AECOM

Intel Impact Study

Key Findings

Sarah Richards, Associate, AECOM Economics + Advisory

Delivering a better world

A study commissioned by: **The Columbus Foundation**

aecom.com

Intel Impact Study Overview

“Between stimulus and response lies a space. In that space lies our freedom and power to choose a response. In our response lies our growth and our happiness.” – attributed to Viktor Frankl

This Photo by Unknown Author is licensed under CC BY

Intel Impact Study Overview

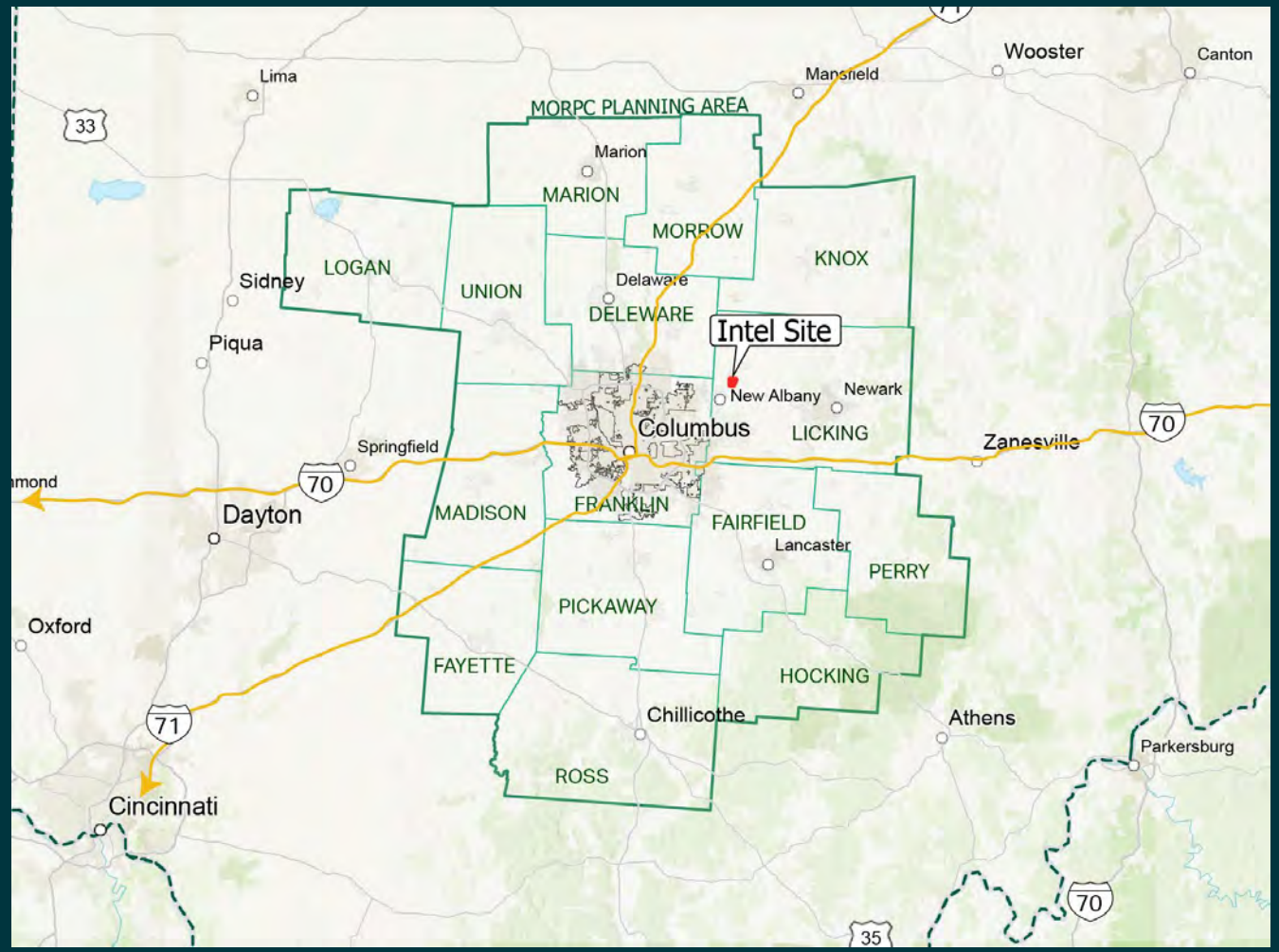
Key Questions

- What are the **ripple effects** of investment by Intel/other tech industries to the Columbus region?
- How can **challenges** (pressures on housing supply/affordability, traffic congestion, environmental consequences, etc.) be turned into **opportunities**?
- How can the region use this investment as a **catalyst** for **"smarter"** growth and development, and **leverage t**he initial investment as a **catalyst improve quality of life for ALL residents**?

