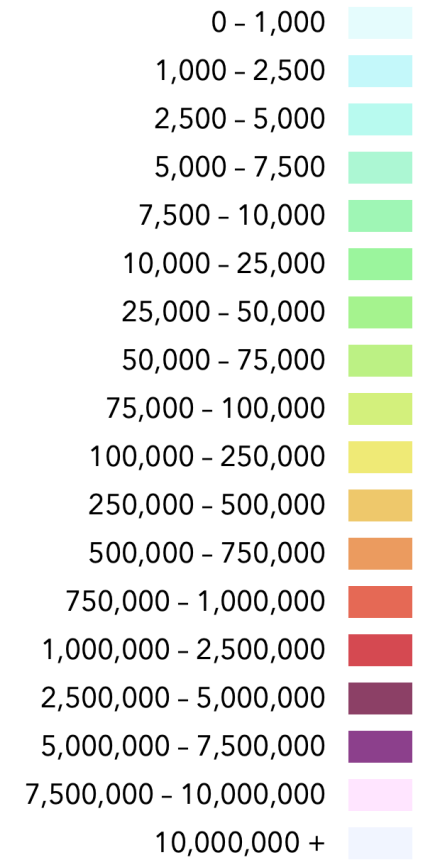


Miami-Dade TPO

56

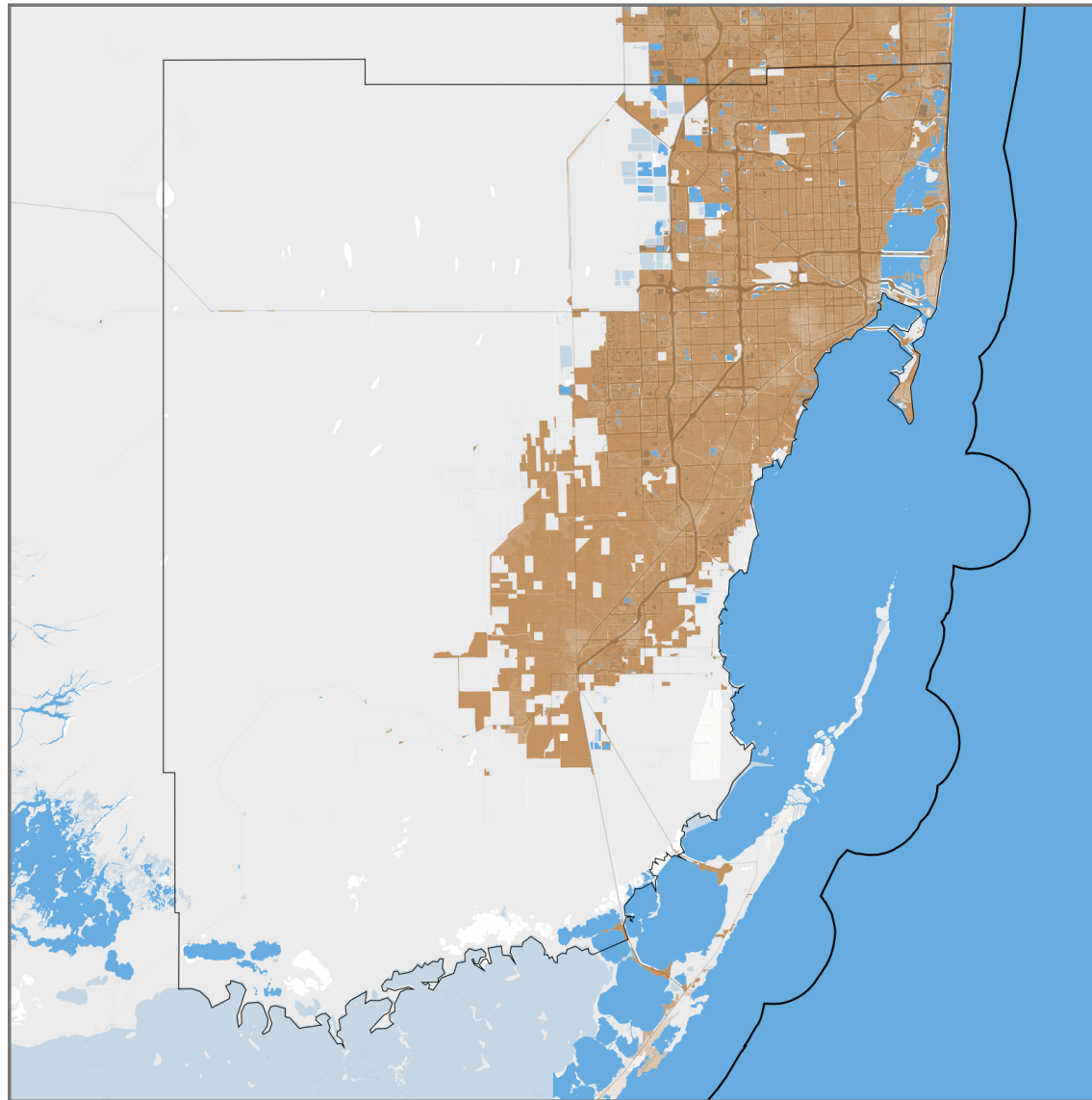


Jobs within 30 minutes
(Biking, medium stress)

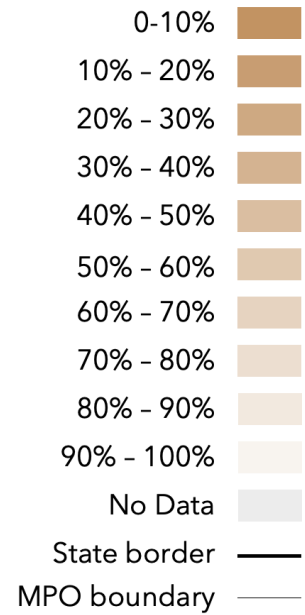


State border —
MPO boundary —

Miami-Dade TPO



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



North Florida Transportation Planning Organization

Job Accessibility Results—Bike, 2017

Total Jobs **629,178**

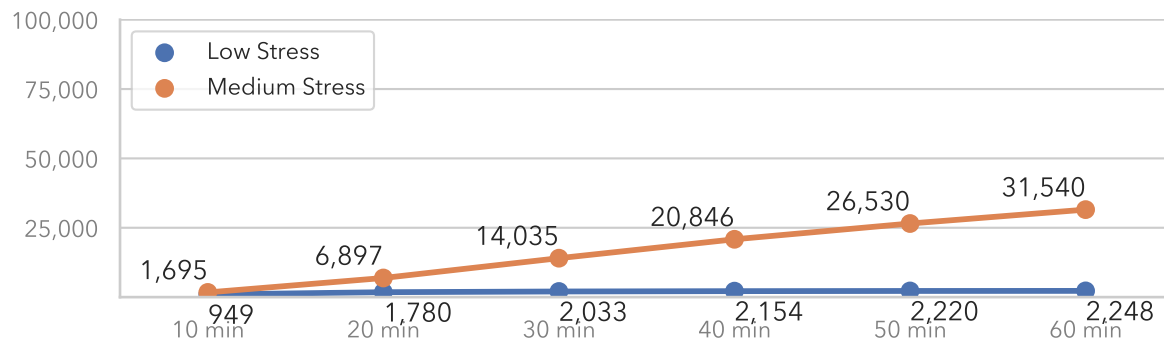
Average Job Density (per mi²) **608**

Total Workers **616,091**

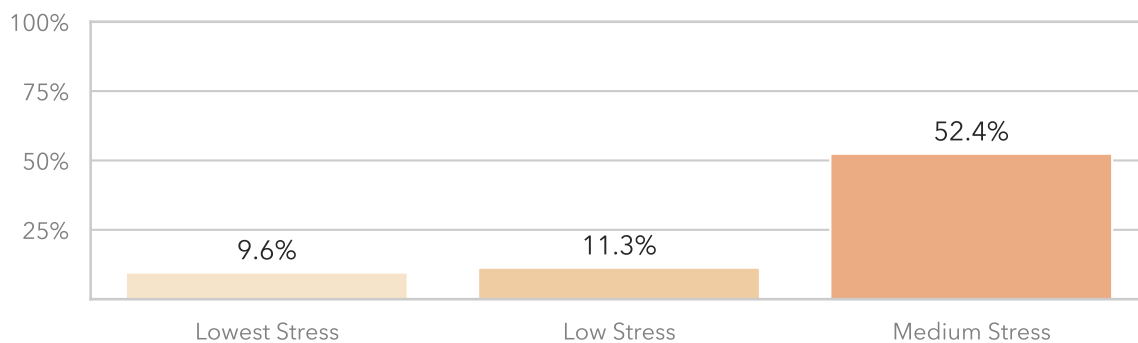
Average Worker Density (per mi²) **595**

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

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

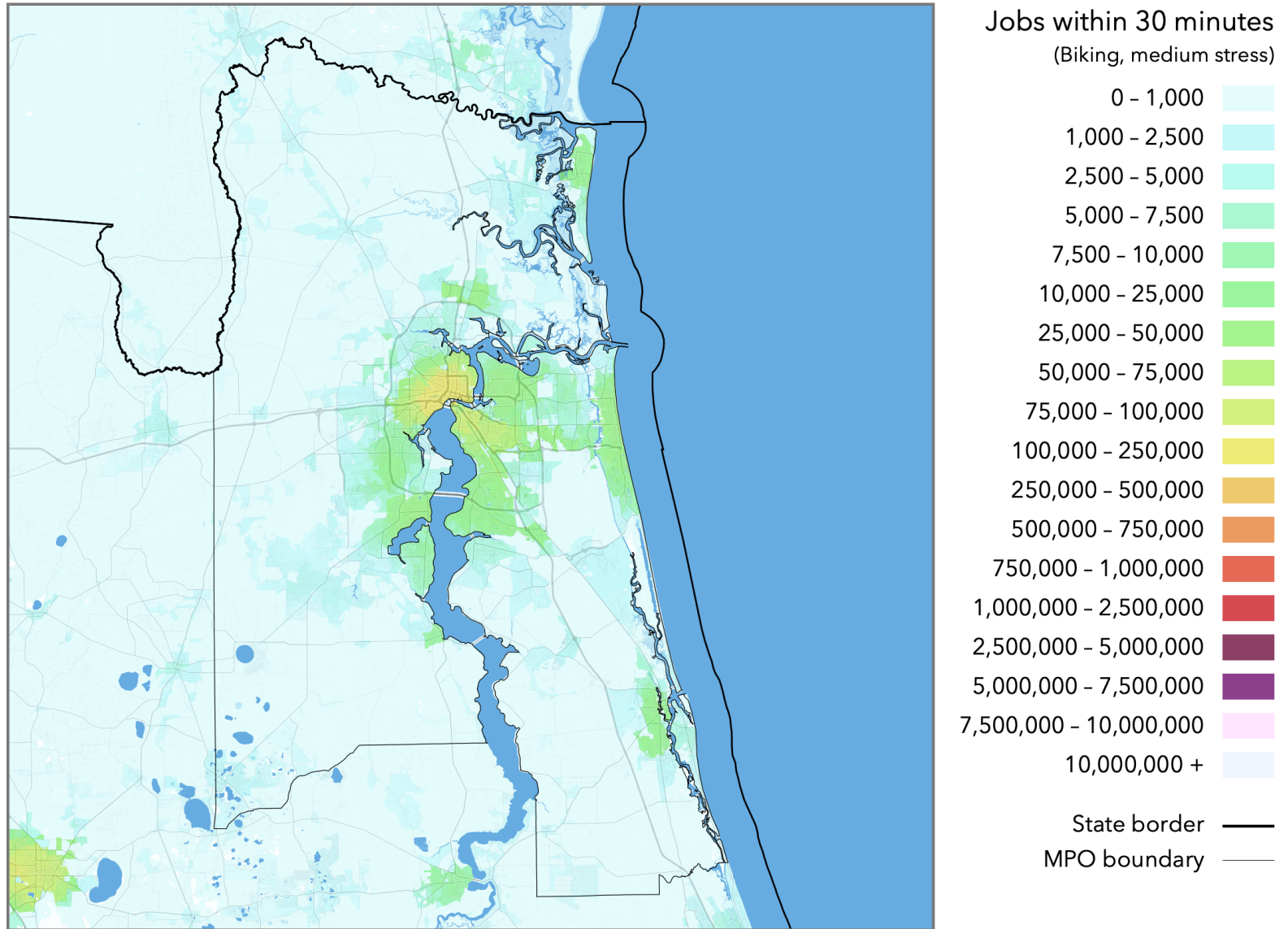


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



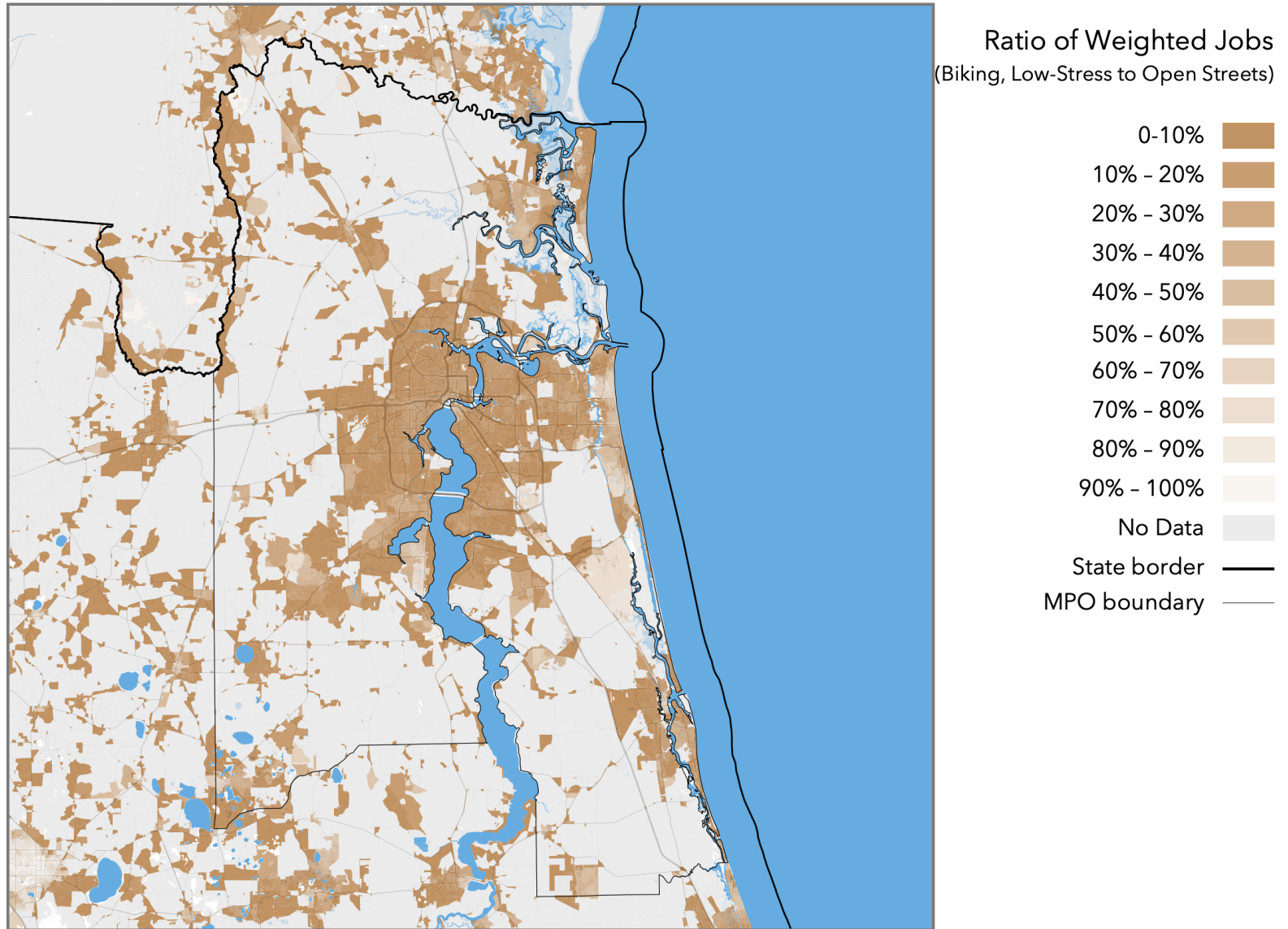
North Florida Transportation Planning Organization

