



# THE ROAD AHEAD I-75 CAP

Benefit & Impact Area  
Mapping Framework  
July 2024

**AECOM**



DOWNTOWN  
DETROIT  
PARTNERSHIP  
— EST. 1922 —



**MDOT**  
Michigan Department of Transportation

# Introduction

## Mapping Framework

Already, this mapping framework has informed goal development and public engagement efforts to date. This information continues to inform future alternative development, purpose and need creation, and grant writing efforts.

The framework analyzes data on demographics, existing infrastructure systems and conditions, sensitive environmental and cultural features, buildings and architecture, ongoing planning efforts, and planned development and infrastructure projects. This information is assessed to consider impacts based on the surrounding built environment, health outcomes, development potential, environmental sustainability, and quality of life.

Data is summarized to identify opportunities and threats within the four preliminary project goals.

## Preliminary Goals and Objectives



### Community-Centered Public Space

*Assess land use and community assets to inform public space needs*



### Sustainability & Resiliency

*Assess open space and public health data to identify vulnerabilities and health risks*



### Equity & Opportunity

*Assess demographic information to identify community needs and goals*



### Connectivity & Mobility

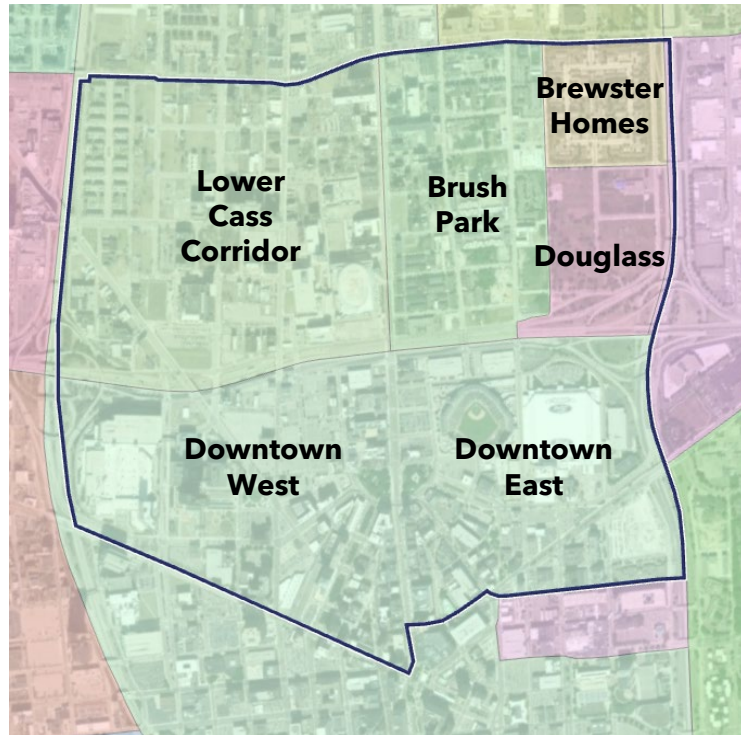
*Assess transportation landscape and data to enhance accessibility and connectivity*

# Study and Benefit & Impact Area

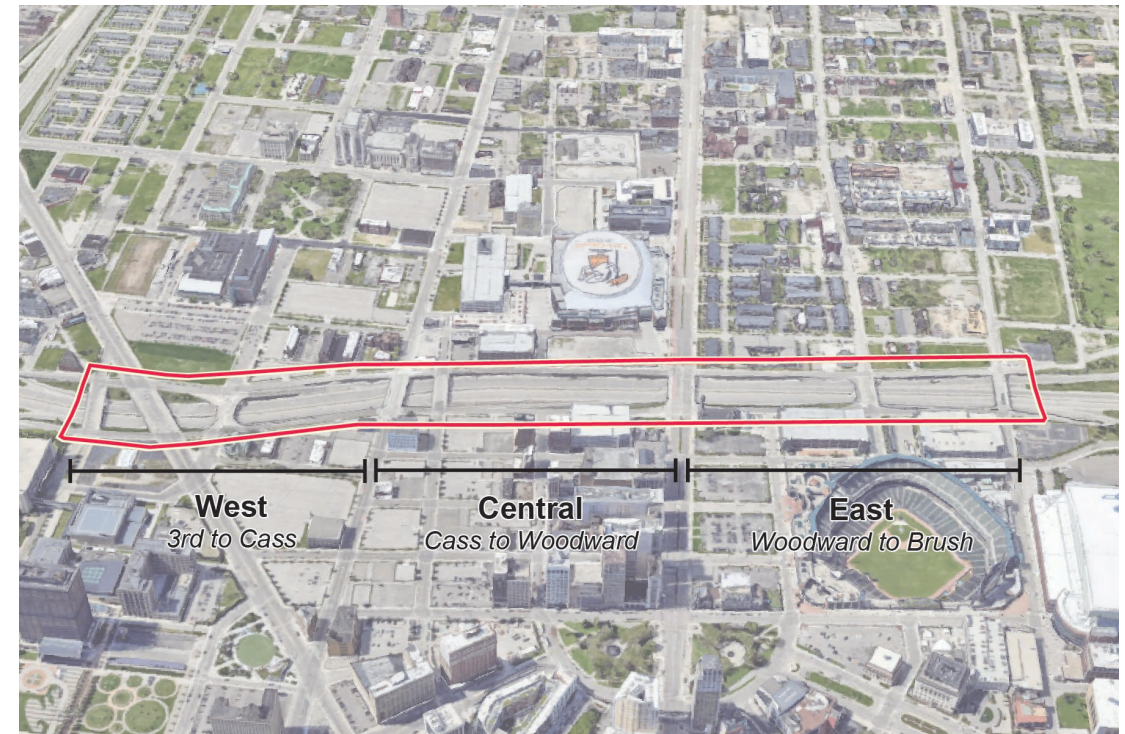
Throughout the analysis, demographic and spatial data is assessed for census tracts or blocks that fall within the project **Benefit & Impact Area (B&IA)**.

Areas in the B&IA will be referred to as **Brewster Homes, Douglass, Brush Park, Lower Cass Corridor, Downtown West, and Downtown East**, shown below.

Benefit & Impact Area (B&IA)



Study Area



# Overview

GOALS	THEMES	OPPORTUNITIES	POTENTIAL THREATS
COMMUNITY-CENTERED PUBLIC SPACE	CONNECTION	<ul style="list-style-type: none"> <li>• Create better access to downtown amenities for residents</li> <li>• Explore potential to restore networks, particularly Park Avenue</li> <li>• Reconnect entertainment, dining, and retail districts</li> <li>• Coordinate with Cass Technical High School</li> </ul>	<ul style="list-style-type: none"> <li>• Potential desire to maintain disconnected networks to maintain quiet nature of neighborhoods</li> </ul>
	EXPAND OPTIONS	<ul style="list-style-type: none"> <li>• Reduce parking need by investing in peds, bicyclists, micromobility</li> <li>• Lower transportation costs</li> <li>• Reverse trends of auto-centric infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Common misconception that parking availability is associated economic activity</li> <li>• Potential for varied interests between suburban commuters and residents</li> <li>• Vulnerabilities of low-income car commuters</li> </ul>
CONNECTION & MOBILITY	UPDATE FACILITIES	<ul style="list-style-type: none"> <li>• Continue 2<sup>nd</sup> Ave one-way to two-way conversion across I-75</li> <li>• Reimagine entrances and exits</li> <li>• Reimagine / right-size Fisher Service Drive</li> <li>• Update bridge infrastructure</li> <li>• Improve sidewalk network</li> </ul>	<ul style="list-style-type: none"> <li>• Insufficient interagency collaboration between MDOT, City of Detroit, DDP</li> <li>• Motorized traffic volumes generated by large venues in area</li> </ul>
	EXPAND OPTIONS	<ul style="list-style-type: none"> <li>• Emphasize Woodward and Grand River as transit corridors</li> <li>• Expand bike/ped options: Woodward, Grand River, Brush, and Cass</li> <li>• Extend Park Ave / Witherell St nonmotorized networks across I-75</li> <li>• Incorporate bicycle and micromobility facilities into design</li> <li>• Enhance ped, bicycle, and micromobility networks and safety</li> <li>• Complement upcoming additions to network through I-375 project</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of collaboration with DDOT, RTA, SMART</li> <li>• Existing entry and exit ramps in Study Area may impede capping capabilities in certain areas</li> <li>• Coordination with ongoing I-375 project</li> <li>• Freight and hazardous materials routes</li> </ul>
EQUITY & OPPORTUNITY	INVESTMENT	<ul style="list-style-type: none"> <li>• Invest in area previously disinvested in through redlining practices</li> <li>• Create anchor for investment east and west parts of Study Area</li> <li>• Anchor upcoming development at center of Study Area</li> </ul>	<ul style="list-style-type: none"> <li>• Challenges in amenities a highway cap can provide</li> <li>• Perception about use of public funds for private interests</li> <li>• Stronger voices and stakeholders at center of Study Area may overpower weaker voices</li> <li>• Perception about increased land values resulting from project</li> </ul>
	INCLUSIVITY	<ul style="list-style-type: none"> <li>• Mitigate displacement and provide inclusive spaces</li> <li>• Reduce segregation, create more neighborhood connections</li> <li>• Create a more family-friendly space</li> <li>• Create Senior amenities and enhance senior mobility</li> <li>• Attract population to Lower Cass</li> </ul>	<ul style="list-style-type: none"> <li>• Potential desire from stakeholders to maintain current income and race-based segregation</li> <li>• Lack of park activation creating potential resistance to public space</li> <li>• Potential aversion to current areas serving lower income residents</li> <li>• Gentrification concerns, real or perceived threat of increased rents and taxes</li> <li>• Concerns about prioritizing relatively white and higher income location</li> </ul>
SUSTAINABILITY & RESILIENCY	RESILIENCE	<ul style="list-style-type: none"> <li>• Reduce impervious surface</li> <li>• Construct stormwater and green infrastructure</li> <li>• Install more trees</li> </ul>	<ul style="list-style-type: none"> <li>• Potential preference for real estate developments over natural areas</li> </ul>
	HEALTH	<ul style="list-style-type: none"> <li>• Promote transportation modes with lower emissions</li> <li>• Create opportunities for outdoor recreation</li> <li>• Buffer high noise levels from highway</li> </ul>	<ul style="list-style-type: none"> <li>• Common belief that high motorized traffic volumes generally result in more economic activity</li> </ul>



# Community-Centered Public Space

*Assess land use and community assets to inform public space needs*

# History: Street Grid

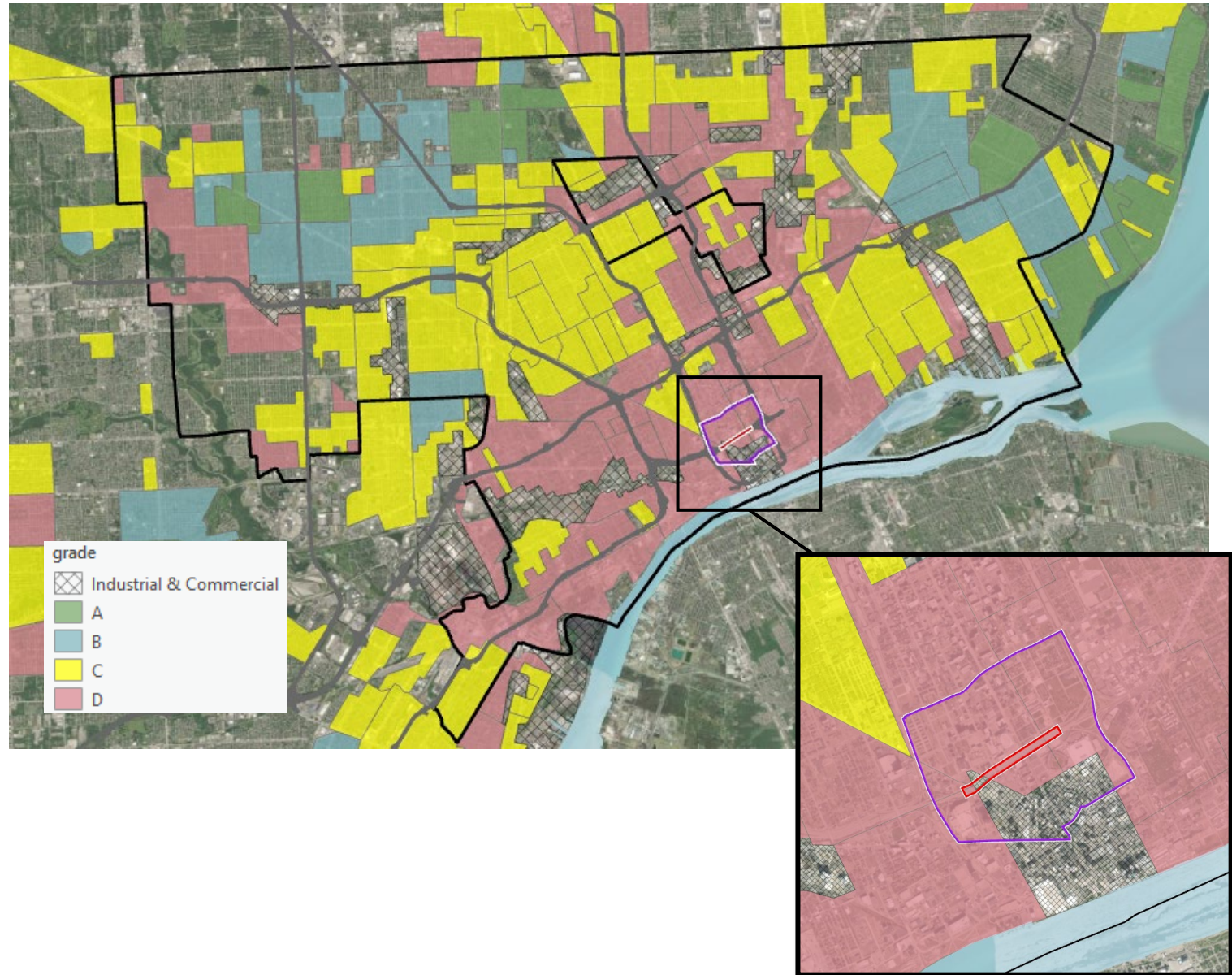
- Disconnected north-south streets: 5<sup>th</sup> Street, 4<sup>th</sup> Street, Park Avenue, Beaubien Blvd, St. Antoine
- Lost businesses and residences
- Grand River Avenue historically lined with small businesses serving surrounding neighborhoods
- Prior to I-75, Midtown, Downtown and Eastern Market local grid network seamlessly connected
- Michigan Avenue, Grand River Avenue, Woodward, and Gratiot historically and currently serving as key corridors to Downtown



Source: SEMCOG 1956 Historical Imagery

# History: Redlining

- Explicit disinvestment in “lower grade” redlined neighborhoods nationwide
- Tendency for highways to be placed in “lower grade” areas nationwide
- B&IA carries that history



Source: *Mapping Inequality*, Richmond University,  
<https://dsl.richmond.edu/panorama/redlining/data>

# Neighborhoods

- Midtown / Brush Park / Brewster Homes / Douglass neighborhoods are disconnected from Downtown by I-75
- I-75 disconnects Eastern Market from Downtown, Brewster Homes, and Douglass. Although that section of I-75 is outside of Study Area, changes within the Study Area and upcoming I-375 changes can help enhance accessibility to Eastern Market from neighborhoods and Downtown.



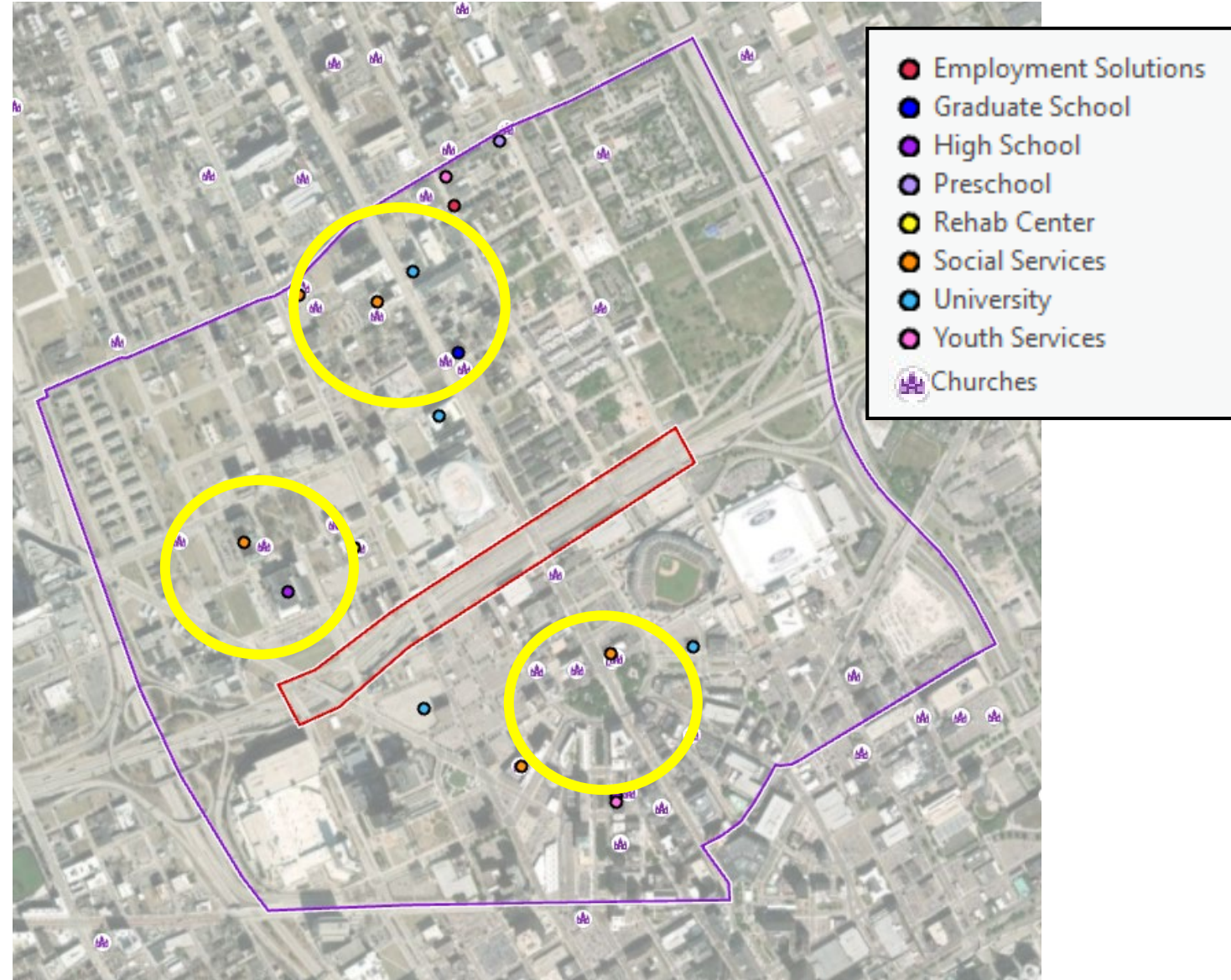
Source: City of Detroit Open Data Portal,  
Neighborhoods, Last updated 2017



# Community Amenities

Key clusters where community amenities are provided are highlighted in yellow.



- These areas often serve a lower income population and may require intentional and inclusive activation of public space
- These are also areas where extra efforts should be made to mitigate of displacement

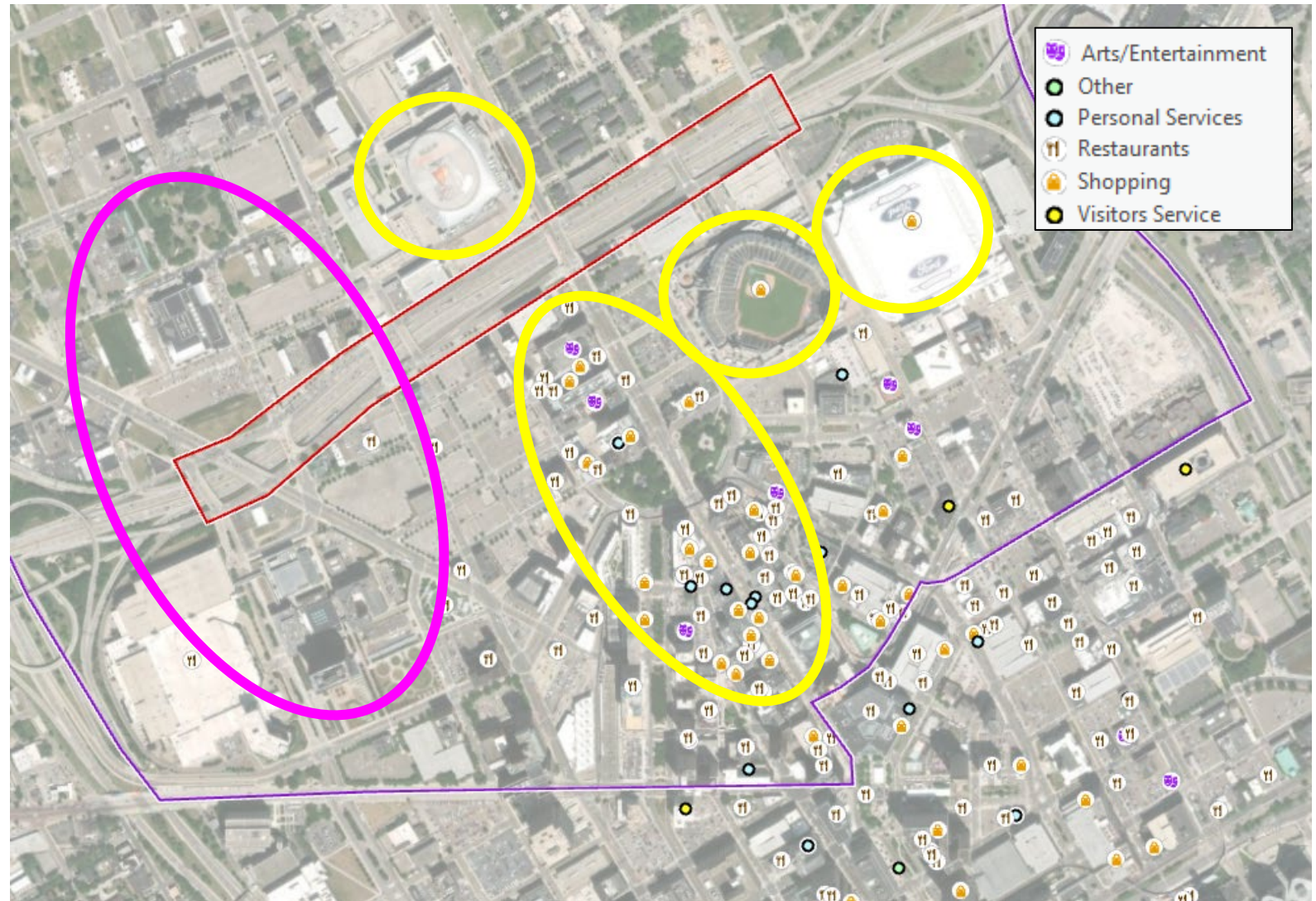


Source: Churches - Detroit Open Data Portal),  
Schools/Services - Adapted from the Detroit  
Open Data Portal "Schools" layer

# Downtown Restaurants, Retail, Hospitality

- Key entertainment, dining and retail areas along Woodward Avenue
- Area near Grand River Avenue lacking restaurants, retail, hospitality

-  Key entertainment, dining, and retail areas
-  Areas lacking dining, and retail