This Photo by Unknown Author is licensed under CC BY

Context

- Proposed Intel plant site will be near New Albany, northeast of downtown Columbus
- Site will add 1,000 acres to 5,000-acre New Albany International Business Park
- Intel's investment will bring **high-paying jobs to the region & spur growth** in tech & other industries
- **How can the greater region ensure that this growth is EQUITABLE & SUSTAINABLE?**



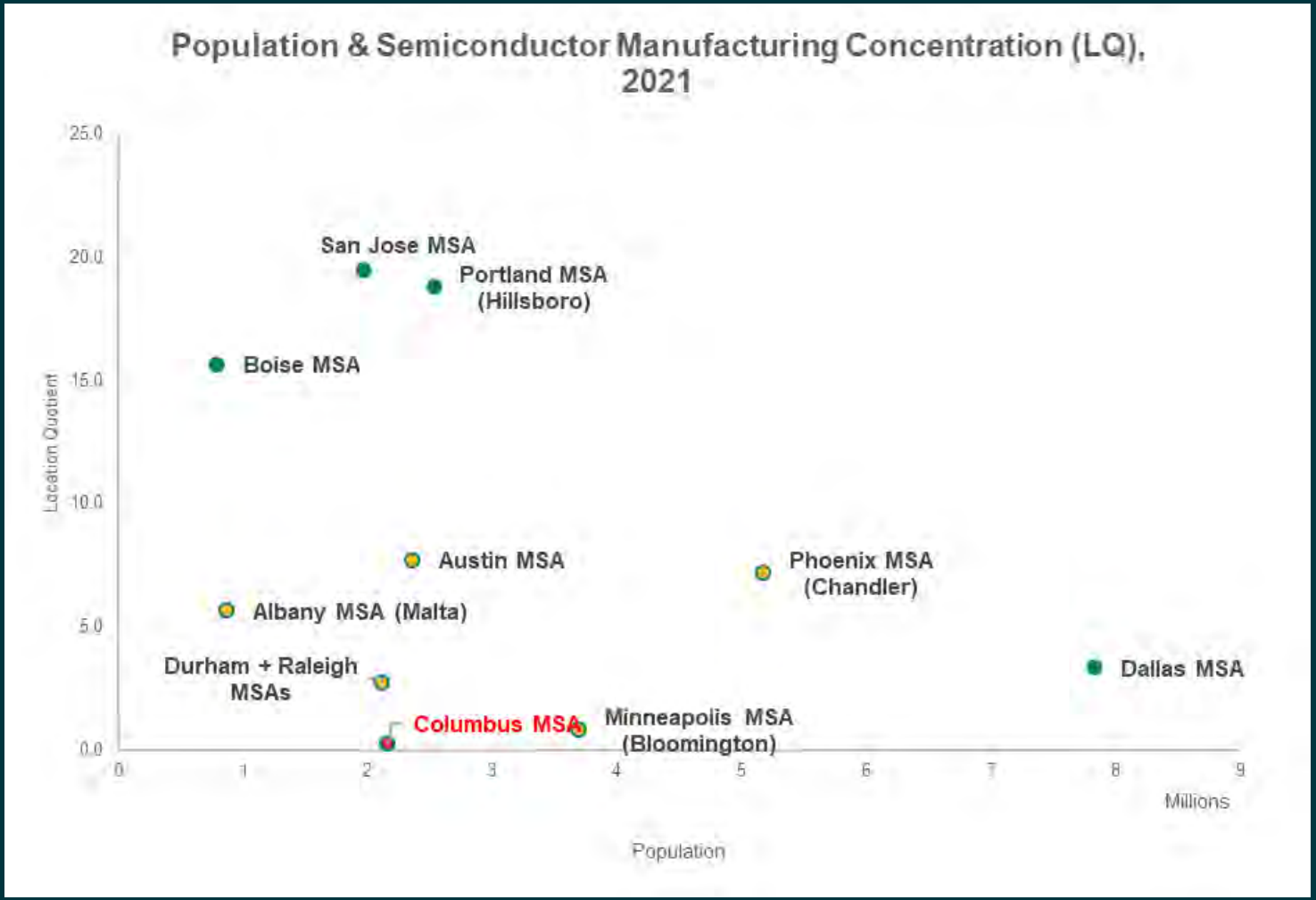
Peer Cities

Delivering a better world

aecom.com

Peer Cities

- Albany-Schenectady-Troy, NY
- Austin, TX
- Minneapolis, MI
- Raleigh-Cary-Durham-Chapel Hill, NC
- Chandler, AZ



Source: Emsi, AECOM, 2022

Takeaways

- Between 2010 – 2020, the U.S. population increased by 7%; Peer Cities saw **11% growth** on average
- Status quo transportation & land-use planning + rapid growth = **SPRAWL**
- **Nonwhite populations** in Peer Cities Austin, Phoenix, and Minneapolis increased by 25%
- **Housing demand** increased between **9% - 39%** over the 10-year period
- Peer Cities saw a significant increase in **adults with a bachelor's degree or higher**
- Peer Cities now boast **higher median household incomes** than the national median, & have achieved **labor force participation** rates greater than 60%
- Despite rapid growth, Peer City Austin reported **steadily falling emissions** since 2015