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North Florida Transportation Planning Organization

60



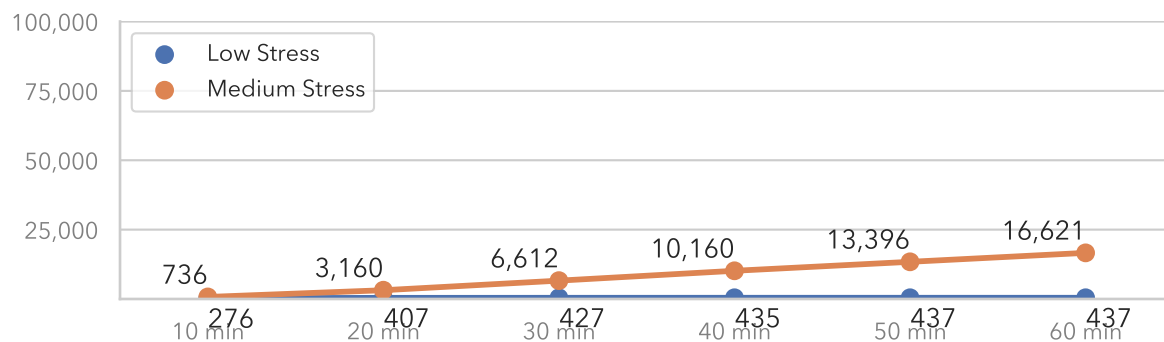
Ocala - Marion County Transportation Planning Organization

Job Accessibility Results—Bike, 2017

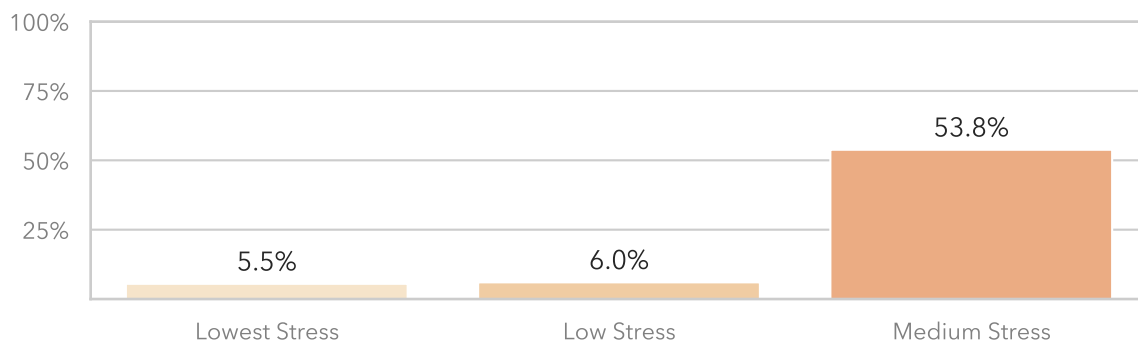
Total Jobs	97,646
Average Job Density (per mi ²)	152
Total Workers	113,776
Average Worker Density (per mi ²)	177

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

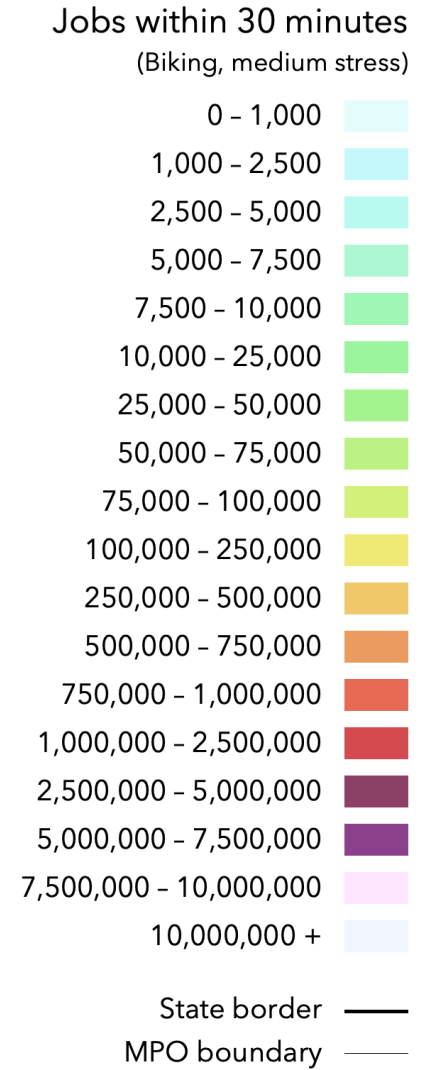
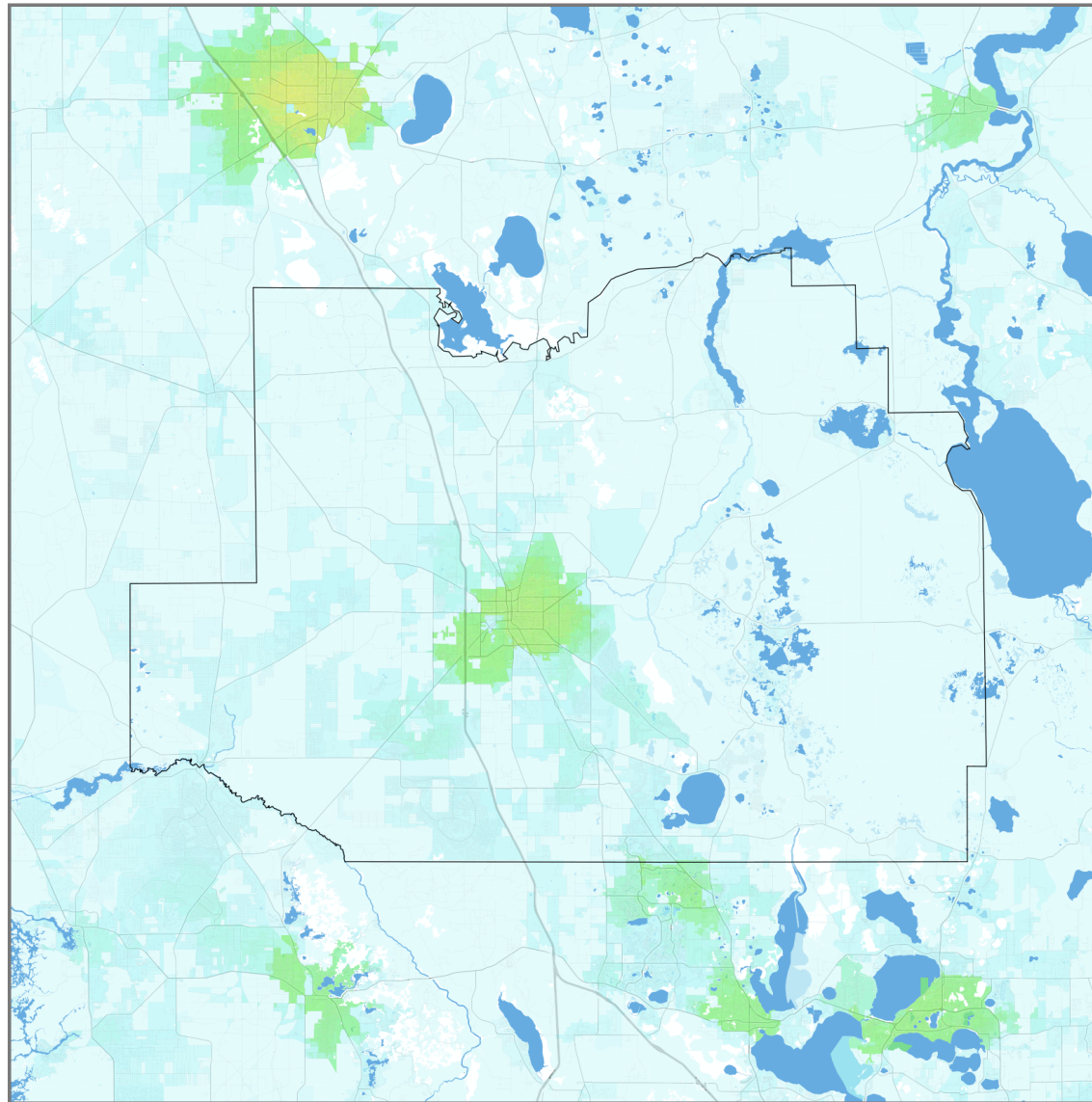
Average Job Accessibility by Travel Time Threshold (worker-weighted)



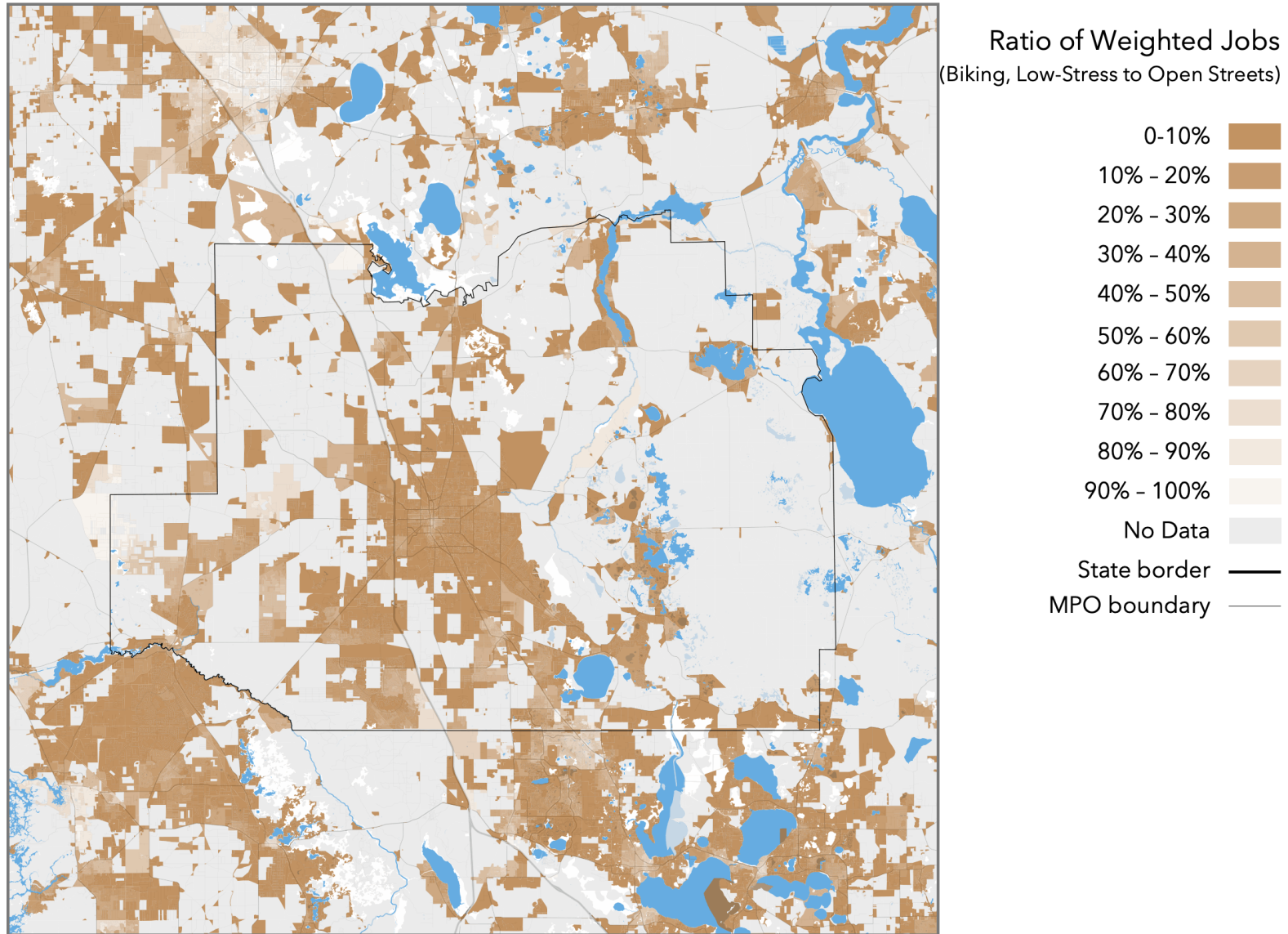
Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



Ocala - Marion County Transportation Planning Organization



Ocala - Marion County Transportation Planning Organization



Okaloosa-Walton Transportation Planning Organization

Job Accessibility Results—Bike, 2017

Total Jobs **101,209**

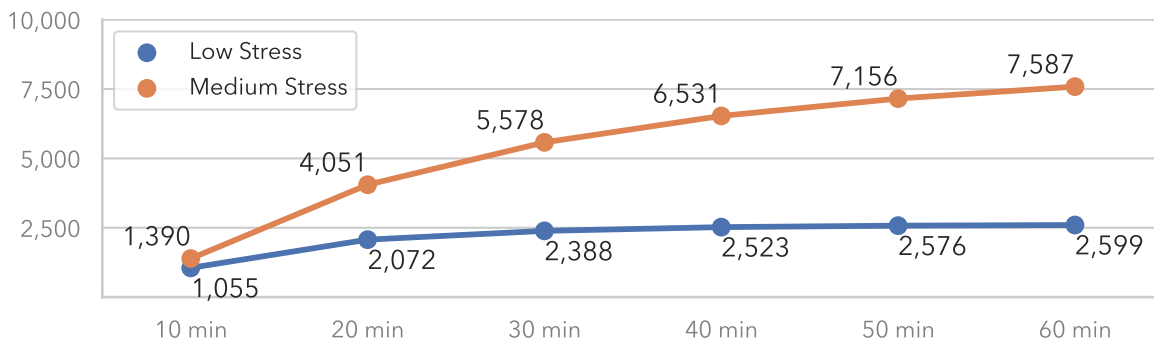
Average Job Density (per mi²) **179**

Total Workers **89,867**

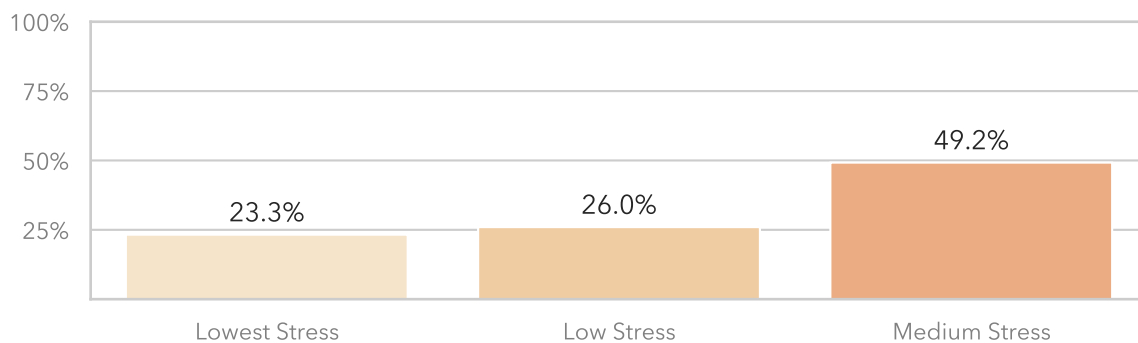
Average Worker Density (per mi²) **159**

