

green  
town

# Active Transportation for Local

**Communities** of River  
Forest

Victoria Barrett, CMAP

Benet Haller, Cook County

Government

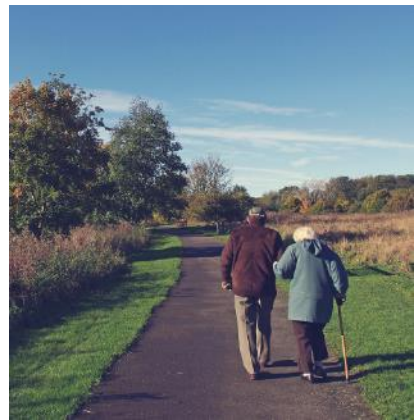


Chicago Metropolitan  
Agency for Planning

# Traffic Safety and Climate Change

**Victoria Barrett**  
Senior Transportation Planner

@cmapillinois |    







# Chicago Metropolitan Agency for Planning

- MPO for northeastern Illinois
- 284 units of government
- 7 counties, plus 2 townships
- 8.5 million residents
- Oversight of federal transportation funding for the region
- Technical Assistance
- Develop regional policy on transportation, climate, and economy
- Convene and collaborate

ON



TO

2050



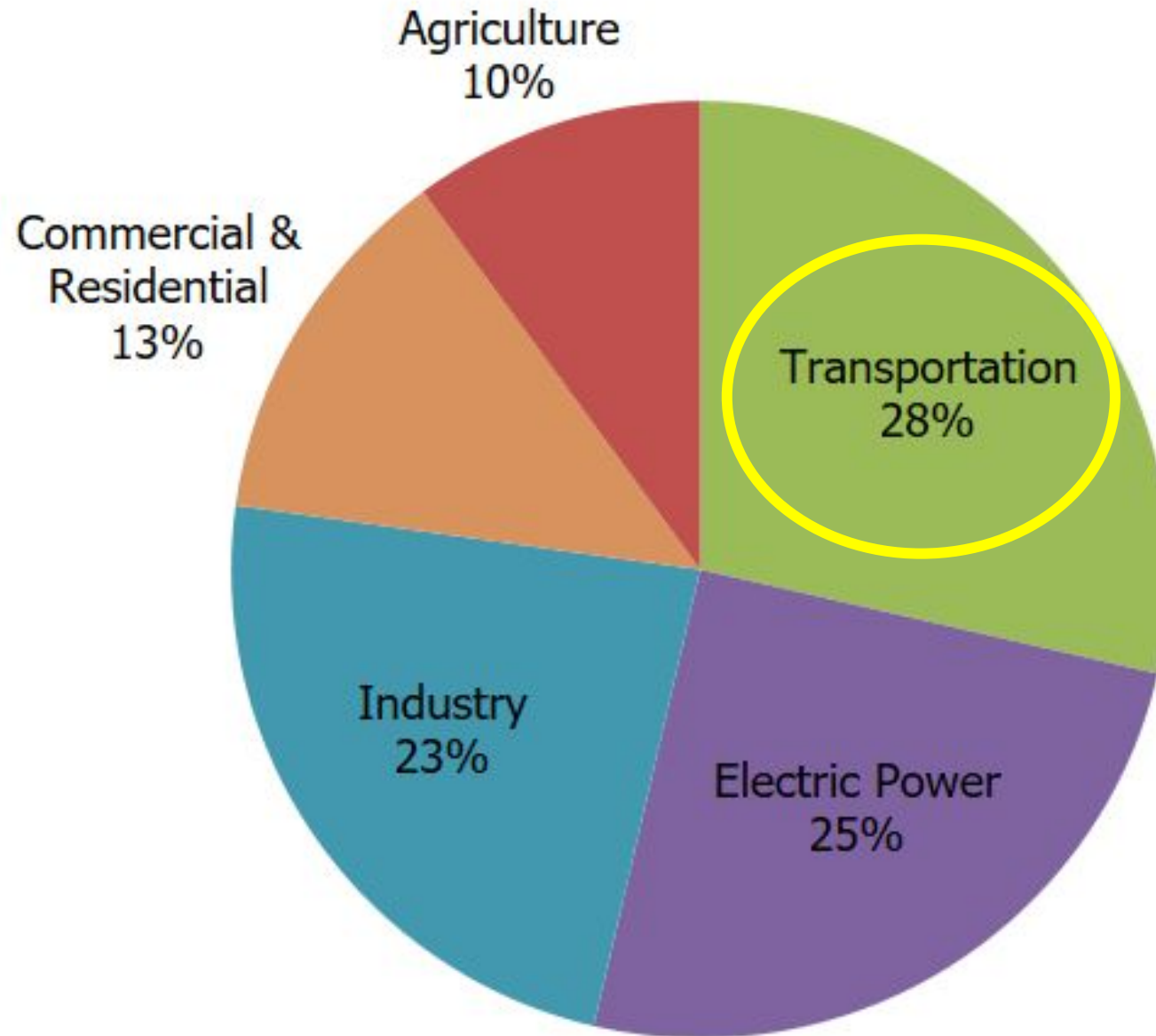


Chicago Metropolitan  
Agency for Planning

**Transportation is a major  
contributor to climate change**

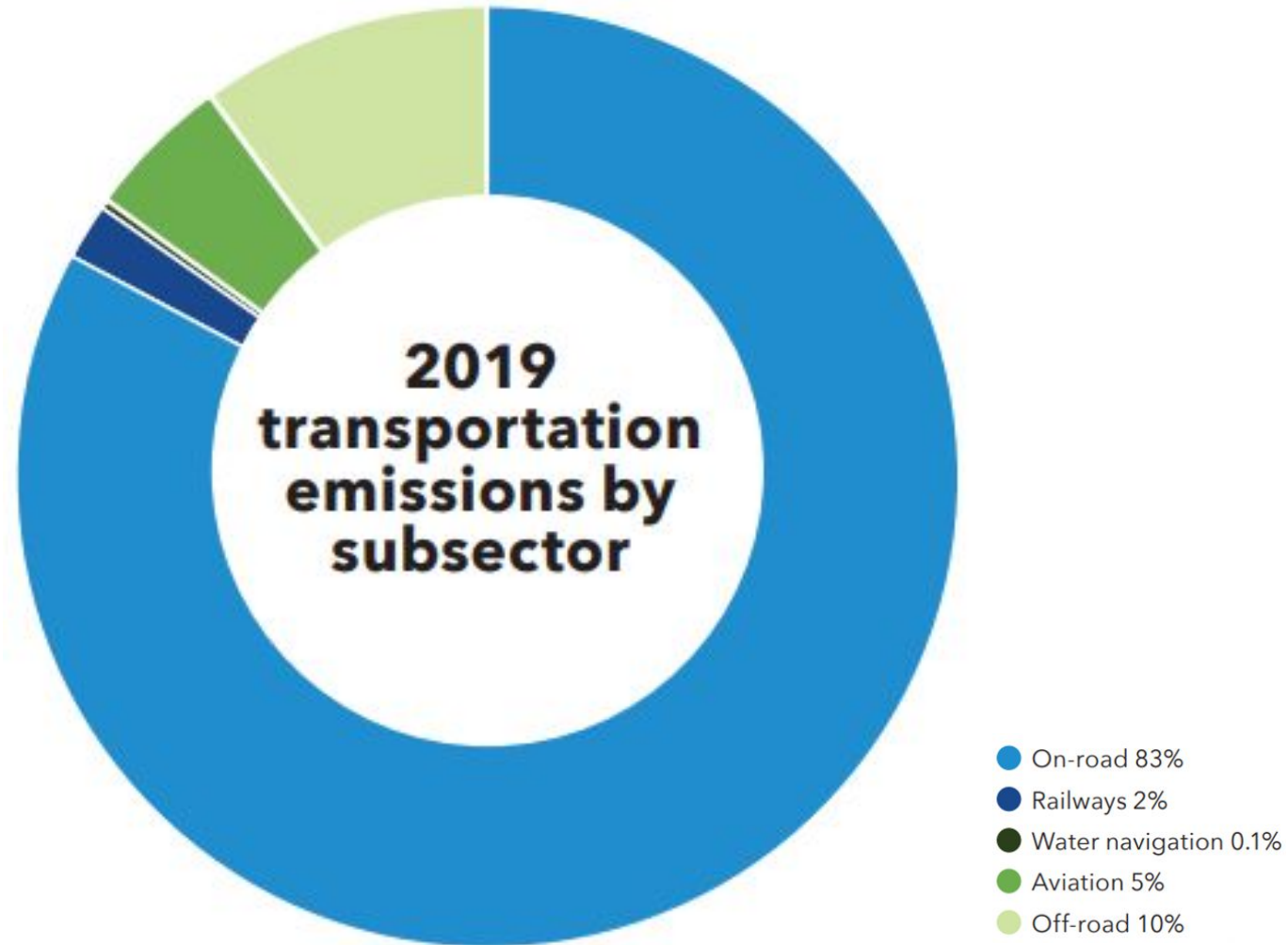


# Transportation is top producer of greenhouse gases



Data from [Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2021](#). (2021 shown here)

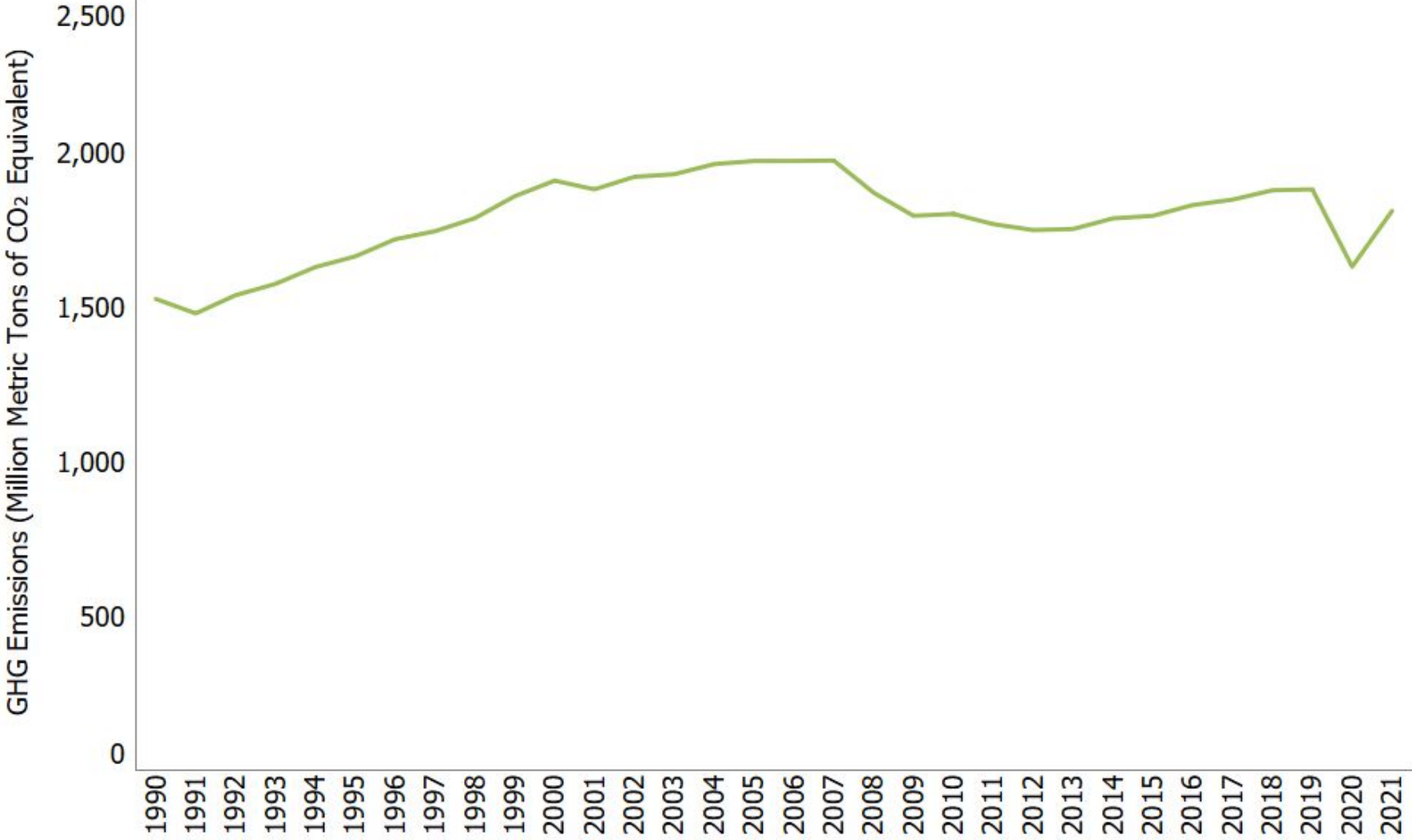
# Emissions from transportation are increasing



- Mostly due to more driving
- Post pandemic trends may make this worse or...?