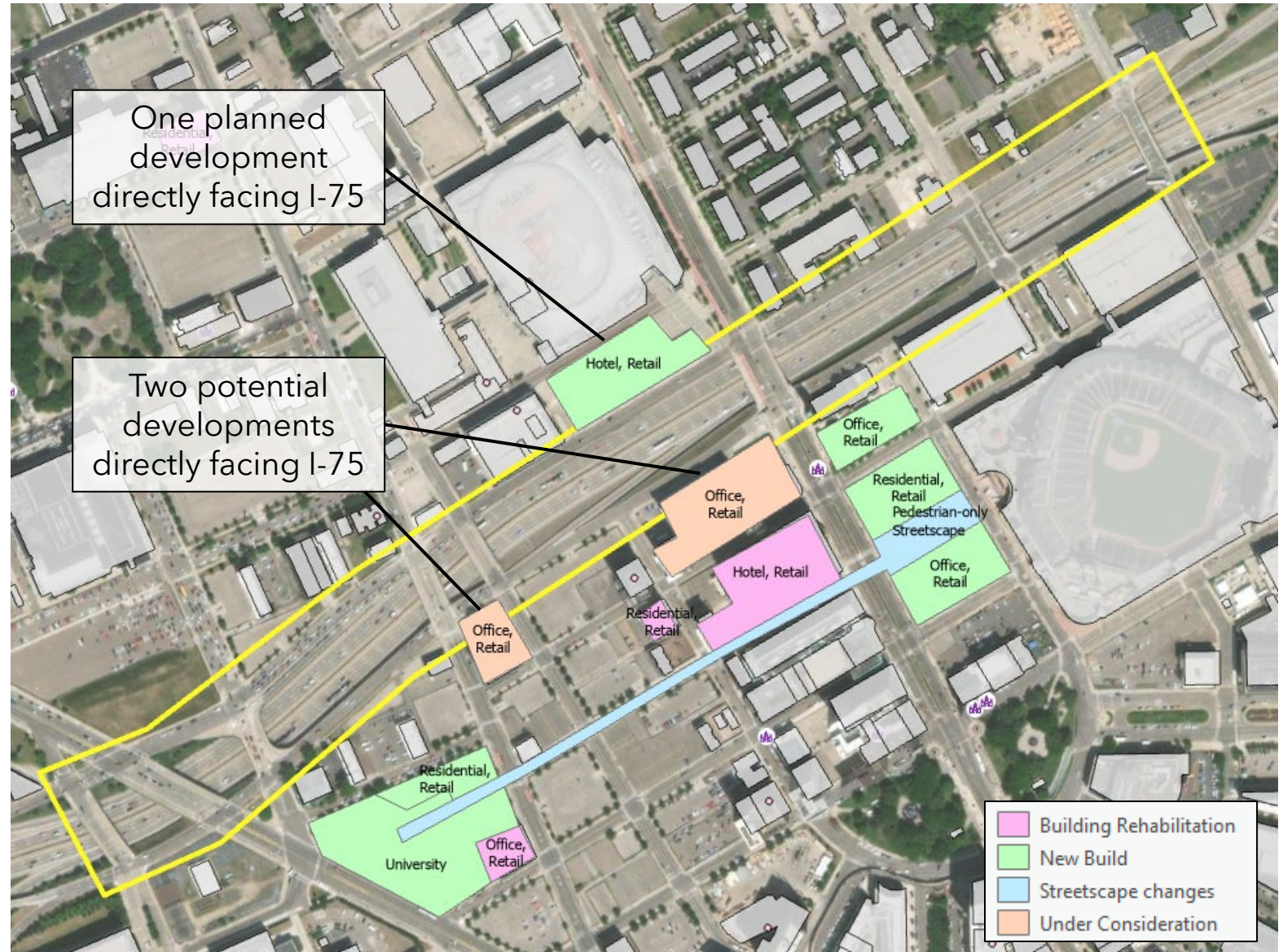


Source: DDP, Data for South of I-75 only



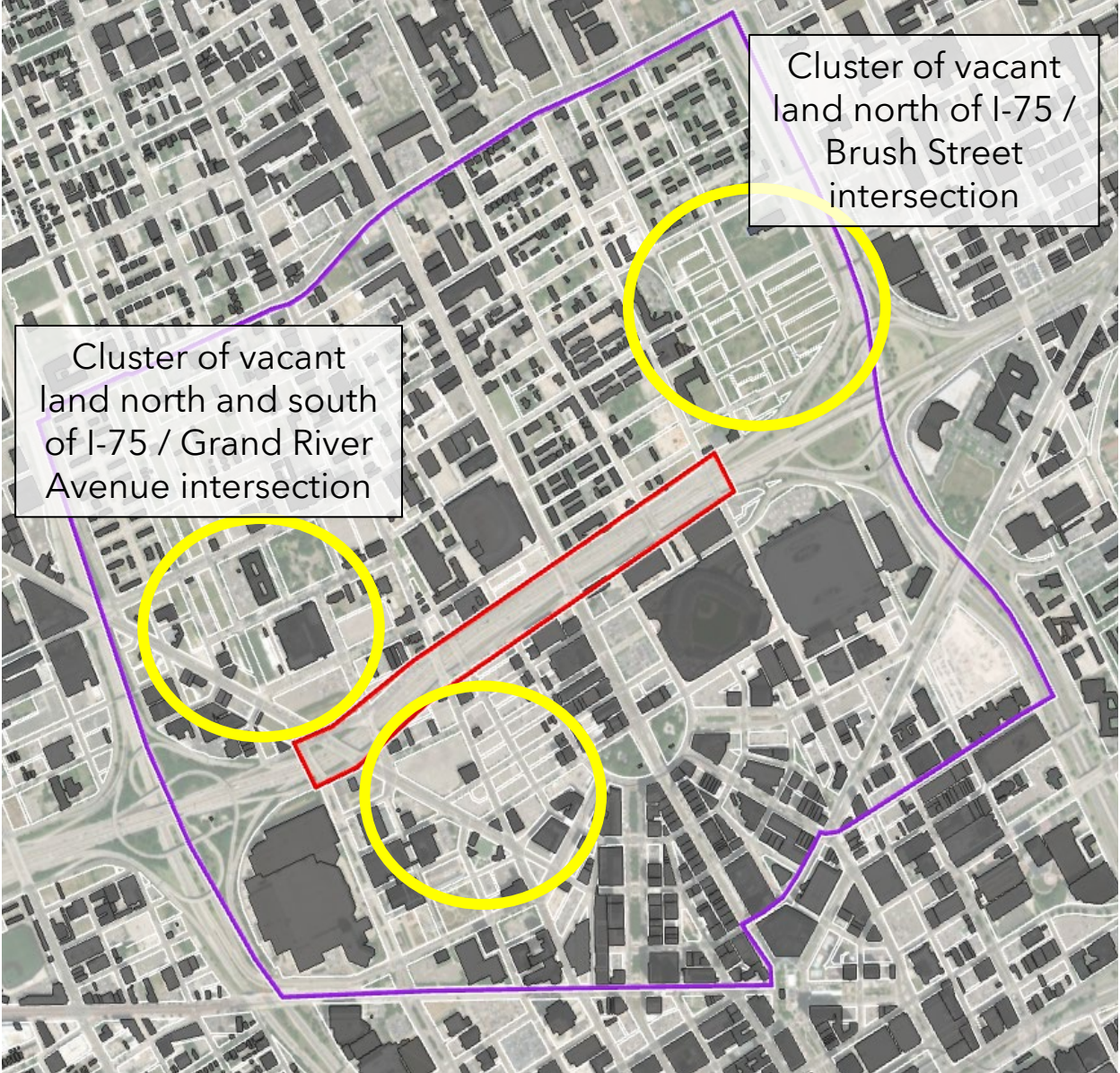
# UMCI and District Detroit Plans

- UMCI and District Detroit developments are near Study Area, with some buildings directly along Fisher Service Drive



Source: "District Detroit," [detroitmi.gov](https://detroitmi.gov)  
<https://detroitmi.gov>

# Building Footprints and Vacant Land



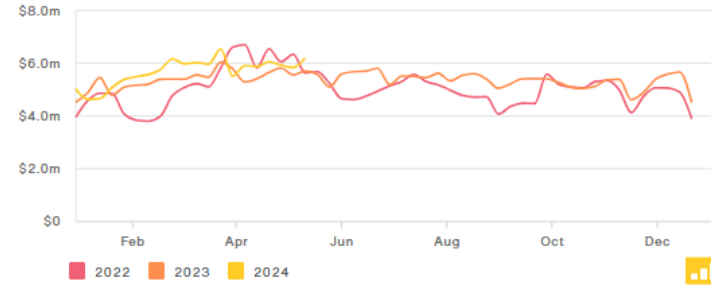
Source: Detroit Open Data Portal, Base Units Buildings, Last updated December 2022

# Spend Metrics

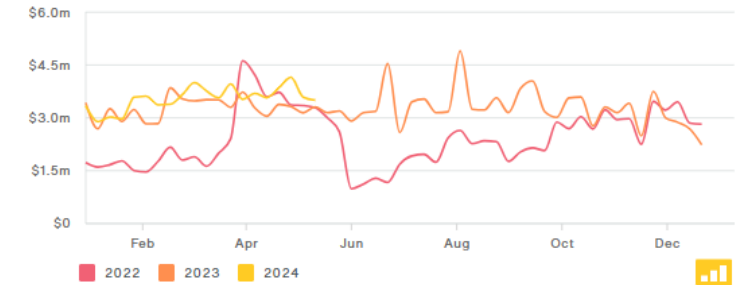
Primary spend within B&IA:

1. Restaurants and Bars: ~\$4-6 M
2. Gas Stations, Parking, Taxis, Tolls: ~\$3-4.5 M
3. Retail: ~\$2-3 M
4. Airline, Hospitality & Car Rental: ~\$1.5-3 M

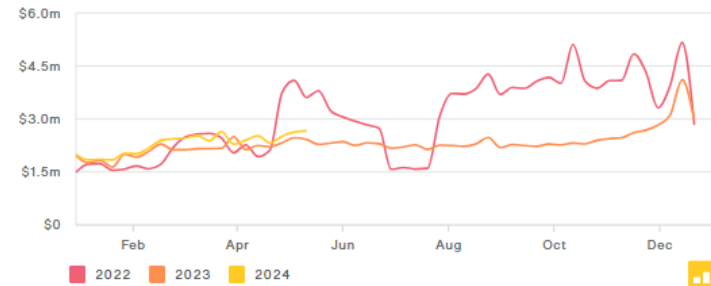
**Restaurants & Bars**  
Spend at merchant location in this geography, weekly total  
2022 to 2024



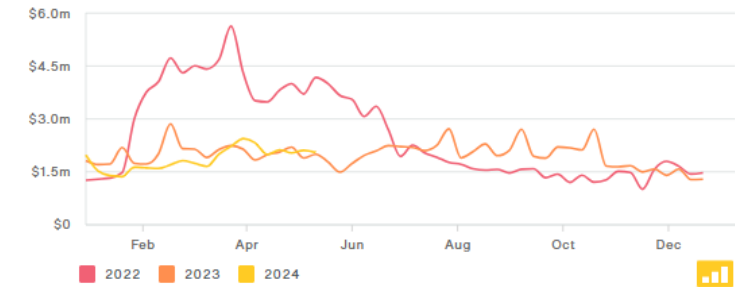
**Gas Stations, Parking, Taxis, Tolls**  
Spend at merchant location in this geography, weekly total  
2022 to 2024



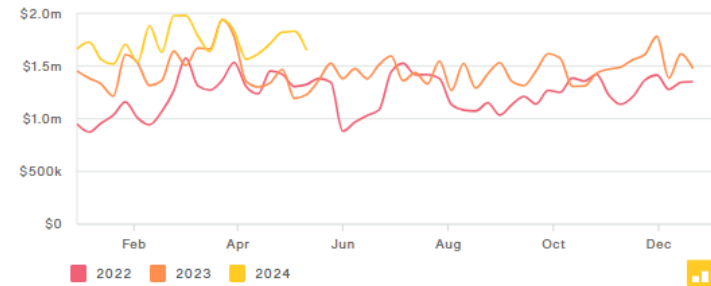
**Retail**  
Spend at merchant location in this geography, weekly total  
2022 to 2024



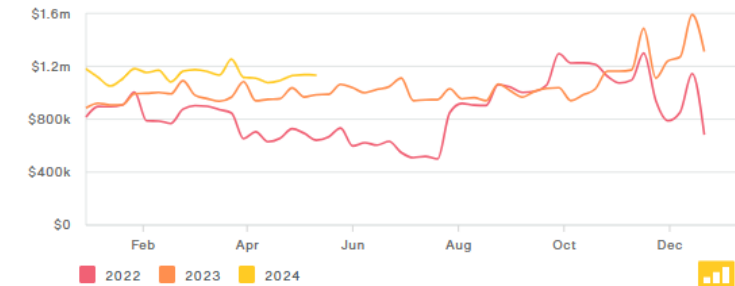
**Airline, Hospitality, & Car Rental**  
Spend at merchant location in this geography, weekly total  
2022 to 2024



**Entertainment & Recreation**  
Spend at merchant location in this geography, weekly total  
2022 to 2024



**Grocery Stores**  
Spend at merchant location in this geography, weekly total  
2022 to 2024



Source: Replica Primary Spend Metrics, Spend by Merchant Location, B&IA tracts

# Spend Metrics

## Restaurants and Bars

- Downtown / Cass Corridor / Eastern Market are key spending areas, disconnected by I-75

## Retail

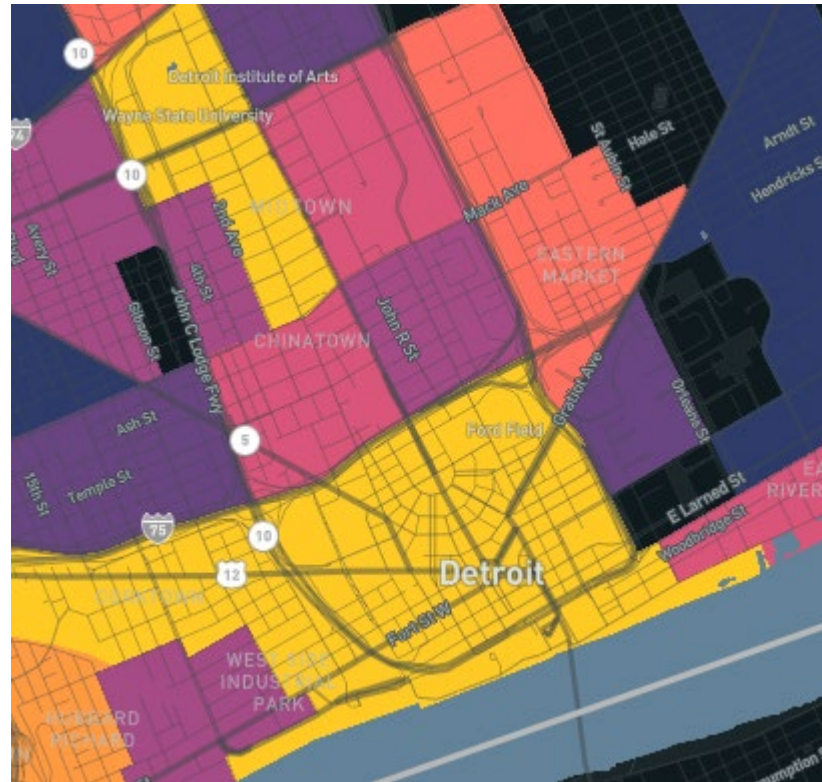
- Riverfront / Cass Corridor / Downtown are key spending areas. Downtown and Cass Corridor disconnected by I-75

Tracts In Detroit, MI

### Restaurants & Bars

Spend at merchant location in this geography, weekly total

May 11, 2024 to May 17, 2024



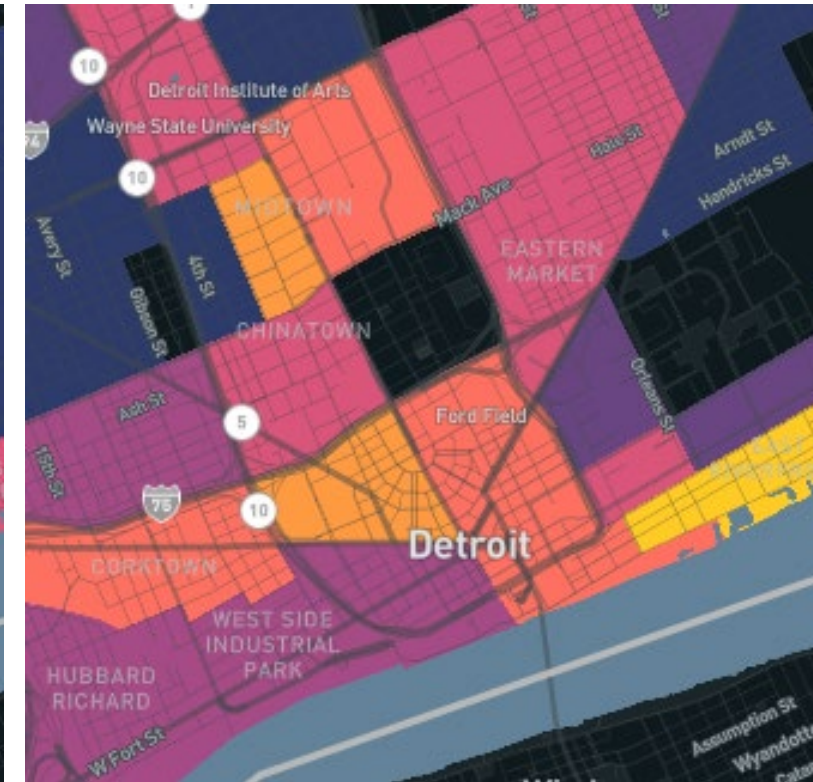
Spend



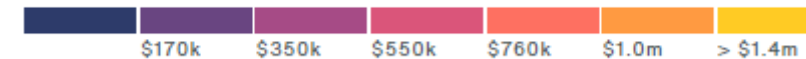
### Retail

Spend at merchant location in this geography, weekly total

May 11, 2024 to May 17, 2024



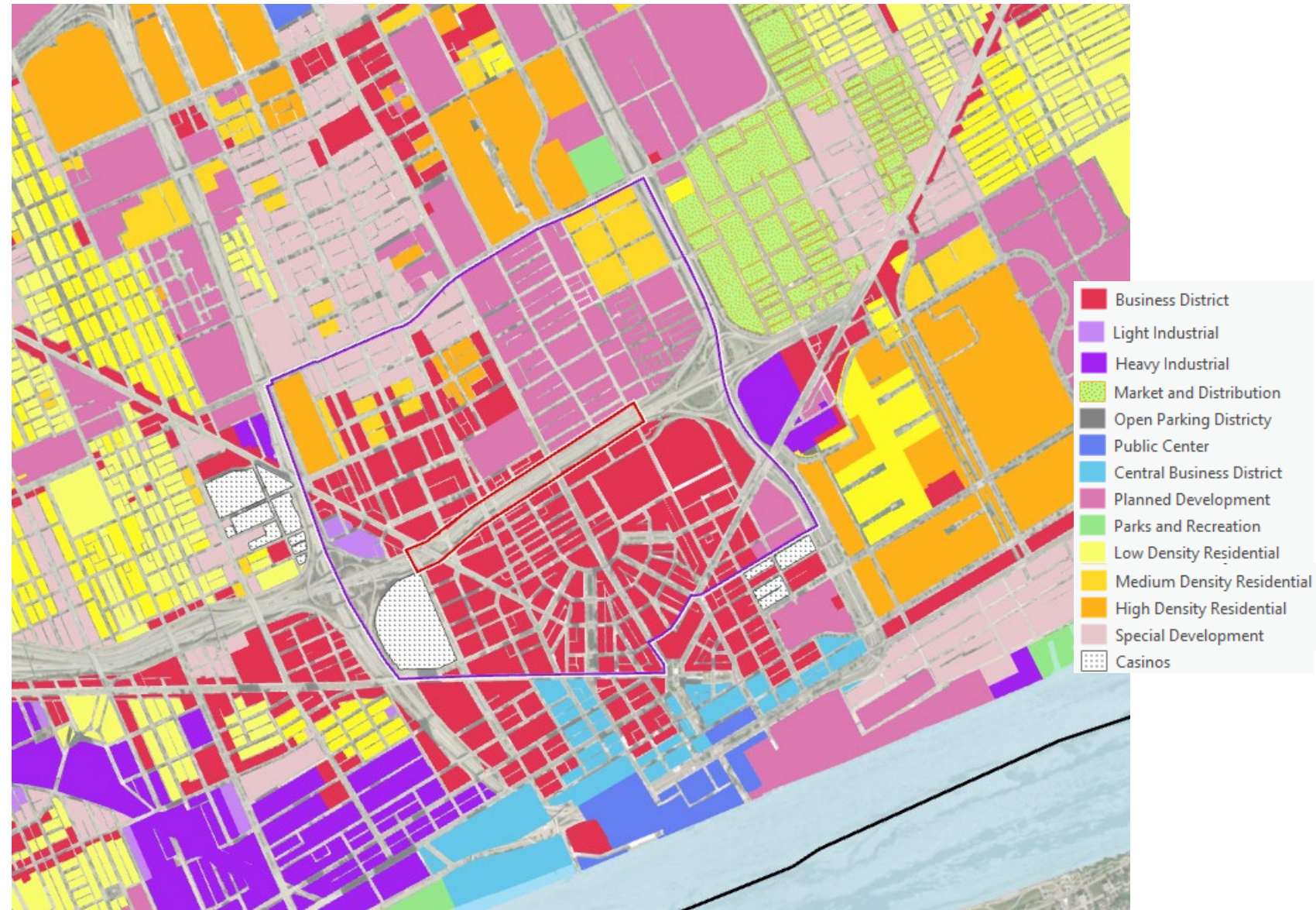
Spend



Source: Replica Primary Spend Metrics, spend per square mile, spend at merchant location

# Land Use

- Light industrial and Casino zoning along Grand River
- Medium to high density zoning throughout the B&IA
- Business District and Planned Development zoning along the Study Area
- I-75 limits connections between the planned business districts, residential districts, and market districts



Source: City of Detroit Open Data Portal, Zoning,  
Last updated May 2024



# Community-Centered Public Space Analysis

THEMES	OBSERVATIONS	OPPORTUNITIES	POTENTIAL THREATS
<b>CONNECTION</b>	<ul style="list-style-type: none"> <li>• Top spending in B&amp;IA includes (1) Restaurants and Bars (2) Gas Stations/Parking/Taxis/Tolls (3) Retail, (4) Airline Hospitality and Car Rental</li> <li>• Retail: Key retail districts are in Cass Corridor and Downtown</li> <li>• Restaurants and Bars: Key dining districts are Downtown, Cass Corridor, and Eastern Market</li> <li>• Neighborhoods: Lack of connections between Eastern Market, Midtown/Brush/Brewster Homes/Douglass, and Downtown</li> </ul>	<ul style="list-style-type: none"> <li>• Reconnect entertainment, dining, and retail districts Downtown</li> <li>• Create better connections between popular retail locations (Cass Corridor, Eastern Market, Downtown) so visitors and residents can better connect between districts without a car</li> <li>• Explore potential to reconnect previously disconnected streets, particularly Park Avenue</li> <li>• Reconnect neighborhoods, allow residents to access downtown amenities</li> </ul>	<ul style="list-style-type: none"> <li>• Potential desire from community members or stakeholders to maintain disconnected network to preserve quiet nature of neighborhood</li> <li>• Challenges in what amenities a highway cap can provide due to budget and engineering limitations</li> </ul>
<b>INVESTMENT</b>	<ul style="list-style-type: none"> <li>• Thirteen projects immediately north and south of the Study Area under development</li> <li>• UM Center of Innovation and District Detroit projects to bring mixed-use development and pedestrian streetscapes</li> <li>• Areas with vacant land located north and south of I-75 / Grand River Avenue intersection and north of Brush Street / I-75</li> <li>• Areas on far east and west side of B&amp;IA near I-75 and M-10 lack restaurants, retail, and hospitality</li> </ul>	<ul style="list-style-type: none"> <li>• Disinvestment throughout area due to historic redlining practices</li> <li>• Anchor upcoming development, catering to a variety of uses</li> <li>• Create anchor for development and investment for currently vacant areas in the east and west parts of the Study Area</li> </ul>	<ul style="list-style-type: none"> <li>• Perceptions about use of public funds for private development interests</li> <li>• Perceptions about increasing land values resulting from capping project</li> <li>• Strong voices and stakeholders near center of Study Area may overpower weaker voices on outskirts of Study Area</li> </ul>
<b>INCLUSIVITY</b>	<ul style="list-style-type: none"> <li>• High income inequality in area</li> <li>• Community amenities located along Woodward in lower Cass Corridor, near Grand Circus Park, and in lower Cass Corridor near Second Avenue</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce segregation by creating more connections between lower and higher income areas</li> <li>• Mitigate displacement and provide inclusive spaces in areas providing vital services to the community (schools, shelters, places of worship, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Potential desire from community members or stakeholders to maintain current income and race-based segregation</li> <li>• Potential resistance from community members to open public space due to current lack of activation of Grand Circus Park and evasion of current areas serving lower-income residents</li> </ul>



# Sustainability & Resiliency

*Assess open space and public health data to identify vulnerabilities and health risks*