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

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

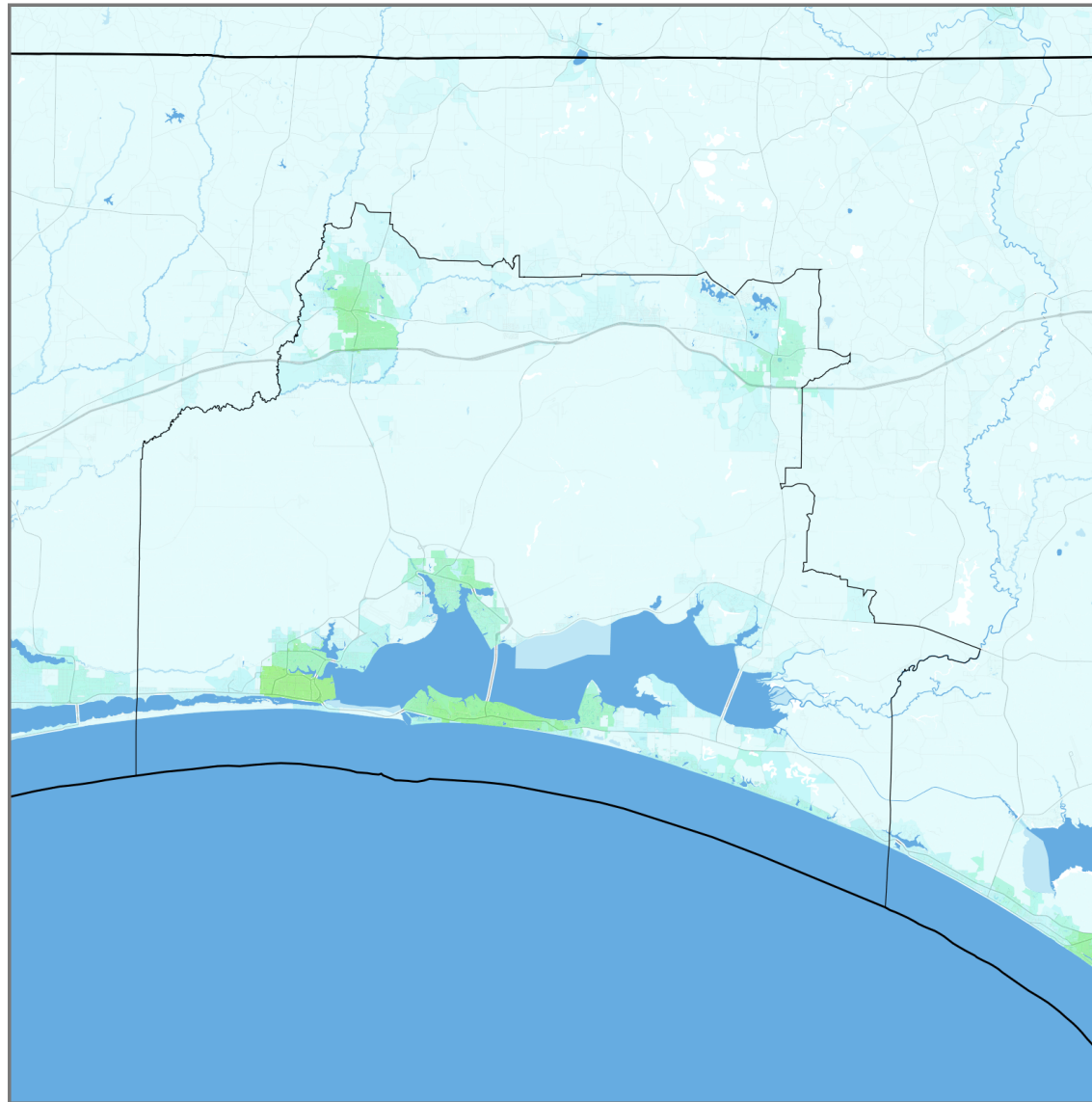


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

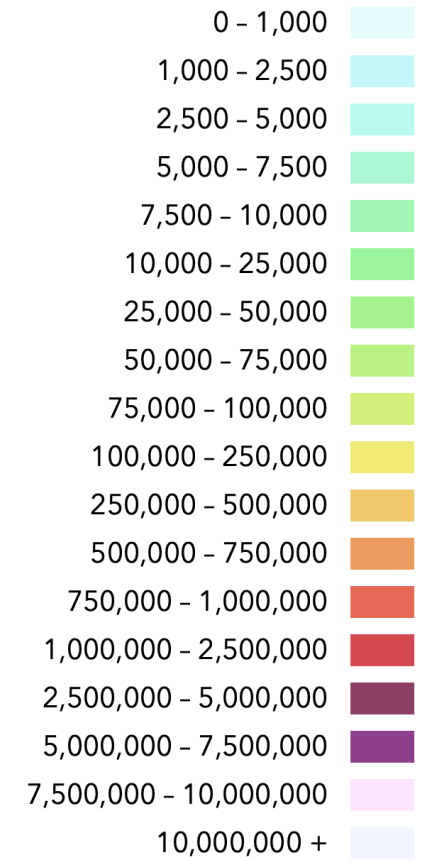


Okaloosa-Walton Transportation Planning Organization

65



Jobs within 30 minutes
(Biking, medium stress)



State border —
MPO boundary —

Okaloosa-Walton Transportation Planning Organization

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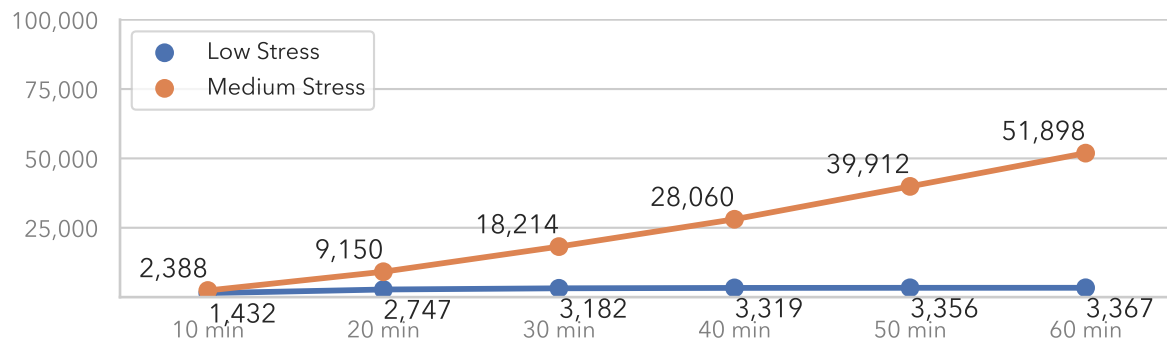
Palm Beach MPO

Job Accessibility Results—Bike, 2017

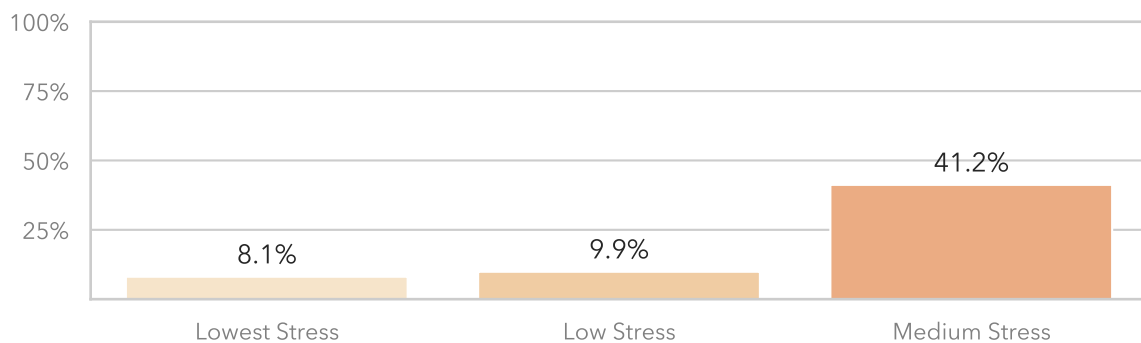
Total Jobs	576,595
Average Job Density (per mi ²)	754
Total Workers	550,160
Average Worker Density (per mi ²)	720

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

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

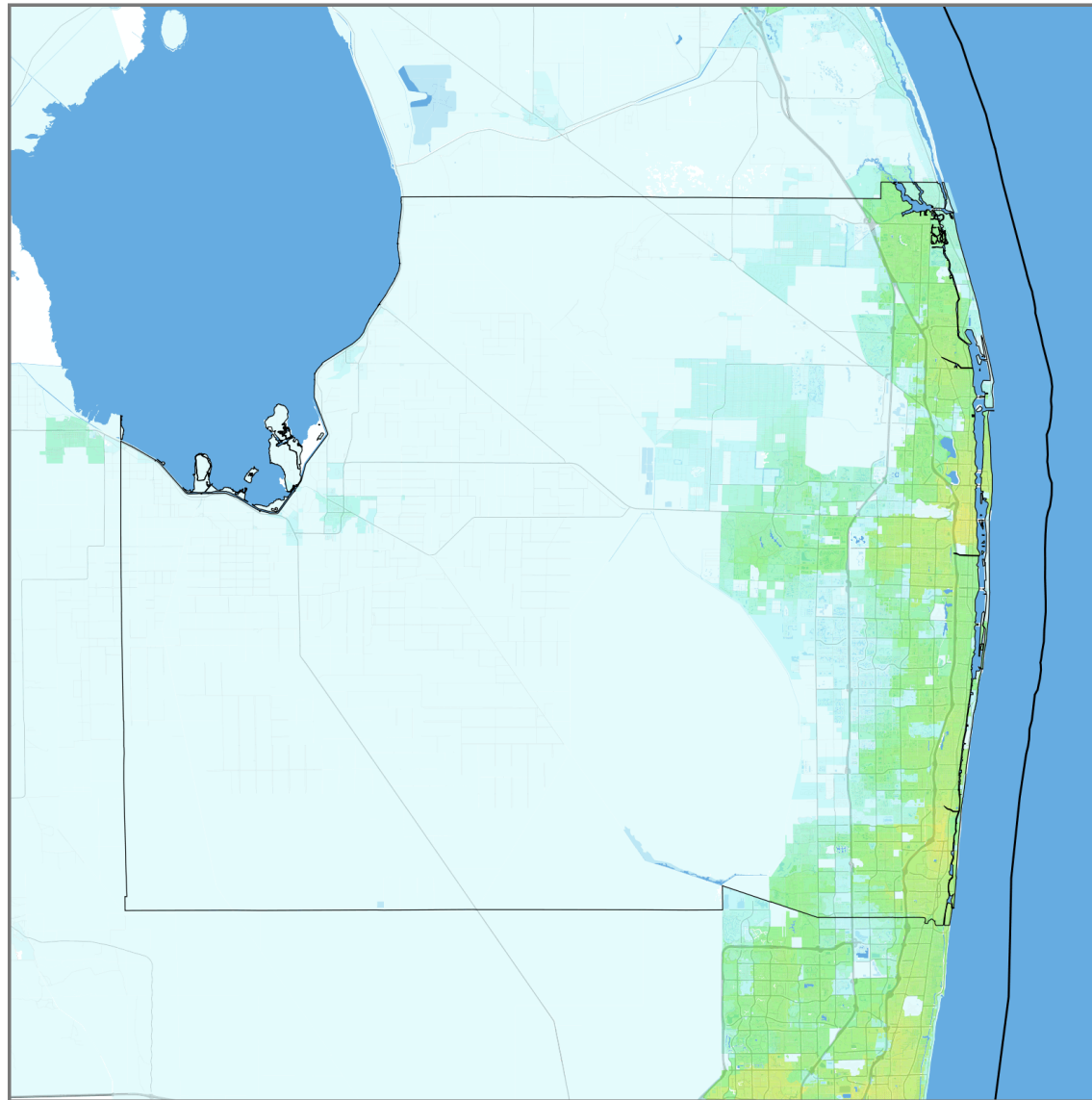


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

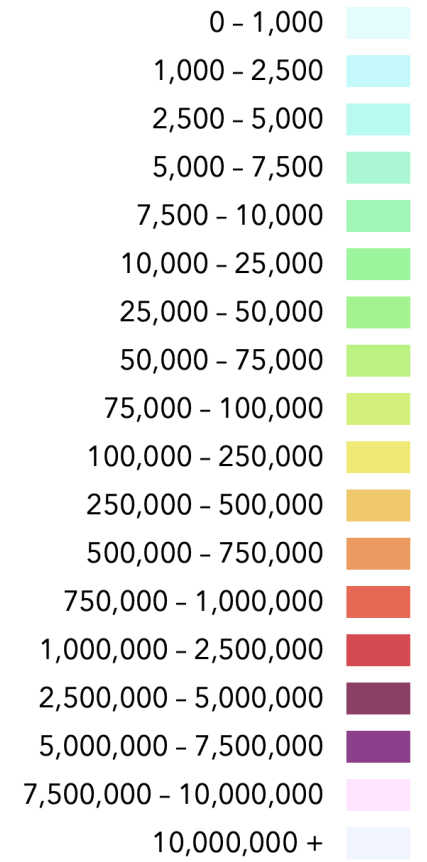


Palm Beach MPO

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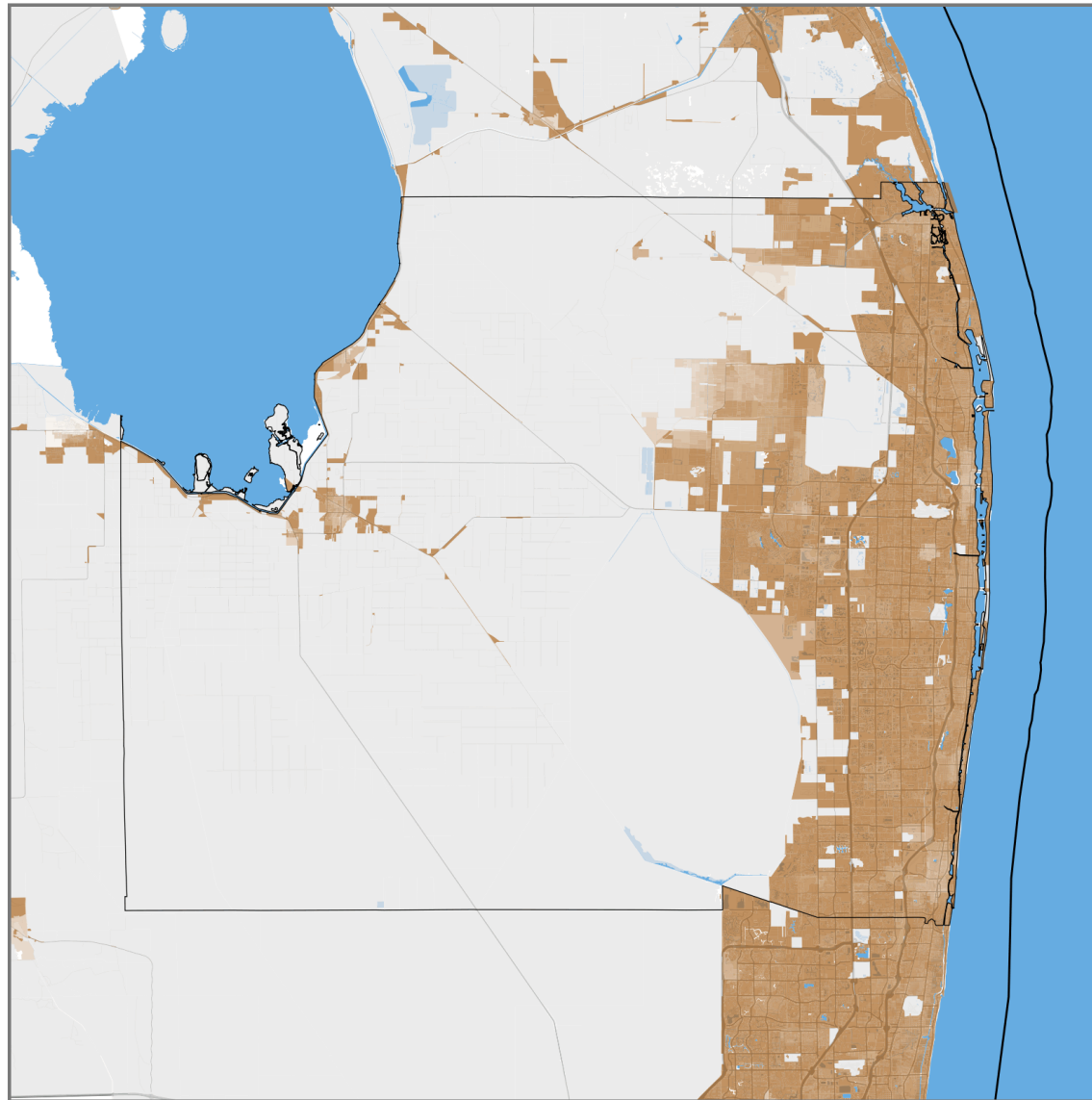