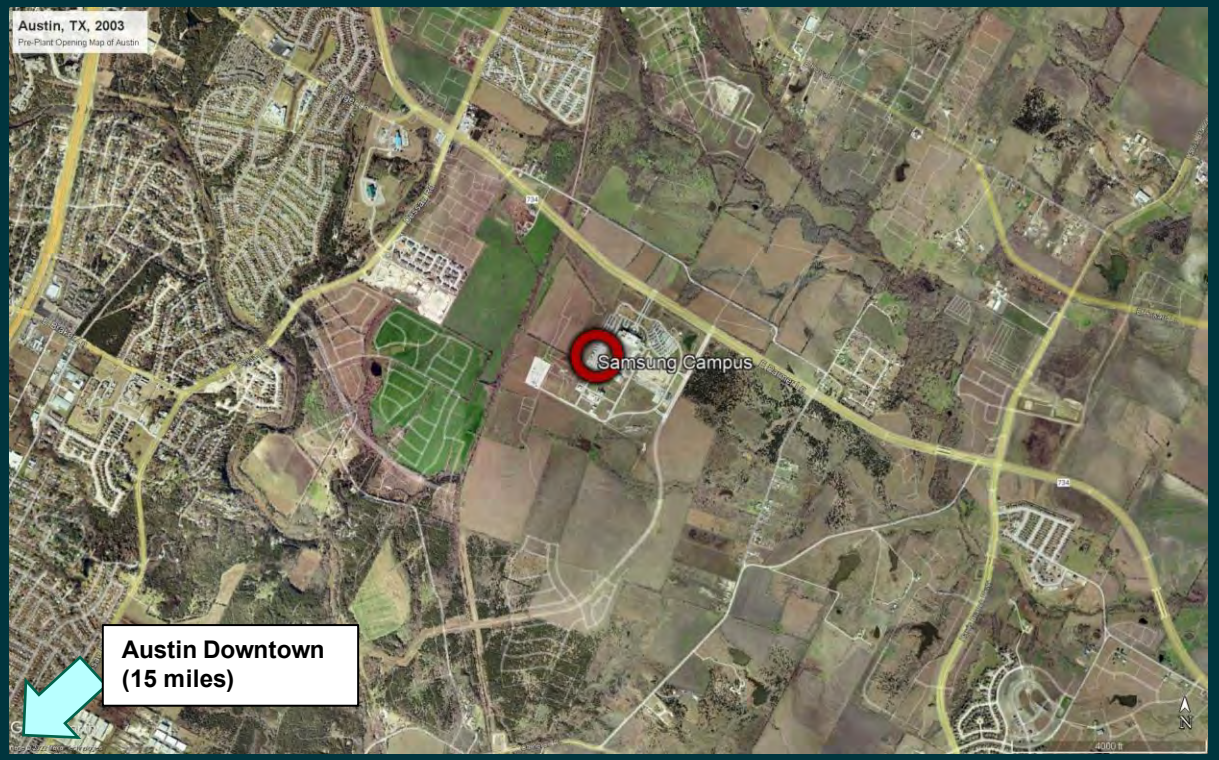
Pre- and Post-Plant Aerial Views

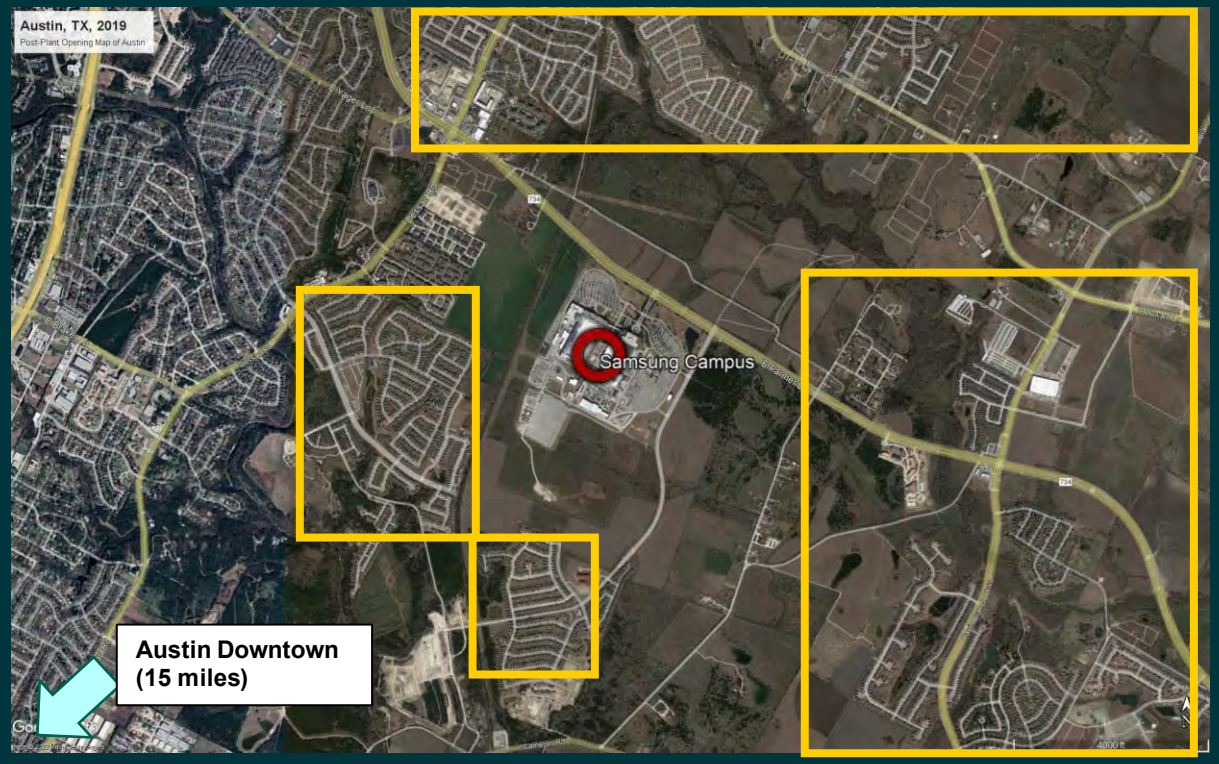
Albany MSA – GlobalFoundries Fabrication Plant

