

Resilient Chicago



PIONEERED BY THE
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RESILIENT CITIES

100 Resilient Cities is a global initiative that seeks to help cities around the world become more resilient to the physical, social, and economic challenges that are a growing part of the 21st century.





RESILIENT CHICAGO



A Plan for Inclusive Growth and a Connected City



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RESILIENT

CITIES

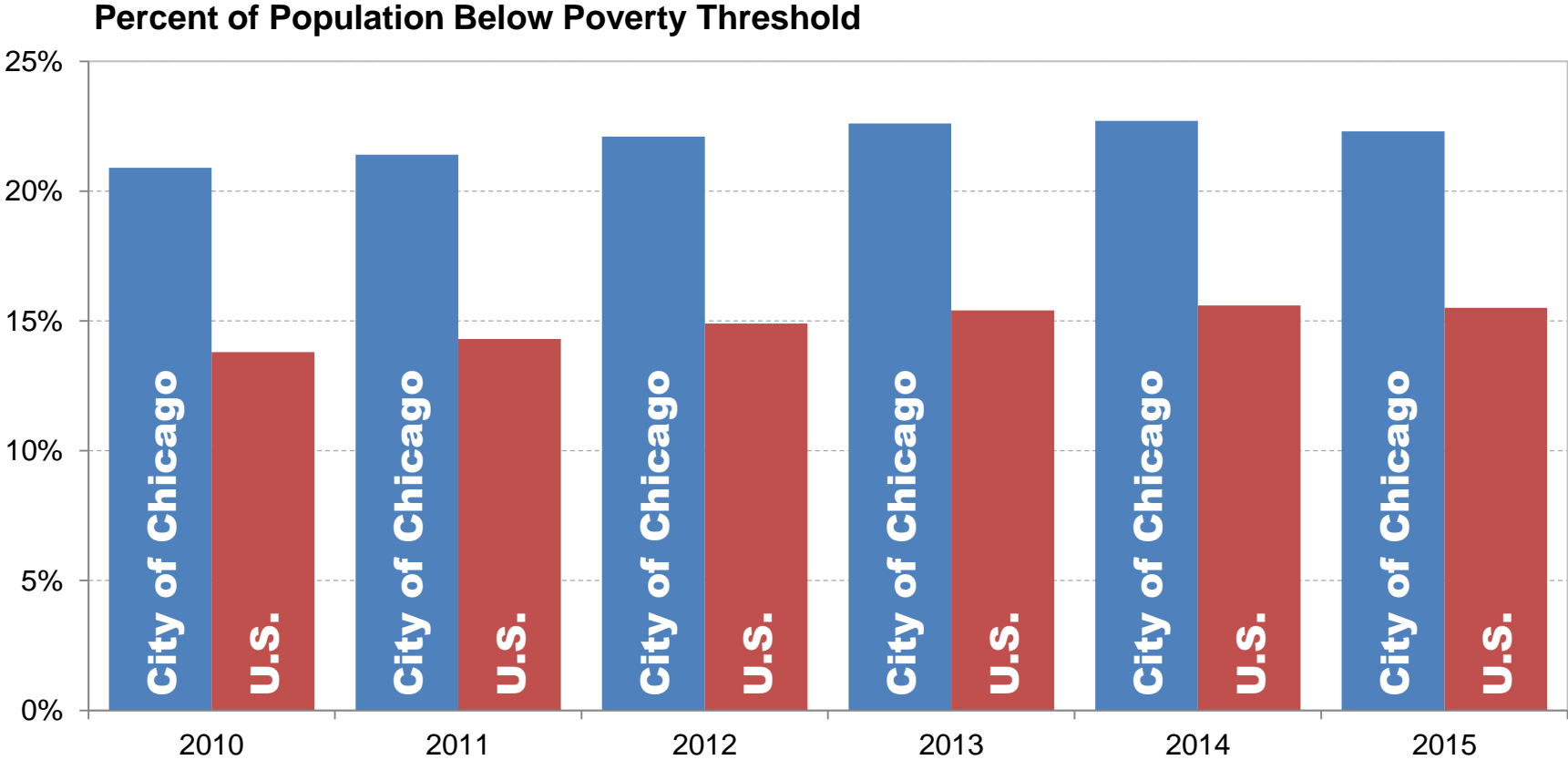
How did we get here?

Developing the Resilience Strategy

**Chicago must address
chronic stresses and prepare
for future shocks...**

Too many Chicagoans live in poverty...

More than 20% of Chicagoans live below the poverty threshold.



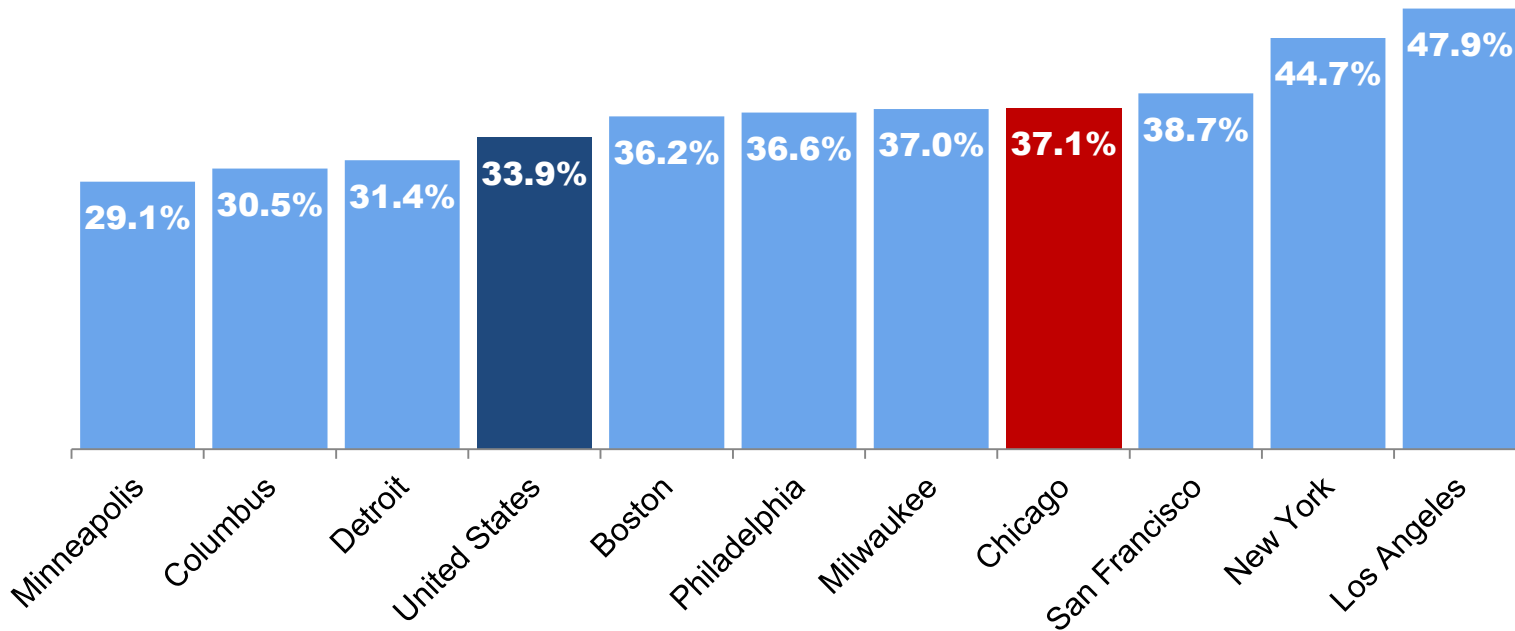
Source: 2011-2015 American Community Survey 5-Year Estimates

...and there is a greater share of cost burdened households in Chicagoland than in the U.S. overall.

37.1% of households in the Chicago MSA spend more than 30% of their income on housing costs. **18.2%** of households spend more than 50%.

Percent of Households Cost Burdened*

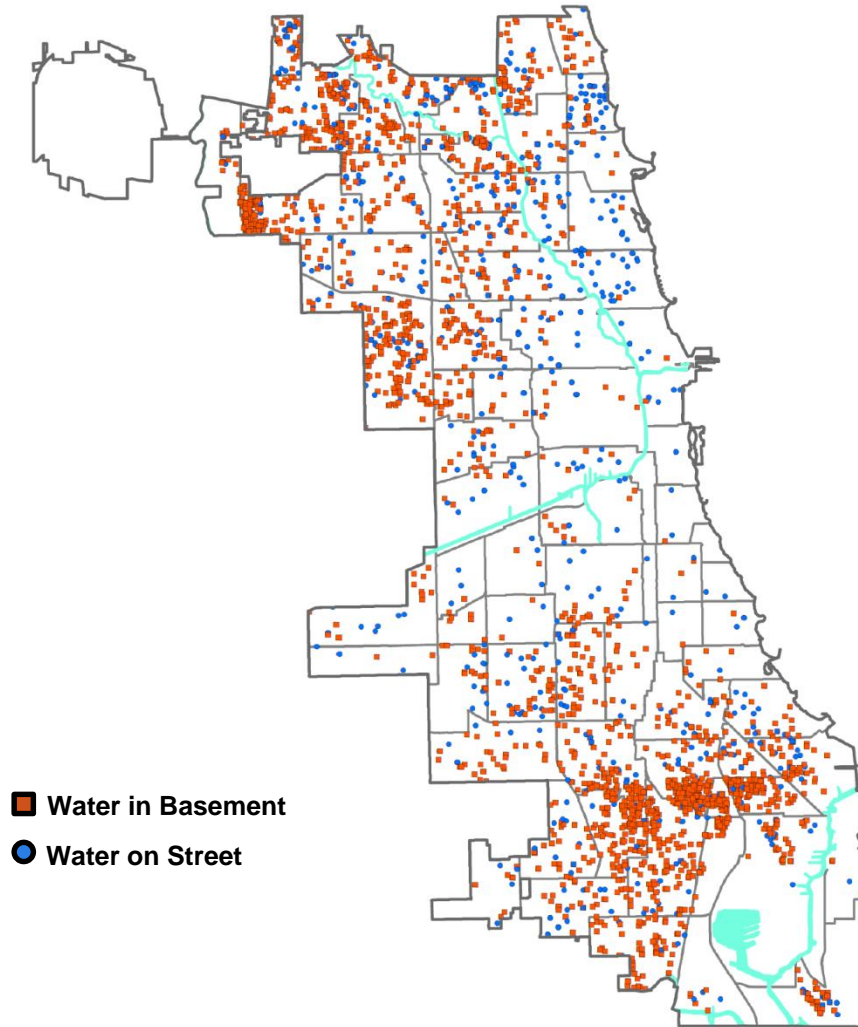
**Housing costs more than 30% of household income*



Note: Locations are Metropolitan Statistical Areas

Chicagoans are vulnerable to flooding events...

