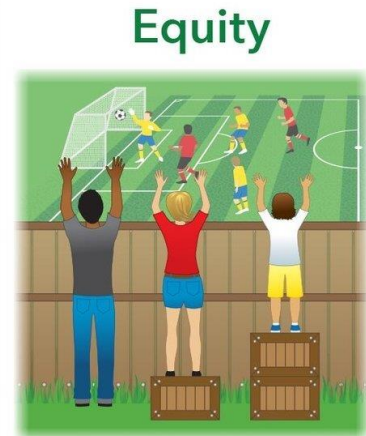
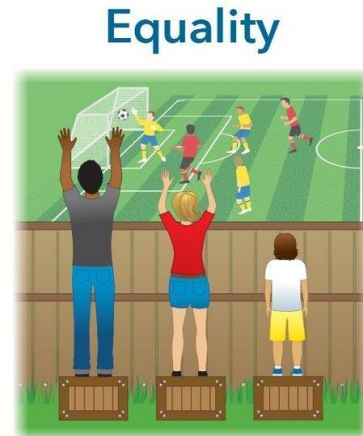

Equity in Pedestrian Transportation

- Presented by: **Solomon Quarm**
- Supervised by: **Dr. John Landosky**



Outline

- Equity – a CITY value
 - Car-dependent transportation is inequitable
 - Planning for Car-Optional Transportation
 - Two Little Rocks
 - Make Walking Useful
 - Make Walking Safe
 - Conclusion
-





CITY OF LITTLE ROCK

CORE VALUES

"Establishing a foundation to build the best Little Rock."

1. EQUITY

Promoting fairness and justice by providing equal access to resources and opportunities for all members of the community, regardless of socio-economic status, race, or background.

2. PEOPLE-CENTERED

Ensuring that all decisions and actions prioritize the well-being and needs of the city's residents, fostering a sense of community and inclusivity.

City Values - Equity

Mission Statement

Vision Statement

Core Values

"We are committed to meeting people where they are and offering access to opportunity **no matter where people live, what they look like, or how much money is in their wallet.**"

Mayor Frank Scott Jr. 2024 State of the City Address

Car-Dependent Transportation
=
Inequitable Transportation



Little Rock is a Car-Dependent city

Most errands require a car.



Little Rock has Minimal Transit

It is possible to get on a bus. [Find Little Rock apartments](#)



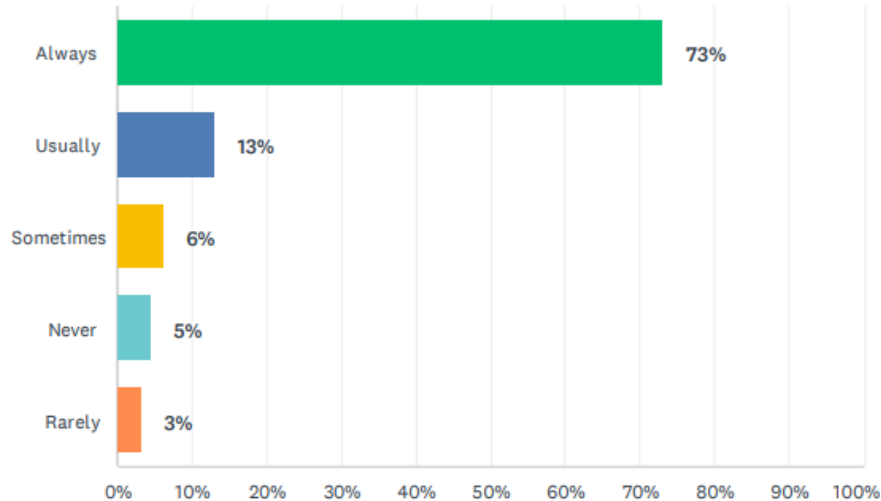
Little Rock is Somewhat Bikeable

Minimal bike infrastructure.

Car-Dependent = Inequitable

Do you have access to a personal motor vehicle?

Answered: 1,174 Skipped: 212

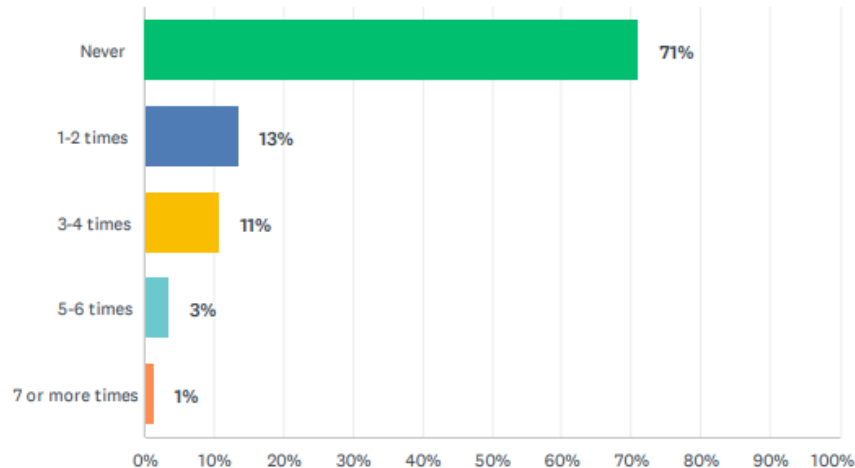


- Transportation Insecurity
 - Under 16
 - Many older residents
 - Medical conditions (e.g. epilepsy)
 - Disability
 - Can't legally drive
 - Low-income

Consequences of Transportation Inequities

Within the last year, how often have you missed work, school, or an appointment because of a lack of transportation?

Answered: 1,156 Skipped: 230



- Perpetuates poverty
 - School
 - tardiness
 - truancy
 - Jobs
 - fewer opportunities
 - poorer performance

Low-Income = Racial Inequity in CLR

- **Our racial disparity in poverty twice U.S. average***
 - 26.2% of Black residents in poverty**
 - 6.9% of white residents in poverty**
- **White households have double the income of Black households**
 - \$65.3K/year vs. \$32.7K/year***

* US News and World Report: Overview of Pulaski County

** US Census 2022 ACS 5-Year Survey (Table S1701)

*** Statistical Atlas

Planning for Car-Optional Transportation

Car-Optional Requires Walking, Biking, and Transit



<1/2 mile



1/2 mile – 4 miles



>4 miles

Bus requires walking/biking to get to and from bus stop

Complete Streets

WHAT IS A COMPLETE STREET?



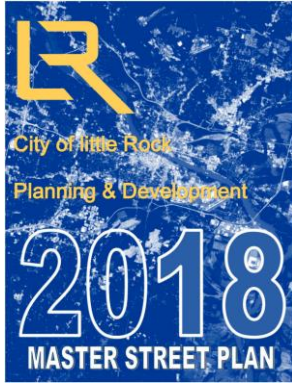
CS Resolution #13,675 (2013)

- Master Street Plan = Complete Streets implementation plan

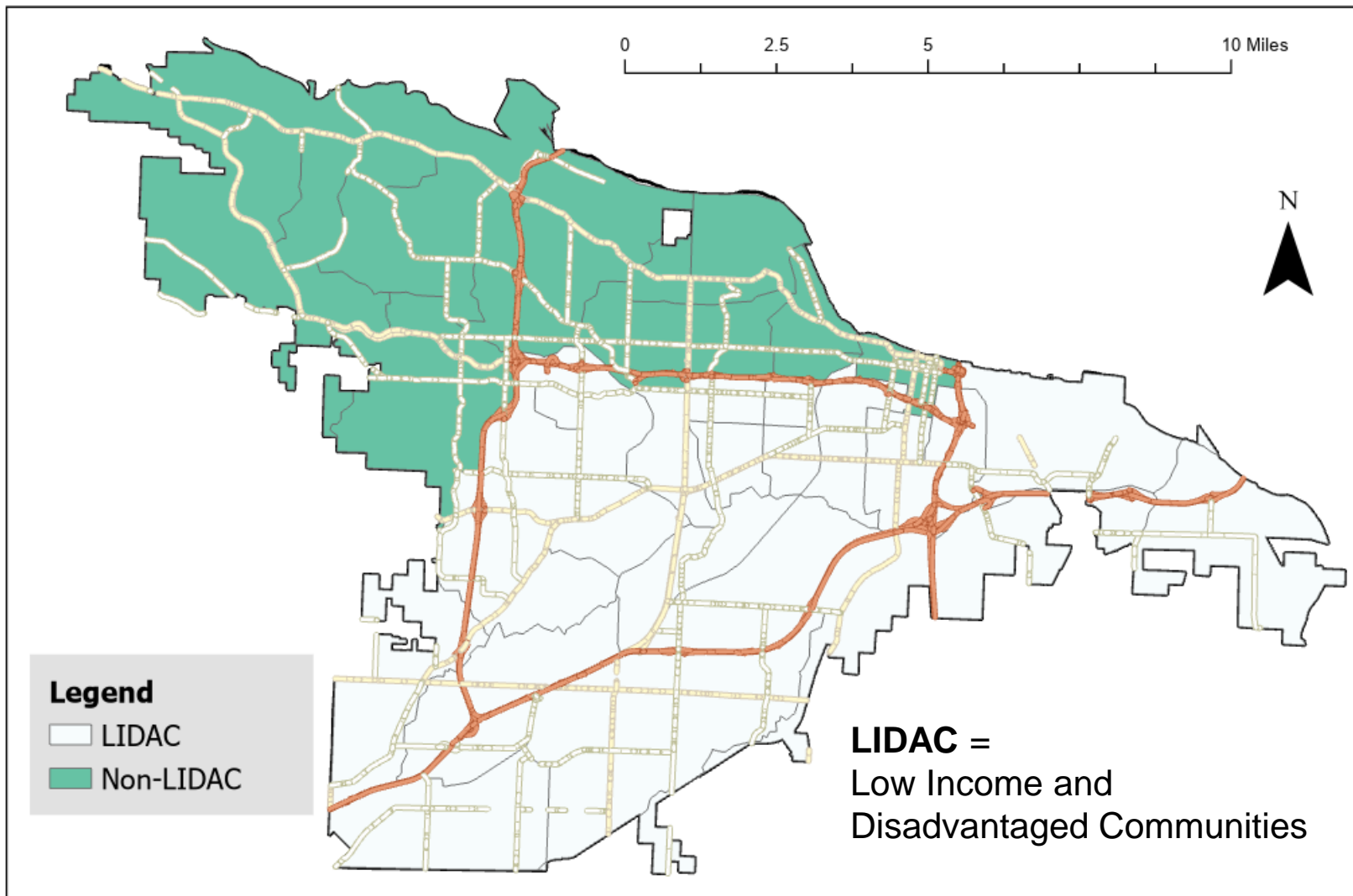
CS Ordinance #21,029 (2015)

- Streets shall be made complete after resurfacing unless exception

Master Transportation Plan

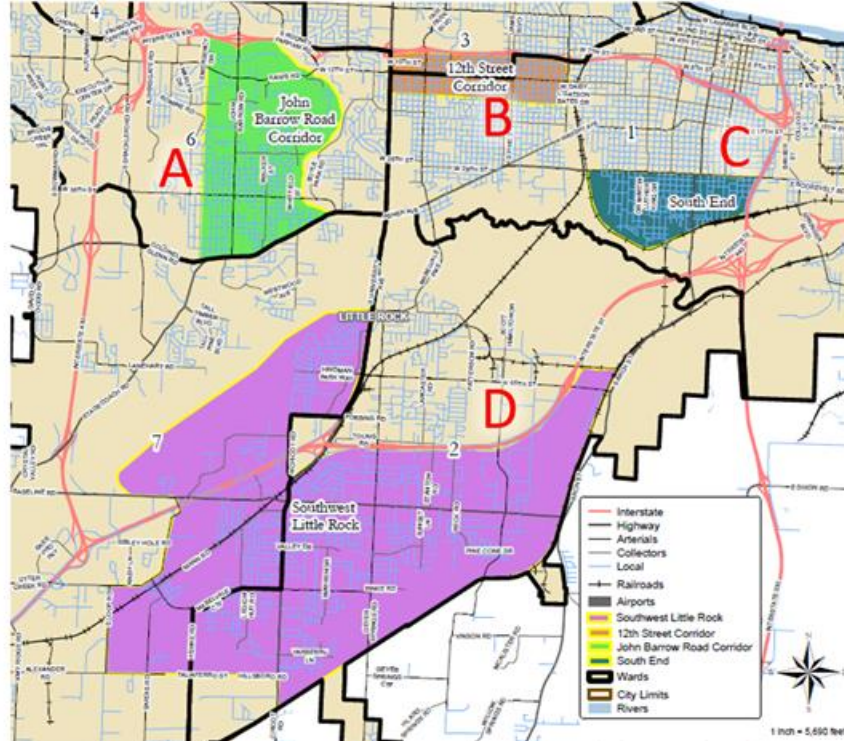


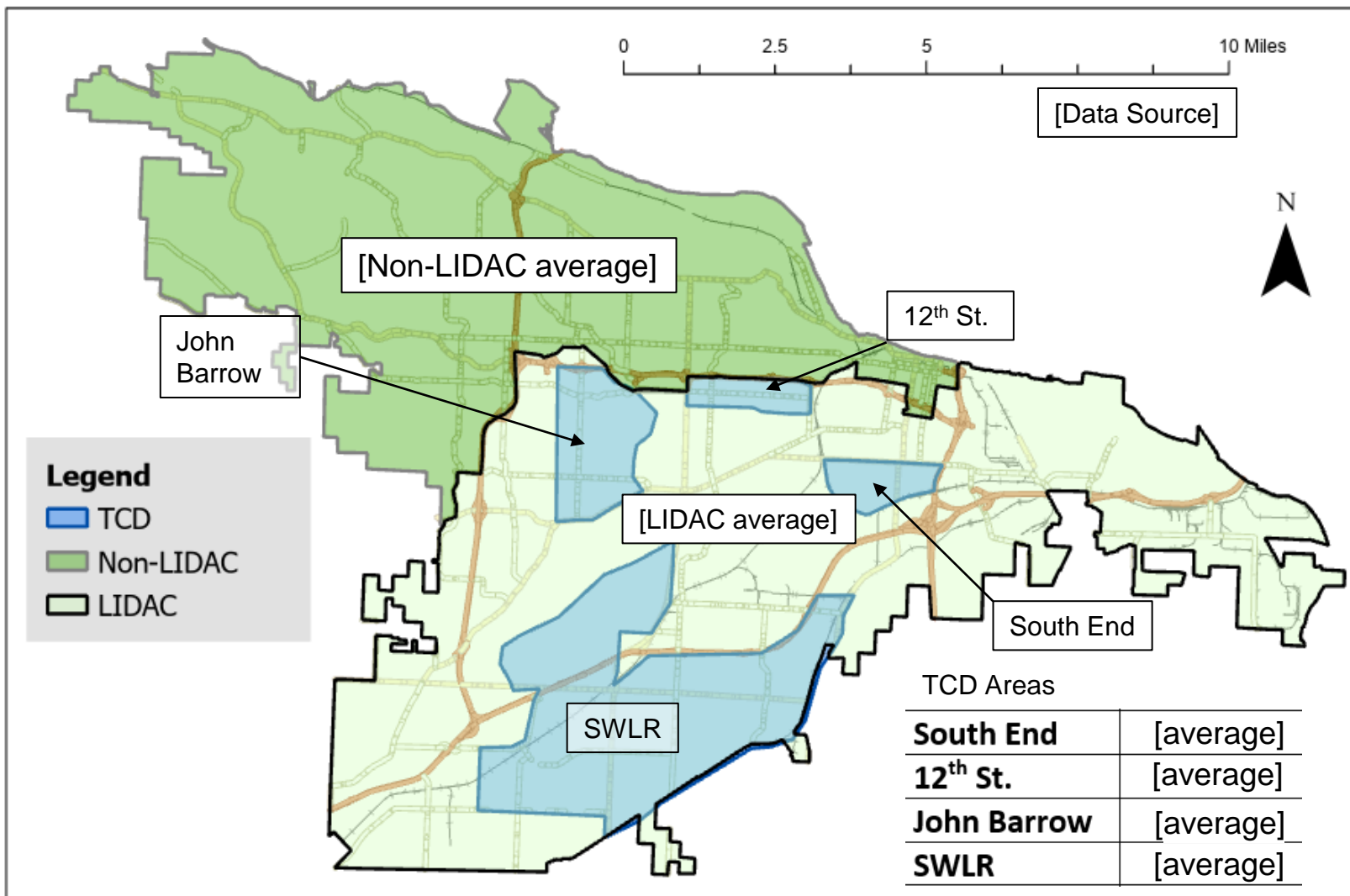
Two Little Rocks



Targeted Community Development Initiative

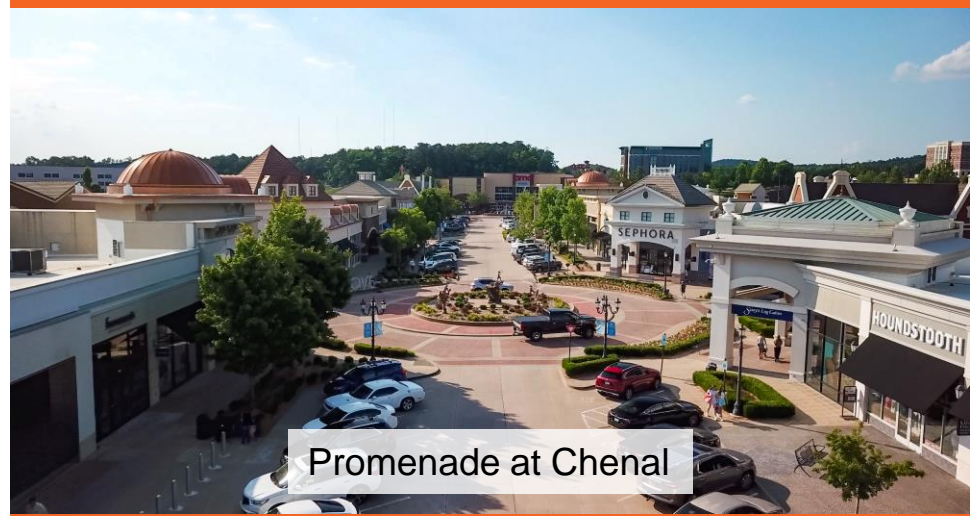
- A:** John Barrow Corridor
- B:** 12th Street Corridor
- C:** South End
- D:** Southwest Little Rock