*Note – these images are not meant to imply that growth was directly caused by the location of the plants, but simply to note changing land use patterns nearby pre- and post-plant

Pre- and Post-Plant Aerial Views

Austin MSA – Samsung Campus

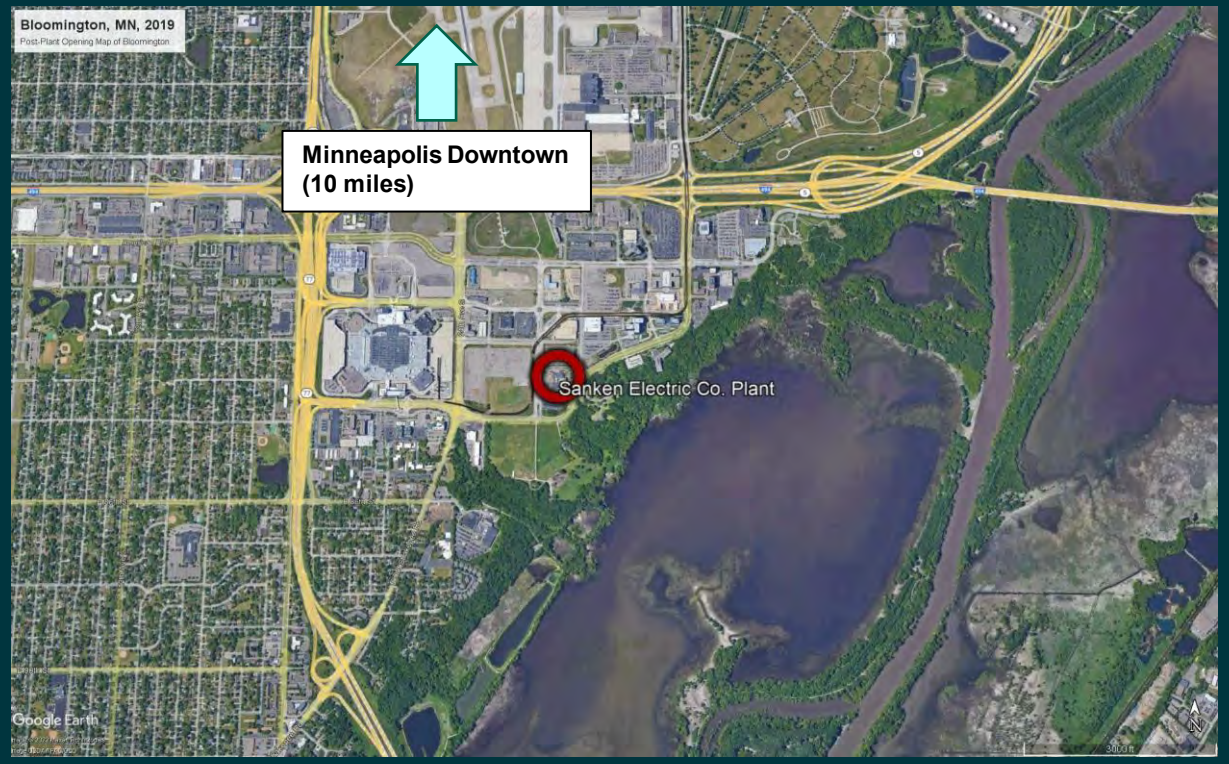




*Note – these images are not meant to imply that growth was directly caused by the location of the plants, but simply to note changing land use patterns nearby pre- and post-plant