Jobs within 30 minutes
(Biking, medium stress)

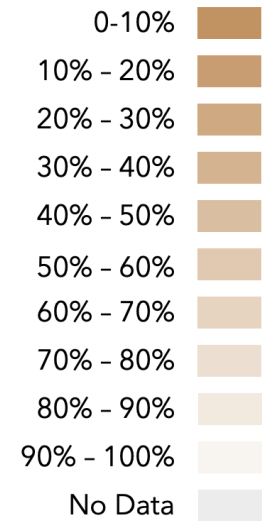


State border —
MPO boundary —

Palm Beach MPO



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



State border

MPO boundary

Pasco County MPO

Job Accessibility Results—Bike, 2017

Total Jobs **113,227**

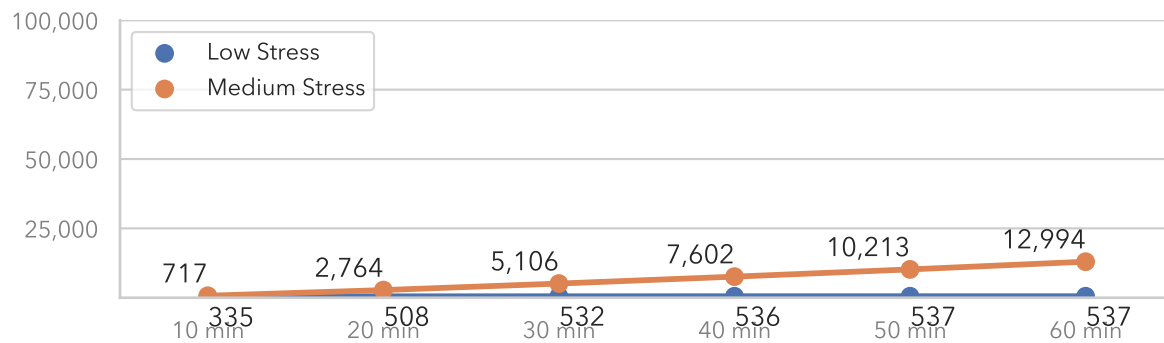
Average Job Density (per mi²) **382**

Total Workers **184,533**

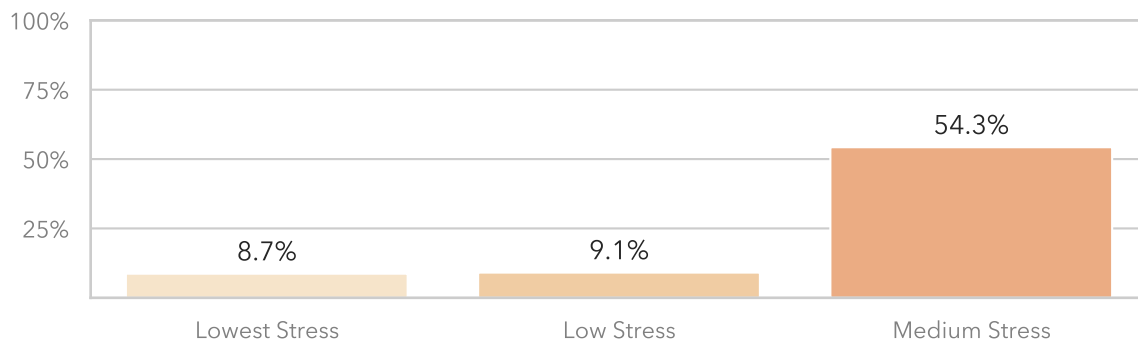
Average Worker Density (per mi²) **623**

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

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

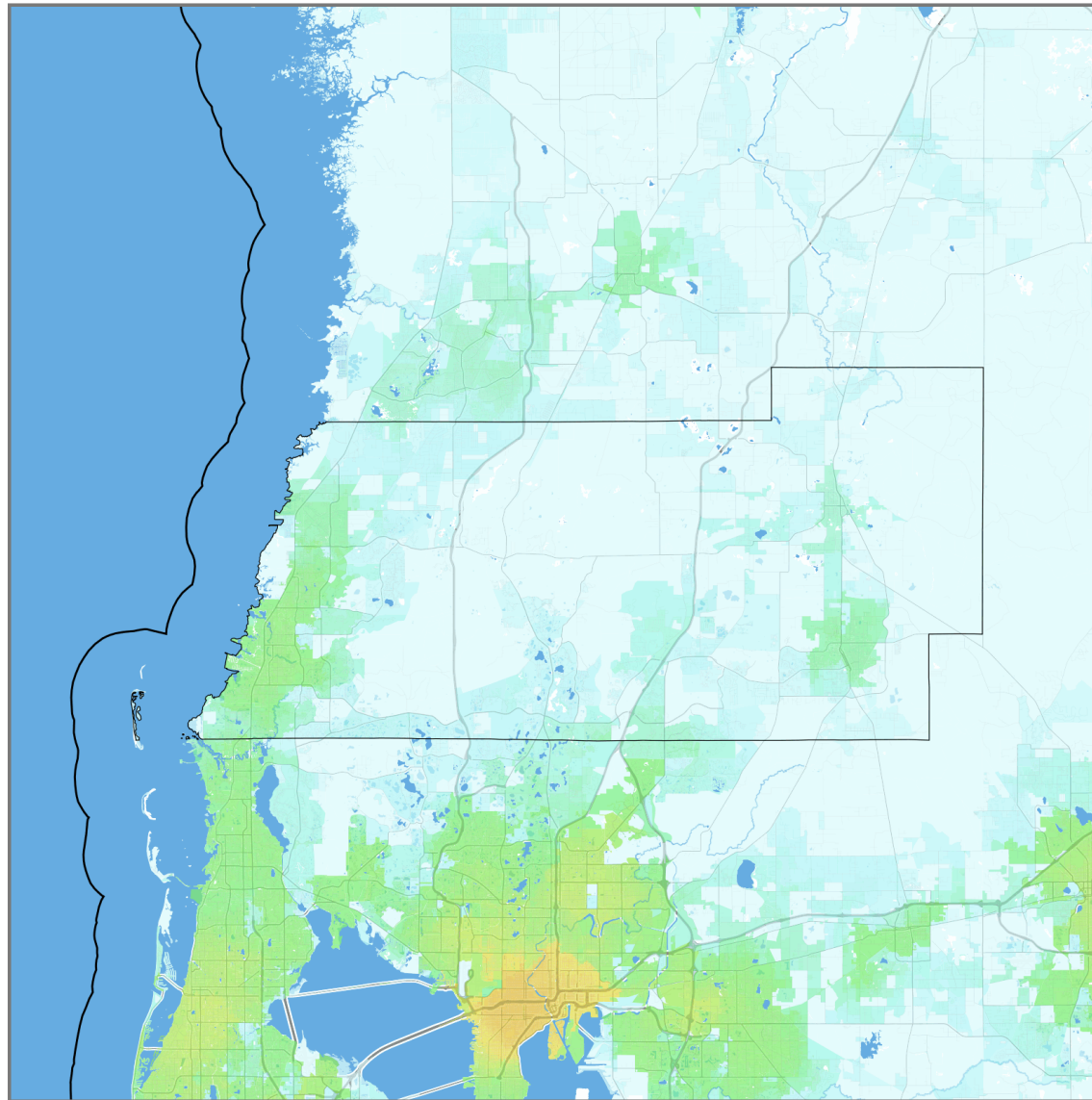


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

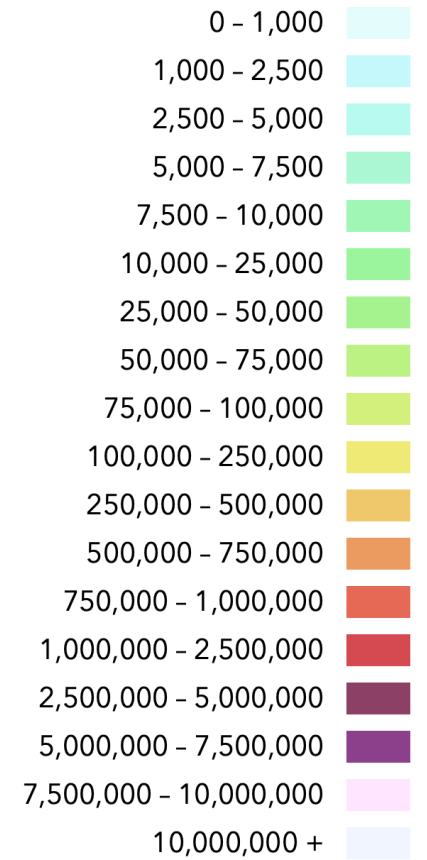


Pasco County MPO

71



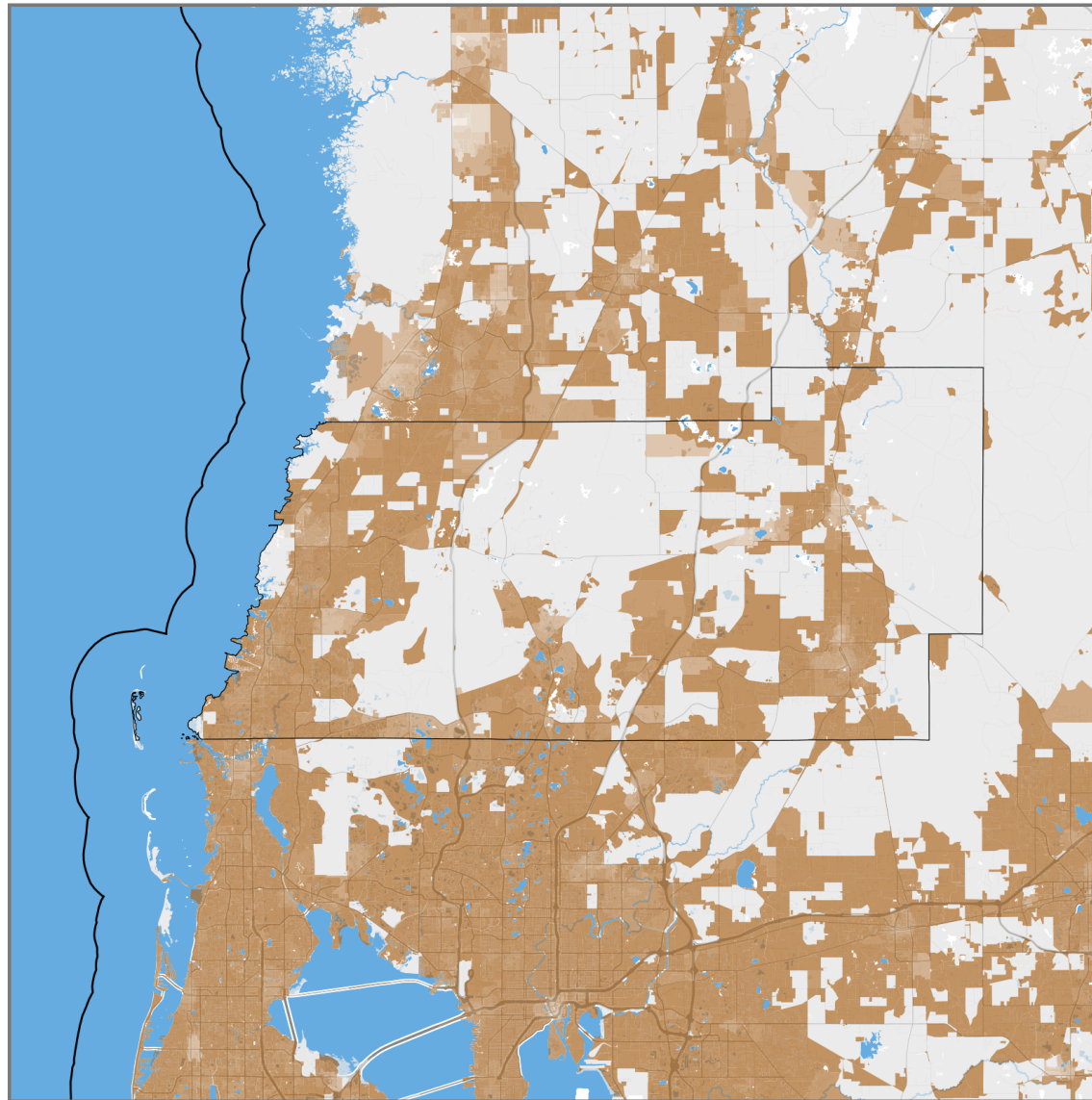
Jobs within 30 minutes
(Biking, medium stress)



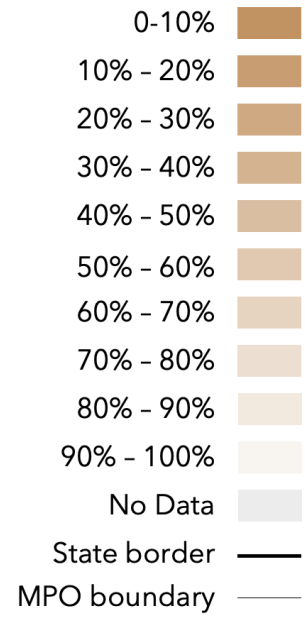
State border

MPO boundary

Pasco County MPO



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



Polk County Transportation Planning Organization

Job Accessibility Results—Bike, 2017

Total Jobs **225,615**

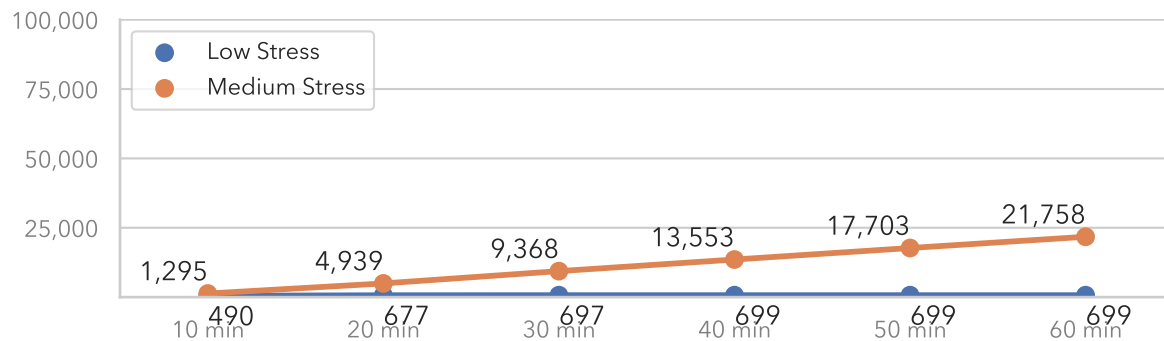
Average Job Density (per mi²) **290**

Total Workers **251,431**

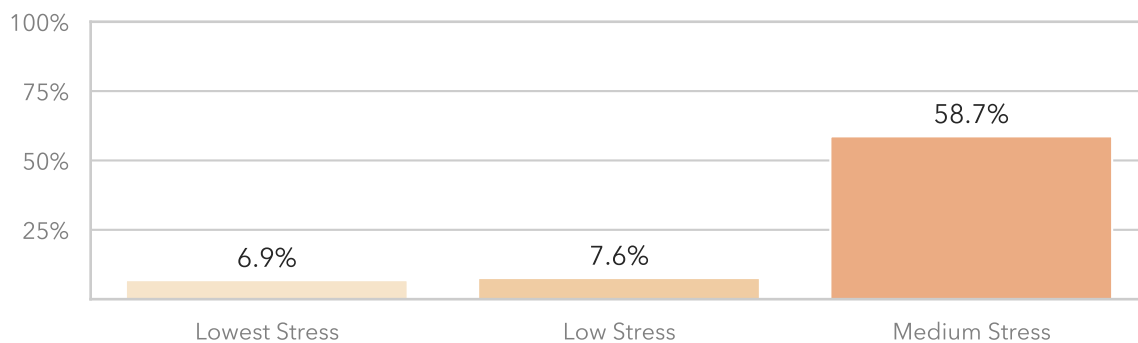
Average Worker Density (per mi²) **323**