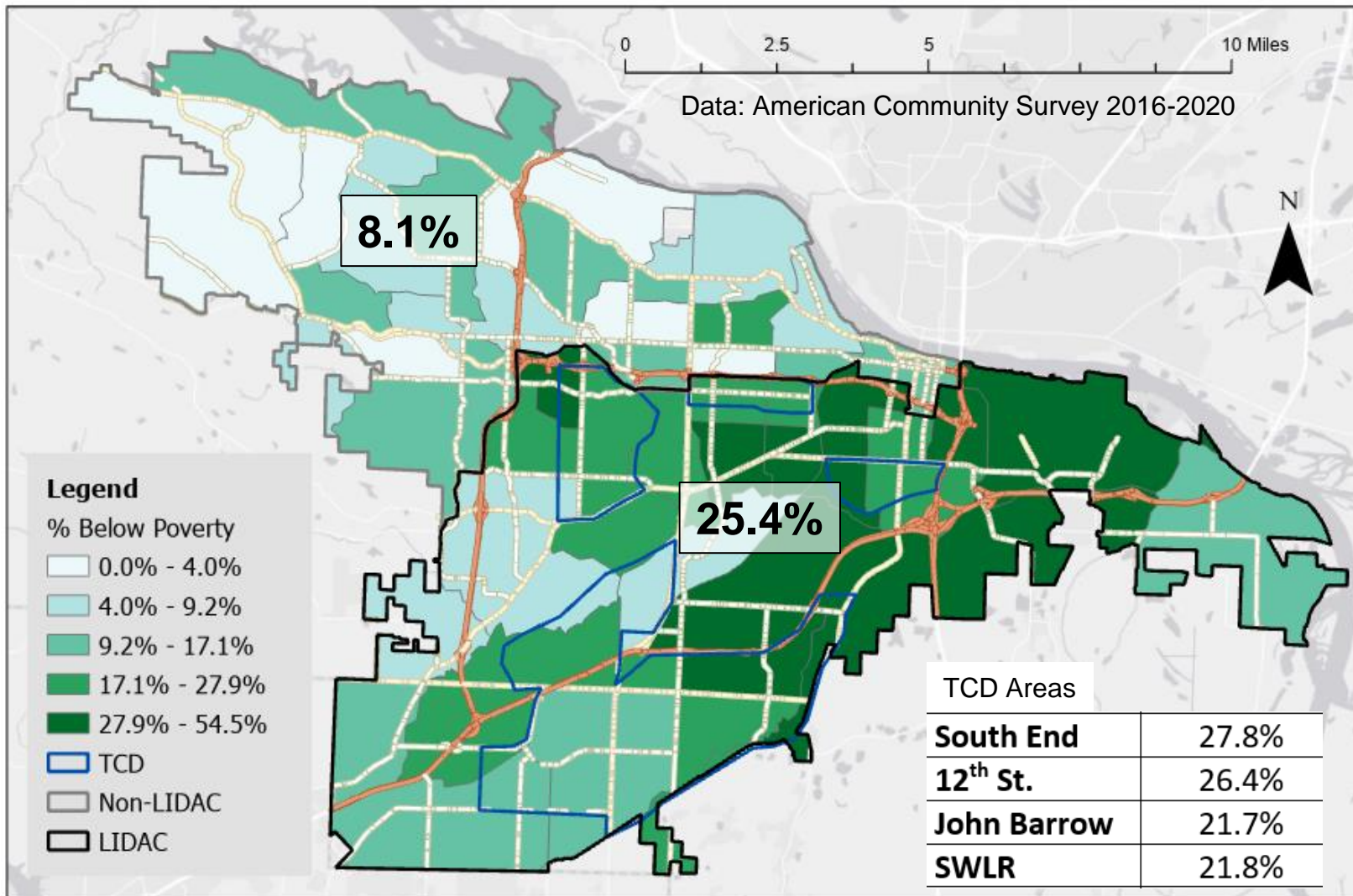


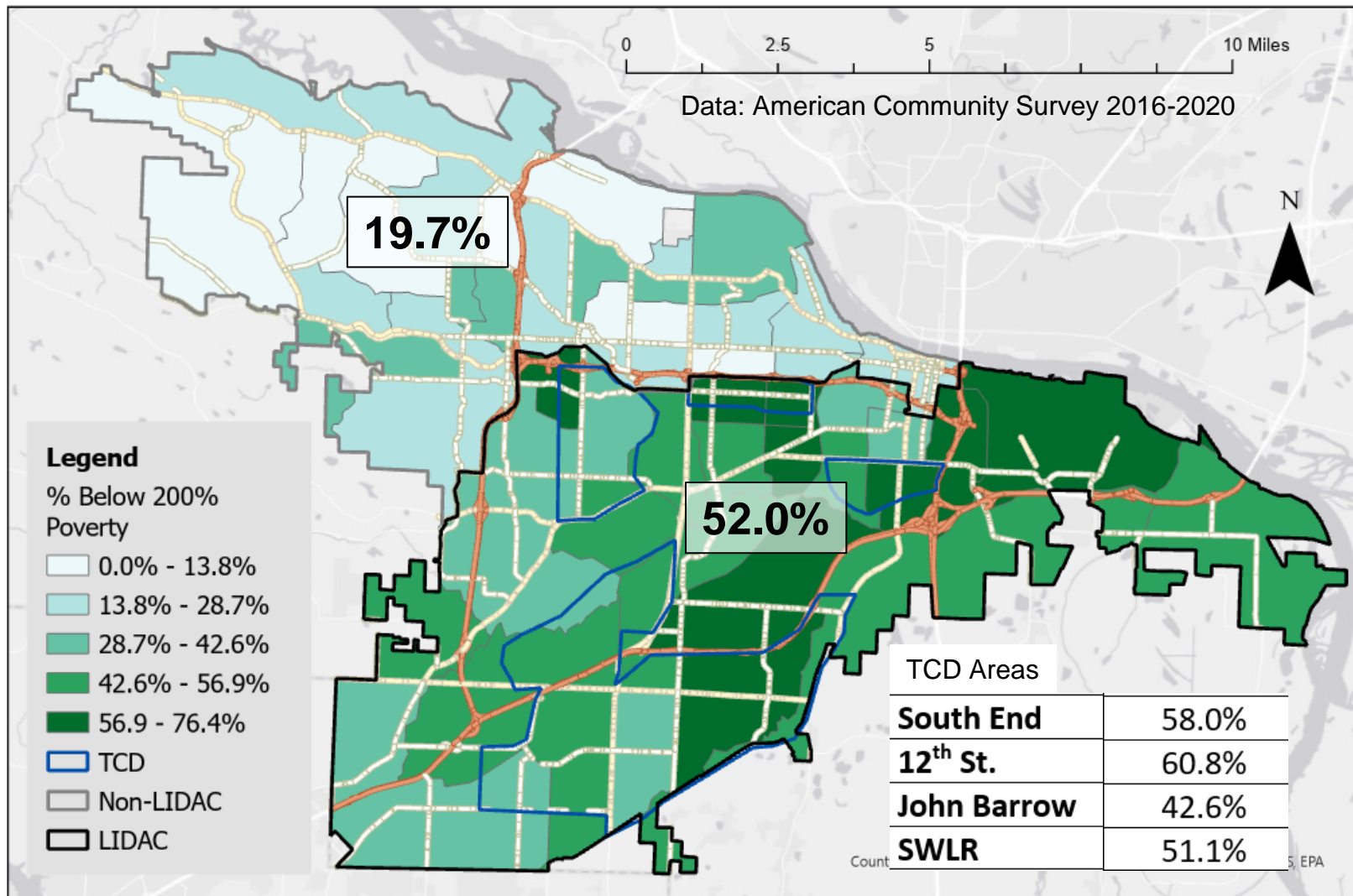


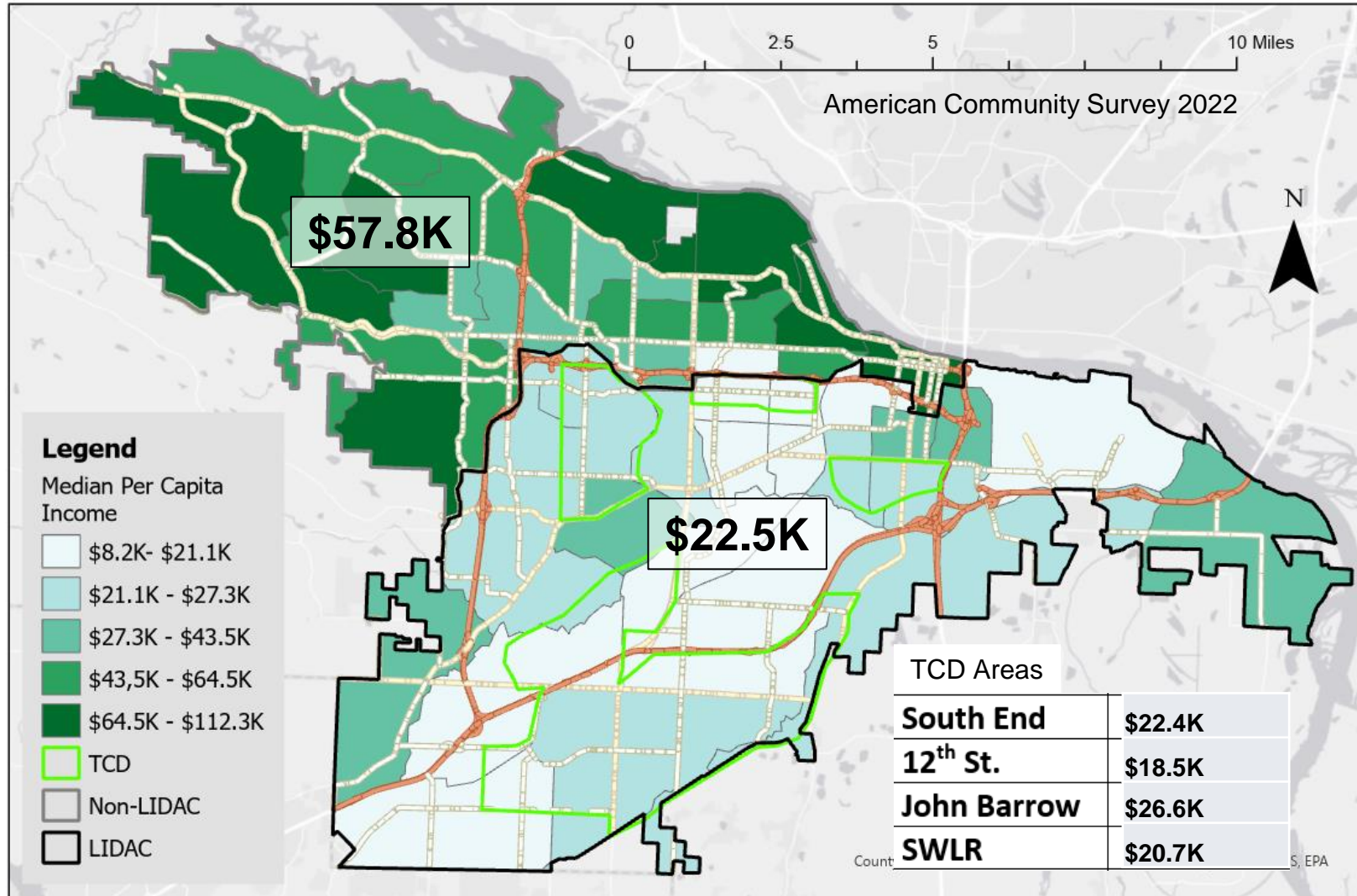
Two Little Rocks

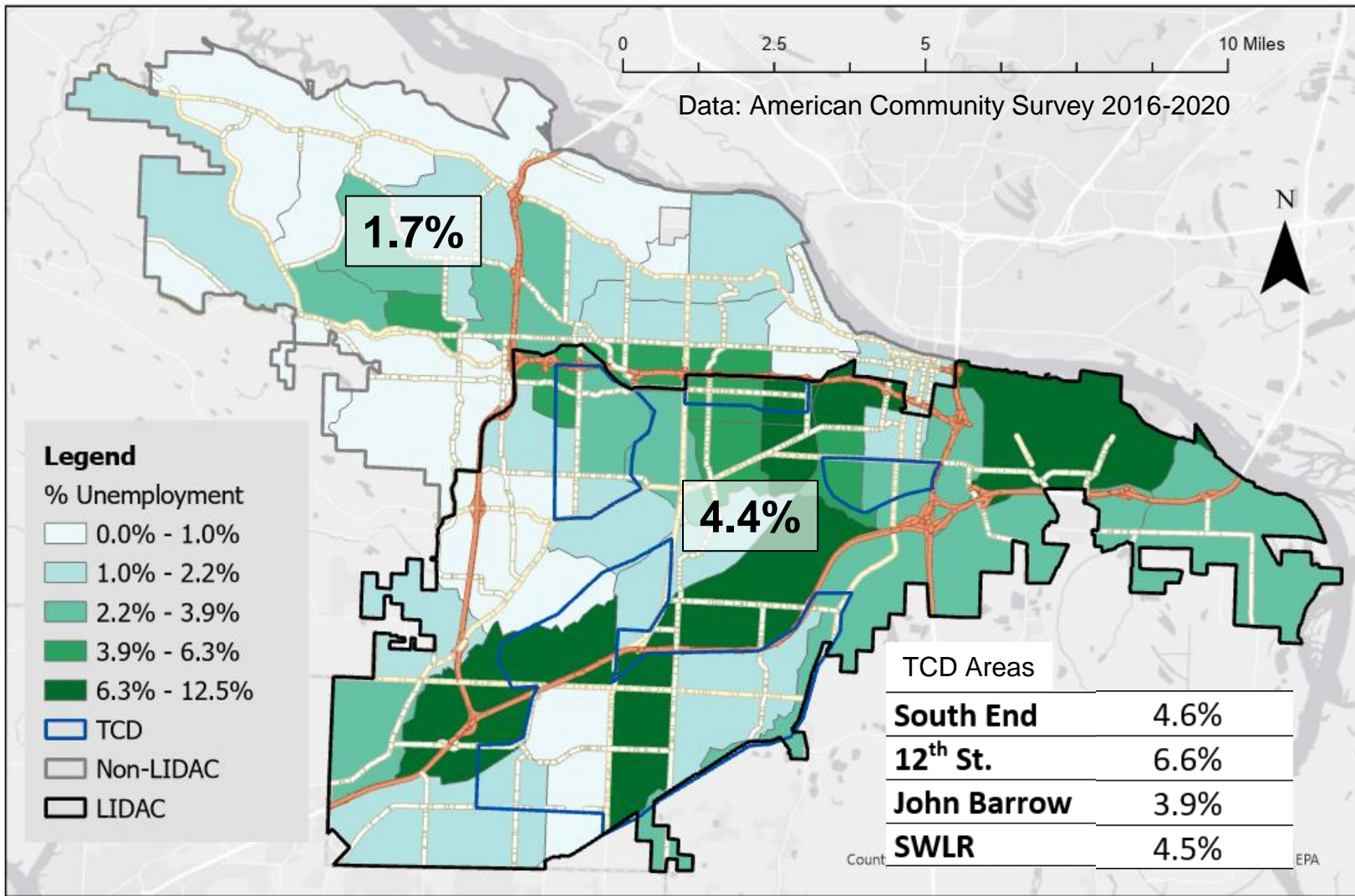
Economics

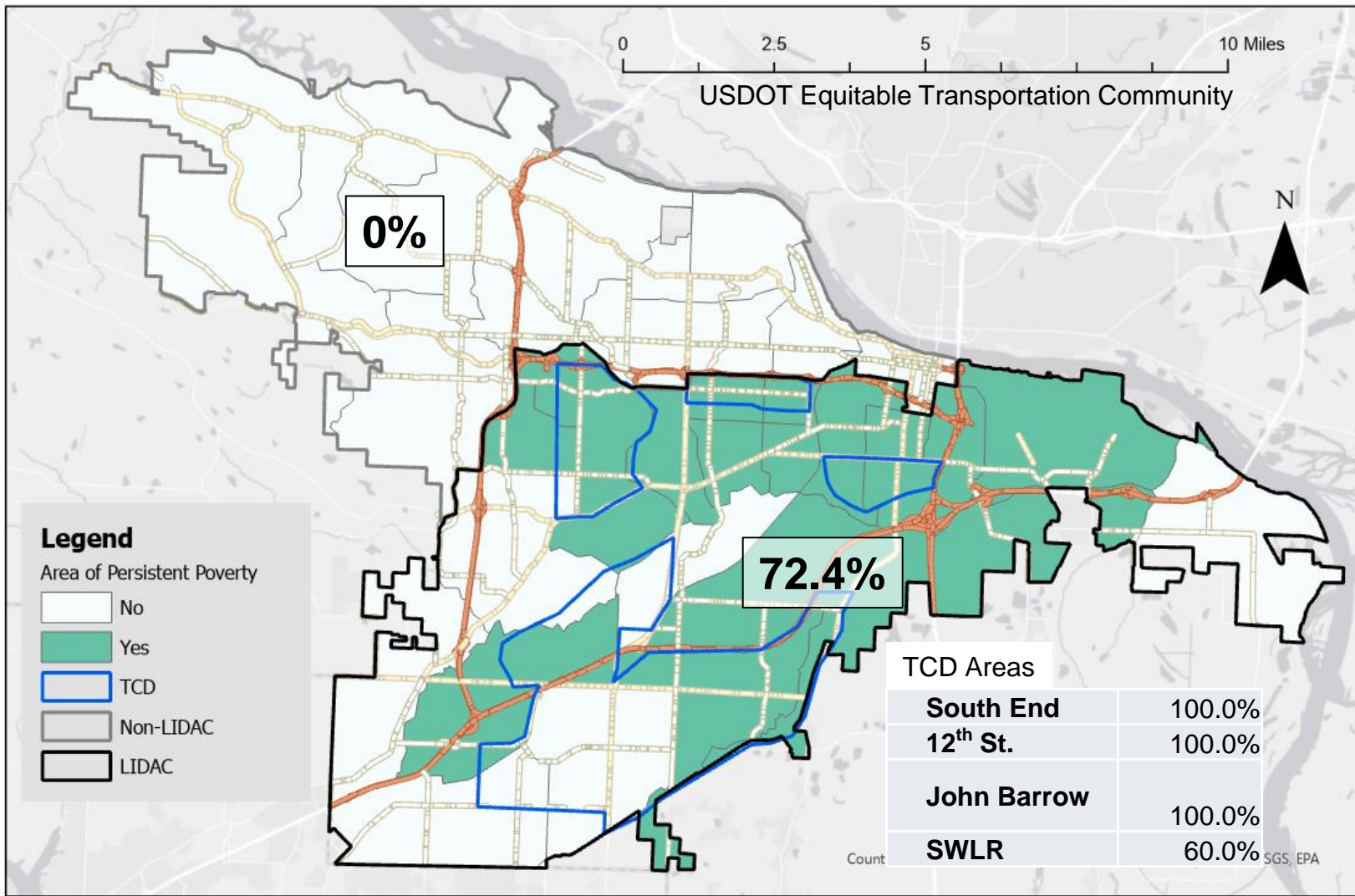








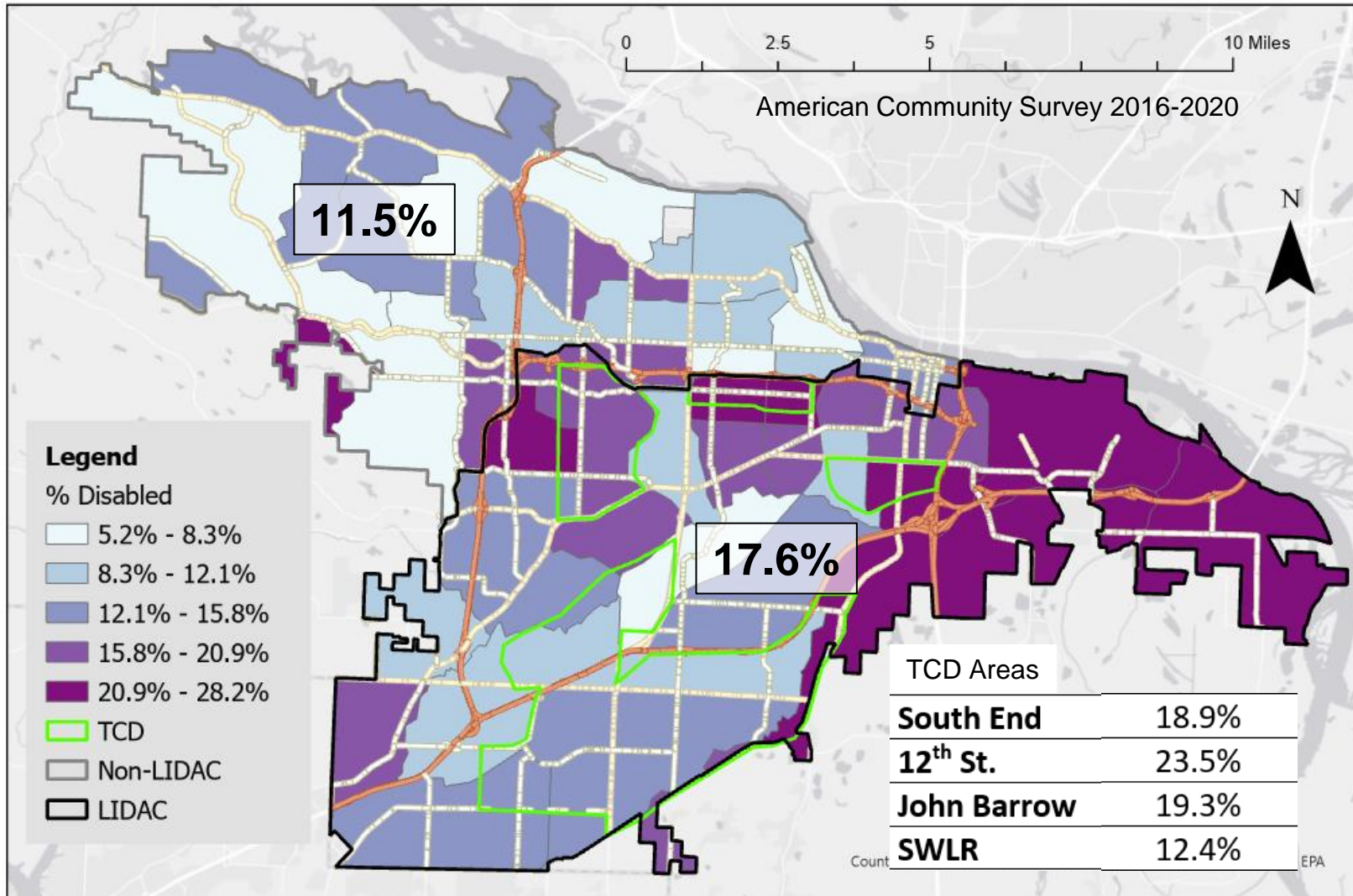


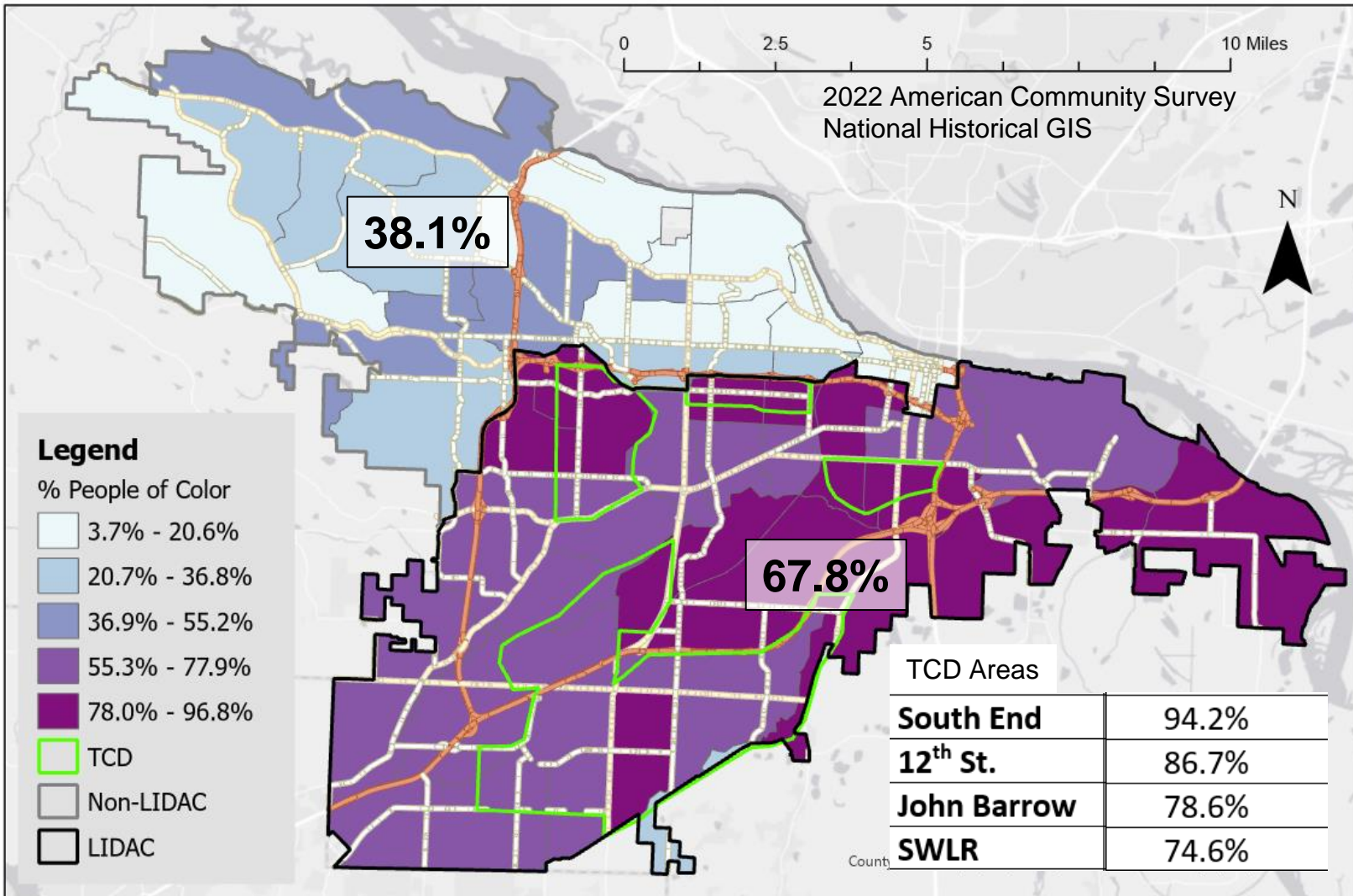


Two Little Rocks

Demographics



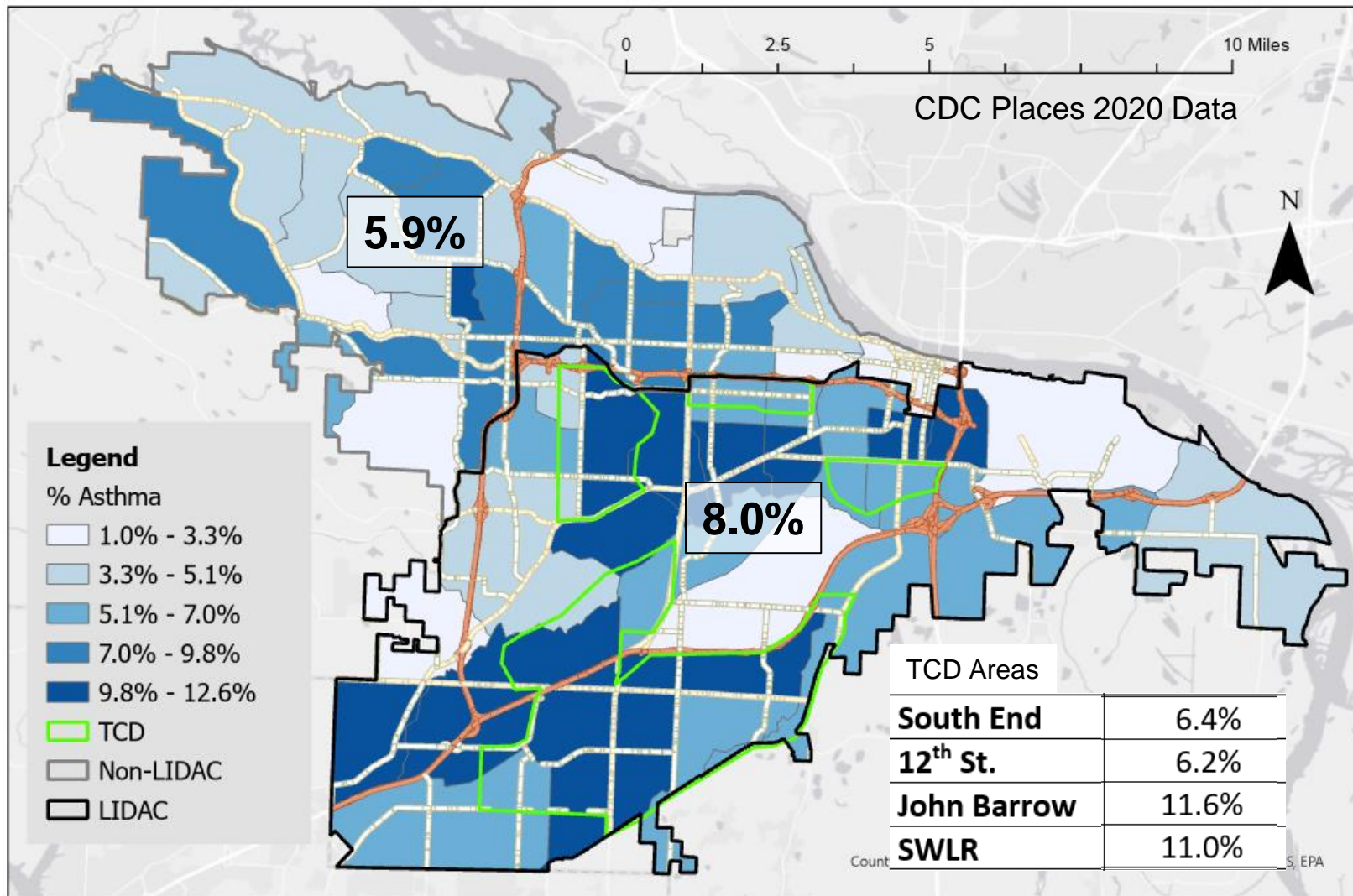


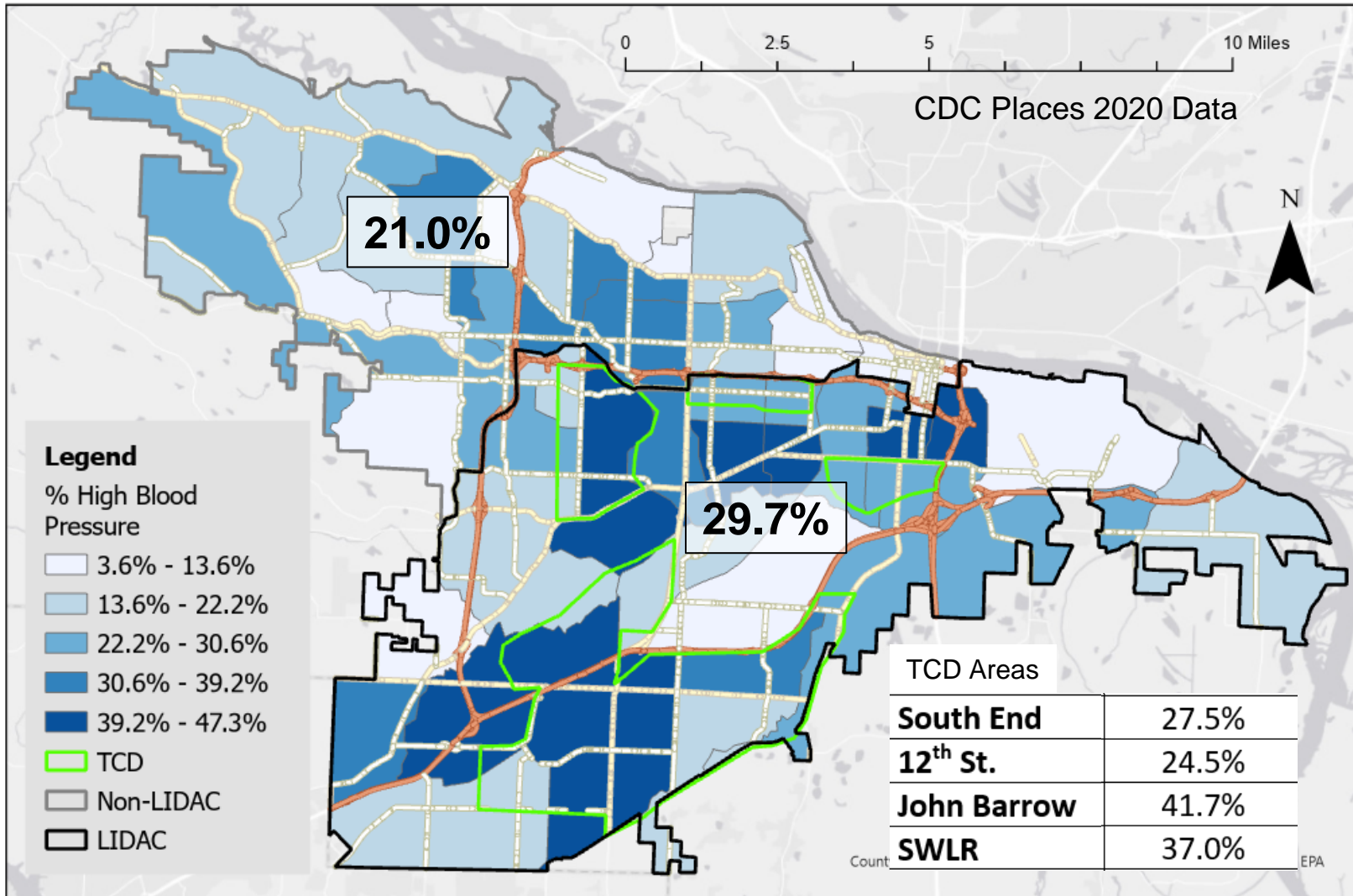


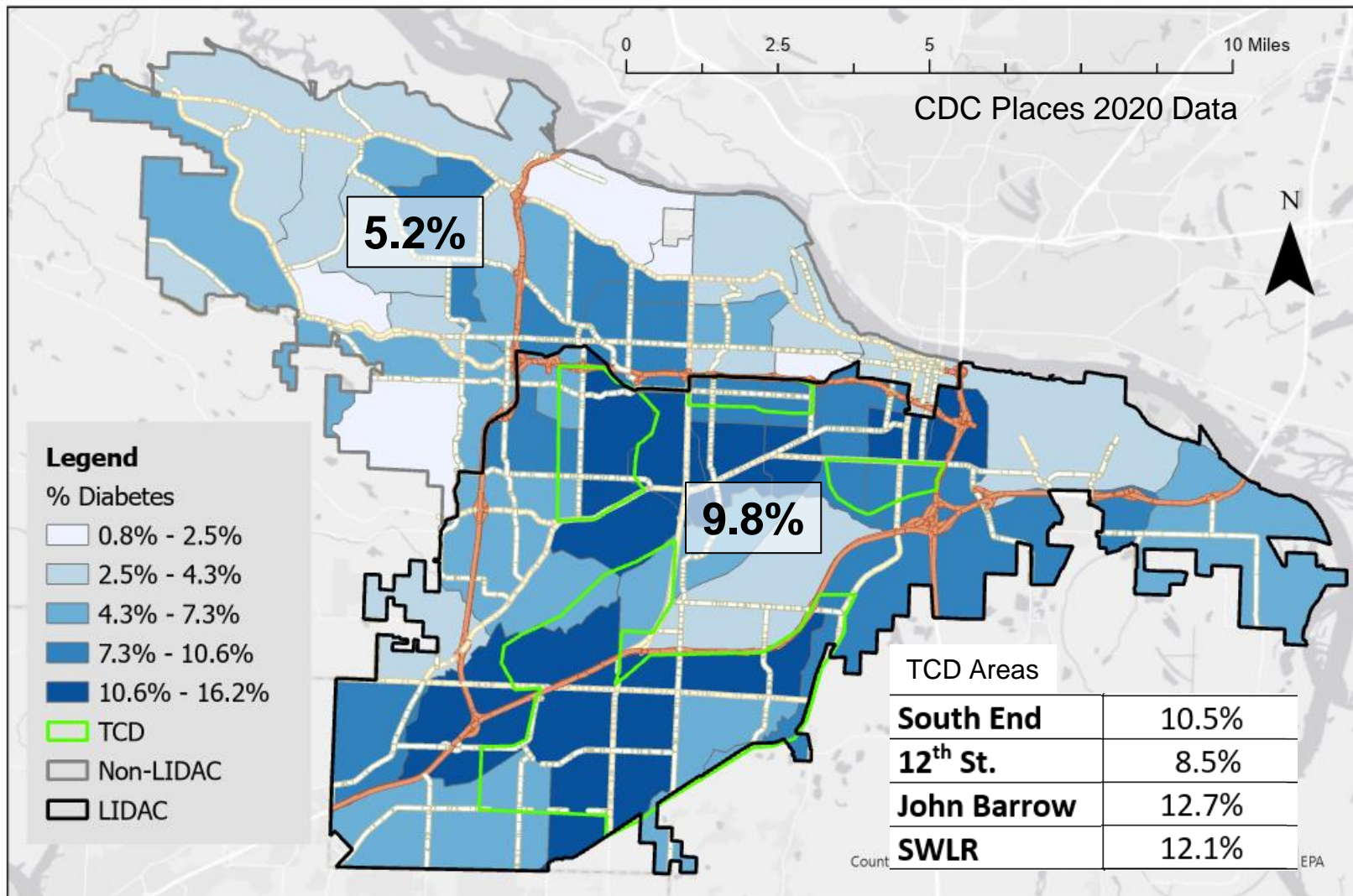
Two Little Rocks

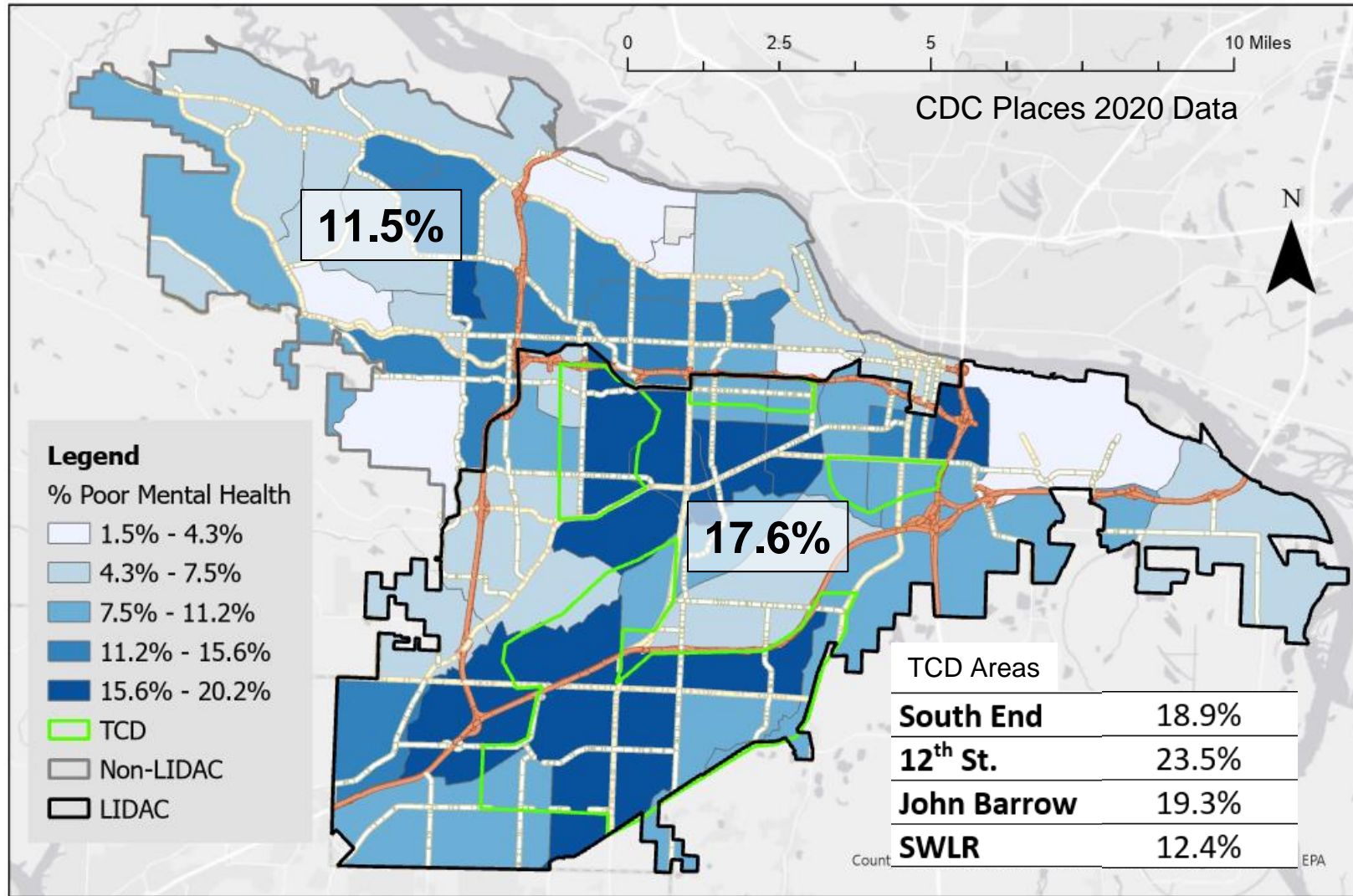
Health









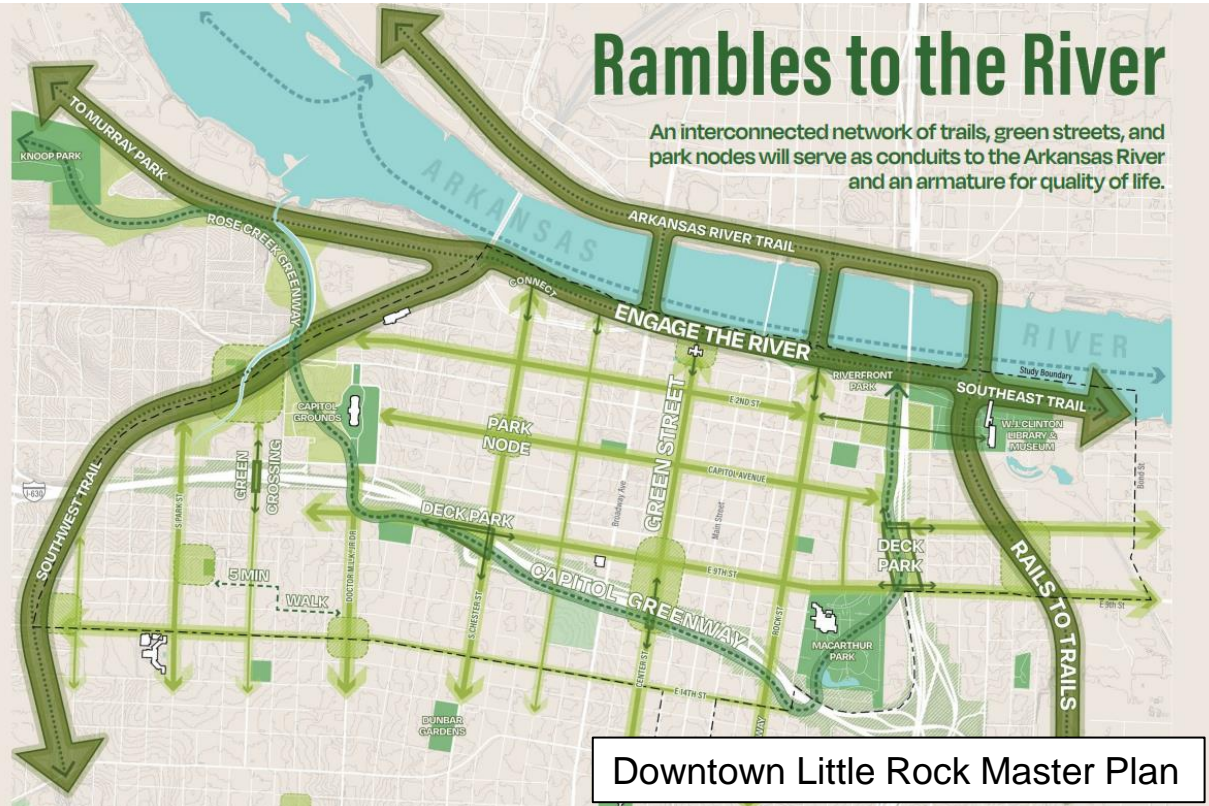