# Public Park Space

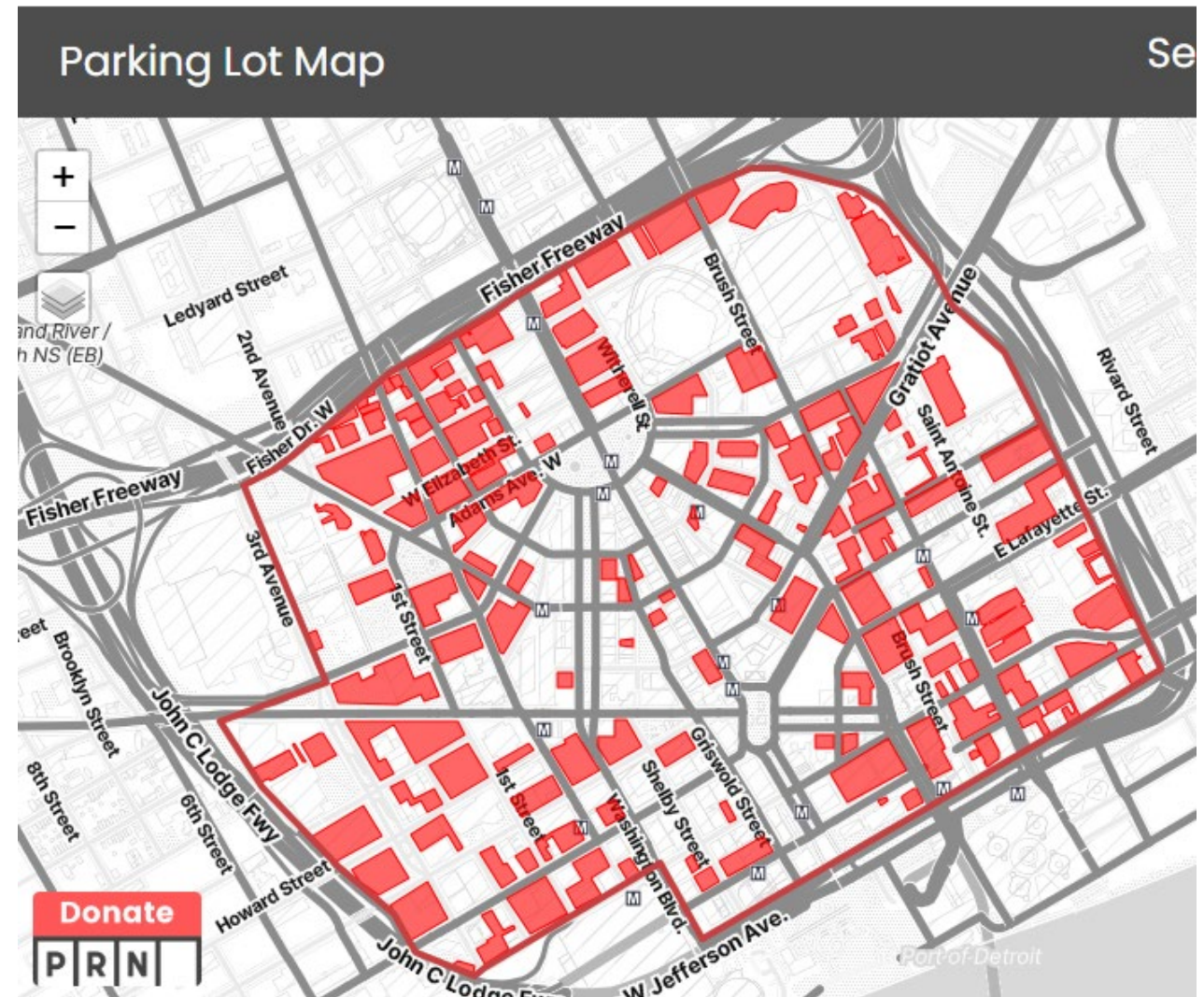
Park	Seating	Shade	Low Traffic Exposure	Playground / sports facilities
Cass Park	✓	✓	✓	
4th Charlotte				✓
Grand Circus	✓	✓	✓	
John R Watson	✓	✓	✓	✓
Brush Adelaide	✓	✓	✓	✓
Beacon Park	✓		✓	
Kosciuszko Statue		✓		
Capitol Park	✓		✓	
Harmonie Park	✓	✓	✓	



Source: Adapted from - City of Detroit Open Data Portal, Parks

# Downtown Parking Lots

- Per parking reform network data, Detroit has the highest parking score of all cities analyzed. A high parking score means more land dedicated to parking compared to the median for a city in an urbanized area of that size.
- Contributes to high amount of impervious surface and other negative environmental and social factors



Note: Data includes surface parking lots in use and above ground garages where majority of structure is parking

Source: Parking Reform Network,  
<https://parkingreform.org/resources/parking-lot-map/>

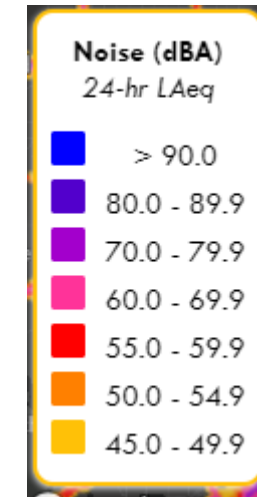
# Noise

- Persistently high noise levels in Benefit and Impact Area
- High noise levels have a negative effect on health, including stress related illnesses, high blood pressure, hearing loss, speech interference, sleep disruption, and lost productivity, among other health affects
- In the Study Area, the source of high noise levels is roads (not aviation or rail)



National Transportation  
Noise in the U.S. for  
2016, 2018 and 2020

Modes: Road



**NOTE:** The National Transportation Noise Map and associated data were developed for national level analysis and includes simplified noise modeling. It is intended for the tracking of trends and should not be used to evaluate noise levels in individual locations and/or at specific times.

Source: The National Transportation Noise Map,  
<https://maps.dot.gov/BTS/NationalTransportationNoiseMap/>;  
Clean Air Act Title IV - Noise Pollution,  
<https://www.epa.gov/clean-air-act-overview/clean-air-act-title-iv-noise-pollution>

# Equitable Transportation Community (ETC) Explorer

The following slides contain information from the USDOT Equitable Transportation Community (ETC) Explorer, an interactive web application that uses 2020 Census Tracts and data to explore the cumulative burden communities experience because of underinvestment in transportation in the following five components (1) Transportation Insecurity, (2) Climate and Disaster Risk Burden, (3) Environmental Burden (4) Health Vulnerability (5) Social Vulnerability.

This is a dynamic tool designed to help understand how communities experience burdens that transportation investments can mitigate or reverse.

Data on the following slides summarizes information for Census Tracts 5173, 5225, 5172, and 5207

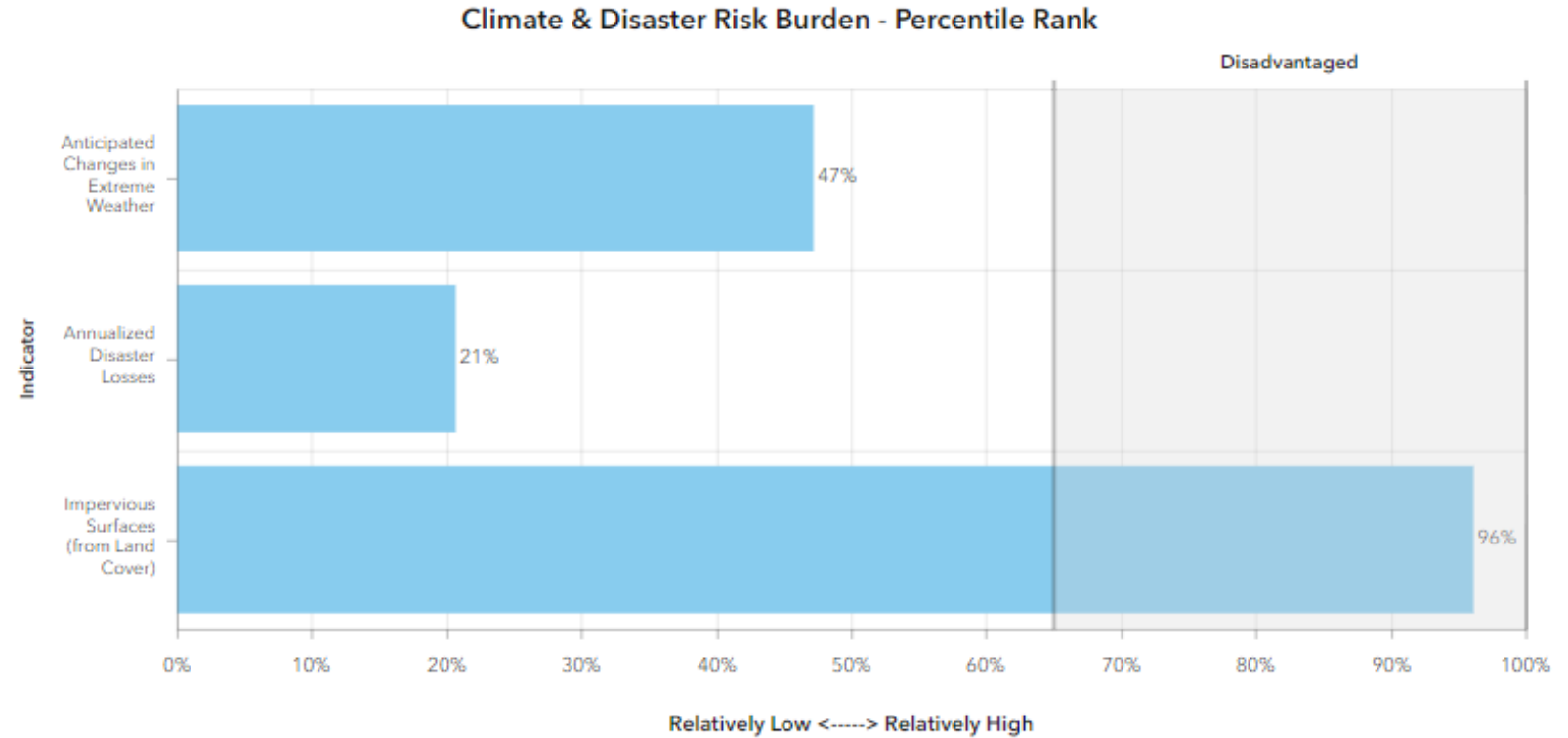


Census Tracts 5173, 5225, 5172, 5207

Source: USDOT Equitable Transportation Community (ETC) Explorer, <https://experience.arcgis.com/experience/0920984aa80a4362b8778d779b090723/page/ETC-Explorer---National-Results/>

# Climate and Disaster Risk Burden

- Climate and disaster risk in B&IA includes high percentage of impervious surfaces, which comes with many negative consequences including amplifying heat island effect and exasperating poor air quality



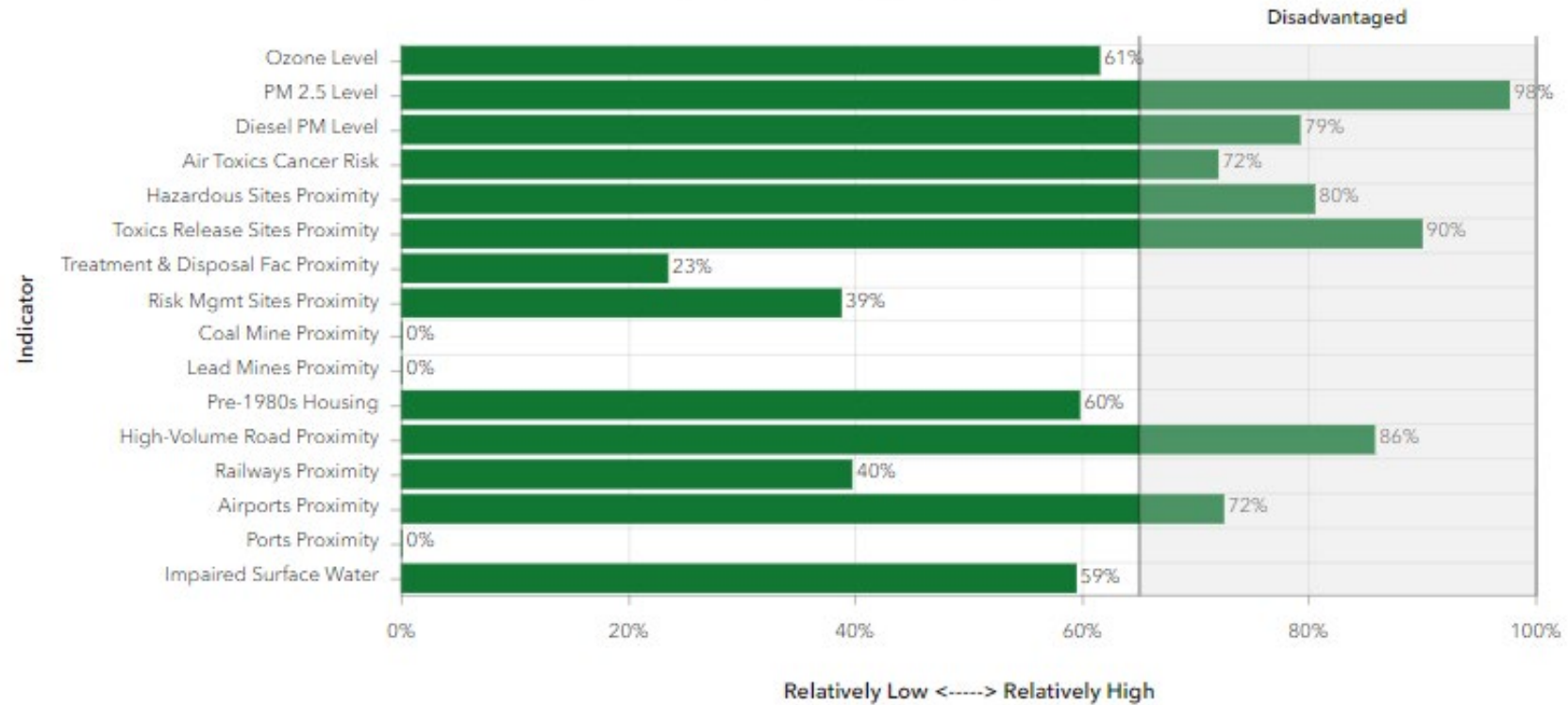
Data from Census Tracts 5173, 5225, 5172, 5207  
<https://experience.arcgis.com/experience/0920984aa80a4362b8778d779b090723/page/ETC-Explorer---National-Results/>

Source: USDOT Equitable Transportation Community (ETC) Explorer

# Environmental Burden

- Environmental burdens in the Benefit and Impact Area include **high particulate matter** (often from burning fossil fuels, vehicle emissions, road dust), **high diesel particulate matter, high air toxins** (often from vehicular / industrial emissions)
- These air quality issues are associated with **health problems** and are partially due to proximity to hazardous sites, proximity to toxic release sites (defined by EPA), proximity to roads with high traffic volumes, and proximity to airports.

Environmental Burden - Percentile Rank



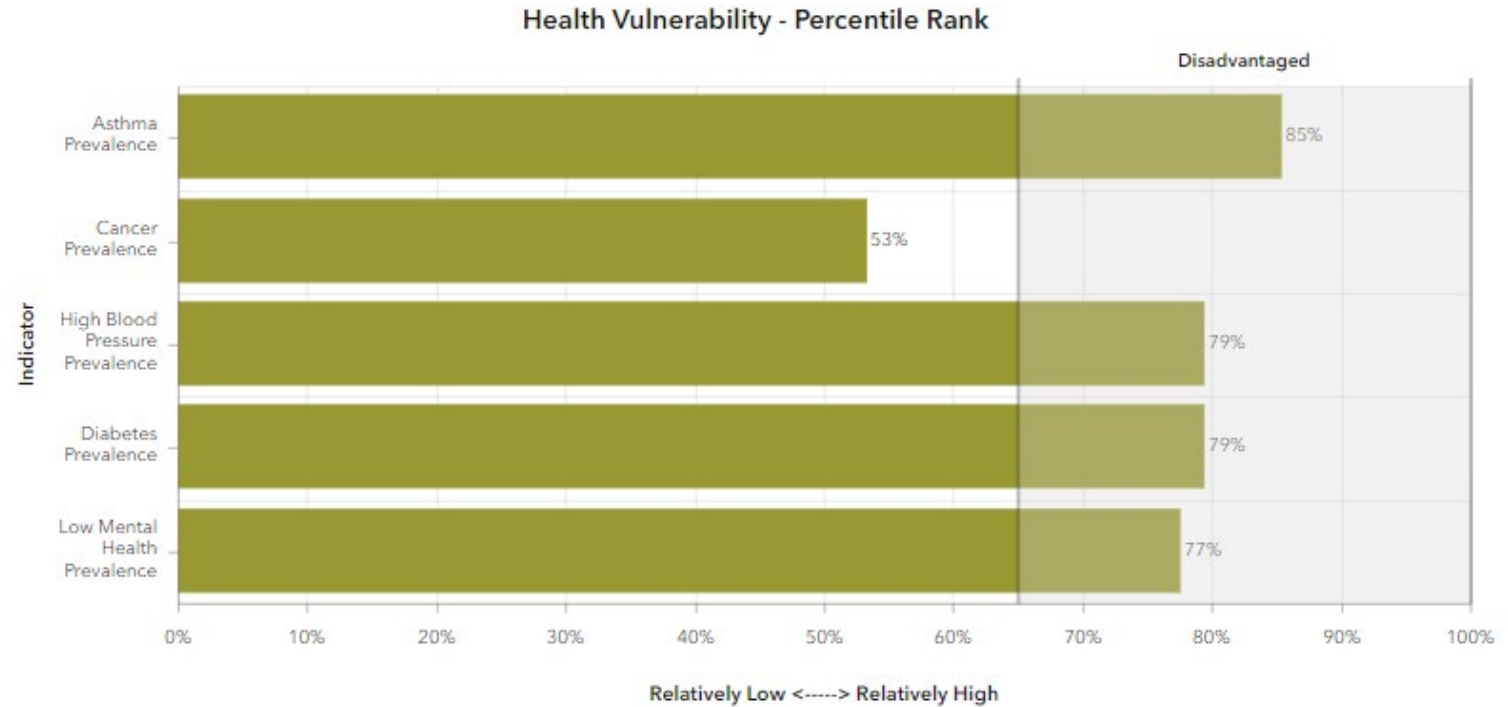
Data from Census Tracts 5173, 5225, 5172, 5207  
<https://experience.arcgis.com/experience/0920984aa80a4362b8778d779b090723/page/ETC-Explorer---National-Results/>

Source: USDOT Equitable Transportation Community (ETC) Explorer



# Health Vulnerabilities

- Health vulnerabilities in Benefit and Impact Area: high prevalence of asthma, high blood pressure, diabetes, low mental health

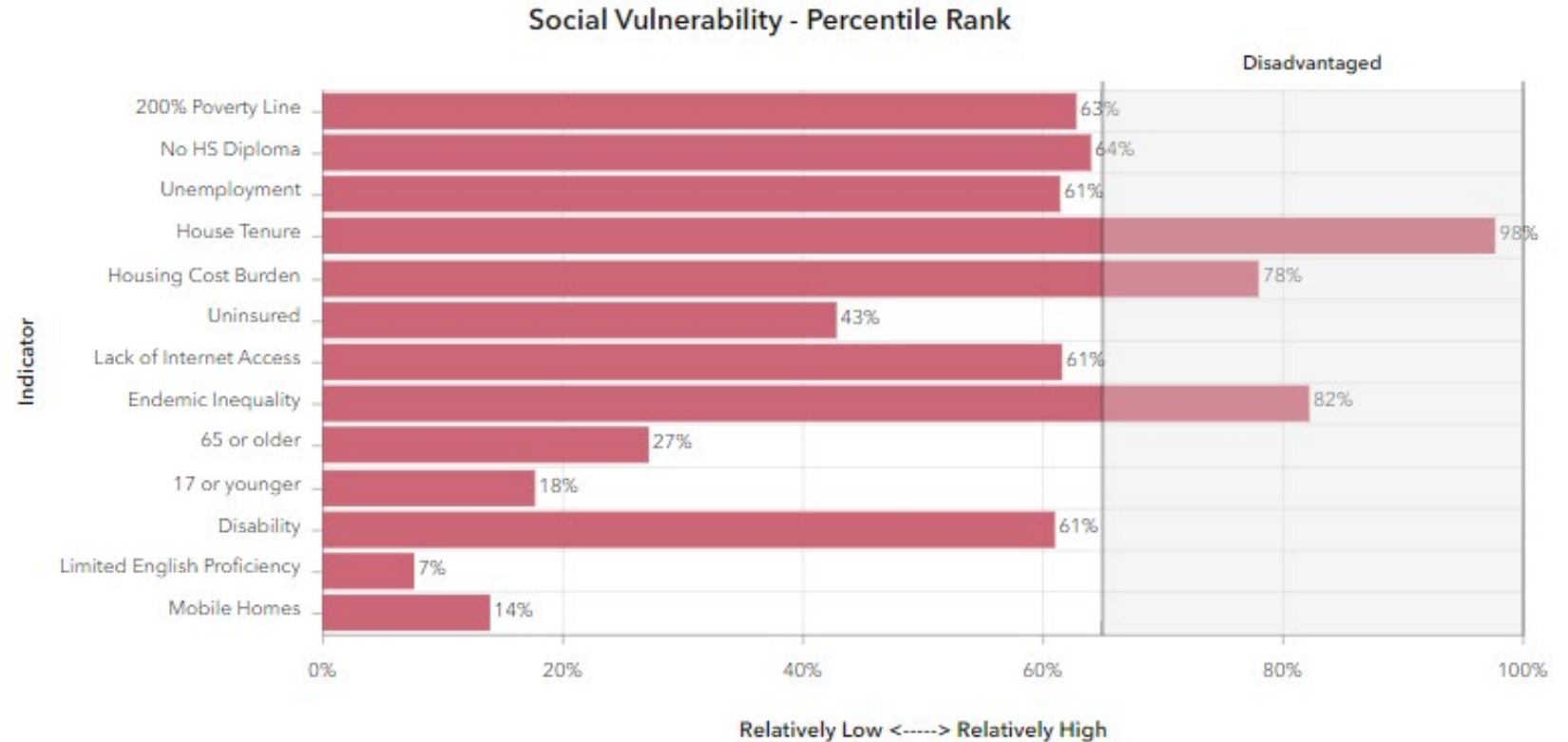


Data from Census Tracts 5173, 5225, 5172, 5207  
<https://experience.arcgis.com/experience/0920984aa80a4362b8778d779b090723/page/ETC-Explorer---National-Results/>

Source: USDOT Equitable Transportation Community (ETC) Explorer

# Social Vulnerabilities

- Social vulnerabilities in Benefit and Impact Area: High percentage of renter occupied housing, high housing cost burden, high income inequality

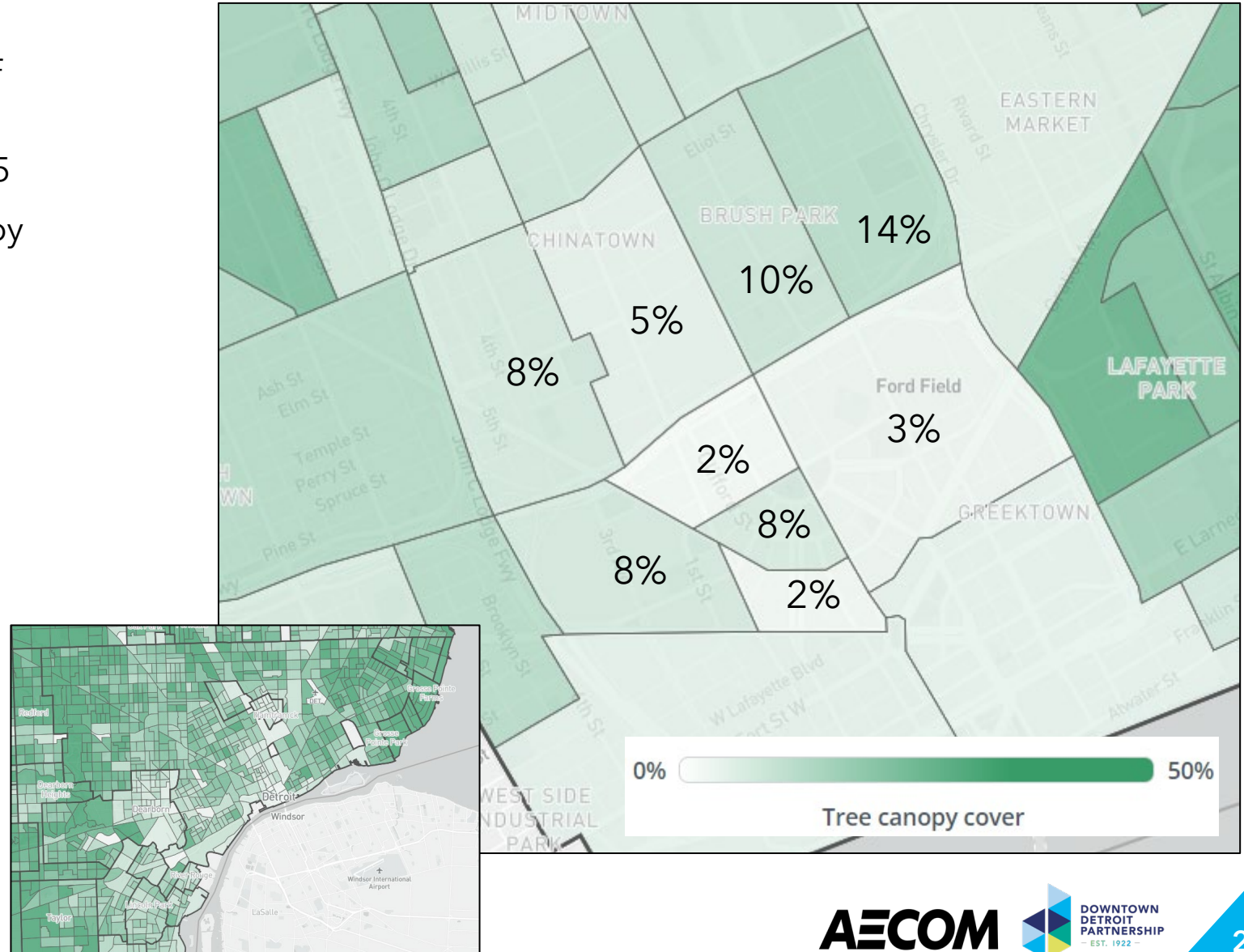


Data from Census Tracts 5173, 5225, 5172, 5207  
<https://experience.arcgis.com/experience/0920984aa80a4362b8778d779b090723/page/ETC-Explorer---National-Results/>

Source: USDOT Equitable Transportation Community (ETC) Explorer

# Tree Canopy Cover

- Low tree canopy cover relative to the rest of City and metro region
- Lowest canopy in block groups south of I-75
- Numerous benefits to increasing tree canopy including flooding, air quality, pedestrian walking conditions, climate and community wellbeing



