



# The Power of Transit

The Unrealized Opportunity Transit has on our Lives

Hayden Clarkin, EIT

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# About Me

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**Hayden Clarkin, EIT**

**@The\_transit\_guy**

- Transportation Engineer & Planning Experience
- Born and Raised in New England
- Studied Civil Engineering & German at UConn
- Lived in Germany studying public transportation operations
- Spent 3 years living in the Bay Area working on large scale west coast transit projects
- Moved to NYC to work on ADA Improvements at MTA
- Founder and CEO of TransitCon



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# The 5 Powers of Transit

**01** The Power to Make us More Equal

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**02** The Power to Create Prosperity

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**03** The Power to Sustain our Future

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**04** The Power to Respect Us

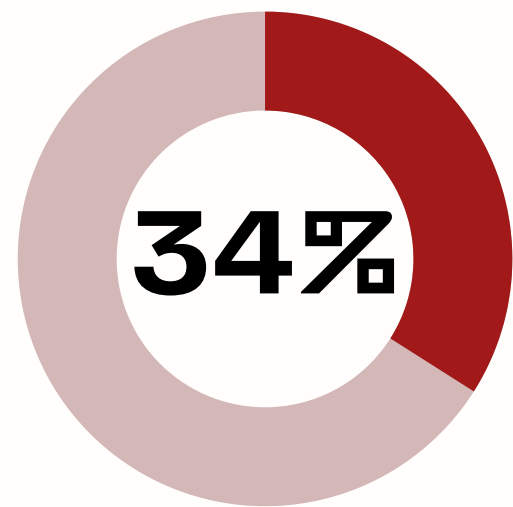
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**05** The Power to Connect Us

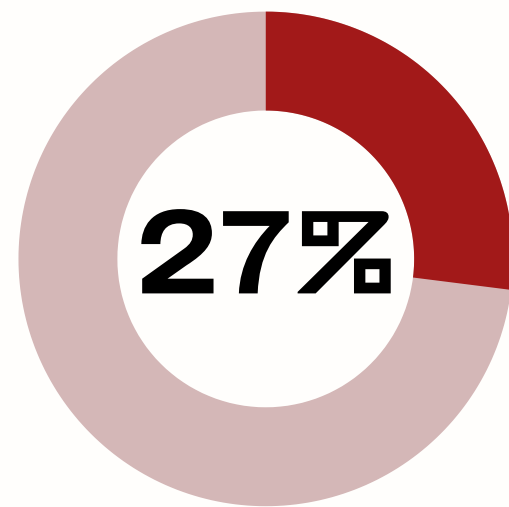
# 1) The Power to Make Us More Equal



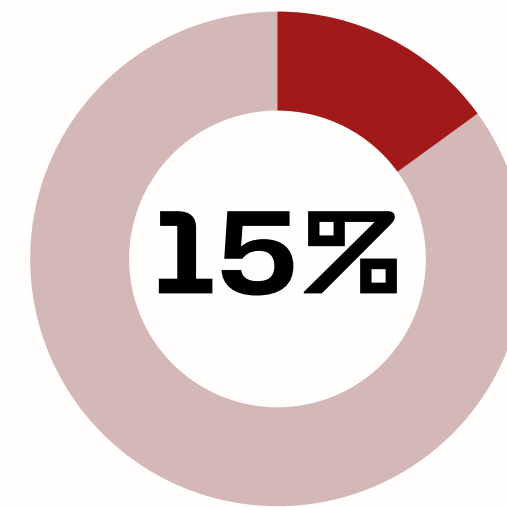
# Transit Reliance



**of Black People**



**of Latino People**

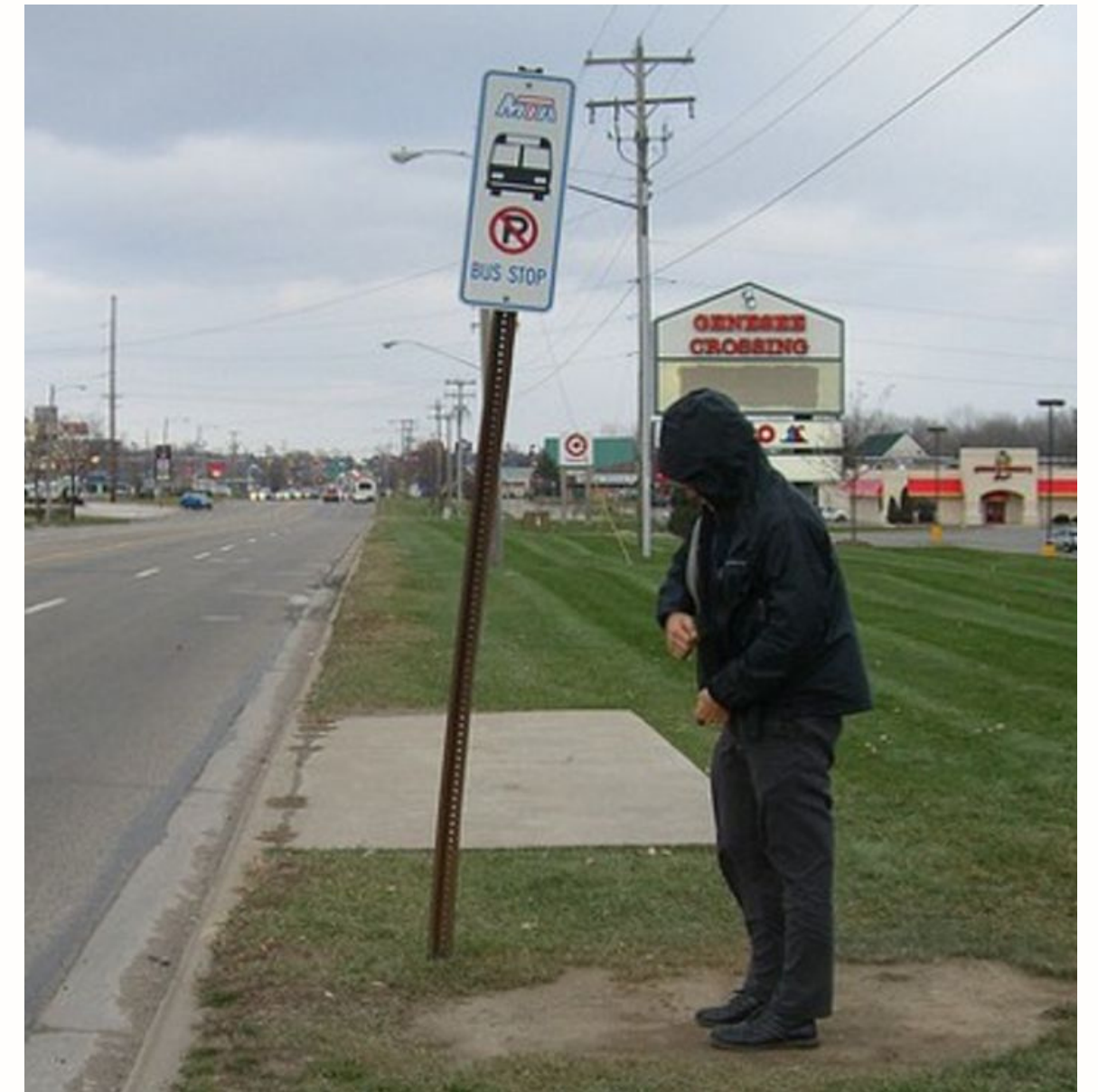


**of White People**

**... In Urban areas RELY on Public Transit**

# Isn't Transit Doing Enough?

- **Who does transit serve?**
- **How well are we serving them?**



# Drum Roll...

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# Rhode Island!

Let's do a small experiment:

See how long it takes to get around Rhode Island on transit versus a car.

