

BOUNCE *FORWARD*

*BUILDING THRIVING, HEALTHY, &
EQUITABLE COMMUNITIES*



MARCH
4 & 5, 12, 19, 25 & 26



RMLUI 2021
WESTERN PLACES | WESTERN SPACES

Transit, Mobility and Equity: A Way Forward



RMLUI 2021

WESTERN PLACES | WESTERN SPACES

CLARION

OTTENJOHNSON

ROBINSON NEFF + RAGONETTI PC



GARY
COMMUNITY
INVESTMENTS

Working together
for Colorado's children



KAPLAN
KIRSCH
ROCKWELL

Brownstein Hyatt
Farber Schreck



FGMC

FOSTER GRAHAM MILSTEIN & CALISHER, LLP
ATTORNEYS AT LAW



BABBITT CENTER
FOR LAND AND WATER POLICY

A Center of the Lincoln Institute of Land Policy



ROOT POLICY
RESEARCH



WITHEY MORRIS **PLC**
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DOWNTOWN
COLORADO
inc.



ChangeLab Solutions





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Susan A. Wood
Regional Transportation Authority (RTD)



RMLUI 2021
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Panelists

Christof Spieler
Huitt-Zollars

Beth Osborne
Transportation for America

Eulois Cleckley
Denver Department of
Transportation and Infrastructure





Race | Transportation



“...urban design is **not neutral**. It either perpetuates or reduces social inequities within cities. And that is very hard for people to wrap their minds around because urbanists are taught that they are good, that they make communities better, and that they are the **bringers of solutions.**”

– Jay Pitter
@Jay_Pitter

Railroad infrastructure has placed
disproportionate impacts on Black and
Hispanic neighborhoods.



BUSINESS

Texas found a cancer cluster in Houston in August. Residents didn't find out until December.



Erin Douglas

| Dec. 11, 2019

| Updated: Dec. 11, 2019 2:54 p.m.



Highways were built through Black and Hispanic neighborhoods to enable White suburban commuters to pass through quickly.



REPORT PROBLEM
OR EMERGENCY
1-800-848-8722
X-ING 288098
UNION PACIFIC RAILROAD







RAILROAD
BRIDGE

45SB TO 69SB



EAST FWY

10

45

45

69

59

69

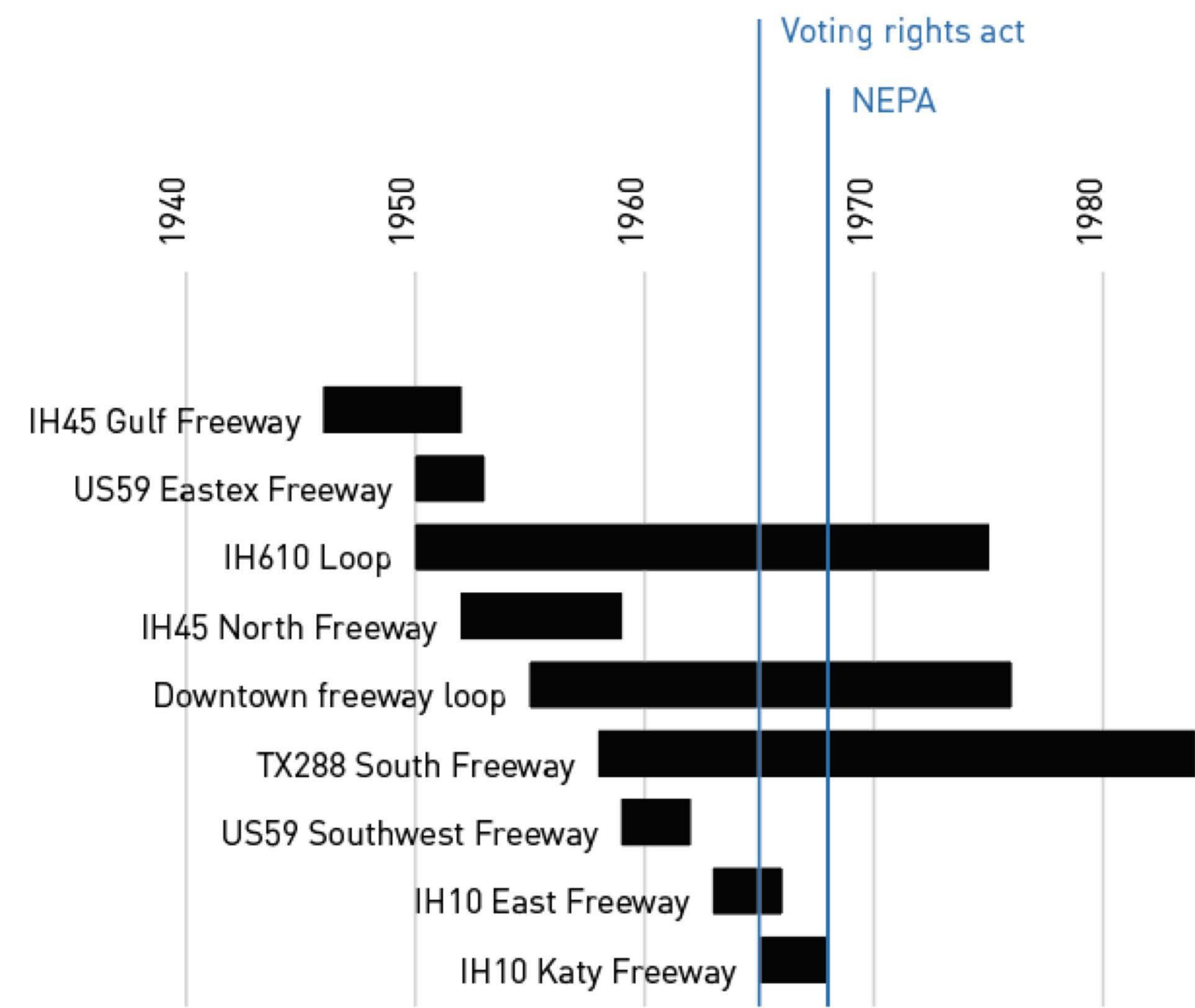
59

JENSEN DR

ICE ELEMENTARY SCHOOL

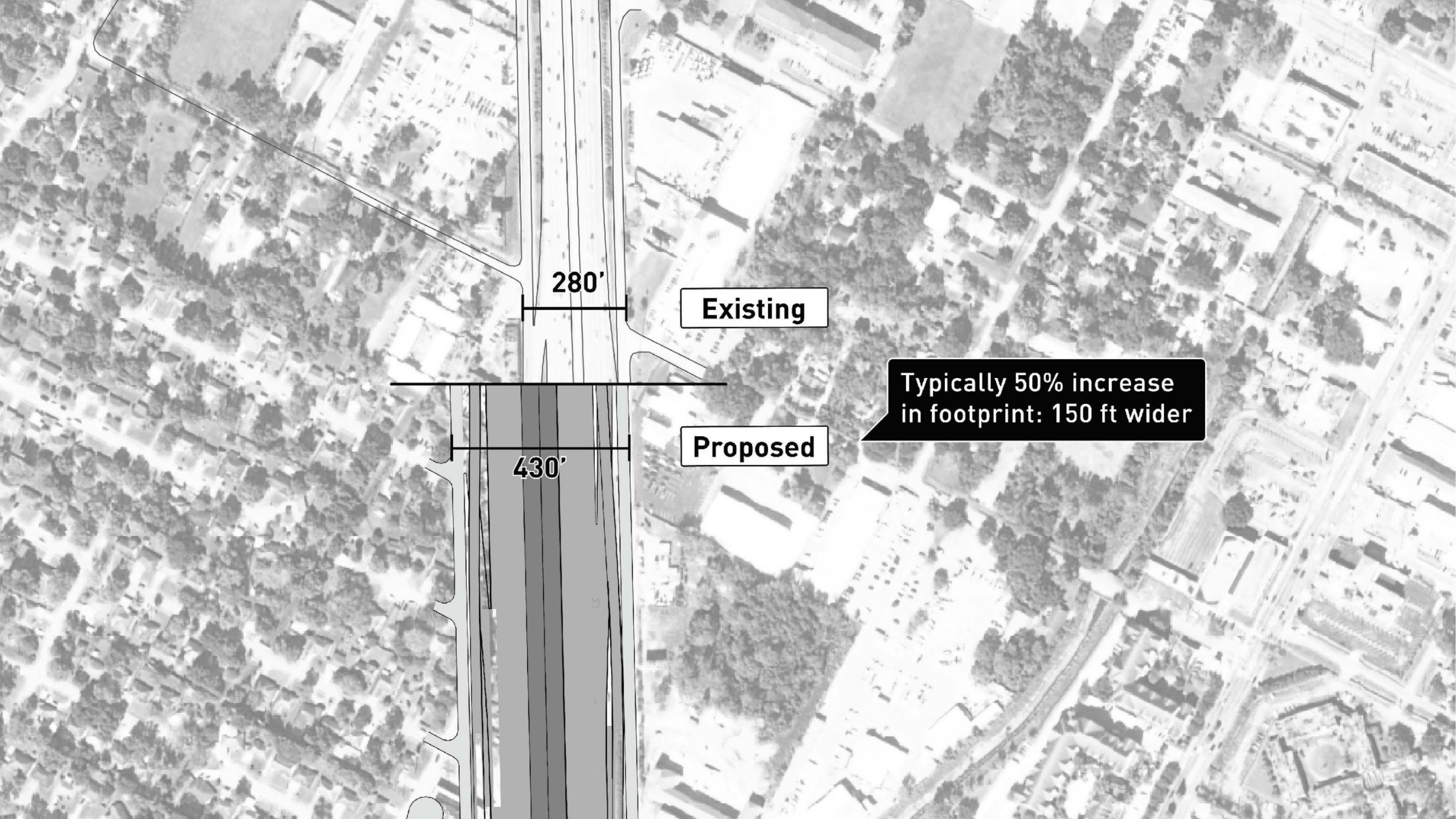
SWINY PARK

Houston Freeway Construction Timeline (inside 610)



Construction of IH 45 elevated





280'

Existing

Typically 50% increase
in footprint: 150 ft wider

430'

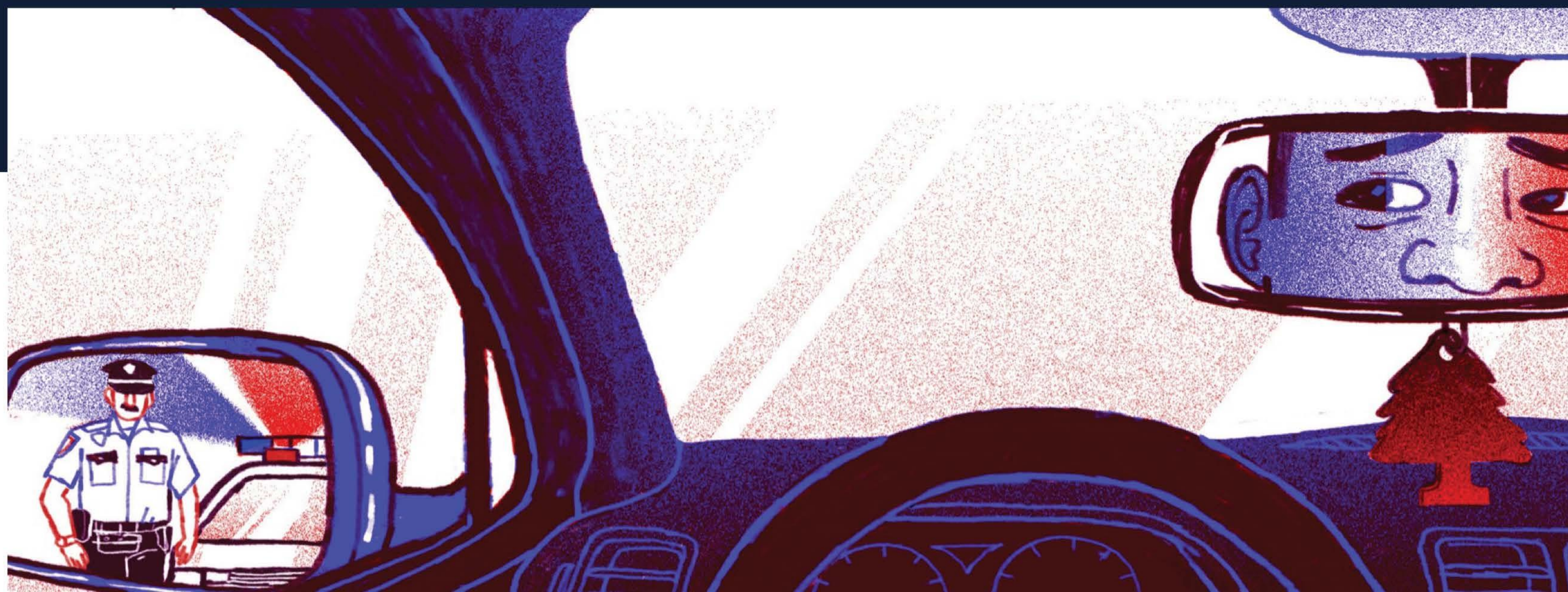
Proposed

Traffic enforcement has long been
used to harass people of color.

U.S. NEWS

Inside 100 million police traffic stops: New evidence of racial bias

Stanford researchers found that black and Latino drivers were stopped more often than white drivers, based on less evidence of wrongdoing.



L.A. Sheriff's Deputies Fatally Shoot Black Man After Suspected Bike Violation

By Reuters, Wire Service Content Sept. 1, 2020



Demonstrators protest against the shooting of Dijon Kizzee by Los Angeles sheriff's deputies, in Los Angeles, California, U.S., September 1, 2020.
REUTERS/Patrick T. Fallon REUTERS

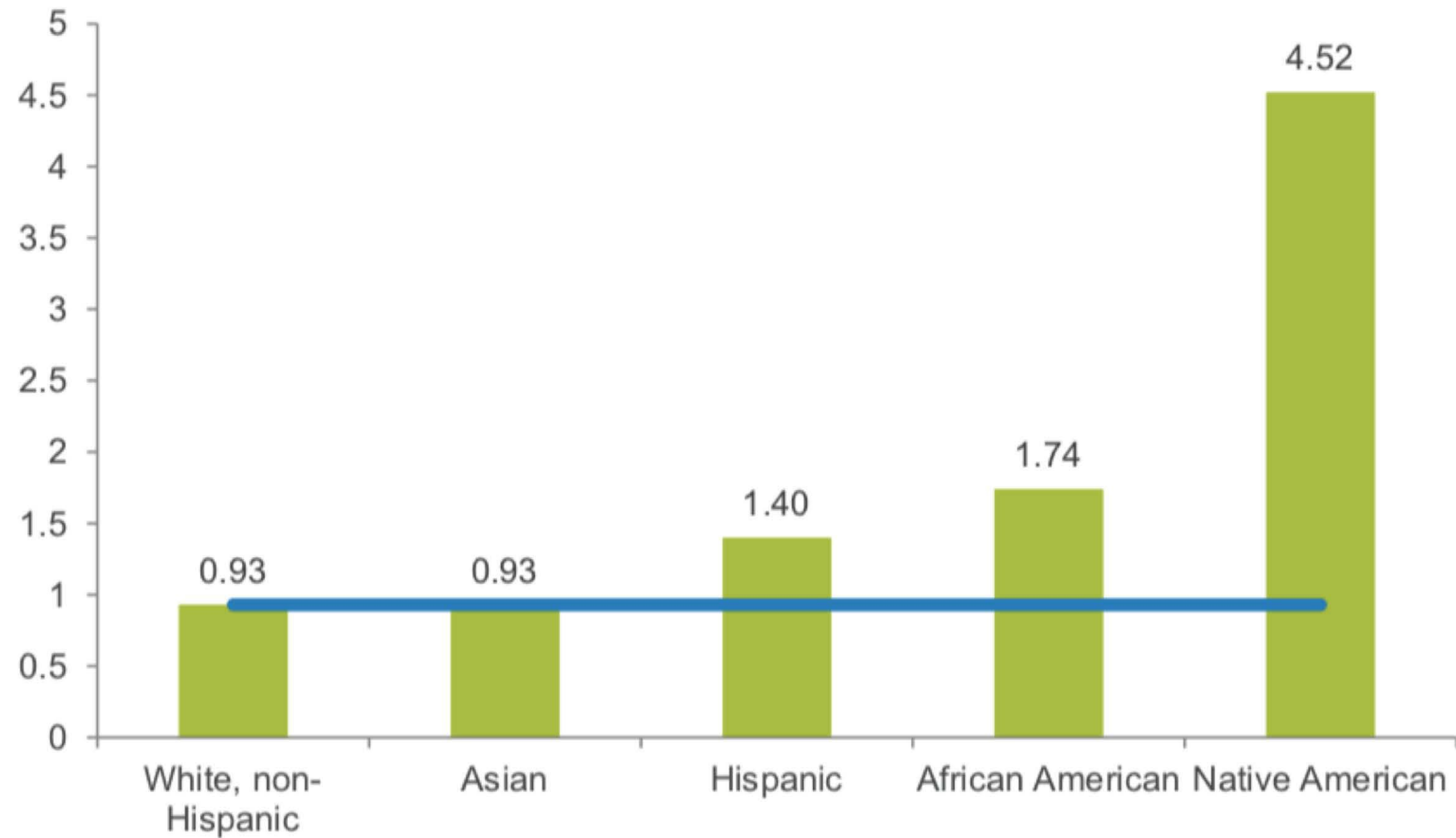
BY LUCY NICHOLSON AND Steve Gorman

...stopped on his bicycle for an alleged "vehicle code" violation was ...shed one officer

The lack of safe pedestrian
infrastructure is killing Blacks,
Hispanics, and Native Americans.

FIGURE 6

Annual pedestrian fatalities per 100,000 people by race/ethnicity (2005-2014)



Many agencies have essentially built and operated two systems with different standards for amenities, service levels and levels of subsidy.



Park and Ride:
30 min
Managed lanes
Plush seats
Canopies at stops
\$3.25
60% White

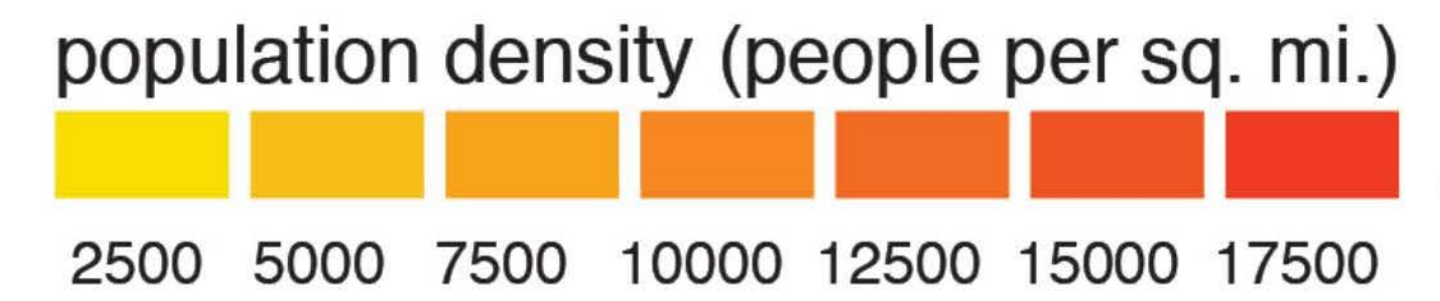


Local:
90 min
Mixed traffic
Hard seats
No shelters at stops
\$1.25
60% Black

CHOICE RIDER | DEPENDENT RIDER



population density (people per sq. mi.)



A horizontal color scale legend for population density. It consists of seven colored squares transitioning from yellow to red, with numerical values below each square: 2500, 5000, 7500, 10000, 12500, 15000, and 17500.