# Greenhouse gas emissions from transportation 1990 - 2021



U.S. Environmental Protection Agency (2023). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021

# Strategies to lower greenhouse gas emissions from transportation sector



1. Switching fuels\*
2. Improving fuel efficiency
3. Improving operating efficiencies
4. ~~Reducing travel demand (vehicular)~~

## My take

4. Reducing reliance on the single-occupancy vehicle
5. Improving how we plan our communities to reduce trips and trip lengths
6. Improving safety, accessibility and mobility of non/low-ghg emitting modes of travel to capture more daily local trips

*While simultaneously addressing socio-economic disparities in access to jobs, housing, and affordable transportation options*



Chicago Metropolitan  
Agency for Planning

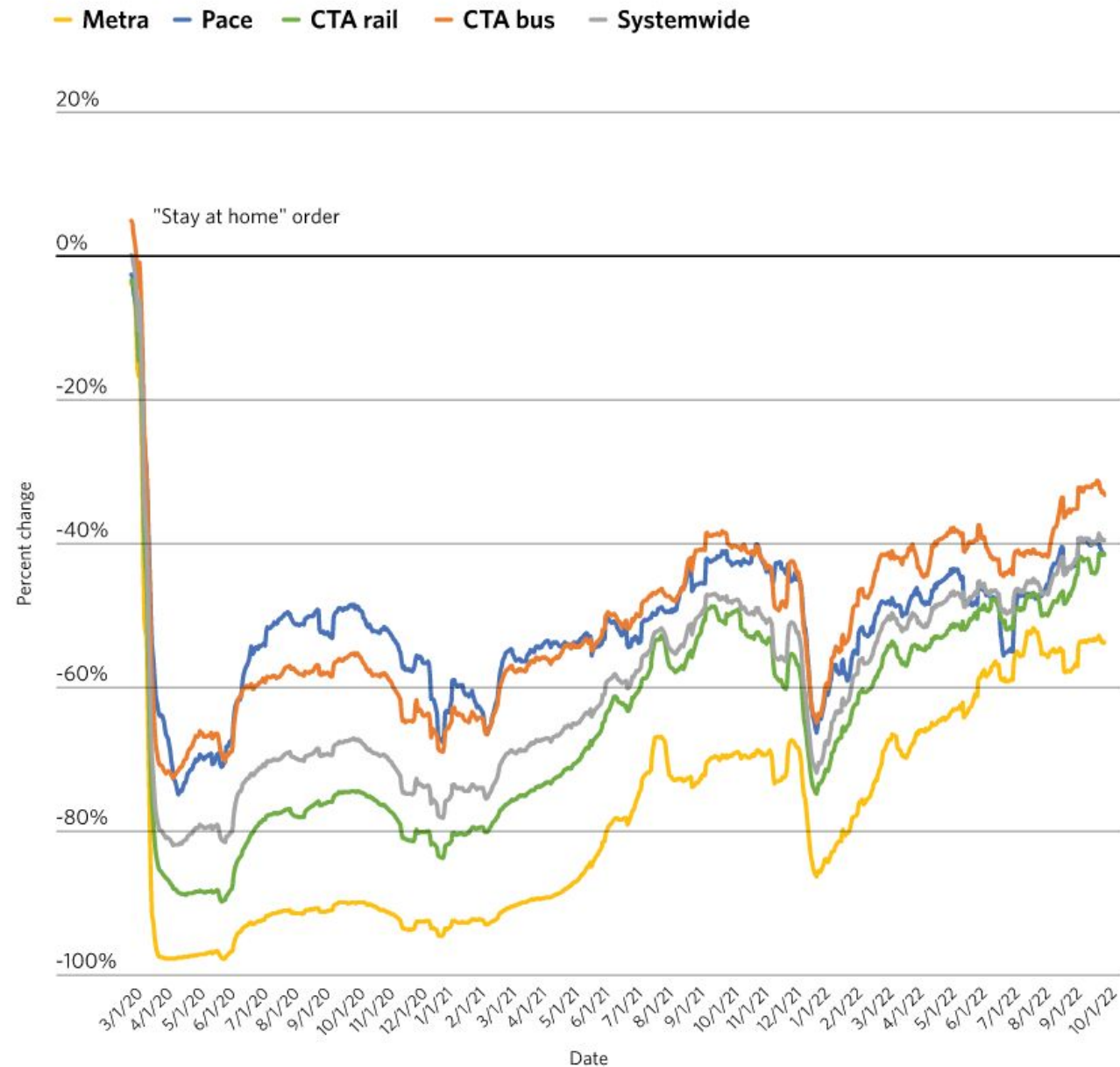
# Travel demand is changing





# Transit ridership in northeastern Illinois

Year-over-year ridership percent change by service (March 1, 2020 through October 1, 2022)

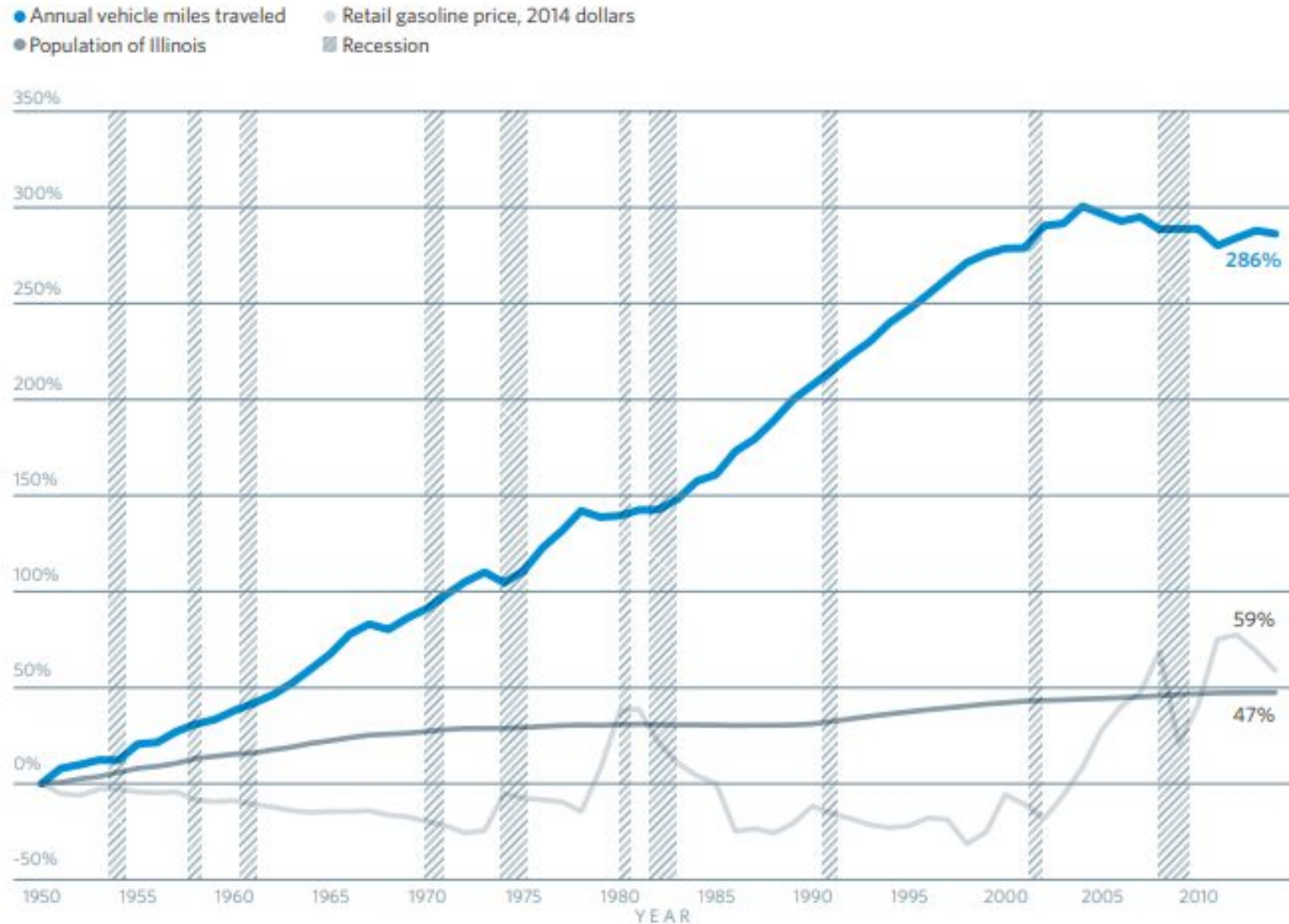


Source: Regional Transportation Authority.

# Vehicle Miles Traveled

Percent change since 1950 in annual VMT, population and gas prices in Illinois

Source: U.S. Census Bureau, Illinois Department of Transportation, U.S. Energy Information Administration and Federal Reserve Bank of St. Louis.





Chicago Metropolitan  
Agency for Planning

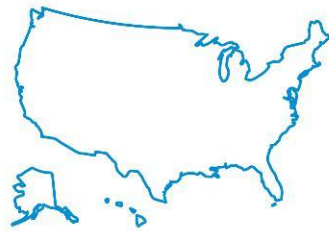
# We are experiencing a traffic safety crisis