**Who will win?**





# Central Falls, RI

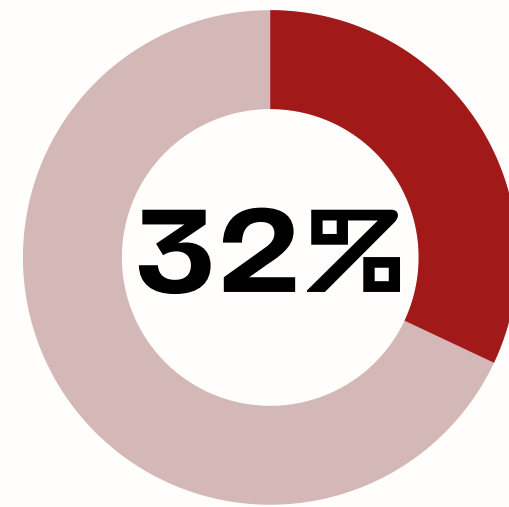


**19.1%**

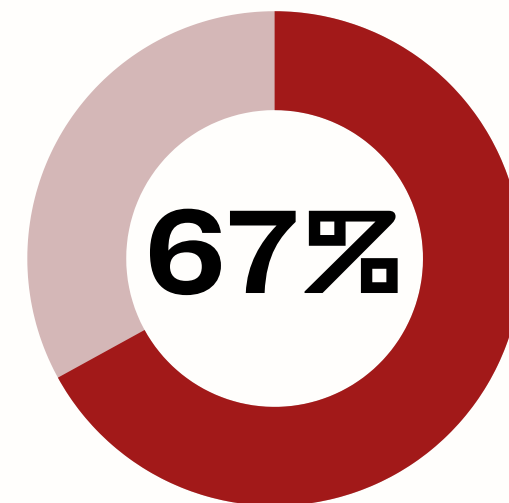
**Homeownership Rate**

**16K**

**People Per Square Mile**



**Live Under the  
Poverty Line**



**Identify as Latino**



# Johnston, RI

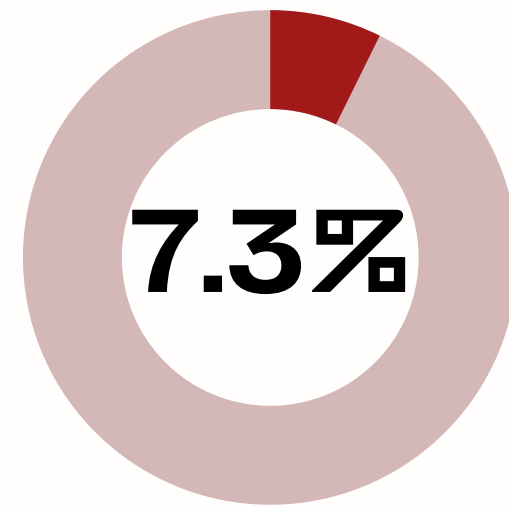


**91%**

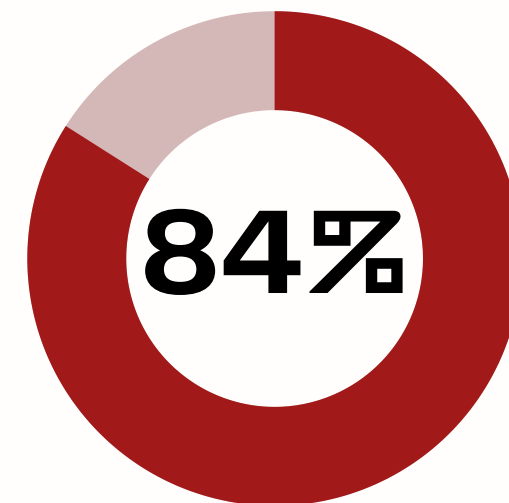
**Drive Alone**

**1.19K**

**People Per Square Mile**



**Live Under the  
Poverty Line**



**Identify as White**

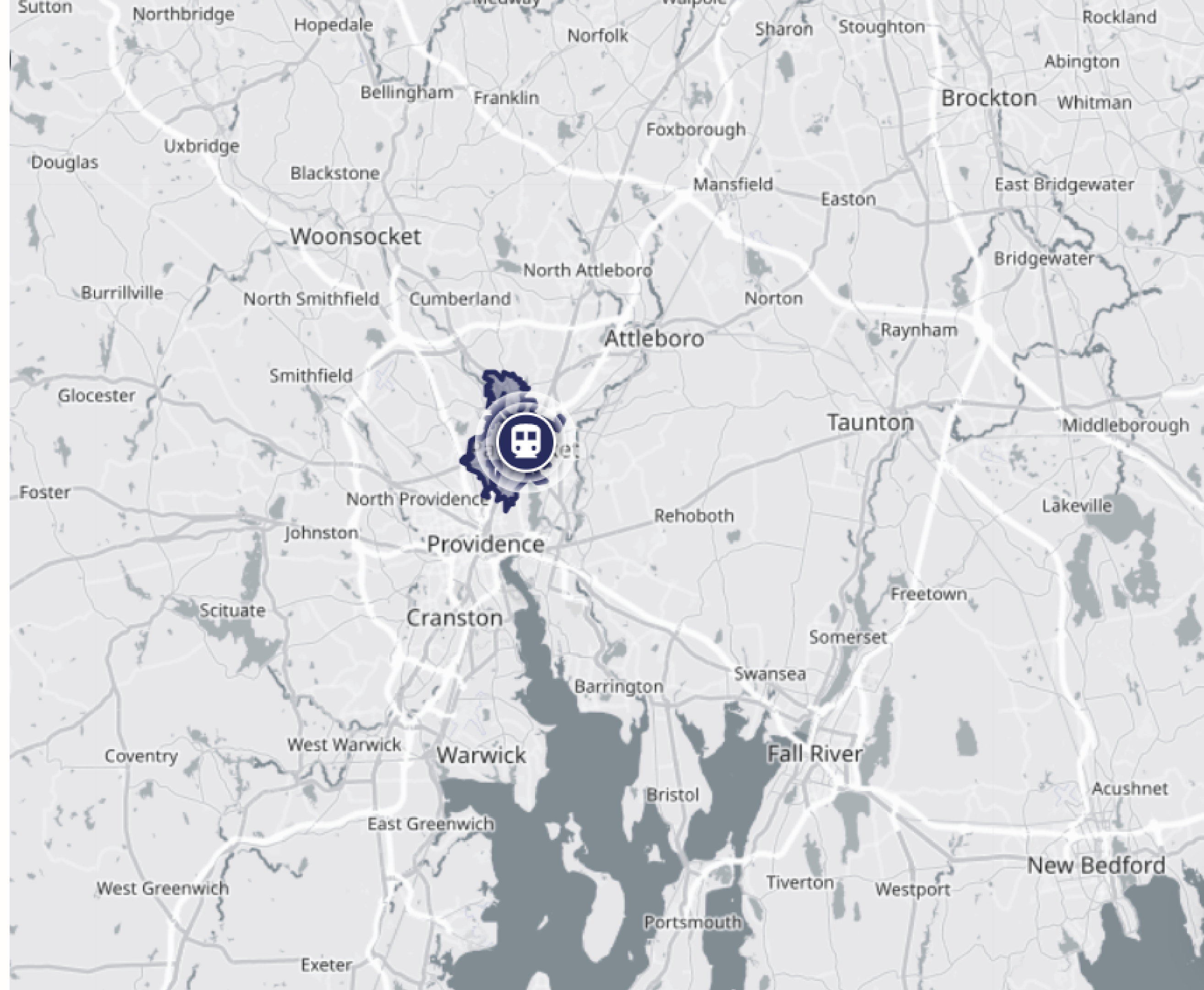


# Mobility Comparison

Central Falls, Rhode Island has one of the highest transit propensities in the state of Rhode Island.

## Monday @ 8AM for 30 mins

This isochrone is how far you can get in the Providence Metro area by taking transit for 30 mins in any direction.

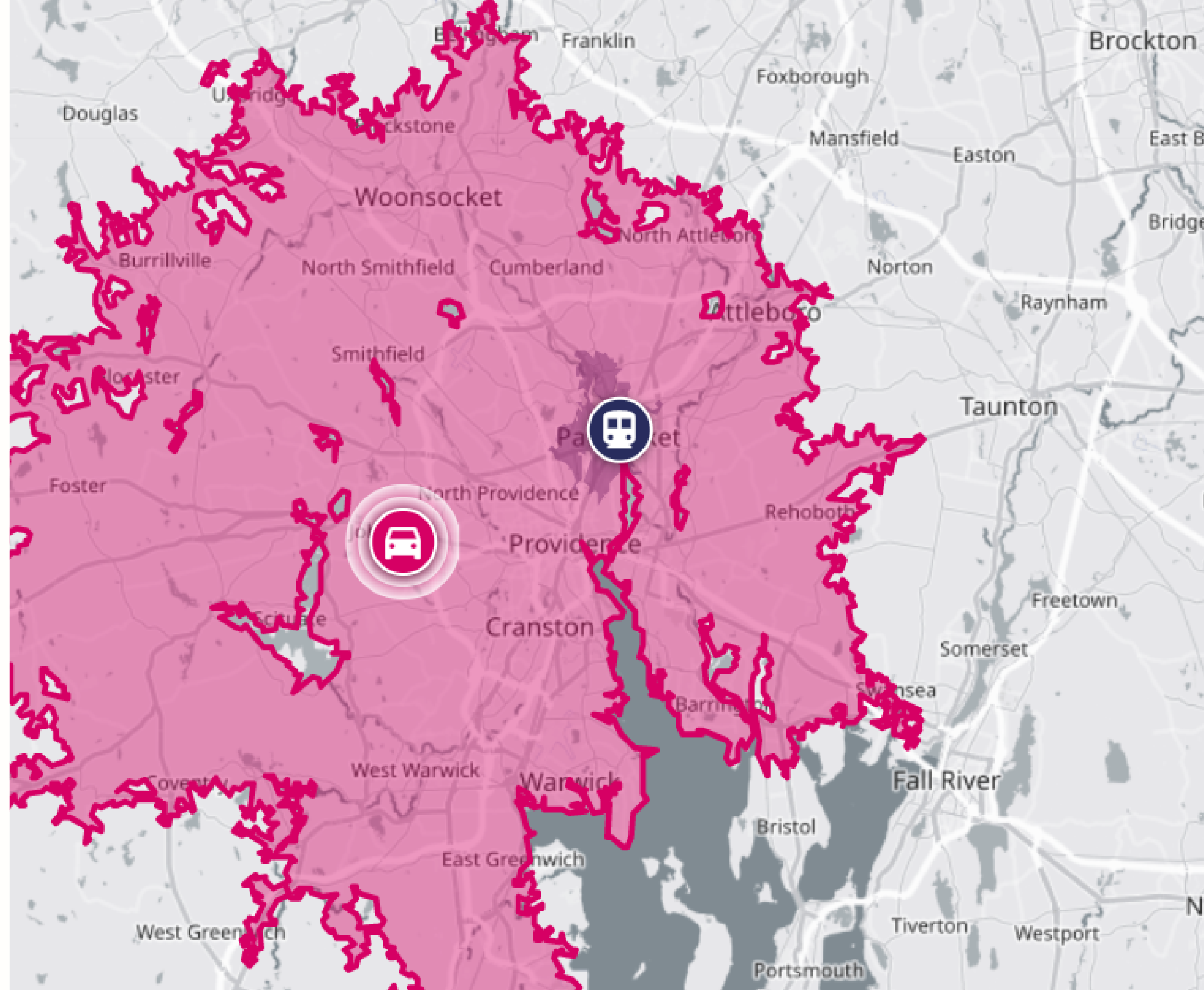


# Mobility Comparison

Johnston, Rhode Island borders Providence to the West, and is a suburban town close to the highway with one bus route.