Recommendations

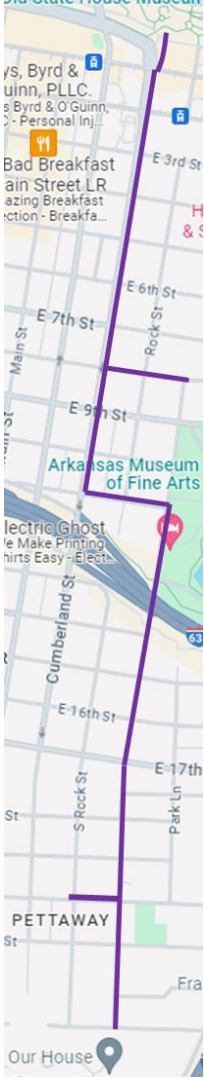
- Create affordable high-density housing north of I-630
- Inclusionary Zoning
 - >25% of units below-market-rate
 - Permanent
 - Spatially integrated
- Prevent merging parcels to create large single-family homes
- Create BikePed I-630 crossings



Recommendation: I-630 crossings



- Reorienting to the River requires connectivity to the river
- Equity requires connectivity across I-630



Recommendation: I-630 crossing

- The Pettaway Ramble
 - a.k.a. the Commerce Street Accessible Neighborhood Greenway
- Pop-Up December 2023
- Future Pop-Up May 2024



PLAN ONLY



Recommendation: I-630 crossing

- Complete Streets: Bicycle Plan
- One of three Priority Projects is an I-630 crossing at State Street

PLAN ONLY





Recommendation: I-630 crossing

- Southwest Trail
- Locally, the Southwest Trail will provide a low-stress I-630 crossing

\$1.67M in 2017
\$1.3M in 2020
Not yet fully funded

Recommendation: I-630 crossing



- Jonesboro Children's Trail
- Low-stress I-630 crossing at Jonesboro



APPROVED AND MOSTLY FUNDED

Make Walking Useful

Walk Score

Rodney Parham (cars)

Cantrell (cars)