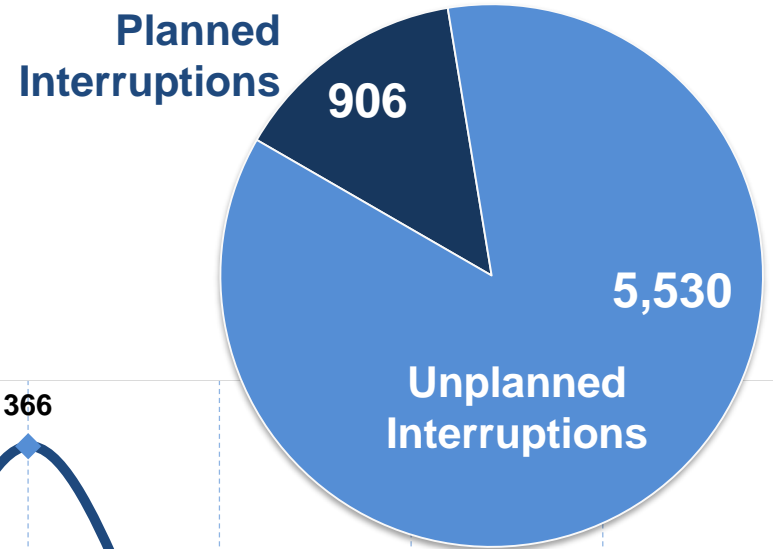
311 Calls for Flooding – April 17-18, 2013



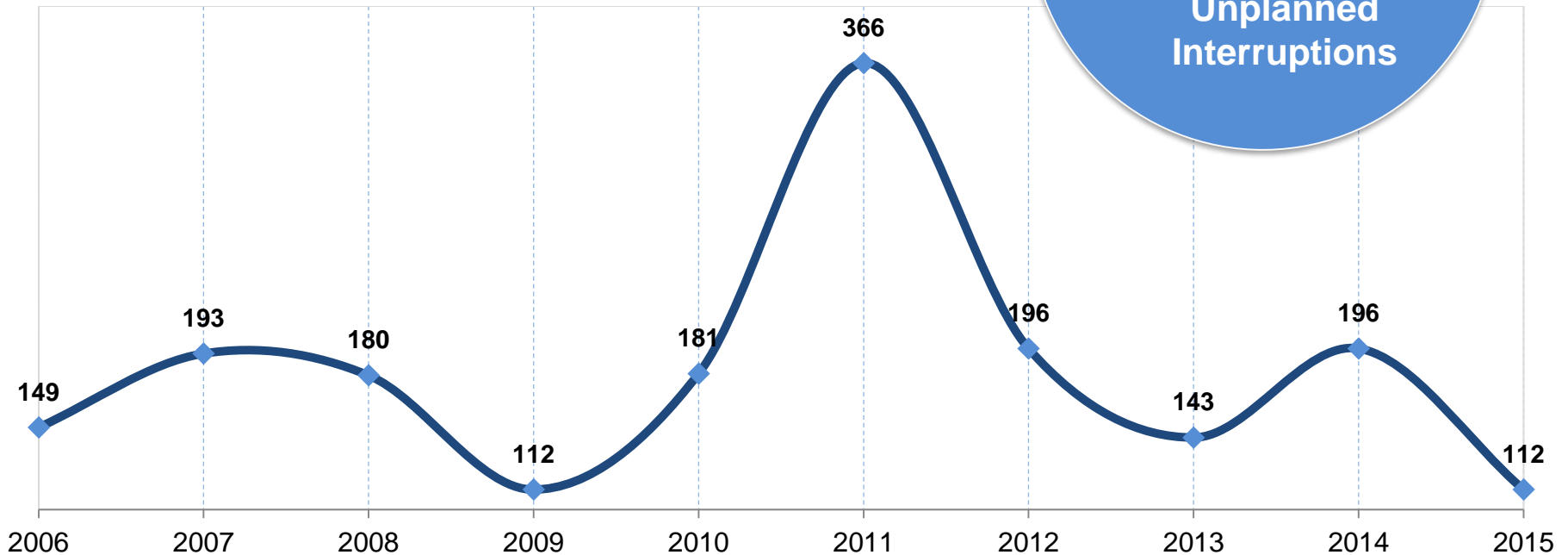
A major rain event, like one in April 2013, can result in **over 2,000** calls for reporting flooding.

...and electric outages.

86% of outages are unplanned and last an average of **2 hours**



Average Duration of Interruption (minutes)



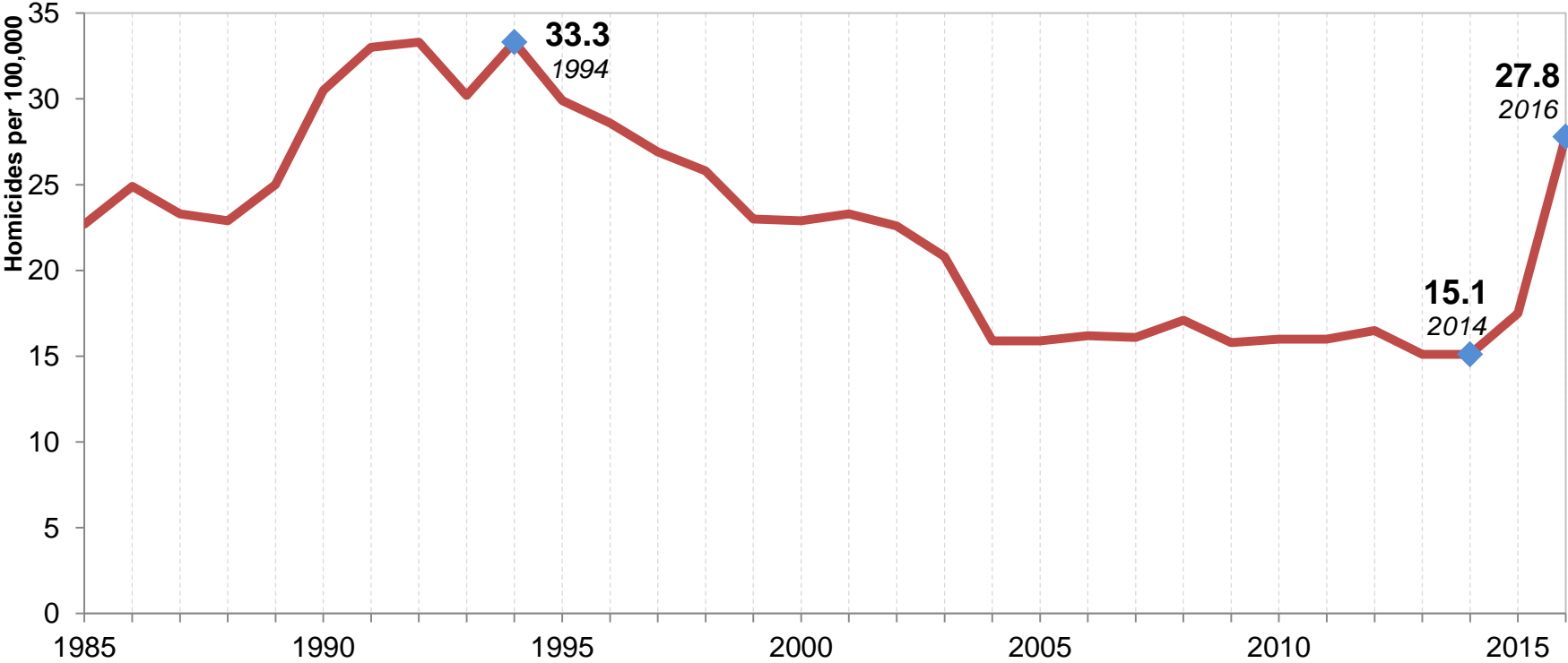
Credit: Illinois Commerce Commission Utilities Annual Report 2016; ComEd

**Data includes reportable storm outages*

Too many Chicagoans are victims of gun violence.