Pre- and Post-Plant Aerial Views

Minneapolis MSA – Sanken Electric Co. Fabrication Plant

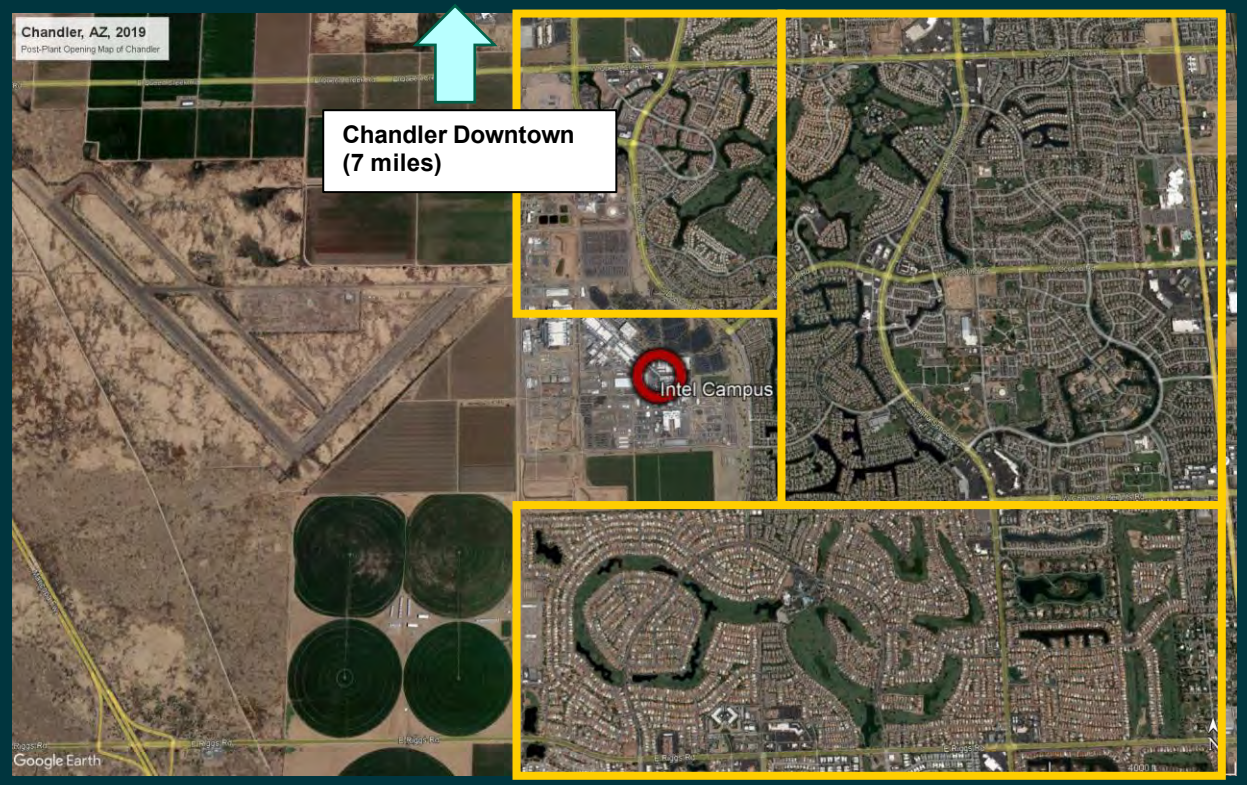


*Note – these images are not meant to imply that growth was directly caused by the location of the plants, but simply to note changing land use patterns nearby pre- and post-plant

DRAFT

Pre- and Post-Plant Opening Aerial Views

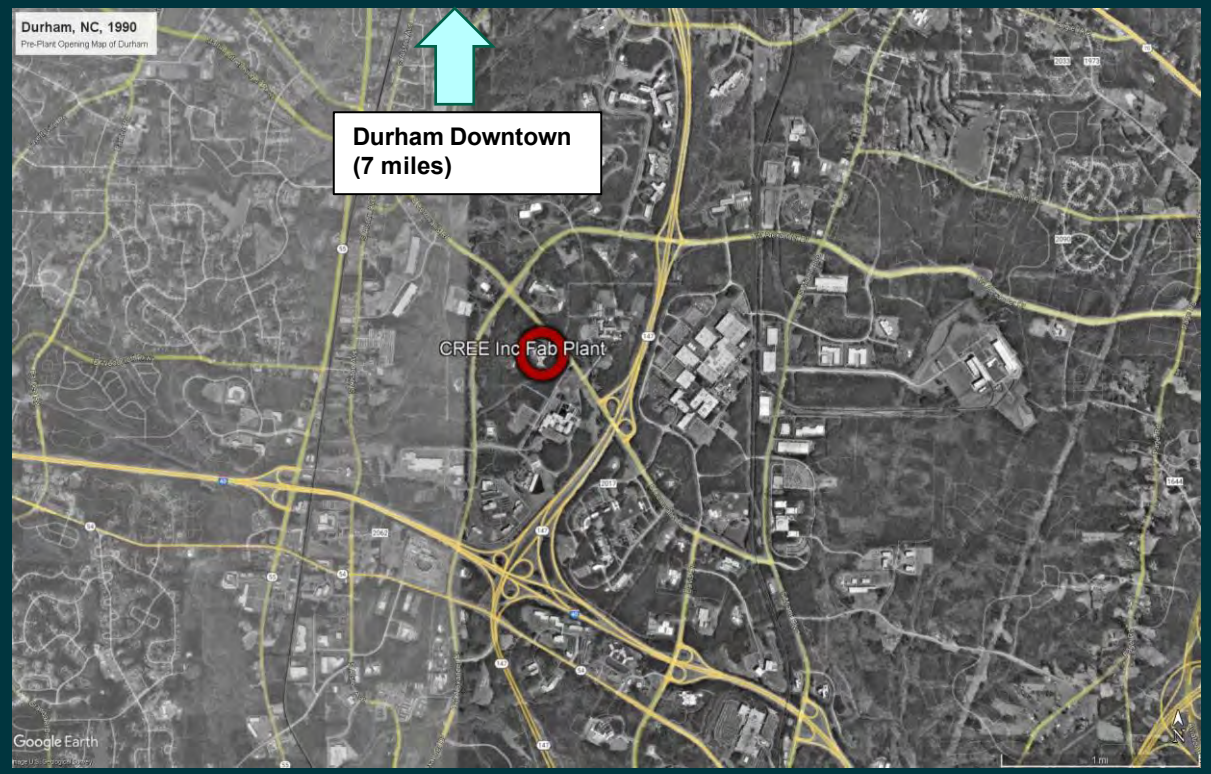
Phoenix MSA – Intel Campus



*Note – these images are not meant to imply that growth was directly caused by the location of the plants, but simply to note changing land use patterns nearby pre- and post-plant