Heights

Hillcrest

River Market

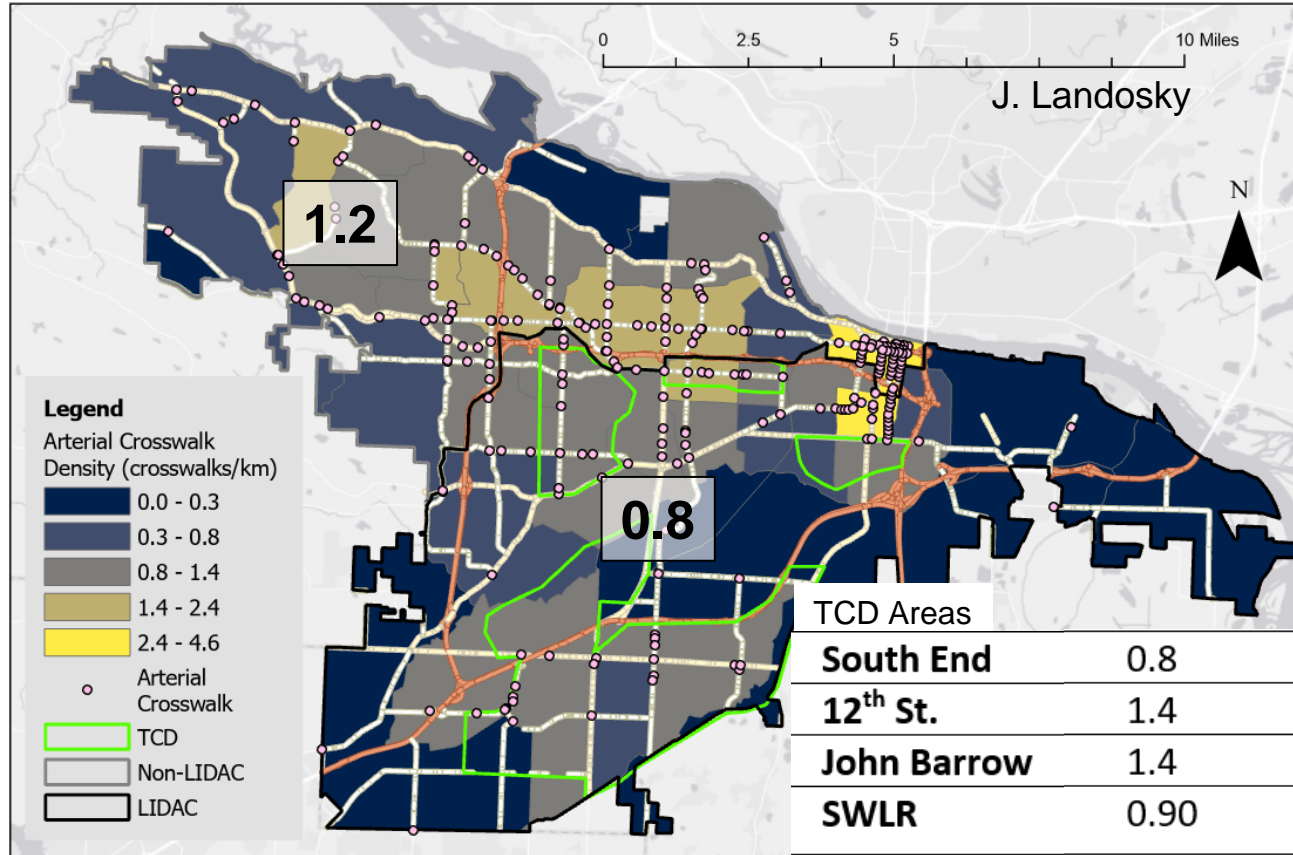
Markham/Bowman (cars)

SoMa

Geyer Springs/Baseline (cars)

Walk score = concentration of destinations
Several green spots are car-centric

Fewer Arterial Crosswalks south of I-630



Data from J. Landosky observing 2021 aerial imagery

Recommendations

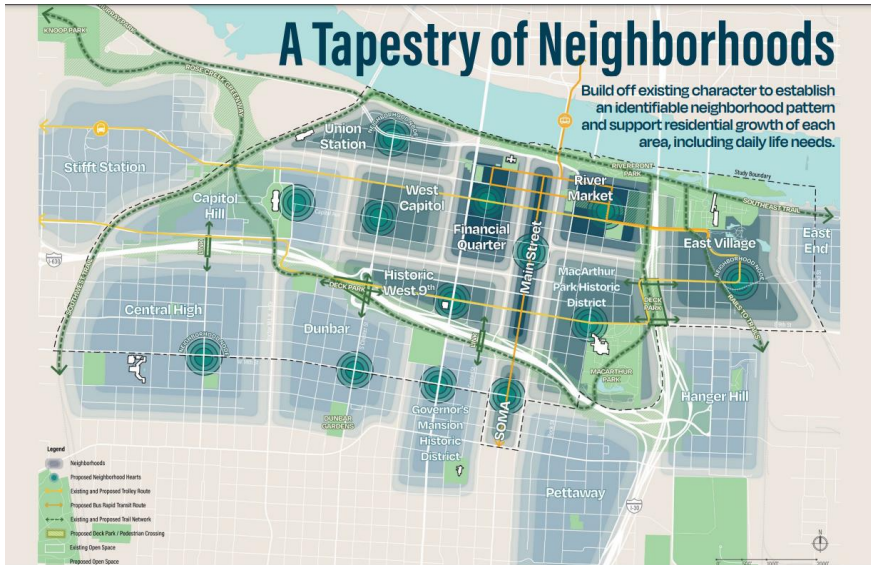


Figure from the Downtown Little Rock Master Plan

- Create neighborhood-oriented business districts south of I-630
- Facilitate innovation for small-scale, local developers
- Within residential zoned areas, welcome pockets of General Commercial zoning (C3)
- Require connectivity in the street grids of new development
- Retrofit cul-de-sac street grids with BikePed connectivity where possible
- Create Arterial crossings

Recommendation: Street Grid Connectivity



Driving-only transportation pattern

- Eliminates useful walk
- Funnels all traffic to Arterials
 - makes them much more dangerous for all users
 - forces BikePed onto them
- Should be discouraged



Walkable connected transportation network

- Retains useful walk
- Creates traffic flow choices
 - More resilient to individual street closure
 - BikePed can choose most direct/least stressful route
- Makes transit work
- Should be encouraged

Recommendation: Arterial Crosswalks

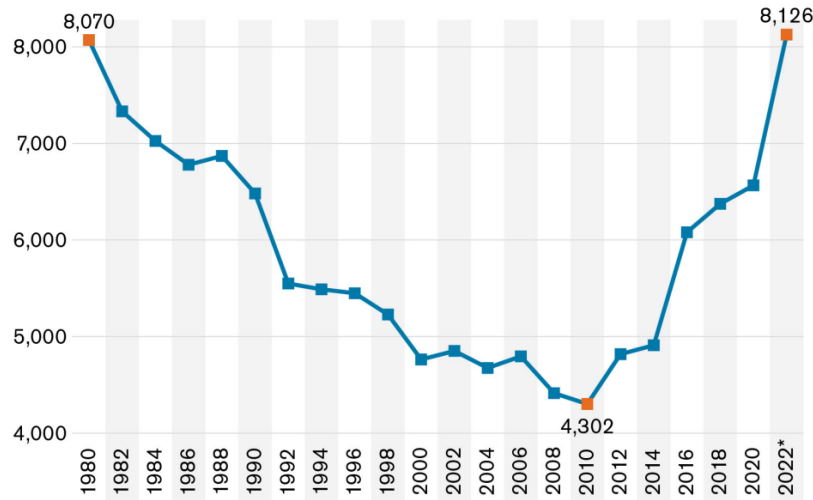


- Prioritize intersections that
 - Have traffic light
 - Have sidewalk corridors on both sides of Arterial
 - Are along or within ½ mile of transit route
- Stripe hi-vis crosswalks
- Install pedestrian refuge islands
- Install ped buttons
- Create pedestrian refuge islands
- Install overhead street lighting

Make Walking Safe

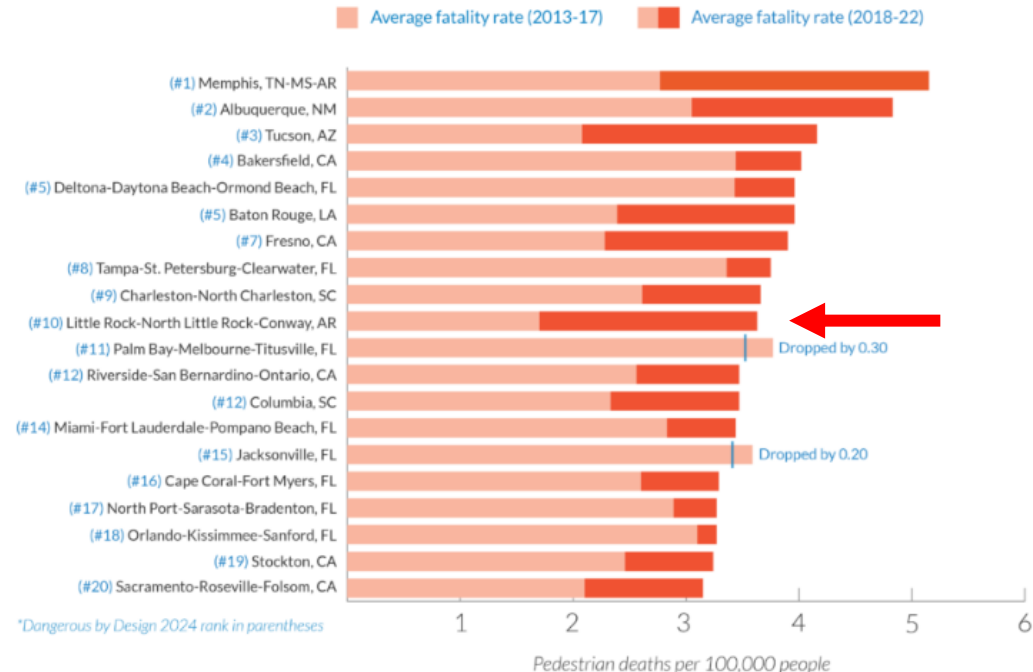
Walking in Little Rock is Not Safe

Figure 5 Number of Annual U.S. Pedestrian Fatalities, 1980-2022



*Projected
Sources: FARS and GHSA analysis of SHSO data

All but two of the top 20 are getting more deadly
The most dangerous metro areas are getting more deadly



*Dangerous by Design 2024 rank in parentheses

Bike Commuting in Little Rock is not Safe

Bicyclist Fatalities per Bicyclist Commuters over Time

Figure 3.4.8 - Bicyclist Fatalities per Bicyclist Commuters over Time

There is limited data on how often people bicycling are exposed to vehicle traffic. Comparing bicyclist fatalities by the number of people who bike to work uses readily available federal data to provide an estimate of exposure. Large percentage changes can occur due to either an increase in fatalities or a decrease in the number of bicycle commuters.

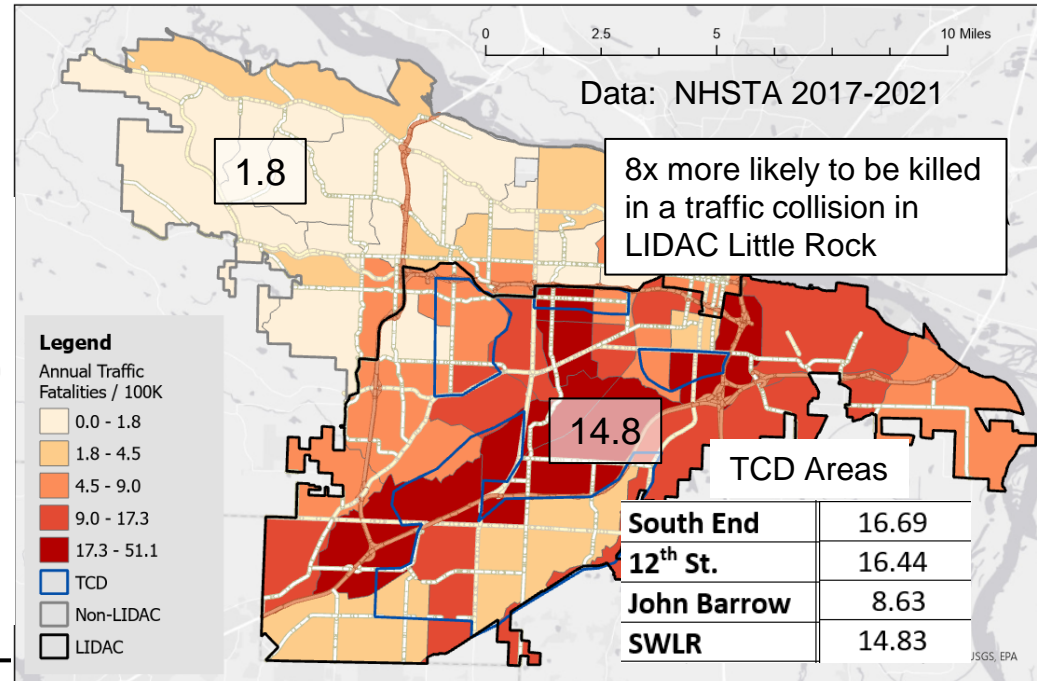
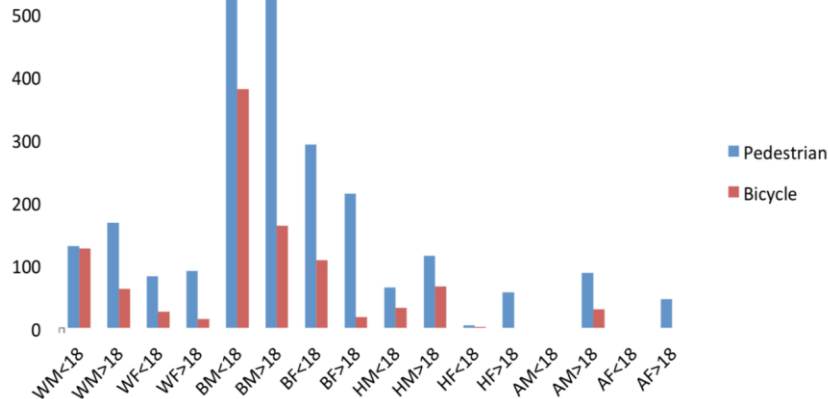
Search in table

Page 1 of 2

Community	State	2012-2016 Average	2017-2021 Average	Difference	Percent Change
Jackson	MS	32.3	169.0	136.8	424%
Newark	NJ	31.8	112.0	80.2	252%
Little Rock	AR	13.3	82.8	69.5	521%
Arlington	TX	17.0	49.6	32.6	192%
Jacksonville	FL	24.1	48.0	23.9	100%
Tulsa	OK	11.2	47.6	36.4	325%
Charlotte	NC	15.0	44.5	29.6	198%
Oklahoma City	OK	34.3	39.1	4.8	14%
Fresno	CA	10.4	36.5	26.1	251%
Memphis	TN	17.6	36.1	18.5	105%
Louisville	KY	12.2	30.6	18.4	152%
Montgomery	AL	29.4	29.0	-0.4	-1%
Colorado Springs	CO	3.2	27.7	24.5	756%
Dallas	TX	9.0	26.5	17.5	195%
San Antonio	TX	26.8	24.8	-2.0	-8%
Indianapolis	IN	11.2	22.6	11.3	101%
Houston	TX	9.0	21.3	12.3	138%
Detroit	MI	20.2	20.9	0.7	3%
Cheyenne	WY	29.4	20.4	-9.0	-31%
Miami	FL	12.9	19.6	6.7	52%

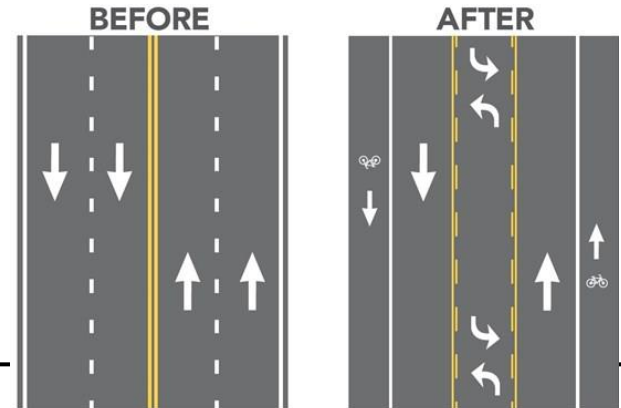
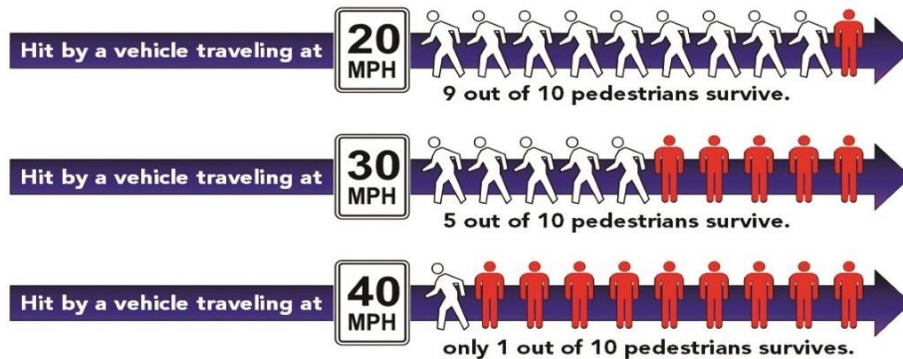
Particularly for LIDAC Residents

- Black residents 3x more likely to be hit by a car while walking or biking vs. white residents