The number of homicides spiked after a period where the rate had been half of that of the 1990s

Homicide Victims in Chicago, 2010-2016

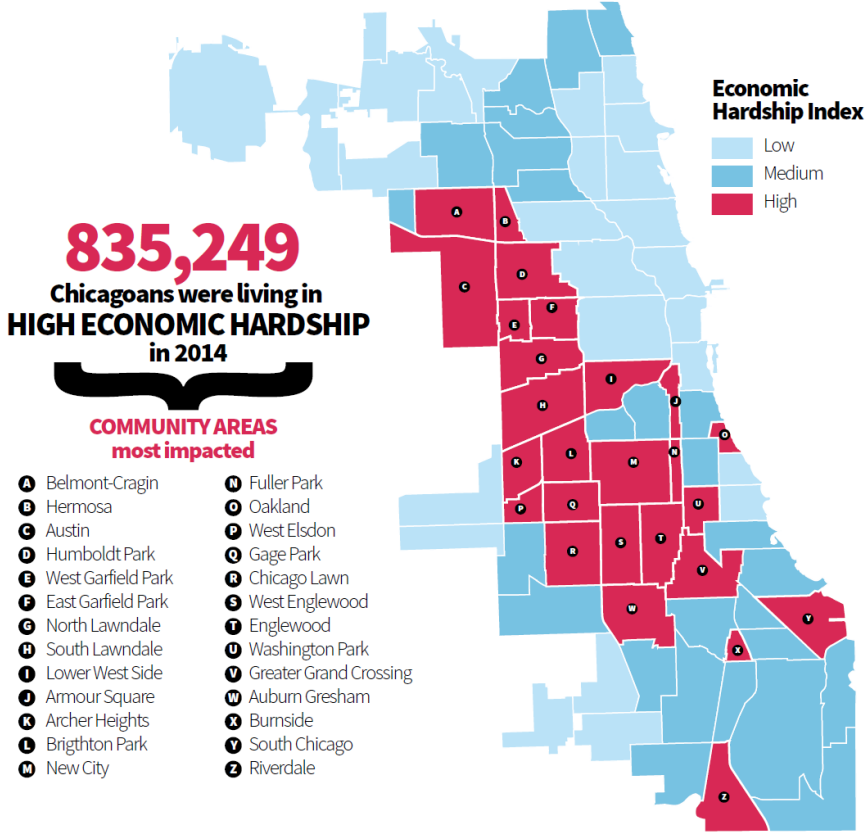


Credit: University of Chicago Crime Lab analysis of data from Chicago Police Department, the Federal Bureau of Investigations, and the Uniform Crime Reports

**...especially in disconnected
communities with a
disproportionate share of
hardships.**

The greatest disparities across key indicators consistently exist in the same West and South Side communities.

Economic Hardship Index



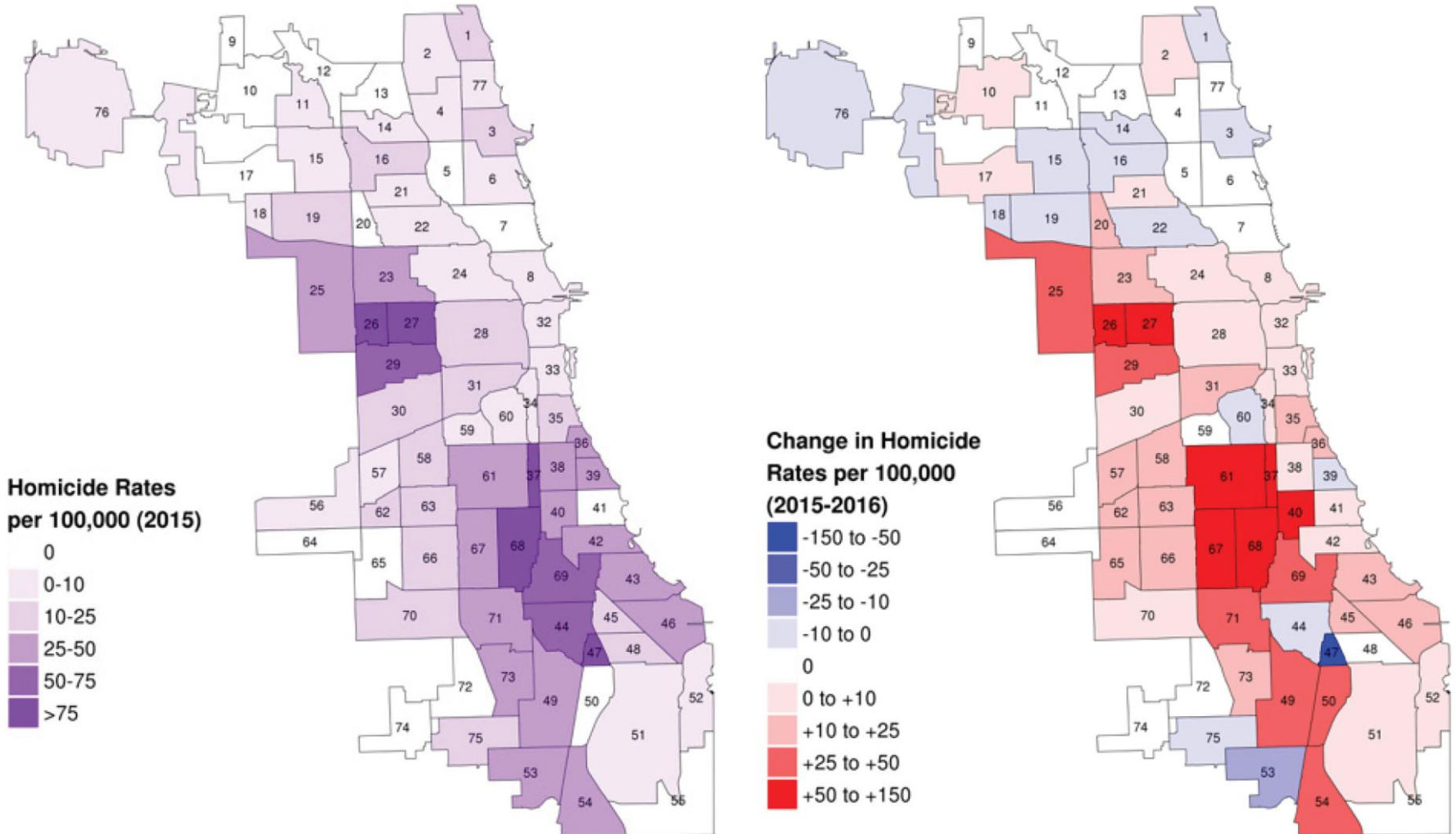
Economic Hardship Index:

1. Unemployment
2. Crowded Housing
3. Poverty
4. Education Attainment
5. Dependents
6. Per Capita Income

Credit: Chicago Department of Public Health, “Healthy Chicago 2.0” using data from U.S. Census ACS 2014 Estimates, diversitydatakids.org, and Kirwan Institute.

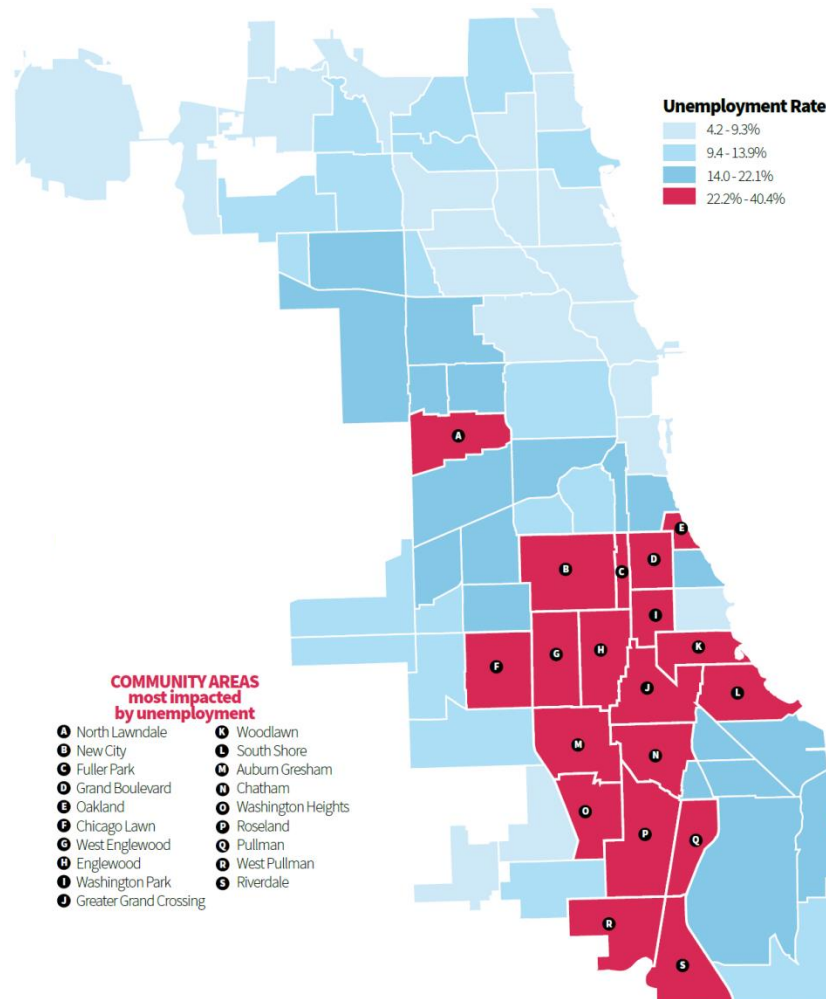
Including disparities in homicides...

Homicide Rates in Chicago Community Areas, 2015-2016



...unemployment....