## Monday @ 8AM for 30 mins

This isochrone is how far you can get in the Providence Metro area by driving for 30 mins in any direction from Johnston.



# Mobility Comparison

- Hours of Operation
- Frequency
- Speed
- Operational Issues
- Connectivity

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**Central Falls, RI**  
**30 Min by Transit**

**163k Jobs**

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**Johnston, RI**  
**30 Min by Car**

**466k Jobs**

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**Number of Jobs**

**2.85X Jobs**

# Mobility Comparison

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**The next city to highlight is.....**

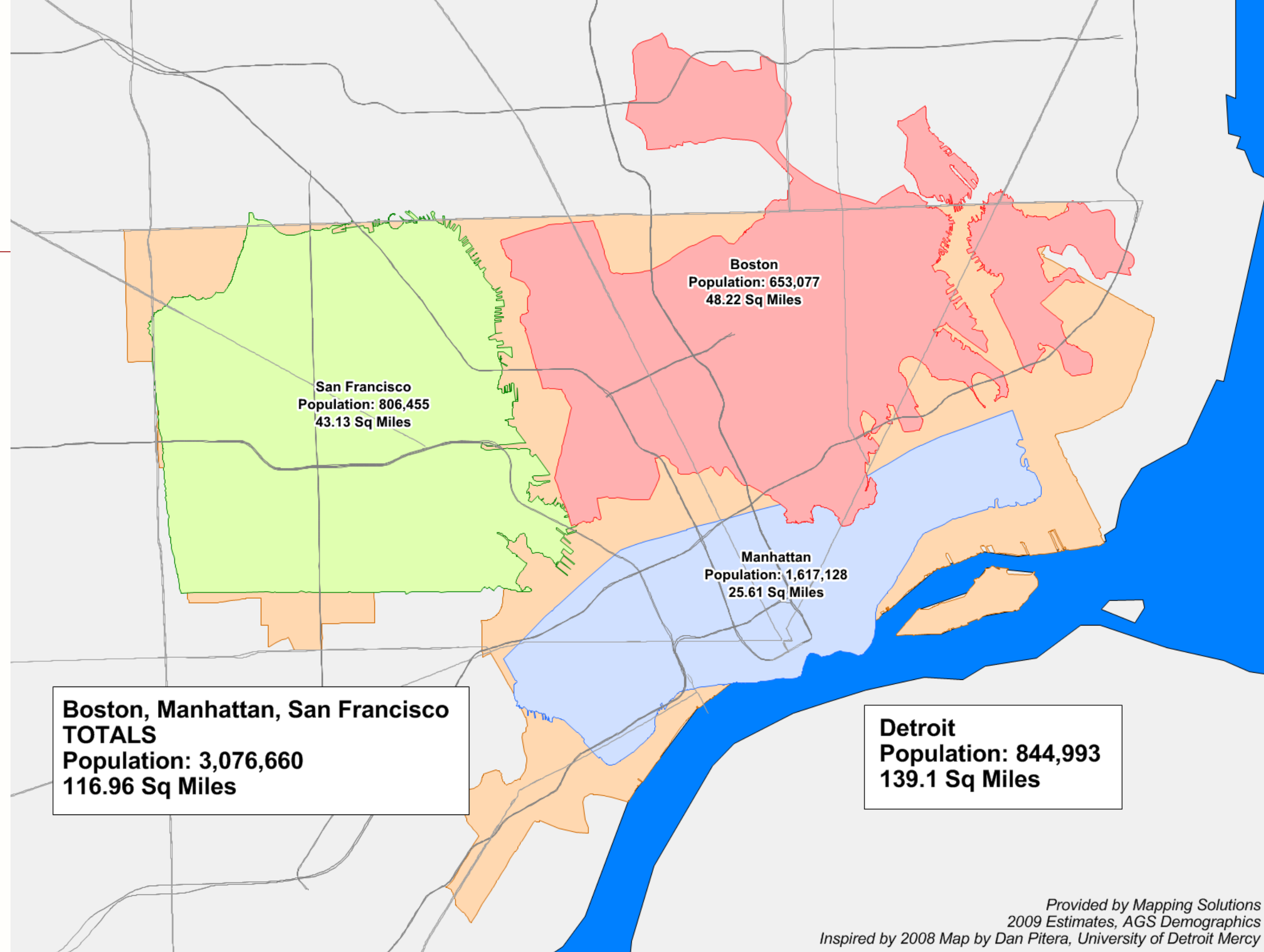
**1) This city is the only city in the contiguous United States where you can look south and see Canada.**

**2) In 1909, this city laid the first mile of concrete highway down in the world.**

**3) This city had the tallest department store in the world until the '60s.**

# Detroit, MI

The city boundaries are overlaid by the areas of San Francisco, Boston, and Manhattan. All of which have their own mobility issues.

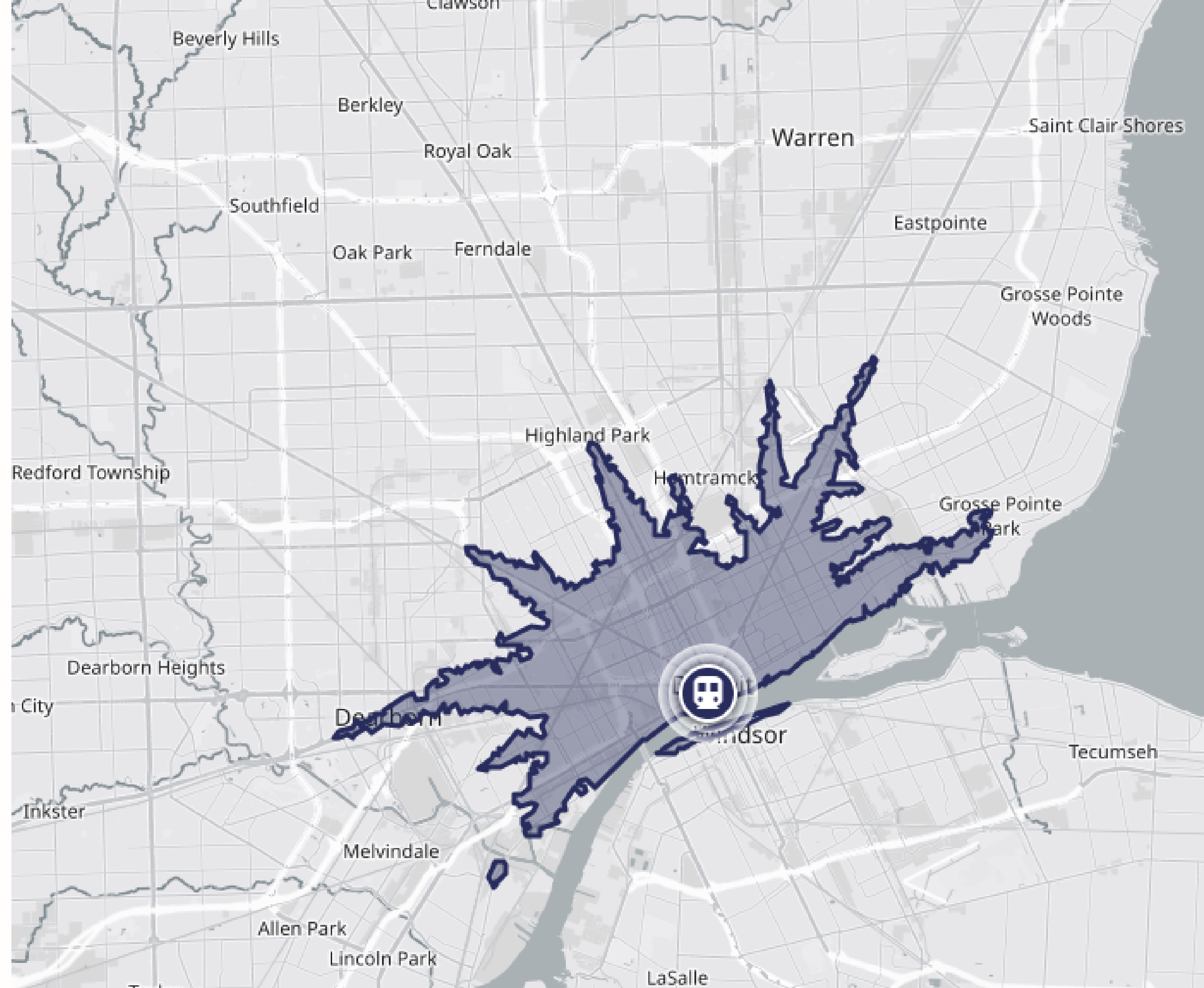


# Mobility Comparison

**1/4 Detroit residents** do not have access to a car, one of the biggest cities in America with such low car ownership.

## Monday @ 8AM for 30 mins

This isochrone is how far you can get in the Detroit Metro area by taking transit for 30 mins in any direction from the most transit rich node.