Recommendations

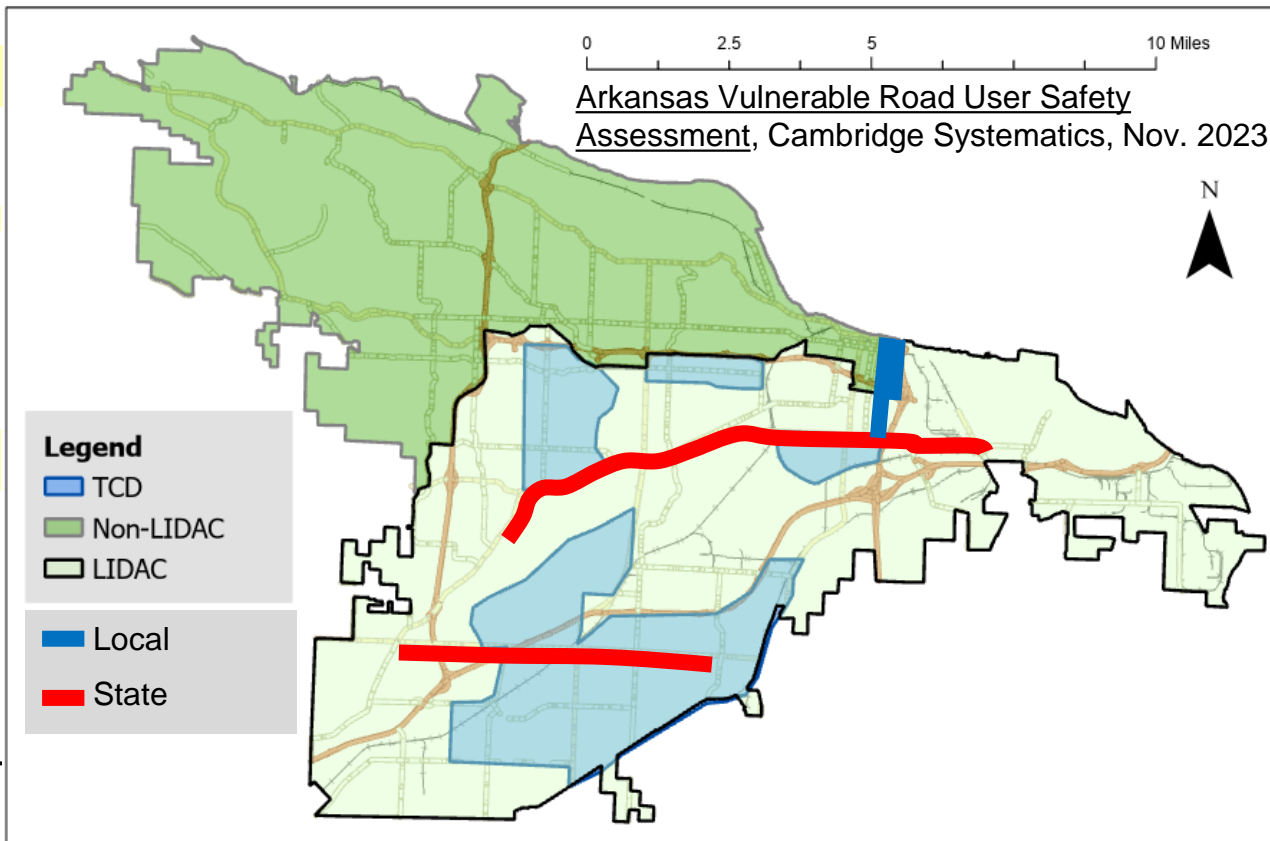
- Adopt Vision Zero
- Curb illegal speeding with design
- Road Diet four-lane streets
- Focus on the most dangerous corridors
- Fund bicycle and pedestrian infrastructure like it's life or death



Recommendation: Most Dangerous Corridors for BikePed

ID	NAME	MPO AREA
S1	Hwy 338 (Baseline Rd)	Metroplan
S2	US-70 (Asher Ave)	Metroplan
S3	Hwy 141 (N Main St)	N.A.R.T.P.C.
S4	Hwy 7 (Central Ave)	Tri-Lakes MPO
S5	US-67 (T.P. White Dr)	Metroplan
S6	US-70 (Roosevelt Rd)	Metroplan
S7	US-70 (E Broadway Ave)	West Memphis MPO
S8	US-70 Business (Grand Ave)	Tri-Lakes MPO
S9	Hwy 365 (Pike Ave)	Metroplan
S10	Hwy 91 (E Johnson Ave)	N.A.R.T.P.C.

ID	NAME	MPO AREA
L1	Main St	Metroplan
L2	Cumberland St	Metroplan
L3	Grand Ave	Frontier MPO
L4	N Locust St	Metroplan
L5	N Greenwood Ave	Frontier MPO
L6	Union St	N.A.R.T.P.C.
L7	Spring St	Tri-Lakes MPO
L8	S Powell St	NWARPC
L9	S Main St	N.A.R.T.P.C.
L10	Malvern Ave	Tri-Lakes MPO



Recommendation: Fund BikePed Infrastructure

- City of Little Rock Street Fund
- Targeted Community Development Funds
- Federal Transit Authority funds when possible
- Encourage ARDOT to address BikePed safety in their corridors
- Safe Streets for All Implementation Grant (Metroplan)
 - May 16, 2024
- Active Transportation Infrastructure Investment Program (FHWA)
 - June 17, 2024
- Rebuilding American Infrastructure with Sustainability and Equity (RAISE)
 - February 2025

Why is LIDAC Little Rock so dangerous? Hypotheses:



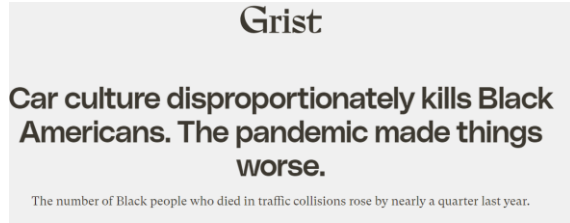
Black, Native, low-income people more likely to be killed while walking: Report

Black, Native and low-income pedestrians are more likely to be killed.

By [Kiara Alfonseca](#)
July 12, 2022, 2:03 PM



CRIMINAL JUSTICE



Even walking is more dangerous if you're black

By German Lopez | [@germanlopez](#) | [german.lopez@vox.com](#) | Oct 27, 2015, 2:00pm EDT

The New York Times

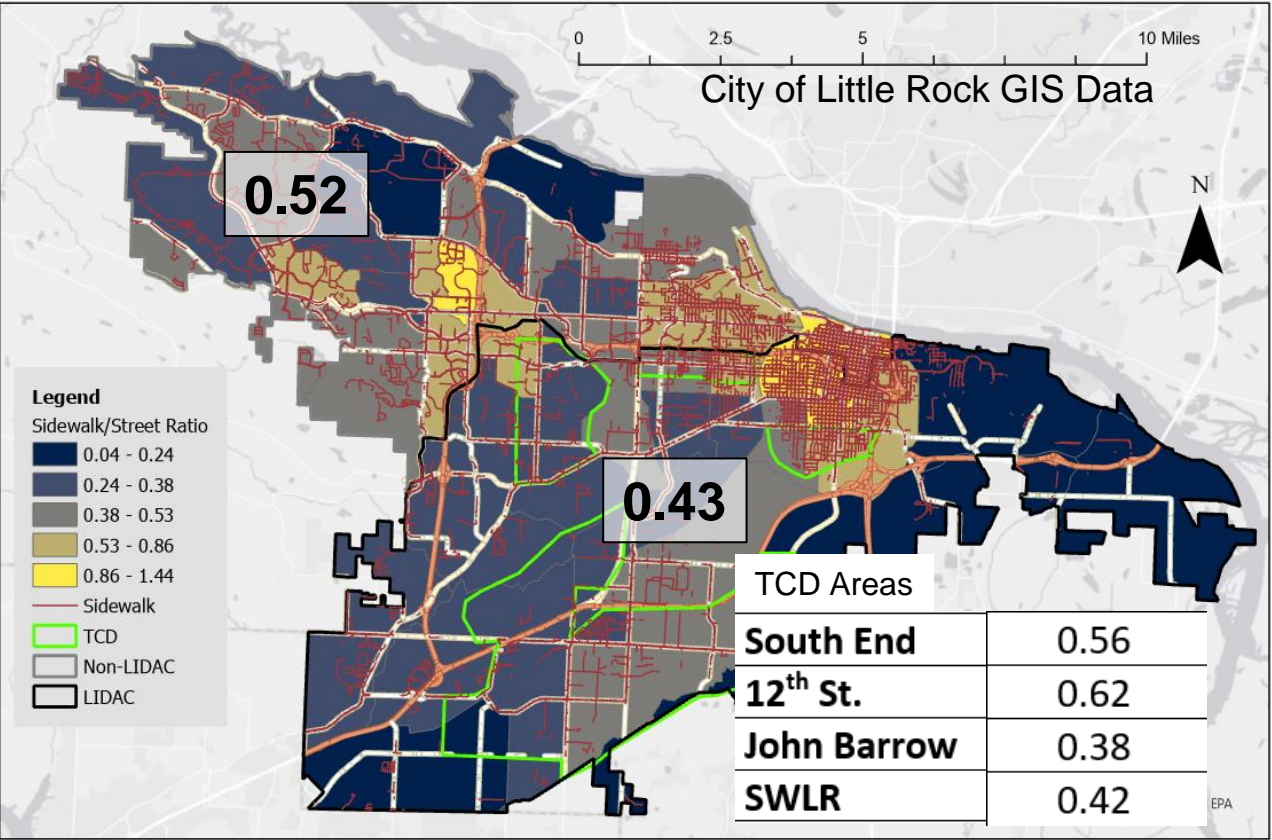
American Road Deaths Show an Alarming Racial Gap



- Fewer sidewalks
- Fewer bike facilities
- More Arterial roads
- Fewer Arterial crossings ✓
- Fewer parks
- Less transit access
- Fewer streetlights
- Less effective streetlights
- Greater dependence on walking/biking/transit