Unemployment Rate

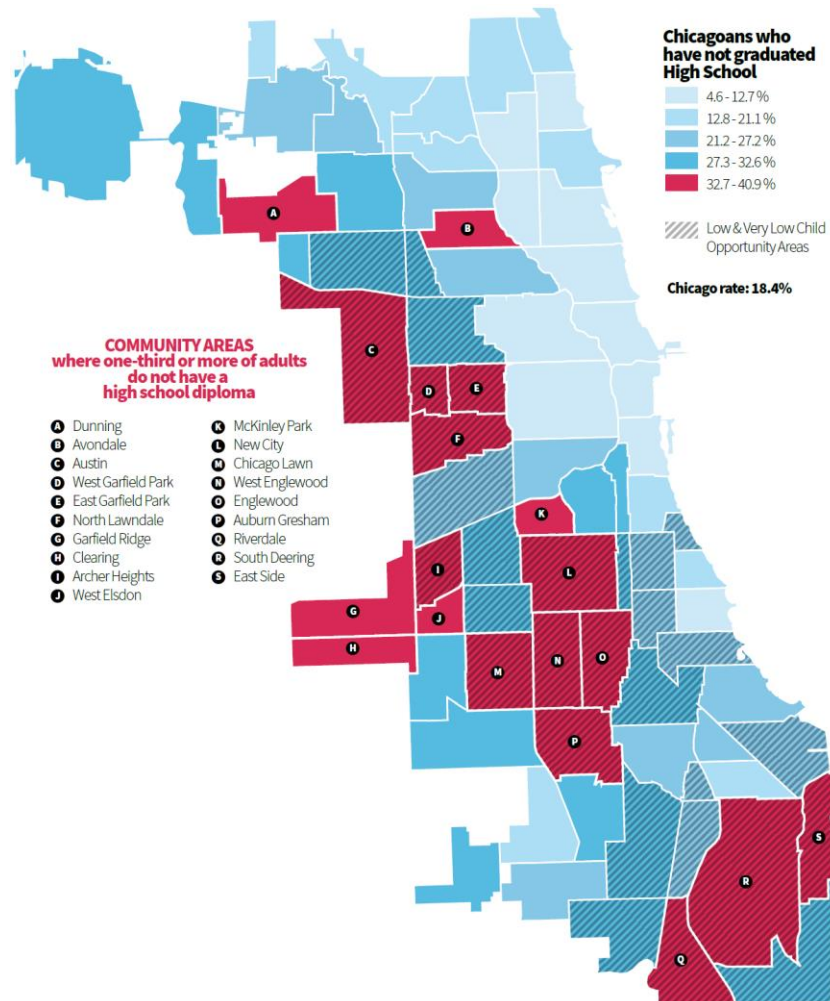


African Americans are **2.6X** more likely to be unemployed than whites

Credit: Chicago Department of Public Health, "Healthy Chicago 2.0" using data from U.S. Census American Community Survey 2010-2014 Estimates

...educational attainment....

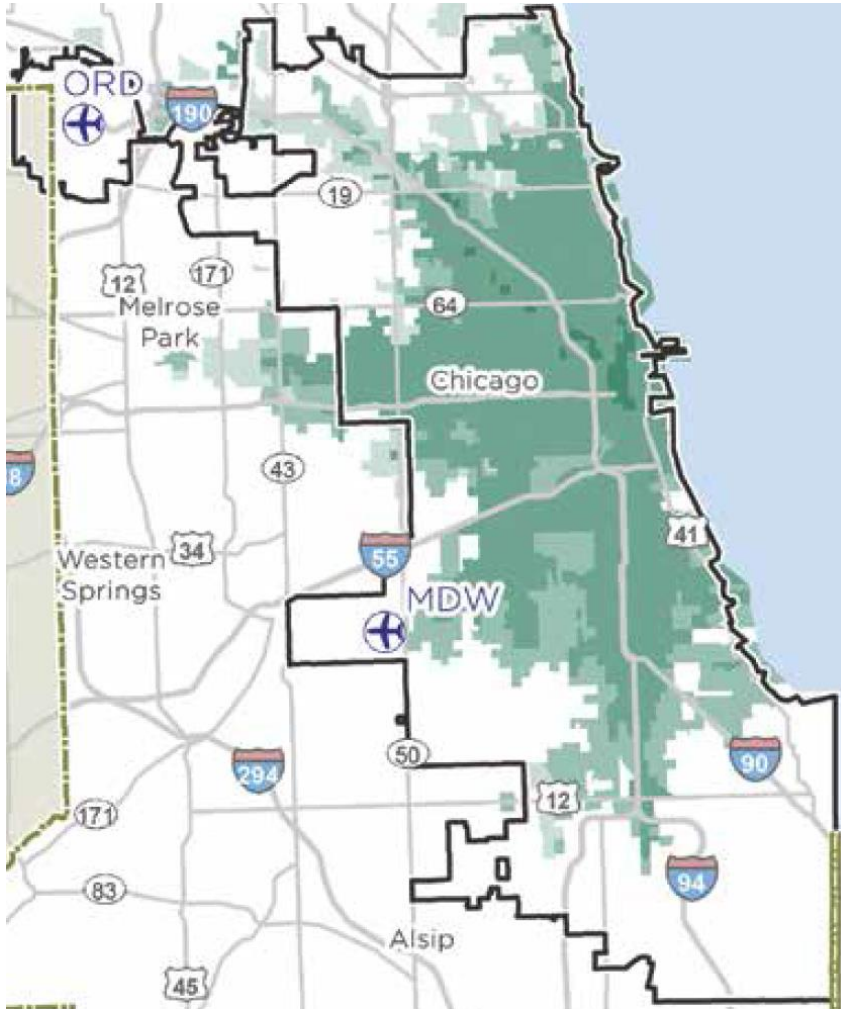
Chicagoans who have not graduated High School



Credit: Chicago Department of Public Health, "Healthy Chicago 2.0" using data from U.S. Census American Community Survey 2010-2014 Estimates

...and access to economic opportunity.

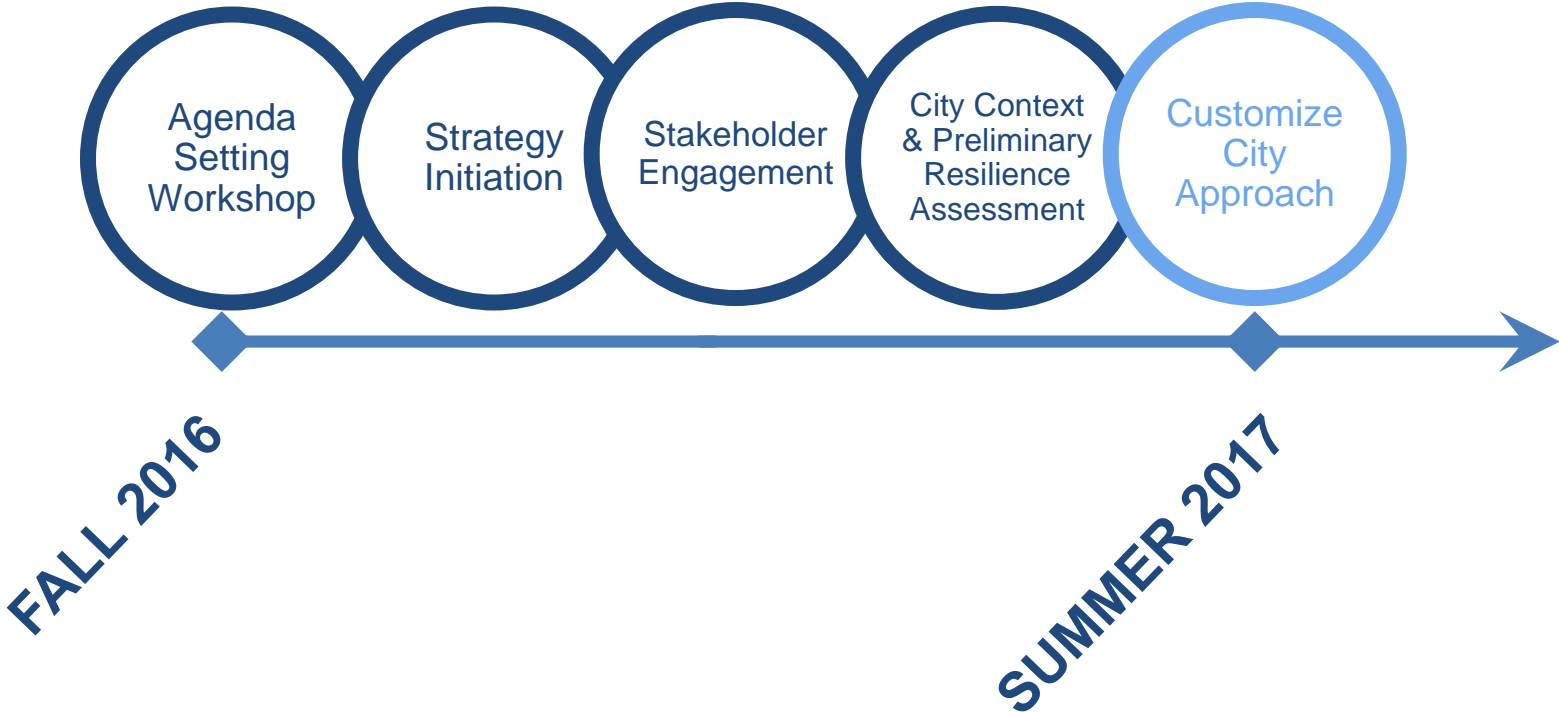
Job accessibility by transit within 45 minutes of home at 8:00 am



Credit: Cook County Long-Range Transportation Plan – data from University of Illinois-Chicago Metropolitan Chicago Accessibility Explorer and Longitudinal Employer-Household Dynamics

Through this process, we have engaged a large and diverse group of stakeholders to better understand threats and opportunities and identify specific actions to take.

Resilience Strategy Creation Process



Resilience Strategy Creation Process



STEP 1: Understand Chicago

Identify Chicago's strengths, it's biggest threats, and it's leading challenges through...