Source: Tree Equity Score,  
<https://www.treeequityscore.org/map#13.27/42.34411/-83.04607>

# Sustainability & Resiliency Analysis

THEMES	OBSERVATIONS	OPPORTUNITIES	POTENTIAL THREATS
<p><b>RESILIENCE</b></p>	<ul style="list-style-type: none"> <li>Limited public park space in the B&amp;IA</li> <li>Limited access to public playgrounds / sports facilities in B&amp;IA</li> <li>Low extreme weather and disaster risk in area, relative to nation</li> <li>High amount of land dedicated to parking in Downtown Detroit, relative to peer cities</li> <li>High percentage of impervious surface contributing to heat island effect, poor air quality, flooding</li> <li>Low tree canopy cover, particularly south of I-75</li> </ul>	<ul style="list-style-type: none"> <li>Create more park programming for youth</li> <li>Increase public space in area</li> <li>Reduce impervious surface</li> <li>Construct stormwater and green infrastructure</li> <li>Reduce parking need by investing in pedestrian, bicycle, and micromobility infrastructure</li> <li>Install more trees</li> </ul>	<ul style="list-style-type: none"> <li>Desire from stakeholders to maintain high amount of parking in area, based on the idea that high parking availability means more economic activity</li> <li>Fears related to crime can result in elements that degrade the built environment: fences, high security presence, limited public space, exclusionary private space, auto-centric infrastructure, limited public seating and restroom options</li> </ul>
<p><b>HEALTH</b></p>	<ul style="list-style-type: none"> <li>Poor air quality including high particulate matter and air toxins, partially due to high proximity to hazardous sites, toxic release sites, high traffic volumes</li> <li>High prevalence of asthma, high blood pressure, diabetes, low mental health</li> <li>High percentage of renter-occupied housing, high housing cost burden, and high-income inequality</li> <li>Due to proximity to highways, there are persistently high noise levels throughout the B&amp;IA</li> </ul>	<ul style="list-style-type: none"> <li>Promote transportation modes with lower emissions</li> <li>Create opportunities for outdoor recreation</li> <li>Buffer high noise levels from highway</li> </ul>	<ul style="list-style-type: none"> <li>Desire from stakeholders to prioritize high motorized traffic volumes in area, based on the misconception that high motorized traffic volumes correlate with more economic activity</li> </ul>

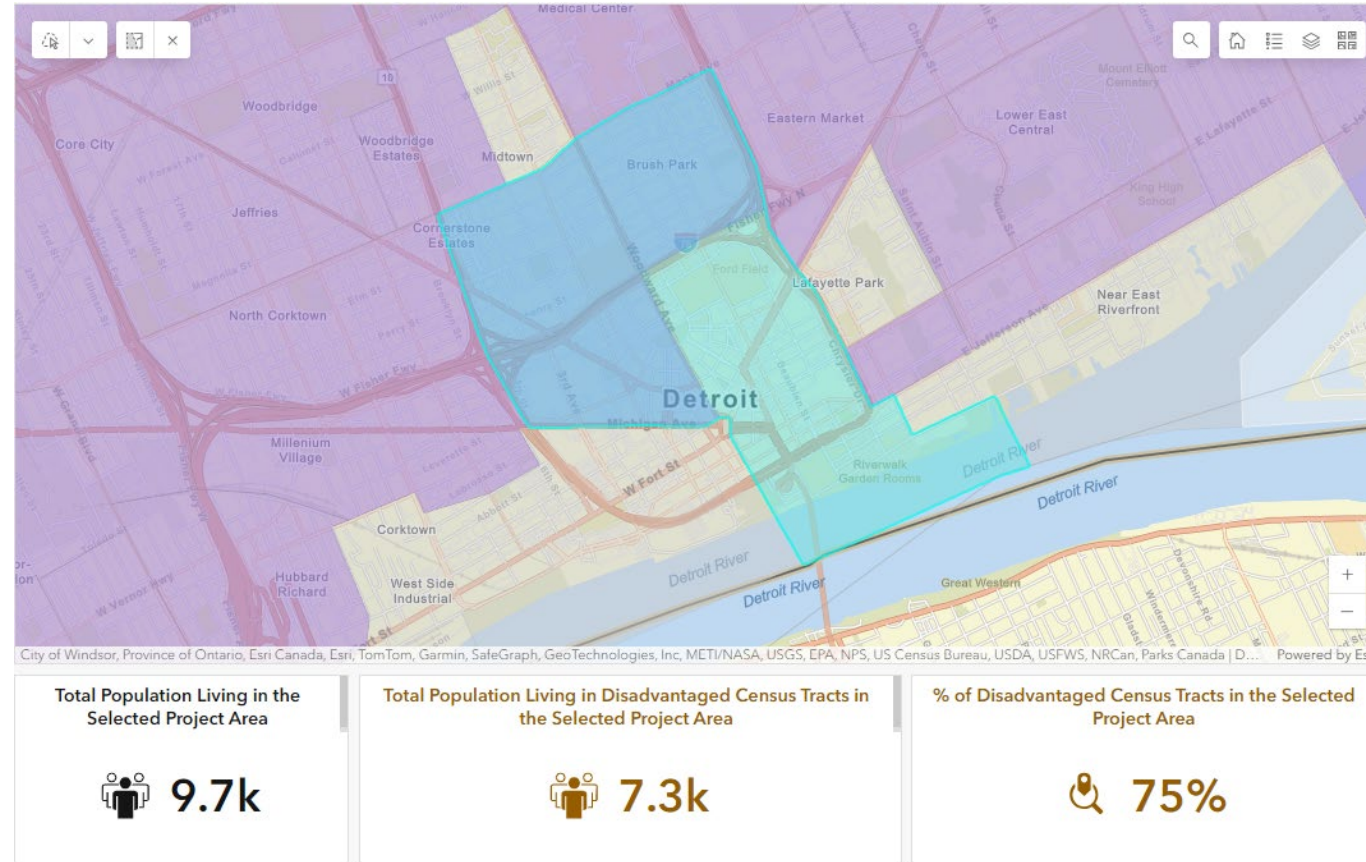


# Equity & Opportunity

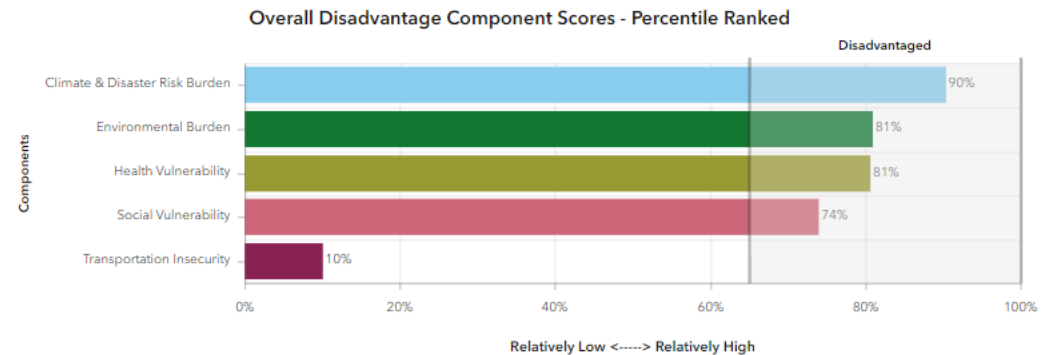
*Assess demographic information to identify community needs and goals*

# Equity

- Benefit and Impact Area primarily categorized as disadvantaged by national ETC equity tool



## Disadvantaged Tracts ETC tool

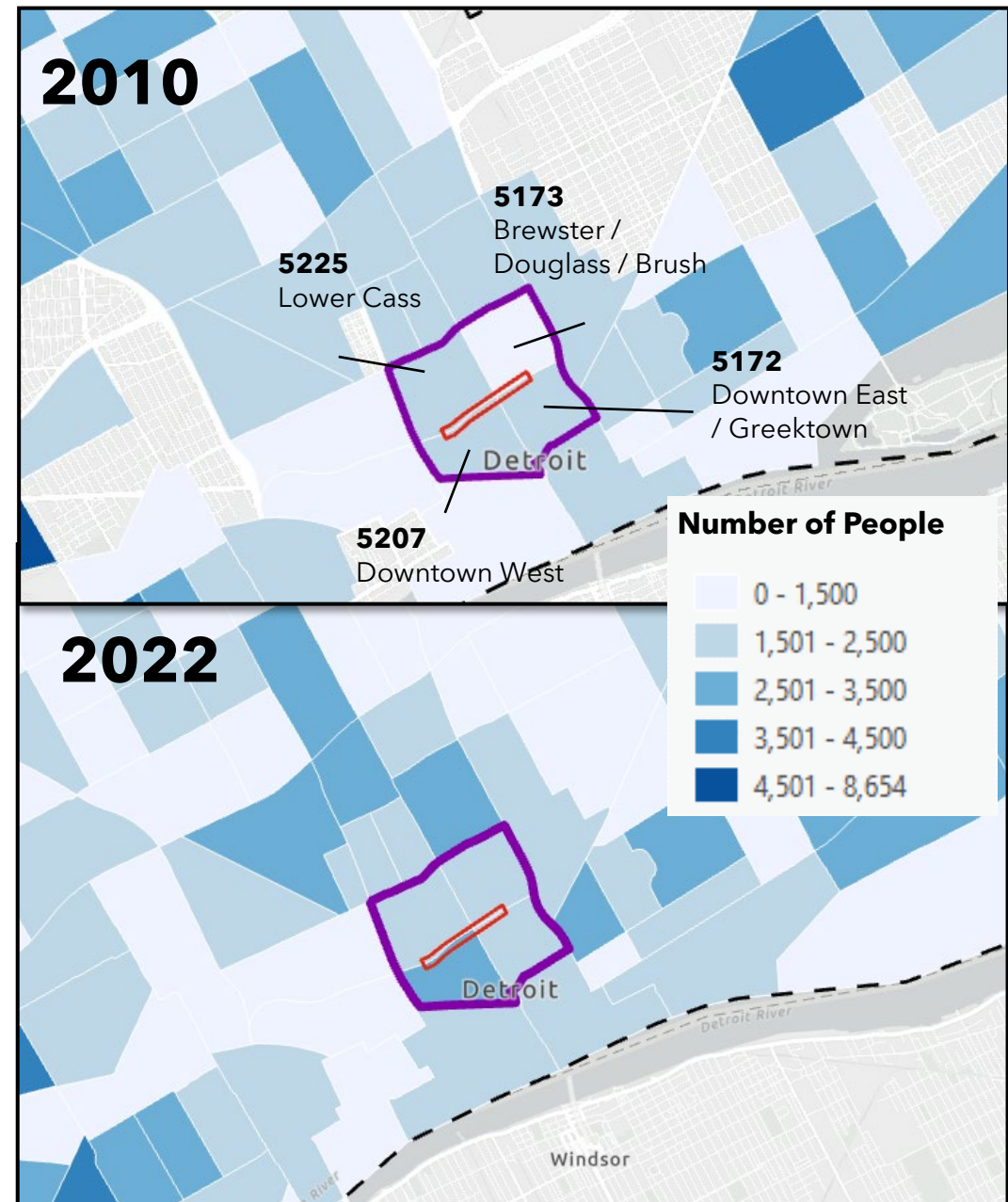
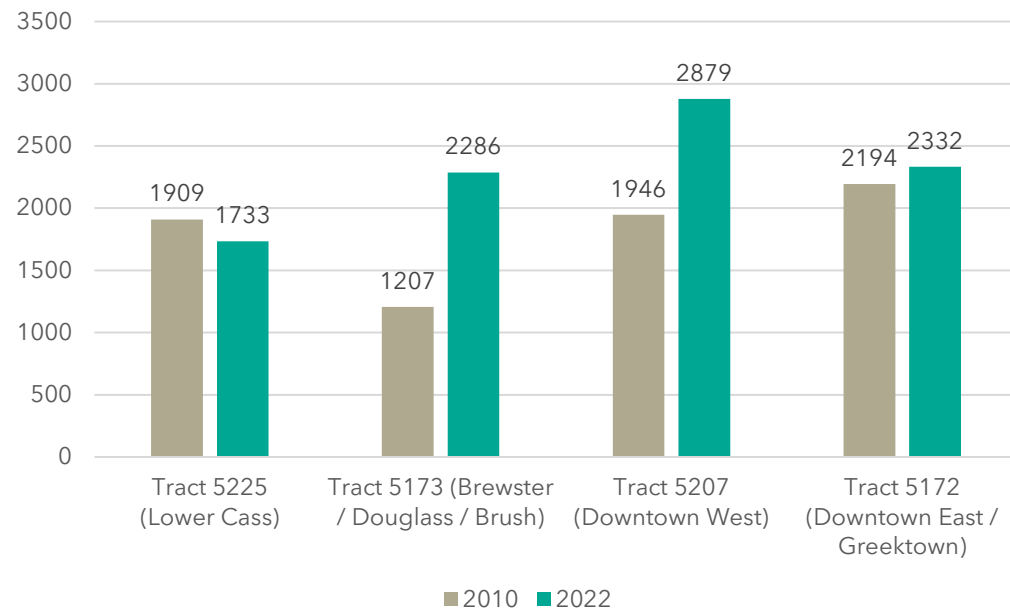


Source: USDOT Equitable Transportation Community (ETC) Explorer

# Total Population

- Population increase in every tract except 5225 (Lower Cass)
- Most significant population increase in Brewster / Douglass / Brush Park tract

Total Population by Tract (2022)

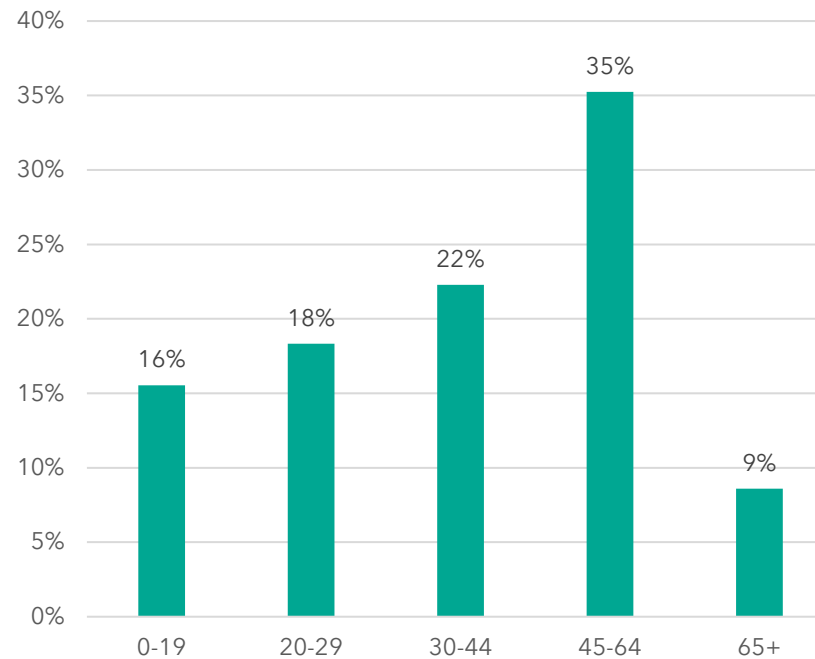


Source: ACS 5-year estimates, 2022 & 2010, Table B02001

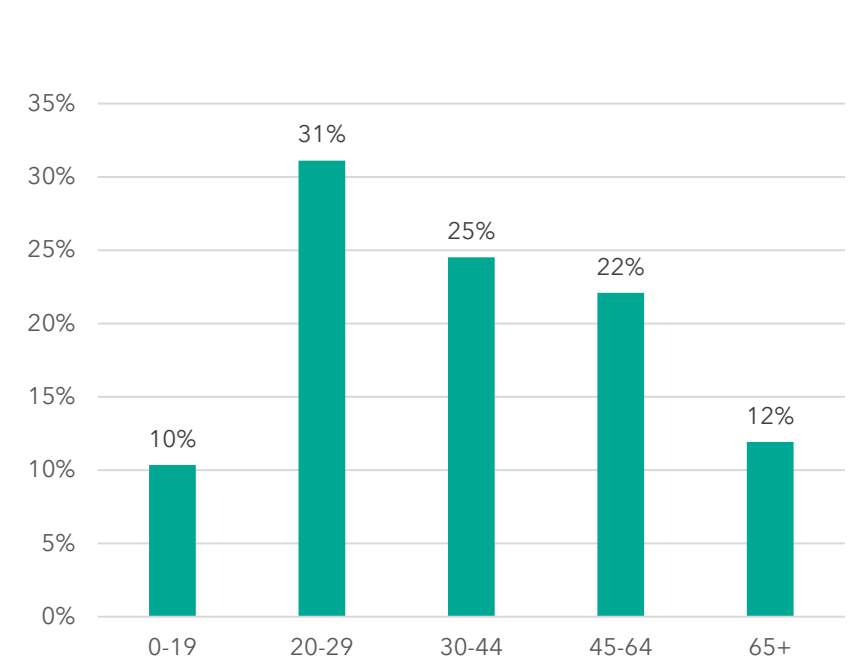
# Age

- Increase in proportion of young adult and senior populations
- Decrease in proportion of youth and adult populations

Age Distribution (2010)



Age Distribution (2022)



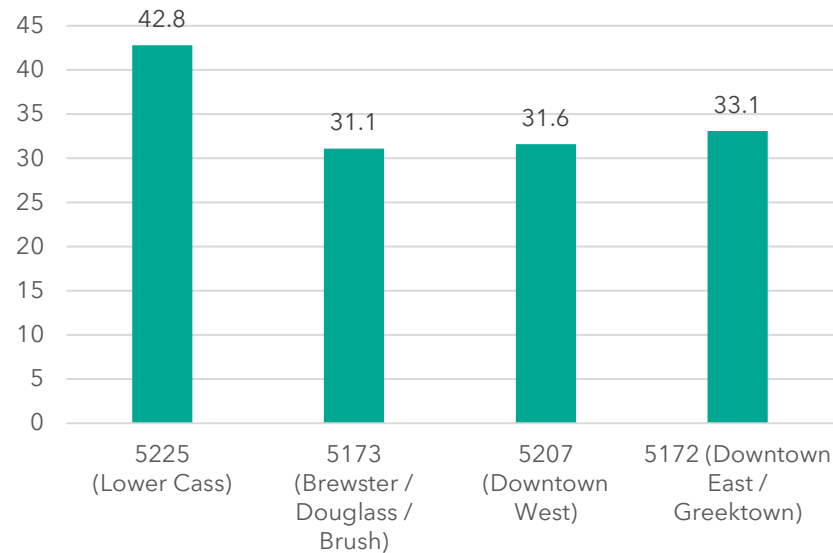
Source: ACS 5-year estimates, 2022 & 2010, Table S0101



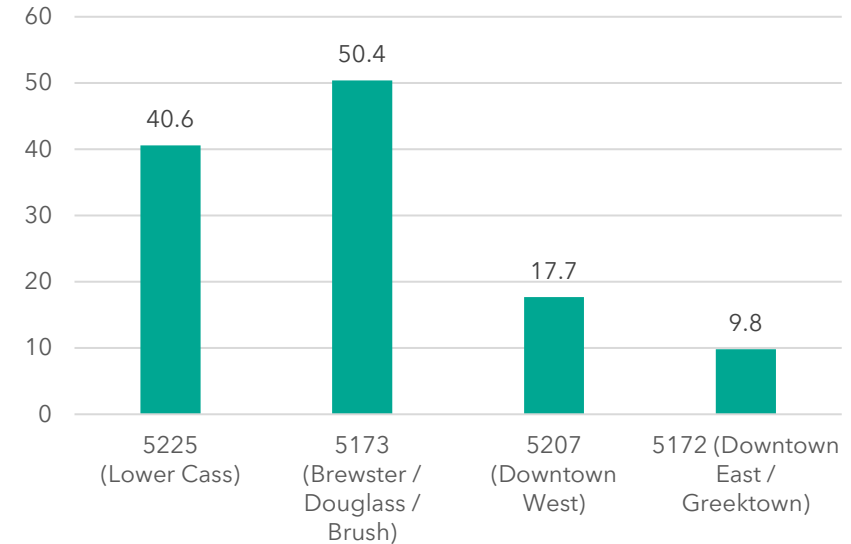
# Age

- Highest proportion of non-working age population in Brewster / Douglass / Brush tract

Median Age by Tract, age in years (2022)



Age Dependency Ratio by Tract, expressed as number of dependents per 100 working age people (2022)

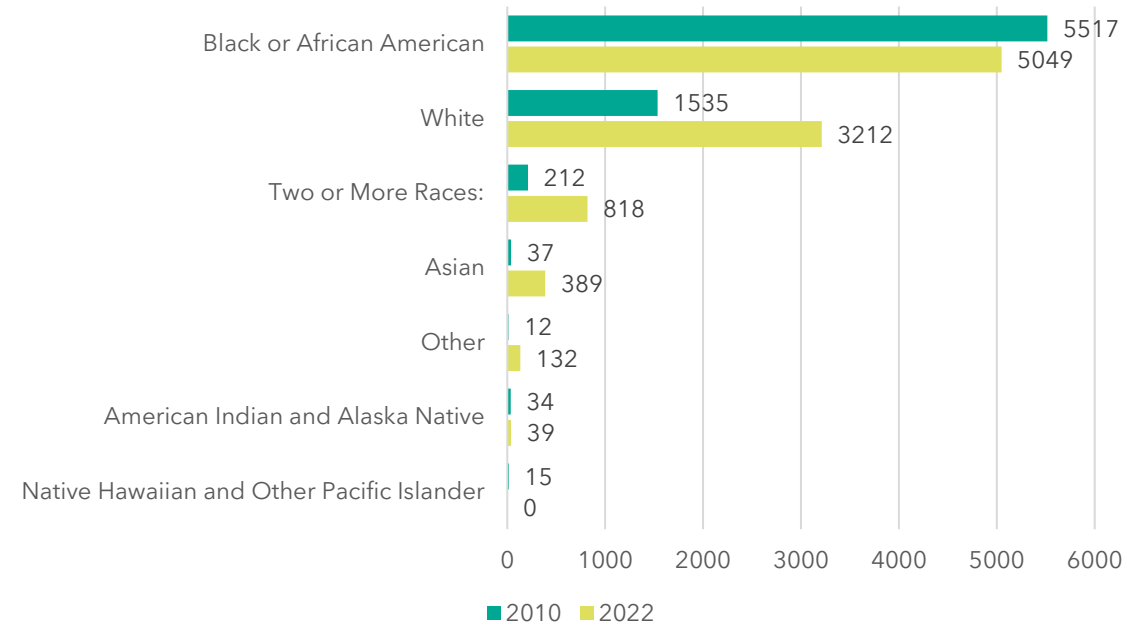


Source: ACS 5-year estimates, 2022 & 2010, Table S0101

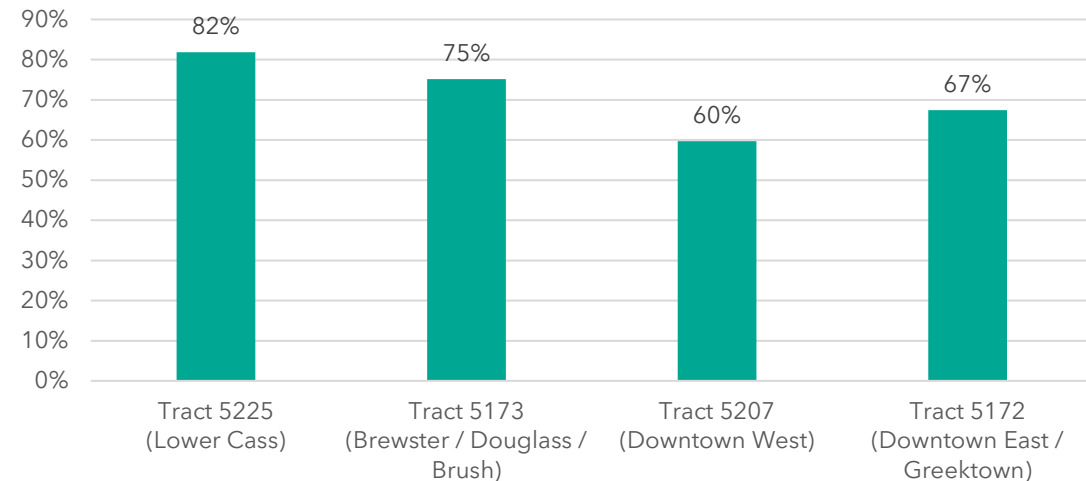
# Race: Non-White

- Increase in white population between 2010 and 2022
- Decrease in Black population between 2010 and 2022
- Proportion of white population grew from 21% of population in 2010 to 35% in 2022
- Proportion of Black population shrank from 76% of population in 2010 to 55% of population in 2022

B&IA Residents by race/ethnicity (2010, 2022)