Color	Population Density (people per sq. mi.)
Yellow	2500
Light Orange	5000
Orange	7500
Dark Orange	10000
Red-Orange	12500
Red	15000
Dark Red	17500

COLFAX BUS

10.5 miles

125,000 people within 1/2 mile

22,000 riders/day

52% white

**E/F/R LIGHT RAIL
(south of Belleview)**









8.75 miles

9,932 people within 1/2 mile

8,000 riders/day

73% white



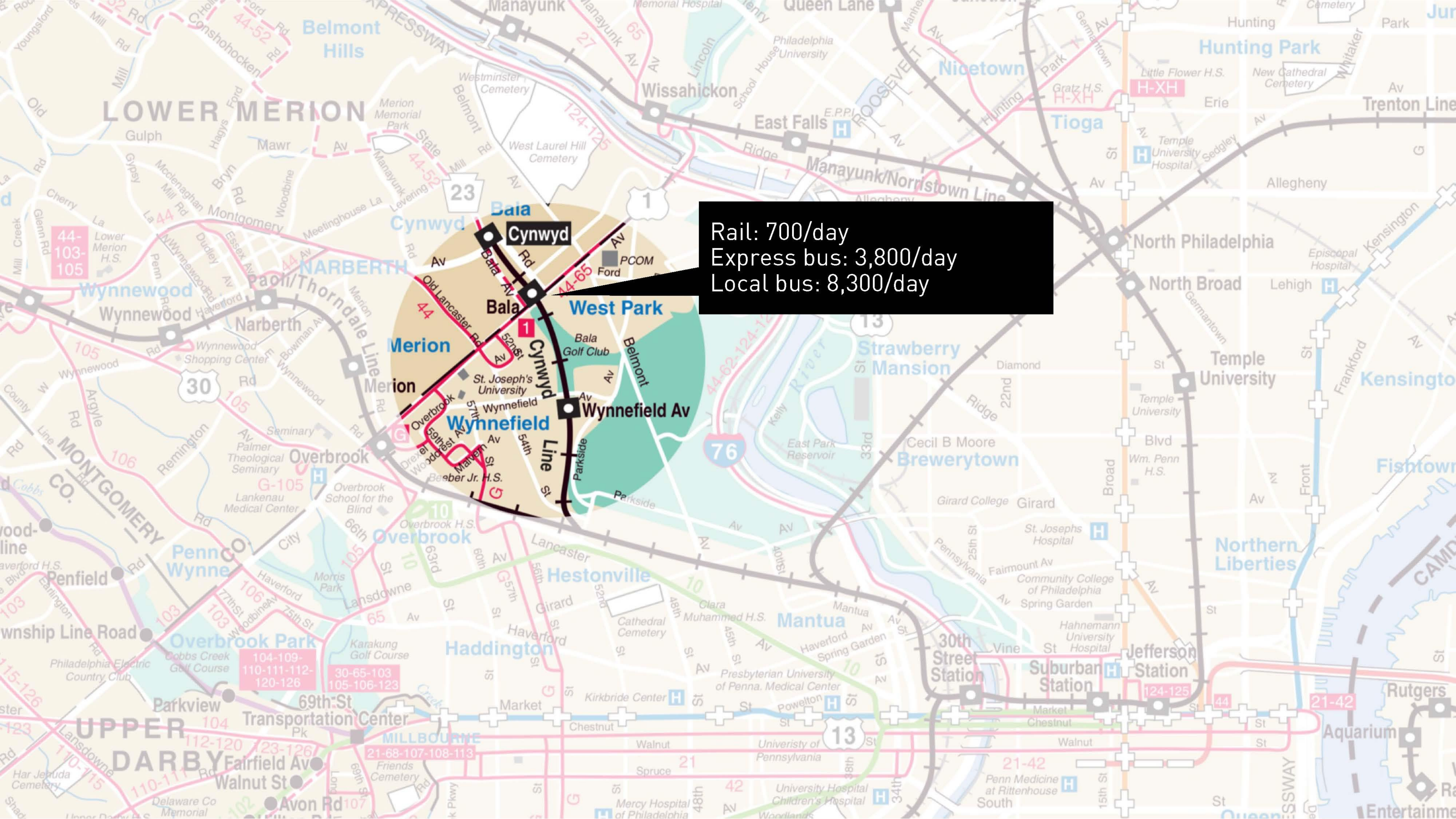
	Productivity				Service Quality			
	 Boardings per Trip	 Boardings per Revenue Hour	 Subsidy per Boarding	 Passenger Miles per Platform Mile	 Passenger Load	 On-Time Performance	 Customer Complaints	 Operated as Scheduled
ST Express FAST, FREQUENT REGIONAL BUS SERVICE (SEE PAGE 15)	<ul style="list-style-type: none"> Monitored regularly and reported annually with a comparative analysis of each route's performance and a peer comparison analysis Annual targets are adjusted accordingly 				Standing passengers not to exceed 1.23 - 1.5 times total seats and limit standing time to 30 minutes	85% of trips arrive within five minutes of schedule, never early	Less than 15 complaints per 100,000 boardings	99.8% of scheduled trips operated
Sounder HIGH CAPACITY COMMUTER RAIL (SEE PAGE 19)	<ul style="list-style-type: none"> Monitored regularly and reported annually with a peer comparison analysis Annual targets are adjusted accordingly 				Most riders have a seat, otherwise limit standing time to 30 minutes	95% of trips arrive at route terminals within seven minutes of schedule	Less than 15 complaints per 100,000 boardings	99.5% of scheduled trips operated
Tacoma Link LIGHT RAIL WITH MULTI-MODAL CONNECTIONS (SEE PAGE 21)	<ul style="list-style-type: none"> Monitored regularly and reported annually with a comparative analysis by time of day and a peer comparison analysis Annual targets are adjusted accordingly 				Standing passengers permitted up to 1.86 times number of seats	98.5% of trips depart/arrive route terminals within three minutes of schedule	Less than 15 complaints per 100,000 boardings	98.5% of scheduled trips operated
Link FREQUENT, RELIABLE HIGH-CAPACITY LIGHT RAIL (SEE PAGE 24)	<ul style="list-style-type: none"> Monitored regularly and reported annually with a comparative analysis by time of day and a peer comparison analysis Annual targets are adjusted accordingly 				Standing passengers not to exceed two times number of seats and limit standing time to 30 minutes	90% of headways within two minutes of schedule	Less than 15 complaints per 100,000 boardings	98.5% of scheduled trips operated



Rapid Transit
\$3.50

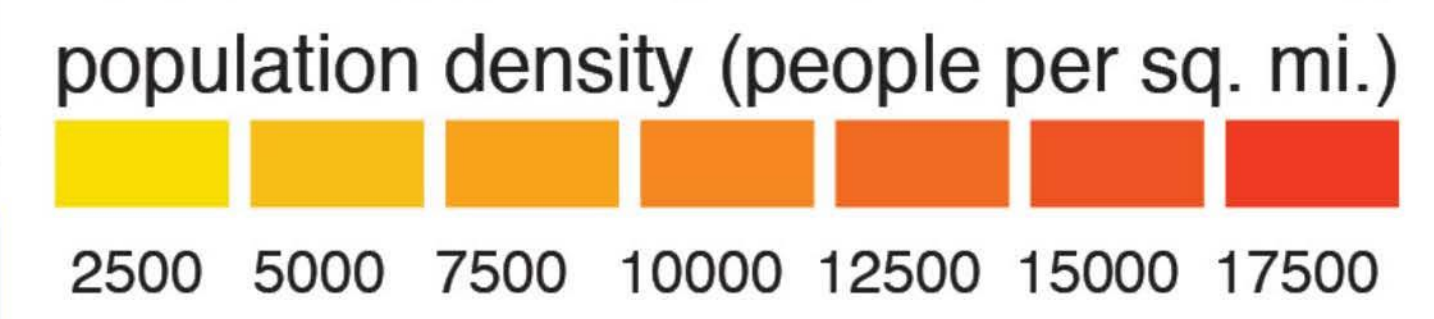
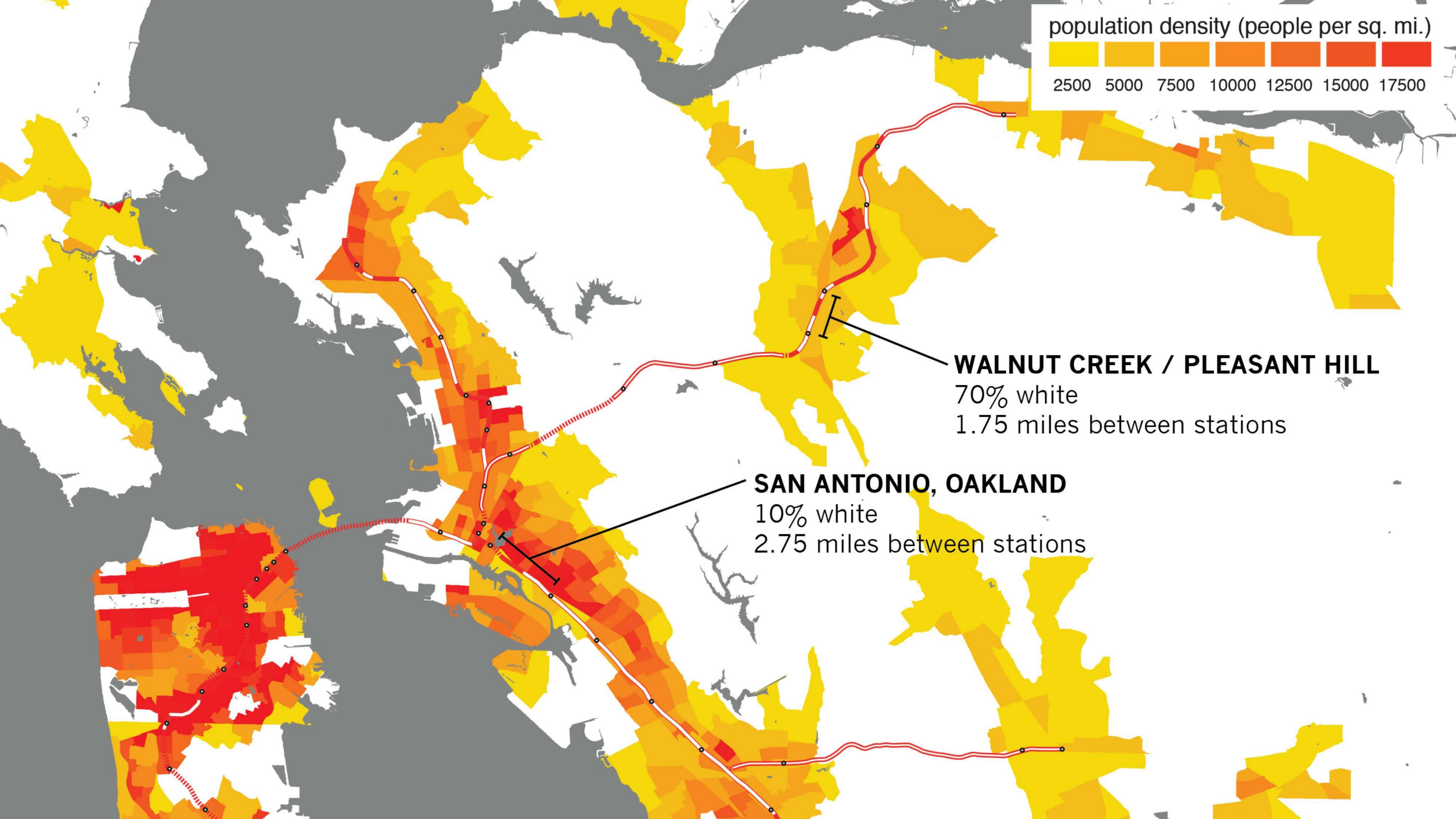


Regional Rail
\$5.25-\$7.00



Rail: 700/day
Express bus: 3,800/day
Local bus: 8,300/day





We manage, operate, and police
transportation systems to promote
“white comfort.”

“I think the
entire field of
transportation
and urban
planning is a
host to **white
comfort.**”

-Dr. Destiny Thomas
The Thrivance Group
@DrDesThePlanner

Cities

'Addicts, crooks, thieves': the campaign to kill Baltimore's light rail

Residents of a progressive and wealthy county claim public transport has brought city crimes to their area - and are fighting to have it closed



▲ Kim Hahn wants a nearby light rail stop closed after she and her husband, Chris, found an intruder in their home in Glen Burnie, Maryland, last year. Photograph: JM Giordano/The Guardian

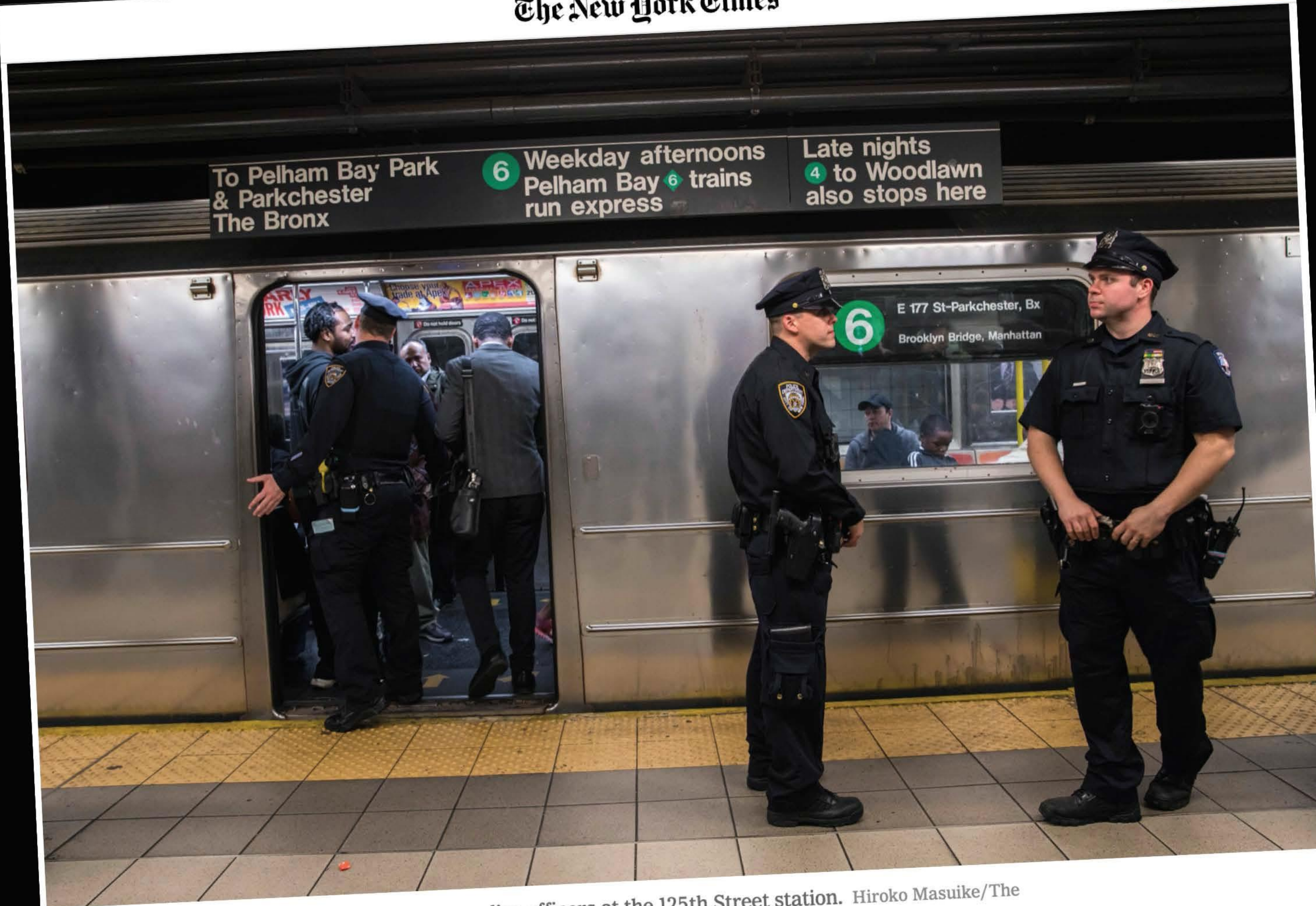


Lucia Graves in Glen Burnie, Maryland

@lucia_graves

Wed 22 Aug 2018 06.30 EDT





New York Police Department Transit Bureau police officers at the 125th Street station. Hiroko Masuike/The New York Times

Subway crime remains at record-low levels.

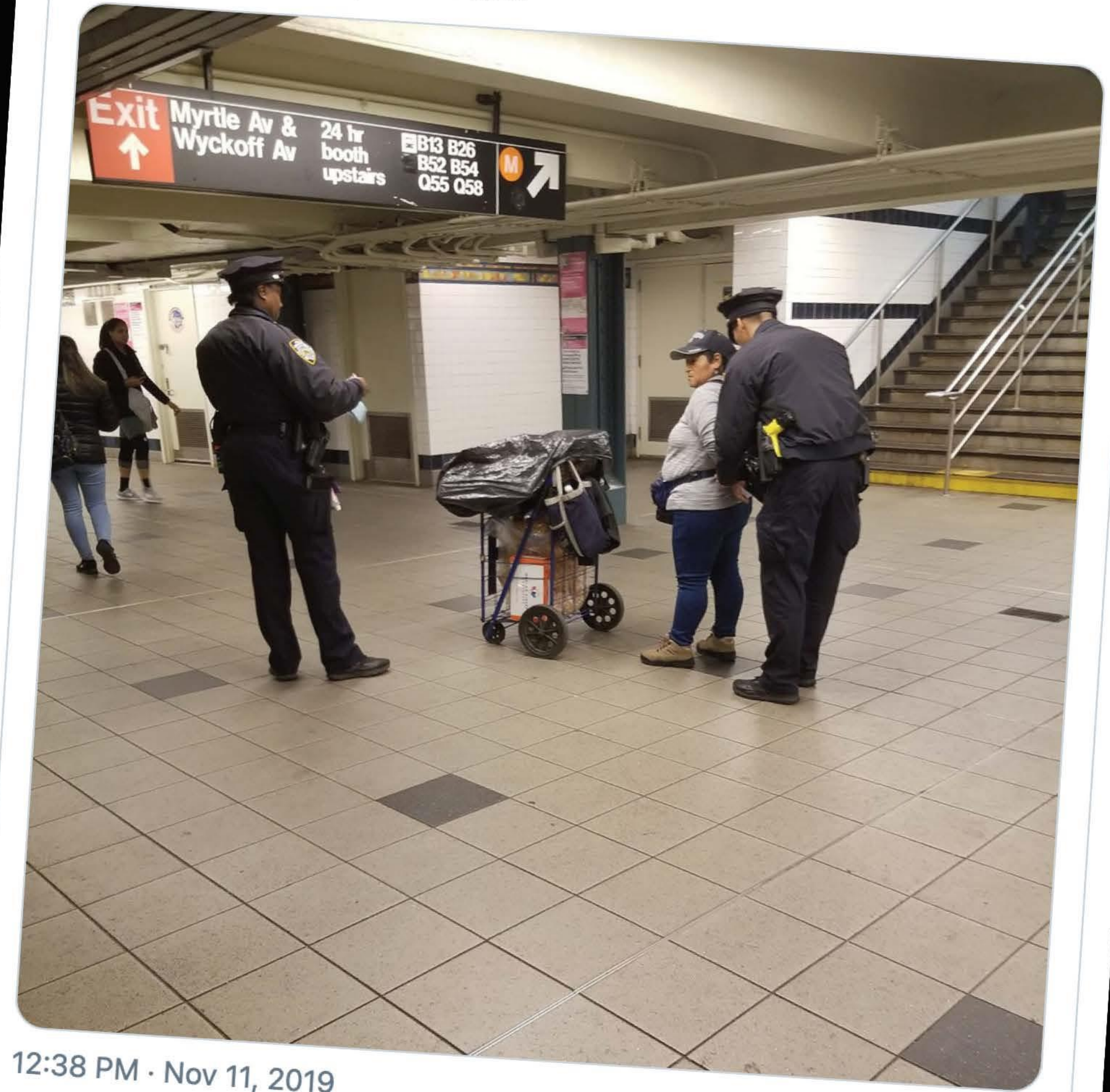
So it was confusing that the Metropolitan Transportation Authority board voted this week to hire 500 additional police officers to patrol the subway and other parts of the transit system, diverting an estimated \$250 million over four years in precious funds that



Bushwick Daily
@BushwickDaily

@JuliaCarmel_ @RLEspinal @jamaale @JumaaneWilliams
Photo of another Churro Vendor in Handcuffs, at Myrtle Wyckoff.

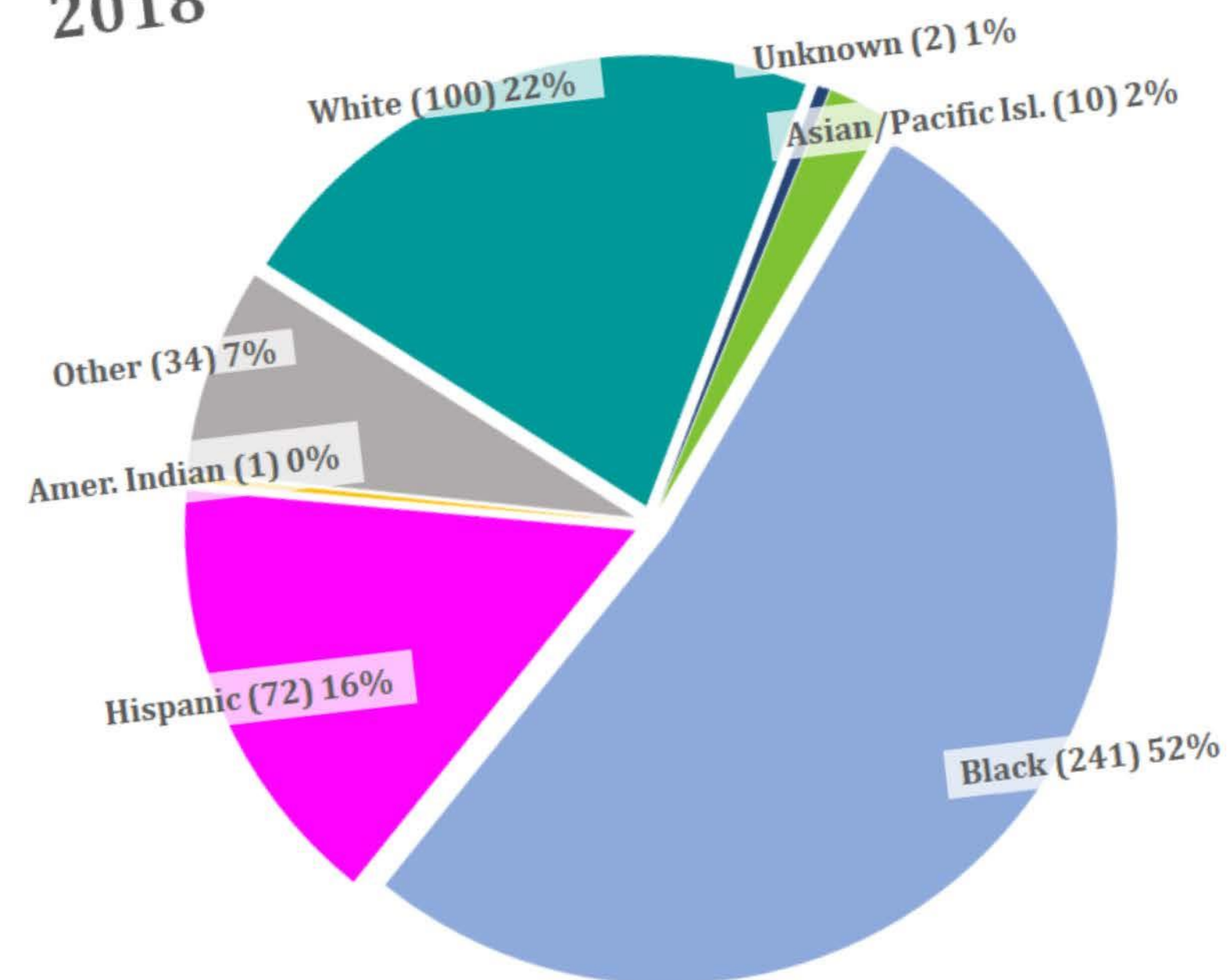
Photo taken at 11:40 a.m. this morning, minutes before rally held at Broadway Junction