1

Agenda-Setting Workshop

100 Civic & Community Leaders

2

Online Surveys

2,500 Recipients & 450+ Responses

3

Meetings, Workshops, & Panels

675+ People
130+ Agencies & Organizations

4

Research

Open Data Portal
National Data Resources



Strengths/Assets

- Abundant Fresh Water
- Diversified Economy
- Transportation Infrastructure
- Educated Population
- Comparatively Low Cost of Living
- Ensure Continuity of Critical Services
- Provide and Enhances Natural and Manmade Assets
- Provide Reliable Communication and Mobility

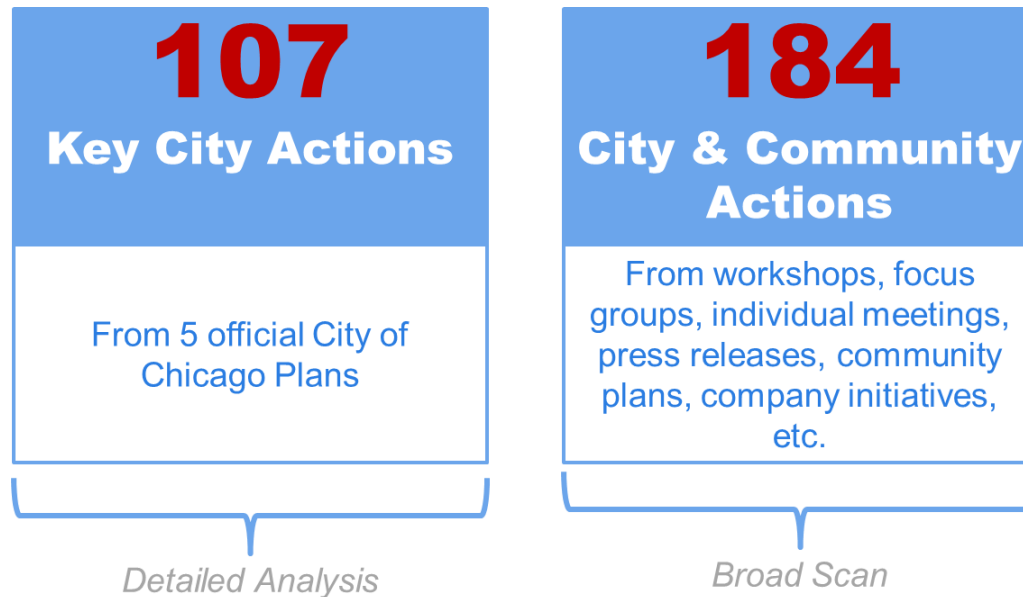


Weaknesses/Threats

- Disconnected Neighborhoods
- Storms
- Economic Crash
- Flooding
- Infrastructure Failure
- Violence
- Access to Quality Education
- Income & Employment Inequality
- Racism
- Ensure Social Stability, Security & Justice
- Support Livelihoods & Employment
- Promote Cohesive, Engaged Communities

STEP 2: Understand Existing Efforts

Understand what the City and its partners have been doing to improve resilience, and to connect these efforts to gaps that *Resilience Strategy* could fill



*The City and its partners are already putting a lot of effort into addressing challenges relating to **education (Cradle-to-Career Strategy)**, **health (Healthy Chicago 2.0)**, **jobs (Chicago-Cook Workforce Partnership)**, and **crime/violence (Public Safety Strategy)**.*

STEP 3: Synthesize

Four key challenges emerged as Chicago's most pressing resilience challenges that the *Resilience Strategy* can help address:

- 1. Reducing disparities within Chicago's neighborhoods** through a focus on reconnecting vulnerable populations and disinvested neighborhoods to opportunity
- 2. Addressing the root causes of crime and violence** through improving connections to economic opportunity and complementing ongoing police reform efforts
- 3. Ensuring the provision of critical infrastructure** specifically for vulnerable populations
- 4. Promoting engaged, prepared, and cohesive communities** through improved connection between the City and residents

Our resilience strategy
will create a more
connected Chicago.

A resilient Chicago is a city where residents, neighborhoods, institutions, and government agencies are successfully connected to each other in the pursuit of economic opportunity, safety, equity, and sustainability.



Residents connected to opportunity



Neighbors connected to each other



Communities connected to other communities



Government connected to residents



City government connected and collaborating



Regional governments connected & working together



Healthy communities connected to nature

Our strategy focuses on three specific pillars...



Strong Neighborhoods

How do we ensure every resident in every neighborhood has the access and opportunity to participate in the economic future of Chicago?



Robust Infrastructure

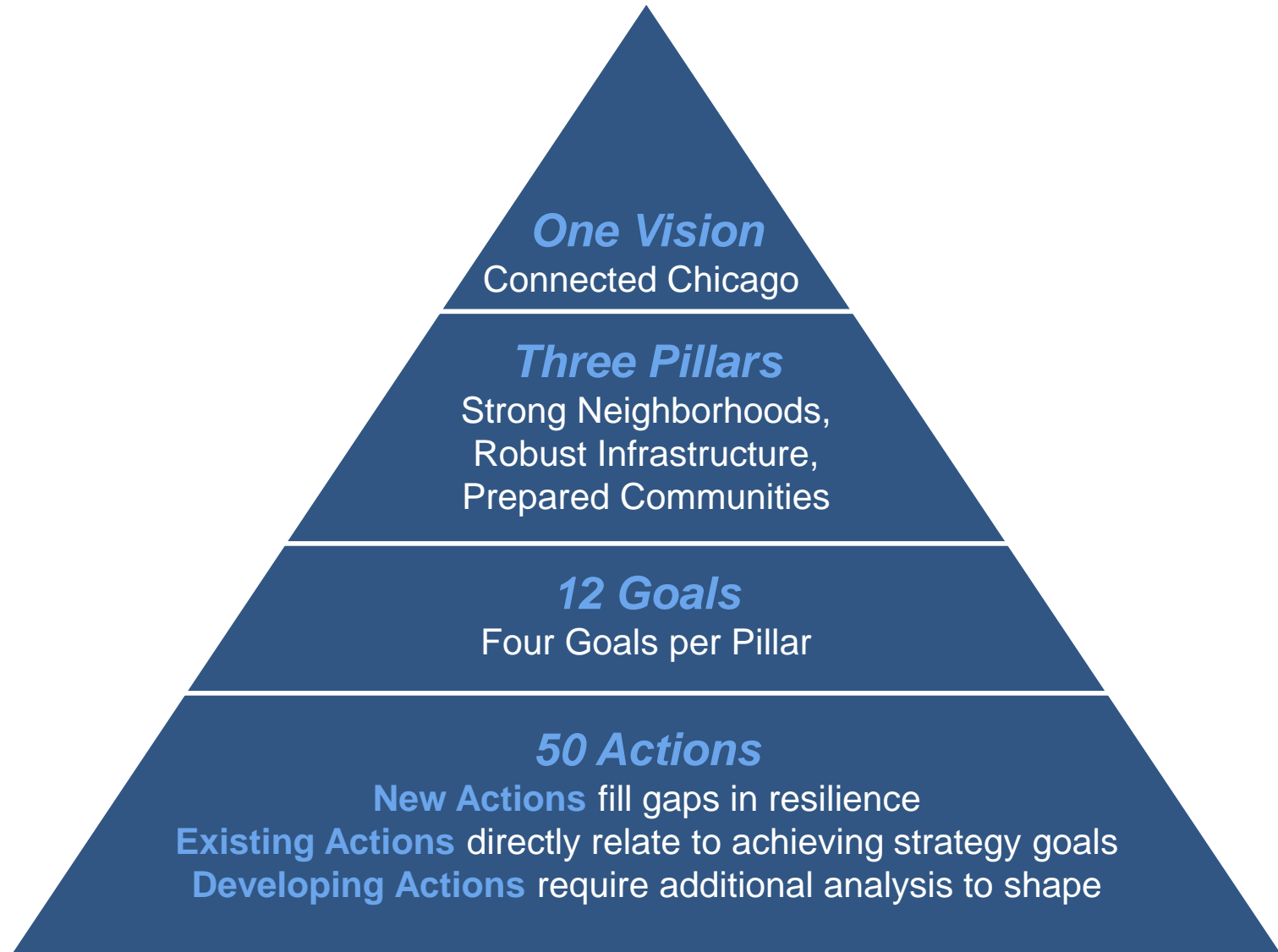
How can we connect City infrastructure investments to strategies that create economic opportunity for all Chicagoans and enhance vulnerable communities?



Prepared Communities

How do we ensure that Chicagoans are engaged and informed so that they are prepared for all threats they face now and in the future?

...12 Goals, and 50 Actions

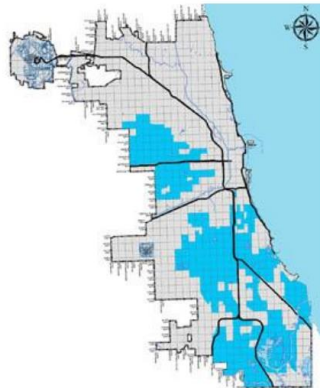


Pillar 1: Strong Neighborhoods

Goals:

- 1. Coordinate city investments and actions to maximize and empower neighborhood development**
- 2. Increase jobs and investment leveraged through community action in communities with historic underinvestment**
- 3. Create a City-community partnership process to renew and build community trust and social cohesion**
- 4. Ensure the protection and enhancement of basic needs for Chicagoans**

Action 1: Neighborhood Opportunity Fund



FROM DOWNTOWN...