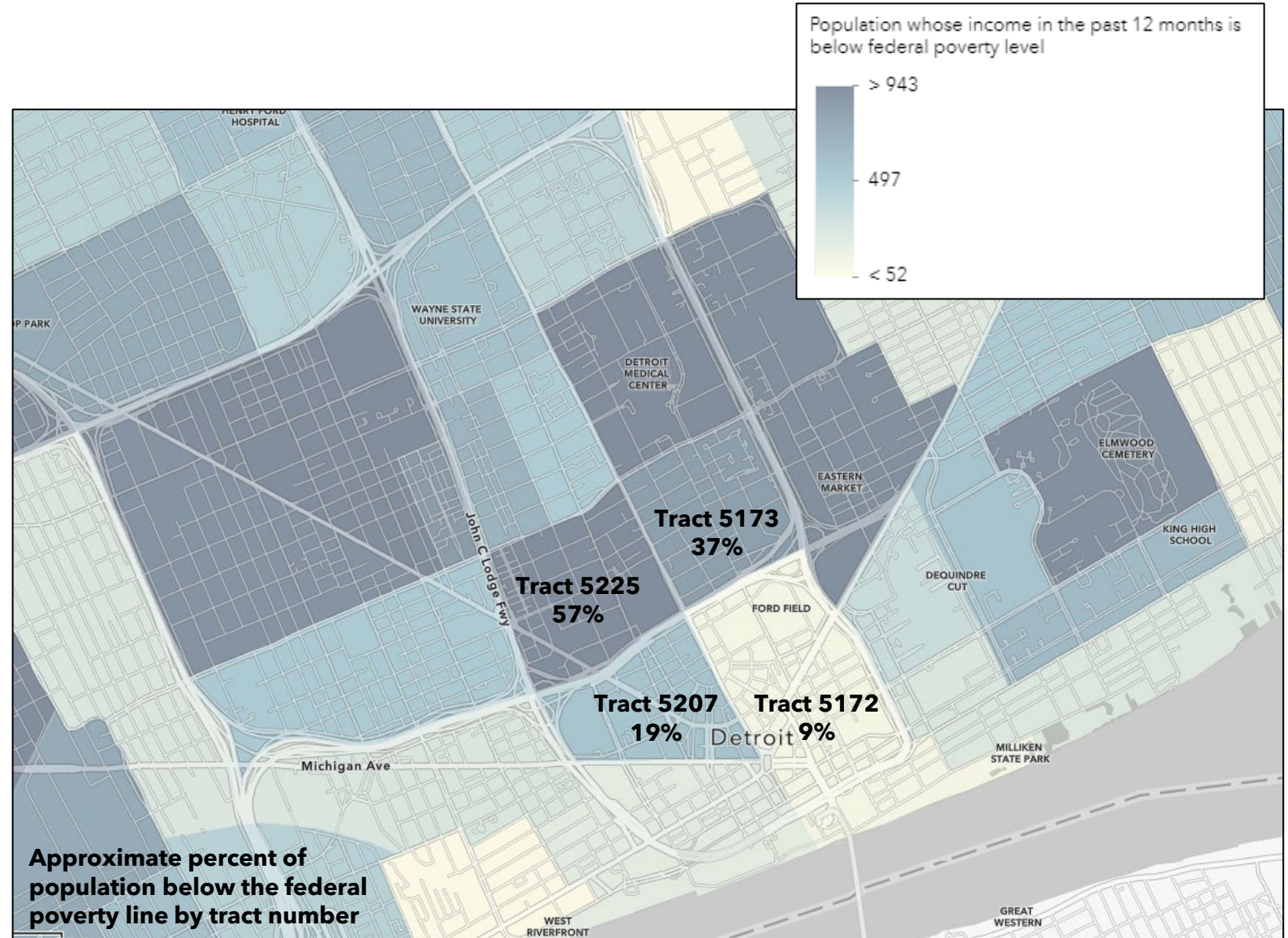
Percent of non-white population by tract (2022)



Source: ACS 5-year estimates, 2010 & 2022, Table B02001

# Poverty Status

- Average of 31% of population with income below federal poverty level in B&IA
- High proportion of population with income under poverty level in lower Cass Corridor (northwest of I-75)

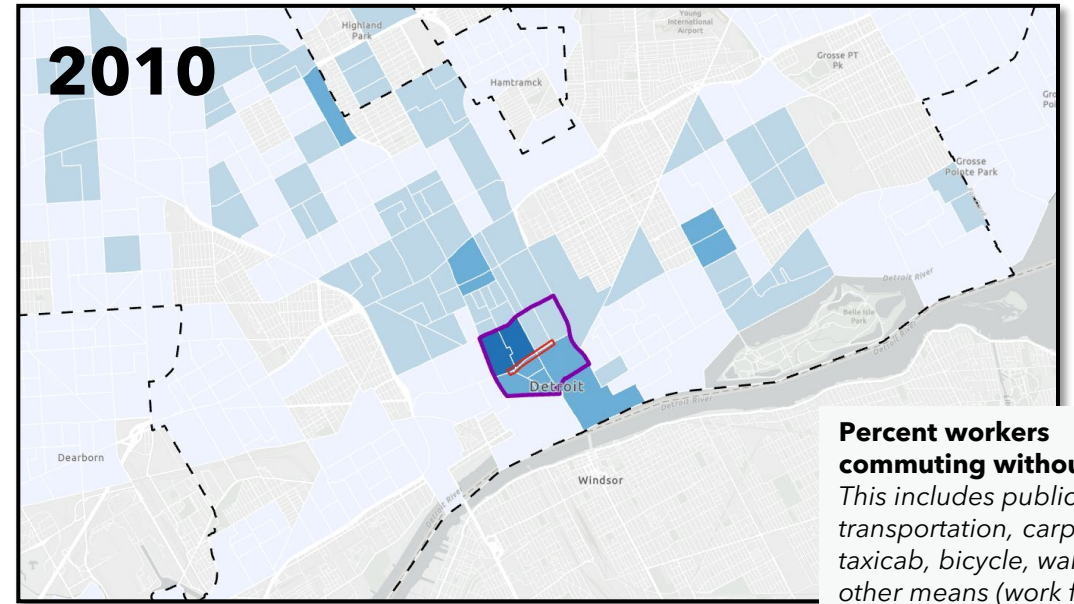
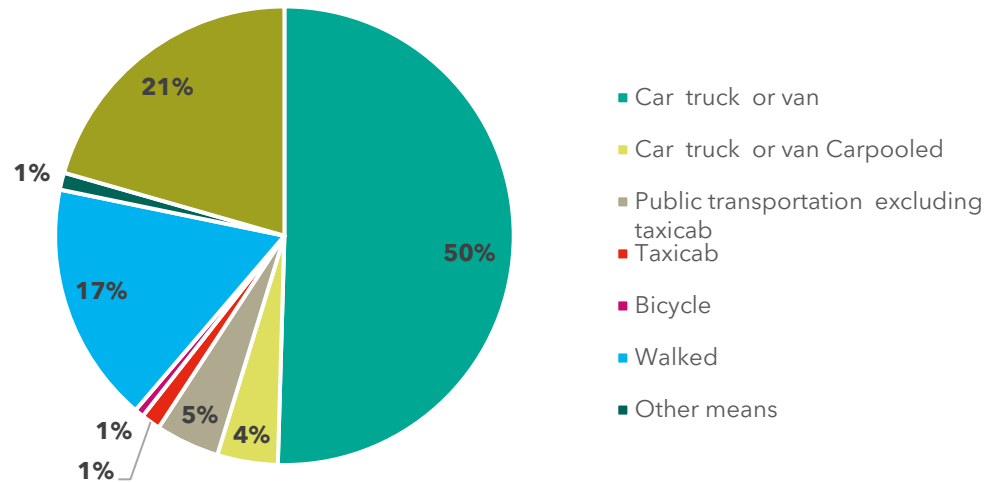


Source: 2023 5-year ACS estimates  
<https://usdot.maps.arcgis.com/apps/webappviewer/index.html?id=af1a590b45444e768402714efb148805>

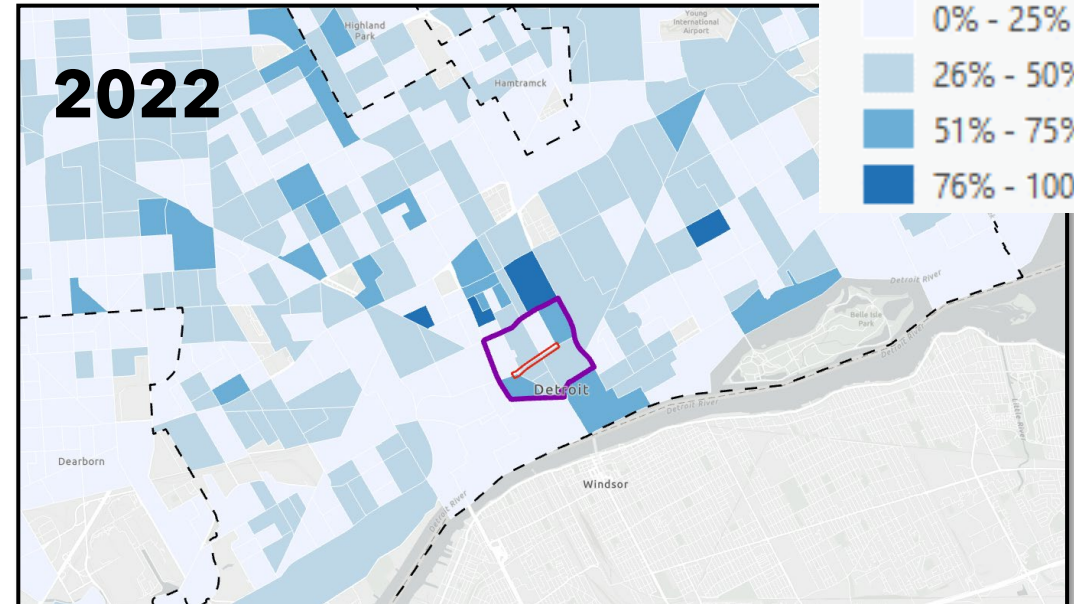
# Commute Mode

- Within Benefit and Impact Area, a decrease in the proportion of people using multimodal transportation options (2010-2022)
- Seventeen percent of workers in B&IA walk to work, 5% use transit, and 1% bike
- Twenty-one percent of workers work from home

B&IA Commute Mode (2022), not including work from home



**Percent workers commuting without a car**  
*This includes public transportation, carpool, taxicab, bicycle, walking and other means (work from home not included)*

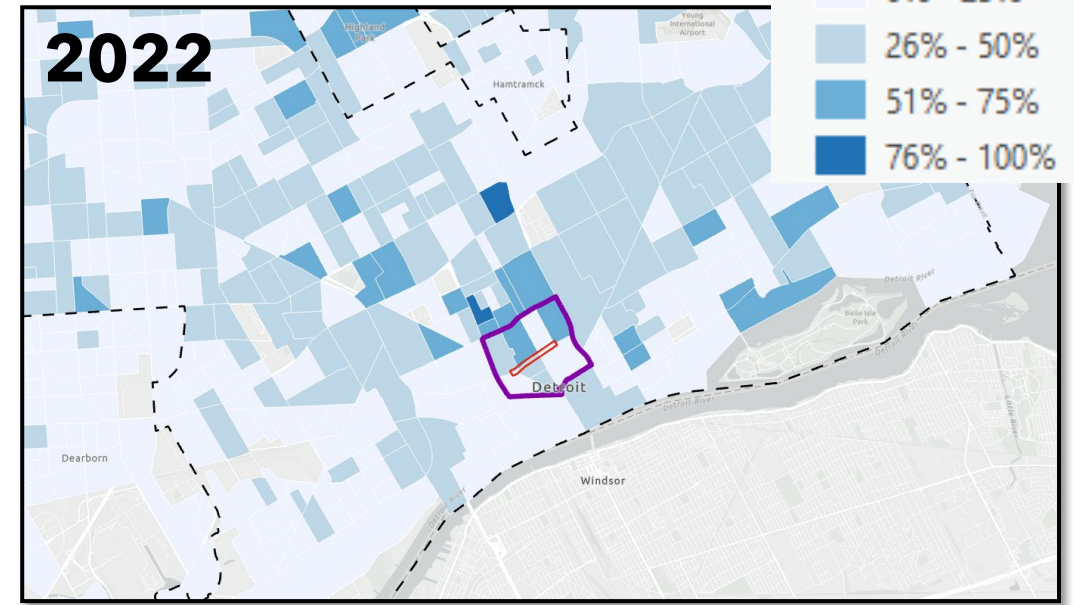
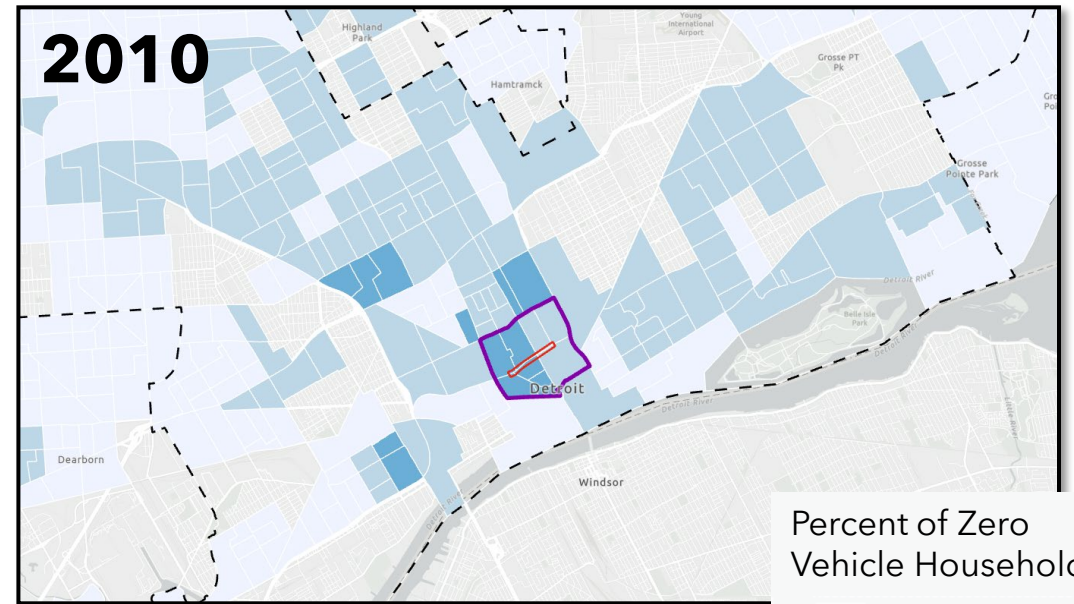
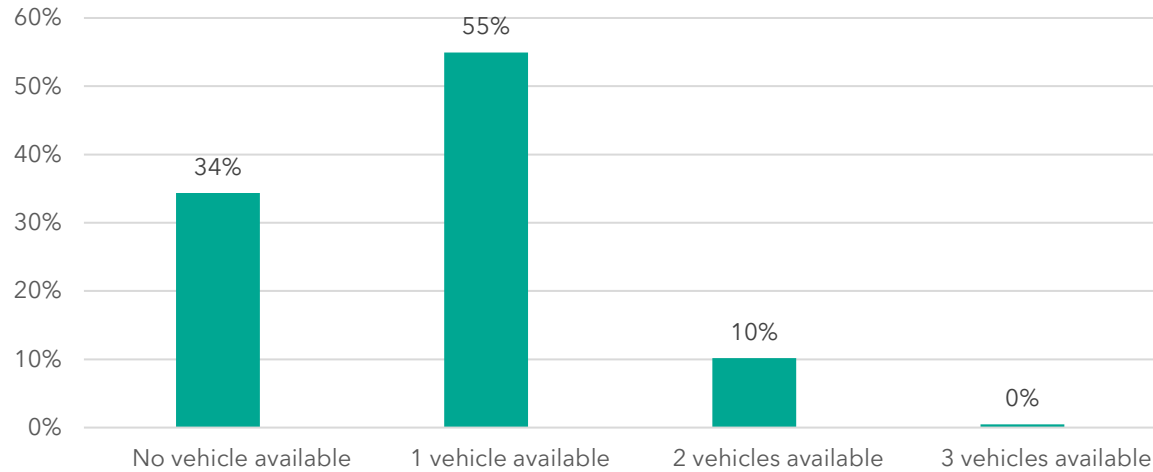


Source: ACS 5-year estimates, 2010 & 2022, Table B08301, Means of Transportation to Work

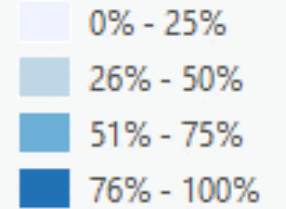
# Zero Vehicle Households

- B&IA has a high proportion of households with no access to a car, particularly in lower Cass Corridor, Brewster, and Douglass.
  - Within B&IA block groups, 34% of workers have no vehicle available (2022)
  - Increase in proportion of zero vehicle households in Brewster and Douglass areas
  - Decrease in proportion of zero vehicle households in Downtown East, Downtown West, and Brush Park

Zero-vehicle households, B&IA Block Groups, 2022



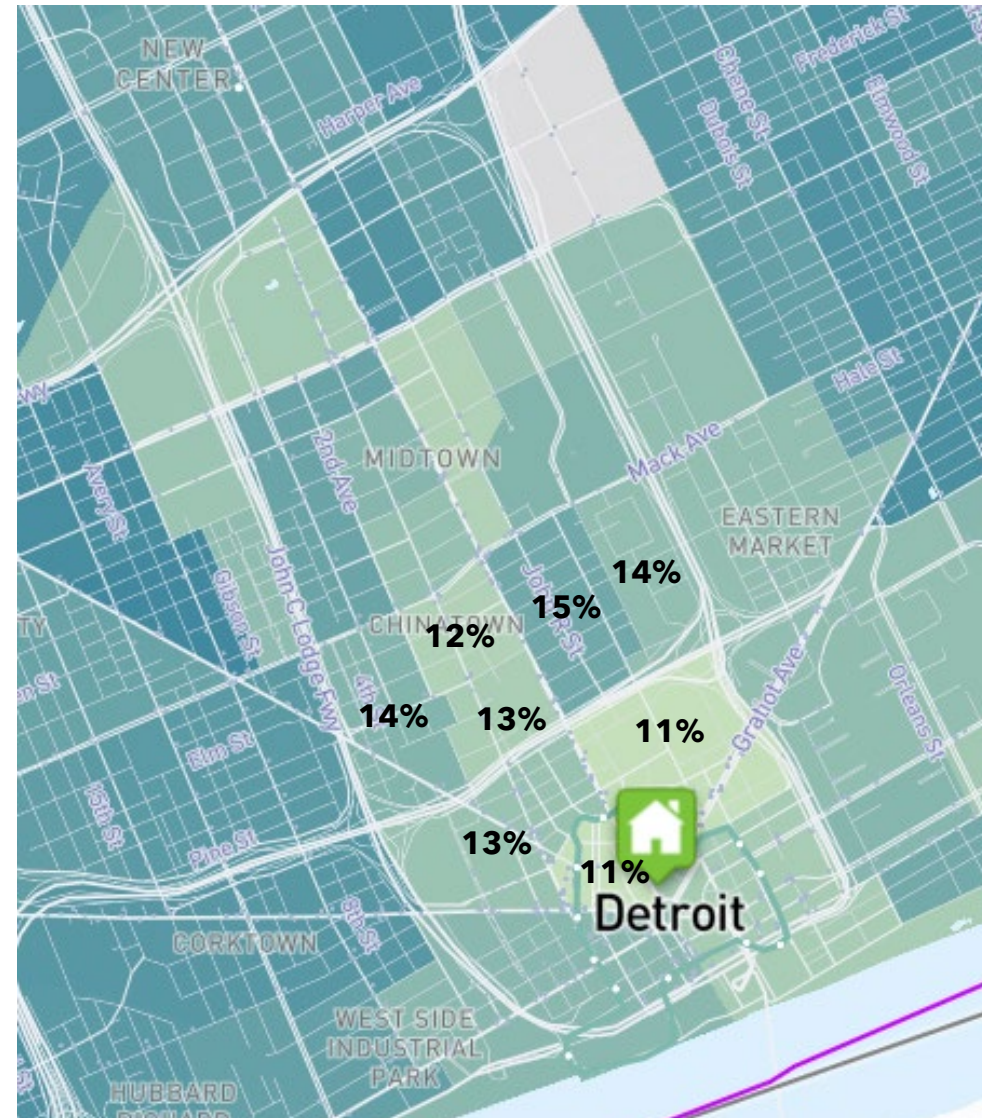
Percent of Zero Vehicle Households



Source: ACS 5-year estimates, 2010 & 2022, Table B25044, Tenure by Vehicles Available

# Transportation Costs

- B&IA Residents are spending an average of 14% of their income on transportation costs
- Within B&IA, highest transportation costs are located in Brush Park, Brewster, Douglass, and Lower Cass



Note: Uses 2019 ACS data as input, sum of auto ownership costs, auto use costs, and public transit costs divided by the block group income. For this calculation, a regional typical household is assumed (\$60,984 household income, 2.51 people in household, and 1.11 workers in household)

Transportation Costs % Income



Source: Housing and Transportation Affordability Index, [htaindex.cnt.org](http://htaindex.cnt.org),

# Vehicle Miles Traveled (VMT)

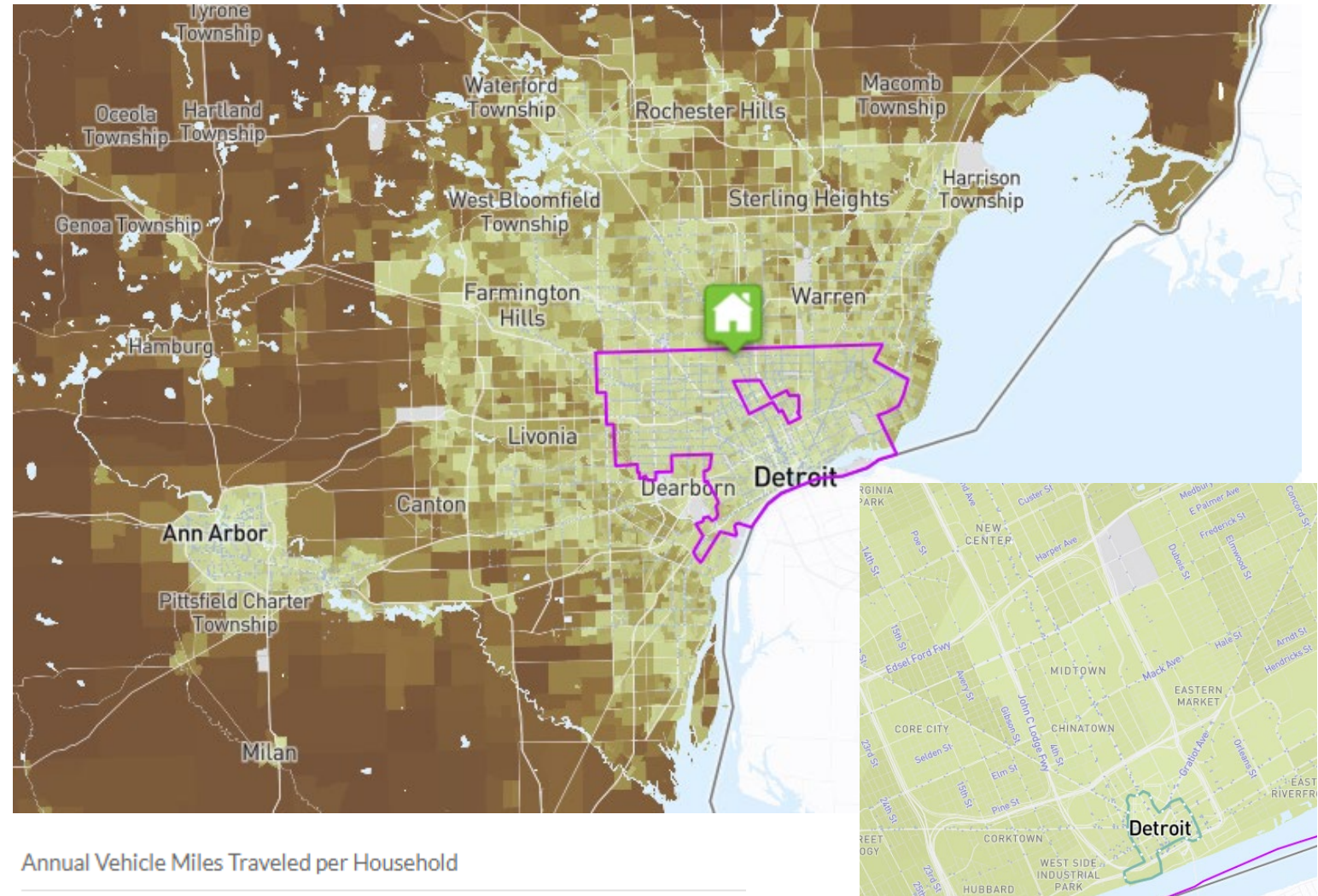
- Vehicle miles traveled is a total sum of miles traveled by every vehicle in a defined area. This is a useful metric to help show how many people are moving in a vehicle in a defined area. It has implications for roadway design, providing alternative transportation mode options, safety, air quality, and more.
- Vehicle miles traveled are higher in Downtown, indicating this area is more auto-oriented. This is likely because Grand River, Michigan, and Gratiot accommodate higher traffic volumes
  - There are relatively fewer vehicle miles traveled in Lower Cass Corridor and Brewster/Douglass (controlled for number of residents)
  - There are relatively more vehicle miles traveled in Downtown West (controlled for number of residents)



Source: Replica.com, Fall 2023, Typical Thursday. VMT traveled in auto (private auto or auto passenger)