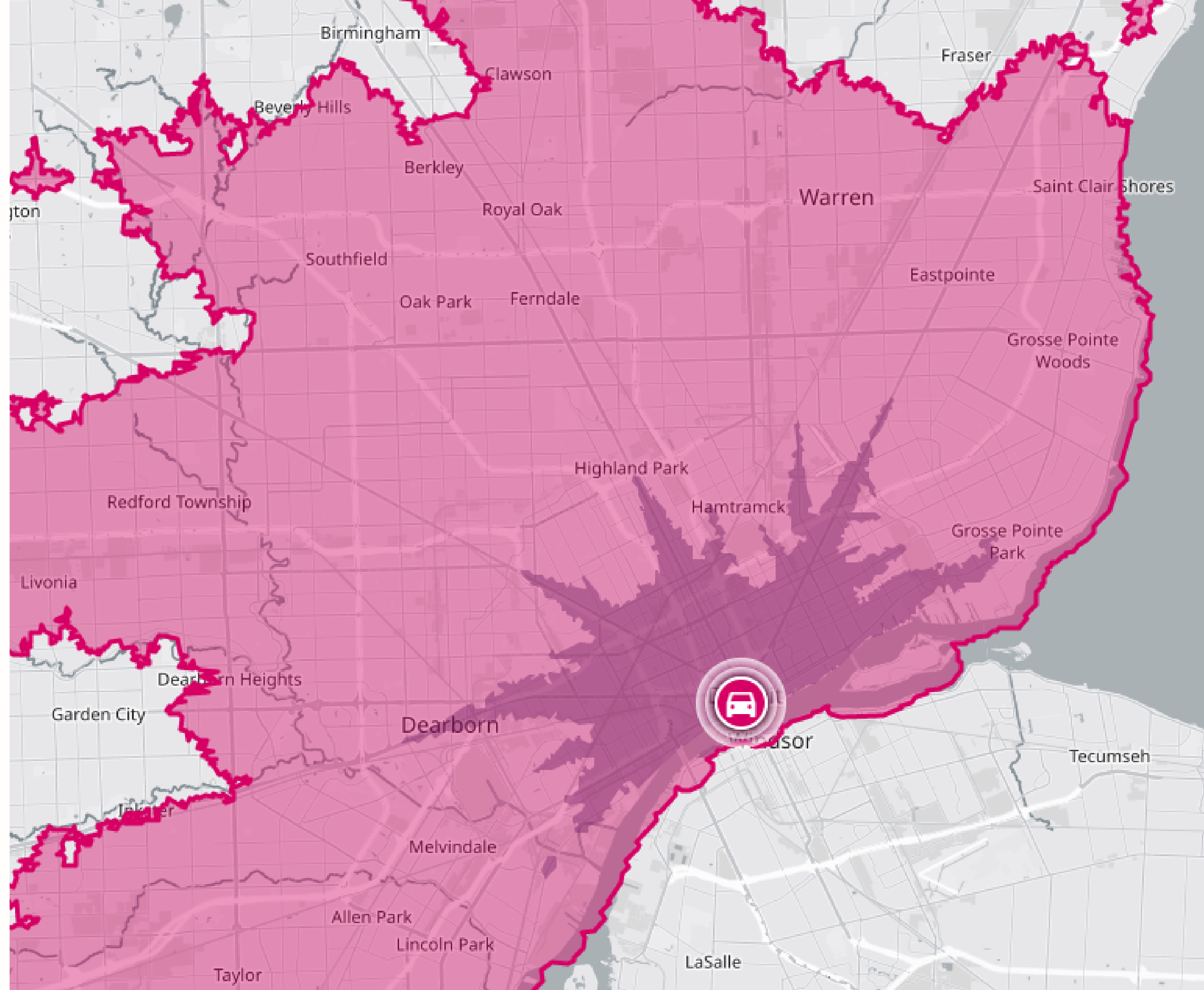


# Mobility Comparison

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# Mobility Comparison

- Hours of Operation
- Frequency
- Speed
- Operational Issues
- Connectivity

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**Detroit Metro  
30 Min by Transit**

**231k Jobs**

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**Detroit Metro  
30 Min by Car**

**1.045 million Jobs**

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**Number of Jobs**

**4.52X JOBS**

## 2) The Power to Create Prosperity



## To the Rider

**01** Productivity

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**02** Opportunity

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**03** Wealth

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## To a Region

**01** Economic Output

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**02** Congestion Relief

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**03** Connectivity

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# Savings

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**The APTA states that the average household saves \$10,000 yearly by owning one less car and taking public transit instead.**

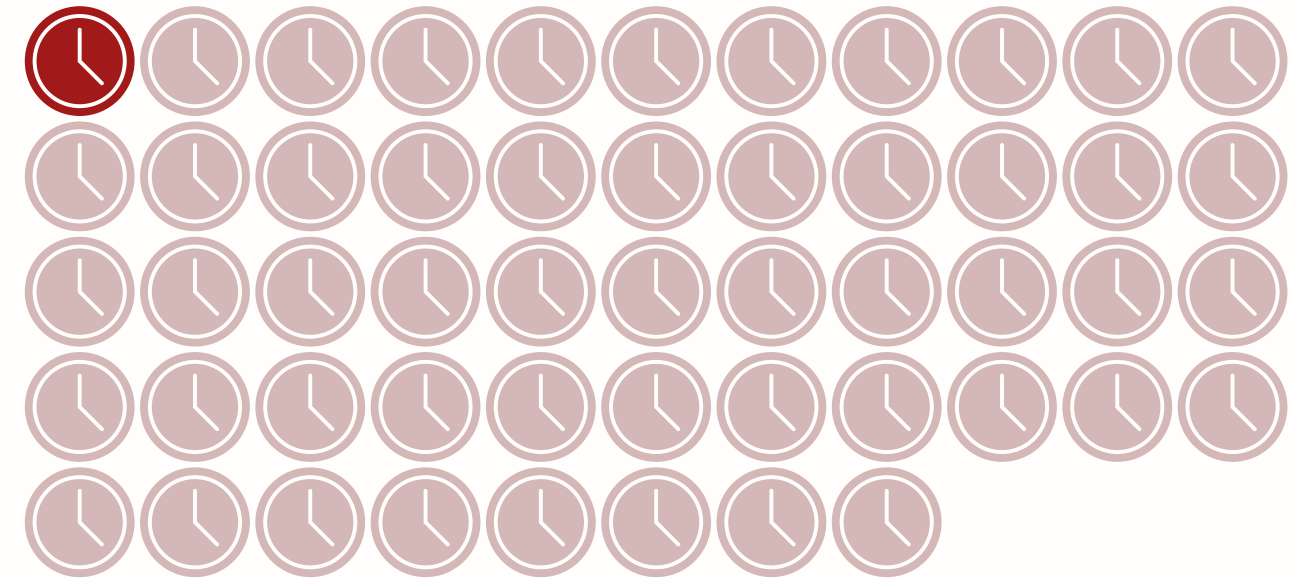
**or**

**\$833 per month.**



**INRIX, a data firm, said that the US loses an average of 87 billion in sitting in traffic, or \$1,348 for every driver in America.**

# Productivity



# 1 Week

**Length of time Boston drivers spend in traffic EVERY YEAR**

# Congestion

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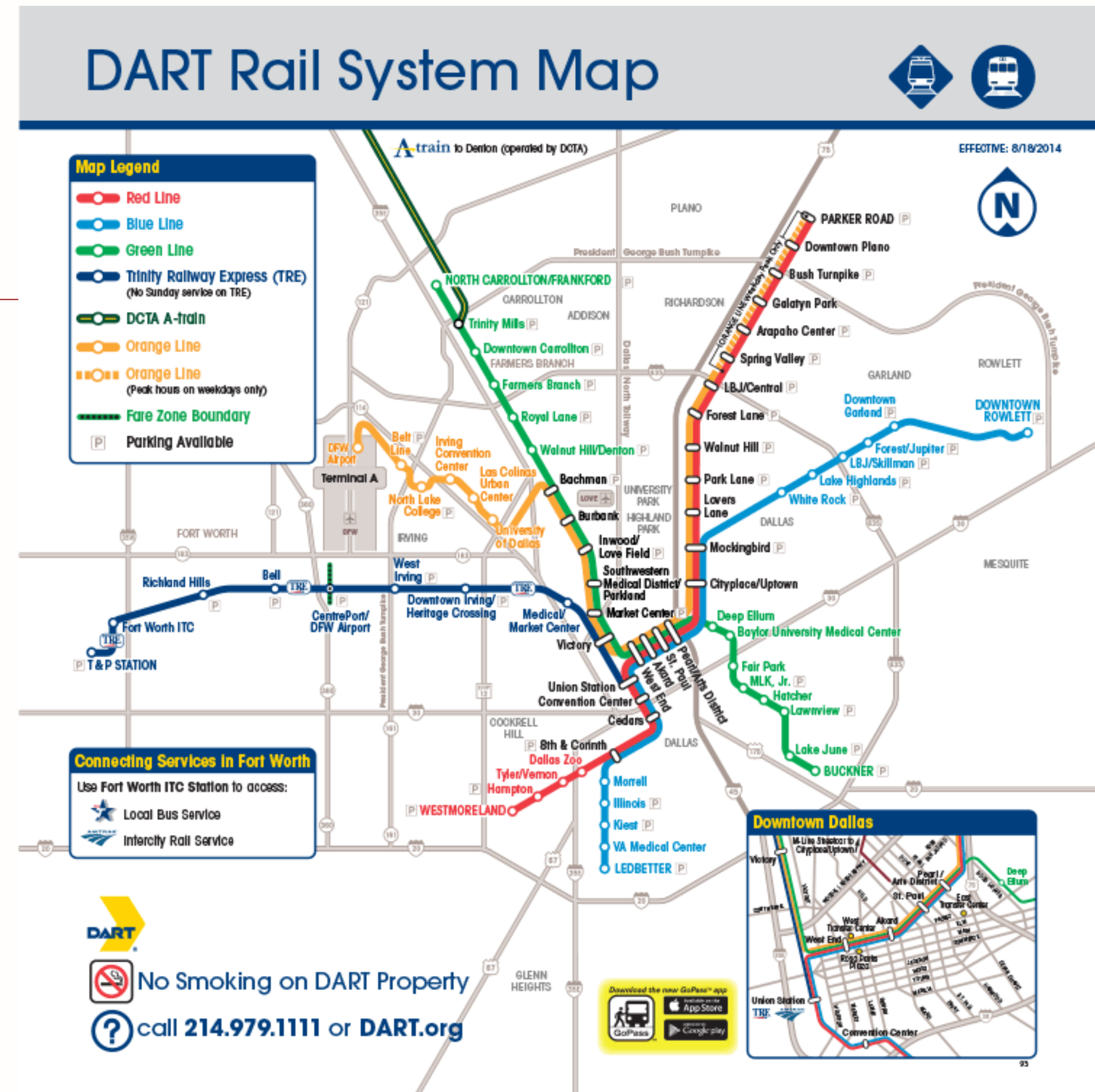
## LA Metro 35 day strike was studied....