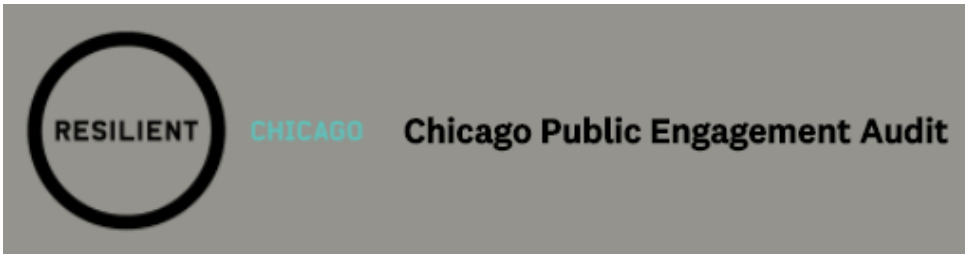
...TO NEIGHBORHOODS

Over **800 applications** received and **57 businesses** selected to date

Eligible Expenses (examples):

- HVAC, plumbing, electrical
- Carpentry and framing
- Roofing and façade repair
- New construction, others

Action 2: Citywide Public Engagement Assessment



- **33,000+ City employees**
- **46 departments + sister agencies surveyed**
- **22 departments + sister agencies to be interviewed**
- **Workshop to take place on May 30th, 2018, with an eye toward next steps**



Tamika
CTA bus operator



Marvin
DFSS/CDPH mobile clinic operator

Pillar 2: Robust Infrastructure

Goals:

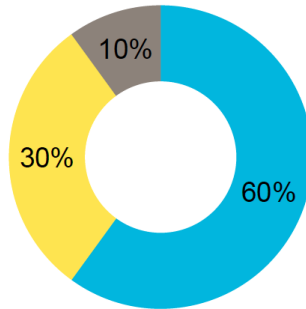
- 1. Improve infrastructure planning to ensure that investments are more strategic, proactive, and coordinated**
- 2. Increase investment in green infrastructure to reduce flood risk and create more sustainable neighborhoods**
- 3. Improve transportation connections between workforce opportunities and areas with high unemployment**
- 4. Reduce citywide greenhouse gas emissions through city renewable energy generation, energy efficiency, and mobility**

Action 3: Green Infrastructure Investments

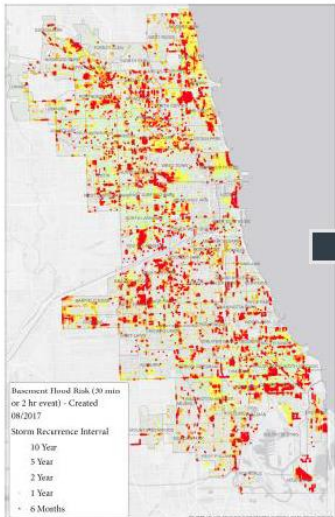
Target areas:

Generated aggregate scoring layer based on the weighted values, yielding 18 target areas

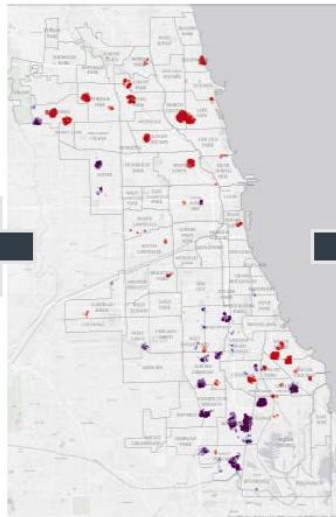
Weighted Value



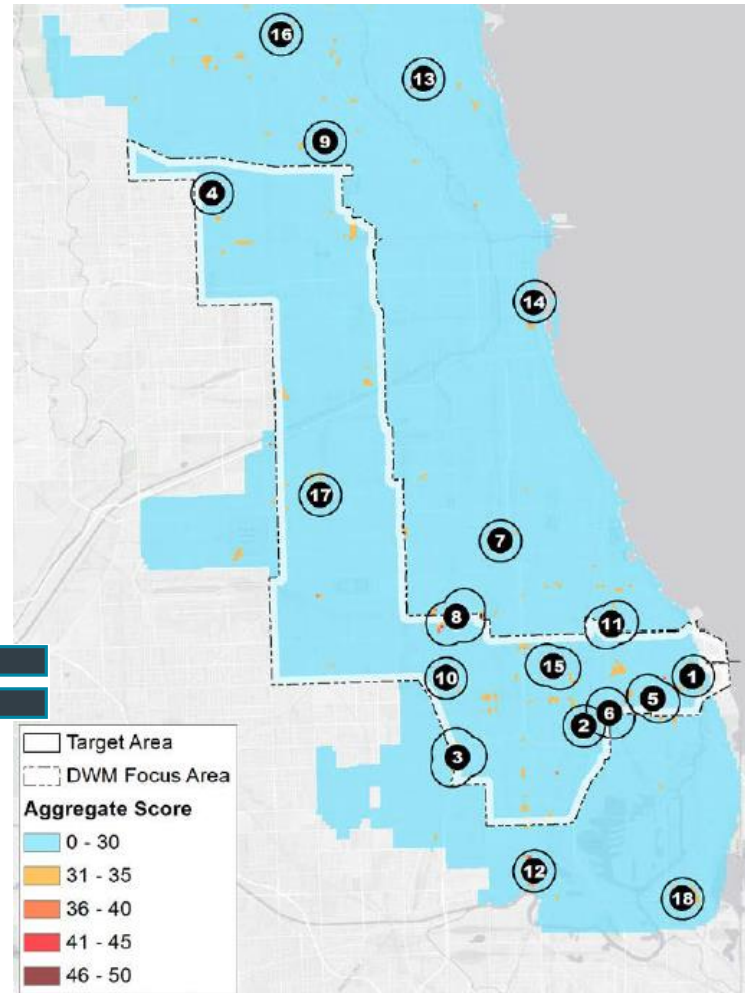
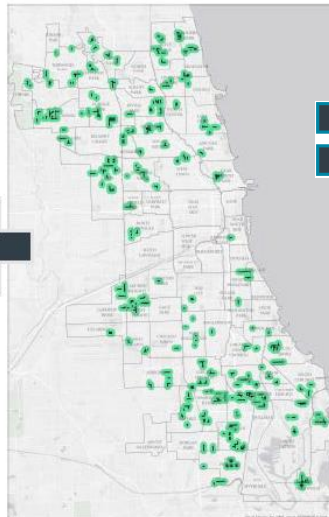
Basement Flood Risk



311 Call Data Hot Spots

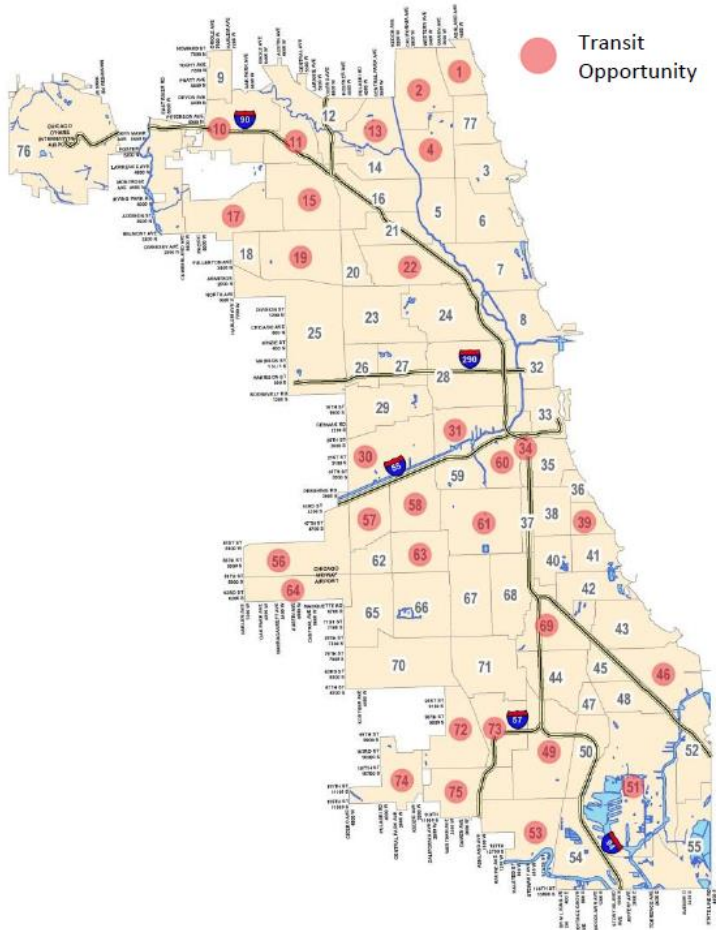


Proximity to DWM CIP



Action 4: Mobility + Workforce Pilot

Identifying transit, mobility and workforce opportunities:



Criteria	Measure	Scoring Threshold	Scoring Weight
Employment	Number of jobs per acre *	The community with the lowest number of jobs per acre receives the high possible point total.	20
Unemployment	Percent Unemployed	The community with the highest unemployment rate receives the high possible point total.	20
Environmental Justice (EJ)	Population Percentage by Race/Ethnicity	The community with the highest EJ rate receives the high possible point total.	20
Income	Per Capita Income	The community with the lowest per capita income receives the high possible point total.	20
Access to Educational and Workforce Development Opportunities	Number of Job Training Centers / City Colleges #	The community with the lowest number of job training centers and City Colleges within a one-mile buffer from the center of the respective community receives the high possible point total.	20