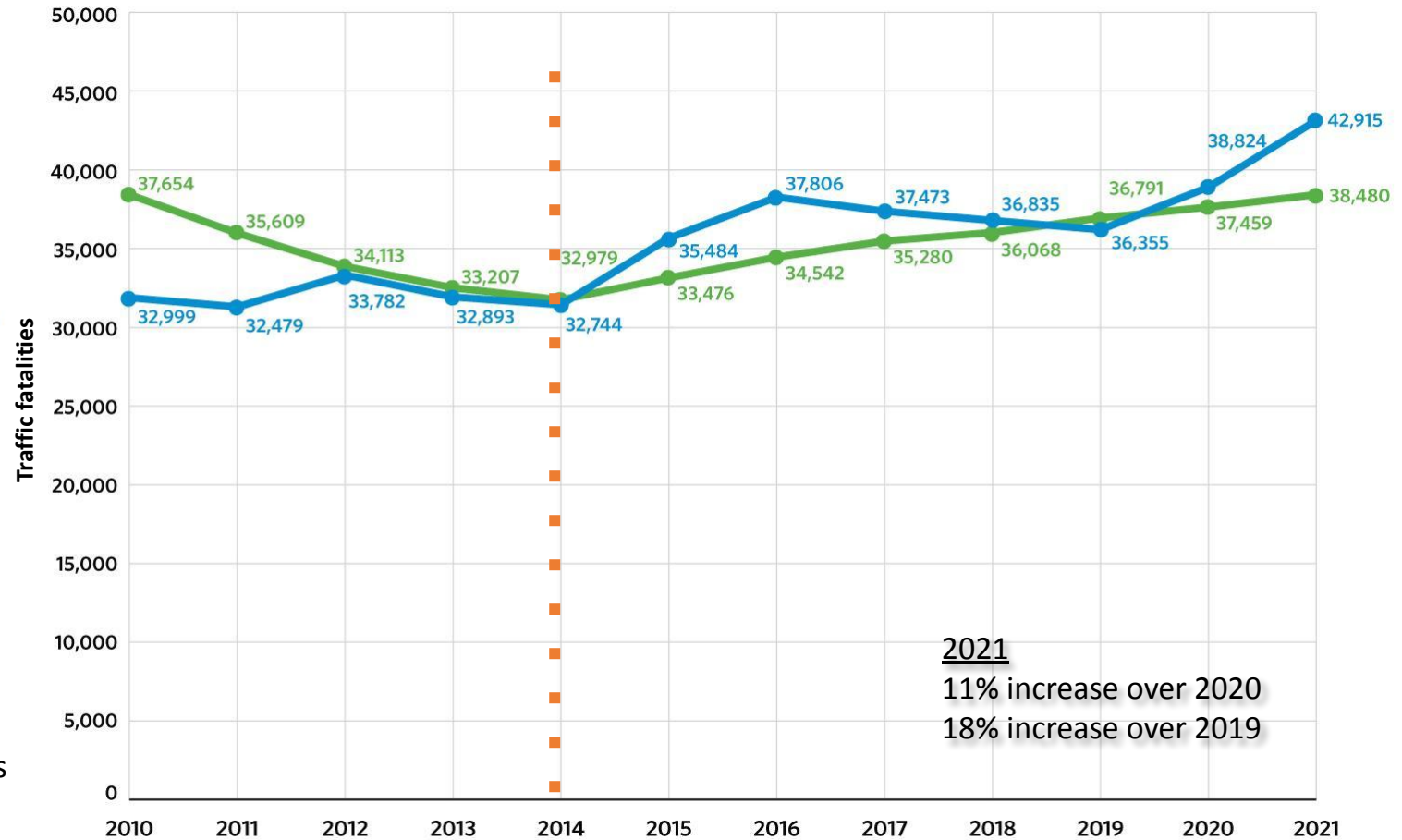


## Traffic fatalities

Nationwide  
2010–2021



- Annual fatalities
- 5-year rolling average fatalities



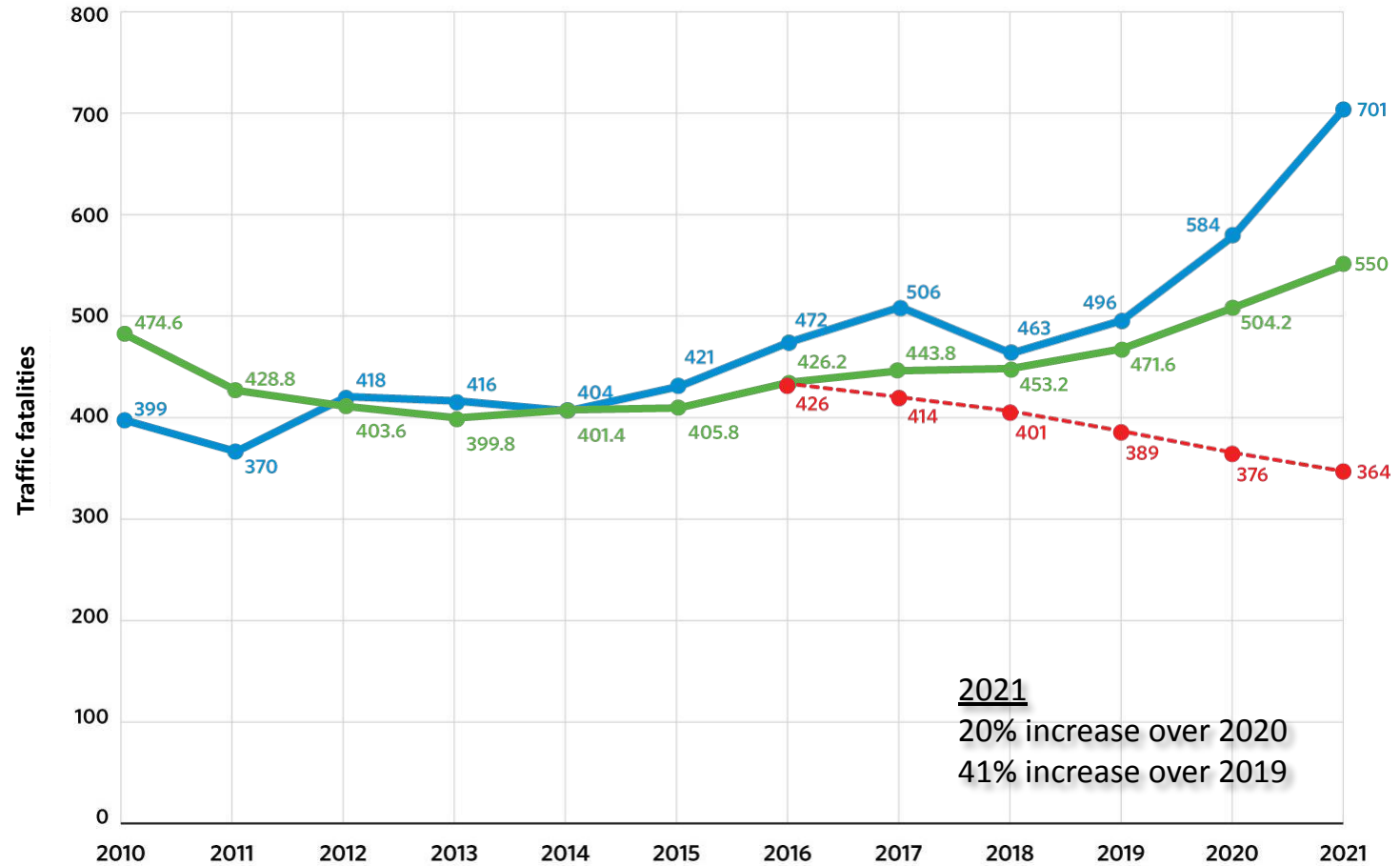
Source: Fatality Analysis Reporting System, National Highway Traffic Safety Administration Note: 2021 values are NHTSA estimates

# Traffic Fatalities

CMAP region  
2010–2021



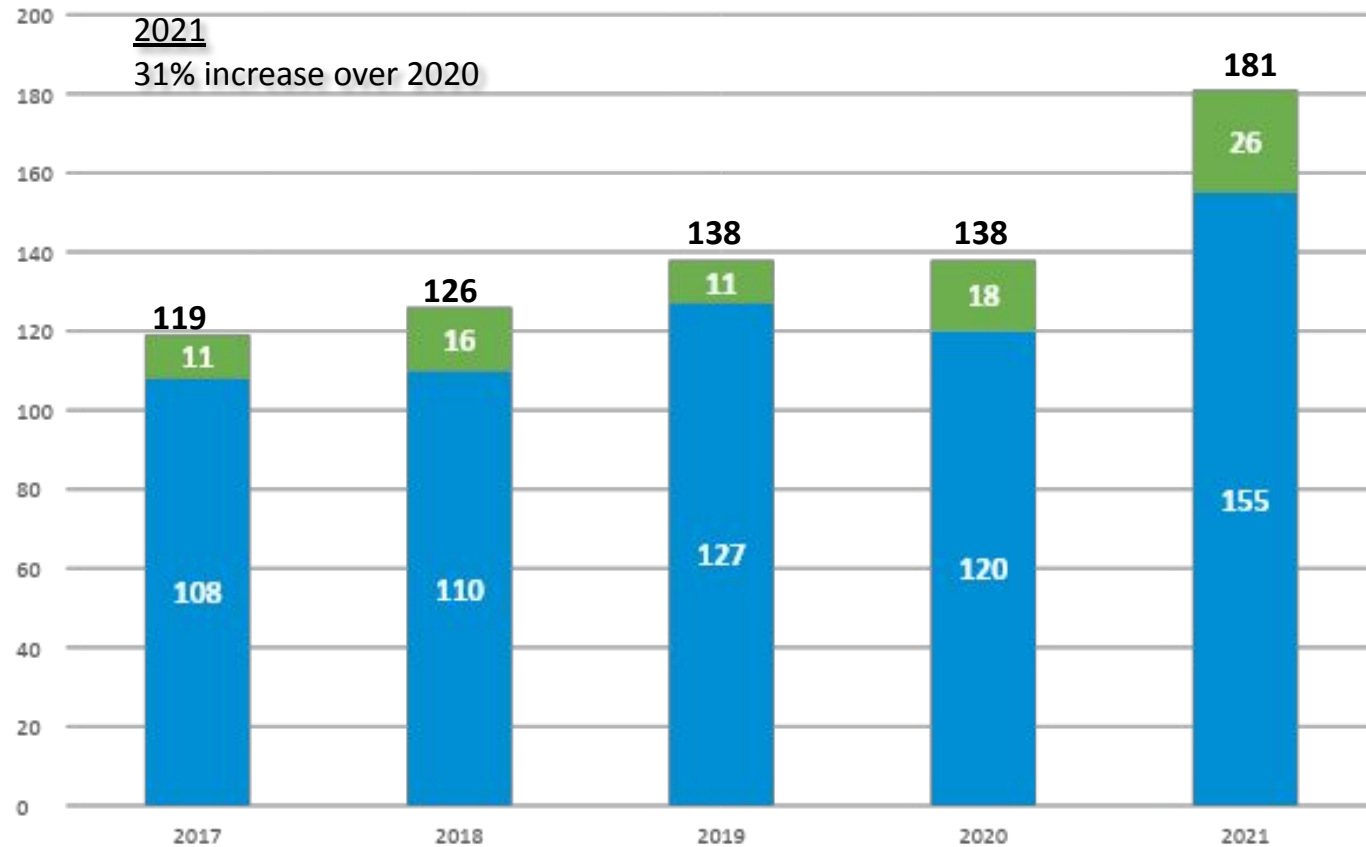
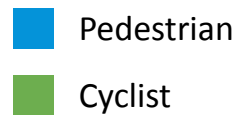
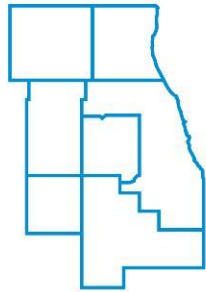
- Annual fatalities
- 5-year average fatalities
- Target 5-year average



Source: CMAP analysis of Illinois Department of Transportation data

## Pedestrian and bicyclist fatalities

CMAP region  
2017–2021

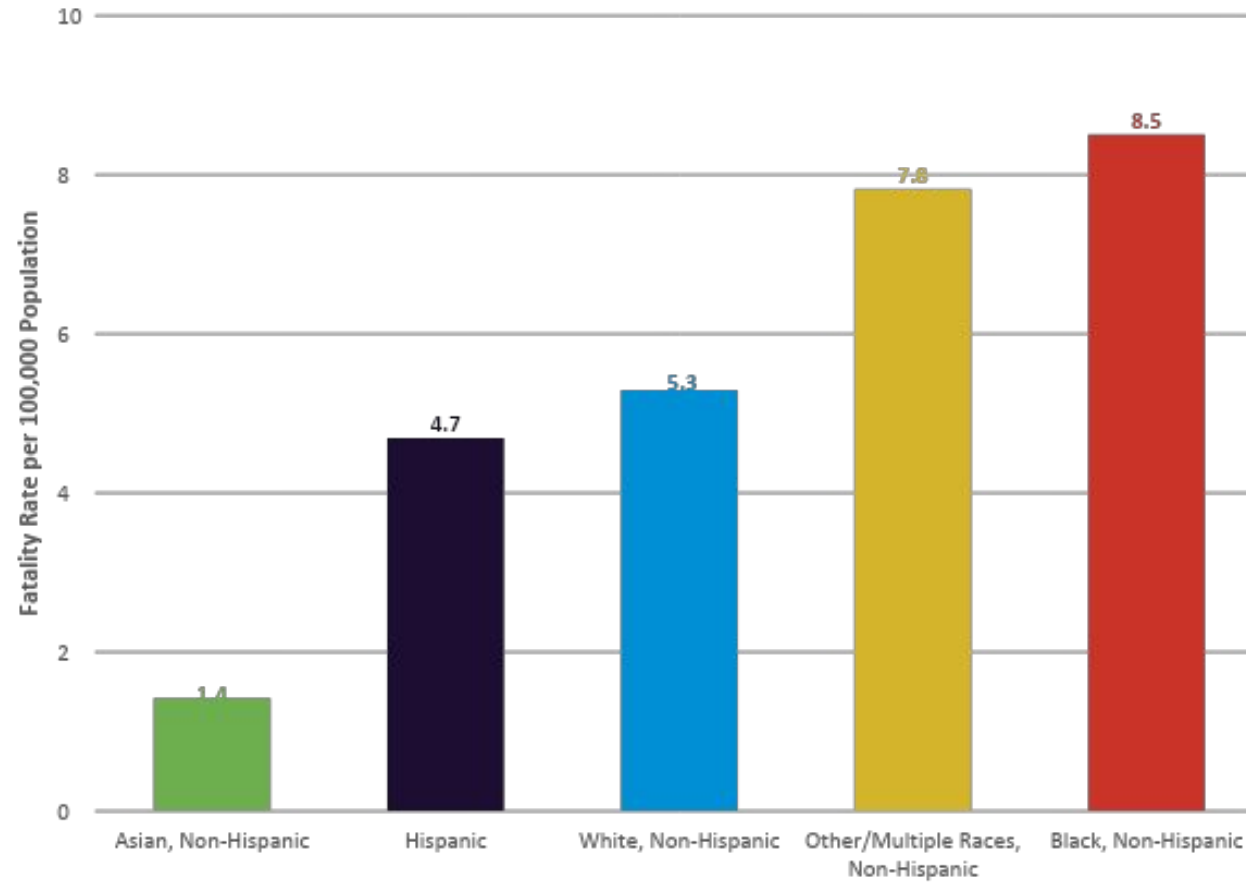


Source: CMAP analysis of Illinois Department of Transportation data



## Traffic fatality rates by race, 5-year average

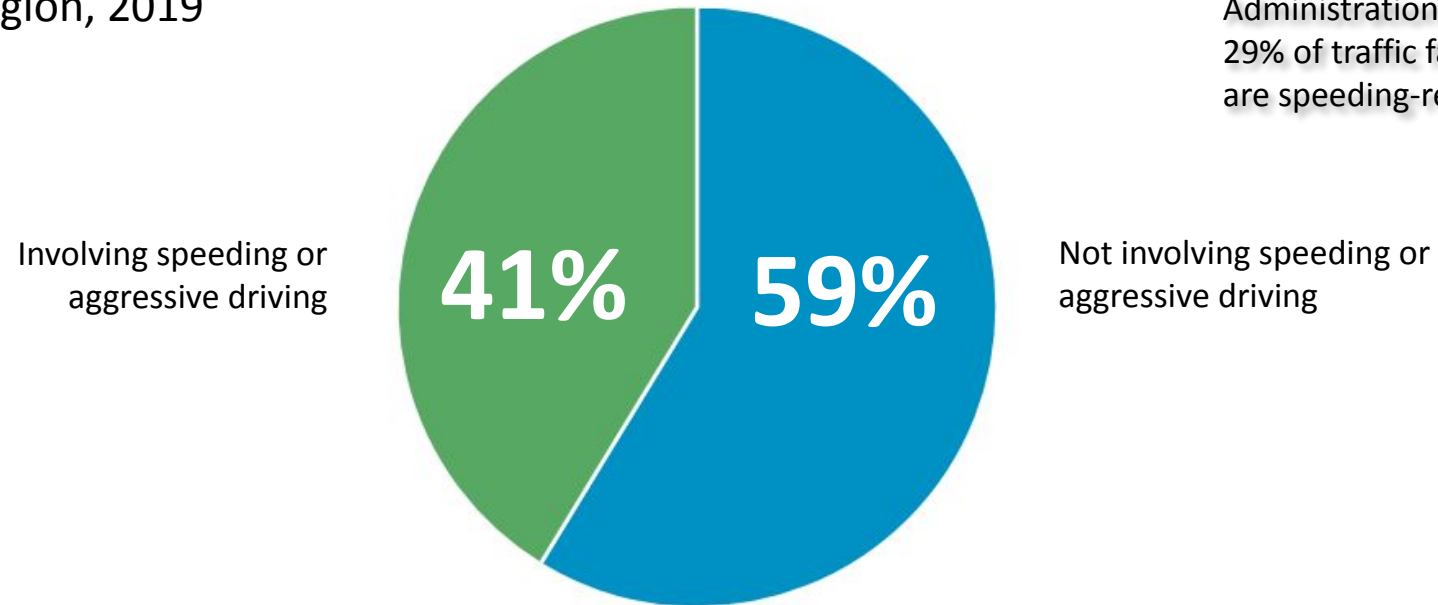
CMAP region  
2015–2019



Note: Fatalities that did not have race information by year 2019: 23; 2018: 1; 2017: 1; 2016: 5; in 2015: 3.