# Annual Vehicles Miles Traveled (VMT) per Household

- Households living in Detroit and in the B&IA travel fewer vehicle miles relative to the greater Metro Detroit region
- This indicates that Metro Detroit residents may be contributing disproportionately more traffic to the regional transportation networks, thus disproportionately benefiting from highways like I-75
- Although B&IA residents contribute less to motorized traffic and emissions, they are the primary ones who bear the negative externalities from the highways



Source: Housing and Transportation Affordability Index, [htaindex.cnt.org](http://htaindex.cnt.org),

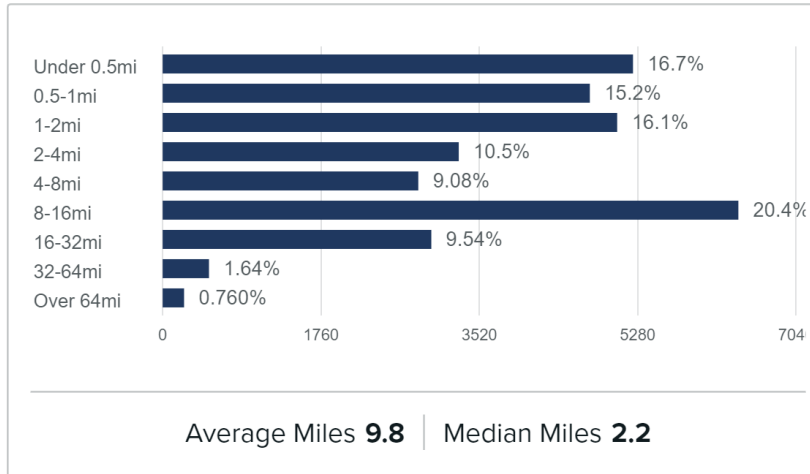


# Trip Distance

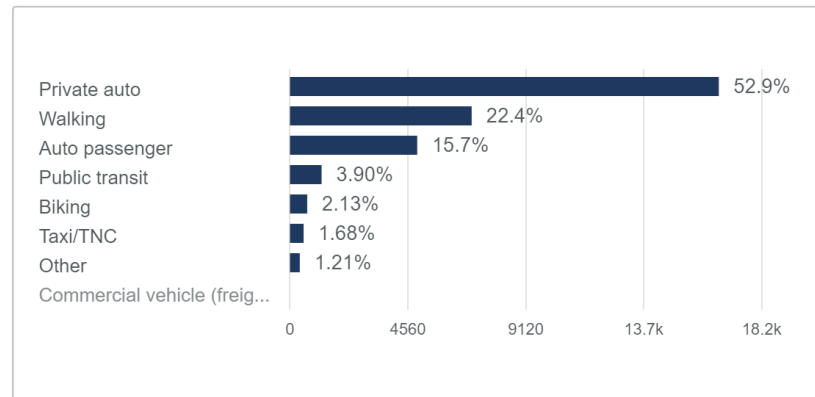
- While residents in the B&IA primarily bear negatively externalities of the highway, they contribute less to motorized traffic
- Compared with City of Detroit residents, B&IA residents:
  - Have shorter trip distances
  - Walk, Bike, Taxi/TNC, Transit more
  - Drive less

## B&IA Residents All modes

Trip Distance (Miles)

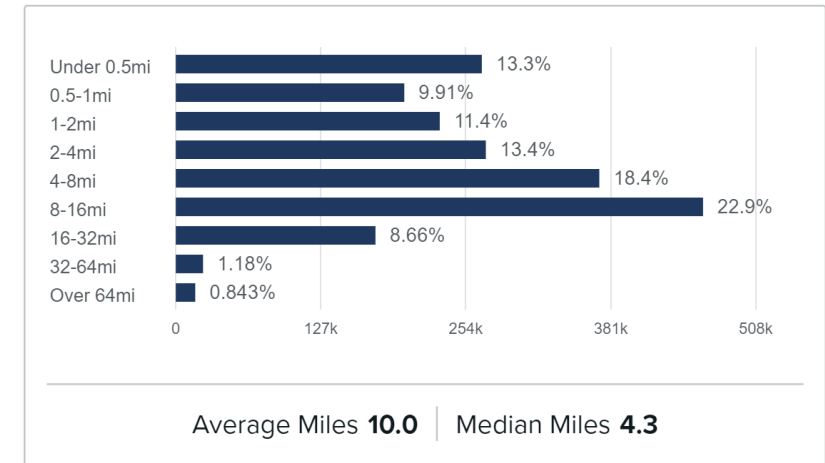


Primary Mode

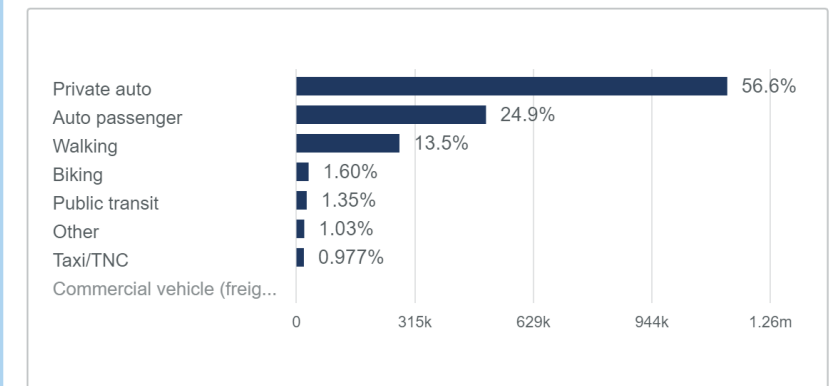


## City of Detroit Residents All modes

Trip Distance (Miles)



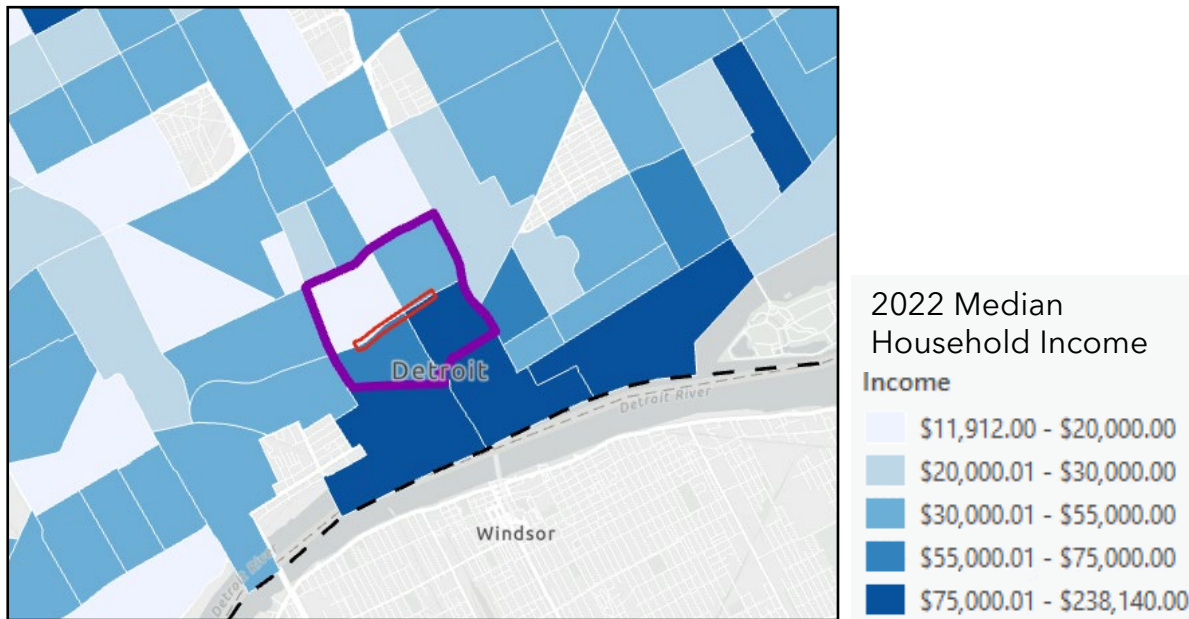
Primary Mode



Source: Replica.com, Fall 2023, Typical Thursday

# Household Income

- High income inequality in B&IA
- Low incomes in Lower Cass area, with a median income of \$18,319
- Affordable housing developments available in Brewster, Douglass and Lower Cass. These areas include Brewster Homes and Cornerstone Estates.



Median household income by tract (2010, 2022)

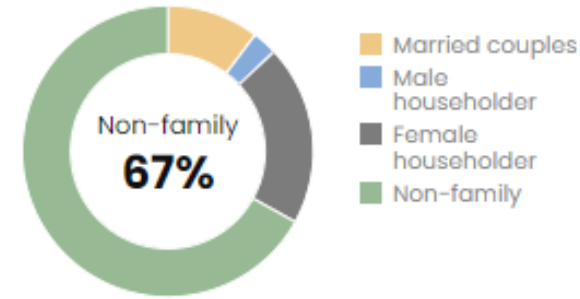


Source: ACS 5-year estimates, 2010 & 2022, Table B19013, Median Household Income

# Housing Costs

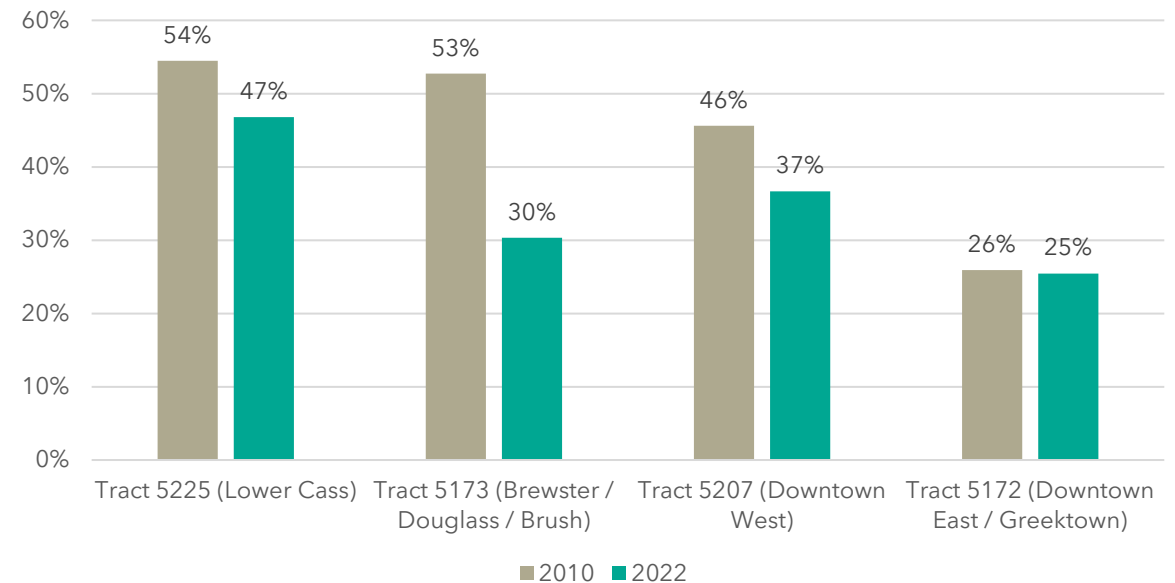
- Overall, housing cost burden has decreased, with the percent of residents spending 30% or more on housing decreasing from 45% in 2010 to 35% in 2020
- The proportion of housing cost burdened households is highest in Lower Cass and Downtown West areas
- Not a lot of families live in the B&IA. Within B&IA tracts 67% of households are non-family households (individuals or groups of non-relatives living together).

Population by household type (2022)



\* Universe: Households  
[Show data](#)

Percent of house burdened households (spending more than 30% on housing) by tract (2010, 2022)

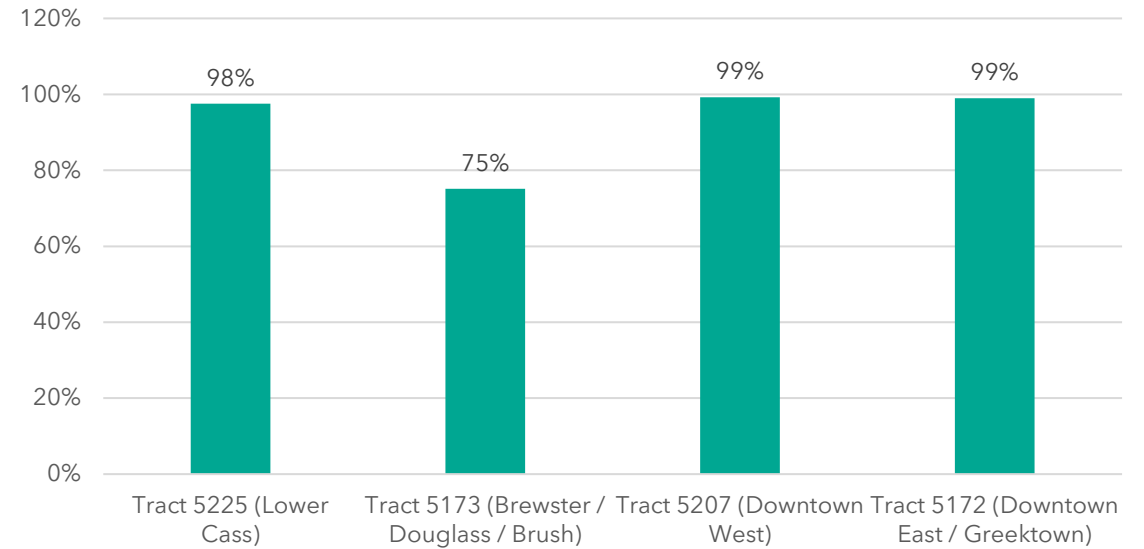


Sources: ACS 5-year estimates, 2010 & 2022, Table B25106, Tenure by Housing Costs as a Percentage of Household Income in the Past 12 Months; Data Driven Detroit Dashboard, Tracts 5225, 5173, 5207, 5172, <https://hip.datadrivendetroit.org>

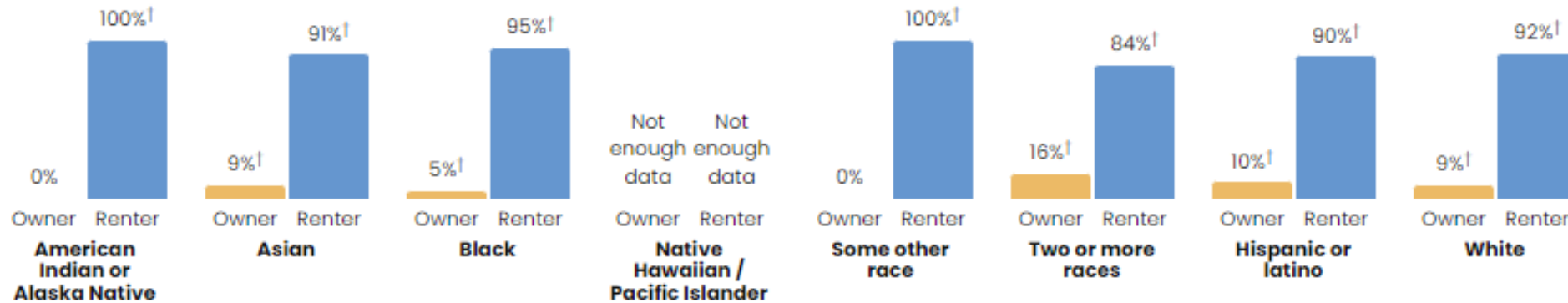
# Tenancy

- Total of 5,156 housing units in B&IA tracts
- Housing units in B&IA tracts are 93% renter occupied (2022)
- Brewster/Douglass/Brush Park tract has the highest rate of owner-occupancy
- High rate of renter-occupied housing units in B&IA, particularly for Black residents

Percent of renter-occupied housing units by tract (2022)



Data Driven Detroit Dashboard: Renter-occupied or owner-occupied by race for B&IA tracts (2022)



\* Universe: Occupied housing units; Hispanic includes respondents of any race. Other categories are non-Hispanic.

[Show data](#)

Sources: Data Driven Detroit, Tracts 5172, 5173, 5207, 5225 (<https://hip.datadrivendetroit.org/custom-profiles/i75/>), ACS 2022 5-year estimates, Table B25106

# Evictions

- An investment like this one raises fear of displacing residents due to raising rents. As previously shown the B&IA is vulnerable to displacement due to a high rate of renter occupancy. This eviction data shows that tenants are already vulnerable to evictions in the B&IA.
  - Unrepresented tenants: 93% (compared with 86% statewide)
  - Non-payment evictions: 85% (compared with 58% statewide)
  - Estimated 2022 Eviction Rate: 11%

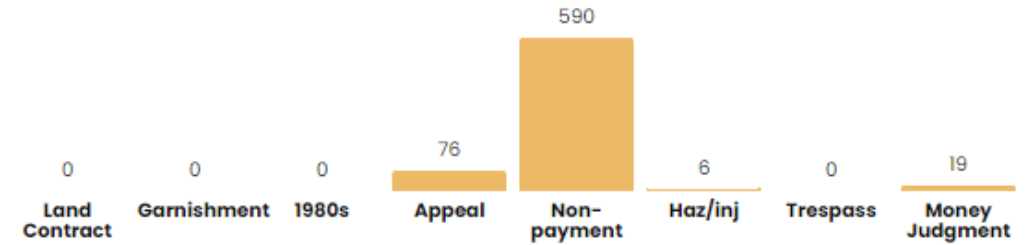
## Data Driven Detroit Eviction Dashboard

Number of evictions filed (2022)

**693**

\* 36th District Court; Data Driven Detroit data

Number of cases by type (2022)



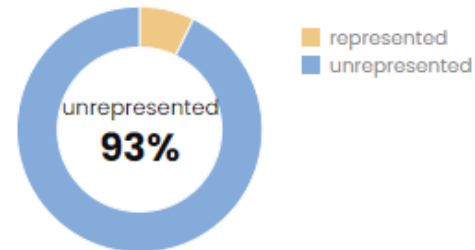
\* Universe: Eviction cases by type; 36th District Court; Data Driven Detroit data  
[Show data](#)

Cases filed where the landlord has a certificate of compliance (2022)

**138**

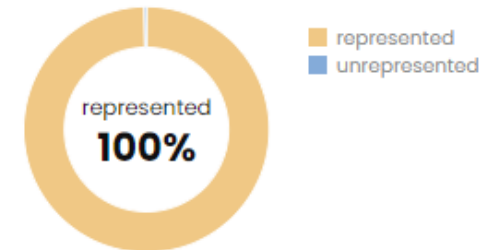
\* 36th District Court; Data Driven Detroit data

Percent of cases with legal representation for tenants (2022)



\* Universe: Cases with Legal Representation for tenants; 36th District Court; Data Driven Detroit data  
[Show data](#)

Percent of cases with legal representation for landlords (2022)



\* Universe: Cases with Legal Representation for landlords; 36th District Court; Data Driven Detroit data  
[Show data](#)

# Equity & Opportunity Analysis

THEMES	OBSERVATIONS (B&IA TRACTS)	OPPORTUNITIES	POTENTIAL THREATS
<b>AUTO DEPENDENCE</b>	<ul style="list-style-type: none"> <li>24% of <u>residents</u> have no vehicle available</li> <li>Since 2010, <u>Workers</u> in B&amp;IA have become more auto-dependent in their in-person commutes</li> <li>Highest transportation cost burden in Brush Park, Brewster, Douglass, and Lower Cass</li> <li>Compared with region, B&amp;IA residents contribute less to traffic and motorized vehicle emissions</li> <li>Within the B&amp;IA, area around Grand River and Michigan Avenues accommodates the most (non-highway) motorized traffic.</li> <li>Compared with City of Detroit residents, residents in area have shorter trip distances, walk, bike, taxi, rideshare, and transit more, and drive less</li> </ul>	<ul style="list-style-type: none"> <li>Compared to the rest of Detroit, residents in this area are less auto-dependent and would benefit from non-motorized transportation investments</li> <li>Lower negative externalities of highway to residents who contribute less to traffic and emissions</li> </ul>	<ul style="list-style-type: none"> <li>Potential for varied interests between suburban commuters and residents</li> <li>Vulnerabilities of low-income car commuters</li> </ul>
<b>STABILITY AND EQUITY</b>	<ul style="list-style-type: none"> <li>Majority of area categorized as disadvantaged</li> <li>Since 2010, population increased in every tract except Lower Cass</li> <li>Most significant population increase in Brush Park, Brewster, Douglass areas</li> <li>Majority non-family households in area (67%)</li> <li>Since 2010, decrease in proportion of youth and adults</li> <li>Since 2010, increase in proportion young adults &amp; seniors</li> <li>Since 2010, decrease in proportion of non-white residents</li> <li>Proportion of housing cost burdened households increased in northwest quadrant, decreased in northeast and southeast quadrants.</li> <li>Affordable housing developments north of I-75</li> <li>High renter-occupancy rate (93%), particularly for Black residents (95%)</li> <li>Highest rate of owner-occupancy in Brush Park, Brewster, Douglass areas</li> <li>11% Eviction rate</li> <li>High income inequality. Downtown East / Greektown tract has a median income of \$84,500. Lower Cass has a median income of \$18,300.</li> <li>High proportion of residents living under poverty level (31%)</li> </ul>	<ul style="list-style-type: none"> <li>Stabilize population in Lower Cass</li> <li>Accommodate growth in Brush Park, Brewster, Douglass areas</li> <li>Opportunity for large federal investment in area that has experienced disinvestment</li> <li>Create a space that is more family-friendly to encourage families to reside in area</li> <li>Create senior amenities and enhance mobility for senior living communities in area</li> <li>Provide amenities to lower income and more vulnerable residents</li> </ul>	<ul style="list-style-type: none"> <li>High rate of renter-occupancy raises concerns of gentrification and threat of rising rents</li> <li>Relatively white and higher income compared to other Detroit communities along highways raises questions about prioritizing this location over others</li> </ul>

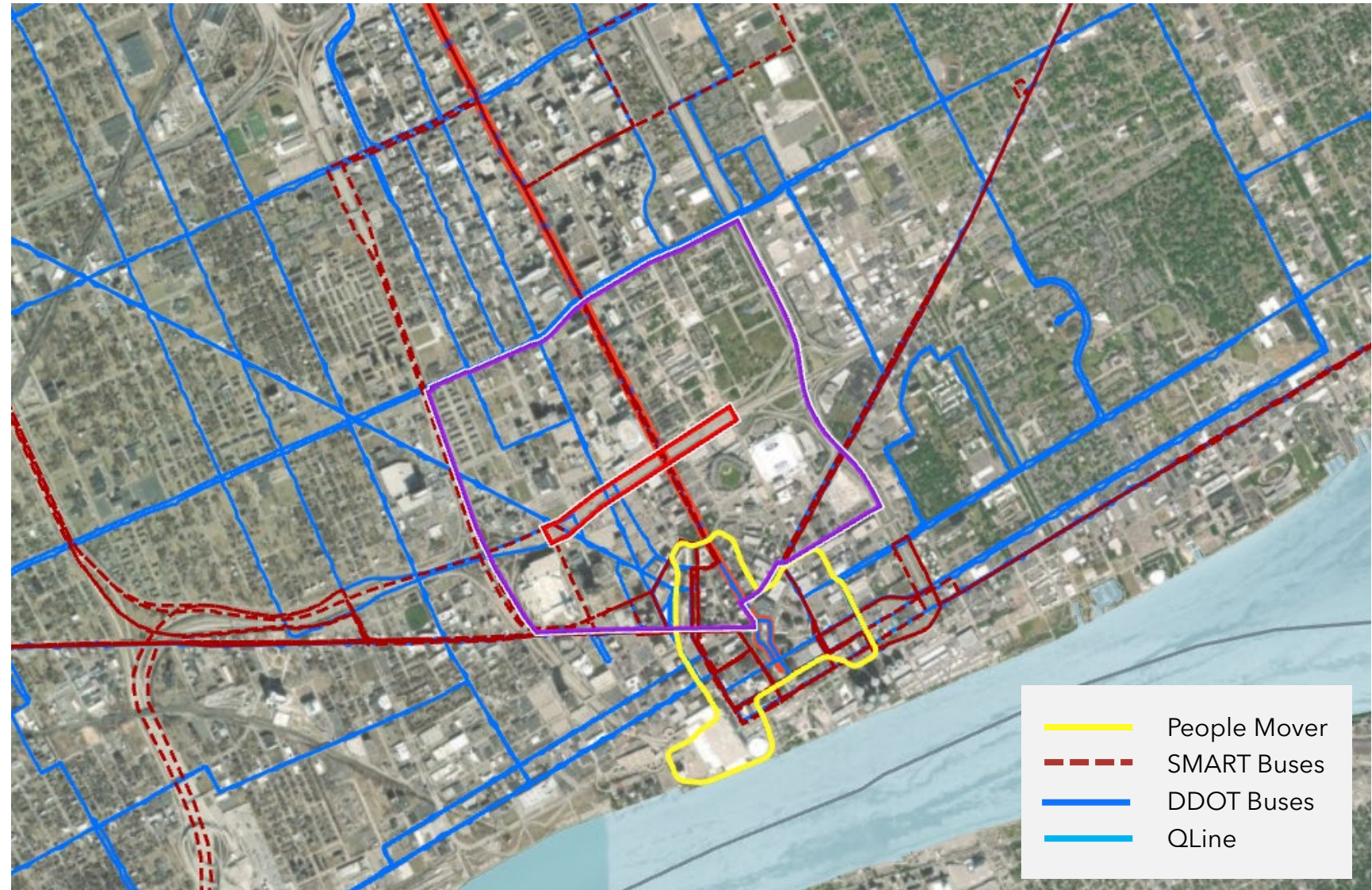


# Connectivity & Mobility

*Assess transportation landscape and data to enhance accessibility and connectivity*

# Transit

- Bus Routes along Woodward Avenue, Cass Avenue, Clifford Street, Grand River Avenue, and 2<sup>nd</sup> Avenue over I-75
- Streetcar infrastructure on Woodward Avenue
- Buses utilizing W. Fisher Service Drive and I-75 west of Woodward



Source: General Transit Feed Specification, GTFS



# Traffic Flows

Local roads with higher daily traffic volumes:

- Woodward Avenue
- Grand River Avenue



Source: SEMCOG Traffic Volume Map,  
<https://maps.semco.org/TrafficVolume/>

# Traffic Flows

The graphics to the right show trips that started, ended, or passed through the B&A Tracts, filtered by trip mode.