Community workshops to be held in Washington Heights and Gage Park communities

Pillar 3: Prepared Communities

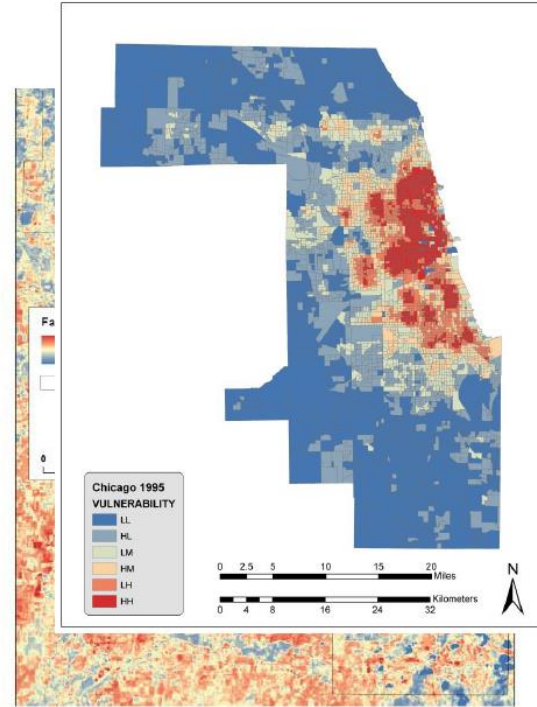
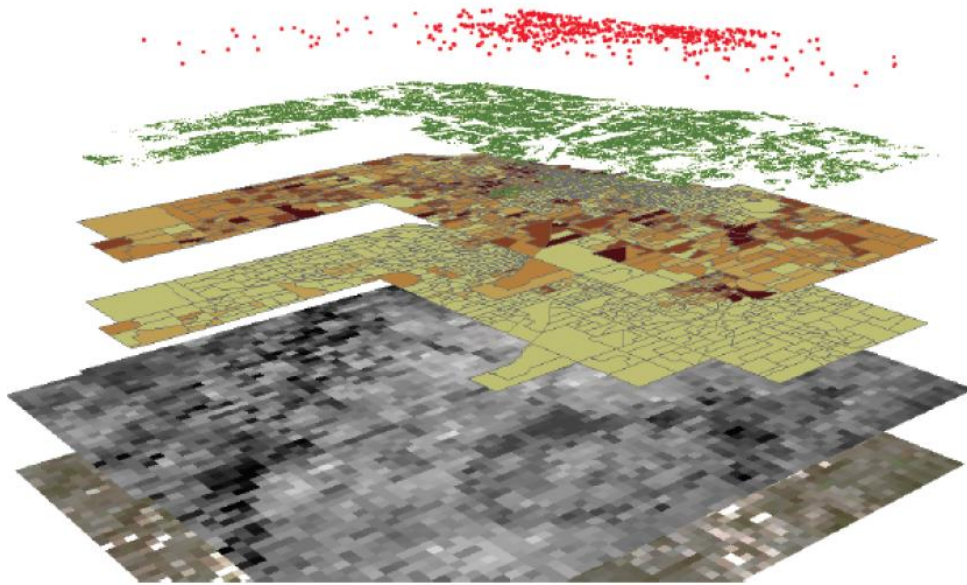
Goals:

- 1. Strengthen communications to create informed and engaged Chicagoans**
- 2. Reduce vulnerabilities to extreme weather events for disconnected Chicagoans**
- 3. Increase personal resilience of city first responders**

Action 5: Urban Heat Response Pilot

Developing an Extreme Heat Vulnerability Index

INTEGRATING DATASETS



- Use extreme heat event data to drive response and planning
- Leverage data sources to improve service to vulnerable populations
- Extend capability to include predictive analytics for extreme snow, ice and rain events

Action 6: Increasing First Responder Resilience



Next Steps

1. Implementing *Resilient Chicago*

- Strategy can be found at resilient.chicago.gov
- “Owners” and “Partners”
- Existing and new commitments

2. Institutionalizing *Resilient Chicago*

- Mayoral transition
- Structural / governance recommendations
- Role of Steering Committee members

RESILIENT CHICAGO **STEERING COMMITTEE**

ACCION

Brad McConnell

AMERICAN RED CROSS OF CHICAGO & NORTHERN ILLINOIS

Celena Roldan, Adam Runkle

CHICAGO BUILDING TRADES

Ralph Affrunti

CHICAGO COMMUNITY TRUST

Dr. Helene Gayle, Michael Davidson

CHICAGO FEDERATION OF LABOR

Bob Reiter

CHICAGOLAND CHAMBER OF COMMERCE

Jack Lavin, Danielle Stanley

CHICAGO METROPOLITAN AGENCY FOR PLANNING

Joseph Szabo, Kristin Ihnchak, Nora Beck

CHICAGO POLICE CRIME PREVENTION AND INFORMATION CENTER

Steve Caluris, Patrick Quinn

CHICAGO TRANSIT AUTHORITY

Dorval Carter

CITY TECH COLLABORATIVE

Brenna Berman, Alex Frank, Jamie Ponce

COMMONWEALTH EDISON

Anne Pramaggiore, Fidel Marquez, Angel Perez

DEPARTMENT OF CULTURAL AFFAIRS AND SPECIAL EVENTS

Mark Kelly, Lisa Laws

DEPARTMENT OF FAMILY & SUPPORT SERVICES

Lisa Morrison Butler

DEPARTMENT OF INNOVATION & TECHNOLOGY

Danielle DuMerer

DEPARTMENT OF PLANNING AND DEVELOPMENT

David Reifman, Kathleen Dickhut, Michael Berkshire

DEPARTMENT OF PUBLIC HEALTH

Dr. Julie Morita, Megan Cunningham

DEPARTMENT OF TRANSPORTATION

Rebekah Scheinfeld, Kevin O'Malley

DEPARTMENT OF WATER MANAGEMENT

Randy Conner

ERIKSON INSTITUTE

Cristina Pacione-Zayas

GREATER AUBURN GRESHAM DEVELOPMENT CORPORATION

Carlos Nelson

GREATER SOUTHWEST DEVELOPMENT CORPORATION

Ghian Foreman

HEARTLAND ALLIANCE

Evelyn Diaz

ILLINOIS SIERRA CLUB

Jack Darin

JOYCE FOUNDATION

Ellen Alberding, Elizabeth Cisar

LATINOS PROGRESANDO

Luis Gutierrez

MACARTHUR FOUNDATION

Julia Stasch, Mijo Vodopic

MAYOR'S OFFICE

Robert Rivkin

MAYOR'S OFFICE FOR PEOPLE WITH DISABILITIES

Karen Tamley, Laurie Dittman

METROPOLITAN PLANNING COUNCIL

Marisa Novara, Josh Ellis, Sarah Cardona

OFFICE OF EMERGENCY MANAGEMENT & COMMUNICATION

Alicia Tate-Nadeau, Richard Guidice, Anna Statham

PEOPLES GAS AND NORTH SHORE GAS

Charles Matthews, Eva-Dina Delgado

SIDEWALK LABS

Shaina Doar

SOUTHWEST ORGANIZING PROJECT

Jeff Bartow, Chris Brown

UNIVERSITY OF CHICAGO

Theaster Gates

VILLITA COMMUNITY CHURCH

Pastor Vic Rodriguez

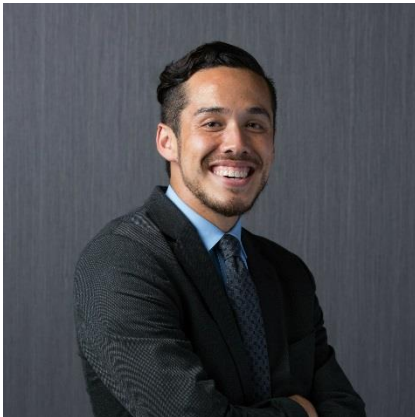
WORLD BUSINESS CHICAGO

Andrea Zopp, Tiffany Hamel-Johnson

YWCA OF METROPOLITAN CHICAGO

Dorri McWhorter

Thank you



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Appendix



RESILIENT CHICAGO



A Plan for Inclusive Growth and a Connected City



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RESILIENT CITIES

Resilience **Icons**



Residents
connected
to opportunity



Neighbors
connected to
each other



Communities
connected to
other communities



Government
connected to
residents



Regional
governments
connected &
working together



Healthy
communities
connected to
nature



City
government
connected and
collaborating

Example Actions



ACTION 25

Complete the Red Line Extension (RLE) to 130th Street



OWNER

CTA

PARTNERS

City of Chicago, Chicago Metropolitan Agency for Planning (CMAP)

TIMELINE

>5 years

LINK TO VISION



- Residents connected to opportunity
- Neighbors connected to each other
- Communities connected to other communities
- Government connected to residents

DESCRIPTION

The Red Line is the backbone of the CTA rail system and carries 30 percent of all rail riders. The Red Line Extension (RLE) will extend the southern portion of the line by 5.3 miles, from the existing terminal at 95th Street/Dan Ryan to 130th Street, and create four new stations near 103rd Street, 111th Street, Michigan Avenue, and 130th Street. These investments will address the needs of far South Side residents that have historically been isolated from viable transportation options.

Prior to the proposed RLE, for the period 2005 to 2010, commute times to jobs were 24 percent longer for residents within the project area compared to other residents in the seven-county region, an extra seven minutes each way. The RLE will shorten commutes, provide multimodal connections, and improve mobility and accessibility for transit-dependent populations.

As a core component of CTA's Red Ahead Program, the RLE will foster economic development and enable far South Side residents to use transit to better connect to major activity centers, affordable housing options (e.g. the Altgeld Gardens public housing project), educational opportunities, and employment centers across the city.

CTA's Red Ahead Program is a comprehensive initiative to maintain, modernize, and expand the Red Line. The program includes the proposed RLE, ongoing 95th Street/Dan Ryan Station and Terminal Improvement, and completed Red Line South Reconstruction, the lattermost of which generated a 10.2-mile stretch of completely rebuilt tracks, 20-minute faster commute times for riders traveling between 95th Street/Dan Ryan and downtown, and other capital improvements. The project also made an additional 41,662 jobs accessible to residents - by trimming associated commute times to under 45 minutes - and created more than 1,500 jobs.