---

**Share of fatal and serious injuries involving speeding or aggressive driving**  
CMAP region, 2019



Nationally, the National Highway Traffic Safety Administration reports 29% of traffic fatalities are speeding-related

Chart reports the share of crashes involving speeding or aggressive driving where the causes of crashes are known in crash reporting.  
Source: CMAP analysis of Illinois Department of Transportation data

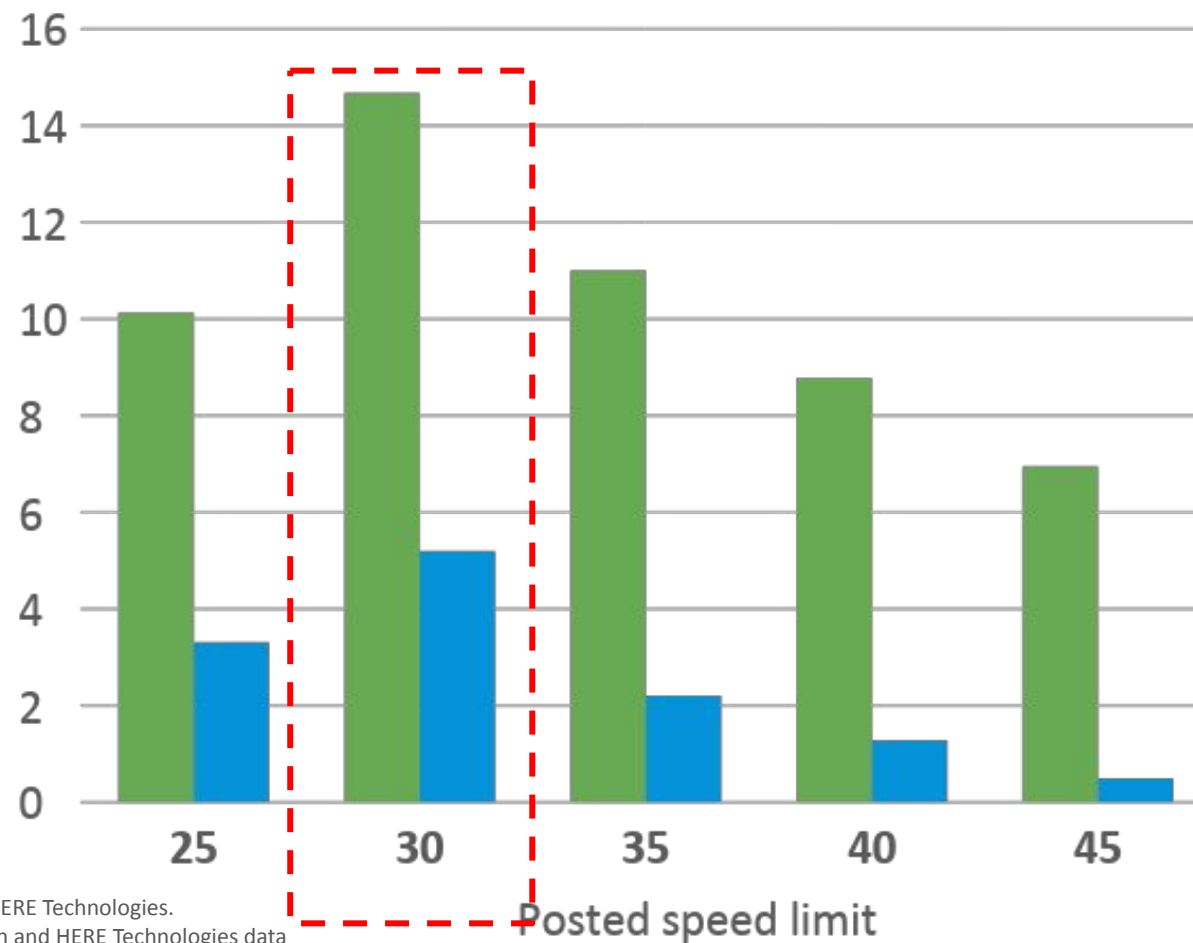
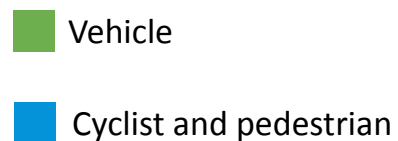
Speeding is a major threat in our cities





## Fatal and serious injury rate by travel mode and posted speed limit (crashes per 100 million miles of vehicle travel)

CMAP region, 2015–2020



Estimated annual VMT in sample. Speed limit data based on HERE Technologies.  
Source: CMAP analysis of Illinois Department of Transportation and HERE Technologies data











If hit by a car traveling:



**20 MPH**

**10% Fatality**



**30 MPH**

**40% Fatality**

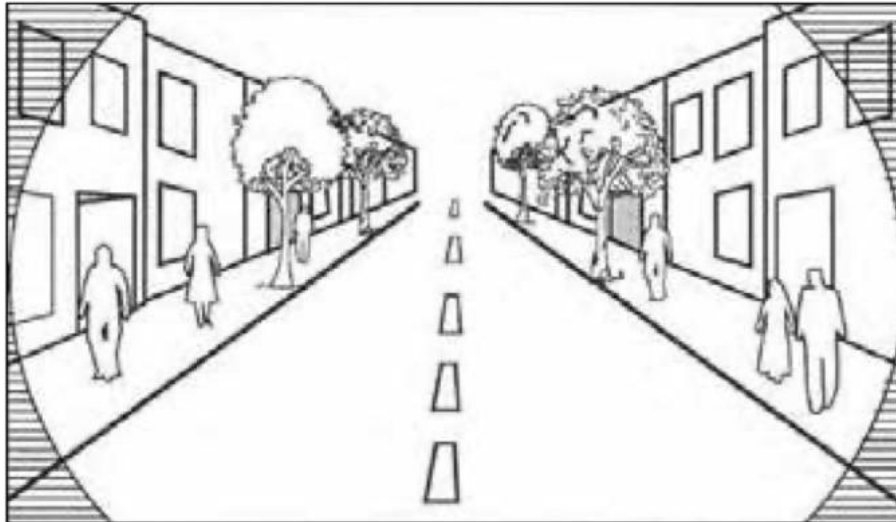


**40 MPH**

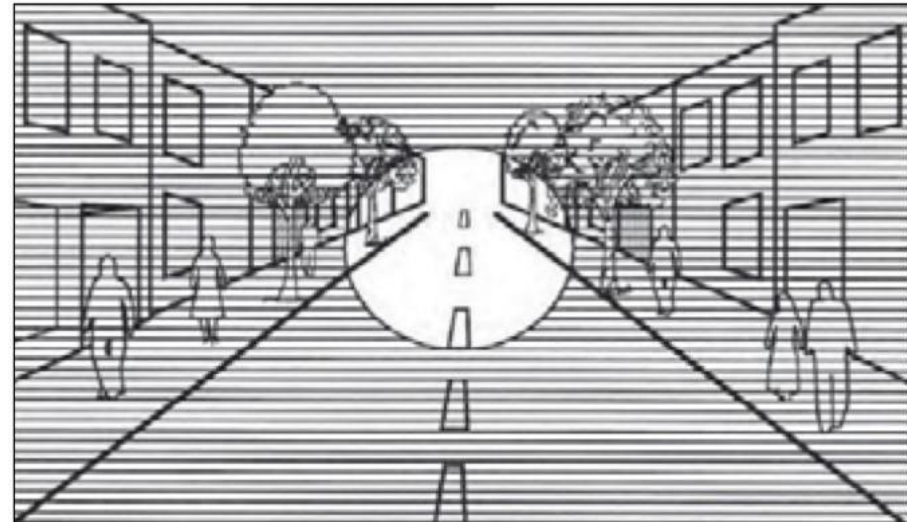
**80% Fatality**

Source: U.S. Department of Transportation

# Speed decreases a driver's field of vision

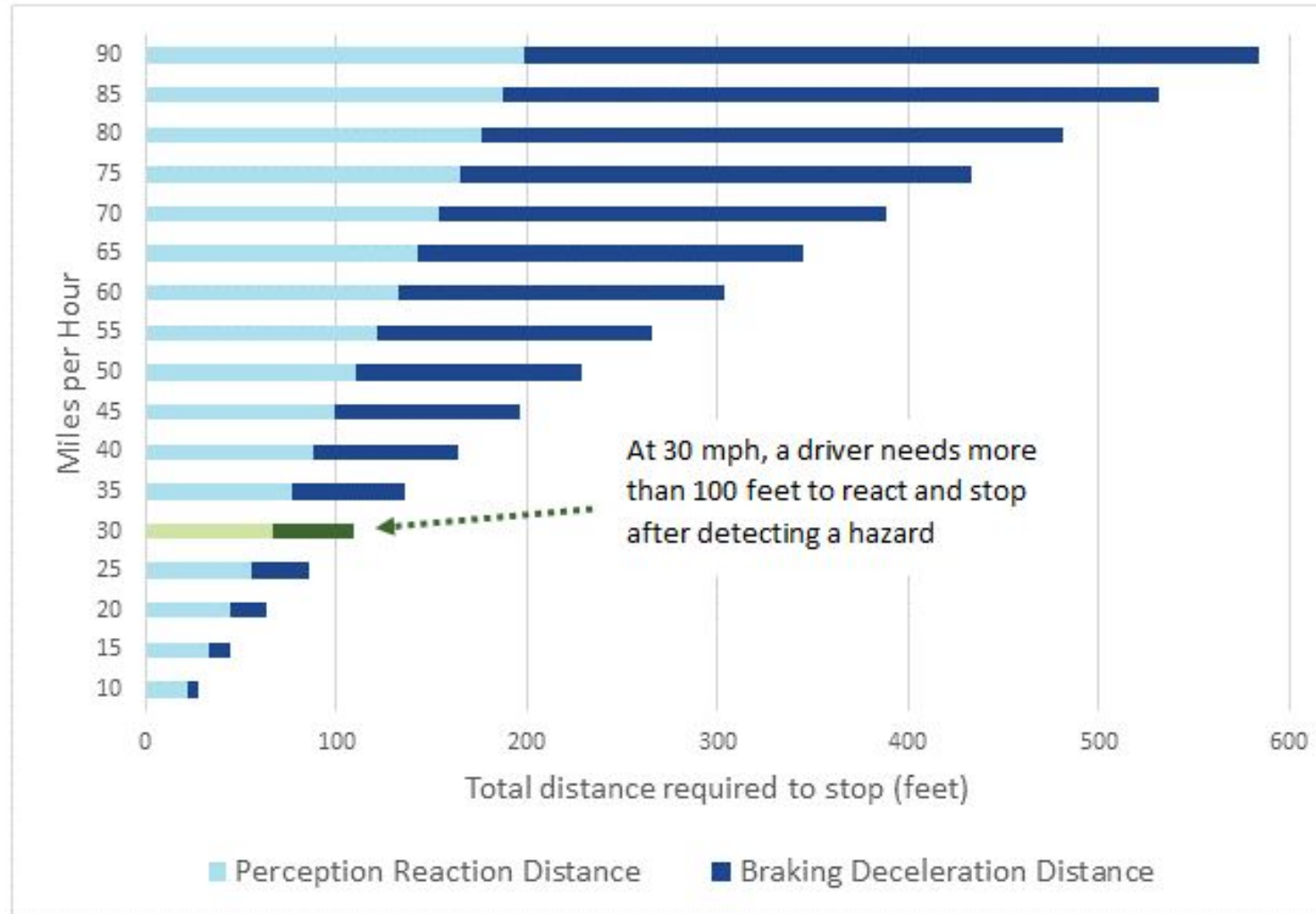


*Field of vision at 15 MPH*



*Field of vision at 30 to 40 MPH*

# Higher speeds increase the distance required for a driver to stop \*

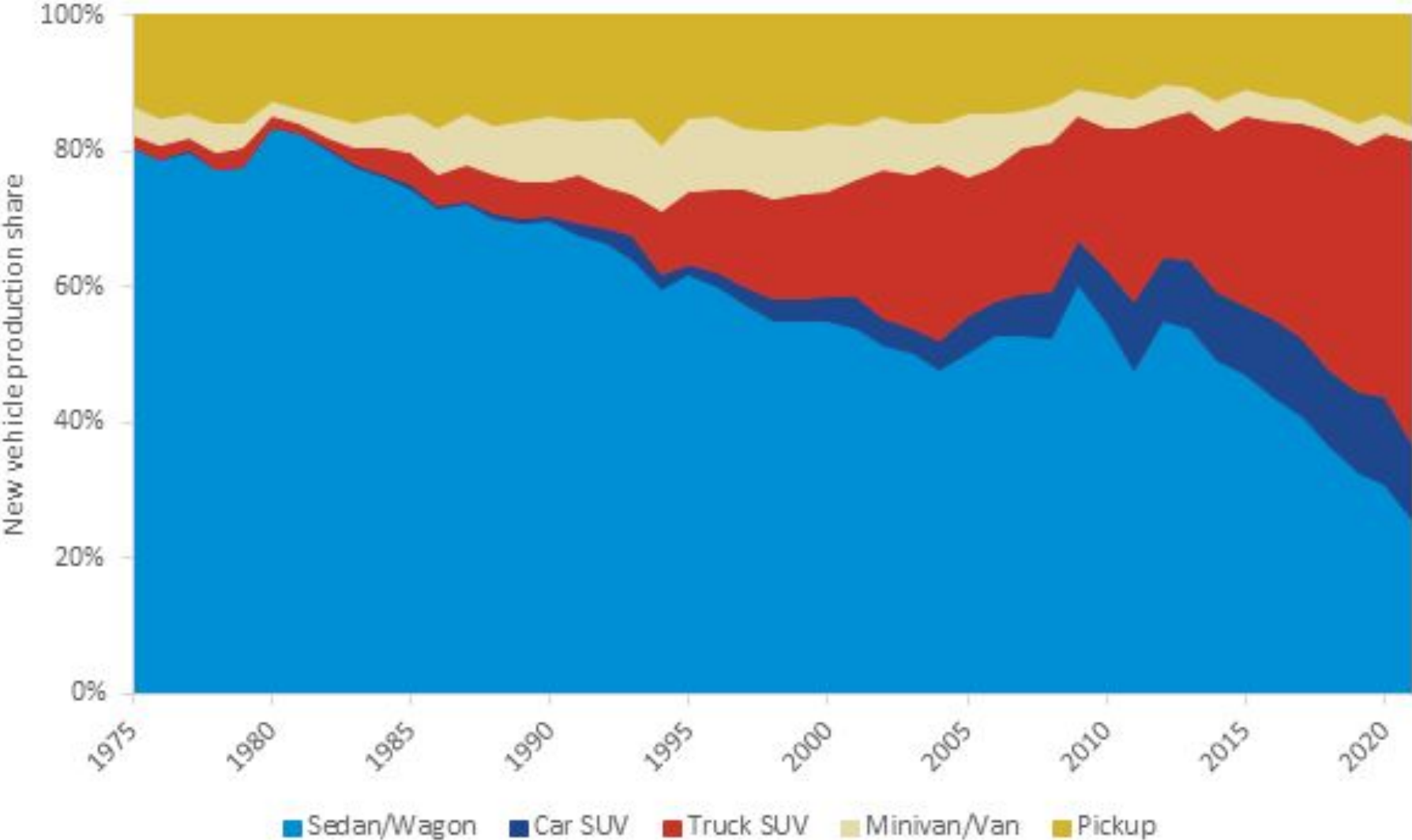


Distance required for a driver to react and stop a vehicle by travel speed.  
Source: CMAP analysis of NACTO report "Vehicle Stopping Distance and Time"

\*average vehicle weight ~2013



# Vehicles are heavier today



NATIONAL

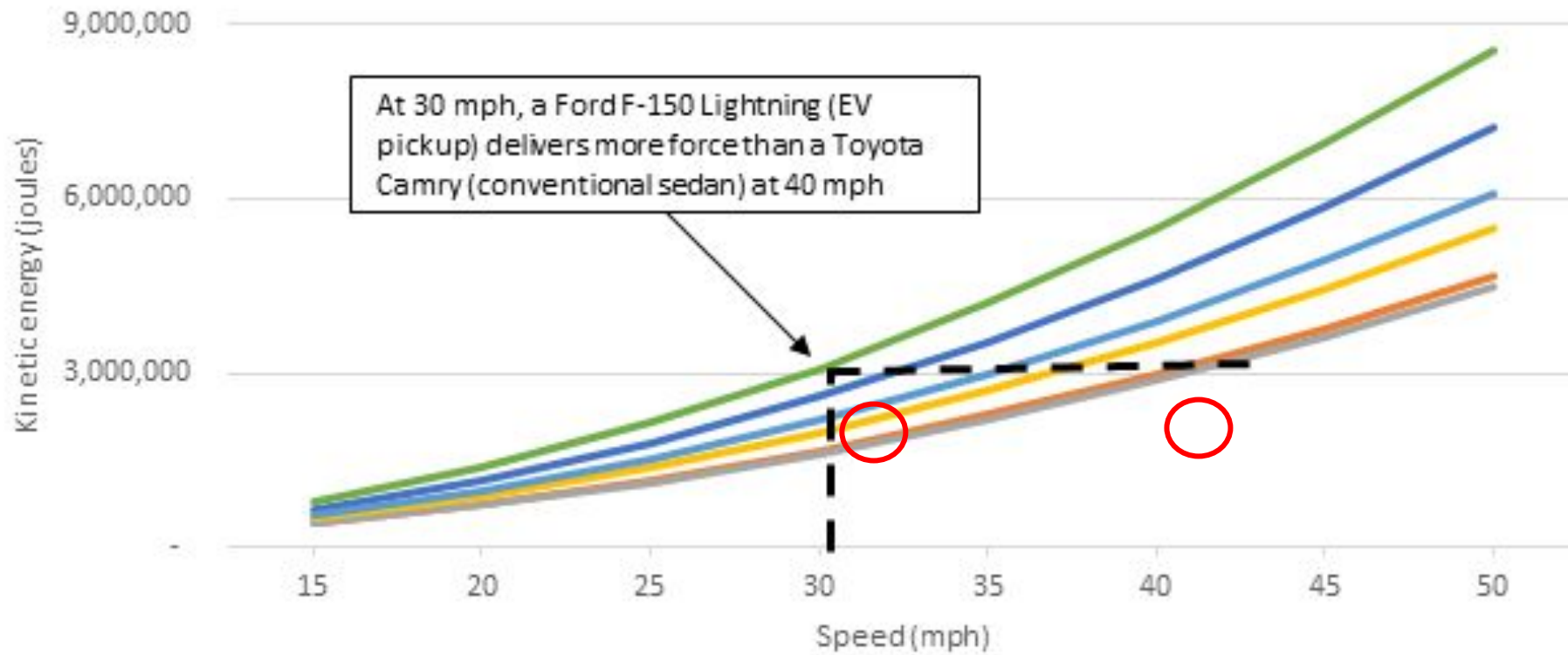
# NTSB head warns of risks posed by heavy electric vehicles colliding with lighter cars

January 11, 2023 · 4:20 PM ET

By The Associated Press



# Heavier vehicles increase the energy in a crash and cause injury



K.E. =  $\frac{1}{2} m v^2$

- Ford F-Series
- Toyota RAV4
- Toyota Camry
- Tesla Model Y
- Jeep Grand Cherokee
- Ford F-150 Lightning



# Vehicles are taller today



Photo credit: Smart Growth America





Chicago Metropolitan  
Agency for Planning

What can we do?



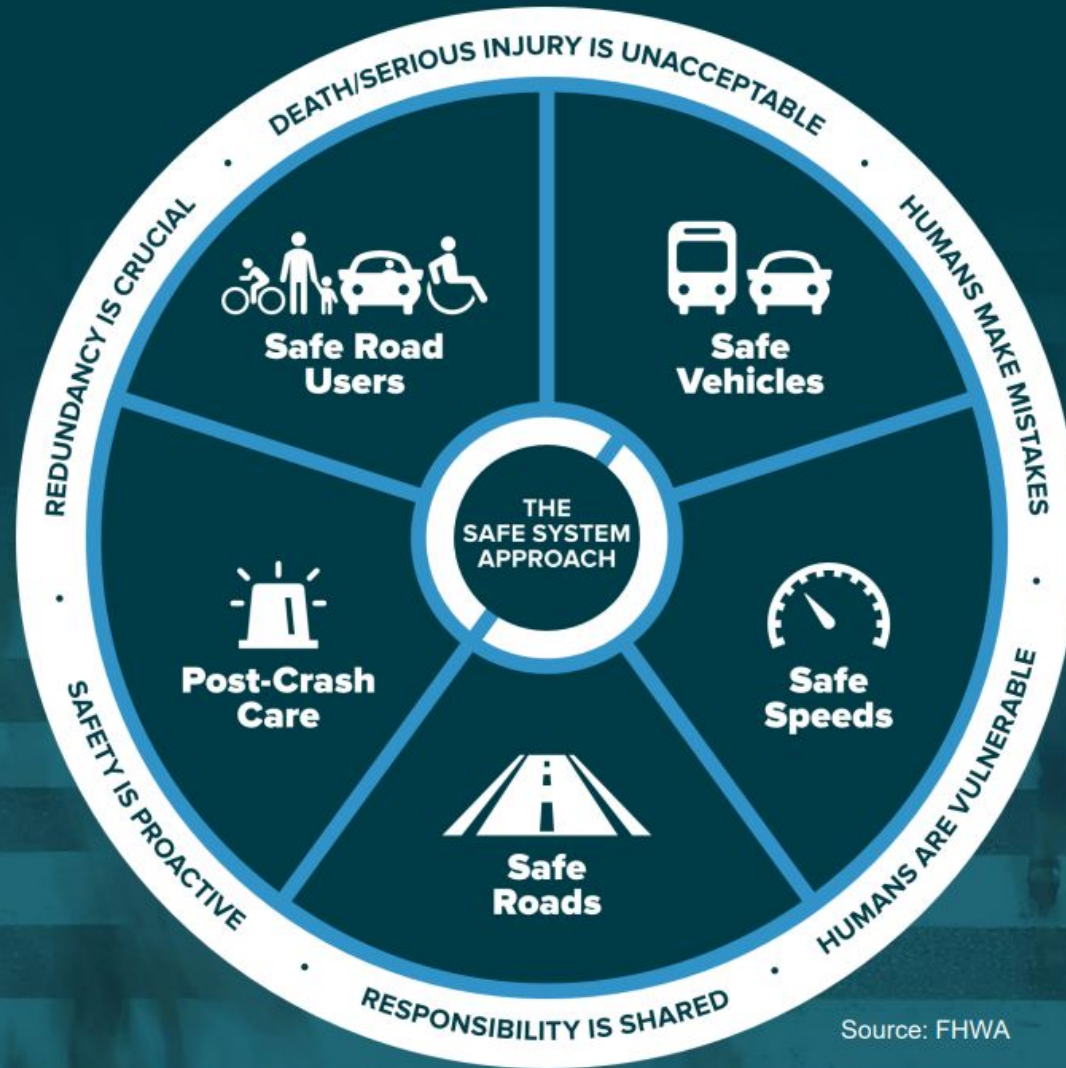


# 1. Re-think how we plan and design our streets





# THE SAFE SYSTEM APPROACH



Source: FHWA



improving street design in multimodal environments



Source: [City of Chicago Department of Transportation](#)





Photo credit: Christopher Burke Engineering



Paint is not enough

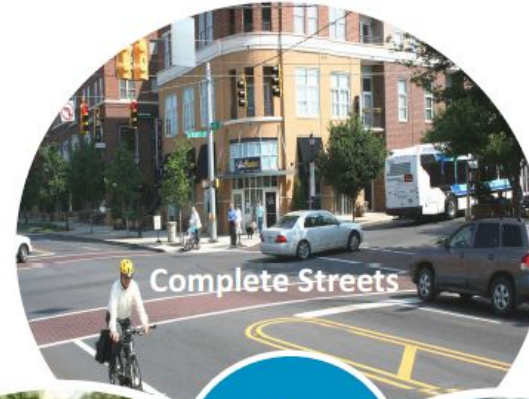




# Self-Enforcing Streets

“A self-enforcing road (sometimes referred to as a “self-explaining roadway”) is a roadway that is planned and designed to encourage drivers to select operating speeds in harmony with the posted speed limit.”