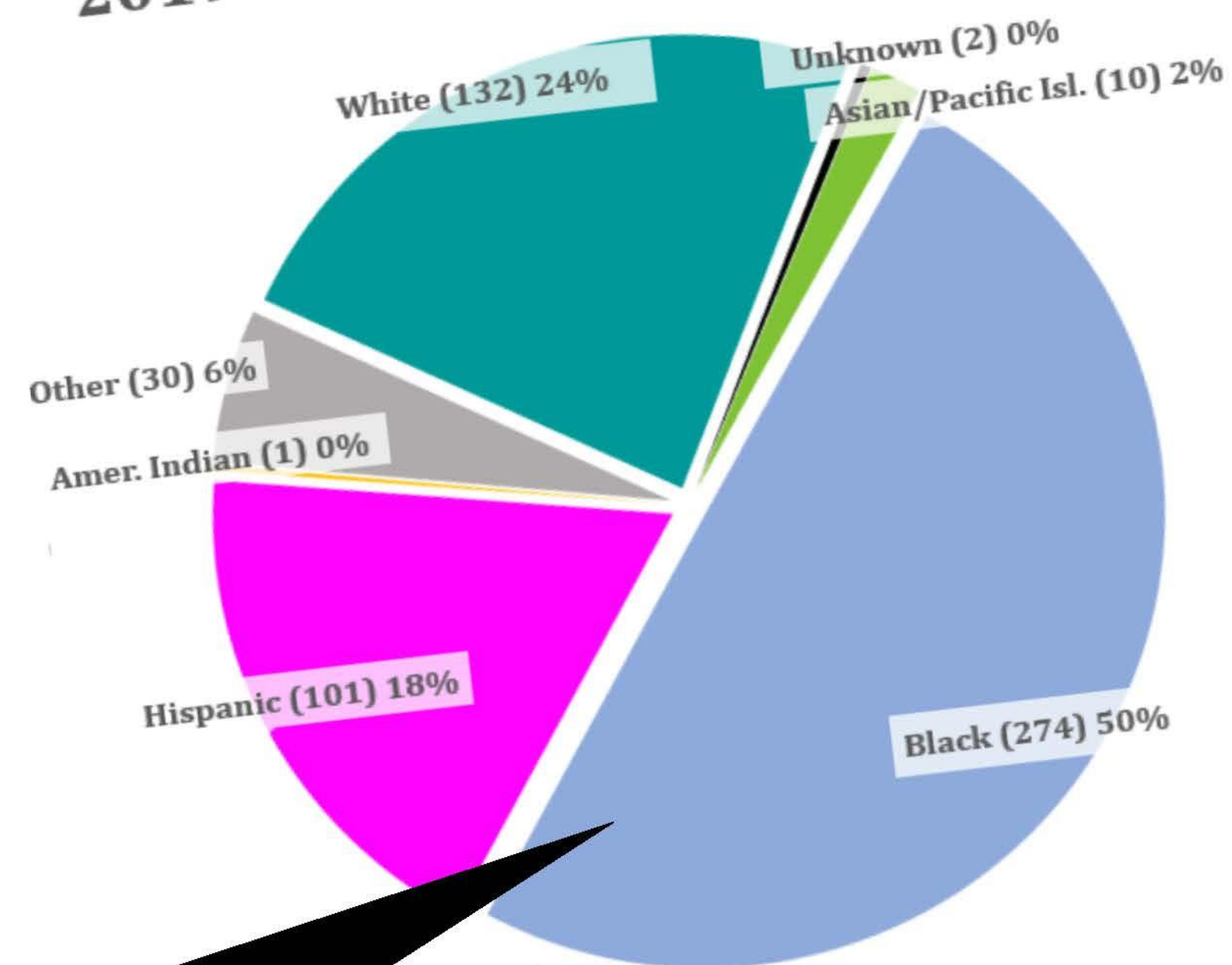
12:38 PM · Nov 11, 2019

Code of Conduct Enforcement by Race 2018-2019

2018



2019



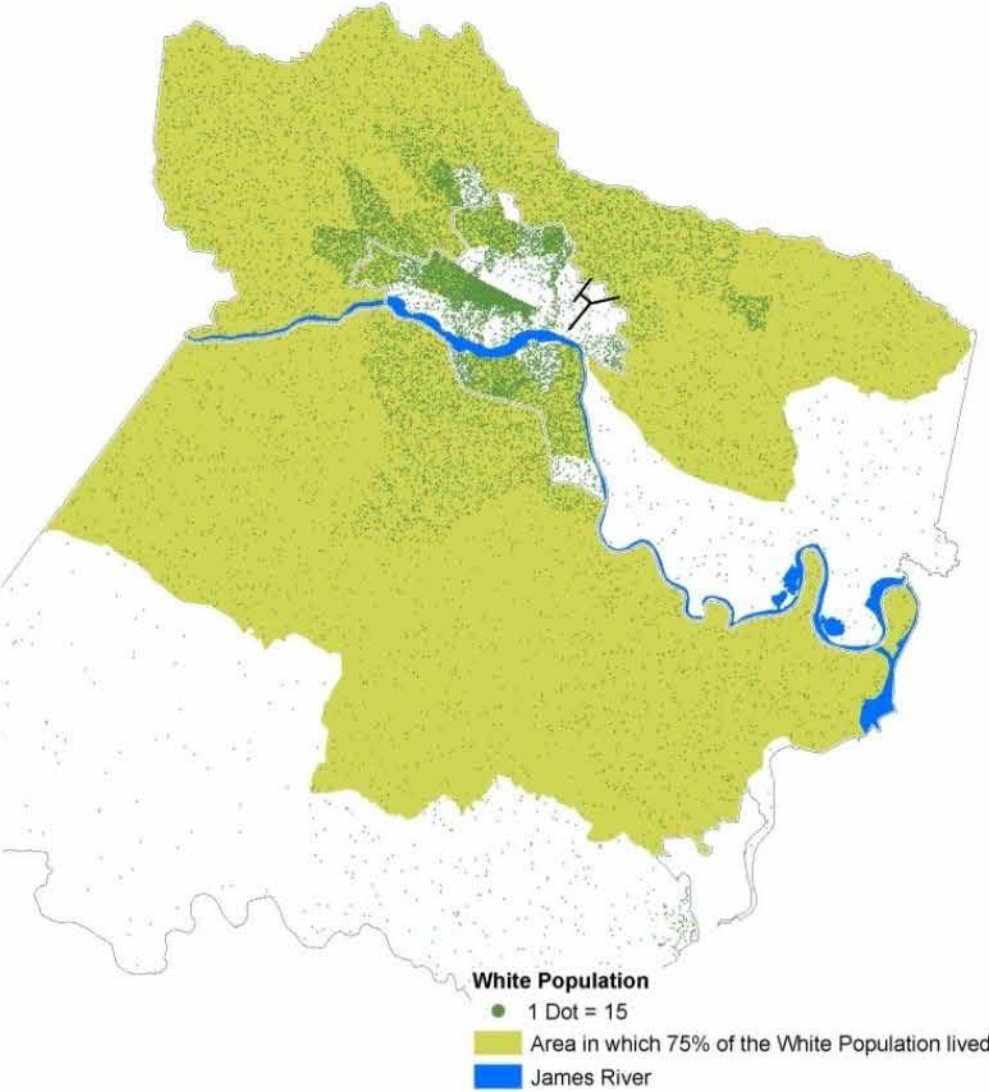
12% of riders are Black
50% of citations are Black

Asian / Pacific Islander ■ Black ■ Hispanic ■ Amer. Indian ■ White ■ Other ■ Unknown

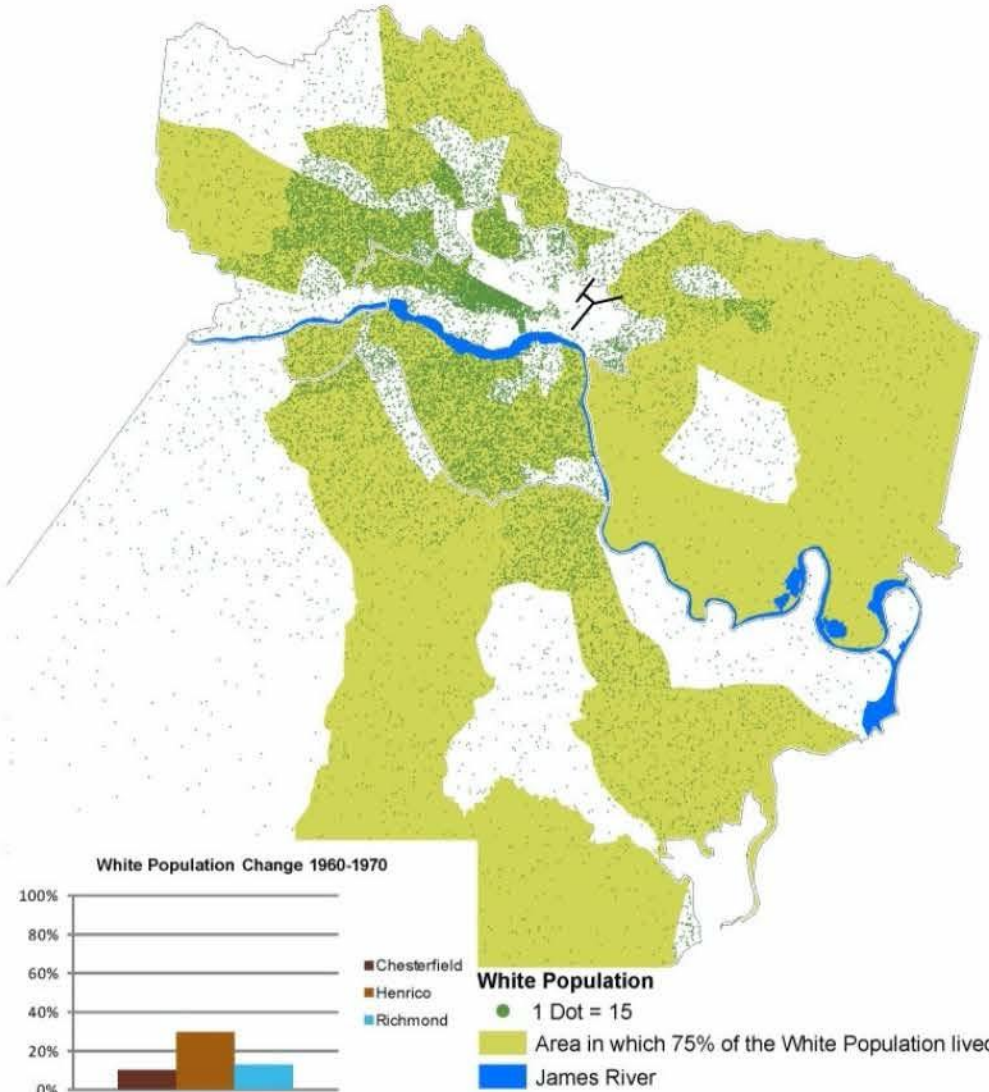
The era of the re-segregationist response to the civil rights movement has shaped how we think about cities and how we talk about transportation.