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

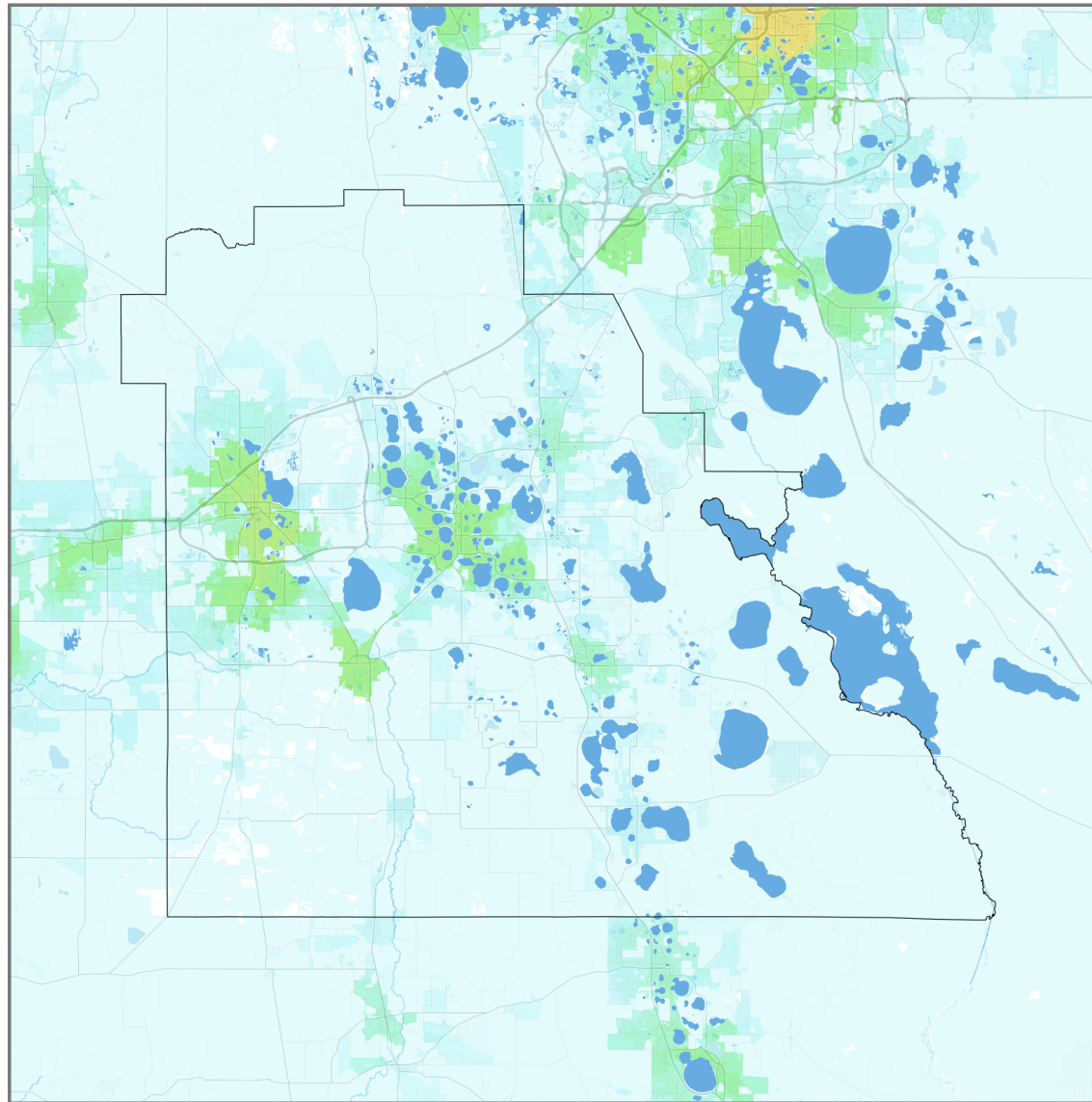
Average Job Accessibility by Travel Time Threshold (worker-weighted)



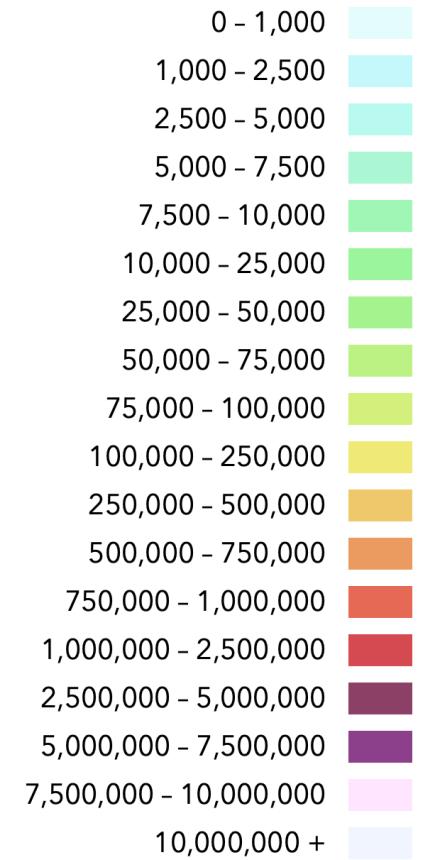
Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



Polk County Transportation Planning Organization



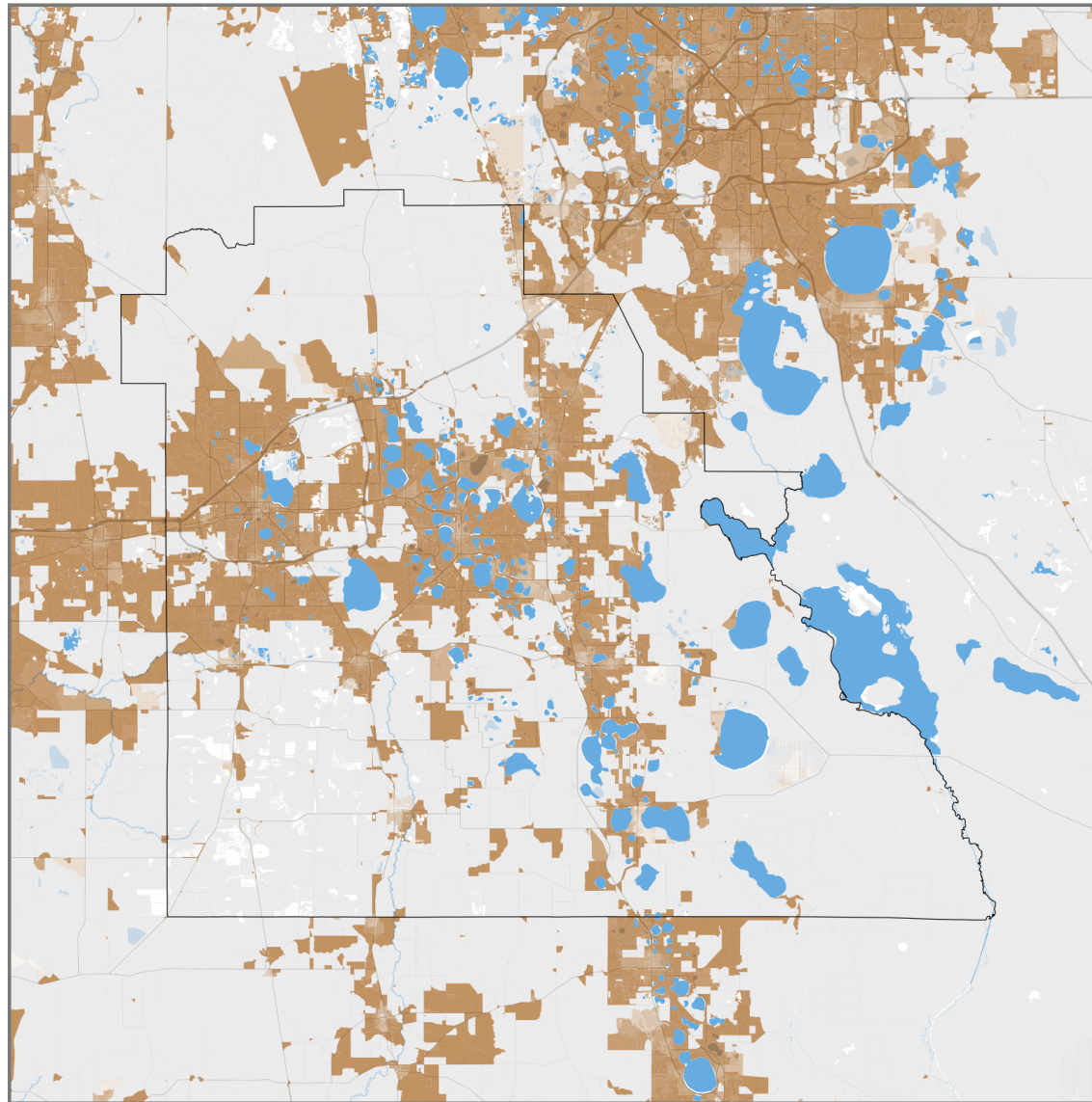
Jobs within 30 minutes
(Biking, medium stress)



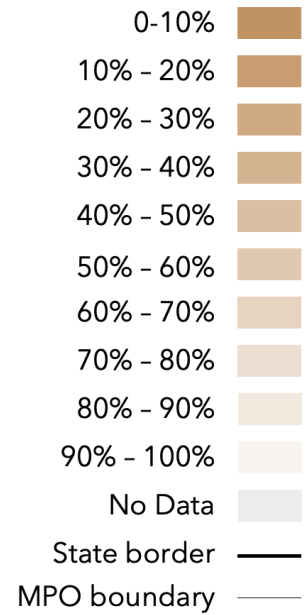
State border

MPO boundary

Polk County Transportation Planning Organization



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



River to Sea Transportation Planning Organization

Job Accessibility Results—Bike, 2017

Total Jobs **181,269**

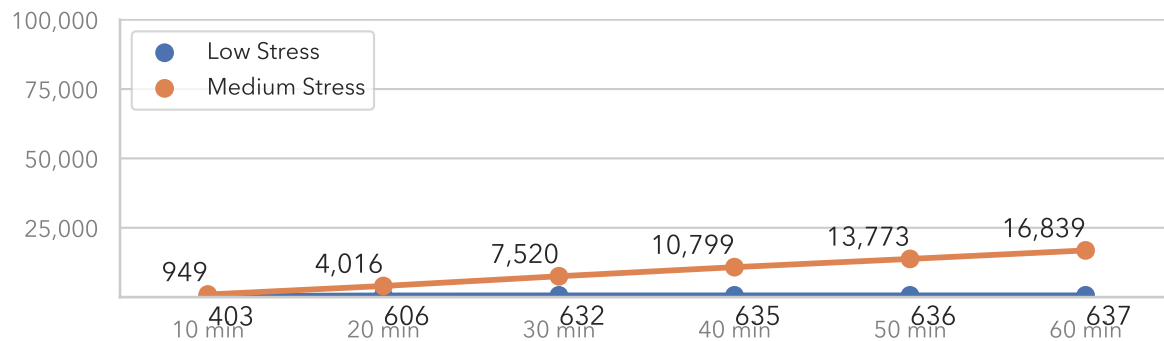
Average Job Density (per mi²) **346**

Total Workers **232,927**

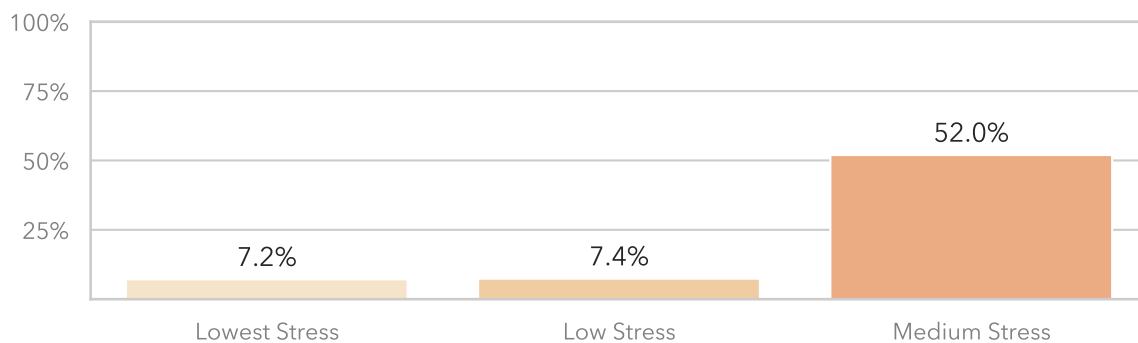
Average Worker Density (per mi²) **444**

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

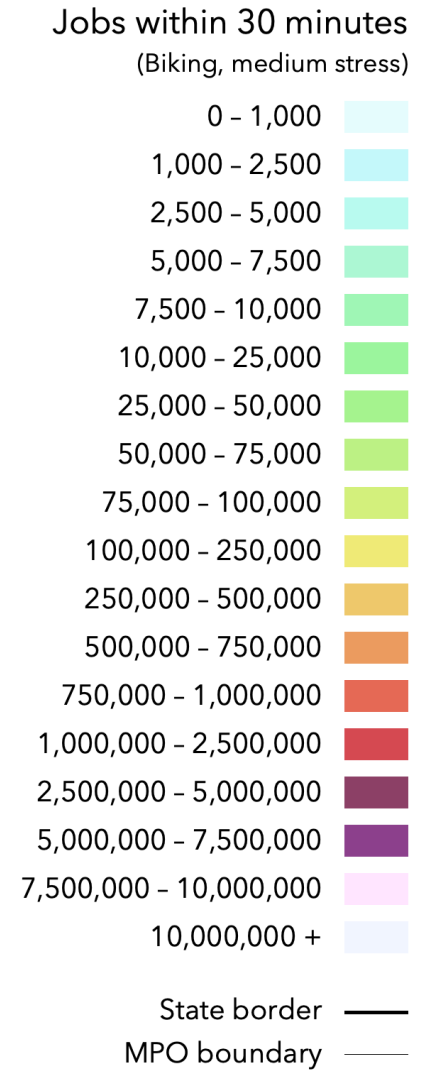
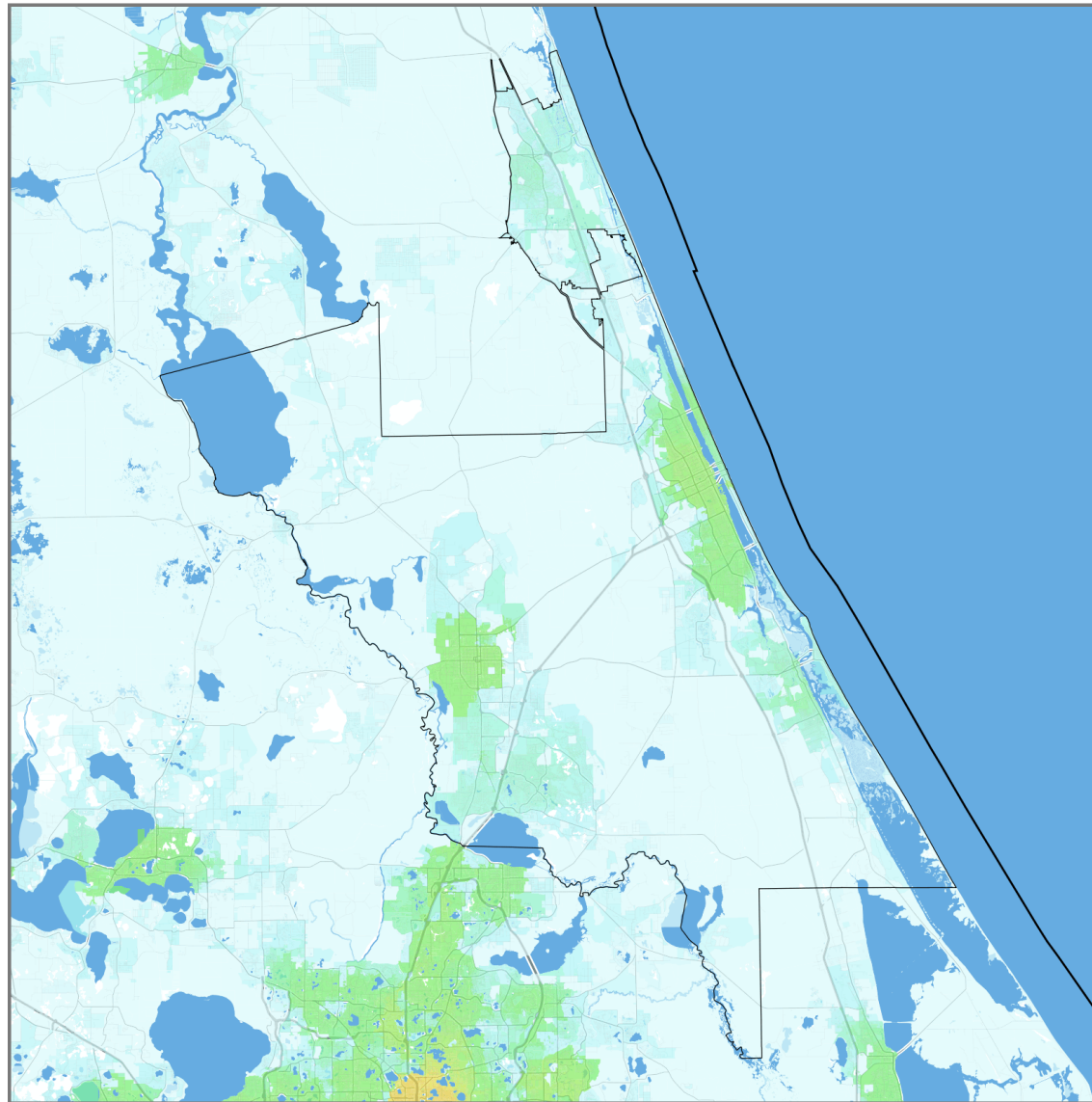
Average Job Accessibility by Travel Time Threshold (worker-weighted)