- Self-Enforcing Roadways  
Guidance Report (FHWA, 2018)



Self-enforcing Streets



Chicago Metropolitan  
Agency for Planning



## 2. Make transit and access to it a priority








# Mobility Recovery

An action plan to reimagine how people and goods move in northeastern Illinois

 Chicago Metropolitan Agency for Planning

<https://www.cmap.illinois.gov/programs/mobility-recovery>



### 3. Address speeding where it is a threat





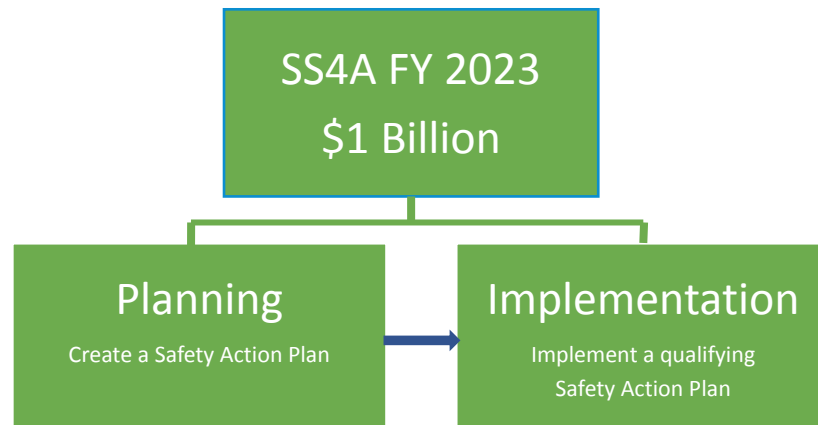
## 4. Leverage funding to make travel safer for all





# Safe Streets and Roads for All: New: Notice of Funding for FY 2023

Applications due Monday, July 10, 2023



S | S  
— | —  
4 | A





# Safe Streets and Roads for All: Planning grant

CMAP awarded a planning grant in January

county-wide safety action plans based on a regional framework

- 2 years, \$4.87M
- Designed to meet SS4A implementation eligibility
- Regional framework
- Equitable engagement and Justice 40 approach
- Build on existing work
- Stay tuned

S | S  
— | —  
4 | A



Chicago Metropolitan  
Agency for Planning

# Thank you!

@cmapillinois |    



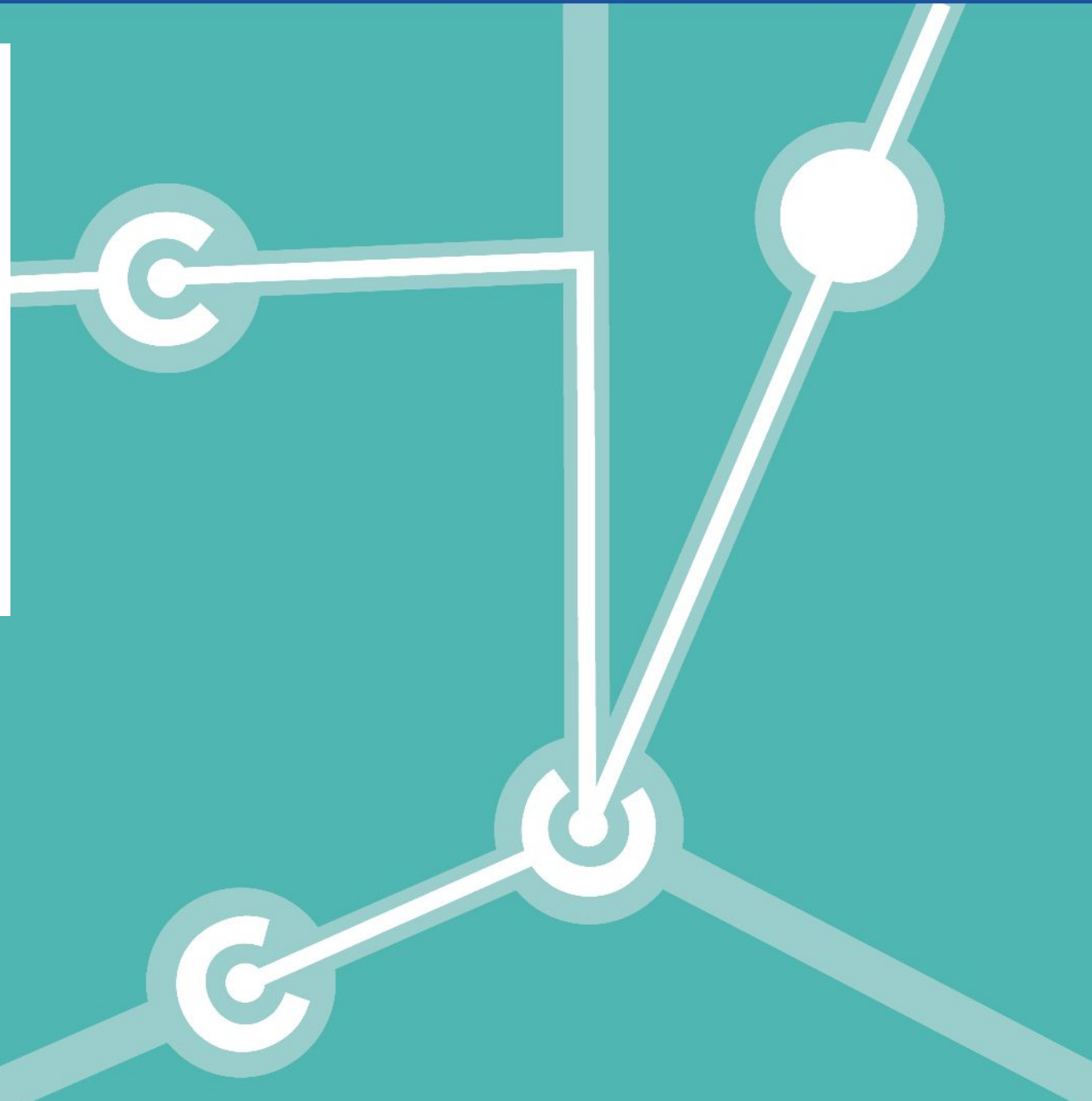
# COOK COUNTY Bike Plan

## Greentown

Benet Haller, Transit Manager

Cook County, Transportation and Highways

June 22, 2023







# COOK COUNTY Bike Plan

**CONNECTING  
COOK COUNTY**  
Beyond Transportation



HONORABLE TONI  
PRECKWINKLE  
PRESIDENT, COOK COUNTY  
BOARD OF COMMISSIONERS

JENNIFER "SIS" KILLEN, P.E., PTOE, SUPERINTENDENT  
DEPARTMENT OF TRANSPORTATION & HIGHWAYS

A project delivered by the Cook County Department of  
Transportation & Highways



## INTRODUCTION

---

First-ever county-wide bike plan

Promotes Healthy, Sustainable, and Smart Communities *Policy Roadmap* strategies

Unique role for Transportation and Highways:

- Sister agency to Forest Preserves
- Coordination among jurisdictions
- Invest in Cook program

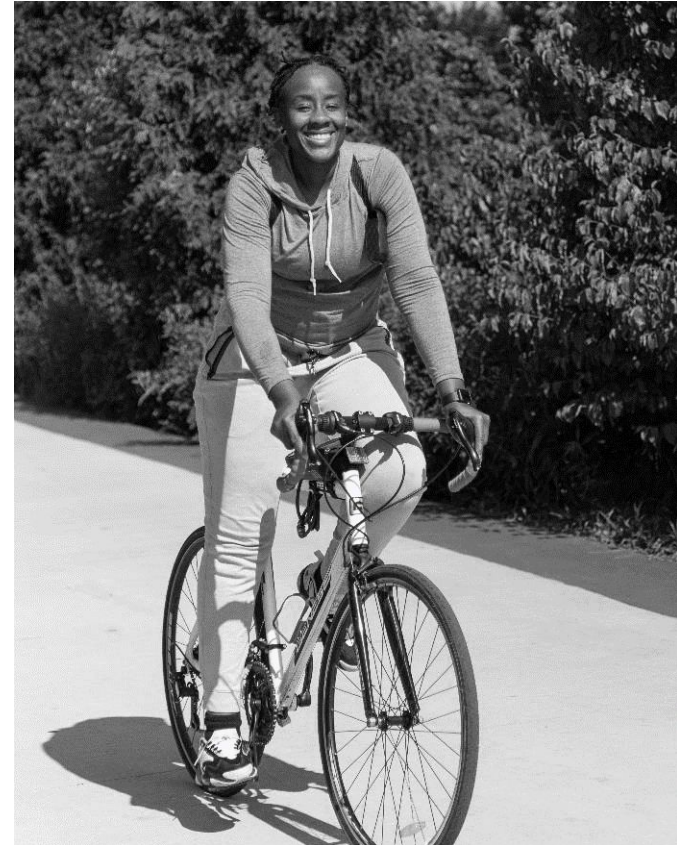




## PRINCIPLES

---

1. **Increase everyday cycling** by supporting bike commuting and better transit integration;
2. **Create a core low-stress network** of bike trails and bike lanes that appeal to all ages and abilities;
3. **Invest in communities of color** to make sure bike facilities are more equitably distributed.



## **RESEARCH AND OUTREACH**

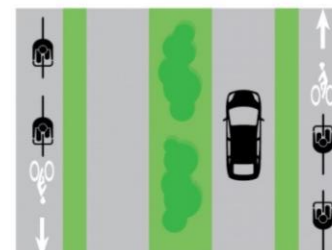
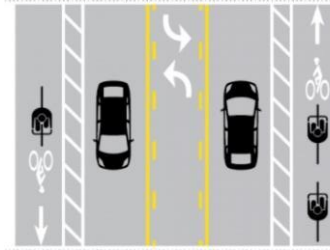
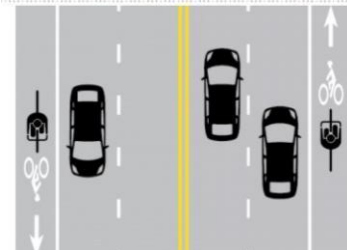
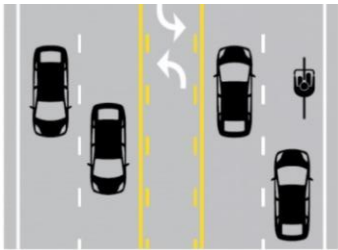
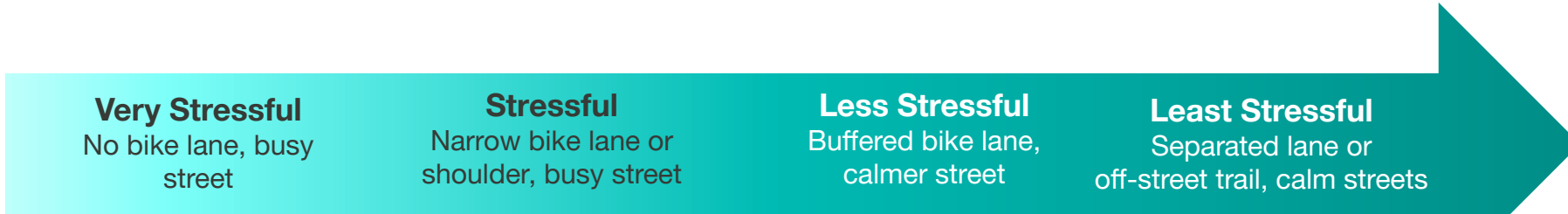
- Reviewed all existing bike infrastructure plans in the county and thoroughly documented the network
- Investigated various bike planning approaches and developed a standard set of definitions
- Public and focused engagement and outreach
- Surveys to understand perspectives and preferred infrastructure







# LOW STRESS NETWORK FOR ALL AGES AND ABILITIES

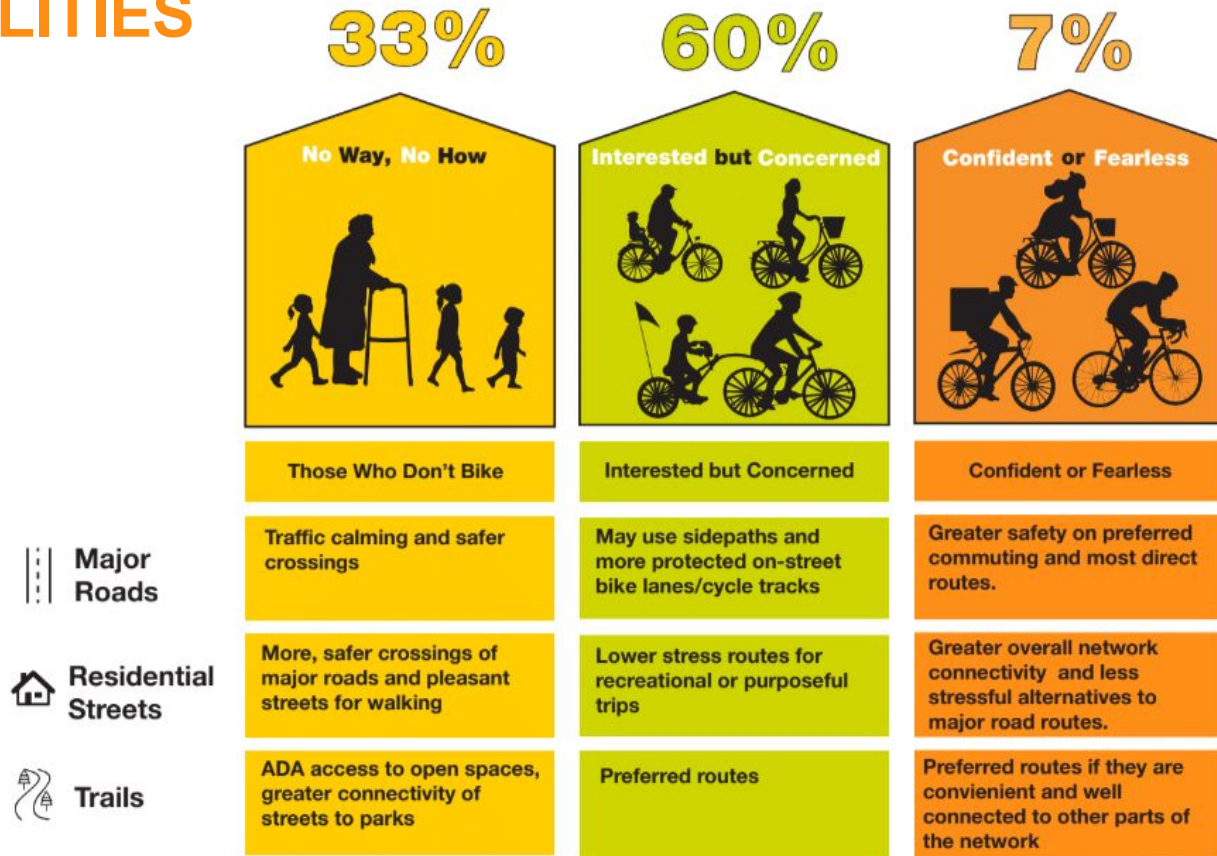


Low-stress attracts the most riders for everyday trips

Source: Alta Planning and Design



# LOW STRESS NETWORK FOR ALL AGES AND ABILITIES



## INVESTING IN COMMUNITIES OF COLOR



Bike planning too often based on needs of only most experienced cyclists

Unequal access to trails within 1 mile of home:

- 24% of white residents
- 28% of Asian residents
- 14% of Latine residents
- 14% of Black residents

75% of side paths on County roads are in higher-income communities



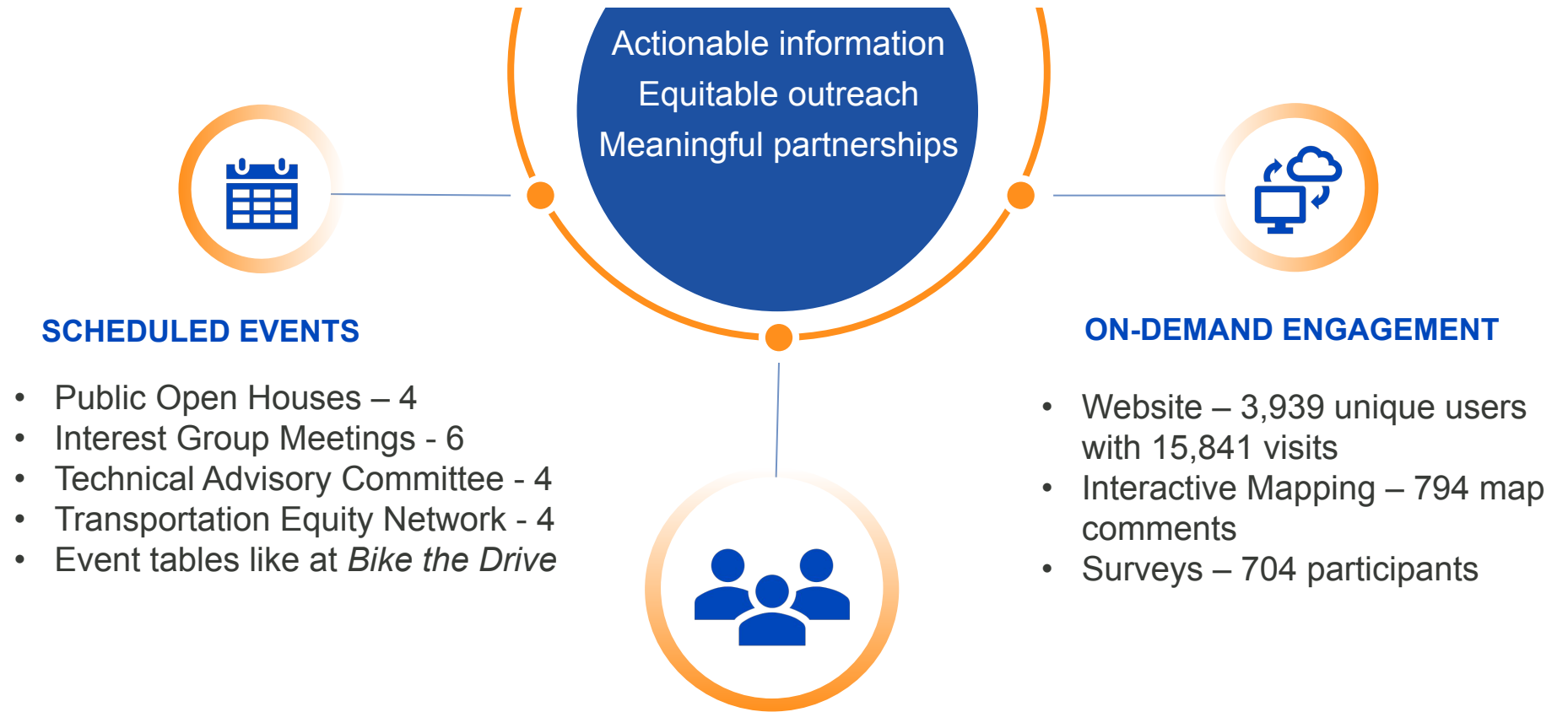
### **Strategies:**

Prioritize bike facilities that serve communities of color  
Target underrepresented groups in our outreach





# COMMUNITY ENGAGEMENT





# SURVEY RESULTS CONT.

## FACTORS THAT INFLUENCE COMFORT



Trails	Paved	Gravel or Unpaved, Shared with Pedestrians
Sidepaths	Close to Attractions/Busy Roadways	Narrow Paths, Lack of Signage, Concrete,
Alleys		Speed Humps, Driveways, Dumpsters, Pavement Conditions
Residential Streets	Traffic Circles	Speed Bumps, Two-Way Traffic, Parking Lighting, Driveways, Non-Signaled Intersections
Arterials Streets	Painted and Protected Bike Lanes, Urban Environments	Suburban Environments, Lighting
Industrial Streets		Trucks and Other Vehicles, Lighting, Traffic

### KEY TAKEAWAYS

- Time of day isn't as impactful as predicted as a factor to influence biking
- Signage is an important factor for every type of infrastructure with a preference on signage that alerts drivers to the presence of bikers
- While some infrastructure is preferred due to lack of vehicle traffic, there are a lot of smaller factors that influence how comfortable those routes can be



## CATEGORIES OF BIKE INFRASTRUCTURE

Type	Jurisdiction	Location/type	Hours	Time to Develop
Shared Streets (On Street)	Local Municipalities	Middle of road	all	Short to Long
Major Roads (On Street)	IDOT, DoTH, Local Munis	Side of road	all	Short to Long
Sidepaths (Off Street/On Street)	IDOT, DoTH, Local Munis, Forest Preserve	8 to 12' shared use path, adjacent to roadway	all	Medium to Long
Trails (Off Street)	Park districts, Forest Preserve, Schools	8 to 12' shared use path	Closed at night	Medium to Very Long
Road Crossings (On Street)	IDOT, DOTH, Local Muni/Township	Where roads or trails cross roads	all	Short to Long

- Major Road Infrastructure
  - Sidepaths\*
  - On Street Protected/Buffered/Painted Bike Lanes
  - Sharrows
  - Bike Routes





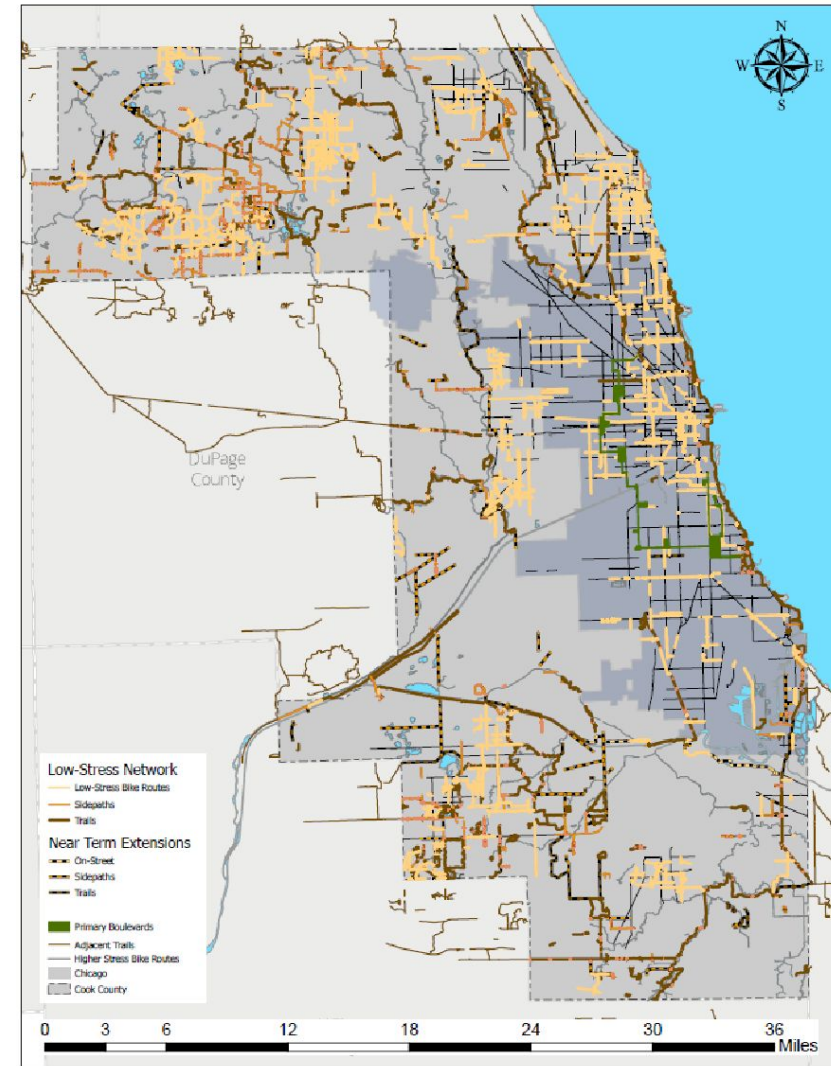
## RELATED PLAN: SEATTLE BIKE MASTER PLAN

- Outlines an infrastructure plan for a connected network with ~100 miles of protected bicycle lanes and ~250 miles of neighborhood greenways.
- Outreach process sought to reach beyond loudest voices and engaged with people who might bike, people of color, people of all ages and abilities, people who live in the project area
- Goal: 100% of households in Seattle within ¼ mile of an all ages and abilities bicycle facility by 2035



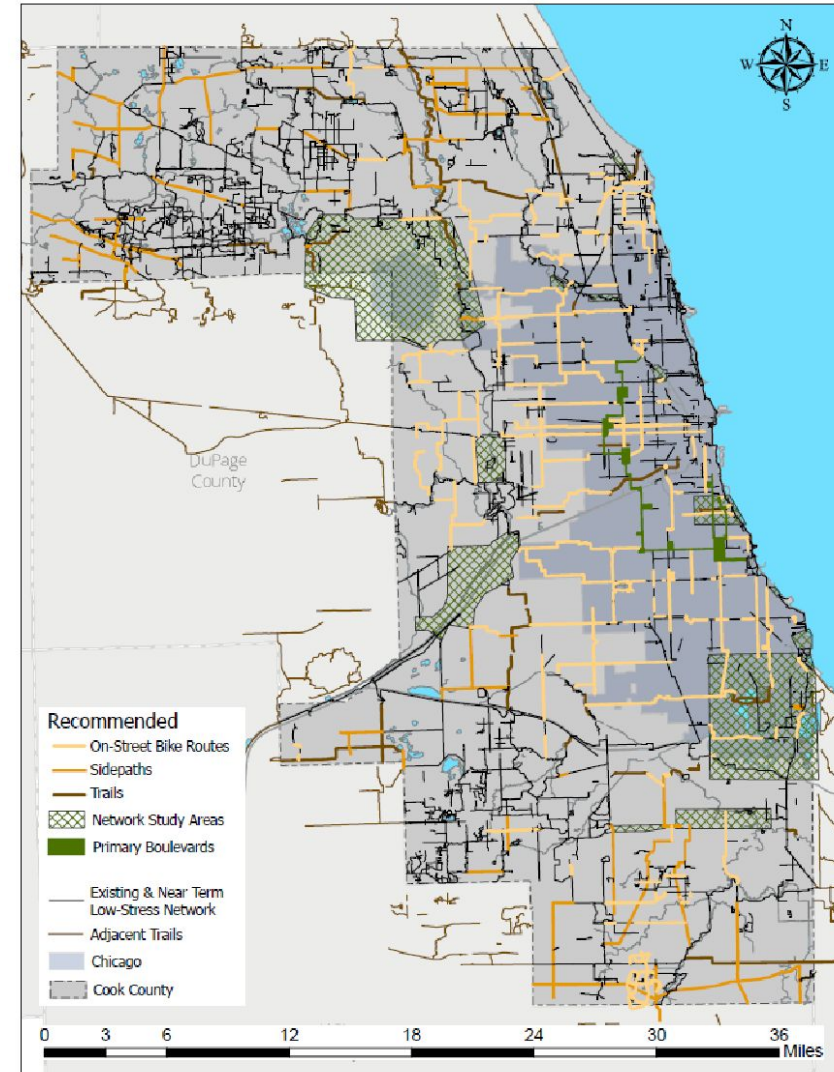
## OVERALL NETWORK

- This is composed of
  - Designated bike routes on Major Roads and Residential Streets
  - Sidepaths
  - Share-use off street trails
  - Road Crossings
- Great degree of variation in access to existing bike facilities
- Goal is for every resident to live within a half mile of a part of the low stress network



## OVERALL NETWORK

- This is composed of
  - Designated bike routes on Major Roads and Residential Streets
  - Sidepaths
  - Share-use off street trails
  - Road Crossings
- Great degree of variation in access to existing bike facilities
- Goal is for every resident to live within a half mile of a part of the low stress network