White Flight in the Richmond Region

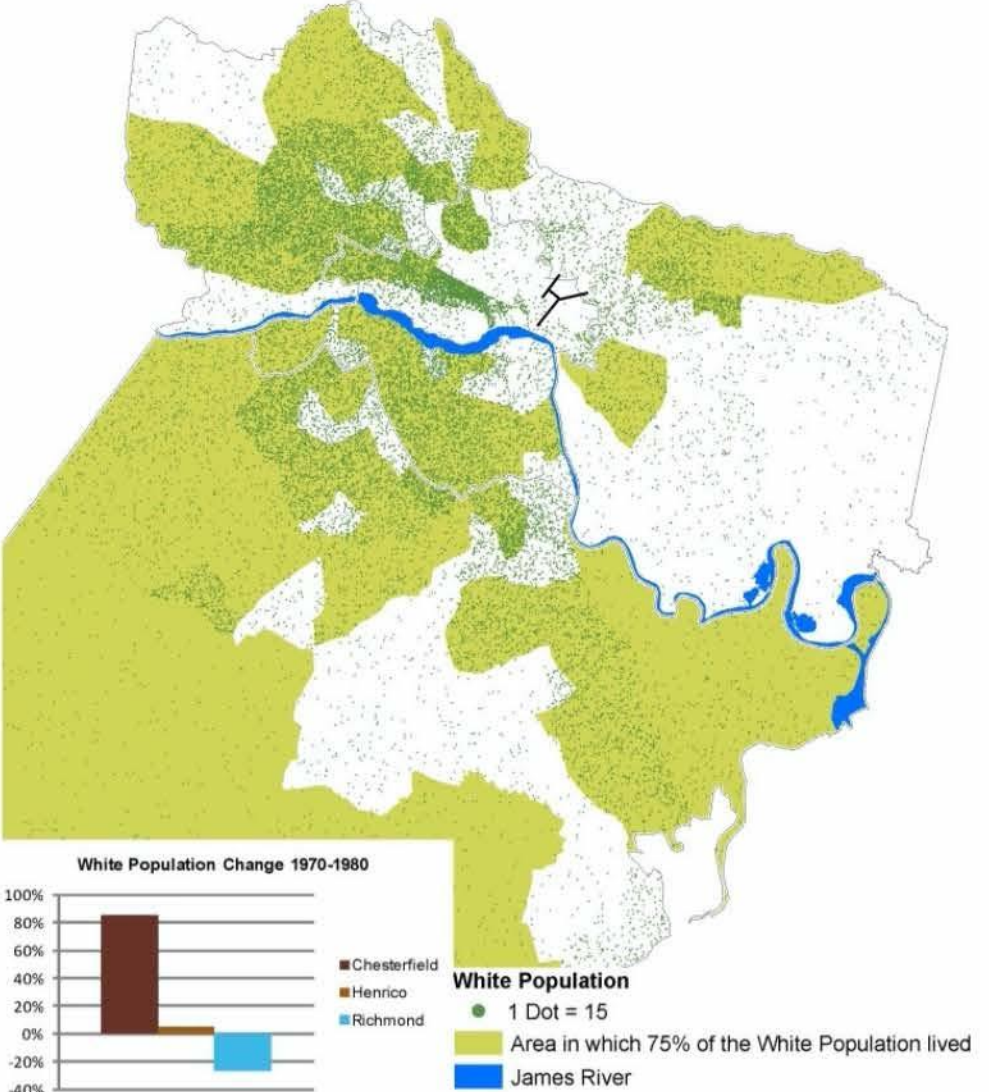
1960



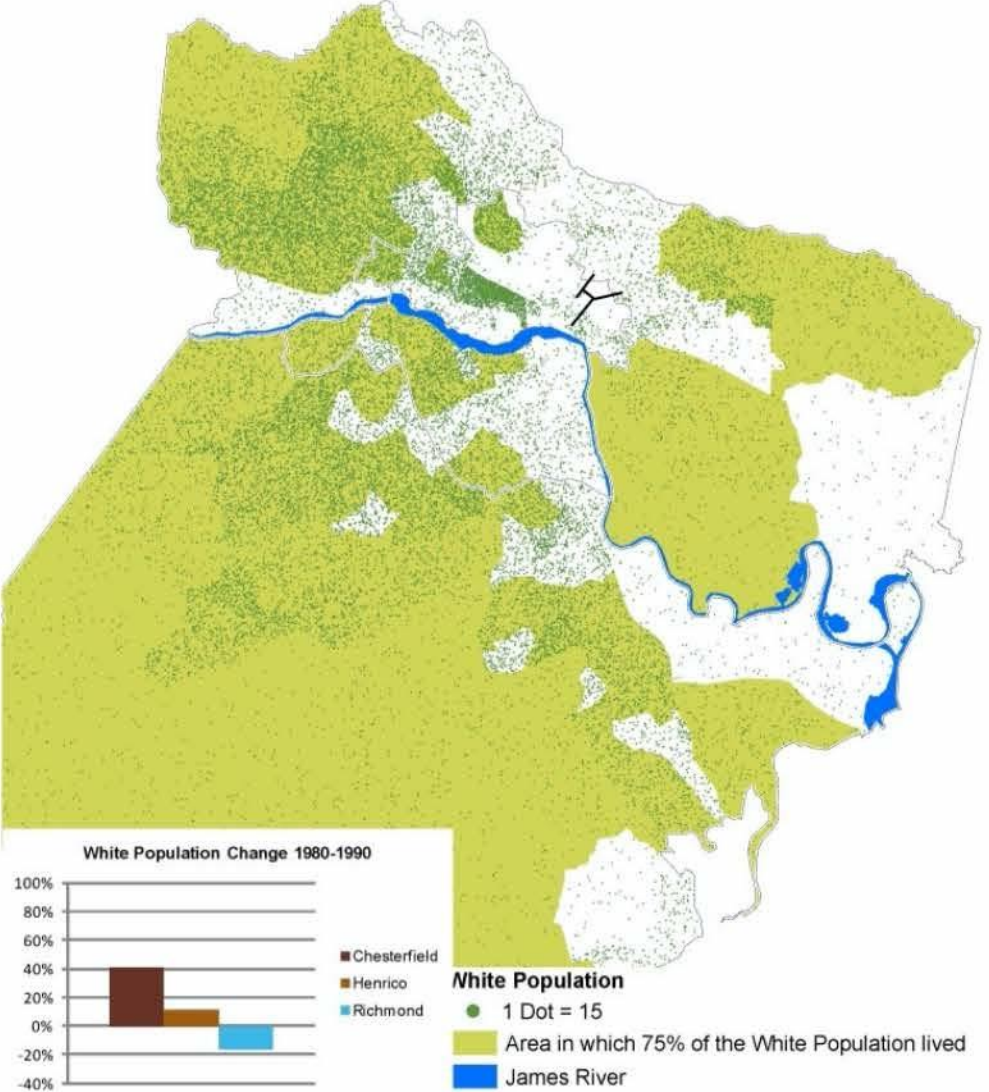
1970



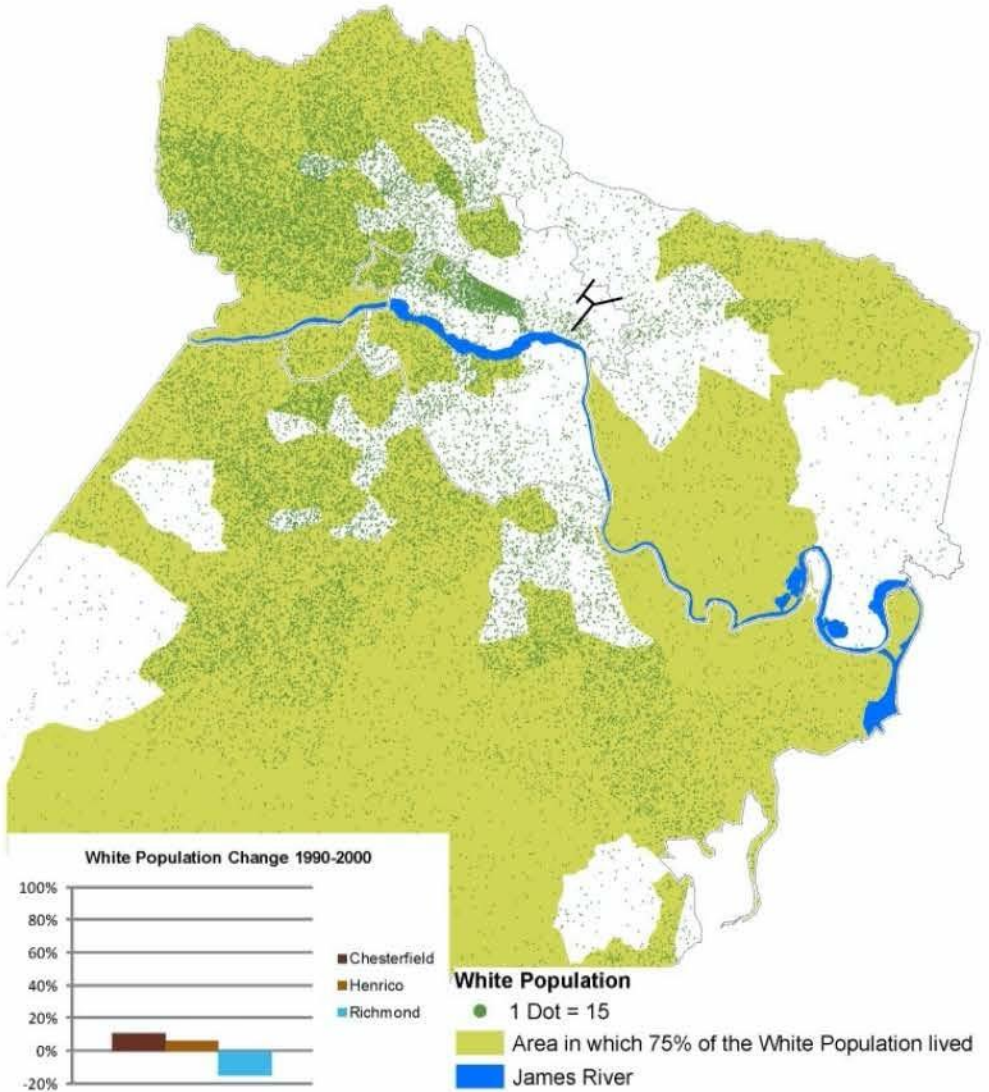
1980



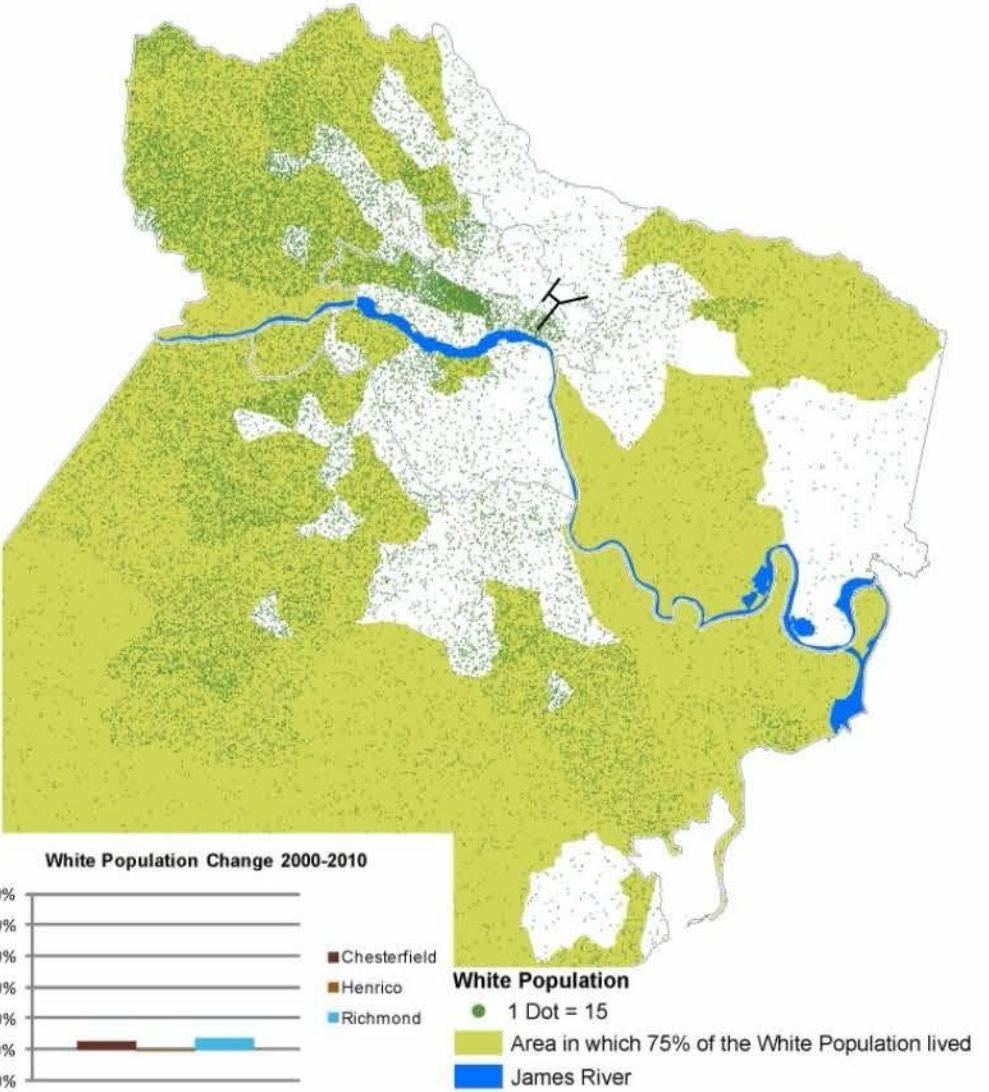
1990



2000



2010



2070 Houston: Construction of IH 45 elevated section o







460

RT
LINES

TRANSIT STOP
40 PARK PLACE
41 GARDEN VILLAS

MOTOR INN

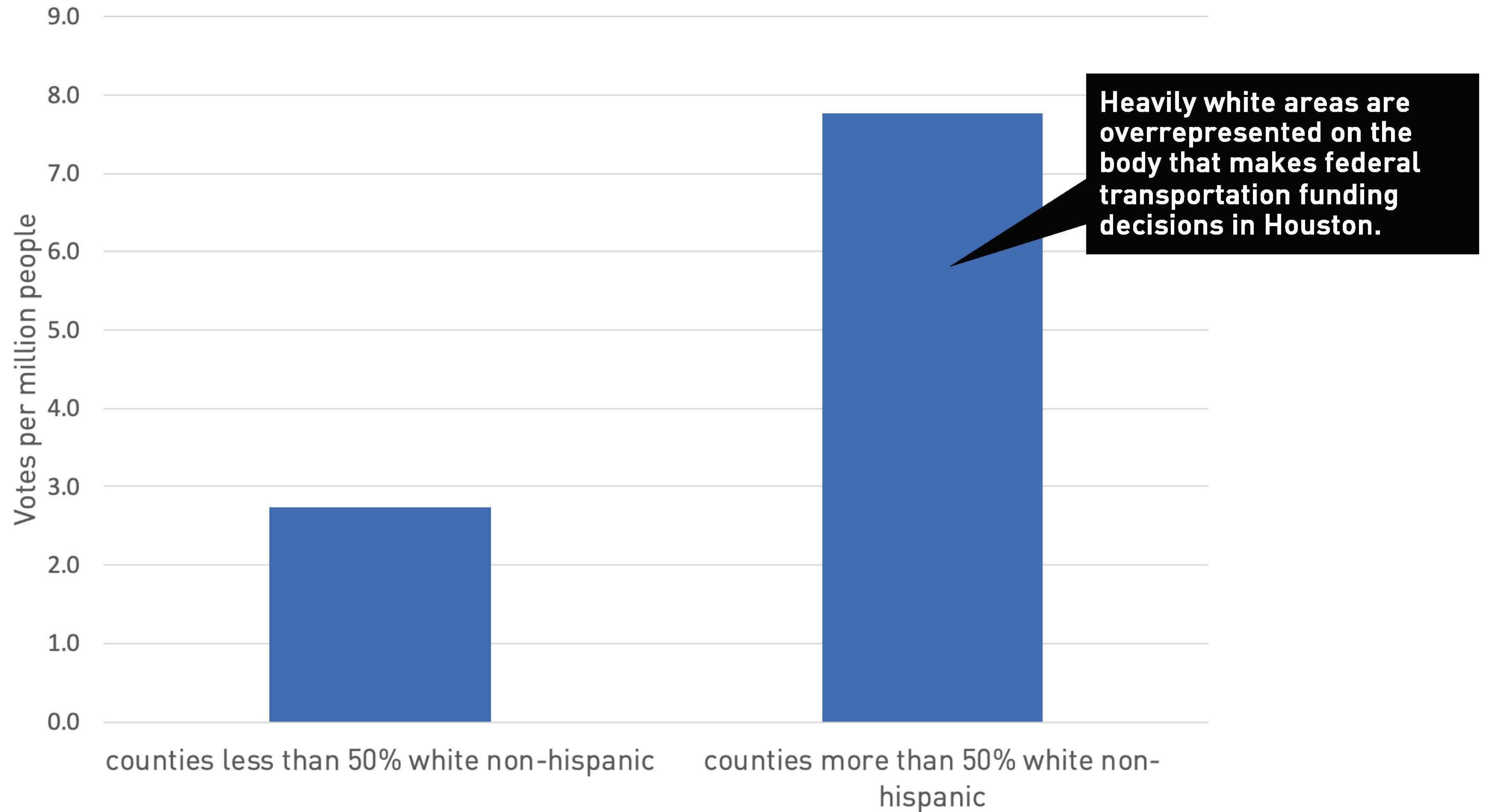


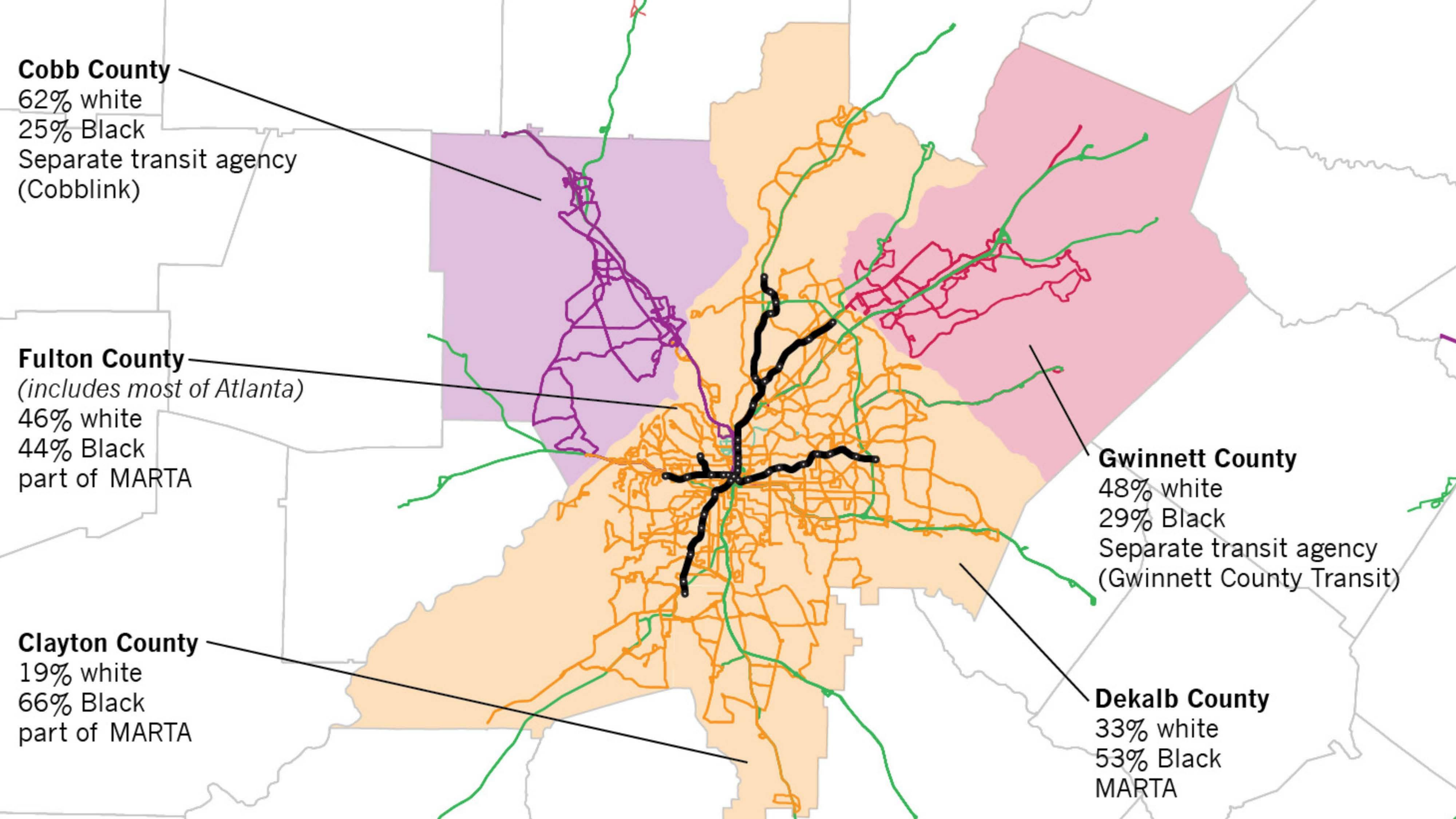
Transit systems have racism built into
their schedules, their fleets, their
route structures and their
infrastructure.

“...when you look at transportation or you look at built environments, what you realize very quickly is that the systems are designed exactly how the **people in power** wanted them to be designed, and they are working.”

-Tamika Butler
@TamikaButler

H-GAC TPC Voting Power by Race





Cobb County
62% white
25% Black
Separate transit agency
(Cobblink)


Fulton County
(includes most of Atlanta)
46% white
44% Black
part of MARTA

Clayton County
19% white
66% Black
part of MARTA

Gwinnett County
48% white
29% Black
Separate transit agency
(Gwinnett County Transit)

DeKalb County
33% white
53% Black
MARTA

Every transit line, every bit of infrastructure, every bus that runs down a street and every train that runs down a track does so in pursuit of a motive.

A photograph of a Cincinnati 'connector' streetcar, which is white with teal accents, traveling on tracks in a city street. The streetcar is moving towards the viewer. In the background, several tall office buildings are visible, including the Cincinnati Bell building and the PNC Tower. The sky is clear and blue. The streetcar has 'connector' written on its side and 'OTR - THE BANKS' on its destination sign. There are traffic lights and street signs visible in the background.

“streetcars in other cities have been shown to bring new people to an area. Streetcars attract people who don’t ride buses. They are popular with young professionals, who tend to live in and near urban areas.”

MEDICAL
CENTER

UNIVERSITY
OF
CINCINNATI

UPTOWN

DOWNTOWN
CINCINNATI

COVINGTON

Streetcar (Cincinnati Bell Connector)

SMALL SYSTEM

LOW PERFORMER



Opened: 2016

Last Expanded: N/A

Length: 2 miles

Stations: 9

Frequency: 12–15 min

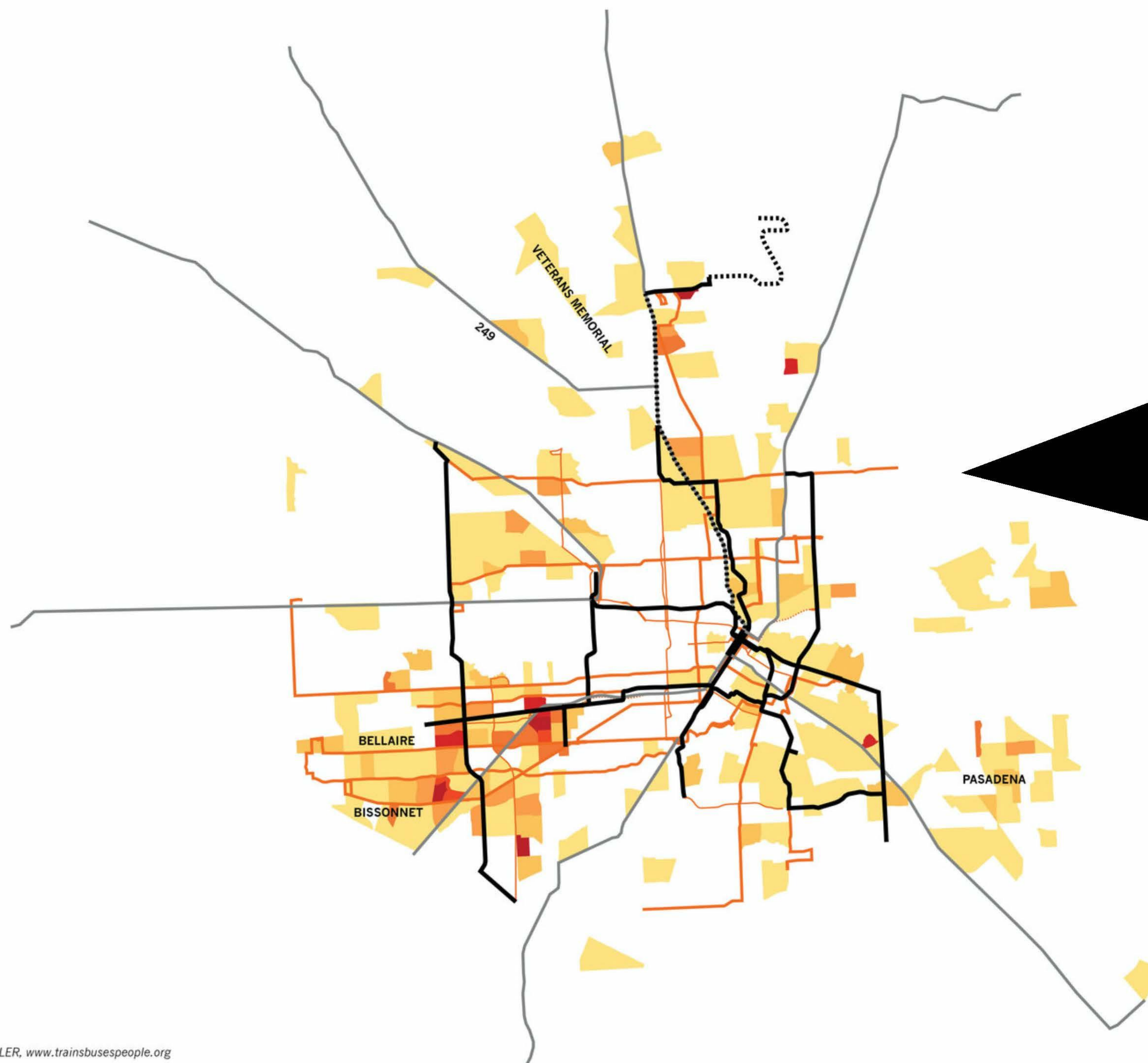
Avg weekday ridership: 1,300

Ridership per mile: 650



**This streetcar
is designed to
gentrify.**

Transportation can absolutely be a powerful tools for equity, opening up a metropolitan area — and its jobs and opportunities — for all of its residents.



METRONext:

Rail+BRT link Black and Hispanic neighborhoods to jobs and education

BOOST improves local bus routes with shelters, service, speed, reliability

Regional express service integrated with local network for reverse commutes and faster trips

Accessibility improvements across the network

To build more equitable networks, we
need equitable decision-making.

To build more equitable networks, we
in the transit world have to be
thoughtful about what we do.

We can't rely on rules to get equity.

subject to this requirement are responsible for complying with the DOT Title VI regulations which prohibit disparate impact discrimination, and therefore should review their policies and practices to ensure their service and fare changes do not result in disparate impacts on the basis of race, color, or national origin.

To further ensure compliance with 49 CFR Section 21.5(b)(2), 49 CFR Section 21.5(b)(7), and Appendix C to 49 CFR part 21, all providers of public transportation to which this Section applies shall develop written procedures consistent with this Section to evaluate, prior to implementation, any and all service changes that exceed the transit provider's major service change threshold, as well as all fare changes, to determine whether those changes will have a discriminatory impact based on race, color, or national origin. The written procedures and results of service and/or fare equity analyses shall be included in the transit provider's Title VI Program.

One purpose of conducting service and fare equity analyses prior to implementing service and/or fare changes is to determine whether the planned changes will have a disparate impact on the basis of race, color, or national origin.

The typical measure of disparate impact involves a comparison between the proportion of persons in the protected class who are adversely affected by the service or fare change and the proportion of persons not in the protected class who are adversely affected. The comparison population for a statistical measure of disparate impact is all persons who are affected by the service or fare changes or who could possibly be affected by the service or fare change (e.g., potential passengers). When a transit provider uses ridership as the comparison population, the transit provider will compare the ridership of the affected route(s) with the ridership of the system. For example, if the ridership of affected route(s) is 60 percent minority and the system ridership is 40 percent minority, then changes to the route(s) may have a disparate impact. When a transit provider uses the population of the service area

Equity analysis when service is changed, not of existing inequity

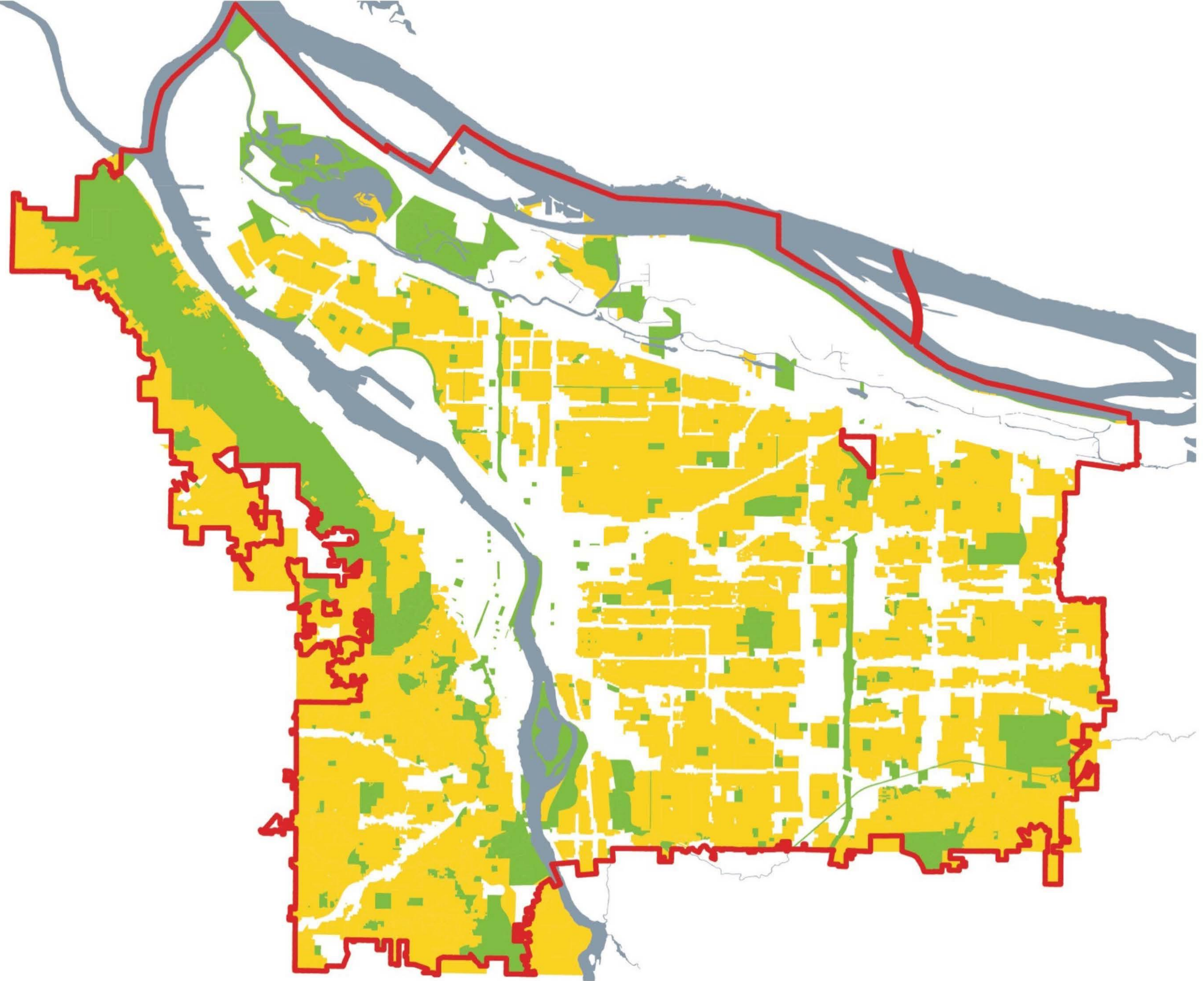
Table 110: MDOT MTA Major Service Change Policies

Mode	Major Service Change Policy
Core Bus	<ul style="list-style-type: none"> • Alteration of a route's revenue miles or revenue hours on a given service day by 25 percent or more, including establishment or abandonment of a route. • Change to the span of service on a route by 90 minutes or more on a given service day.
Commuter Bus	<ul style="list-style-type: none"> • Alteration of a route's revenue miles or revenue hours on a given service day by 25 percent or more, including establishment or abandonment of a route. • Change to the span of service on a route by 90 minutes or more on a given service day. • Elimination of service to a stop, unless there is another stop within three miles of its location. • Establishment of a new stop.
MARC	<ul style="list-style-type: none"> • Alteration of a line's revenue miles or revenue hours on a given service day by 25 percent or more, including establishment or abandonment of a line. • Change to the span of service on a line by 90 minutes or more on a given service day. • Change to the number of stops at a station on a given service day by 25 percent or more. • Establishment or abandonment of a station.
Light RailLink	<ul style="list-style-type: none"> • Alteration of a line's revenue miles or revenue hours on a given service day by 25 percent or more, including establishment or abandonment of a line.

Measured by revenue hours,
not quality of service

We have to reject “we’ve always done it that way” as an answer.

We have to recognize that
transportation fits into larger systems.



We have to be willing to call out
decision-makers.