Pre- and Post-Plant Opening Aerial Views

Raleigh-Durham MSAs – CREE Inc. Fabrication Plant



*Note – these images are not meant to imply that growth was directly caused by the location of the plants, but simply to note changing land use patterns nearby pre- and post-plant

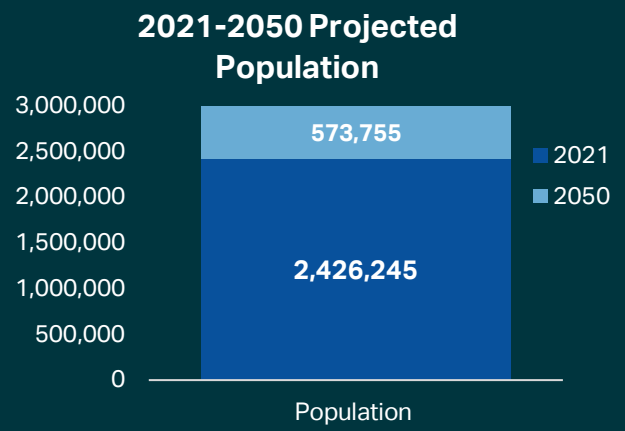
Lessons Learned

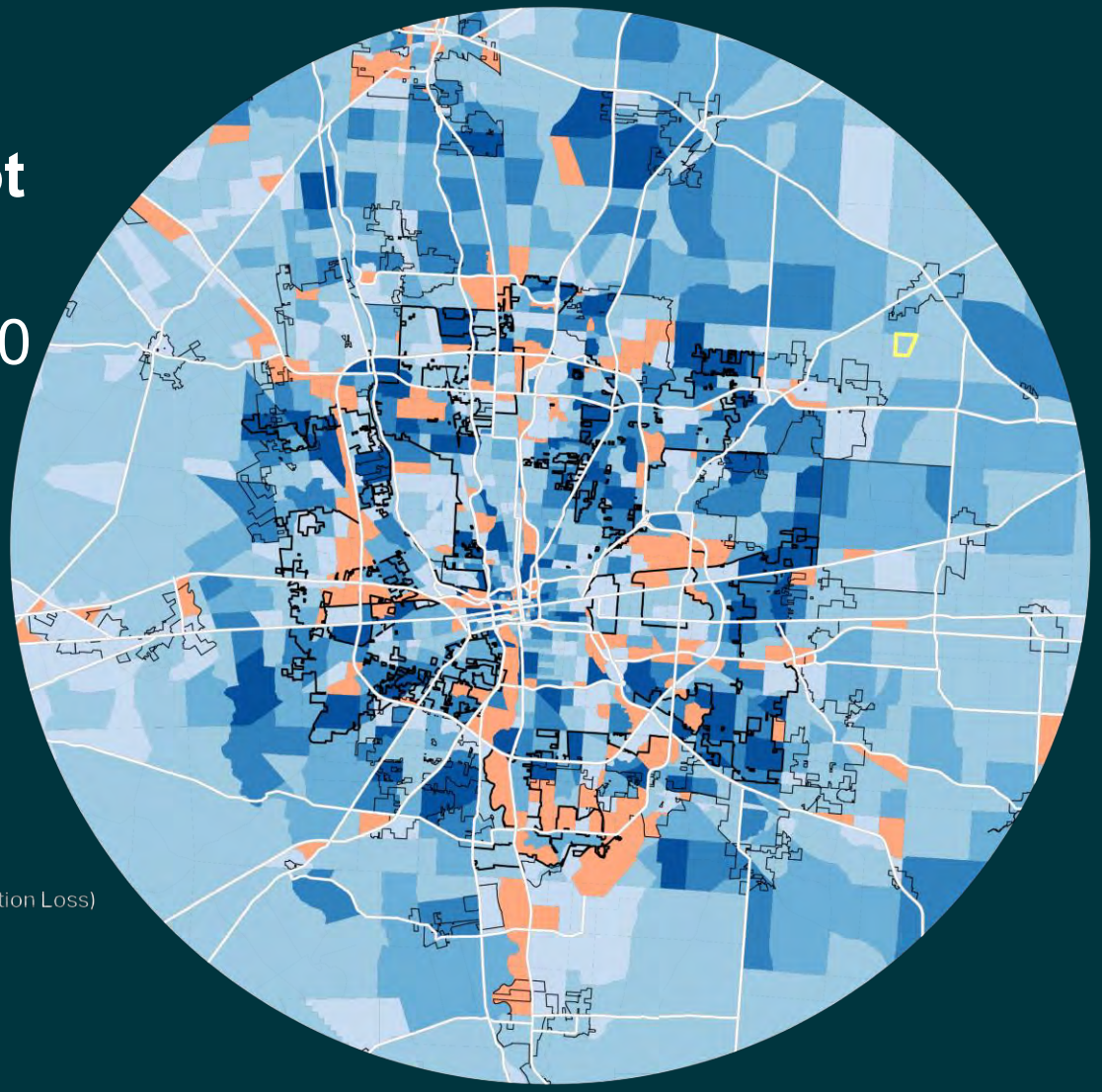
- Chip plants have the potential to be **catalytic investments** for tech hubs
- Economic growth that comes with a growing tech sector can have a **positive impact** on a region's economy; it can also contribute to increases in housing costs "degree inflation," and economic inequality if cities are **unprepared**
- Chip manufacturing also comes with **significant environmental impacts**; regions need to be prepared to address them head-on
- Transportation impacts are felt on a **regional** level; this calls for a **comprehensive look** at how transportation is serving the region, & rethinking the **timing** of new transportation investments
- Intentionality around land use & transportation planning is critical for avoiding **suburban sprawl** as cities grow