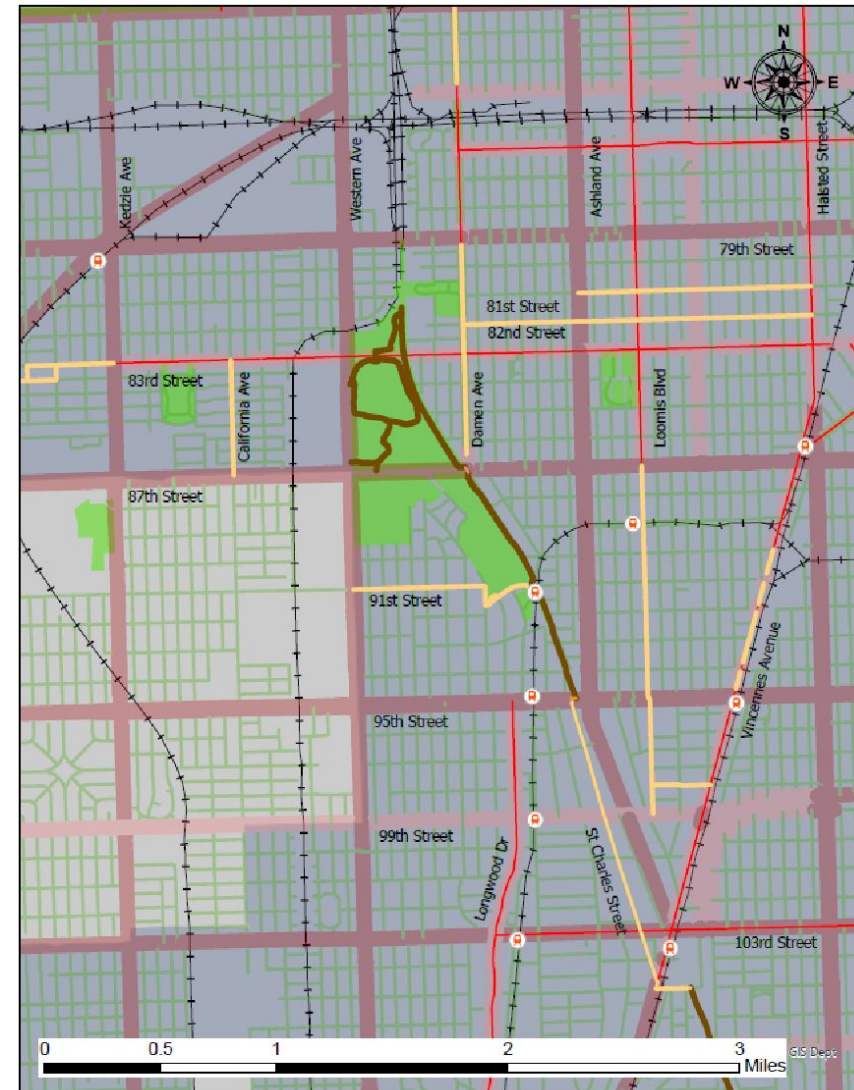






## URBAN NEIGHBORHOOD EXAMPLE: Dan Ryan Woods Environs

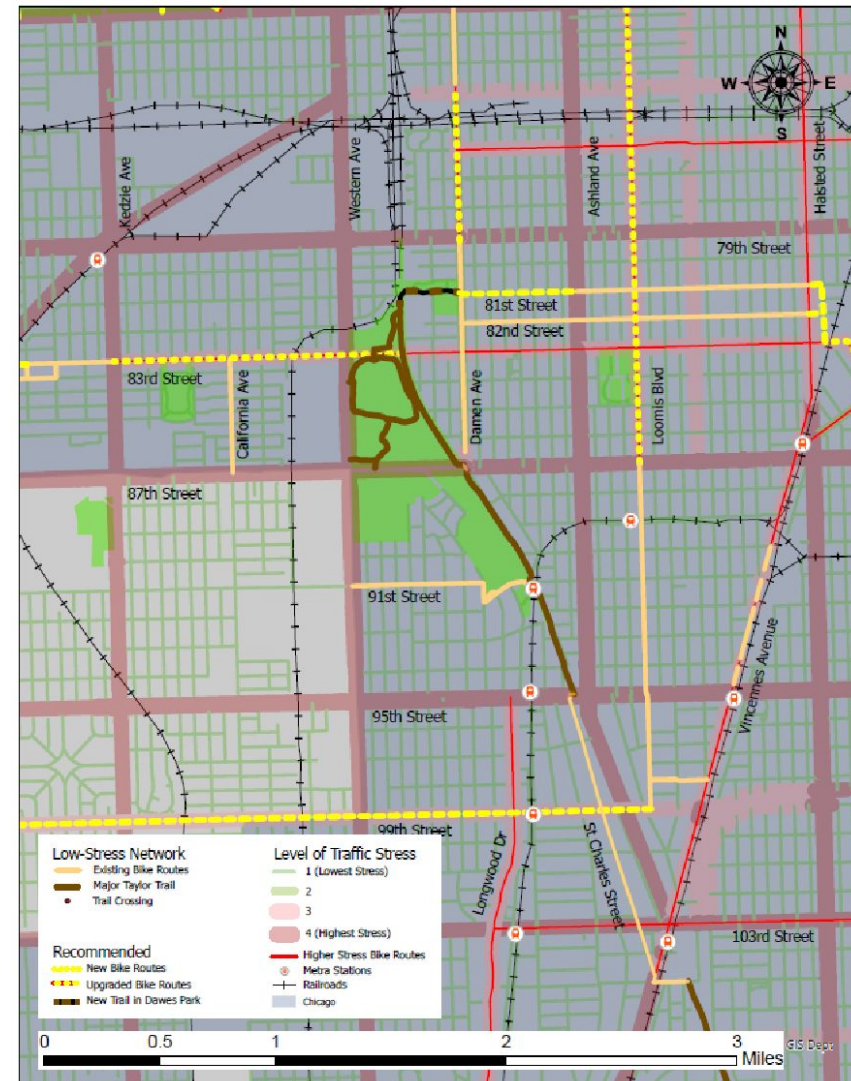
- Hard to reach trail from neighborhoods and communities to the north and west
- Many higher stress bike routes east of Damen
- No bike routes in adjacent municipalities to the west





## URBAN NEIGHBORHOOD EXAMPLE: Dan Ryan Woods Environs

- Create connection from Major Taylor Trail through Dawes Park to connect to Damen/81<sup>st</sup> Street
- Make improvements in existing bike routes to make them lower stress
- Create bike routes in Evergreen Park which connect to routes in Chicago





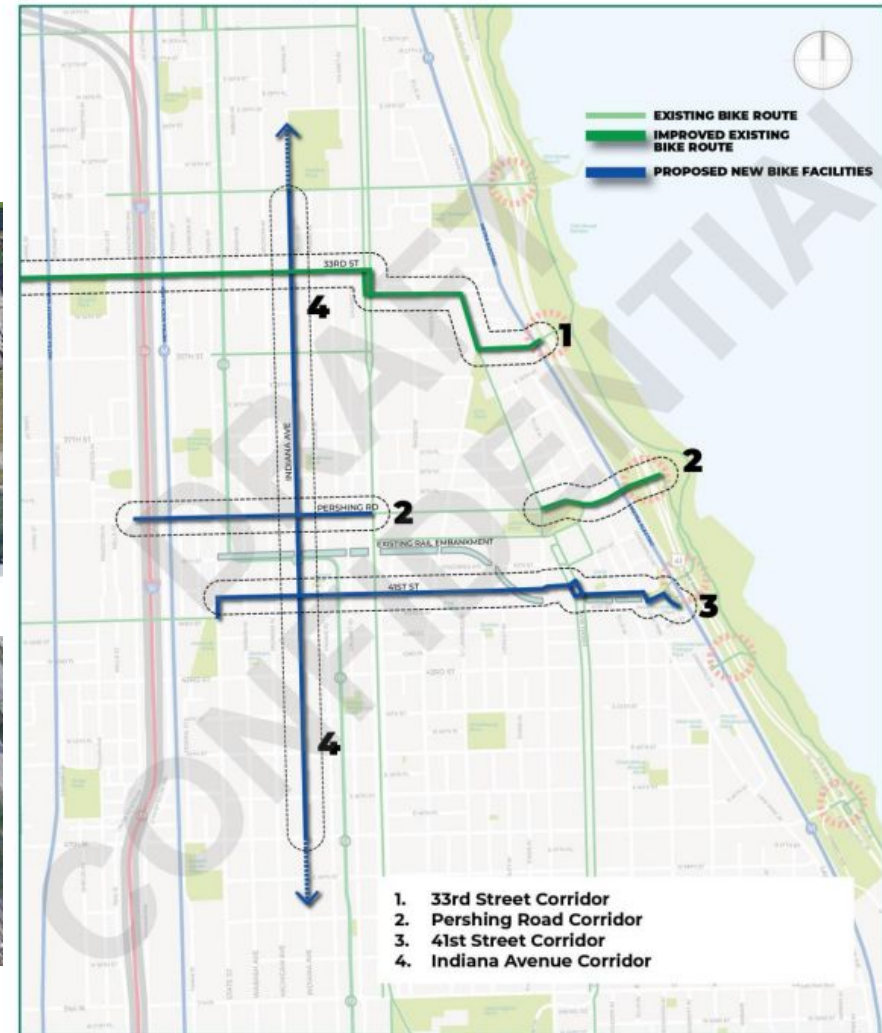


## NORTH KENWOOD AREA

### Potential Improvements



Figure 2. Recommended Future Bicycle Corridors in Study Area







## NORTH KENWOOD AREA Potential Improvements

Figure 6. Existing Low-Stress Network



Figure 7. Potential Future Low-Stress Network





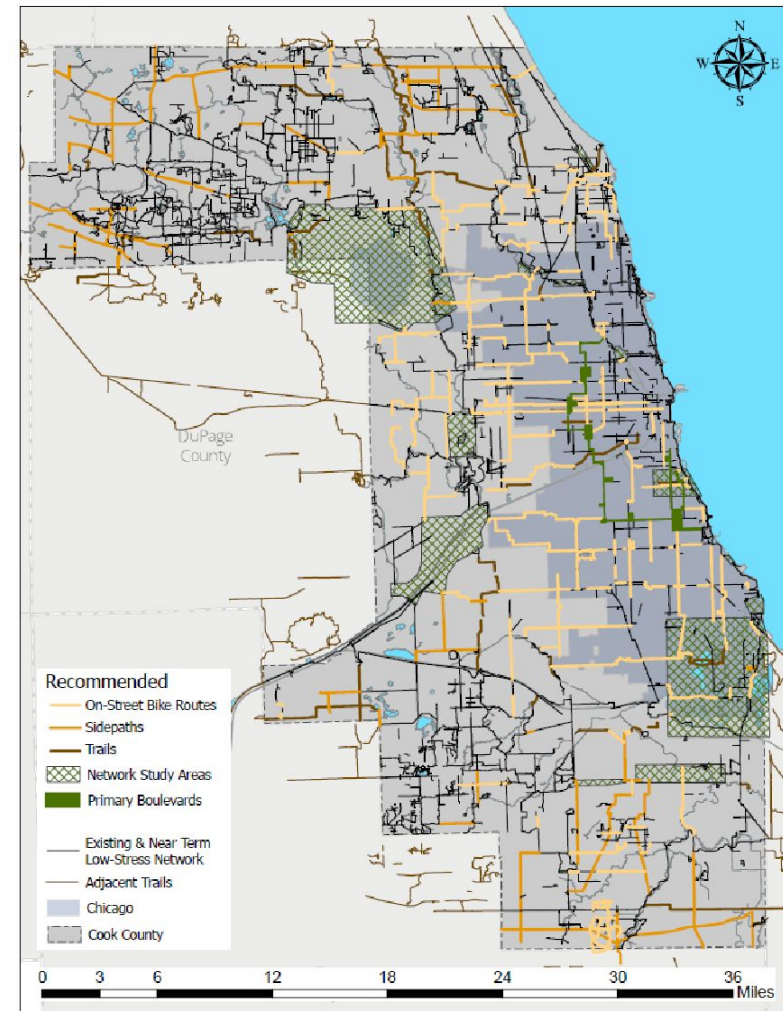
## SELECTED IMPLEMENTATION ACTIONS

### CREATING A CORE LOW-STRESS NETWORK

- Make key connections by building bike paths and lanes along DoTH roadways
- Study new trails outside DoTH right-of-way, followed by funding assistance for feasible projects
- Carry out subarea network studies in challenging locations – O’Hare, Lake Calumet, Bronzeville, etc.

### METRICS INCLUDE:

- Advance 1 – 3 new segment feasibility studies per year



## **SELECTED IMPLEMENTATION ACTIONS**

### **SUPPORTING LOCAL BIKE NETWORKS**

- Work with municipalities to designate bike routes on comfortable residential streets
- Work with partner agencies to make intersections safer for all users, with a focus on locations where bike paths and bike routes cross major roads
- Pioneer new models for long-term maintenance

### **METRICS INCLUDE:**

- **Construct at least 15 miles of sidepath on DoTH right-of-way over the next ten years.**





## **SELECTED IMPLEMENTATION ACTIONS**

---

### **INTEGRATING TRANSIT AND BICYCLING**

- Work with partners to expand bike share beyond Chicago
- Work with partners to ensure infrastructure at and near transit stations supports biking

### **IMPROVING DATA AVAILABILITY AND QUALITY**

- Begin regional bike count program
- Continue to document growing bike network

### **METRICS INCLUDE:**

- **Implement a county-wide bike counting program starting in 2025.**





**Thank  
you!**

green  
town

# Active Transportation for Local

**Communities** of River  
Forest

Victoria Barrett, CMAP

Benet Haller, Cook County

Government