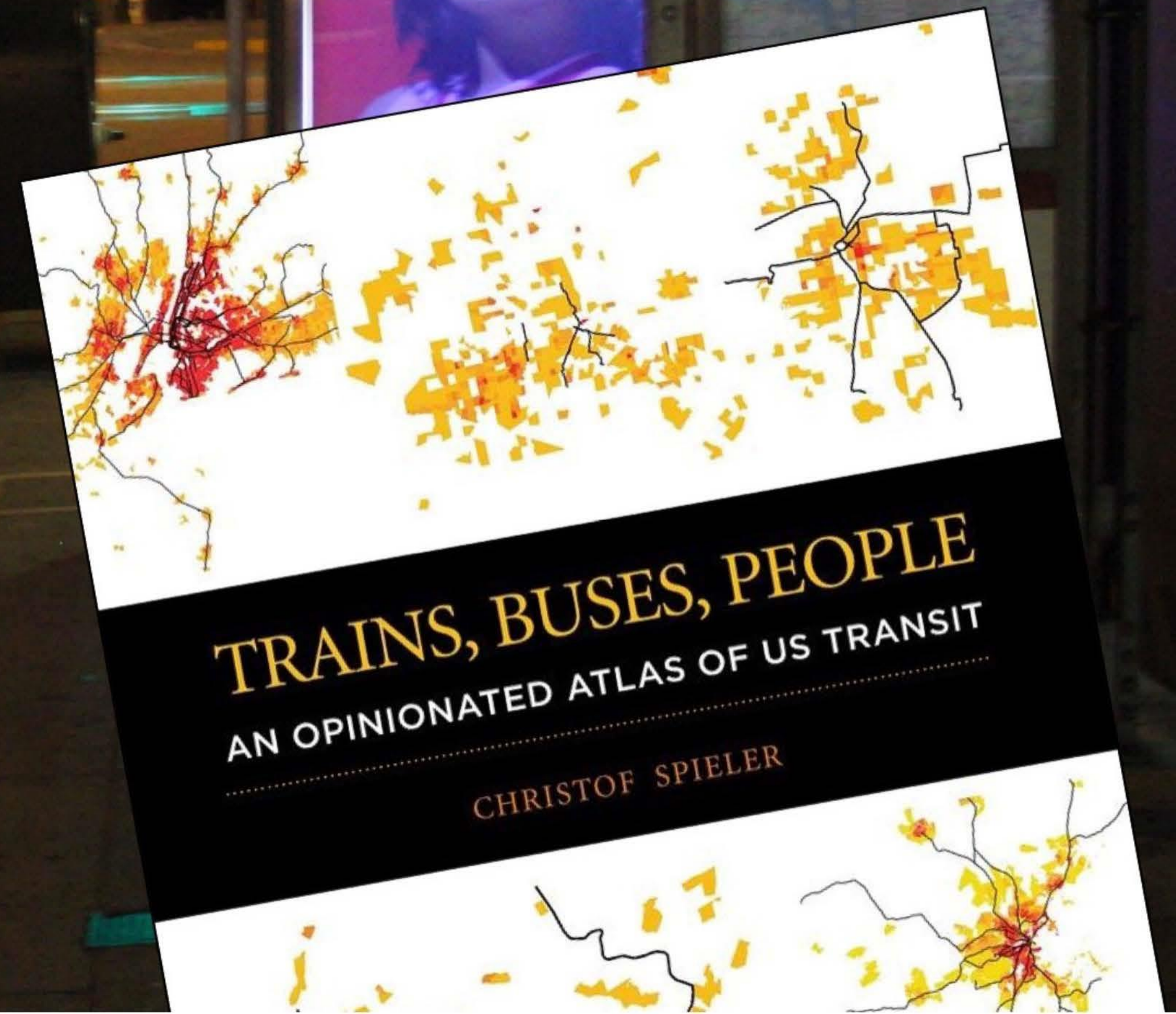
We have to to listen to all riders.

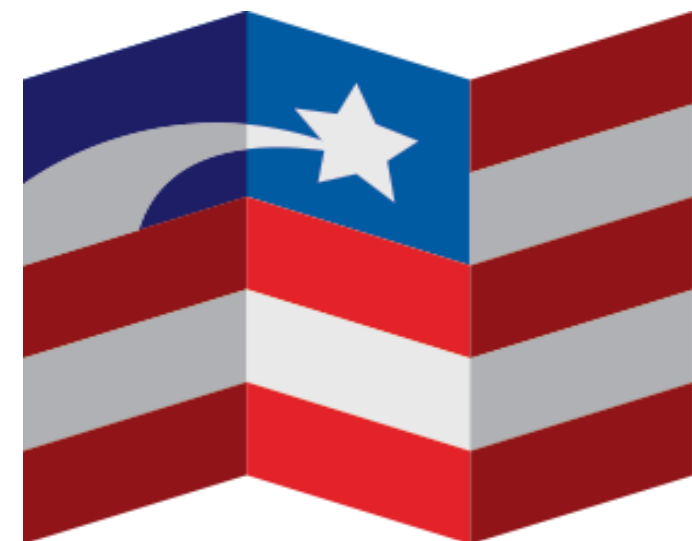
We all have to be willing to
talk about race.

Christof Spieler, PE, LEED AP
Director of Planning
Huitt-Zollars

cspieler@huitt-zollars.com
@christofspieler

Follow:
@Jay_Pitter
@TamikaButler
@DrDesThePlanner





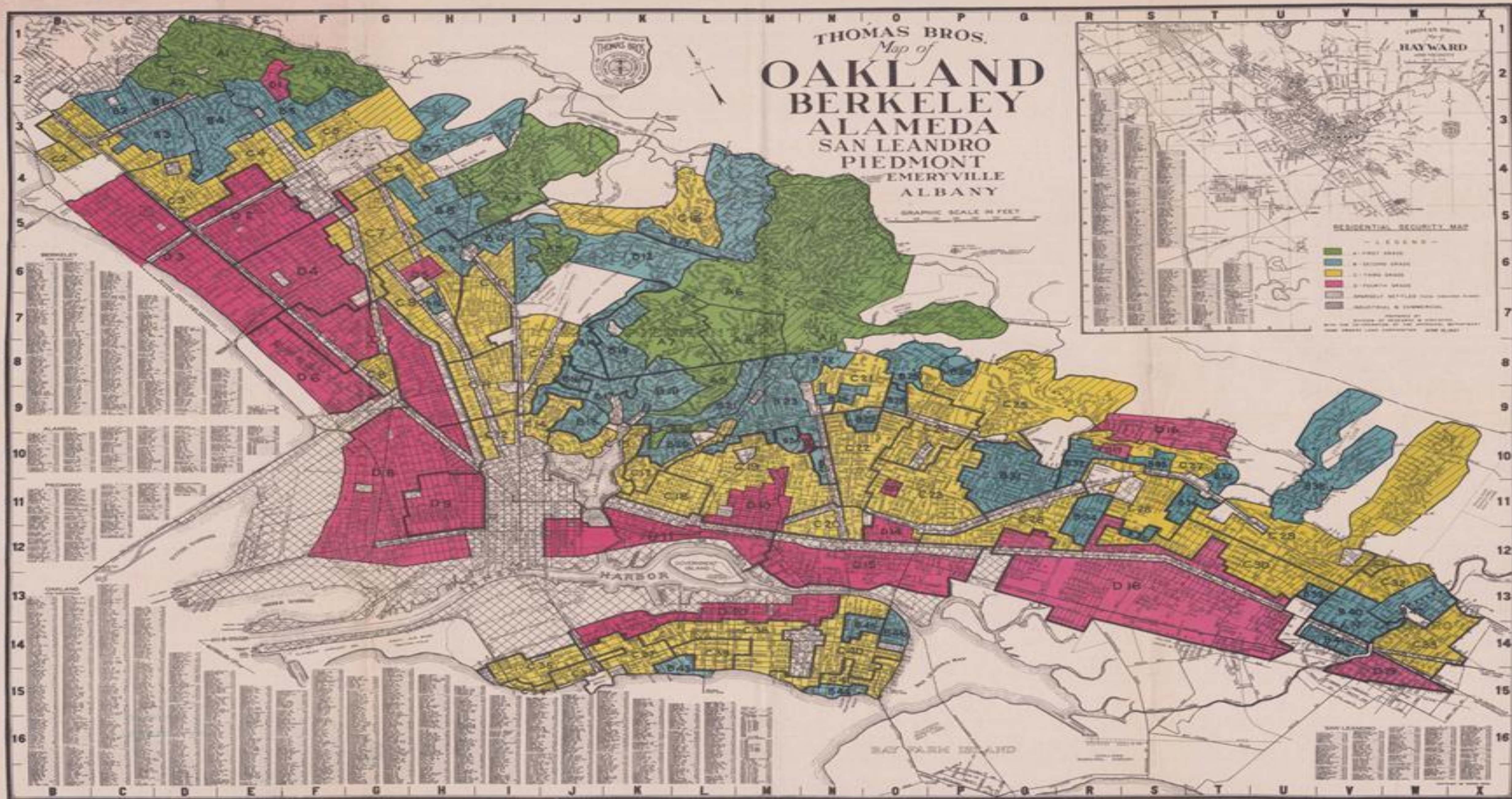
Transportation for America

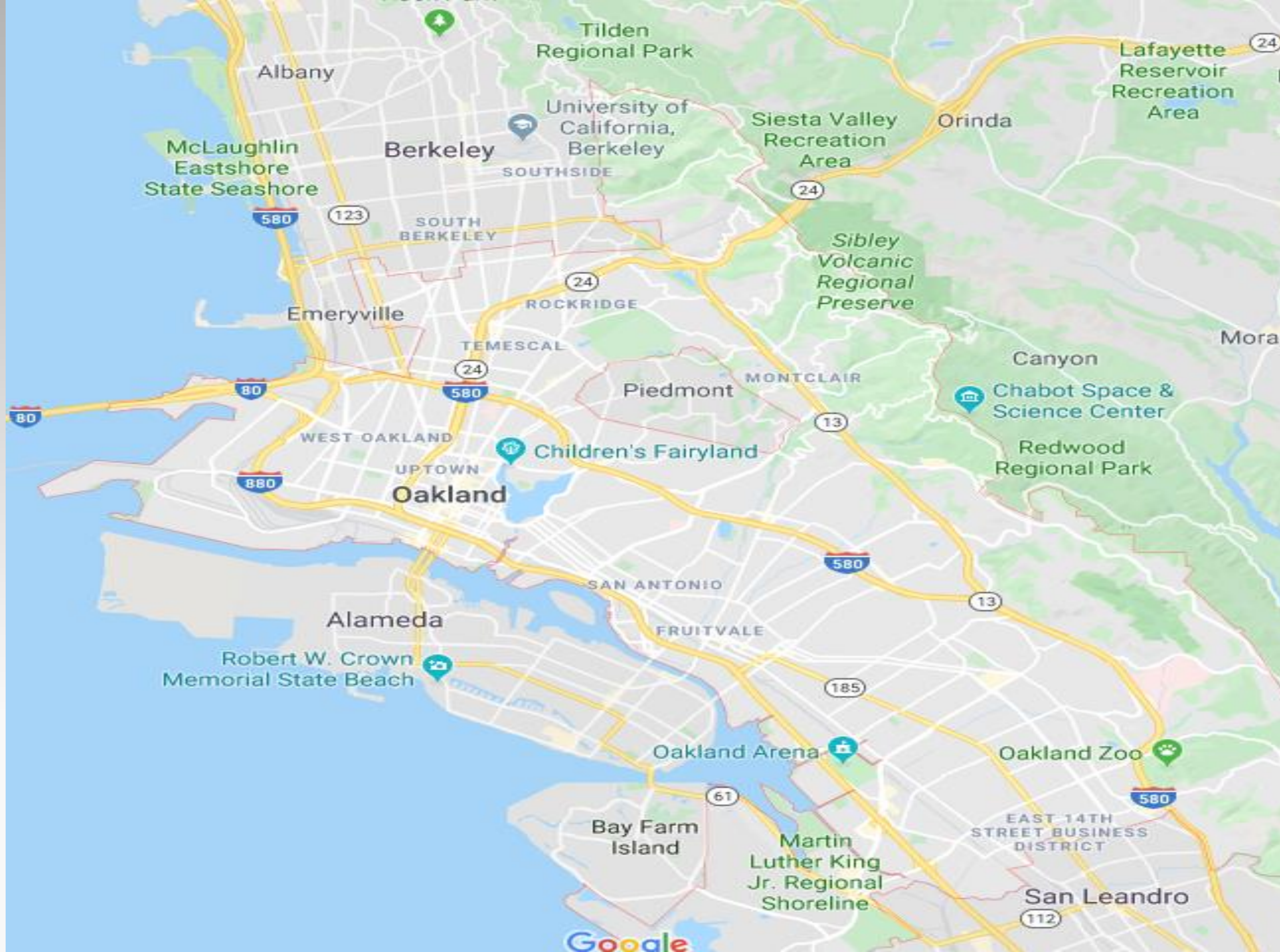
Rocky Mountain Land Use Conference

Beth Osborne, Director
March 26, 2021

www.T4america.org
[@t4america](https://twitter.com/t4america)

Inequities of the Early Highway Program

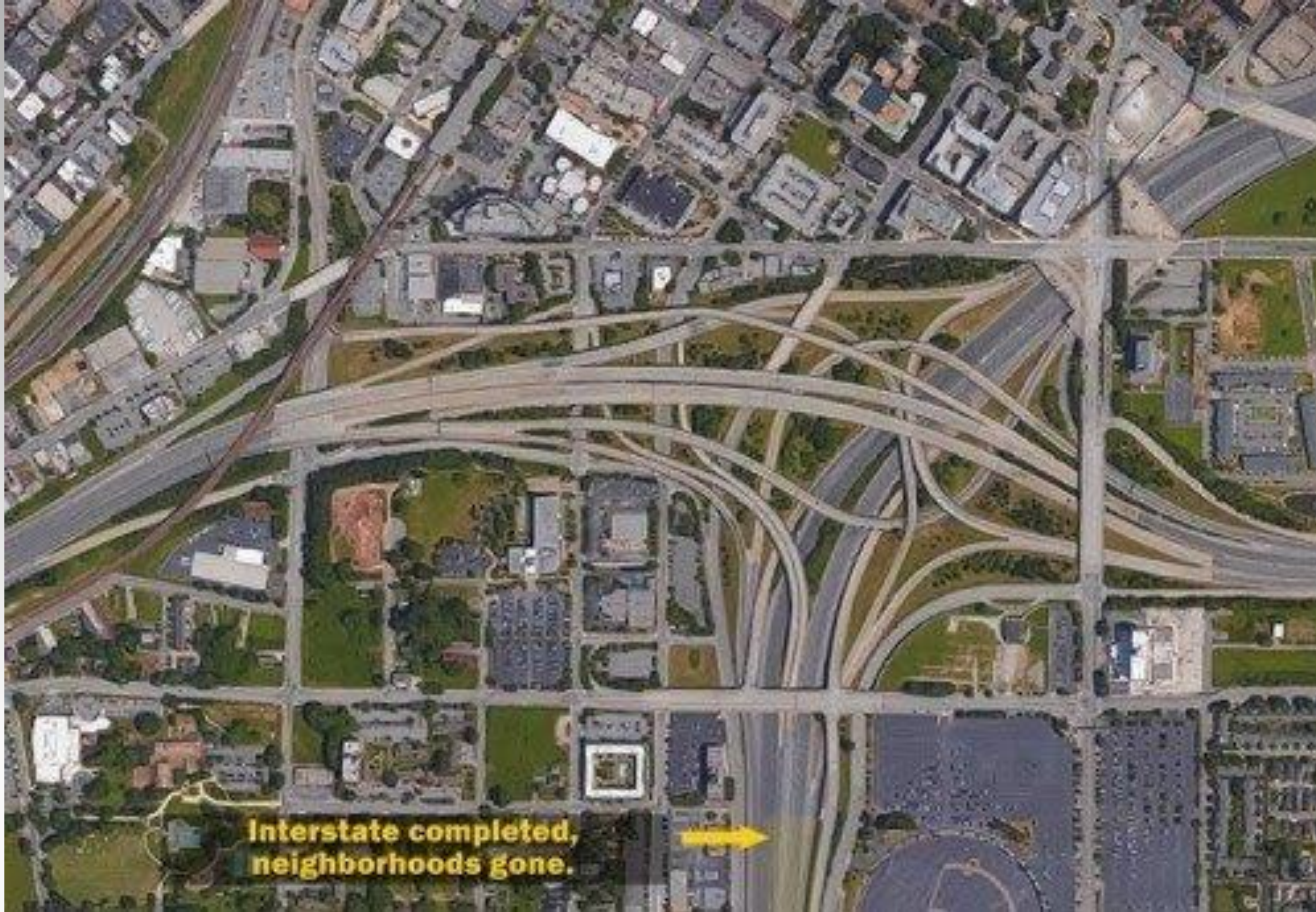




Transportation
for America
for America

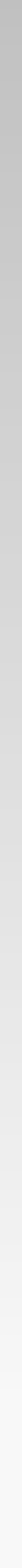


(photo courtesy of @atlurbanist via twitter)



(photo courtesy of @atlurbanist via twitter)

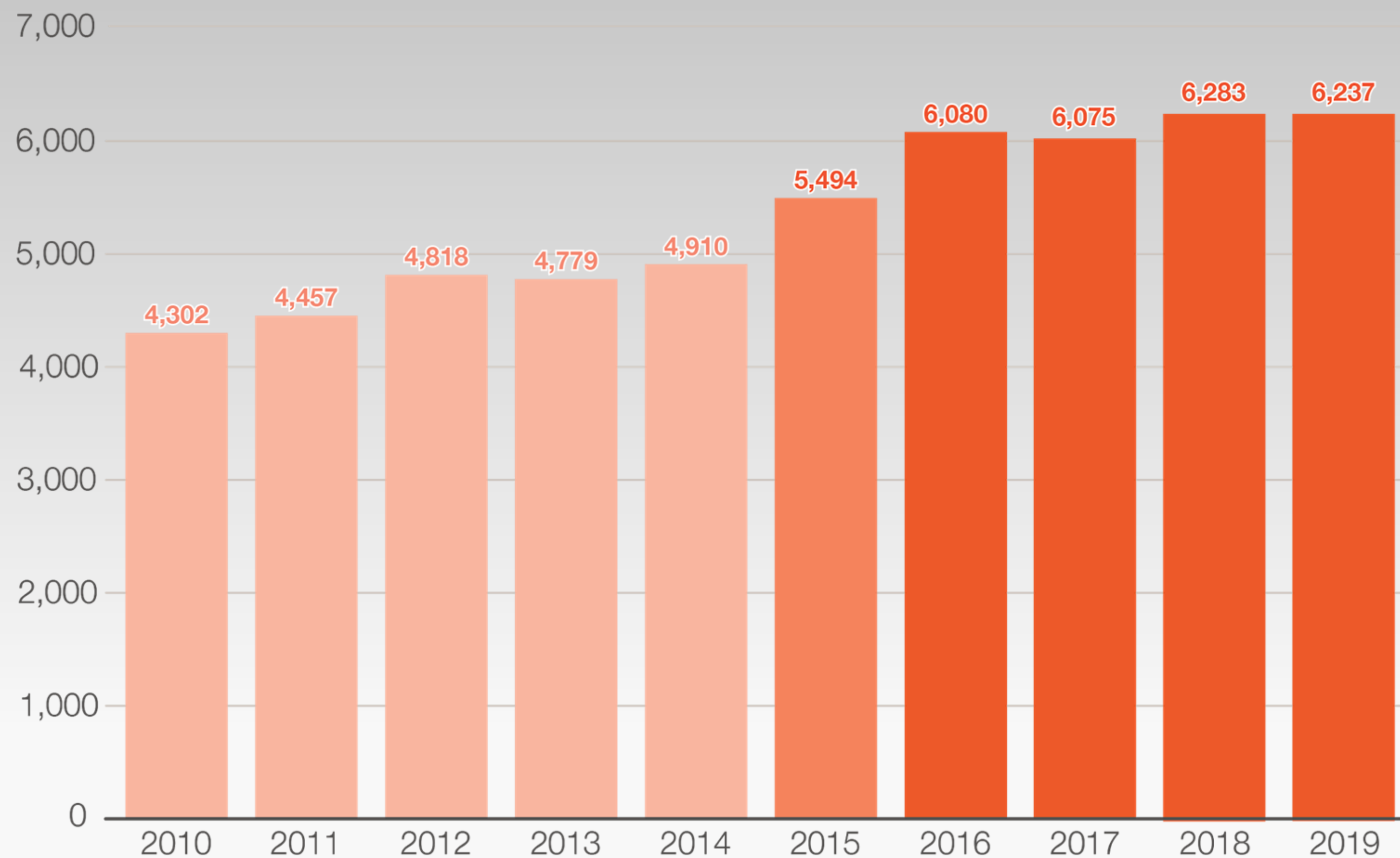
Kansas City — Bruce R. Watkins Highway



Completed in 2002 through Ivanhoe neighborhood
(photo courtesy of @JSchnauzer via twitter)

Inequities of Current Transportation Program

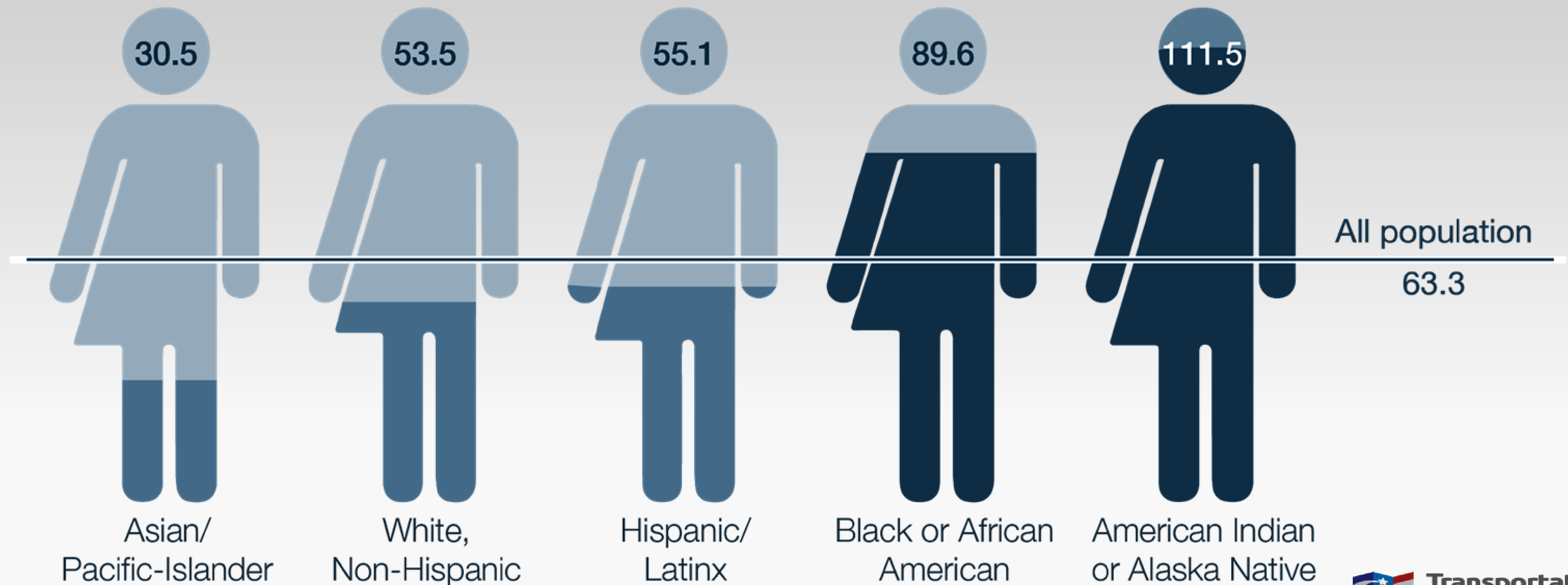
2010-2019: historic increase in fatalities



- **45 percent** increase in people struck and killed while walking.
- **53,435** people were hit and killed by drivers.
- More than **17 people** killed per day in 2019.
- **It is trending worse almost everywhere:** Since our 2019 report **49/50** states and **84/100** metro areas got worse.