Impact Areas

Population

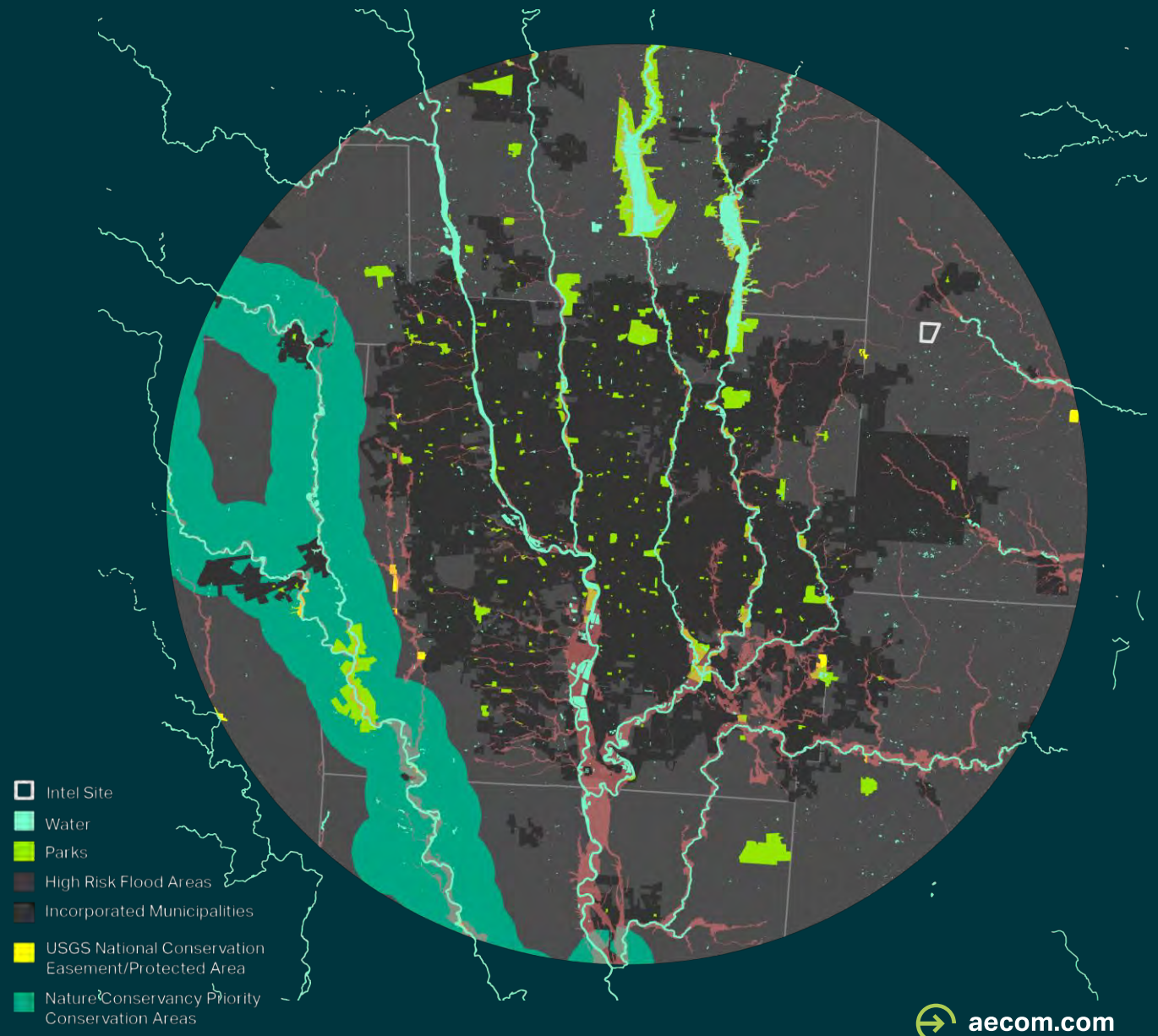
- 15-County MORPC Region projected to add over **0.5 million new residents by 2050 (not including Intel-spurred growth)**
- 70% of regional population growth since 2010 was in **Franklin County**
- As emphasized by regional plans like **insight2050**, traditional suburban development patterns **cannot sustainably accommodate** this level of growth