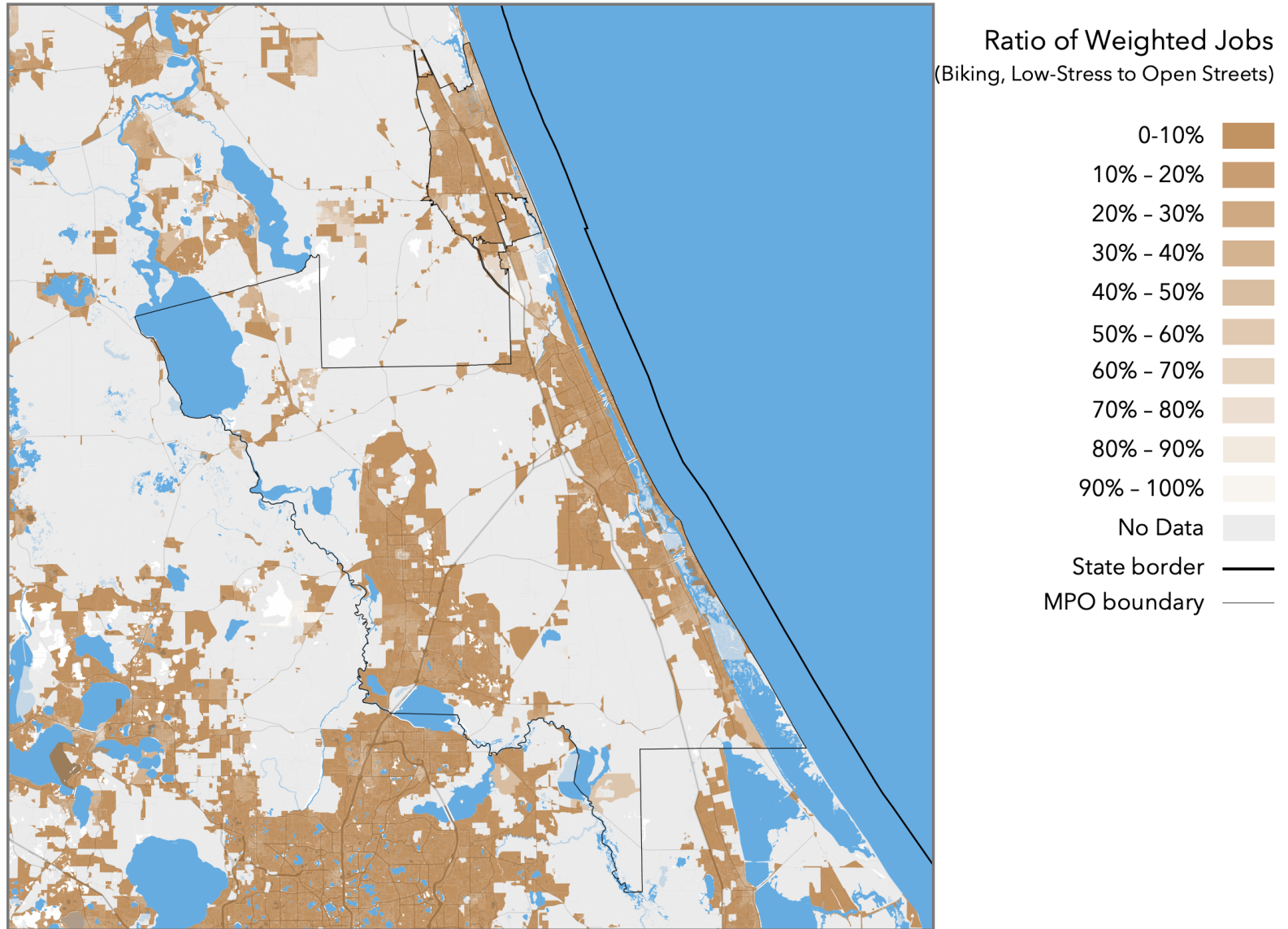
Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



River to Sea Transportation Planning Organization



River to Sea Transportation Planning Organization



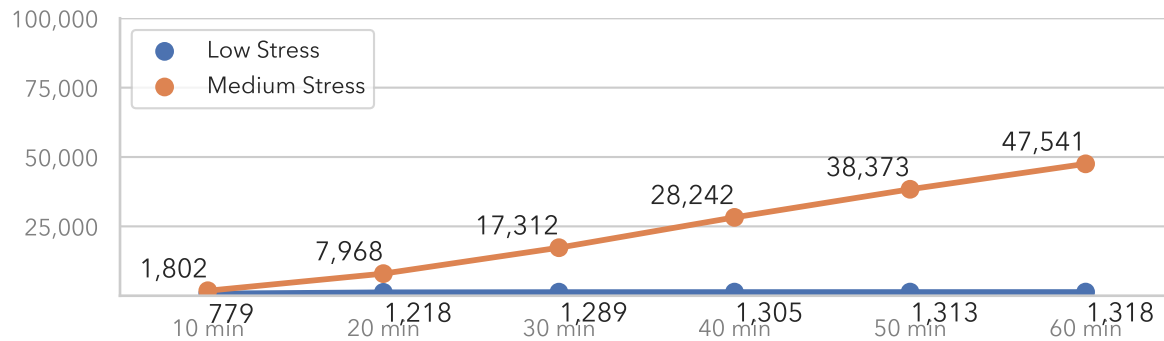
Sarasota-Manatee MPO

Job Accessibility Results—Bike, 2017

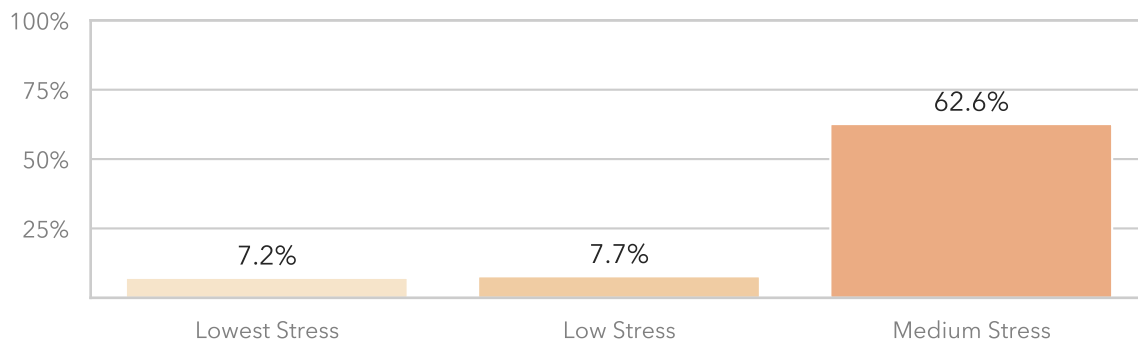
Total Jobs	265,807
Average Job Density (per mi ²)	515
Total Workers	275,942
Average Worker Density (per mi ²)	535

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

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

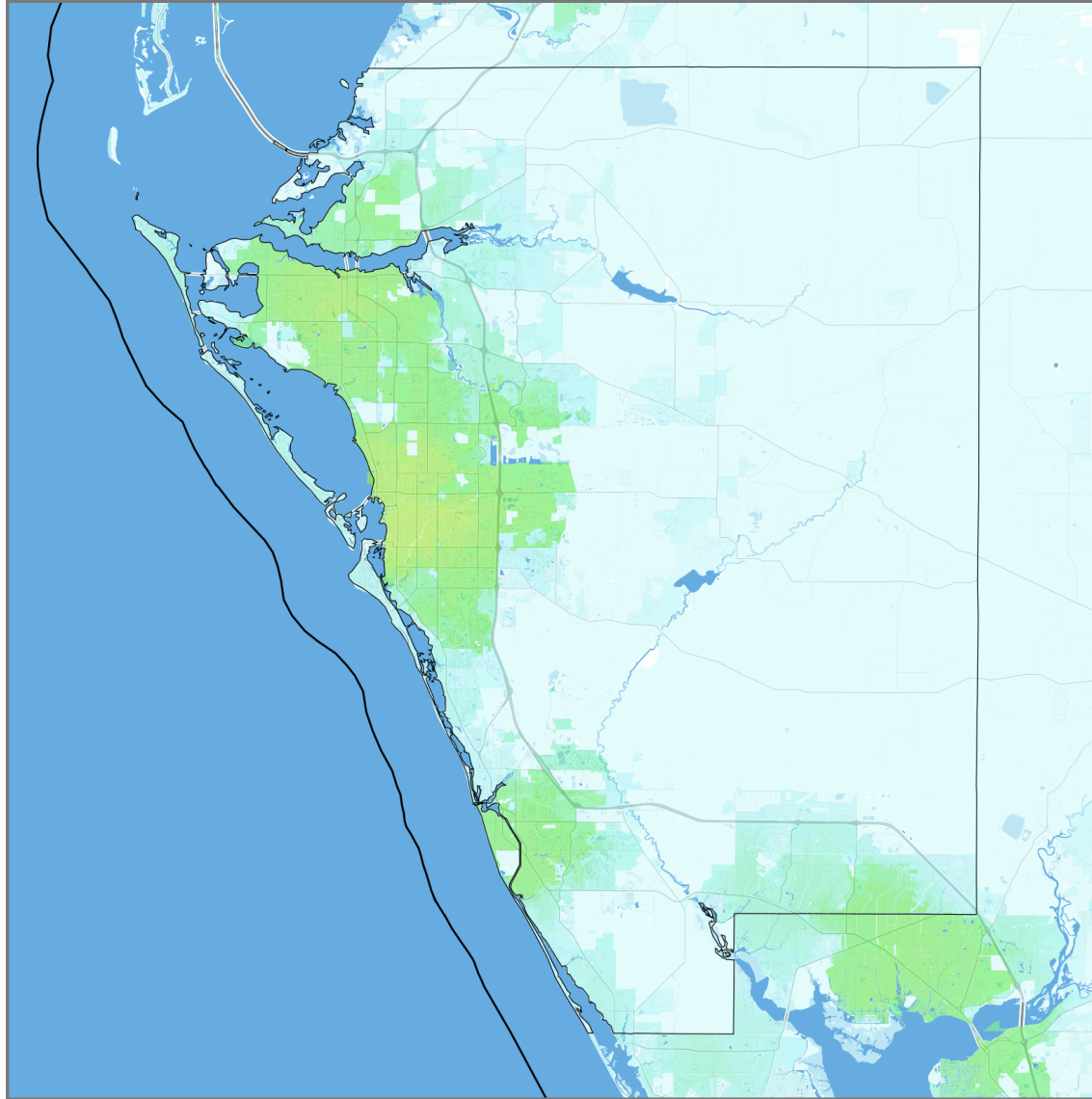


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

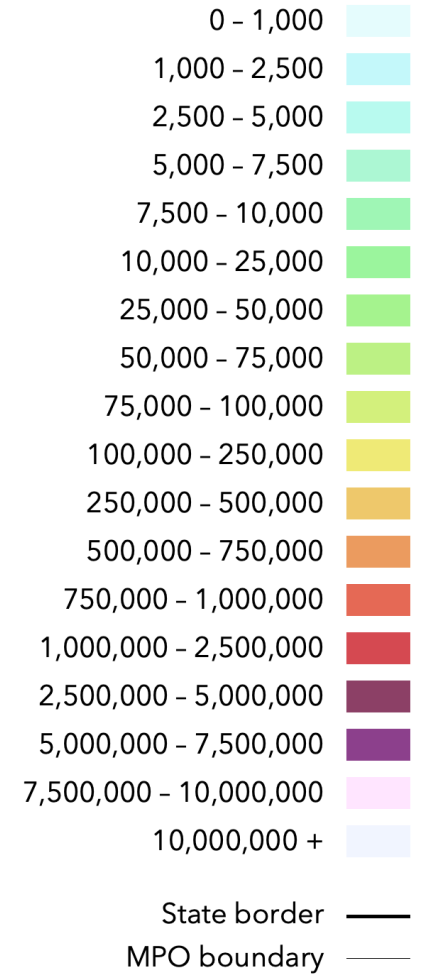


Sarasota-Manatee MPO

80



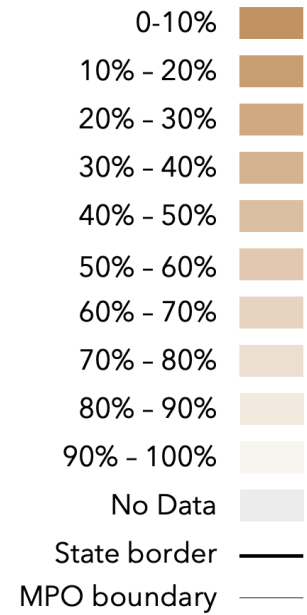
Jobs within 30 minutes
(Biking, medium stress)



Sarasota-Manatee MPO



Ratio of Weighted Jobs
(Biking, Low-Stress to Open Streets)



Space Coast Transportation Planning Organization

Job Accessibility Results—Bike, 2017

Total Jobs **192,211**

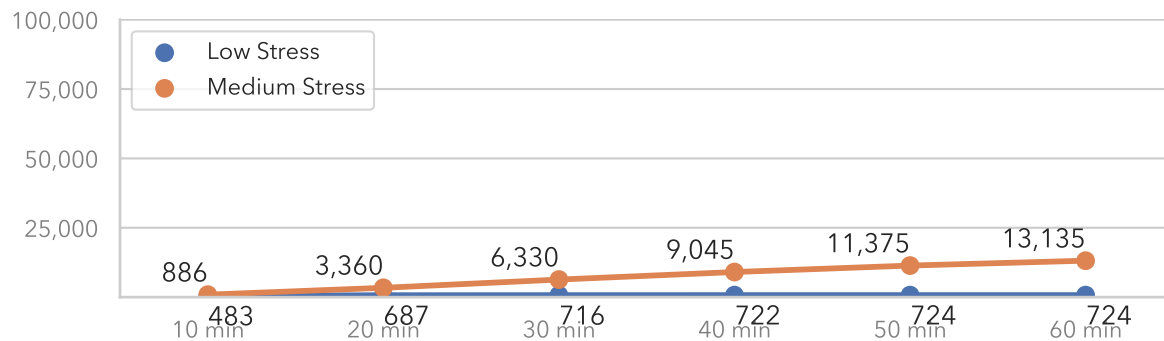
Average Job Density (per mi²) **466**

Total Workers **216,418**

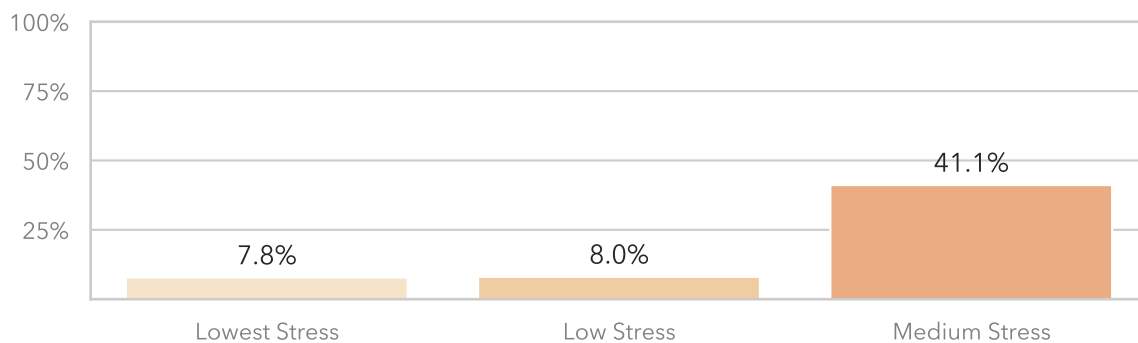
Average Worker Density (per mi²) **525**