People of color are disproportionately represented

Relative pedestrian danger by race and ethnicity
(2010-2019)



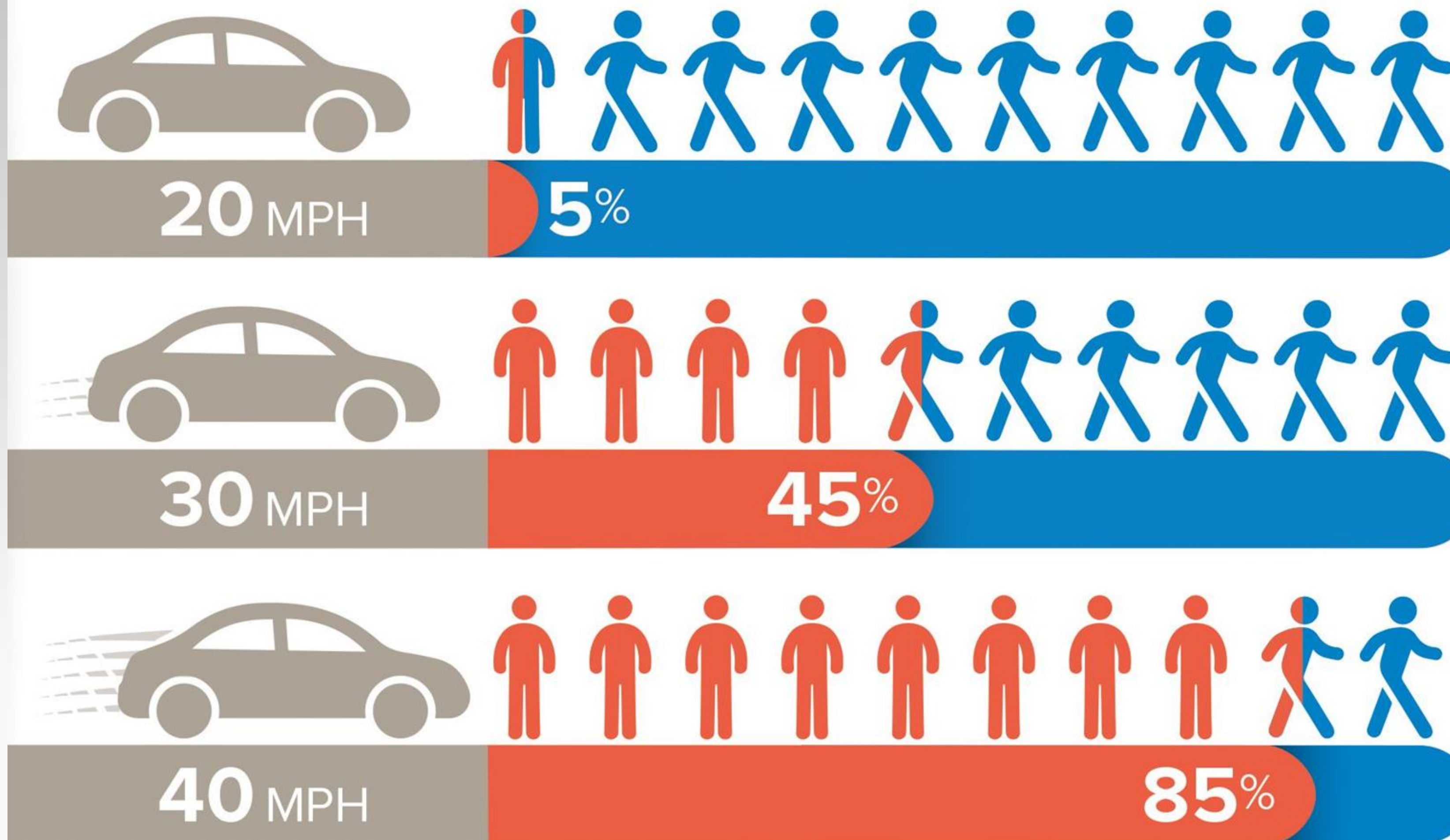
People walking in lower-income areas are struck and killed at much higher rates. People walking in wealthier neighborhoods are killed at far lower rates



You can't prioritize both safety and speed

If hit by a car traveling:

● Fatality ● Person survives collision

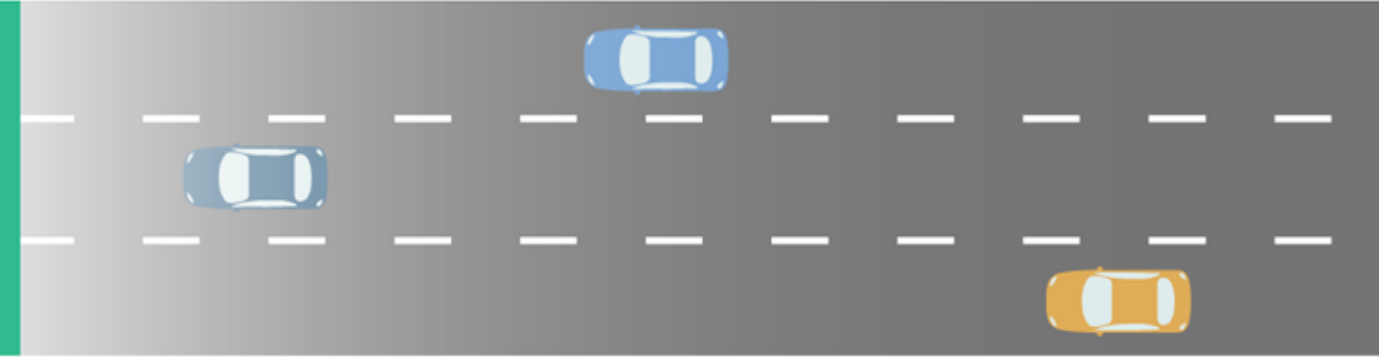


National Traffic Safety Board (2017) Reducing Speeding-Related Crashes Involving Passenger Vehicles.
Available from: <https://www.nts.gov/safety/safety-studies/Documents/SS1701.pdf>

FREE FLOW

Low volumes and no delays.

LOS
A



STABLE FLOW

Speeds restricted by travel conditions, minor delays.

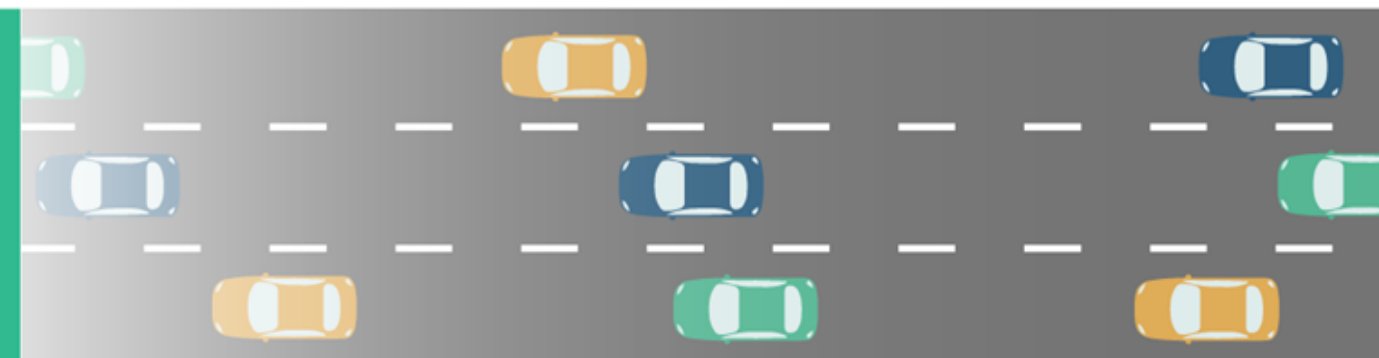
LOS
B



STABLE FLOW

Speeds and maneuverability closely controlled because of higher volumes.

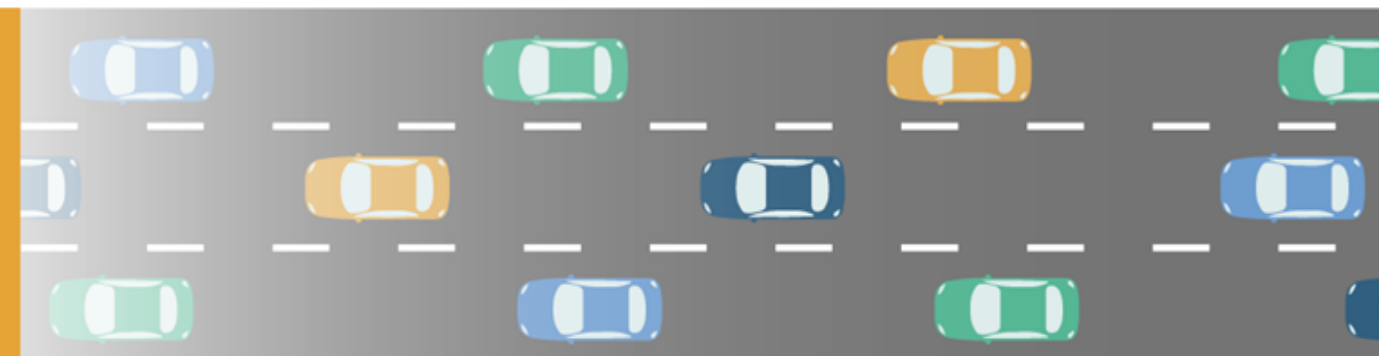
LOS
C



STABLE FLOW

Speeds considerably affected by change in operation conditions. High density traffic restricts maneuverability; volume near capacity.

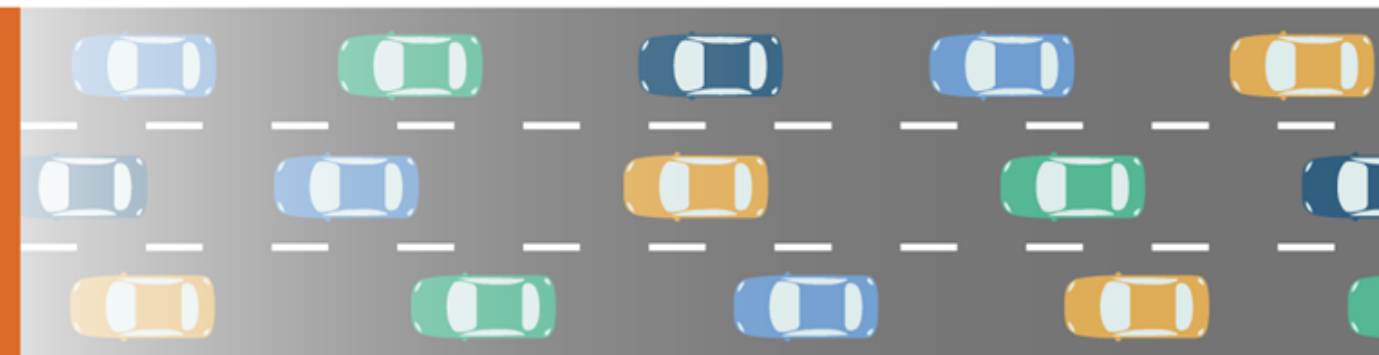
LOS
D



UNSTABLE FLOW

Low speeds; considerable delay; volume at or slightly over capacity.

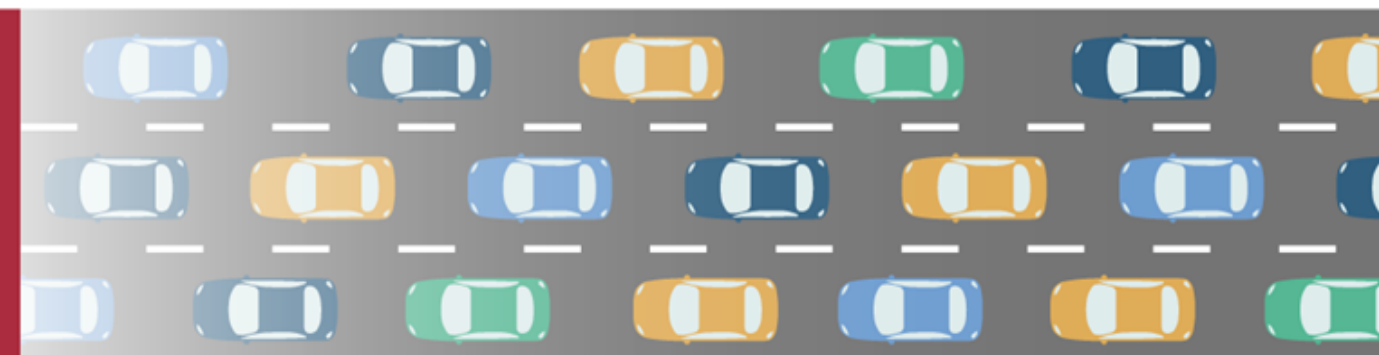
LOS
E



FORCED FLOW

Very low speeds; volumes exceed capacity; long delays with stop-and-go traffic.

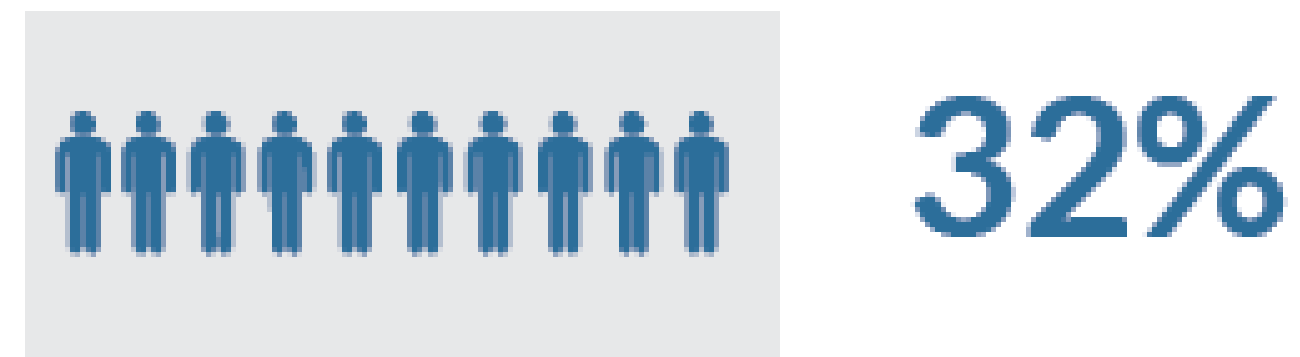
LOS
F



Conflicting messages to drivers



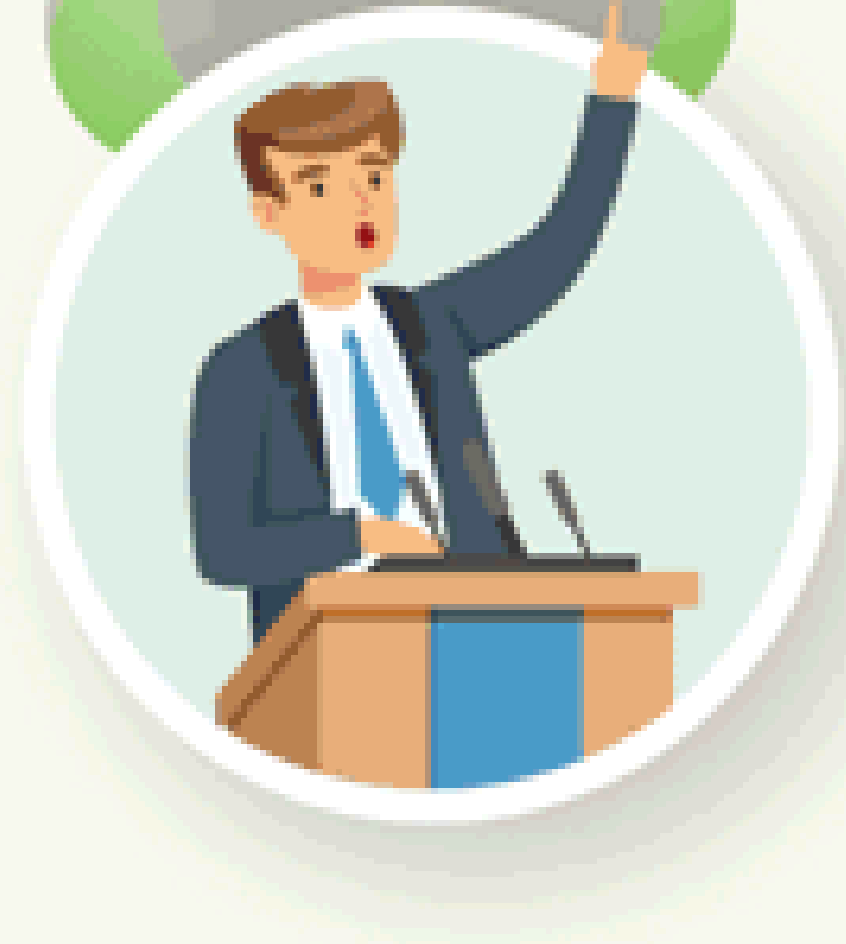
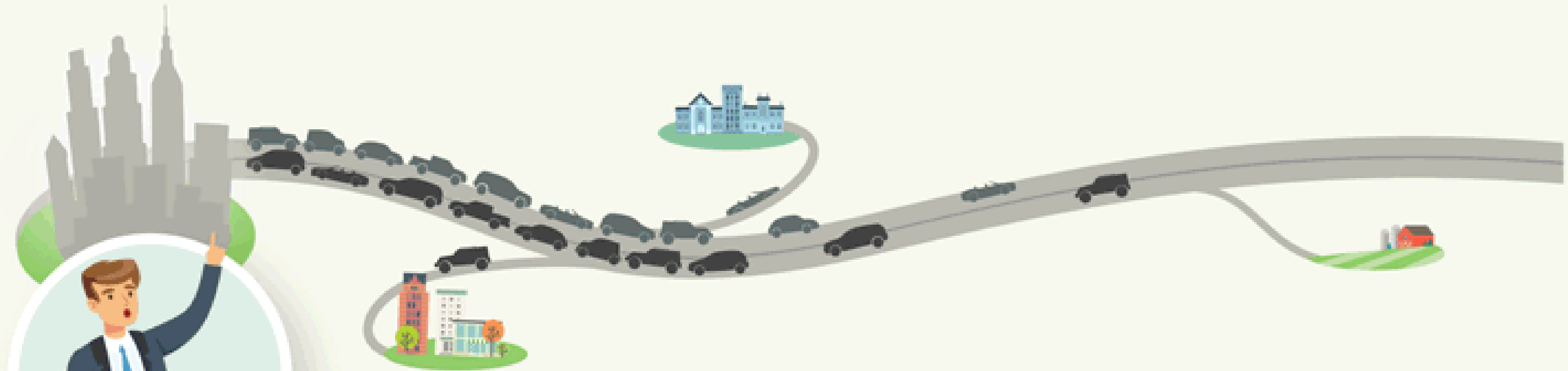
Freeway capacity grew faster than population, yet delay exploded



Change in freeway lane-miles, population growth, and annual hours of delay in the largest 100 urbanized areas from 1993-2017. Delay is defined as extra time spent traveling at congested rather than free-flow speeds. While FHWA only provides data on lane-miles of freeway, TTI's delay metrics capture both freeways and arterial roads.

Induced demand

How highway expansion actually creates more traffic



Government invests millions in expanding the highway to “alleviate” congestion.