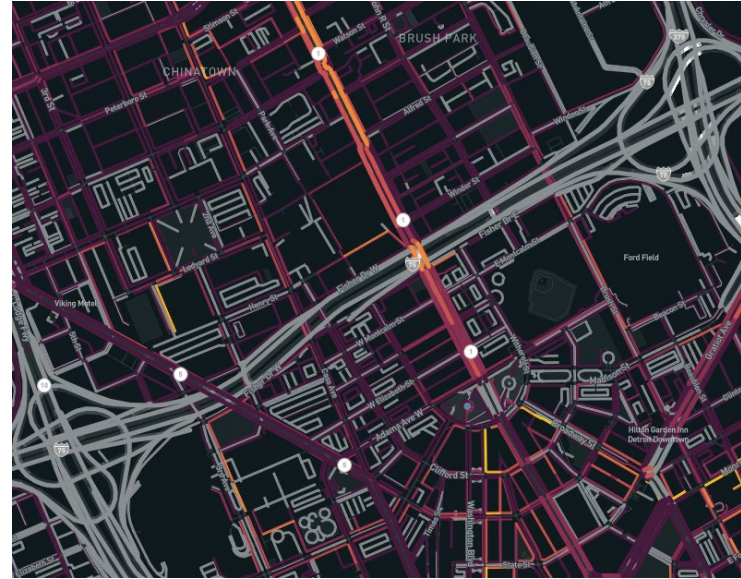
Legends are not shown because the focus of these maps are relative flows within each mode.

Key Observations within Study Area:

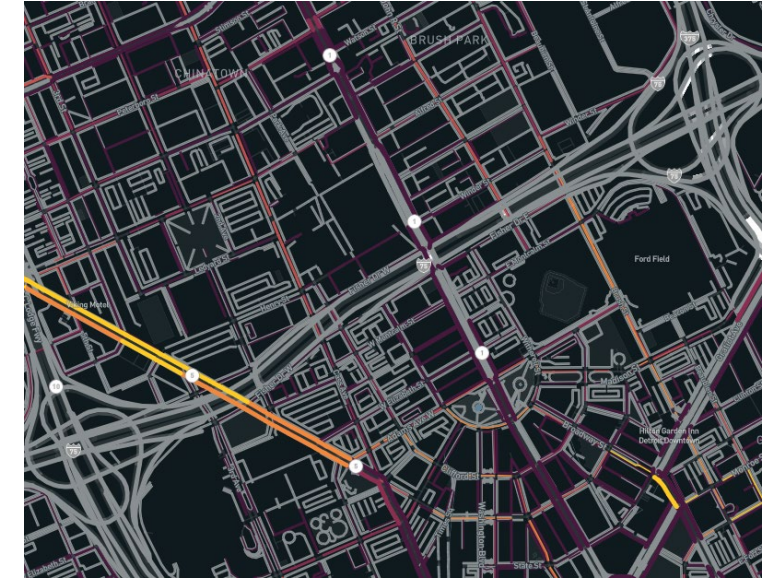
- Ped/bike flows are low along Fisher Service Drive
- Pedestrian flow strongest across Woodward Avenue
- Bicycle flow strongest across Grand River Avenue followed by Brush Street and Cass Avenue
- Private Auto strongest across Grand River Avenue followed by Woodward
- Freight strongest across Grand River Avenue followed by Woodward

Source: Replica, Network Link Volumes, all trips that start, end, or pass through B&A tracts, Typical Thursday Fall 2023

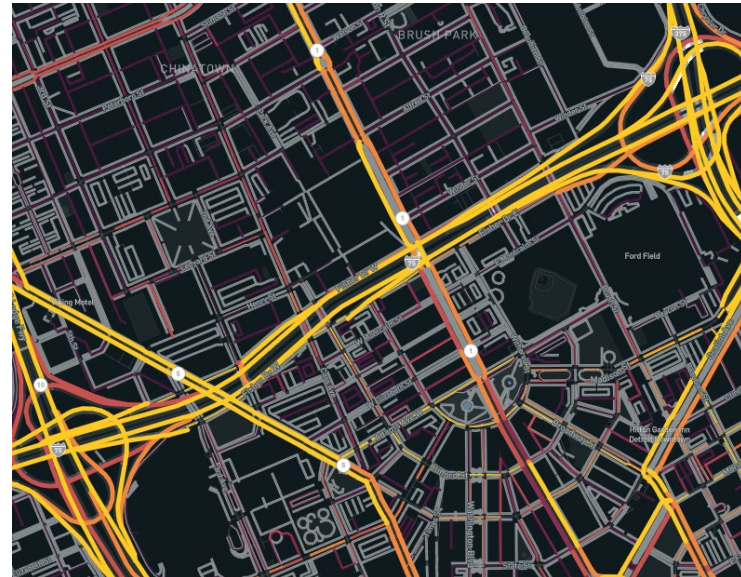
## Pedestrian Trips



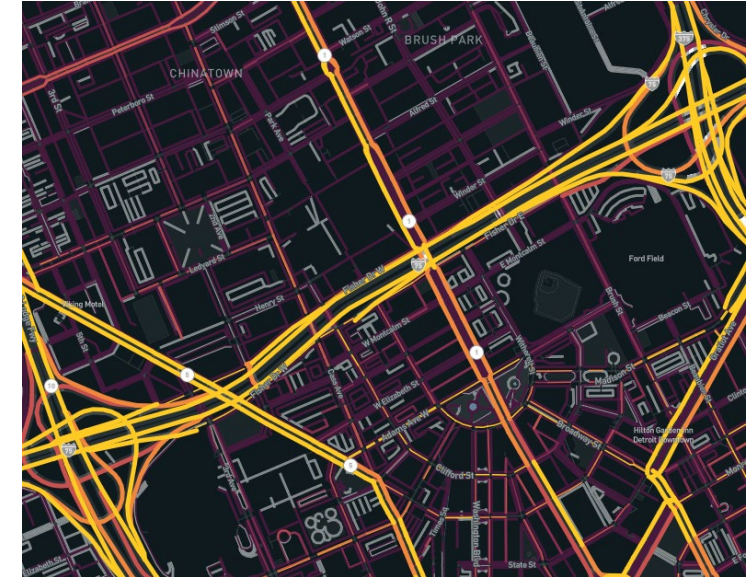
## Bicycle Trips



## Private Auto Trips



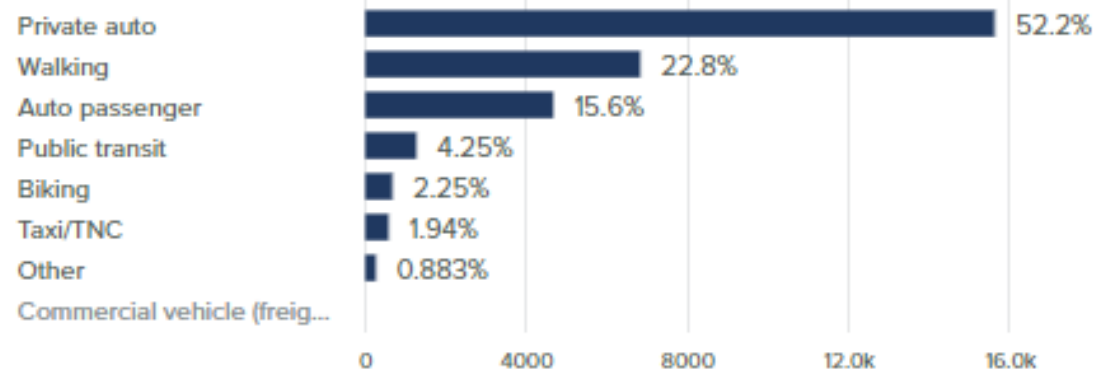
## Commercial Vehicle Trips



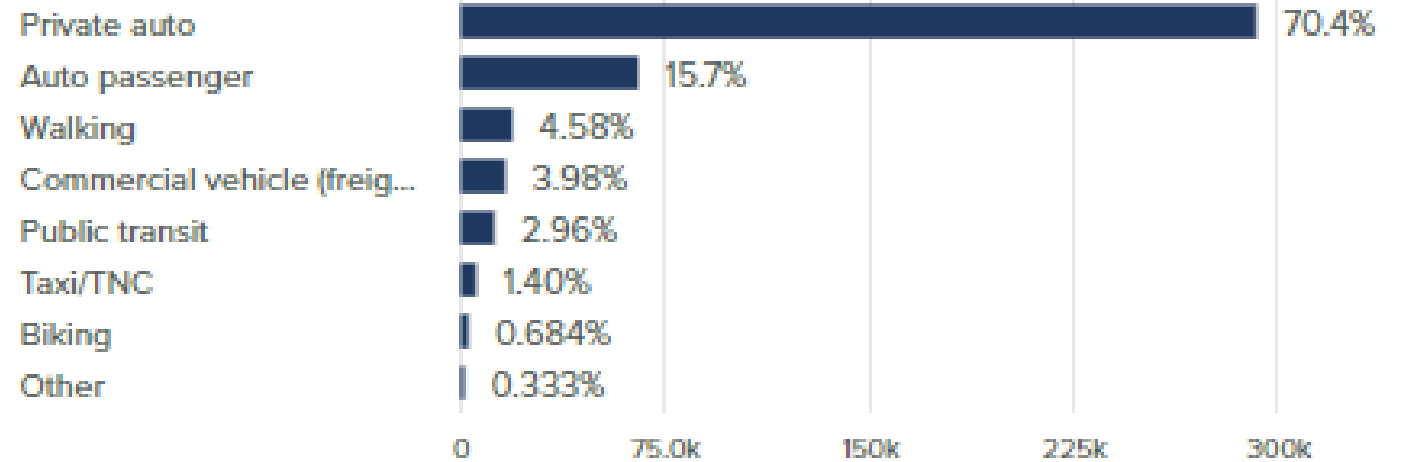
# Trip Mode

- Overall, private auto is the primary mode of trips that start, end, or pass through B&IA tracts (70%), followed by auto passenger (16%), walking (5%), and commercial vehicle (4%)
- Compared to everyone who passes through the area, B&IA residents do less driving and more walking, transit, and biking

Primary mode of **B&IA RESIDENT** trips that start, end, or pass through B&IA tracts.



Primary mode of **ALL** trips that start, end, or pass through B&IA tracts.

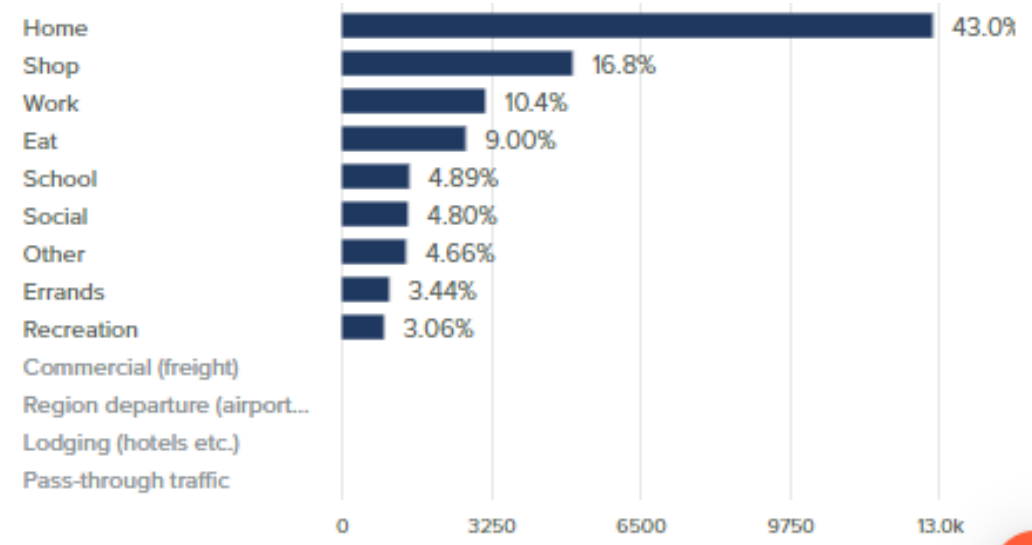


Source: Replica, Network Link Volumes, all trips that start, end, or pass through B&IA tracts, Typical Thursday Fall 2023

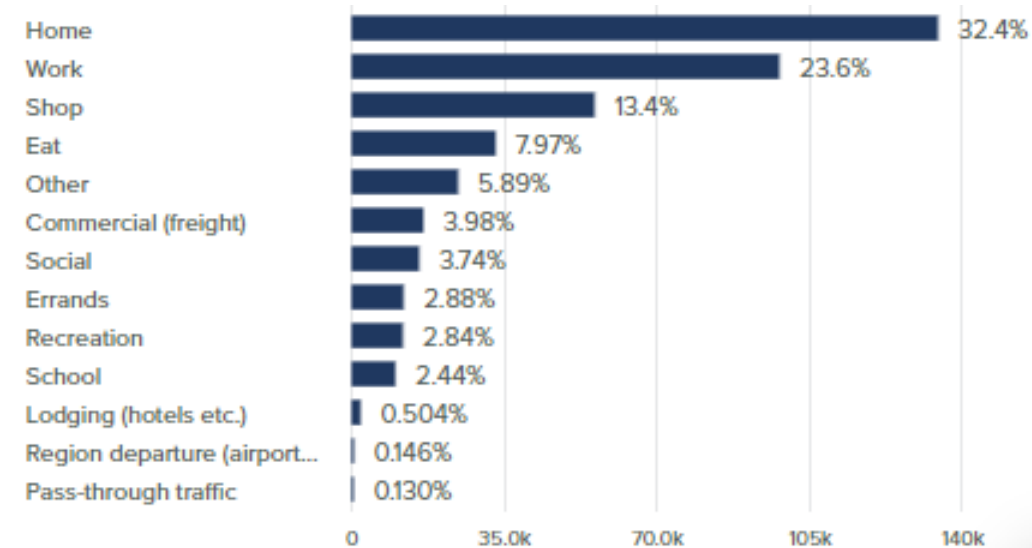
# Trip Purpose

- Overall, the primary purpose of all trips that start, end, or pass through B&IA tracts are Home (32%), Work (24%), Shop (12%), Eat (8%), Other (6%) and Commercial (4%)
- Compared with everyone else passing through the area, B&IA resident trips purposes are more likely to home, shopping, eating, and social activities

Primary purpose of **B&IA RESIDENT** trips that start, end, or pass through B&IA tracts



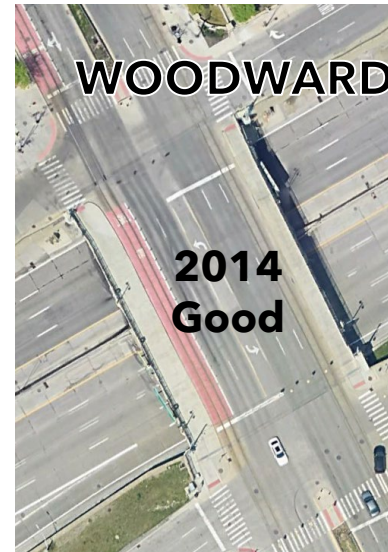
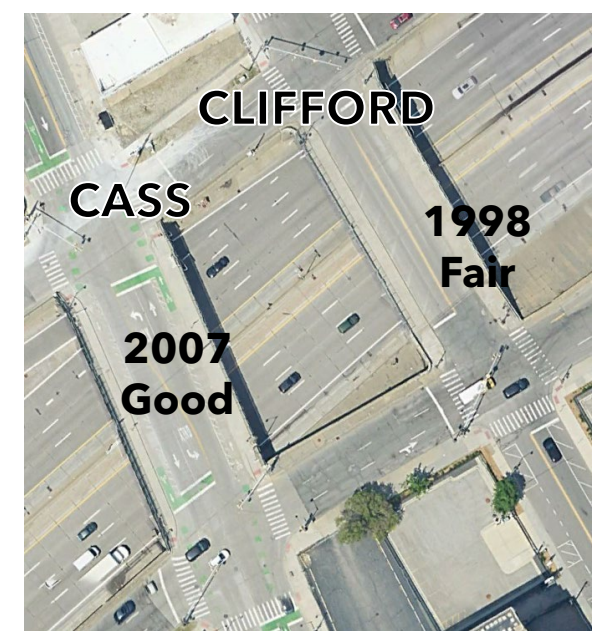
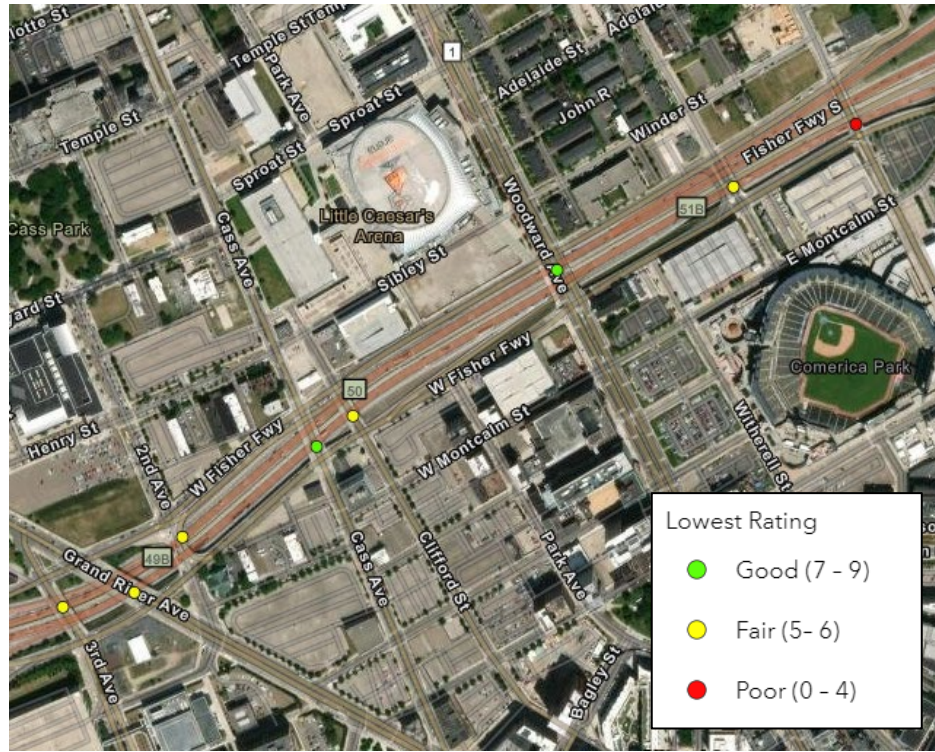
Primary purpose of **ALL TRIPS** that start, end, or pass through B&IA tracts



Source: Replica, Network Link Volumes, all trips that start, end, or pass through B&IA tracts, Typical Thursday Fall 2023

# Bridge Condition

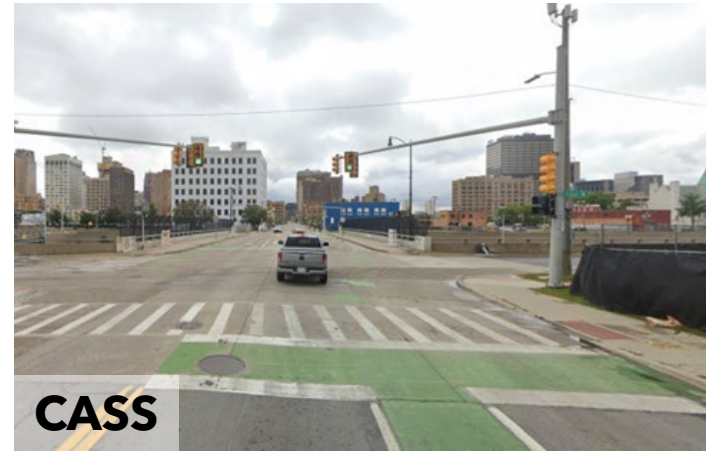
- Brush Street bridge is in poor condition
- Woodward and Cass are the only bridges deemed "good"



Source: MDOT, Date shows year reconstructed

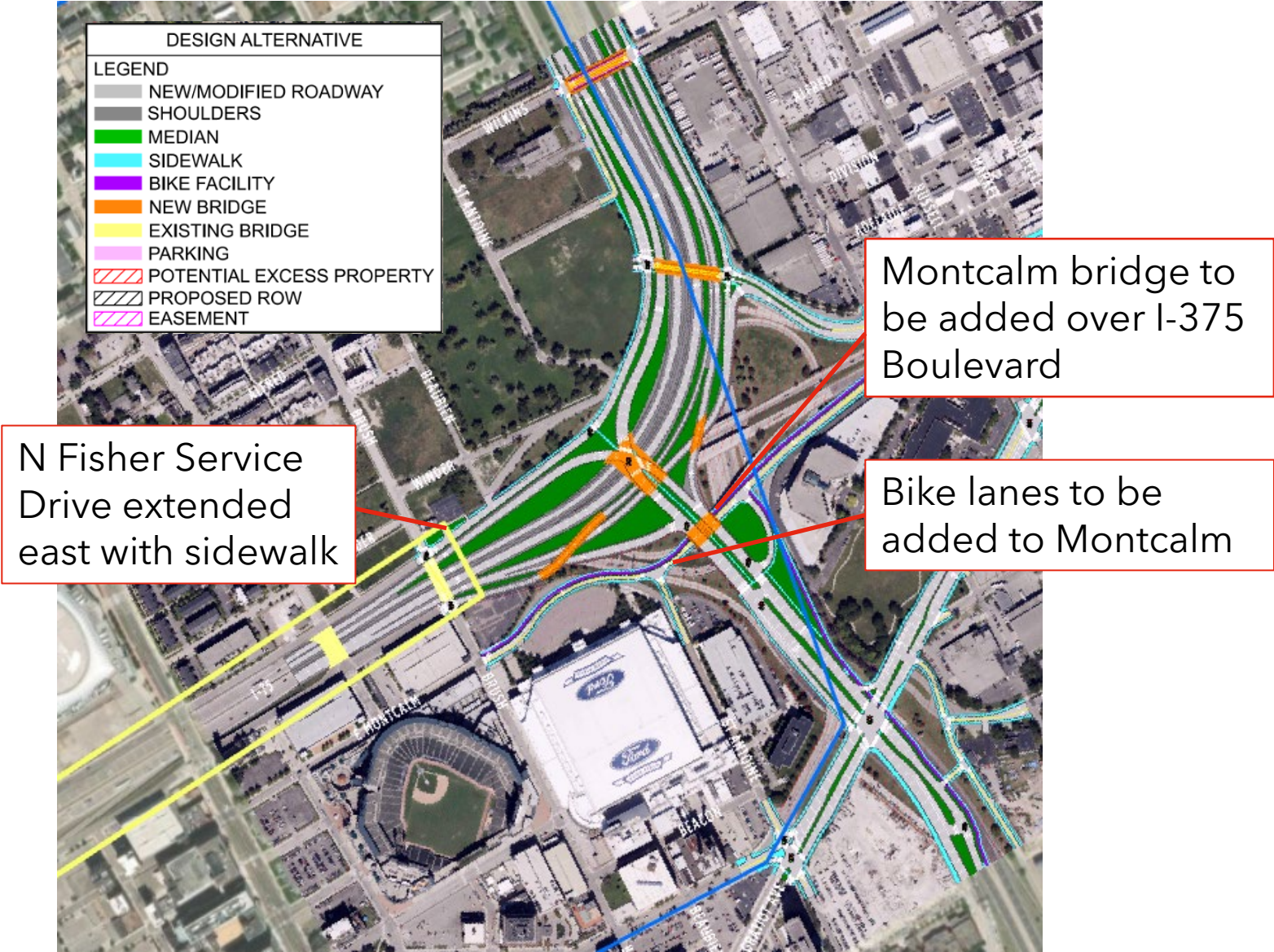
# Bridge Amenities

Road	Motor.		Sidewalk		Bicycle	
	NB	SB	NB	SB	NB	SB
3rd		✓	✓	✓		
GR	✓	✓	✓	✓	✓	✓
2nd	✓			✓		
Cass	✓	✓	✓	✓	✓	✓
Clifford	✓	✓	✓	✓		
Park						
Woodward	✓	✓	✓	✓		
Witherell						
John R	✓	✓	✓	✓		
Brush	✓	✓	✓	✓		