Fewer sidewalks in LIDAC Little Rock

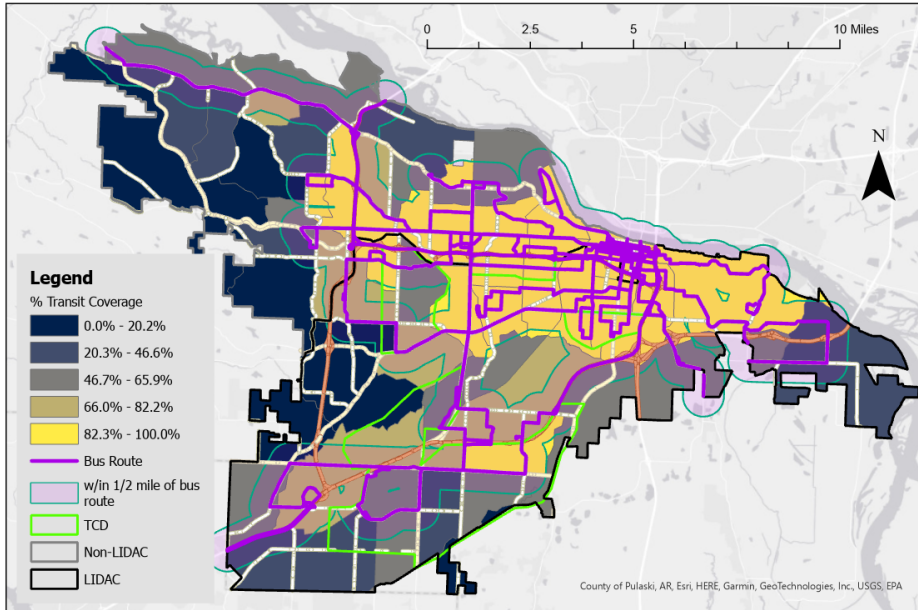


Most fatal pedestrian collisions occur in areas without sidewalks*

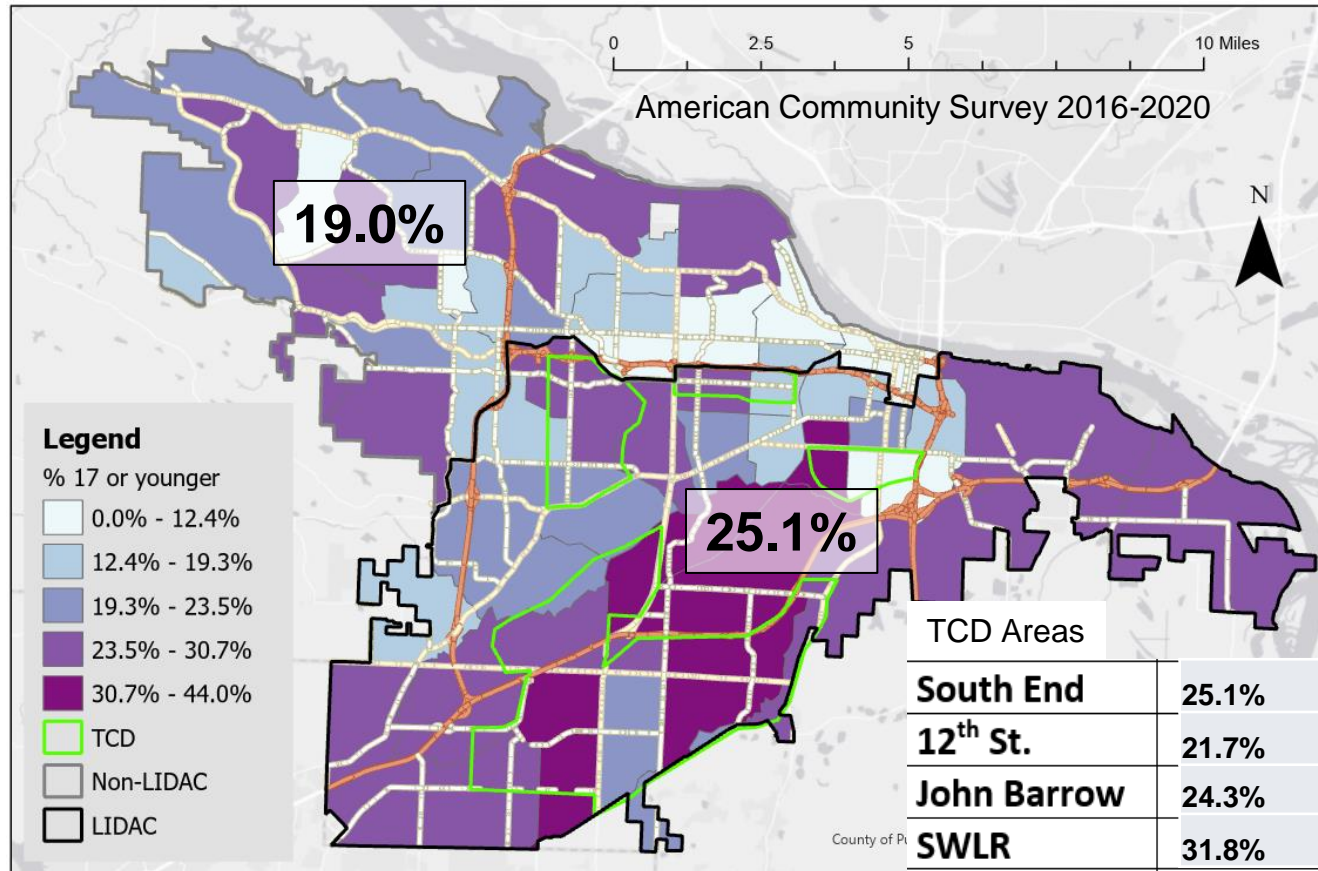
* Governor's Highway Safety Association

Recommendations

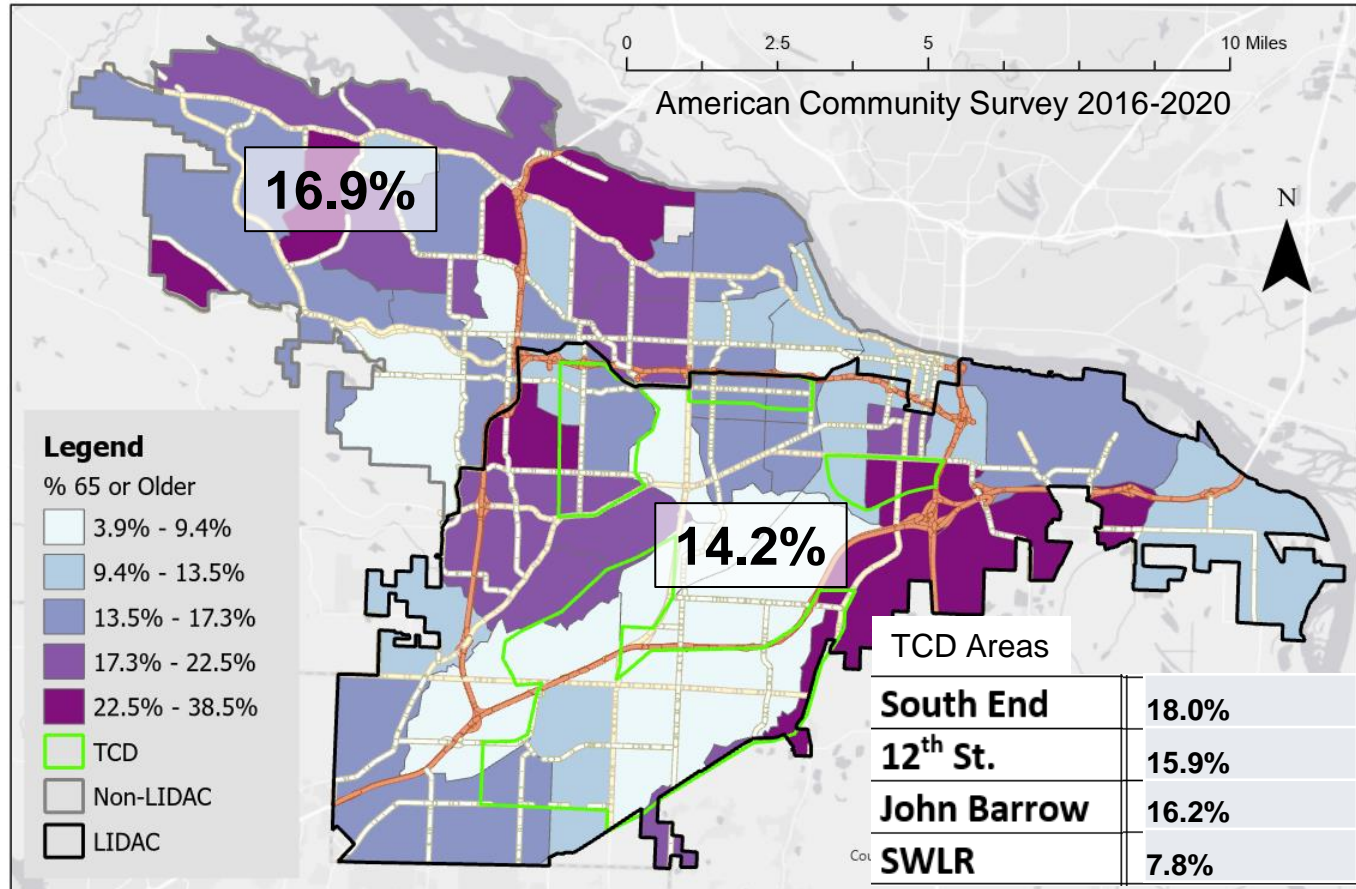
- Crowdsource sidewalk condition assessment
- Install
 - Sidewalks
 - ADA ramps
 - Stripe crosswalks
- Prioritize areas
 - LIDAC
 - Targeted Community Development areas
 - Within ½ a mile of bus route
 - High % of population 65 years or older
 - High % of population 17 years or younger
 - Neighborhood Greenways
 - Along Arterials
 - High street connectivity
 - High walkability
 - All metrics can be quantified and weighted into a composite variable to prioritize sidewalk retrofits



Recommendation: Target census blocks with high % of young people

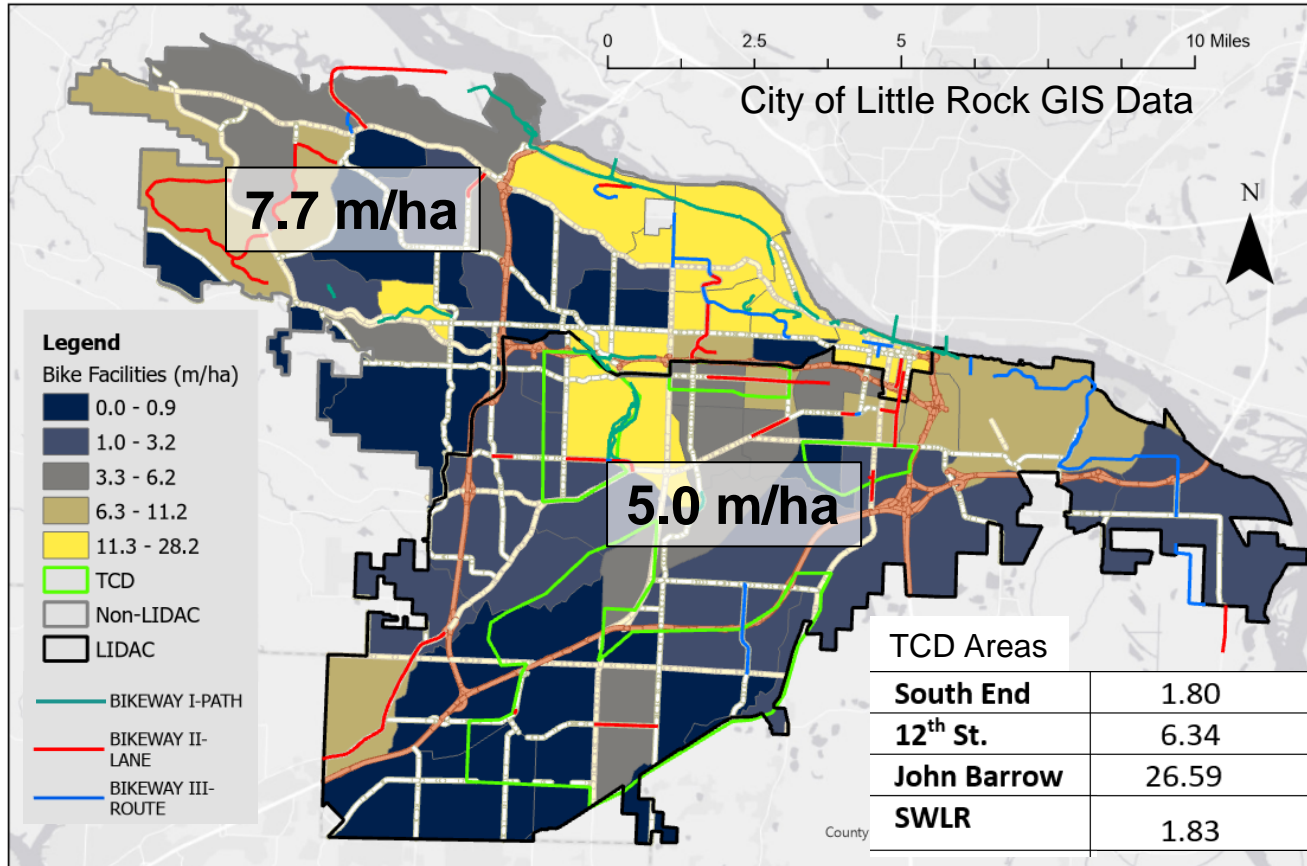


Recommendation: Target census blocks with high % of older people





Fewer bike facilities in LIDAC Little Rock





Recommendations

- Proactively add Neighborhood Greenways
 - Does not affect street function or parking
 - No resurfacing required
 - Quick and inexpensive
- Create *connected* facilities
- Focus on
 - South End TDC
 - 12th Street TDC
 - SWLR TCD
 - LIDAC Little Rock



Hypotheses

- Fewer sidewalks ✓
- Fewer bike facilities ✓
- ~~More Arterial roads~~
- Fewer Arterial crossings ✓
- ~~Fewer parks~~
- ~~Less transit access~~
- ~~Fewer streetlights~~
- ~~Less effective streetlights~~
- Greater dependence on walking/biking/transit

Crossed out hypotheses were tested and not supported with data. Details can be found in the written report