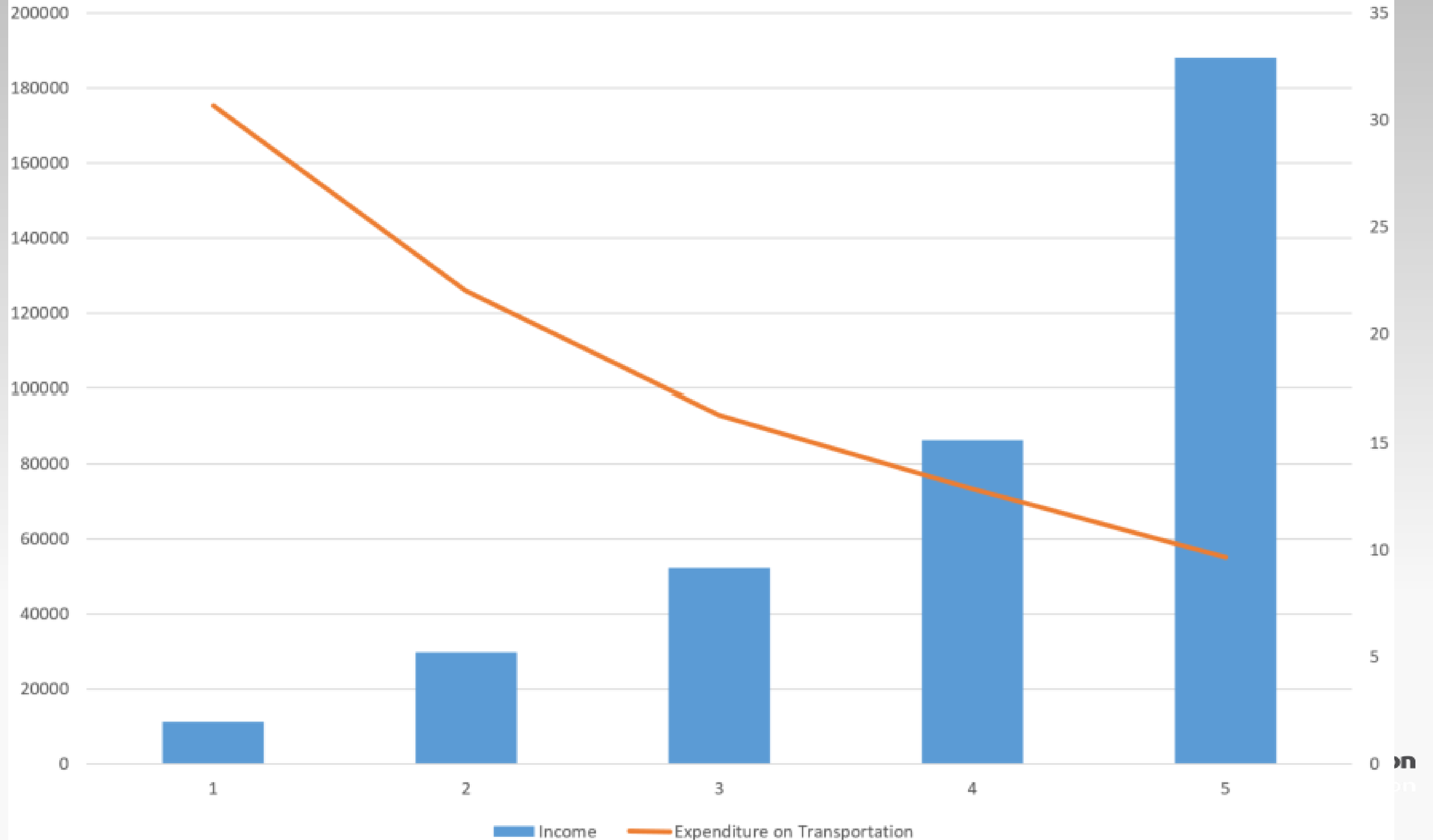
The way we build creates/lengthens trips



The High Cost of Transportation in the US

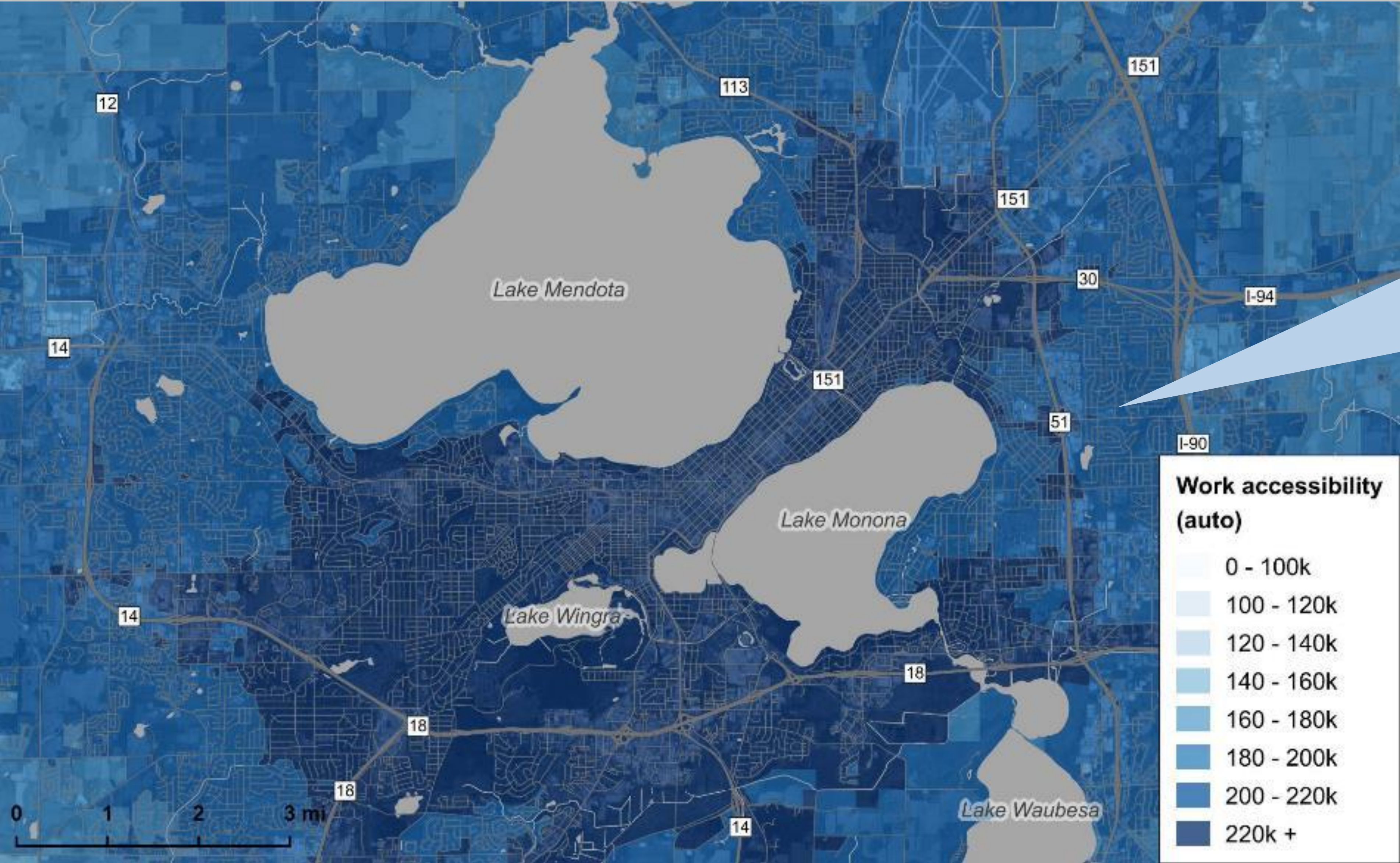


Portion of Transportation Expenditure relative to Income: United States



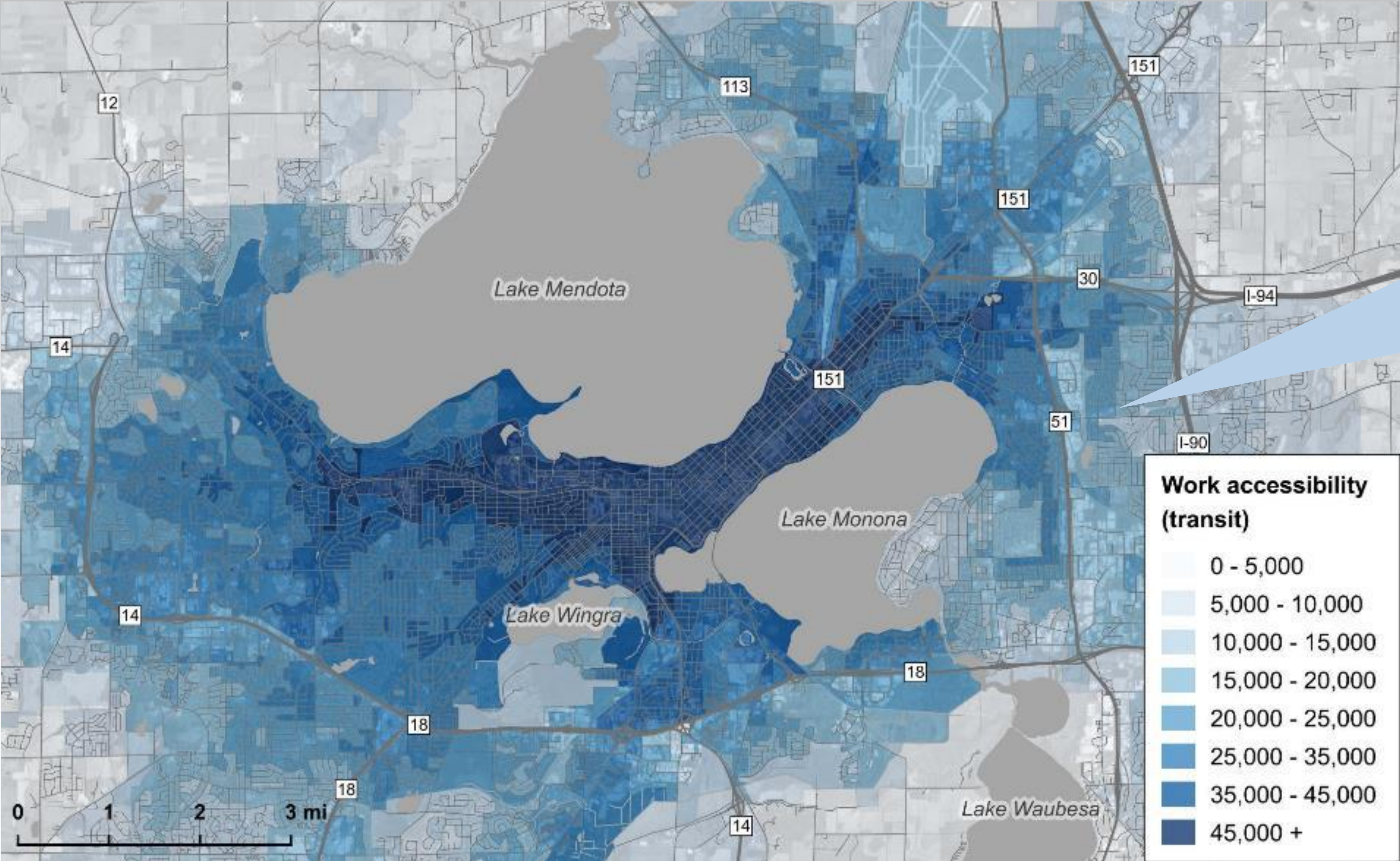
Making Transportation More Equitable

Measure the right thing — multimodal access



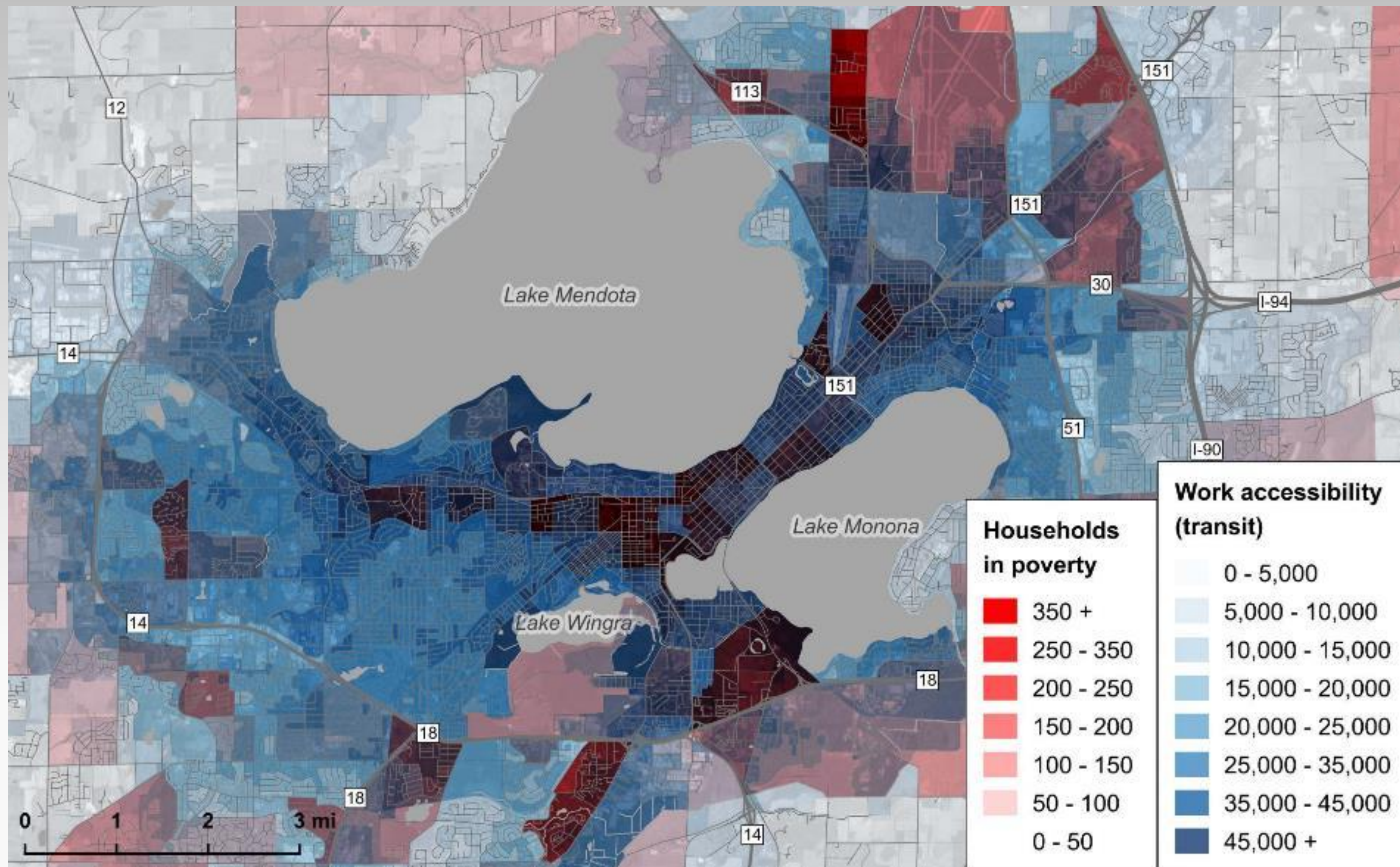
Jobs accessible	
< 15 min	29,000
< 30 min	293,000
< 45 min	308,000
< 60 min	308,000
Final score	212,000

Measure the right thing — multimodal access

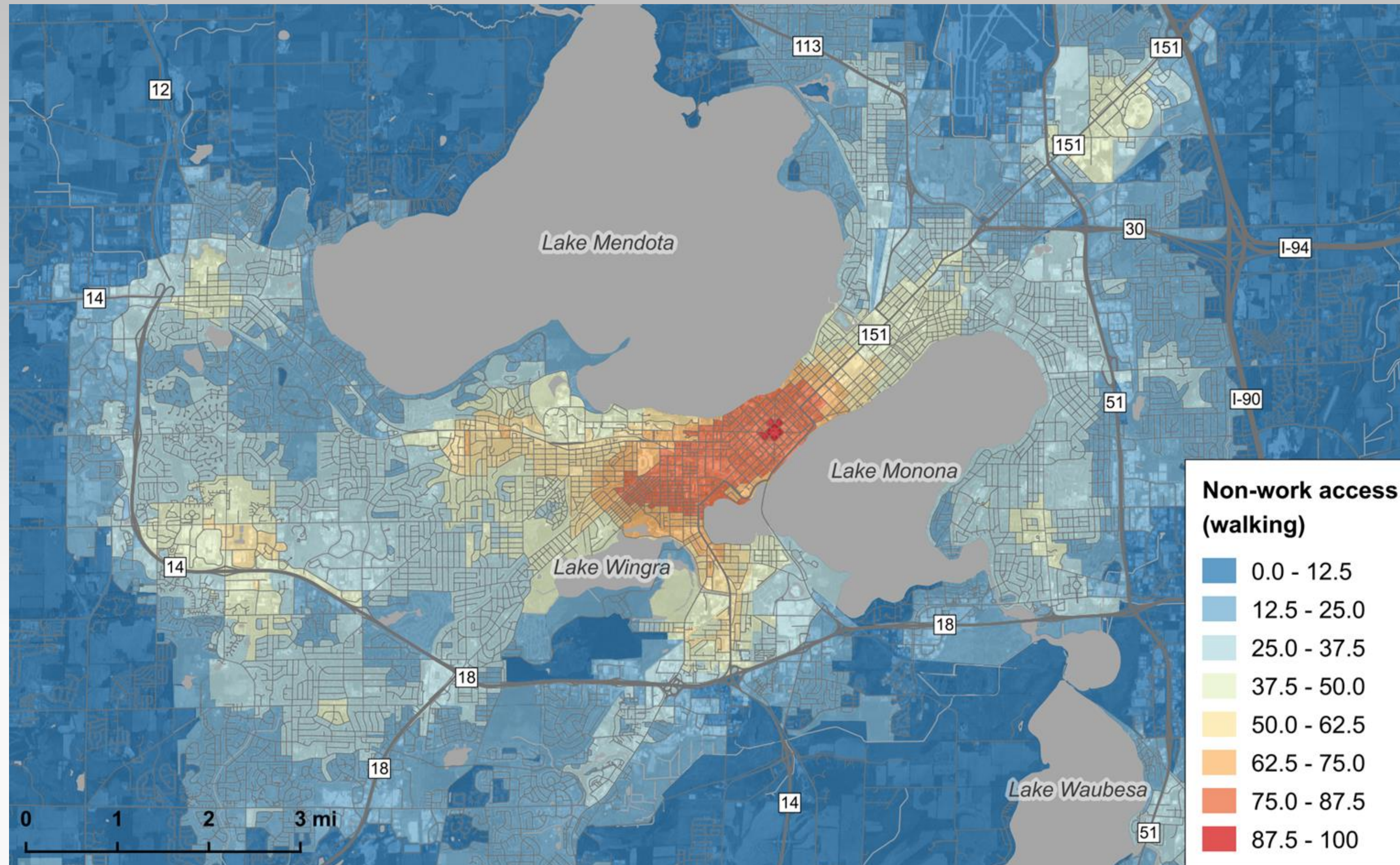


Jobs accessible	
< 15 min	250
< 30 min	24,000
< 45 min	33,000
< 60 min	122,000
Final score	18,000

Measure the right thing — multimodal access



Measure the right thing — multimodal access



Access to:

- Schools
- Shopping
- Grocery stores
- Food and drink
- Recreation
- Healthcare
- Public services
- Banks and ATMs



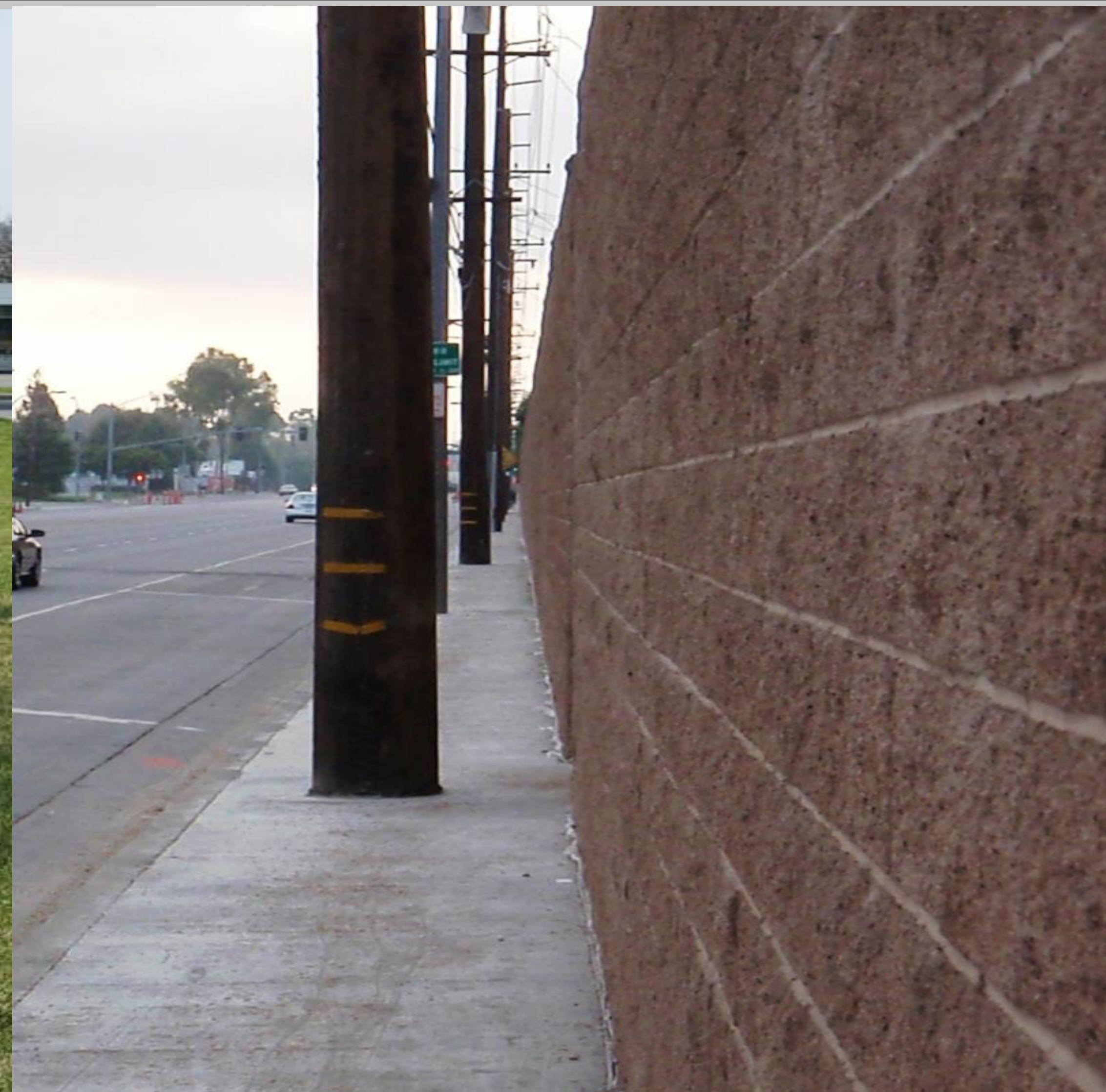
Update standards and scoping



Update standards and scoping



Build better infrastructure for people



Use Better Design, NACTO

Tennessee Adopts NACTO Guidelines; Still Waiting on New York, New Jersey and Connecticut

POSTED BY: MATTHEW NORRIS JUNE 23, 2014

Tennessee recently **became the sixth state** to formally endorse the **National Association of City Transportation Officials (NACTO) Urban Street Design Guide**.