Source: MDOT

# I-375 Connection

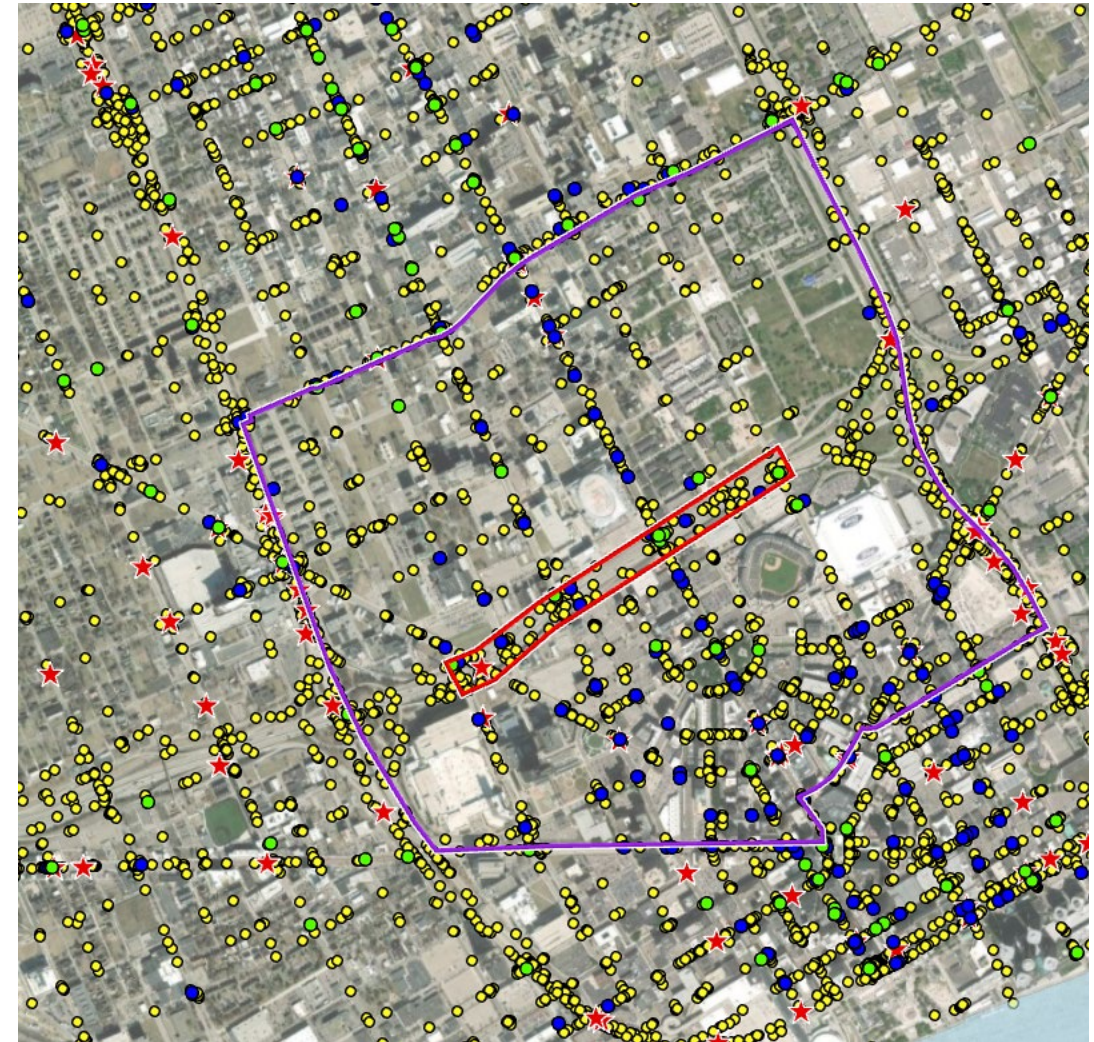


Source: MDOT, I-375 Project Design Alternative

# Safety

- Hotspot at I-75 Grand River Exit at 2<sup>nd</sup> Avenue/Fisher Service Drive
- 6 bike crashes in Study Area (2018-2022)
- 8 ped crashes in Study Area (2018-2022)
- 365 crashes no bike/ped involved in Study Area (2018-2022)
- Crashes involving pedestrians: Woodward and Clifford
- Crashes involving bicyclists: Woodward and Cass

**Crash Locations 2018-2022**  
★ Fatal and Serious Injuries Crashes,  
Pedestrian, Bicycle, No ped/bike involved

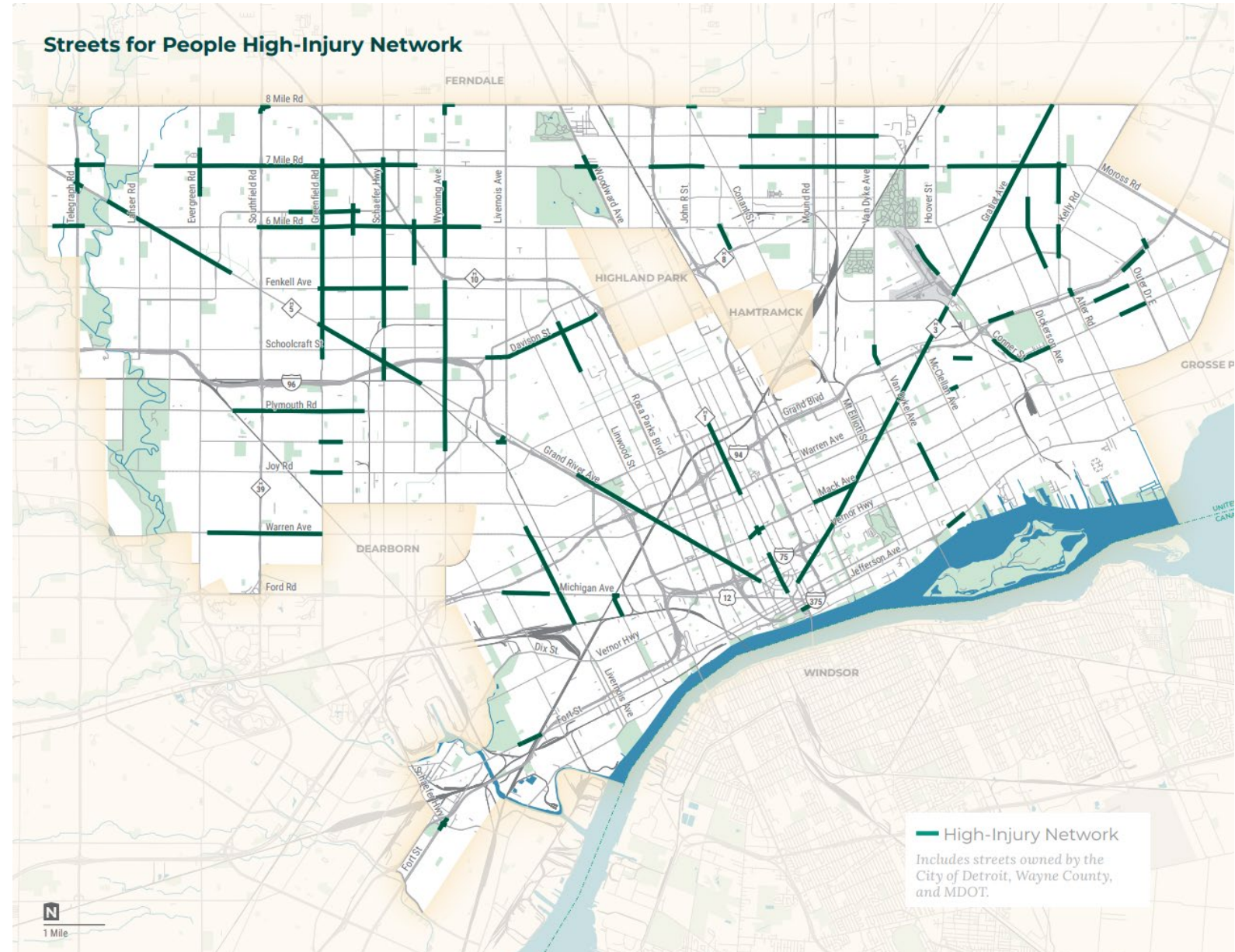


Source: SEMCOG traffic crash data, 2018-2022



# High-Injury Network

- The high-injury network was created with the intention of directing investment toward the most dangerous streets
- The segments of **Grand River Avenue**, and **Woodward Avenue** that intersect with the Study Area are included in the high-injury network
- Detroit Streets for People Plan:
  - “Between 2017 and 2021, 24% of crashes resulting in death or serious injury involved pedestrians and bicyclists while only accounting for 3% of total crashes”
  - “Serious injury crashes have gone up nearly every year since 2014”

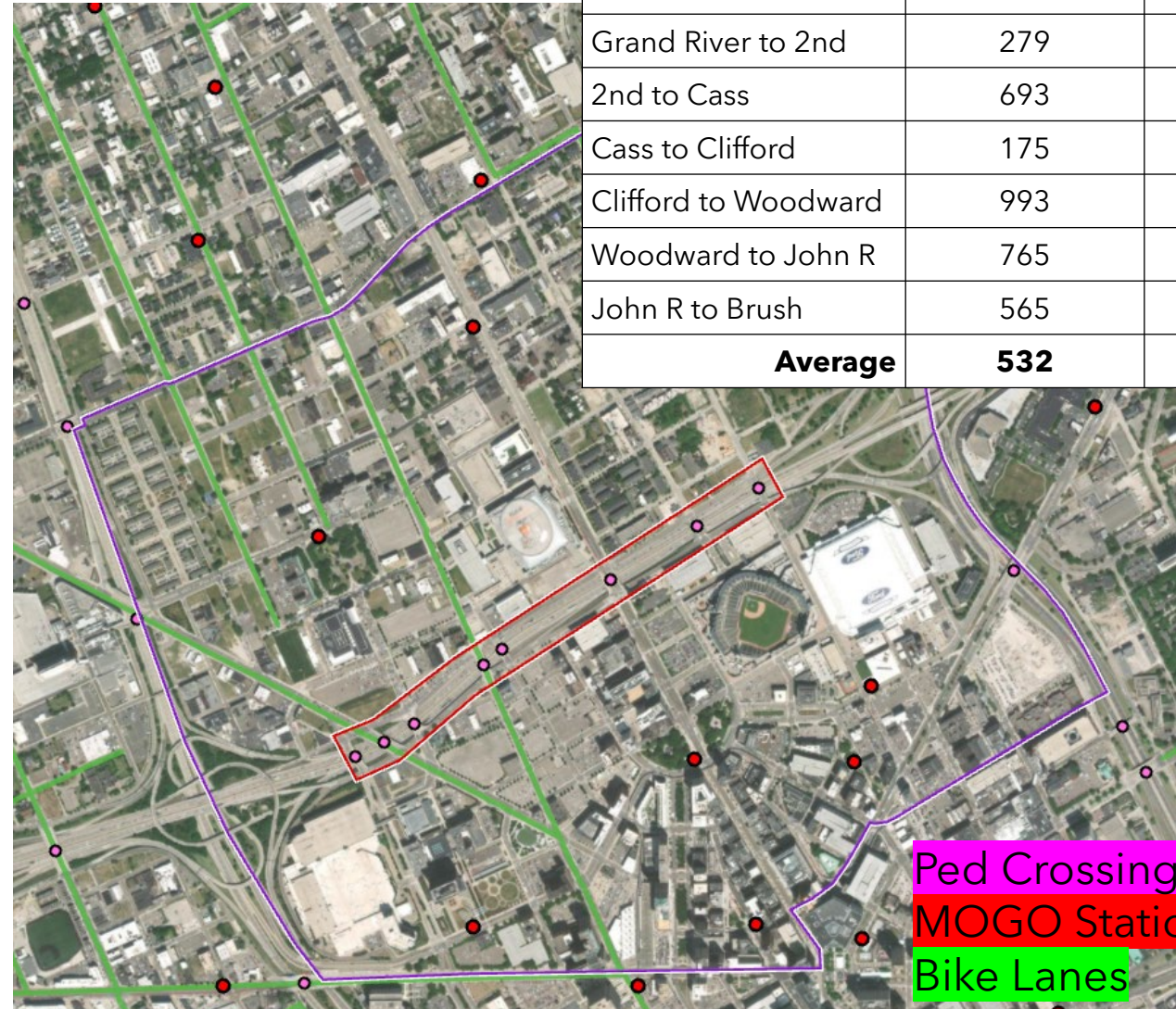


Source: Detroit Streets for People Plan, Page 20

# Non-Motorized Network

- Bike lanes: Grand River Avenue and Cass Avenue the only streets with bike lanes crossing I-75
- Pedestrian Crossings: It takes about seven minutes to walk from Woodward to Clifford Street. The average distance a pedestrian must walk to cross I-75 within the study area is 532 feet, which is around a 3.5 minute walk
- MOGO Stations: Lack of stations near Study Area relative to Cass Corridor and Campus Martius area
- Scooters: Many shared scooter services are available in the area, including Bird, Spin, Lime, and LINK

Distance between North-South Crossing Opportunities (Measured from middle of each bridge)		
Streets	Distance (feet)	Time (Minutes)
3rd to Grand River	253	2 min
Grand River to 2nd	279	2 mins
2nd to Cass	693	4 mins
Cass to Clifford	175	1 min
Clifford to Woodward	993	7 mins
Woodward to John R	765	4 mins
John R to Brush	565	4 mins
<b>Average</b>	<b>532</b>	<b>3.5 mins</b>



Ped Crossings  
MOGO Stations  
Bike Lanes

Source: City of Detroit Open Data Portal

# Non-Motorized Network

- Incomplete Pedestrian Network
  - 2<sup>nd</sup> Avenue Bridge
- Low bicycle comfortability:
  - Along I-75 Service Drive (N & S)
  - Along Woodward Avenue
  - Across John R Bridge
  - Across 2<sup>nd</sup> / 3<sup>rd</sup> / Grand River Bridges and surrounding area



Bicyclist Comfort Level

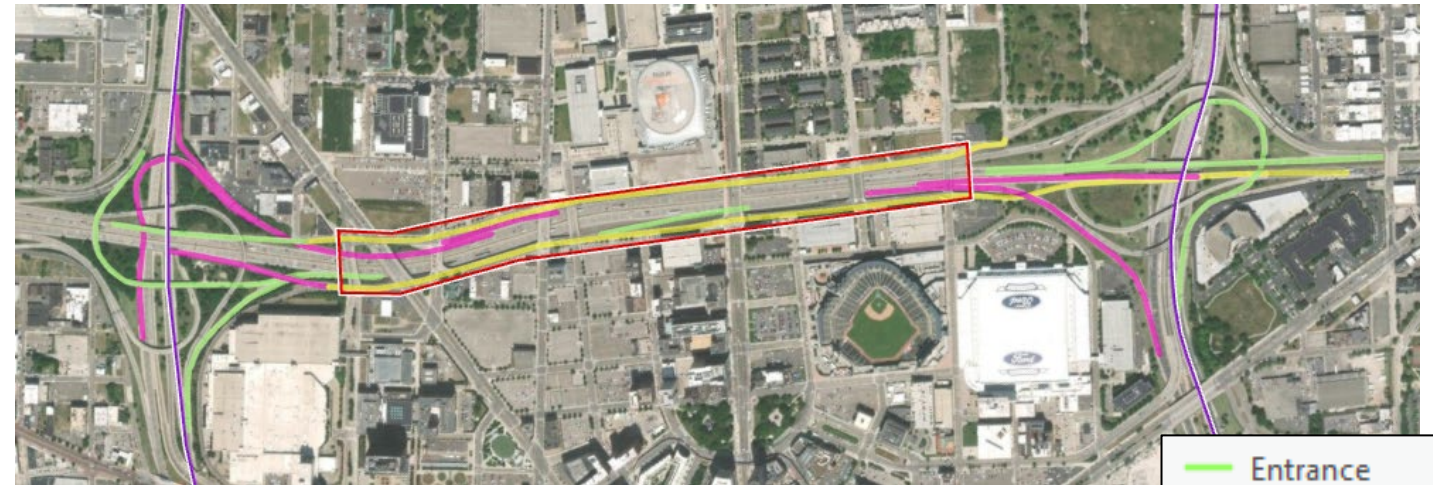


Sources: SEMCOG existing pedestrian network, <https://detroitdatacenter.org/bicycle-network>

# Entrances and Exits

- Fisher Street Service drive 3 lanes throughout B&IA
- Main Downtown exit: Second Avenue/Grand River Avenue
- Main Downtown entry: Clifford Street
- Other Entry/Exit connections: M10 N, M10 S
- Future Entry/Exit Connections: I-375 Boulevard, Eastern Market, Wilkens Street

Current

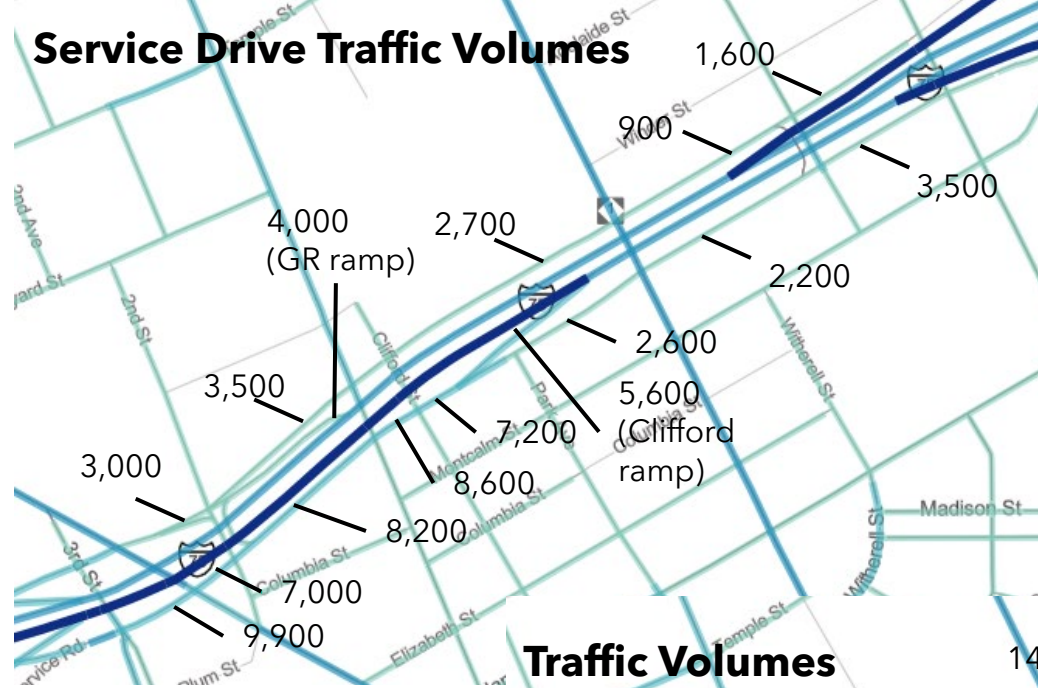


Future with I-375 Design Alternative

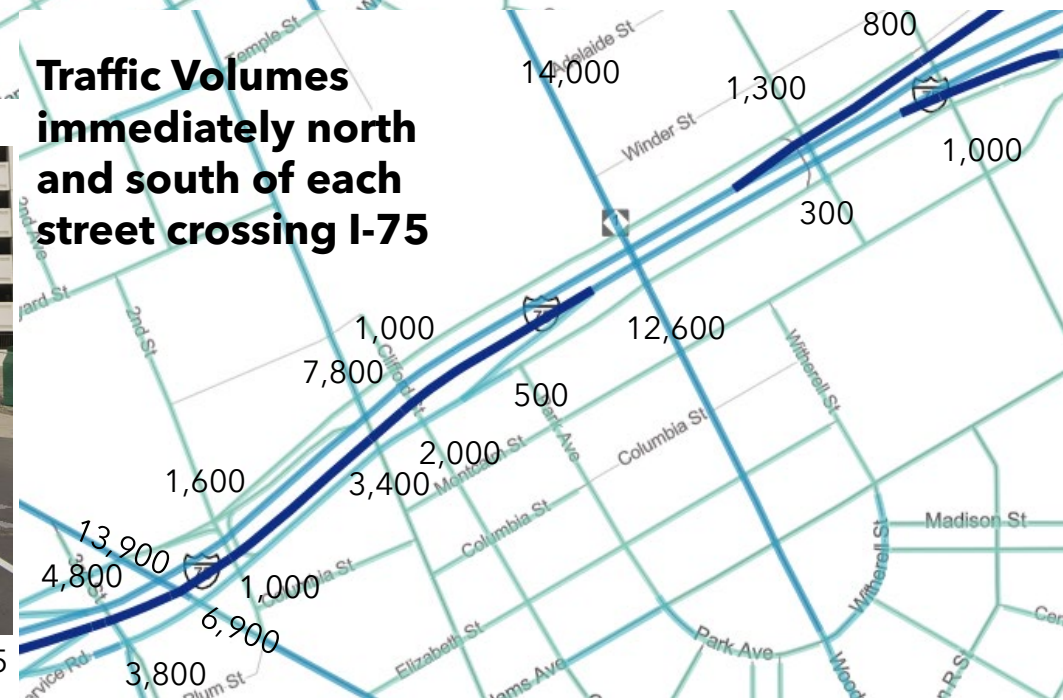


# Service Drive Traffic Volumes

- Fisher Street is a pair of one-way three-lane service drives in the Study Area north and south of I-75
- Highest traffic volumes (measured in average annual daily traffic - AADT) along service drive located near Grand River Avenue
- The average Service Drive AADT is 4,700. For context, immediately north and south of the Study Area, Grand River (N&S), Woodward (N&S), Cass (N), 3<sup>rd</sup> Street (N) all have higher traffic volumes. And Cass is a two-way one-lane street.



## Traffic Volumes immediately north and south of each street crossing I-75



Fisher Service Drive North of I-75



Fisher Service Drive south of I-75

Source: SEMCOG Traffic Volume Map, <https://maps.semco.org/TrafficVolume/>

# Connectivity & Mobility Analysis

THEMES	OBSERVATIONS	OPPORTUNITIES	POTENTIAL THREATS
<b>UPDATE FACILITIES</b>	<ul style="list-style-type: none"> <li>• One way on 2<sup>nd</sup> Avenue and fast slip lanes not conducive to ped/bike modes</li> <li>• Fast I-75 exiting traffic at 2<sup>nd</sup> Avenue/Grand River Avenue degrades local transportation network</li> <li>• Service drives are excessively large, a one-way with three lanes limiting local non-motorized connections</li> <li>• Service drives have low traffic volumes for their size, with average AADT lower than Cass, Woodward, Grand River, and 3<sup>rd</sup> Street</li> <li>• Sidewalk network incomplete in B&amp;IA</li> <li>• Brush Avenue Bridge in poor condition, John R, Clifford, 2<sup>nd</sup> Avenue, Grand River Avenue, and 3<sup>rd</sup> Avenue bridges in fair condition</li> </ul>	<ul style="list-style-type: none"> <li>• 2<sup>nd</sup> Avenue one-way to two-way conversion from Cass Park to Plum Street</li> <li>• Reimagine Grand River Avenue exit</li> <li>• Enhance ped/bike safety at entry and exit</li> <li>• Right size Fisher Service Drive</li> <li>• Improve sidewalk network</li> <li>• Update outdated bridge infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Low interagency collaboration between MDOT, City of Detroit, DDP</li> <li>• Large motorized traffic volumes generated by large event venues in Benefit and Impact Area including Little Caesars Arena and Comerica Park</li> </ul>
<b>EXPAND OPTIONS</b>	<ul style="list-style-type: none"> <li>• Woodward and Grand River currently serving as key transit corridors</li> <li>• Woodward serving as key pedestrian corridor</li> <li>• Grand River, Brush, and Cass serving as key bicycle corridor</li> <li>• Low pedestrian and bicycle traffic along Fisher Service Drive</li> <li>• Grand River and Woodward serving as key auto and commercial vehicle corridors</li> <li>• Limited local north-south crossings across I-75 (all modes)</li> <li>• Lack of bicycle facilities across I-75</li> <li>• I-375 Design Alternative adds bridge across I-75 east of Brush and adds bridge across boulevard at Montcalm Street</li> <li>• I-375 Design Alternative adds pedestrian and bicycle facilities</li> <li>• Limited ped/bike facilities</li> <li>• Crashes involving peds/bikes in Study Area, particularly along Woodward, Clifford, and Fisher Service Drive</li> </ul>	<ul style="list-style-type: none"> <li>• Further emphasize Woodward and Grand River as transit corridors</li> <li>• Strengthen non-motorized options on Woodward, Grand River, Brush, and Cass, and Fisher Service Drives</li> <li>• Extend Park Avenue and Witherell Street across I-75 with ped/bike-only streets</li> <li>• Incorporate bicycle and micromobility facilities into design</li> <li>• Establish pedestrian, bicycle, micromobility networks and enhance safety within Study Area</li> <li>• Complement upcoming I-375 changes to network</li> </ul>	<ul style="list-style-type: none"> <li>• Existing entry and exit ramps in Study Area may impede capping capabilities in certain areas</li> <li>• Low interagency collaboration between MDOT and City of Detroit</li> <li>• Coordination with ongoing I-375 project</li> <li>• Freight and hazardous materials routes</li> </ul>