- 47% reduction in freeway congestion due to transit
- 3.02 billion in annual savings (2021 dollars) for LA freeway commuters due to transit

# Economic Output

From 2016 to 2018....

- 81 developments completed w/ .25 miles of DART Stations
- 5.138 billion dollars = Total property of development
- \$286.4 million in state/local tax revenue
- 10.27 billion for the Dallas – Fort Worth economy





# Capacity



**Bay Bridge: 14,200 people per hour**  
\*assumes 1.7 person per vehicles (Caltrans)

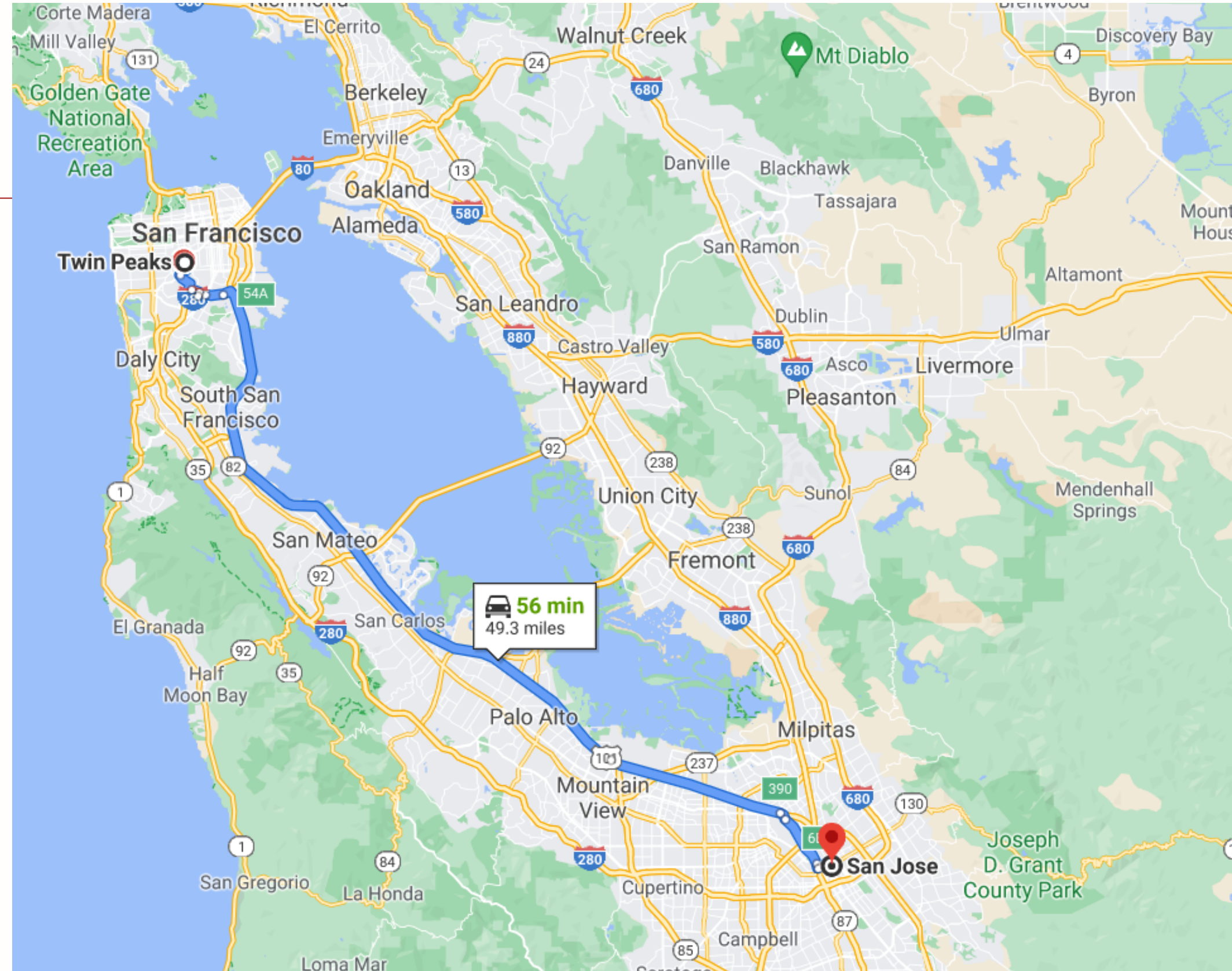


**BART : 27,000 people per hour**

# My Pre-Covid Commute

Living in San Francisco, I was faced with living in the city I loved or having my dream job.

Spending an hour a day on the train working on my computer was a better use of time than sitting in "parking lot" type traffic.



# 3) The Power to Sustain our Future

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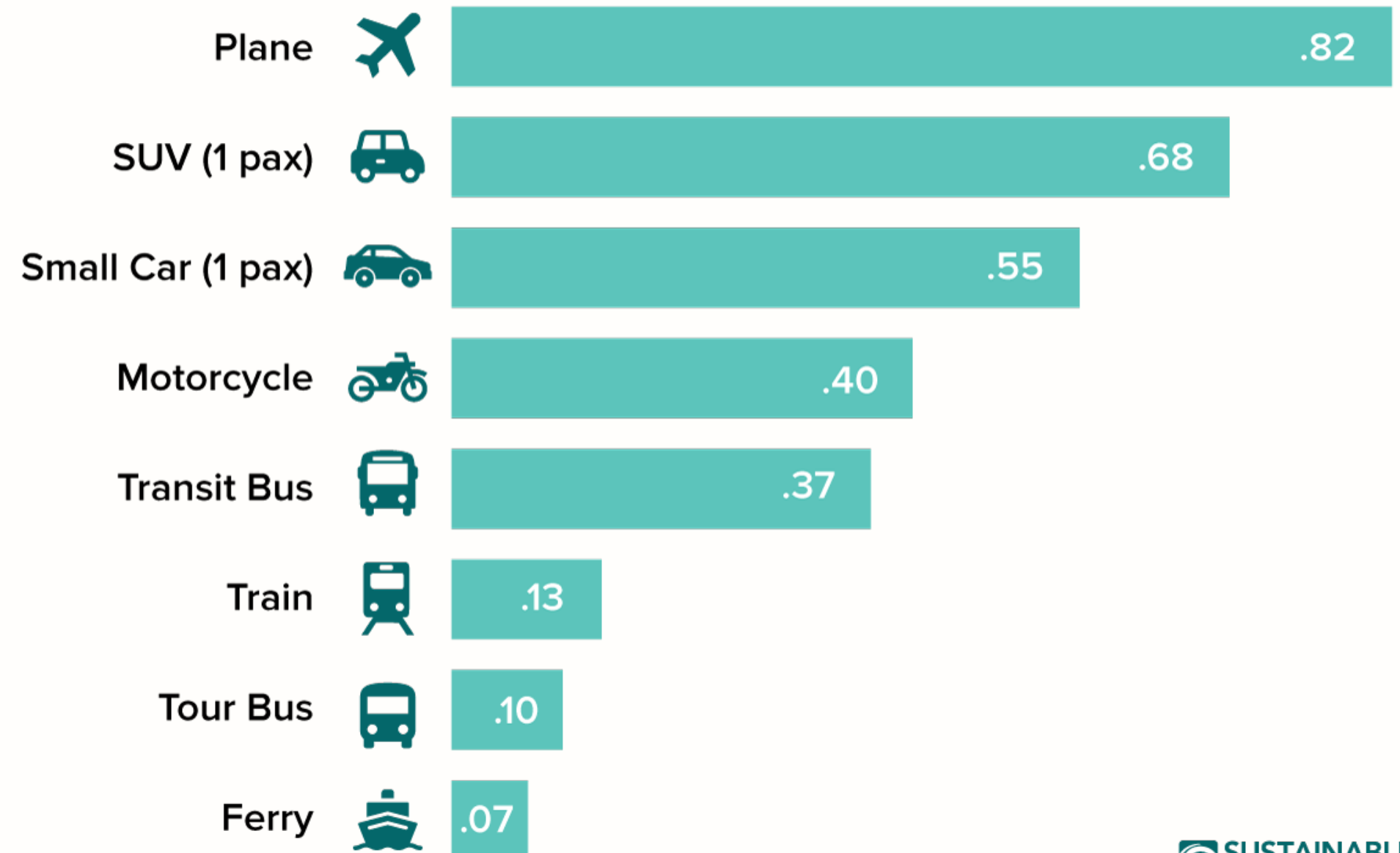