The guide provides technical standards that departments of transportation can use to create streets that safely accommodate all road users, including pedestrians, bicyclists and transit riders. Thirty-seven cities, including New York City, and six states have adopted NACTO's guidelines. New York



The NACTO Urban Street Design Guide provides detailed guidance on how to create vibrant streets that accommodate all road users as safely as possible. | Image: NACTO



Use Better Design, FDOT

FIGURE 2 FDOT CONTEXT CLASSIFICATIONS



Rochester, NY





Harbor Drive, Portland, OR



Harbor Drive, Portland, OR



Greenville, SC



Greenville, SC





Transportation for America

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[@t4america](https://twitter.com/t4america)



www.t4america.org

Transit, Mobility and Equity Forum

COVID-19 Economic Impact

- 23% of the region's workers (420,000) are vulnerable to the immediate effects of the pandemic response
- 30.3 million initial jobless claims nationally
- 338k initial jobless claims in Colorado
- DEN ridership down 95% (now over 80% of pre-COVID volume), RTD ridership down 70% (now 50% of pre-COVID)
- Traffic fatalities down 28%
- City budget losses over 200M, 127M received from the CARES act and ~150M Rescue Plan

Denver Economic Development and Opportunity (DEDO) Covid-19 Economic Impact/Services Tracking Dashboard

Region

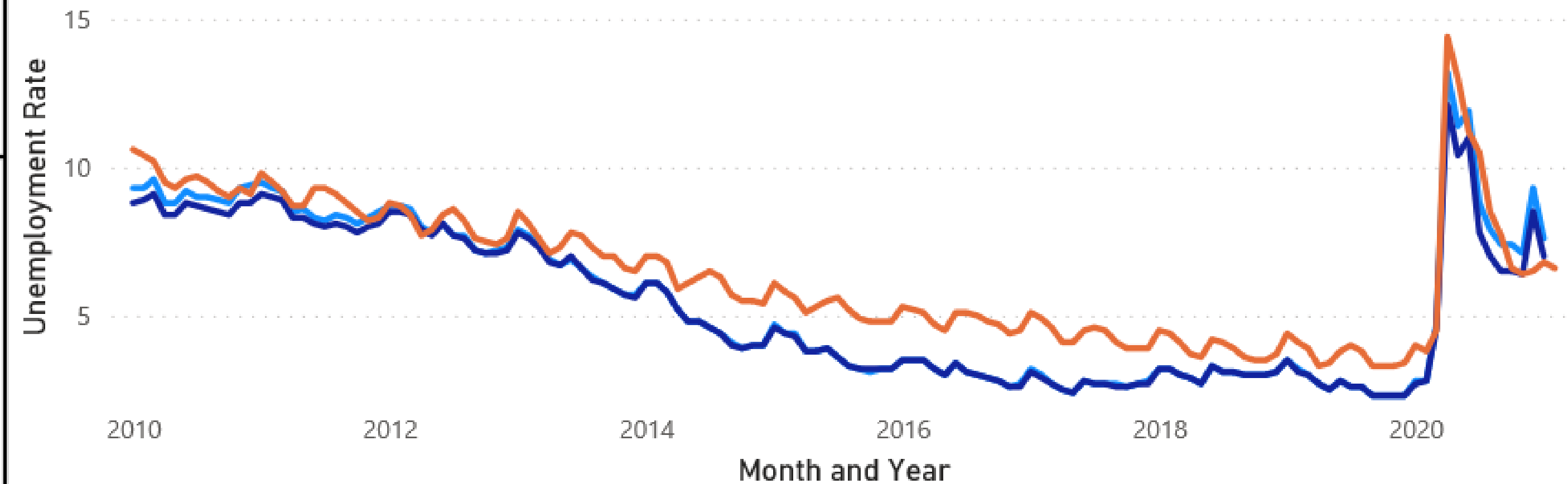
- ☐ Denver
- ☐ MSA
- ☐ National

Most Recent
Available Data:

**February
2021**

Monthly Unemployment Rate (2010-Current)

Region ● Denver ● MSA ● National



Denver Unemployment Rate ✎ ...

7.60

unemployment rate

MSA Unemployment Rate

7.00

unemployment rate

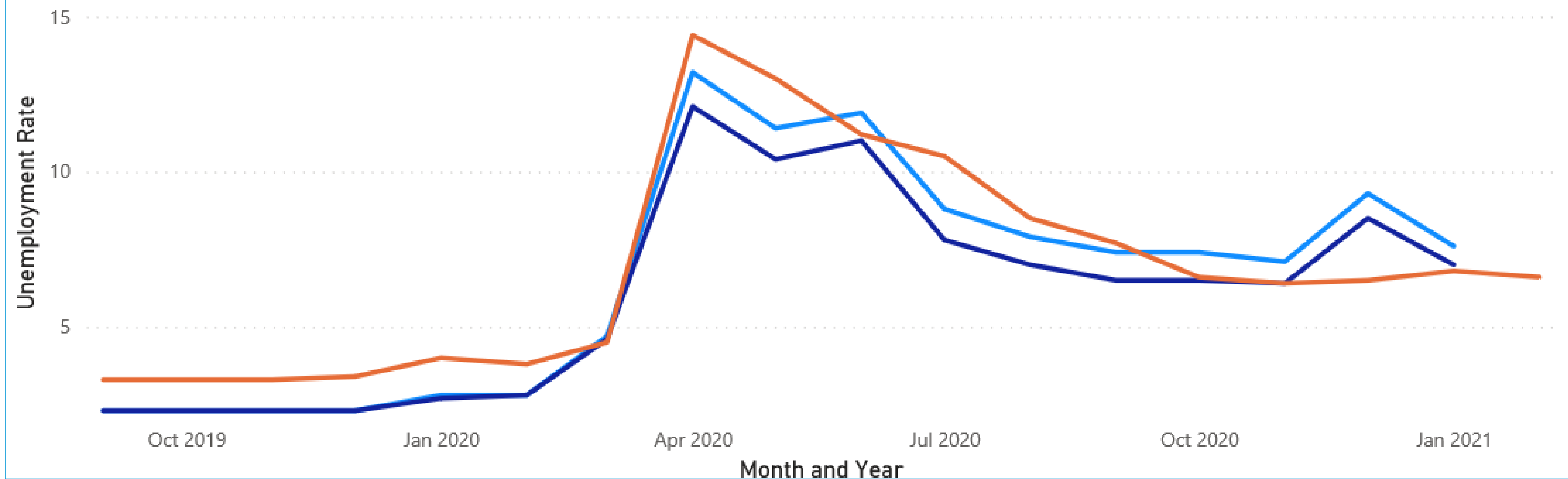
National Unemployment Rate

6.60

unemployment rate

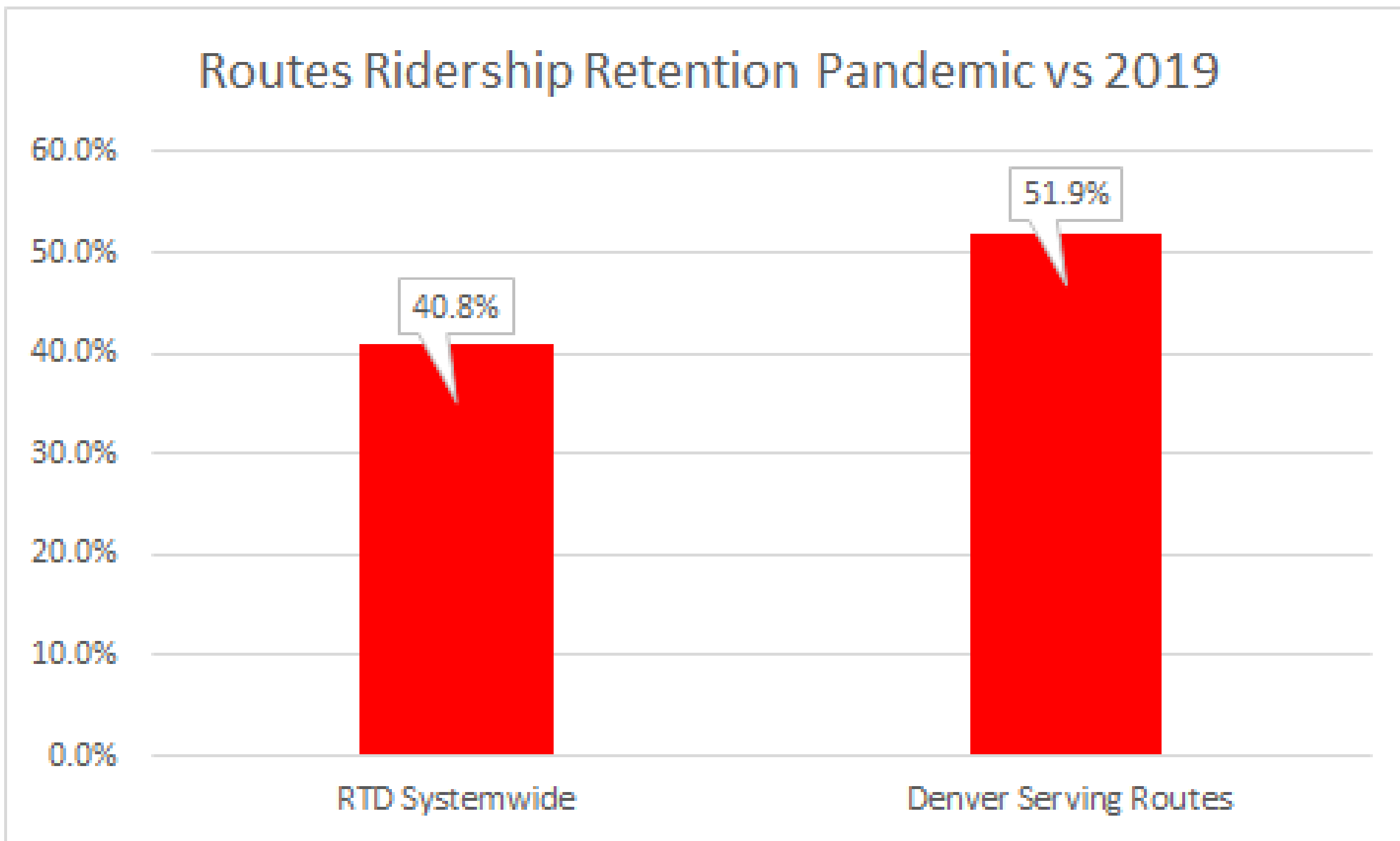
Monthly Unemployment Rate (Last 18 Months)

Region ● Denver ● MSA ● National



RTD Snapshot

(Presented 12/8)



Route Name/Corridor	Pandemic Ridership Retention
36: Fort Logan	99%
16: West Colfax Avenue	86%
48: East 48th Avenue / Commerce City	85%
51: Sheridan Blvd	80%
15L: East Colfax Limited	70%
153: Chambers Road	69%
92: 92nd Avenue	69%
4: Morrison Road	67%
31: Federal Blvd	65%
120: 120th Avenue / Brighton	62%
45: Montbello / Green Valley Ranch	62%
15: East Colfax Avenue	61%
73: Quebec Street	61%
121: Peoria Street	61%
88: Northglenn/Commerce City/Stapleton	61%
40: Colorado Boulevard	61%
105: Havana Street	61%
29: Riverbend	61%
12: Downing / N Washington	58%
38: 38th Avenue	55%

Rethinking the Street

Issue: Initial COVID impact created parks and trails experiencing overcrowding due to individuals seeking space to recreate.

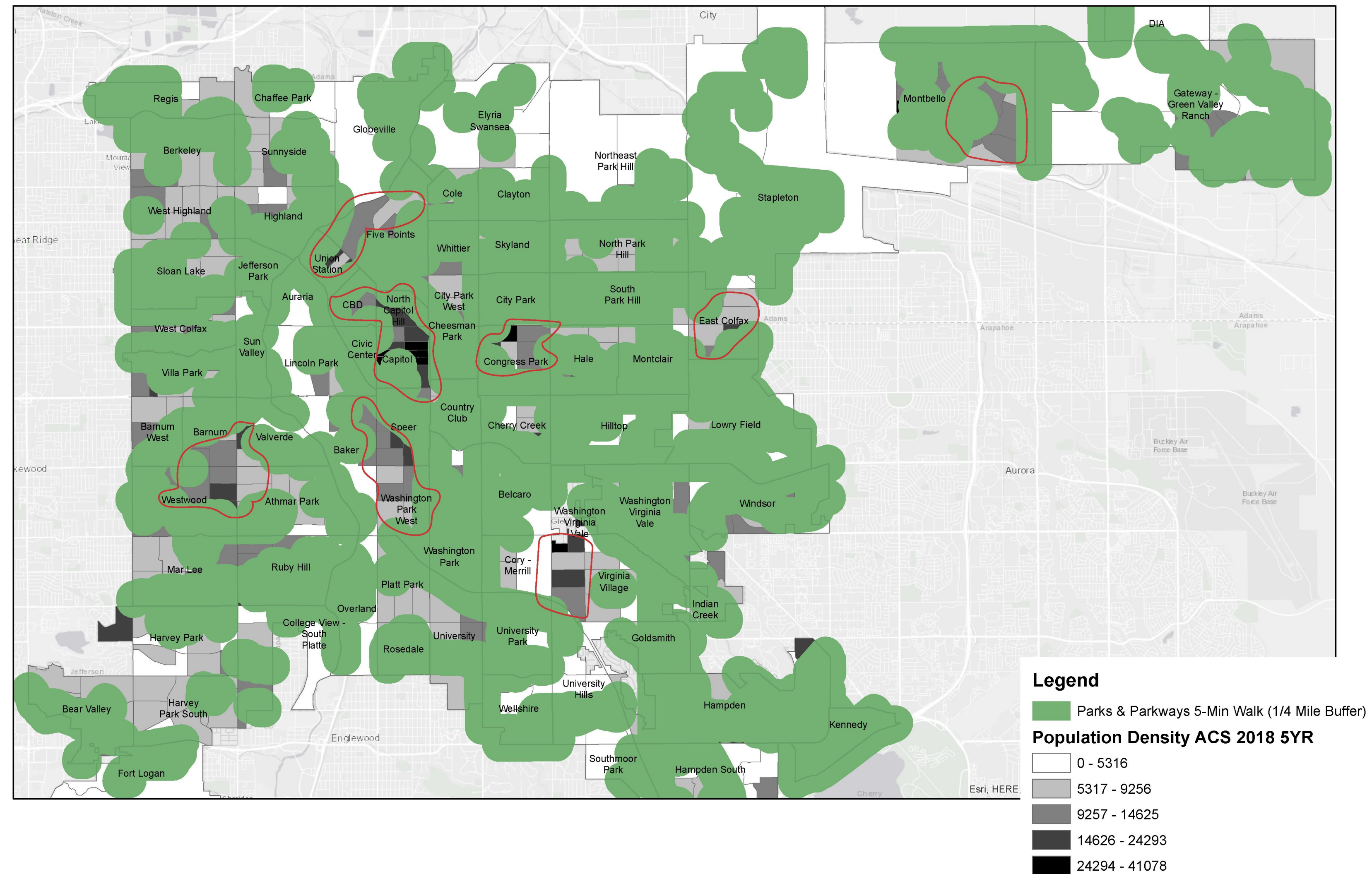
Solution: Denver created temporary shared streets to provide safe and high-comfort space for people to recreate and travel close to home.



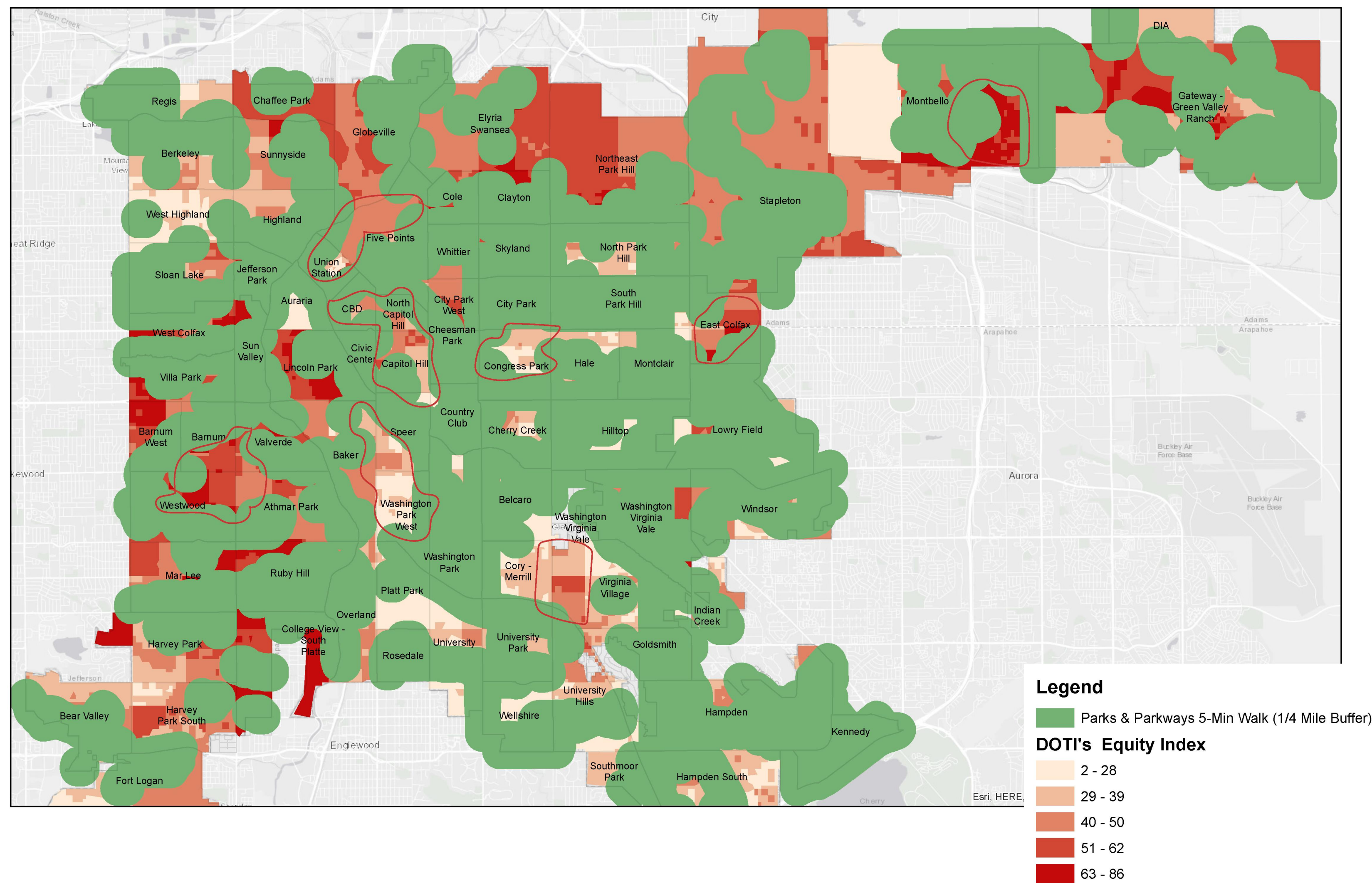
- 11 corridors, ~7.5 mi
- First city to scale
- 100% city program



Denver's Parks and Parkways 1/4 Mile or 5-Minute Walk Buffer With Population Density Below



Denver's Parks and Parkways 1/4 Mile or 5-Minute Walk Buffer With DOTI's Equity Index Below



KPIs: Count Data



77% fewer vehicle trips



28% slower vehicle speeds



11th/16th/Marion > bicyclists
than Cherry Creek Trail

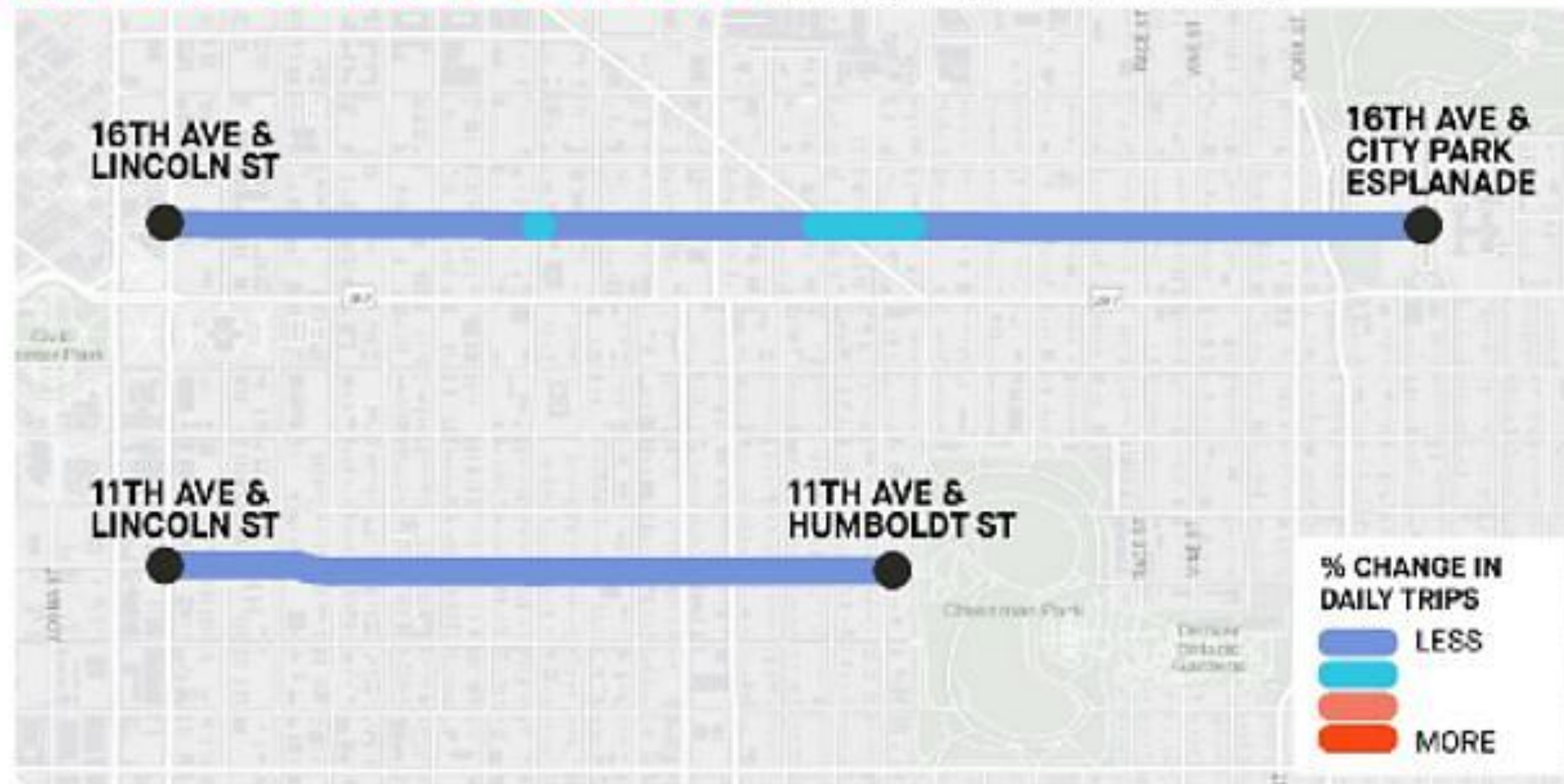


~10K people per day



KPIs: Micromobility Data

BEFORE SHARED STREETS MARCH 19TH-APRIL 2ND



AFTER SHARED STREETS APRIL 3 - APRIL 17



KPIs: Regular Iterations



Community Feedback



**Unanimous
political support**



**Strong community
support**



Advocacy praise



**State & national
recognition**

Making Equity a Reality

Providing attention and resources to the areas, assets and people of the city with the greatest need.

“Recognize that disparities exist.”

“Relentless pursuit of closing the gaps and removing barriers.”