NEXT STEP

Prepare a final Environmental Impact Statement (EIS) and conduct preliminary engineering surrounding the proposed RLE. ■

POTENTIAL KEY INDICATORS

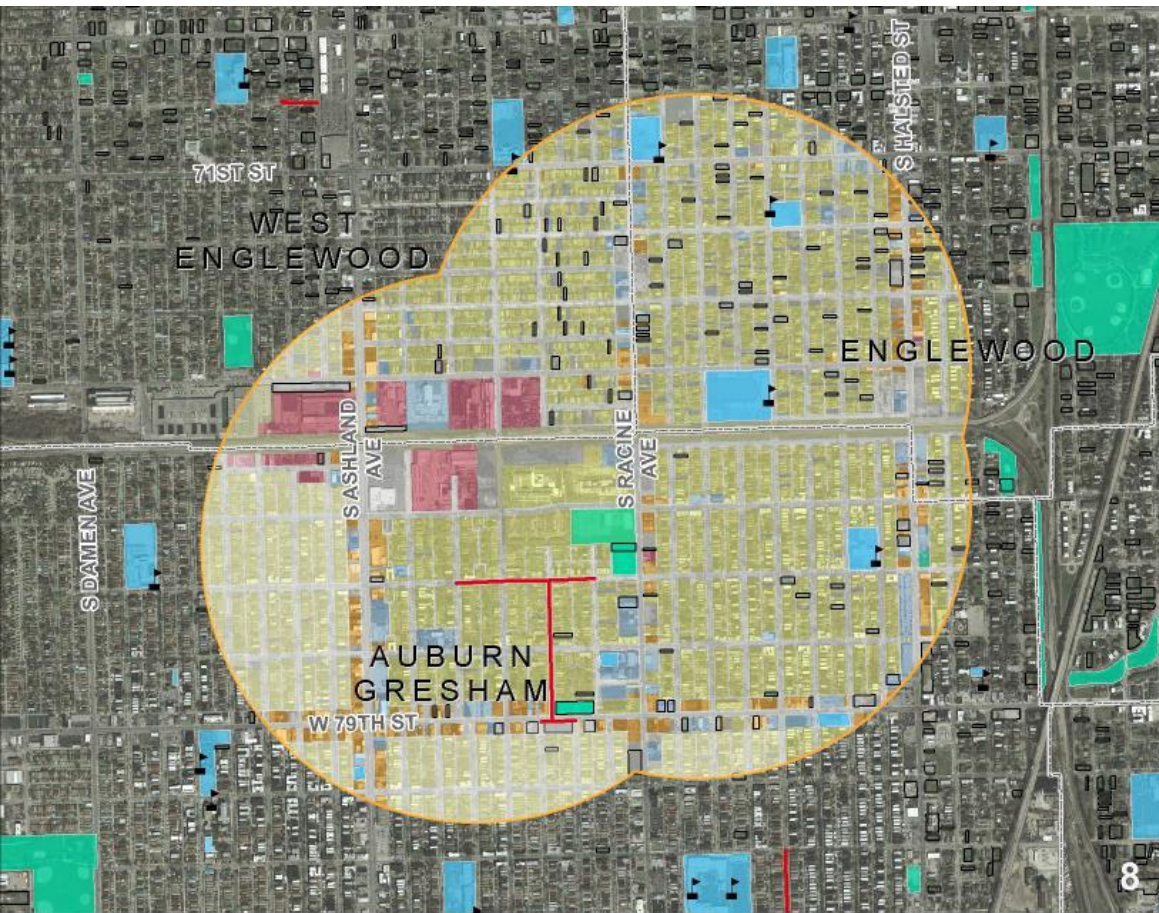
- ① Increase in ridership levels and connections made at new stations
- ② Reduction in commute times for residents in or near project area
- ③ Increase in job accessibility for residents in or near project area
- ④ Number of project-related jobs created
- ⑤ Dollar value of economic investment around new stations

EQUITY IMPACTS

Transit-underserved residents in far South Side communities, including Roseland, Washington Heights, Pullman, West Pullman, Riverdale, and other communities near the project area.

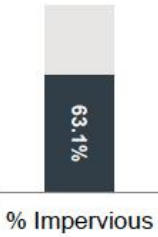
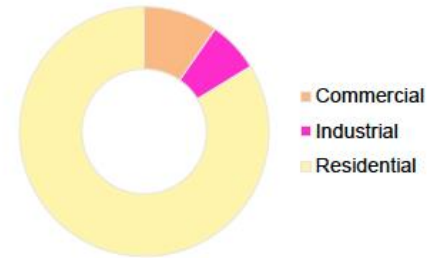


Green Infrastructure: Englewood/Auburn Gresham








Target Area 8
Englewood / Auburn Gresham

Land Use



LEGEND

-  • Oglesby Elementary School
-  • Stagg Elementary School
-  • Camelot - Excel Englewood High School
-  • Bond Elementary School
-  • 61,603 square feet
-  • Park No. 527
-  • Sherwood (Jesse)
-  • Edmonds (Molly)
-  • Junction Grove
-  • DWM Focus Area
-  • 77th and Ada

Green Infrastructure: Englewood/Auburn Gresham

REFINED ANALYSIS AND OPPORTUNITIES

PRELIMINARY STORMWATER ANALYSIS

B: Major flow paths along both sides of the street / large concentration of flow paths adjacent to sewer with capacity issues / potential for large amount of storage behind the sidewalk but within the ROW because of the large tree lawn areas

C: Major flow paths along streets / large concentration of flow paths adjacent to sewer with capacity issues / adjacent to CIP benefit areas / potential for green streets to provide storage

DESIGN OPPORTUNITY

B: Regional Bioretention
Develop larger bioretention areas behind sidewalk - this could be along most of the north side of 76th and would capture flow from the properties to the north as well as flow from the street with curb cuts.

C: Green Street / Streetscape
Develop green street/streetscape aimed to eliminate the Hydraulic Grade Line (HGL) concerns along this street. It would be best to limit the practice between 77th and 75th.

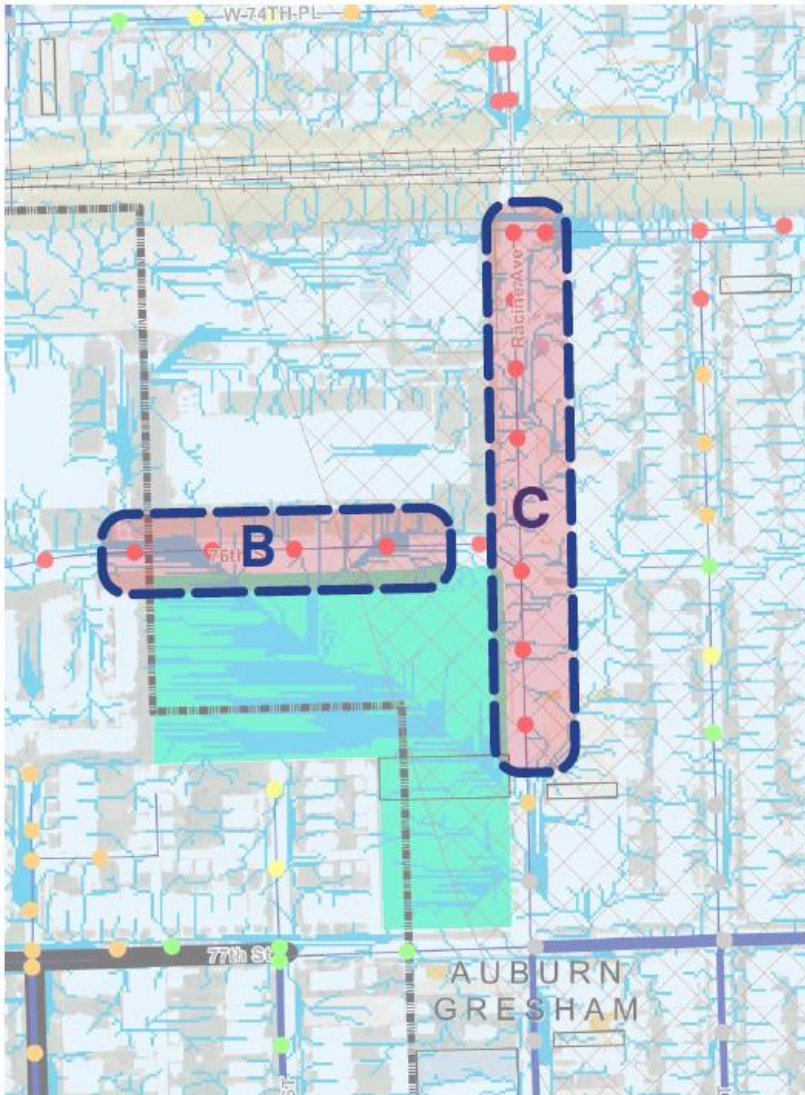
POTENTIAL COMMUNITY AND FUNDING PARTNERS

B: Residents / Community Groups/ DWM / CNT/ CDOT/ Utilities / MWRD / Basement Flooding Partnership

C: DWM / CDOT / Utilities/ BOF / MWRD / Grants

OPPORTUNITY RANK CRITERIA

- Strong Community Partner
- Favorable Topography
- Known Sewer Capacity Issues
- Diverse Use



SITE B





















SITE B

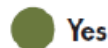


SITE C

Green Infrastructure Practices and Co-benefits

*Center for Neighborhood Technology. "The Value of Green Infrastructure." 2010.

Benefit	Reduces Stormwater Runoff				Increases Available Water Supply	Increases Groundwater Recharge	Reduces Salt Use	Reduces Energy Use	Improves Air Quality	Reduces Atmospheric CO ₂	Reduces Urban Heat Island	Improves Community Livability					Improves Habitat	Cultivates Public Education Opportunities
	Reduces Water Treatment Needs	Improves Water Quality	Reduces Grey Infrastructure Needs	Reduces Flooding								Improves Aesthetics	Increases Recreational Opportunity	Reduces Noise Pollution	Improves Community Cohesion	Urban Agriculture		
Practice																		
Green Roofs	●	●	●	●	○	○	○	●	●	●	●	●	◐	●	◐	◐	●	●
Tree Planting	●	●	●	●	○	◐	○	●	●	●	●	●	●	●	●	◐	●	●
Bioretention & Infiltration	●	●	●	●	◐	◐	○	○	●	●	●	●	●	◐	◐	○	●	●
Permeable Pavement	●	●	●	●	○	◐	●	◐	●	●	●	○	○	●	○	○	○	●
Water Harvesting	●	●	●	●	●	◐	○	◐	◐	◐	○	○	○	○	○	○	○	●



Yes



Maybe



No