# Carbon Emissions

It's no doubt that transit is much more efficient and fuel efficient than the SOV (Single Occupant Vehicle) or air travel

## Emissions by Mode of Transport

pounds of CO2e emitted per passenger per mile

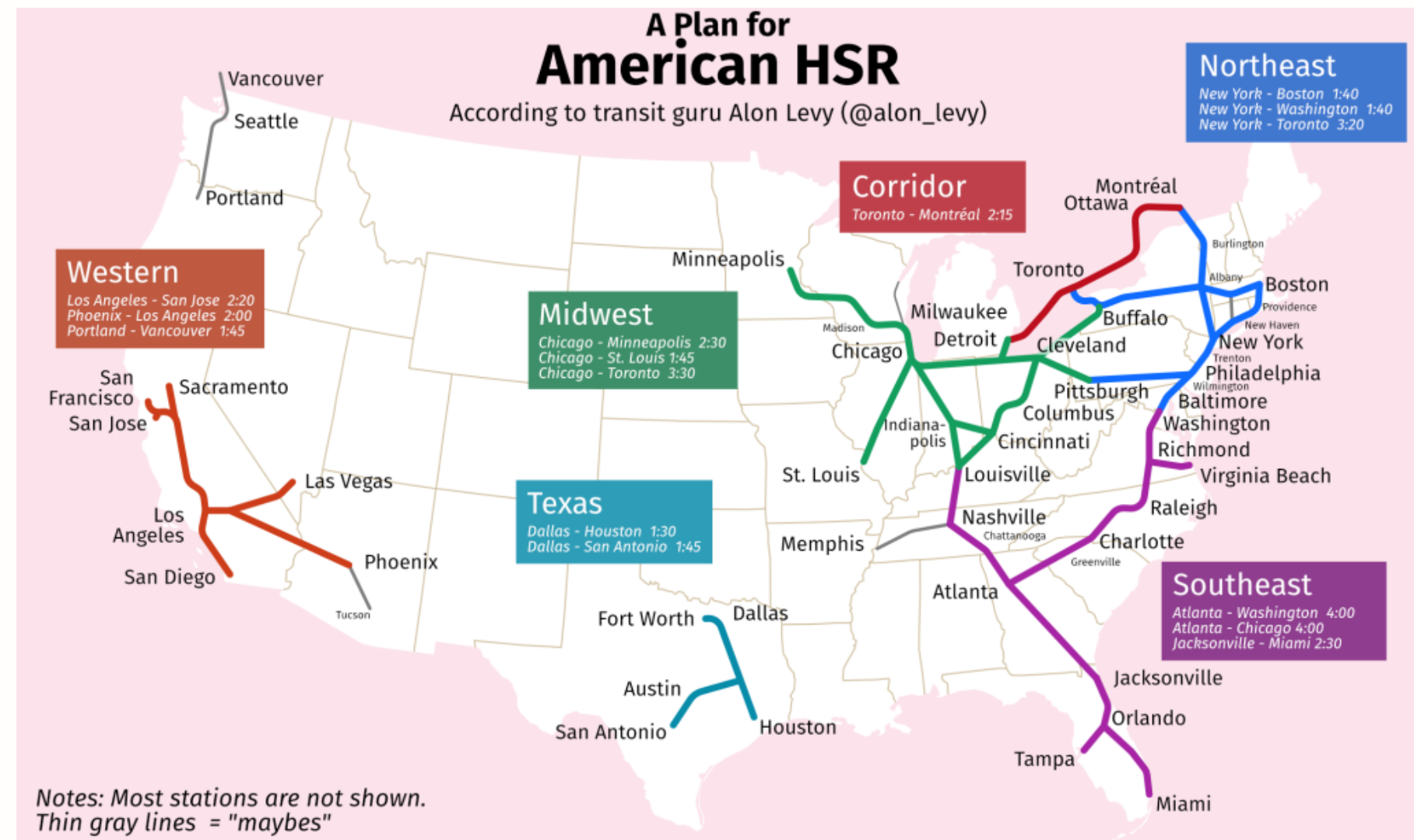
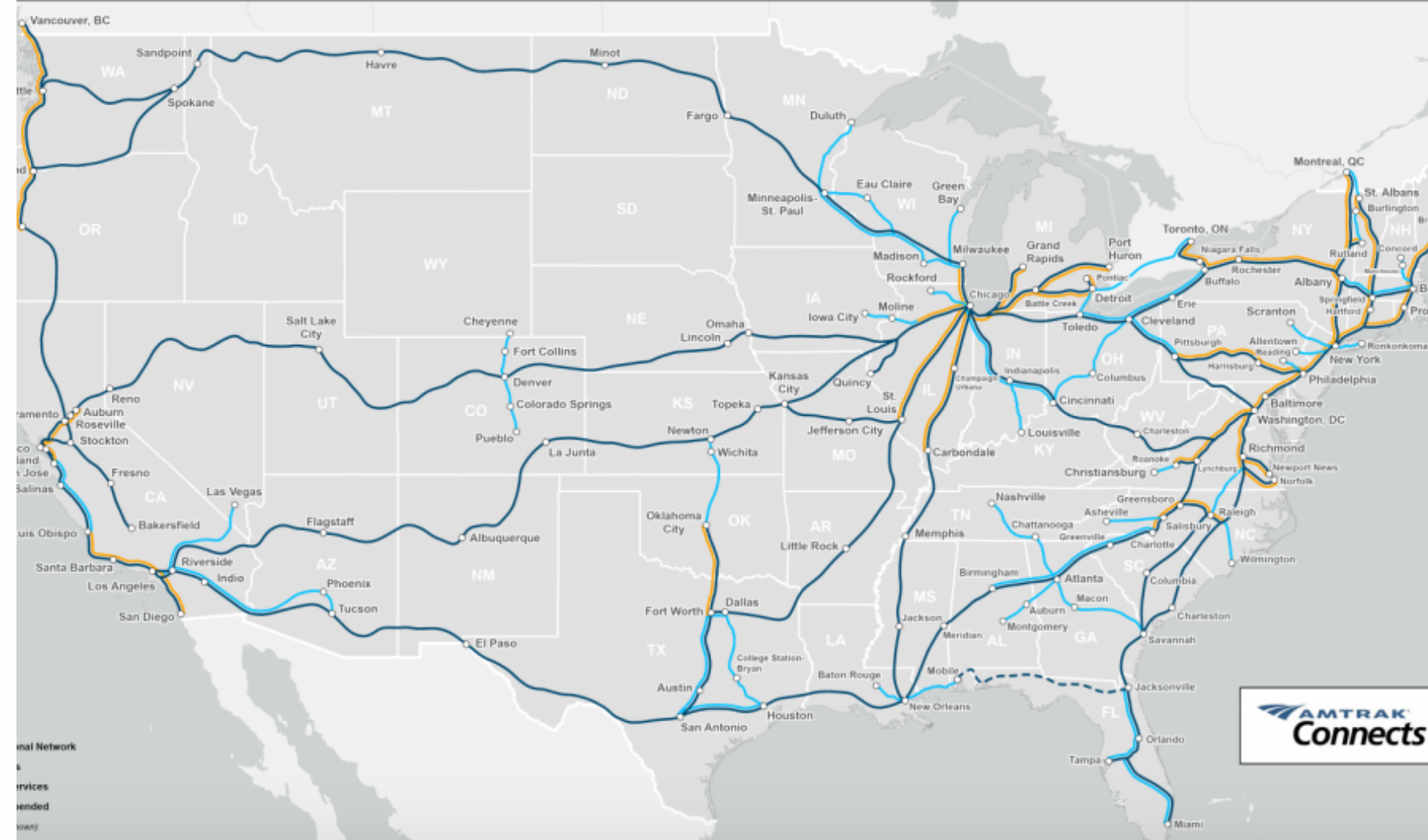


# Future of Rail

## Reinvesting in Amtrak with City Pairs

Amtrak's connect us plan released in 2021 focuses on city pair corridors that either better existing routes or create new ones.

Cities that are too short to fly, or too long to drive, are the next frontier in how transit reduces our carbon emissions.



# The Future is Electric

## Repurposing our fleets with electricity

- As battery technology improves and transit fleets move to all electric trains, buses, ferries, etc.
- Transit capacity matched with carbon free emissions will lead our transportation system to the future
- Carbon free and shared
- No plastic bags of gas!