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

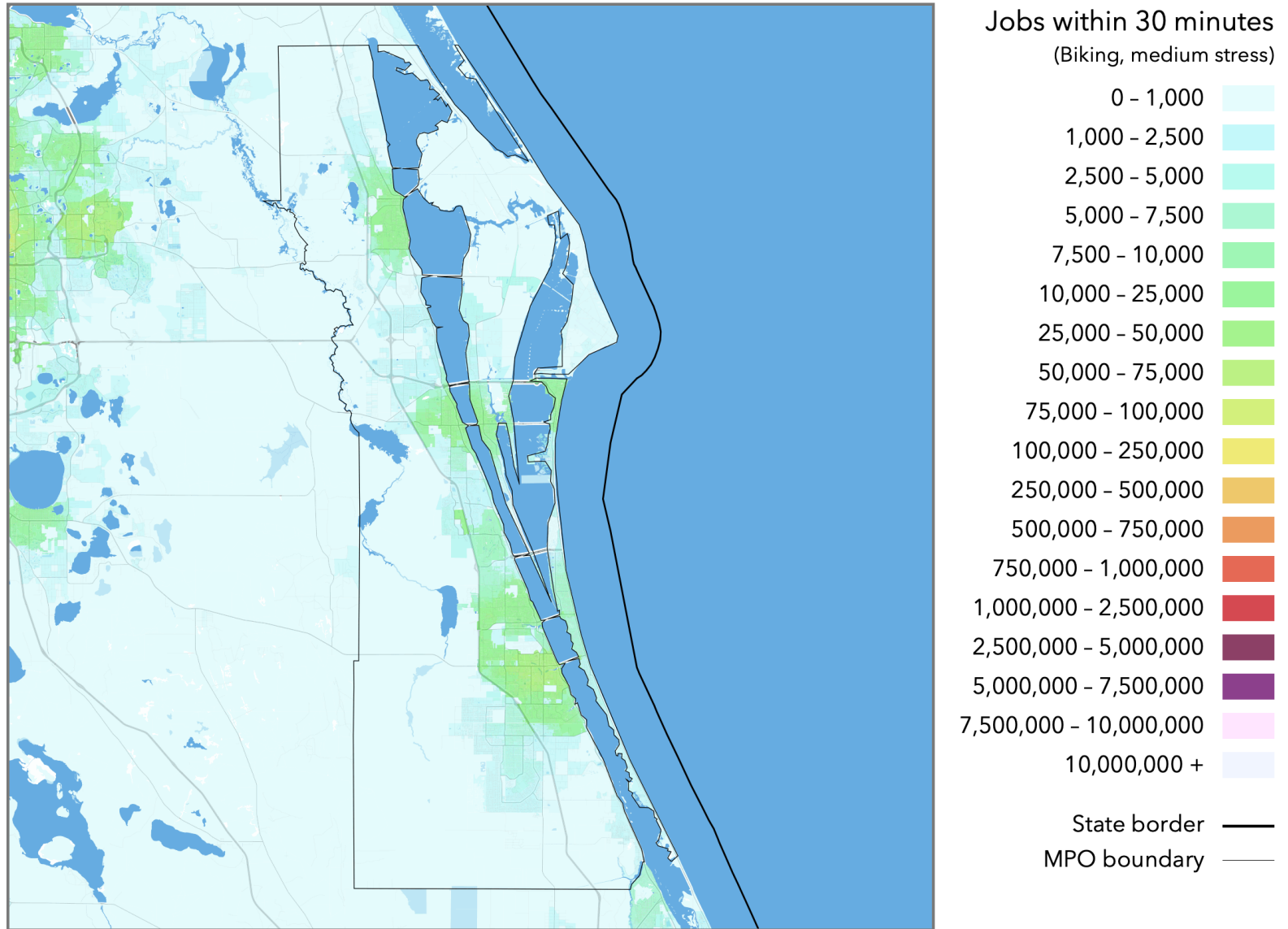
Average Job Accessibility by Travel Time Threshold (worker-weighted)



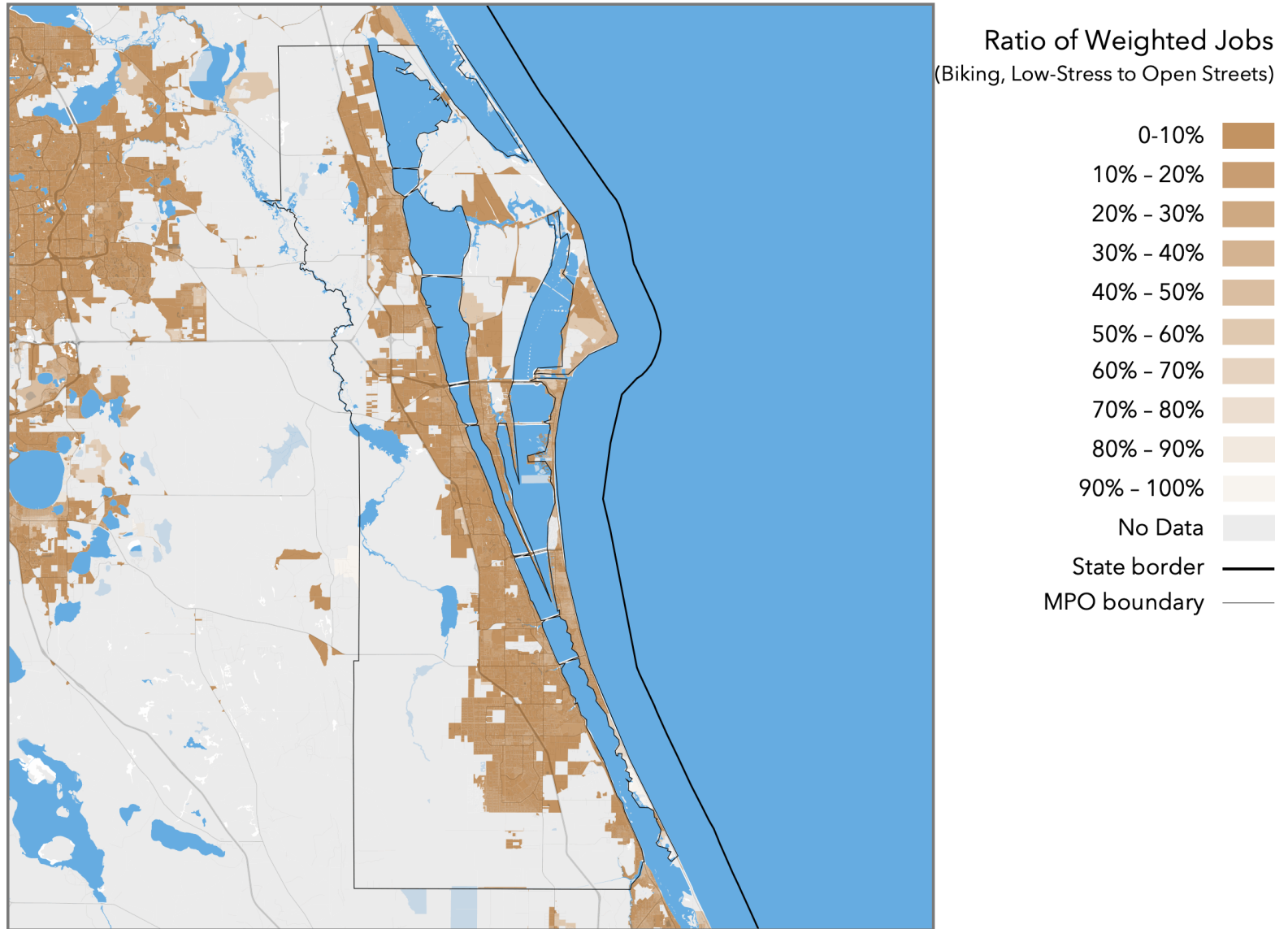
Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)



Space Coast Transportation Planning Organization



Space Coast Transportation Planning Organization



St. Lucie Transportation Planning Organization

Job Accessibility Results—Bike, 2017

Total Jobs **71,715**

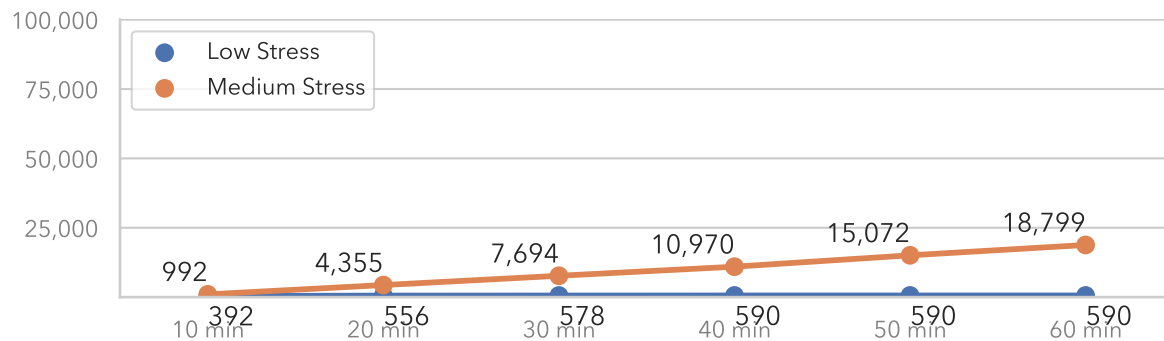
Average Job Density (per mi²) **320**

Total Workers **107,190**

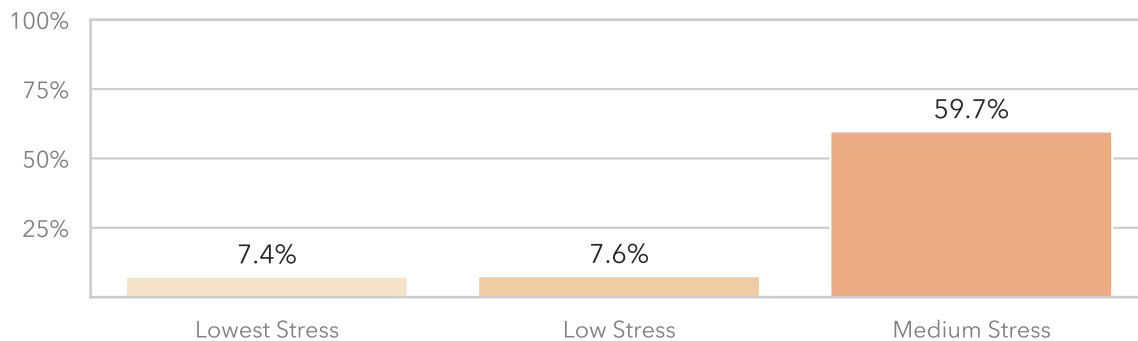
Average Worker Density (per mi²) **478**

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

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

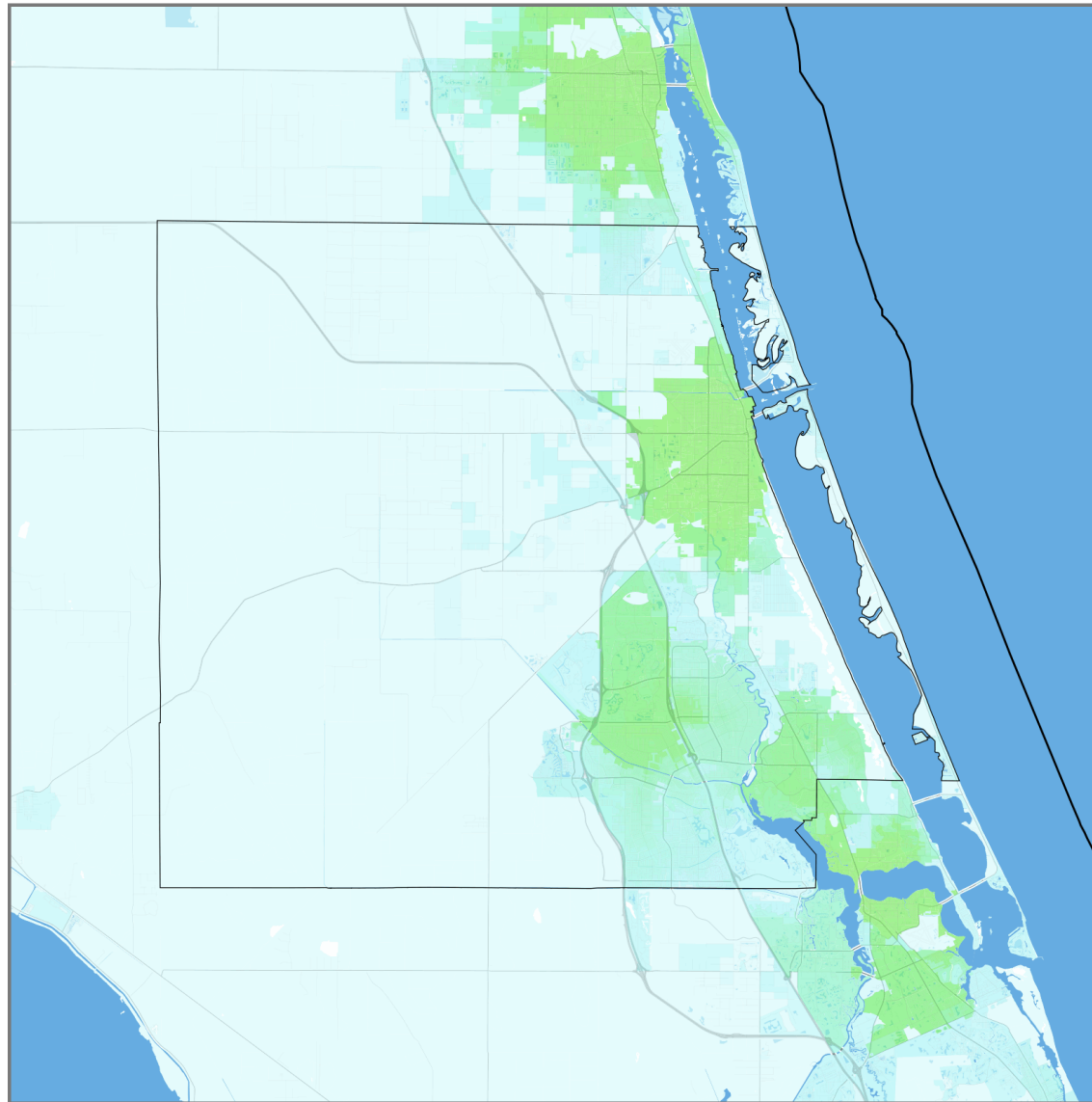


Weighted Job Accessibility Ratio, Bike Networks to Open Streets (LTS 4)