✓-ish

Equality



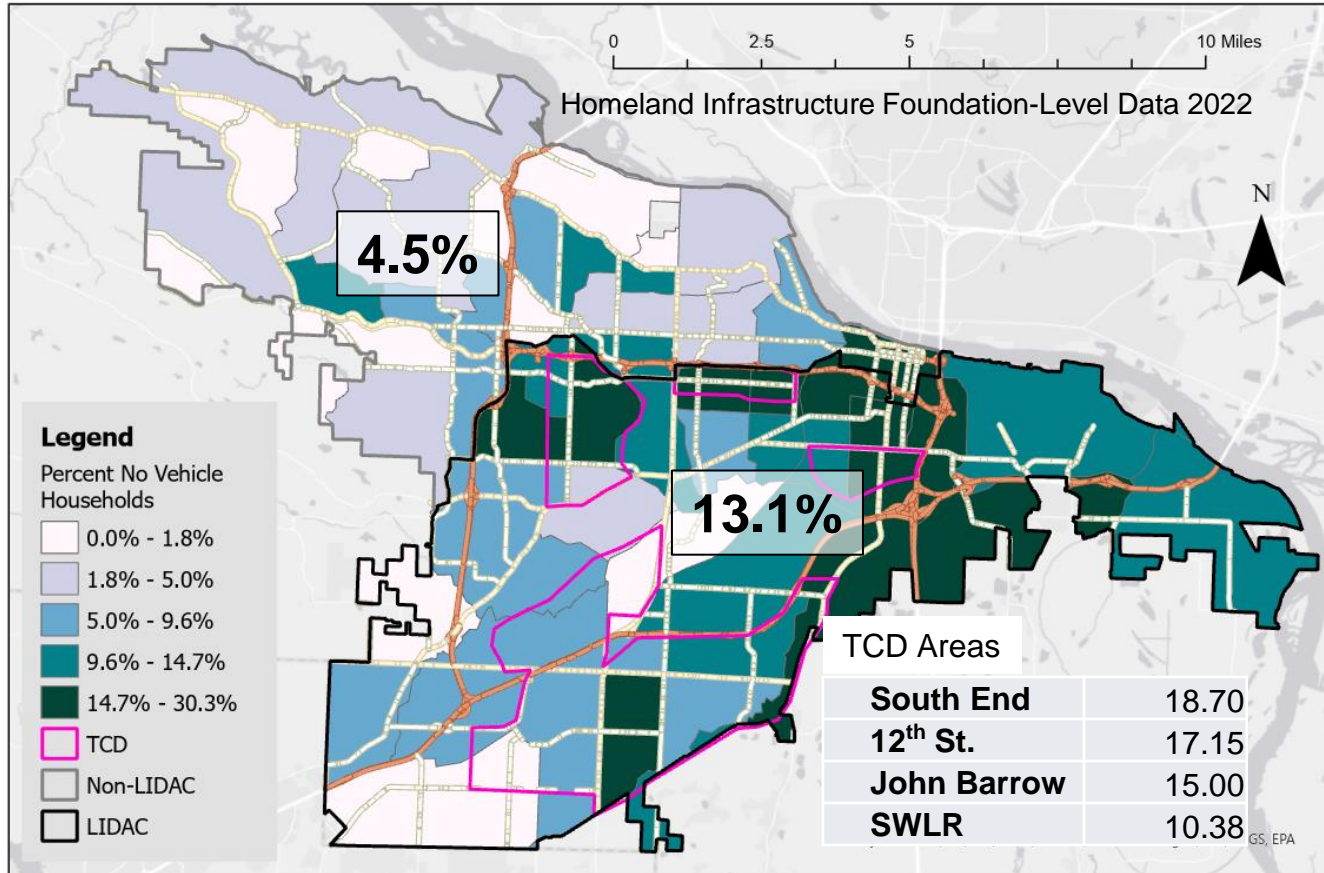
Equity



Means of Transportation to Work

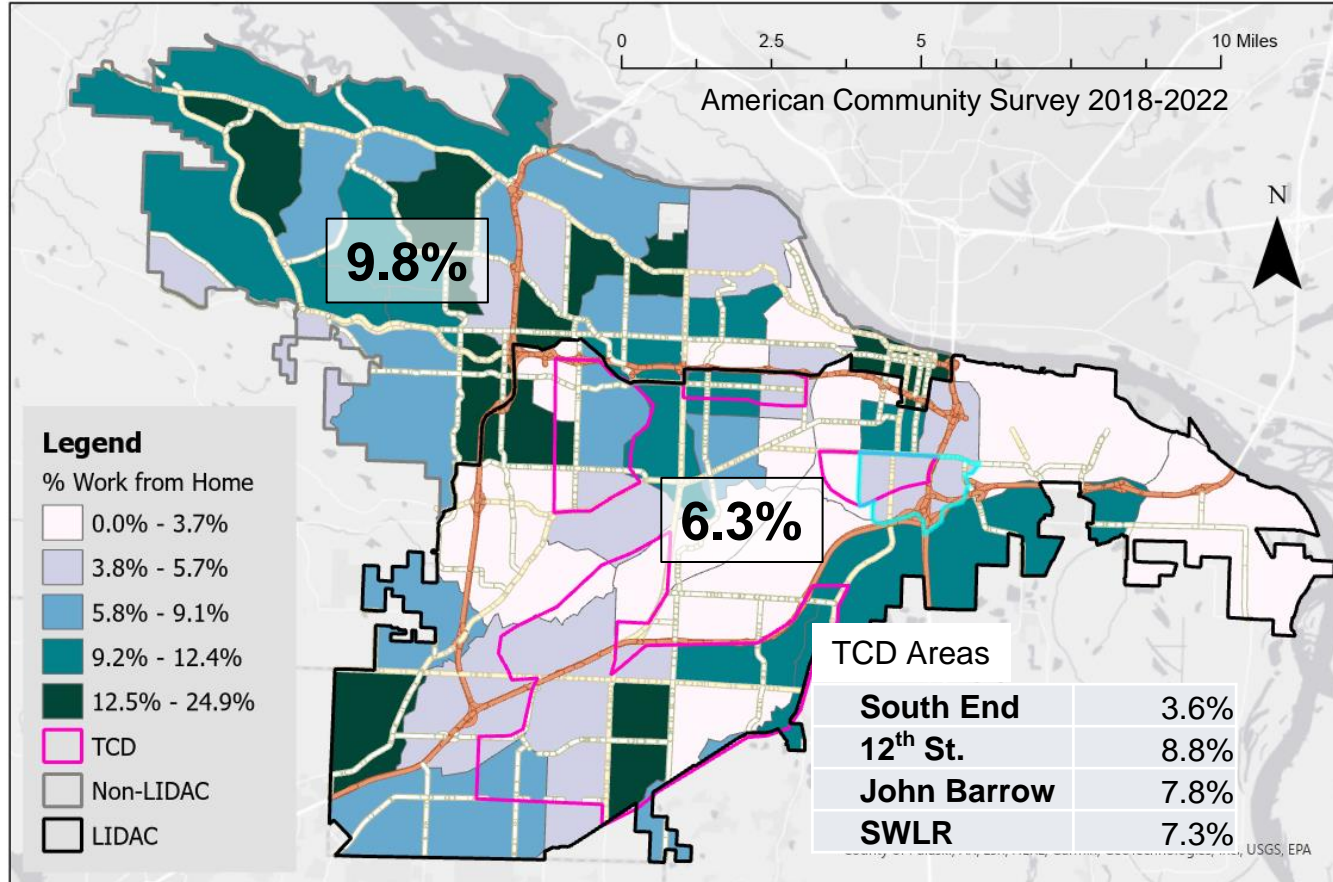


Less likely to have a personal vehicle





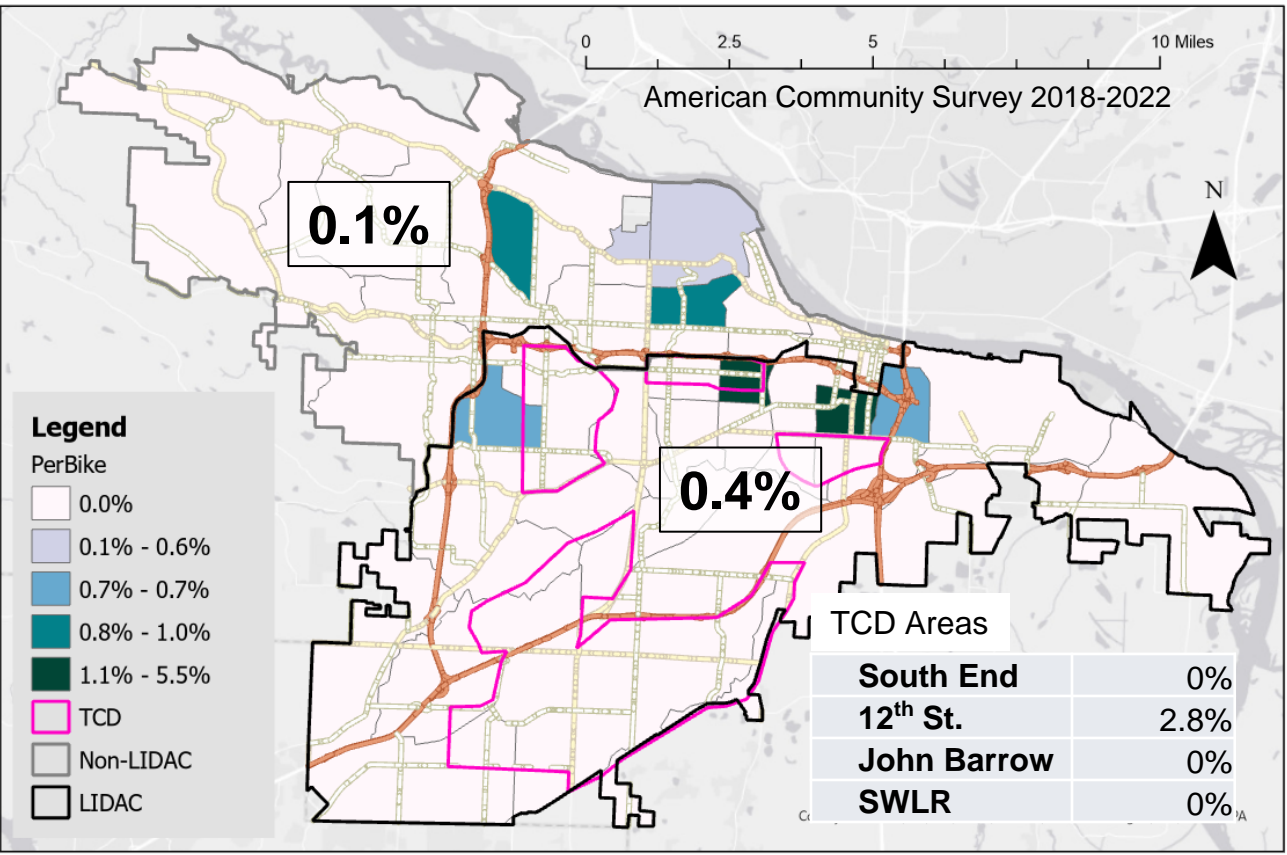
Less Likely to Work from Home



More miles traveled
= more exposure to
transportation risk

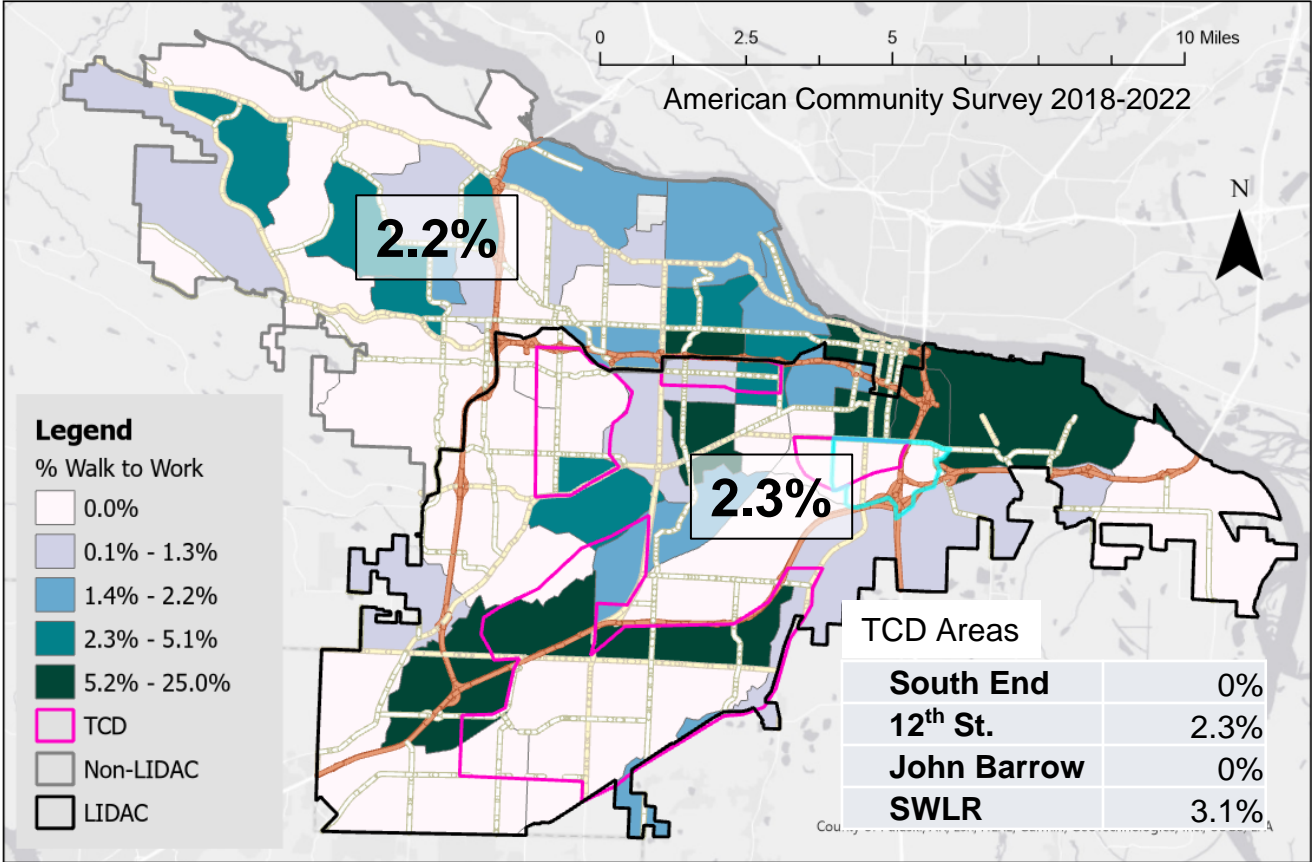


Four Times More Likely to Bike to Work



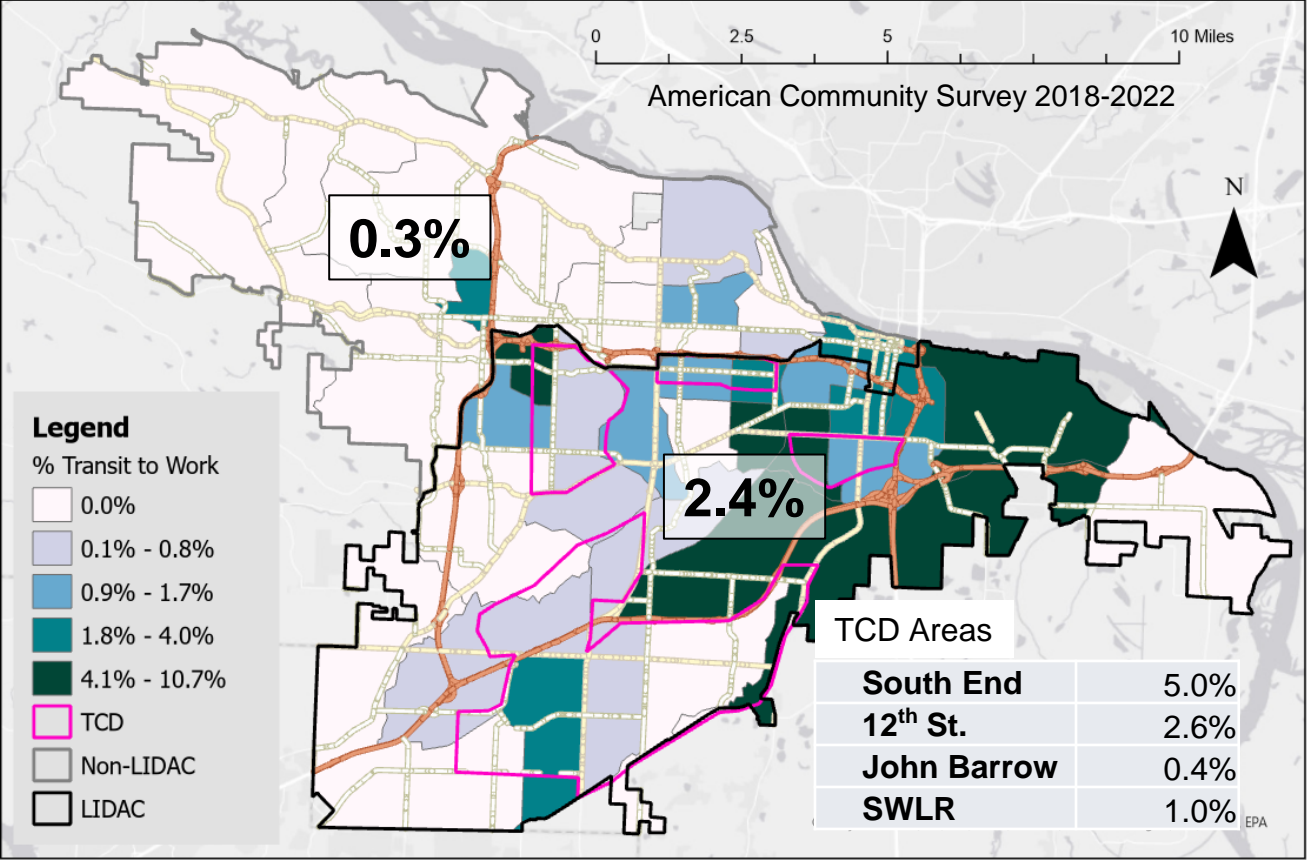


Slightly More Likely to Walk to Work





Nine Times More Likely to take Transit to Work



Conclusion

What keeps you from biking more often? (Check all that apply)	Arkansans	Little Rock
Destinations too far/takes too long to bike	30.7%	28.5%
Unsure of routes to take	16.8%	18.8%
Traffic is too heavy	70.0%	72.1%
Dangerous intersections	63.1%	64.2%
Motorists don't exercise caution around cyclists	76.7%	77.0%
Lack of bike facilities - bike lanes, paths, wide shoulders, etc.	79.9%	83.0%
Poor condition of bike facilities	27.5%	26.7%
Weather	33.0%	32.7%
Lack of lighted routes or paths	24.2%	19.4%
Personal security	18.6%	18.8%
Need to transport other people or things	30.7%	30.9%
Traveling with small children	13.3%	9.7%
Lack of secure bicycle parking	35.0%	32.1%
Lack of work amenities (showers, lockers, etc.)	25.8%	30.3%
Exposure to air pollution	3.6%	3.6%
Other	10.1%	11.5%
Total Number of Respondents	894	165

Environment
built for cars

People afraid
of getting hit
by a car

Conclusion

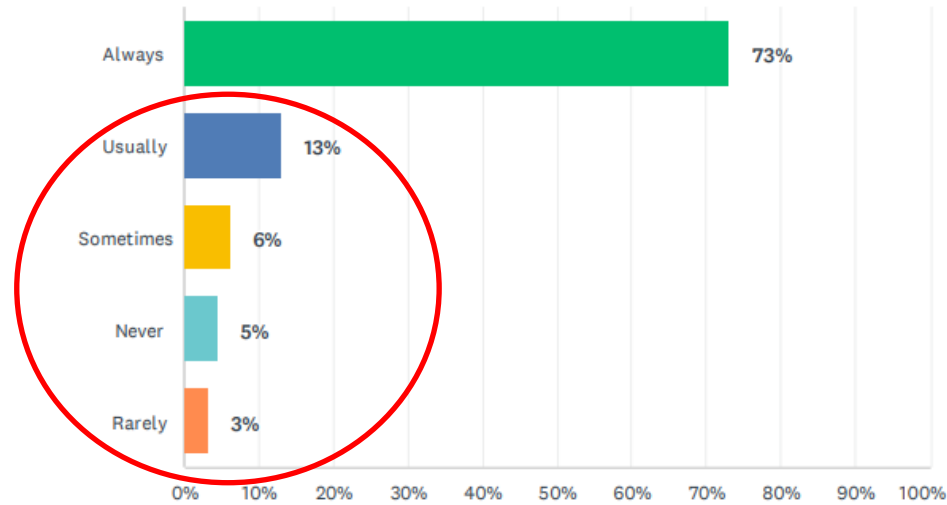
What keeps you from walking more often? (Check all that apply)		Arkansans	Little Rock
Environment built for cars →	Destinations too far/takes too long to walk	50.4%	55.8%
	Unsure of routes to take	10.2%	9.1%
Environment built for cars →	Traffic is too heavy	46.9%	49.7%
	Dangerous intersections	46.2%	50.3%
Environment built for cars →	Lack of sidewalks or paths	72.8%	67.9%
	Poor condition of pedestrian facilities	40.3%	42.4%
Environment built for cars →	Weather	30.6%	32.1%
	Lack of lighted sidewalks or paths	34.9%	21.8%
Environment built for cars →	Personal Security	21.9%	24.8%
	Need to support other people or things	28.5%	27.9%
Environment built for cars →	Exposure to air pollution	2.5%	3.0%
	Access to activity centers	4.5%	5.5%
Environment built for cars →	Other	10.1%	13.9%
	Total	894	165

People afraid of getting hit by a car

Conclusion: Dangerous Answer in Little Rock

Do you have access to a personal motor vehicle?

Answered: 1,174 Skipped: 212



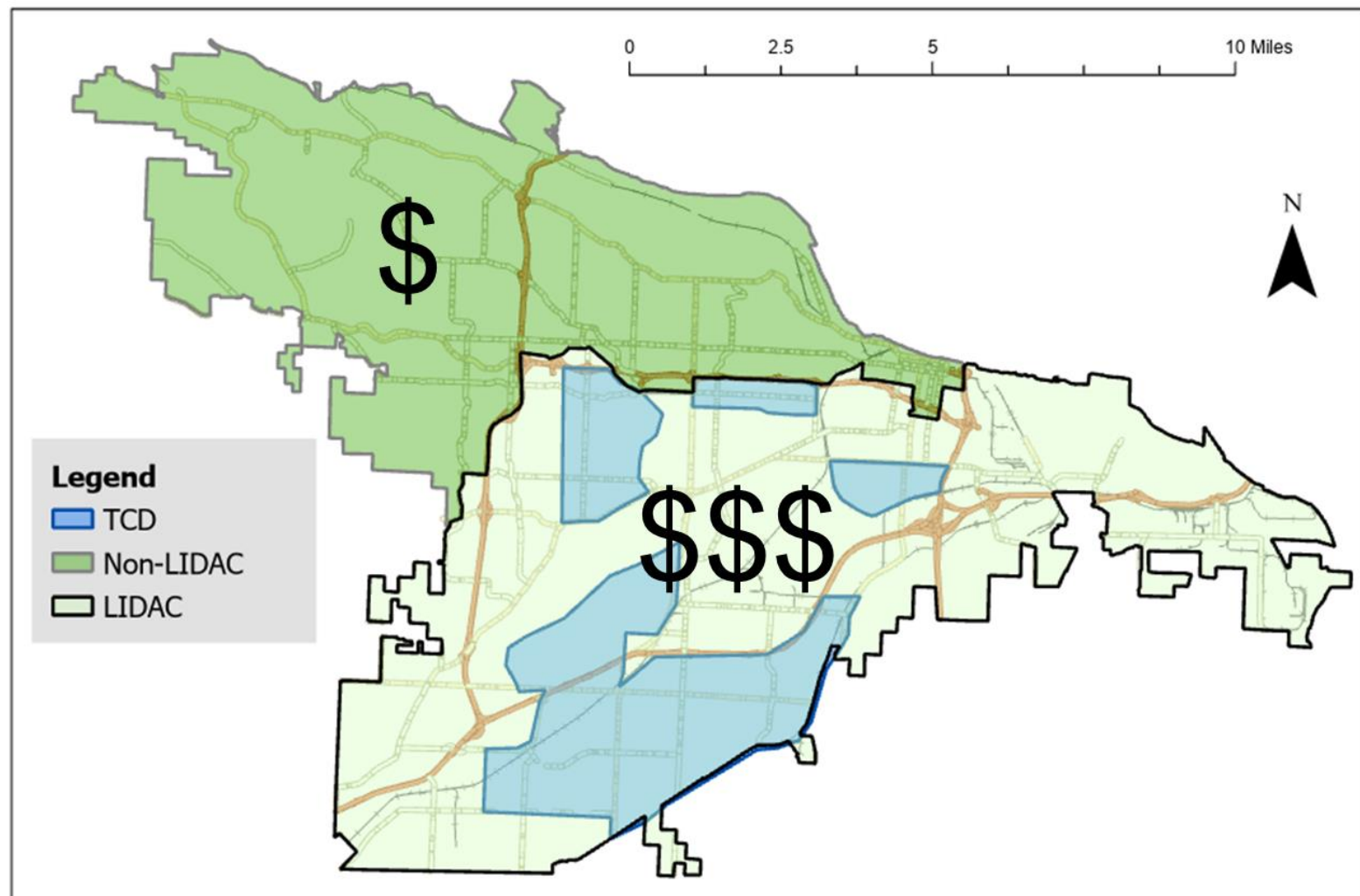
✓ -ish

Equality



Equity





Thank you!

References

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