**BRIEF**

## California to require all-electric buses by 2040

Published Dec. 17, 2018

By [Jason Plautz](#)  
Contributor



## 4) The Power to Respect Us

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# Transit is a Moral Insight

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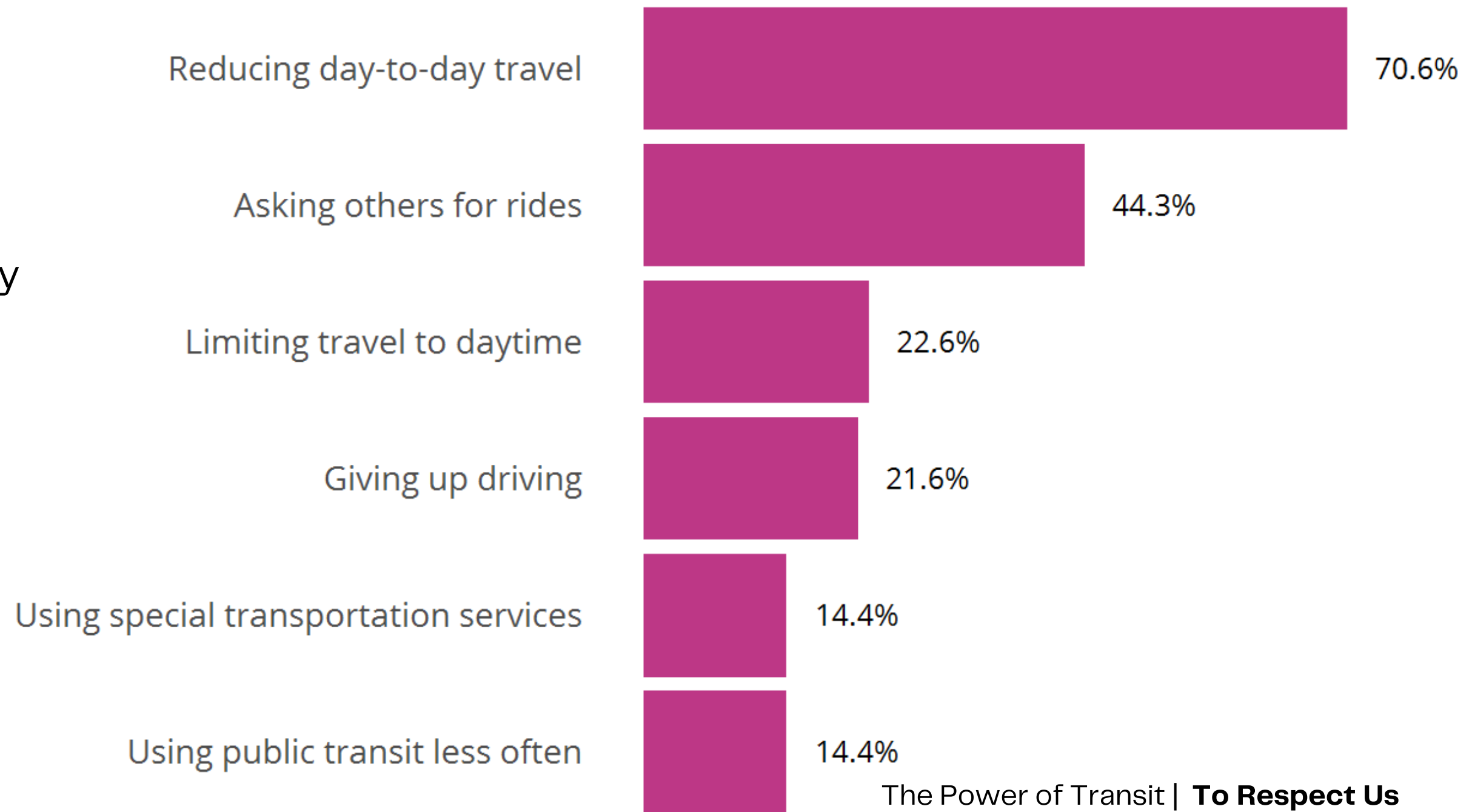
"When I walk down the street, the build environment around me makes me feel worthless"

**- Central Falls Workshop Participant**



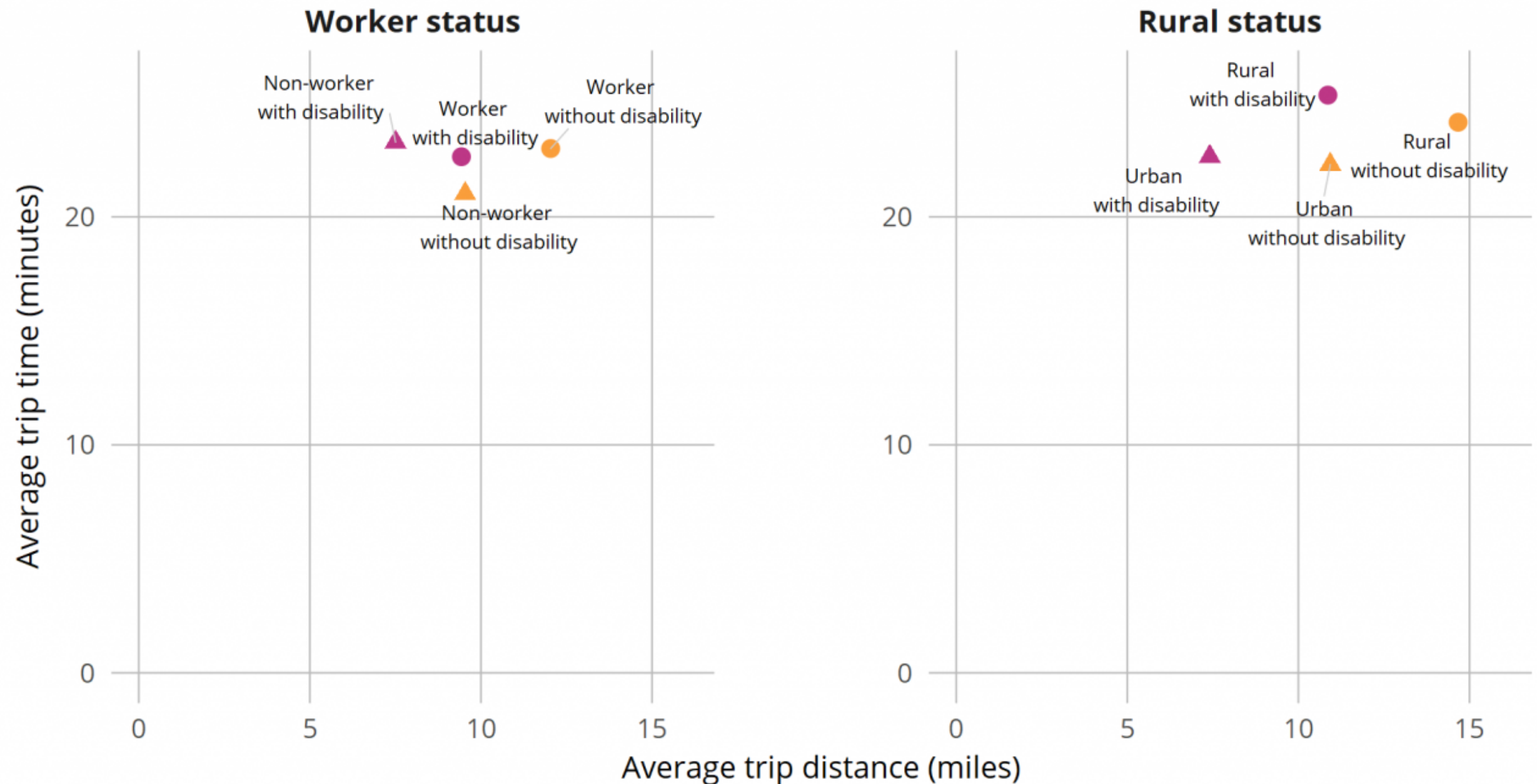
# Mobility Impaired Riders

- Transit has been and can be the ability to be a powerful mobility generator for those who have mobility impairments
- ADA became law in 1990.



# Mobility Impaired Riders

- The difference between urban and rural environments similar regarding mobility access.
- Transit has power to equalize mobility for those who are physically impaired to those who are able bodied.

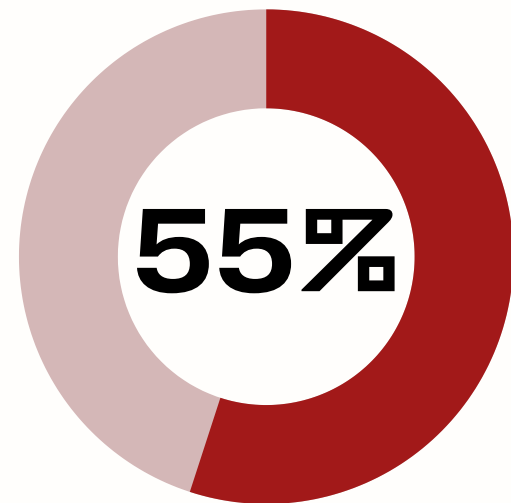


# Mobility Impaired Riders

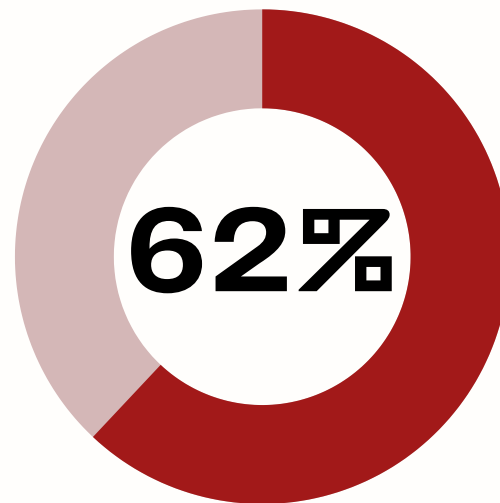
- **118 of the 472** MTA train stations are handicap accessible (**25%**)
- Parents with strollers or elderly with vertical challenges also need elevators



# Elderly



**3+ Million People  
Cities**



**> 250k People Cities**

**Failure to access  
transportation impacts health  
& well being via medical appts,  
shopping & social activities.**

# Respect Riders

From this...