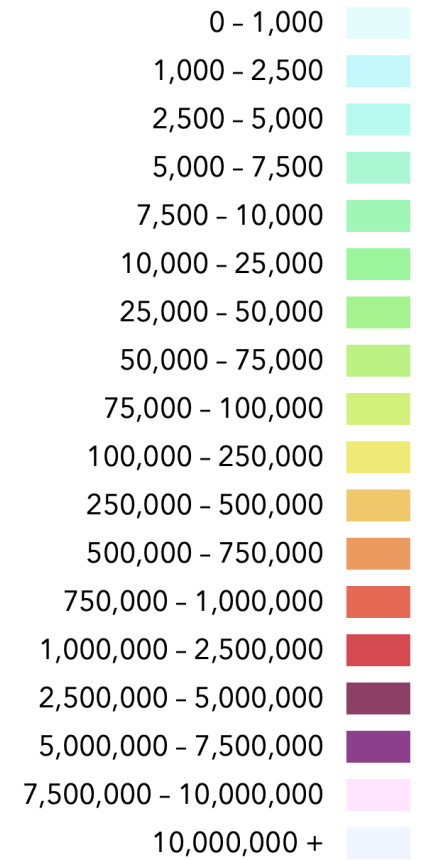


St. Lucie Transportation Planning Organization

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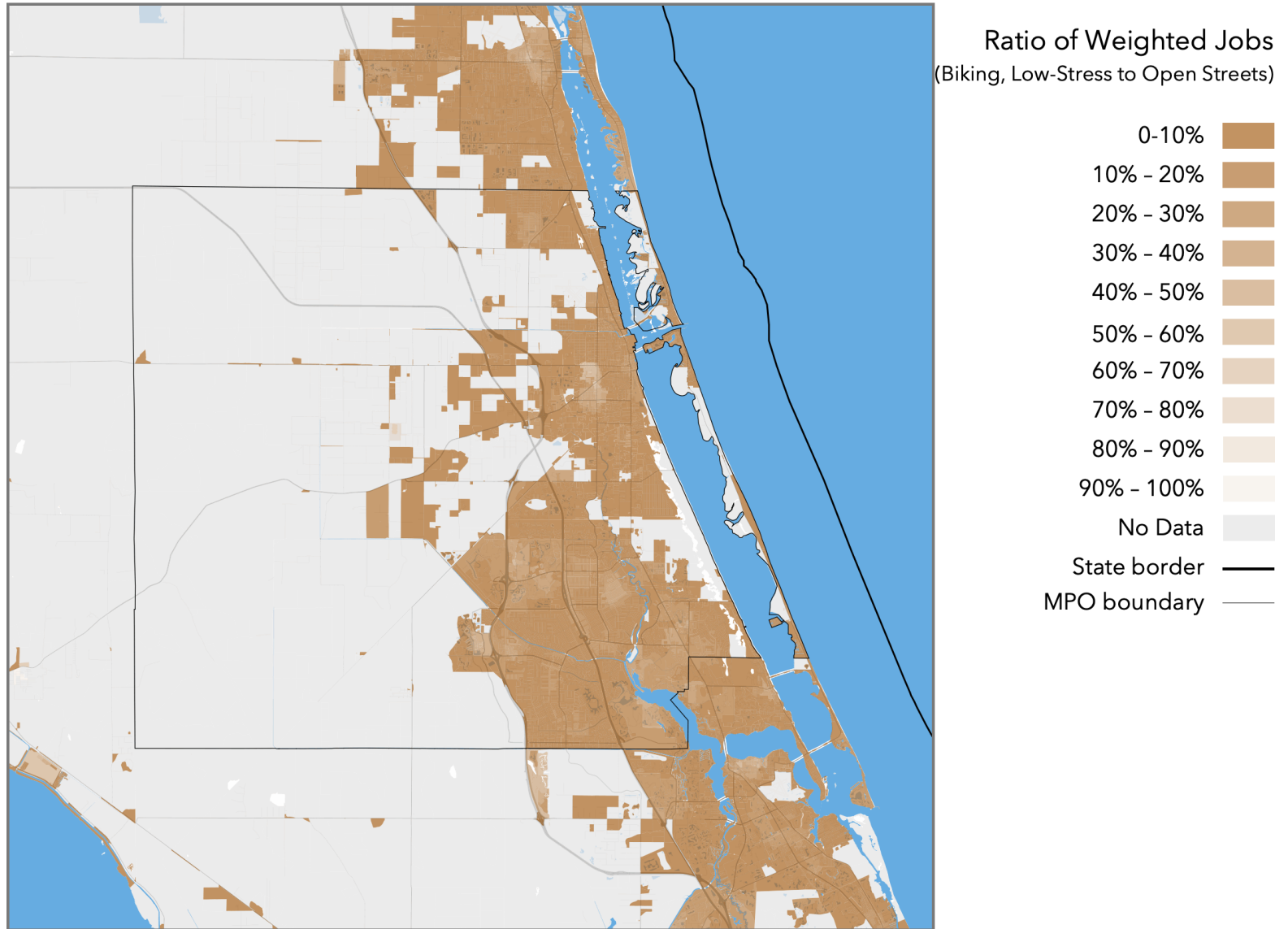


Jobs within 30 minutes
(Biking, medium stress)



State border —
MPO boundary —

St. Lucie Transportation Planning Organization



2.3 Accessibility by County

Table 3 provides the average job accessibility by bike for each county on low-stress bicycle networks, and Table 4 provides the average job accessibility by bike for each county on medium-stress bicycle networks.

Table 3: Average Low-Stress Job Accessibility by Travel Time Threshold for Counties (Bike)

County	10 min	20 min	30 min	40 min	50 min	60 min
Alachua	2,298	12,105	25,710	38,589	49,197	56,501
Baker	169	198	198	198	198	198
Bay	672	1,233	1,330	1,340	1,341	1,341
Bradford	171	251	258	260	260	260
Brevard	482	685	714	720	722	723
Broward	2,019	4,027	4,784	5,014	5,140	5,229
Calhoun	121	235	260	260	260	260
Charlotte	441	889	979	993	993	993
Citrus	156	269	291	298	300	300
Clay	697	1,581	1,948	2,158	2,458	2,639
Collier	779	1,922	2,535	2,751	2,831	2,859
Columbia	393	659	669	669	669	669
DeSoto	249	290	290	290	290	290
Dixie	91	127	136	138	138	139
Duval	1,150	2,121	2,382	2,481	2,503	2,505
Escambia	700	1,174	1,213	1,218	1,223	1,223
Flagler	161	295	340	350	360	364
Franklin	267	370	380	381	385	395
Gadsden	235	326	327	327	327	327
Gilchrist	75	81	84	84	85	92
Glades	105	122	122	122	122	122
Gulf	185	245	249	249	249	249
Hamilton	149	203	204	205	206	206
Hardee	229	258	258	258	258	258
Hendry	710	1,077	1,085	1,086	1,086	1,086
Hernando	291	551	610	622	625	627
Highlands	230	330	359	362	363	364
Hillsborough	1,366	2,325	2,575	2,613	2,617	2,618
Holmes	118	155	156	156	156	156
Indian River	338	471	492	498	501	501
Jackson	239	320	322	323	323	325
Jefferson	85	152	163	164	164	164
Lafayette	83	85	85	85	85	85
Lake	434	758	825	861	862	862
Lee	773	1,674	2,064	2,146	2,170	2,183

Table 3: (continued)

Leon	1,060	1,805	1,893	1,903	1,904	1,904
Levy	84	120	136	143	145	147
Liberty	45	54	54	54	54	54
Madison	168	191	193	200	214	224
Manatee	652	1,004	1,072	1,086	1,099	1,105
Marion	276	402	421	429	431	431
Martin	537	703	710	712	712	712
Miami-Dade	3,397	6,015	6,949	7,285	7,323	7,329
Monroe	1,944	3,685	4,775	5,342	5,386	5,393
Nassau	224	292	295	295	295	295
Okaloosa	1,178	2,283	2,627	2,776	2,820	2,830
Okeechobee	171	200	201	201	201	201
Orange	1,417	3,296	4,284	4,928	5,454	5,515
Osceola	514	1,227	1,655	1,720	1,725	1,725
Palm Beach	1,432	2,747	3,182	3,319	3,356	3,367
Pasco	335	508	532	536	537	537
Pinellas	1,551	2,575	3,003	3,227	3,293	3,296
Polk	490	677	697	699	699	699
Putnam	230	289	290	291	292	292
Santa Rosa	272	569	702	738	743	743
Sarasota	896	1,414	1,488	1,504	1,509	1,511
Seminole	924	1,582	1,842	1,931	1,942	1,943
St. Johns	525	946	1,140	1,326	1,397	1,411
St. Lucie	391	556	578	589	589	589
Sumter	308	909	1,127	1,164	1,164	1,164
Suwannee	140	181	193	196	203	203
Taylor	208	282	283	283	283	284
Union	78	86	86	86	86	86
Volusia	440	652	674	675	676	676
Wakulla	79	193	233	253	263	266
Walton	288	665	782	825	888	944
Washington	218	308	310	311	312	313

Table 4: Average Medium-Stress Job Accessibility by Travel Time Threshold for Counties (Bike)

County	10 min	20 min	30 min	40 min	50 min	60 min
Alachua	2,905	14,666	31,944	48,899	63,385	72,462
Baker	228	485	669	715	740	748
Bay	1,211	5,483	11,143	16,364	20,772	24,347
Bradford	225	364	400	414	414	415
Brevard	884	3,356	6,318	9,021	11,338	13,087
Broward	3,445	15,223	32,307	53,102	77,433	103,851
Calhoun	121	235	261	262	263	264
Charlotte	881	4,171	8,122	11,712	14,126	15,693
Citrus	304	1,134	2,045	2,818	3,478	4,134
Clay	893	3,038	5,326	7,756	10,320	13,280
Collier	1,164	4,066	7,295	10,109	12,974	15,713
Columbia	624	1,762	2,449	3,370	4,439	5,578
DeSoto	653	1,615	2,185	2,414	2,630	2,777
Dixie	92	129	147	162	188	241
Duval	2,157	9,102	18,931	28,380	36,145	42,894
Escambia	1,624	7,039	12,914	18,507	22,441	24,613
Flagler	228	919	1,991	3,105	4,198	5,196
Franklin	332	503	570	575	579	589
Gadsden	354	859	1,061	1,179	1,242	1,419
Gilchrist	75	82	86	91	100	123
Glades	117	133	134	135	139	143
Gulf	253	437	459	462	464	464
Hamilton	155	218	224	236	250	289
Hardee	510	1,007	1,260	1,370	1,463	1,725
Hendry	996	1,820	2,193	2,265	2,274	2,275
Hernando	451	1,613	2,828	3,917	4,913	5,939
Highlands	573	1,821	3,212	4,897	6,701	8,567
Hillsborough	3,297	16,309	36,802	62,397	92,820	124,650
Holmes	122	172	181	191	223	259
Indian River	1,091	4,818	9,694	14,884	18,704	21,485
Jackson	400	793	852	858	861	869
Jefferson	87	160	185	201	219	244
Lafayette	94	125	131	139	140	143
Lake	736	2,760	4,996	6,817	8,261	9,144
Lee	1,251	4,766	8,941	13,518	18,307	22,204
Leon	2,762	13,030	27,428	41,270	53,392	63,165
Levy	120	208	290	378	446	505
Liberty	46	67	80	80	81	81
Madison	245	322	329	337	352	363
Manatee	1,425	6,671	14,174	23,095	31,536	39,299

Table 4: (continued)

Marion	735	3,155	6,604	10,151	13,385	16,609
Martin	1,194	3,486	5,956	8,182	9,461	10,512
Miami-Dade	6,665	26,384	55,798	89,474	126,351	169,088
Monroe	2,280	4,353	6,438	7,779	7,797	7,806
Nassau	621	1,792	2,534	3,003	3,417	3,618
Okaloosa	1,560	4,533	6,207	7,216	7,863	8,304
Okeechobee	444	1,240	1,872	2,105	2,131	2,141
Orange	3,124	12,950	27,134	44,772	62,291	77,891
Osceola	972	3,696	5,963	7,336	8,523	10,179
Palm Beach	2,388	9,150	18,214	28,060	39,912	51,898
Pasco	717	2,764	5,106	7,601	10,213	12,993
Pinellas	3,198	14,442	31,283	51,680	70,208	87,120
Polk	1,295	4,938	9,367	13,551	17,701	21,756
Putnam	519	1,576	2,339	2,589	2,633	2,664
Santa Rosa	401	1,558	2,711	3,936	5,360	7,021
Sarasota	2,147	9,148	20,169	32,929	44,596	55,038
Seminole	1,533	6,183	12,213	19,251	27,461	39,904
St. Johns	714	2,243	3,887	4,997	6,021	6,791
St. Lucie	994	4,354	7,697	10,995	15,105	18,828
Sumter	411	1,474	1,945	2,217	2,405	2,548
Suwannee	270	495	587	693	754	819
Taylor	361	888	1,219	1,362	1,432	1,447
Union	109	138	141	154	155	169
Volusia	1,060	4,495	8,372	11,979	15,242	18,626
Wakulla	121	386	542	708	783	914
Walton	349	1,072	1,595	2,041	2,396	2,693
Washington	315	654	803	926	985	1,027

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: Bike 2017 Methodology* report.

3.1 Bicycle Level of Traffic Stress

Bicycle Level of Traffic Stress (LTS) evaluation is a method for classifying street segments’ suitability for bicycling based on the physical characteristics of the roadway, such as speed limits, lane configurations, and the types of bicycle facilities present, if any. A value of 1 (lowest stress) to 4 (highest stress) is assigned to each street segment based on these characteristics. In this study, roadway characteristics are determined by street segment tag data in the OpenStreetMap network data used for routing computations. We define the LTS 1 network as “lowest-stress”, LTS 2 network as “low-stress”, the LTS 3 network as “medium-stress”, and the LTS 4 network as the “open streets” network — i.e. if a person feels comfortable riding a bicycle on all streets (except limited-access highways, such as interstates and freeways), including arterials, they would experience “open streets” access.

3.2 Travel Times by Bike

Travel times by biking were calculated using detailed road networks for the entire country, with individual street links and intersections classified by LTS score. A constant bicycle speed of 5 m/s (11.2 mi/h) is used. Travel times were calculated for each of the four LTS levels, which are cumulative — i.e. the low-stress network includes facilities in both LTS 1 and LTS 2 classifications, the medium-stress network includes facilities in LTS classifications 1, 2, or 3, etc.

3.3 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 20 km (12.4 miles) are included, even if those destinations are located in a different state or other jurisdiction. Only locations within the United States are included. The MPO jurisdictions used for aggregate analysis are based on data provided in the US Department of Transportation’s National Transportation Atlas Database 2016¹.

3.4 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)². The LEHD Origin-Destination Employment Statistics (LODES) dataset, which is updated annually, provides Census

¹http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_atlas_database/index.html

²<http://lehd.ces.census.gov/data/>

block-level estimates of employee home and work locations. This analysis uses LODS data from 2015, the most recent available as of this writing.

3.5 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, for each LTS level. 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, for a given LTS level.

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.

In the case of accessibility by biking, local accessibility levels are very sensitive to the presence or absence of good bicycle facilities, and the willingness of a rider to use more stressful roadways. A person willing to ride on more stressful roadways will gain significantly more access to valuable destinations, while a person who is more cautious may be forced to take more circuitous routes to their destinations, or be unable to reach them entirely.

4 Conclusions

Insights for bicycle urban planning can be found in comparing bicycle access at different LTS tolerances. “Open streets” accessibility indicates the level of bike accessibility that everyone would experience if every street were made comfortable for biking on. Thus, comparing the access currently experienced on the low-stress network with that on the “open streets” network quantifies the degree to which job access could be improved by providing low-stress bicycle facilities on high-stress routes. This ratio is graphed in the second chart on the MPO data pages in [Section 2.2](#), and also mapped for the MPO jurisdictions included in the study; areas with a lower ratio of low-stress access to “open streets” access are colored more intensely. Such areas may lack good connections to the low-stress bike network, and aggregate analysis at the neighborhood level may offer planners a tool to identify where investments in low-stress bicycle facilities would have the greatest benefit in improving access to destinations.

The ratios comparing low-stress and medium-stress accessibility to “open streets” accessibility allow comparisons of bicycle network performance between MPOs of different sizes. The MPOs which perform the best when comparing medium-stress access to the maximum possible bike access all have bicycle networks which, on average, allow their residents to access a greater percentage of the job opportunities which can be accessed by biking on the “open streets” network. This performance metric assesses how well an MPO’s bicycle network allows people to reach the available valuable opportunities.