# Respect Riders

**From this...**



# Respect Riders

From this...



# Respect Riders

**From this...**





# Respect Riders

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**From this...**



# Respect Riders

From this...



# Respect Riders

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**To this!**



# Respect Riders

**To this!**



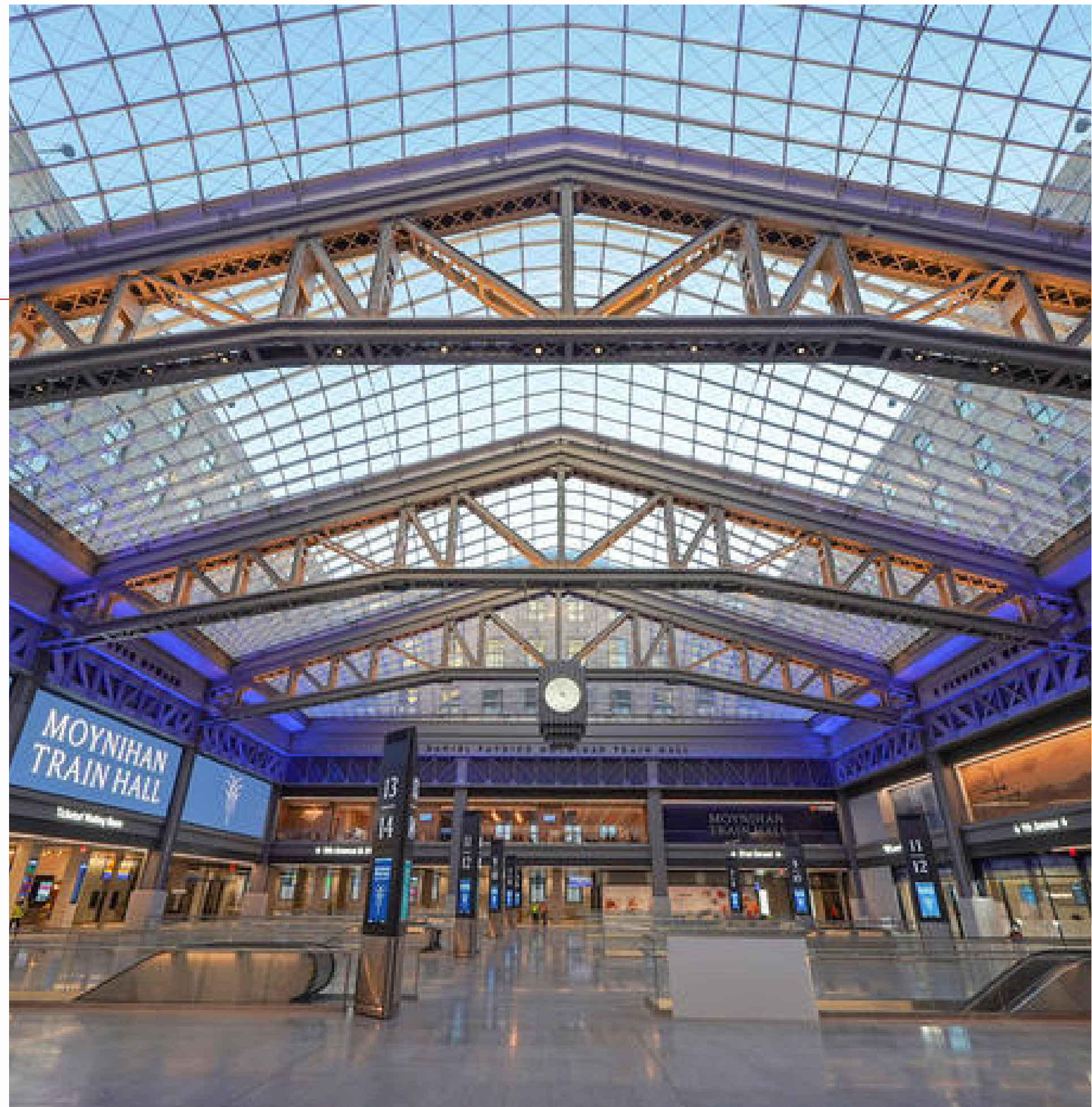
# Respect Riders

**To this!**



# Respect Riders

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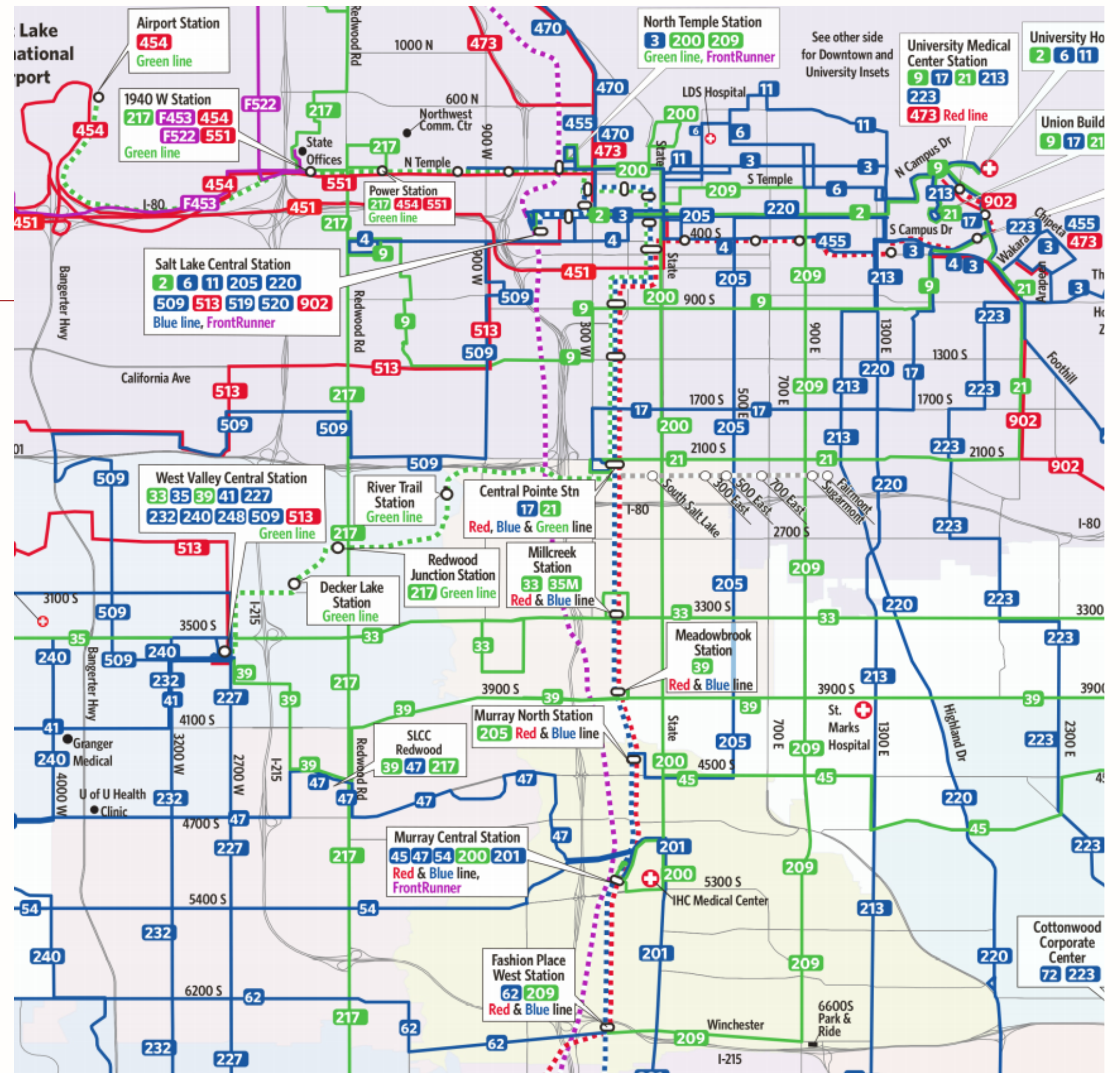


# 5) The Power to Connect Us



# In its Basic Utility...

- It connects us! It's a mobility generator tasked with not making a profit, but serving people as a **public good**.
- Not only does it connect us to places we want to go, it brings us together as a community and people. I'll explain.





# "Places where strangers meet."

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## "Transit is Human-Scale"

Jan Gehl, famous Copenhagen architect says that transit, unlike the street which is often sized for cars, is "inherently human scale."

## Social Capital

"Researchers in Sweden found that car commuters trust and engaged socially with others less than commuters using other modes."

## It's Not a New Theory

Jan Gehl cites an ancient Icelandic poem in his book Cities for People "man is man's greatest joy."

# Transit builds Community...

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**"Papa Matt"**

"Driving the same bus everyday for years, it was hard not to think everyone on that bus wasn't family."

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**05** The Power to Connect Us

# Contact

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