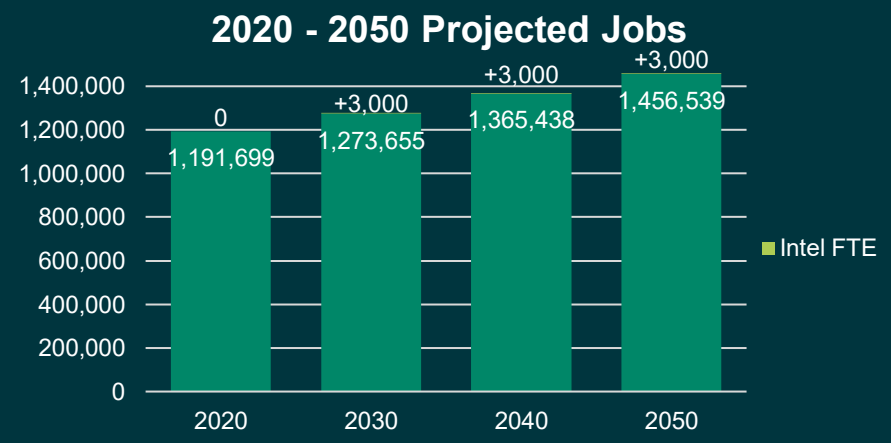
Environment

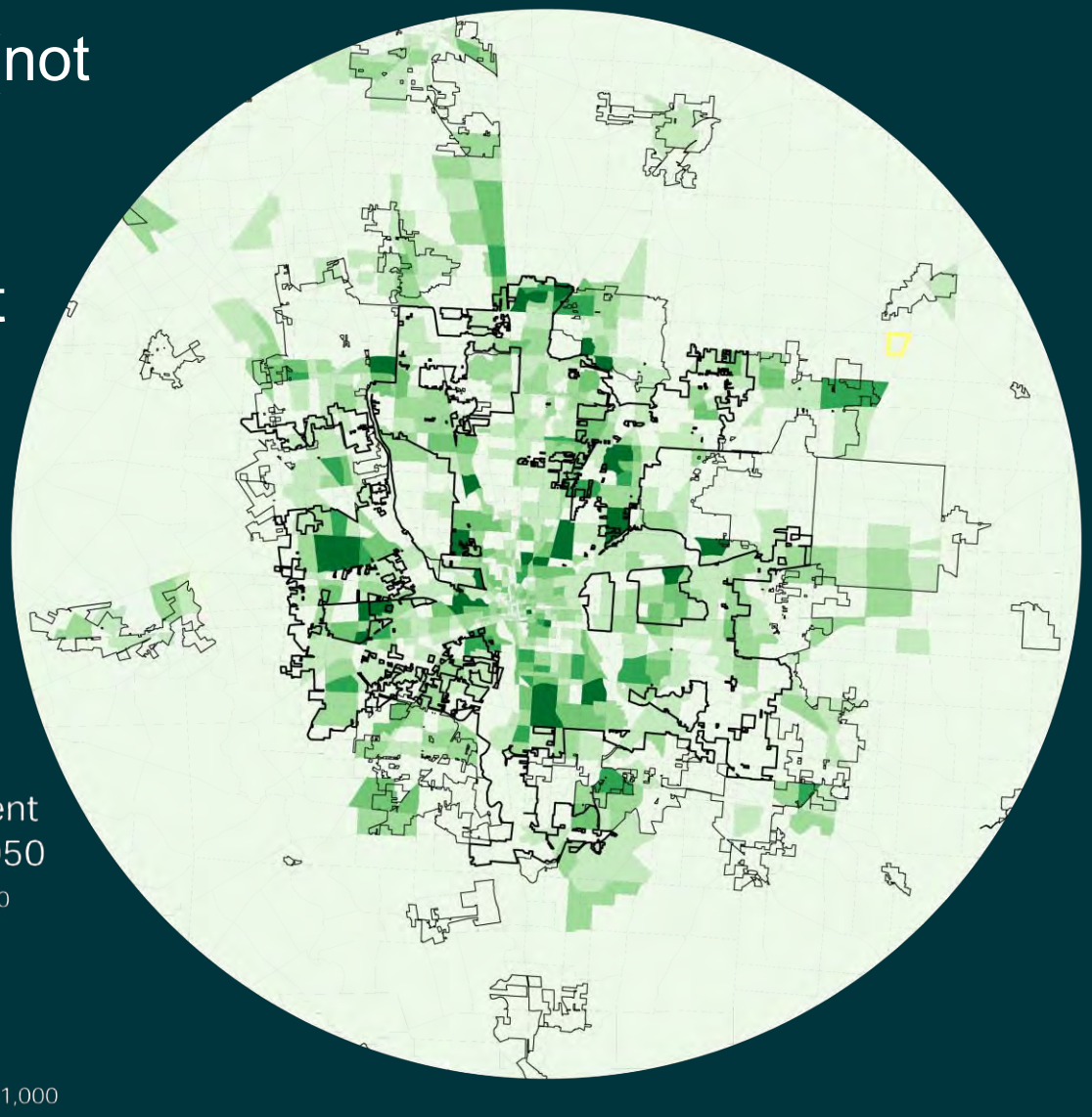
- New plant will require **5 million gallons of water per day** – Intel is working with local utilities to ensure adequate **supply & capacity**
- Localities in the northeast region will need to be cognizant of **flood hazard areas** when planning for future development
- Broader **environmental impacts of adding population** to the region a key consideration



Economy & Employment

- MORPC projects **250,000+** new jobs by 2050 (not including Intel jobs)
- Intel expects to bring **3,000** direct jobs to the region, plus **7,000** construction jobs – does not include other indirect or induced jobs
- Trends show regional employment growth is increasingly occurring in **downtown** & surrounding neighborhoods

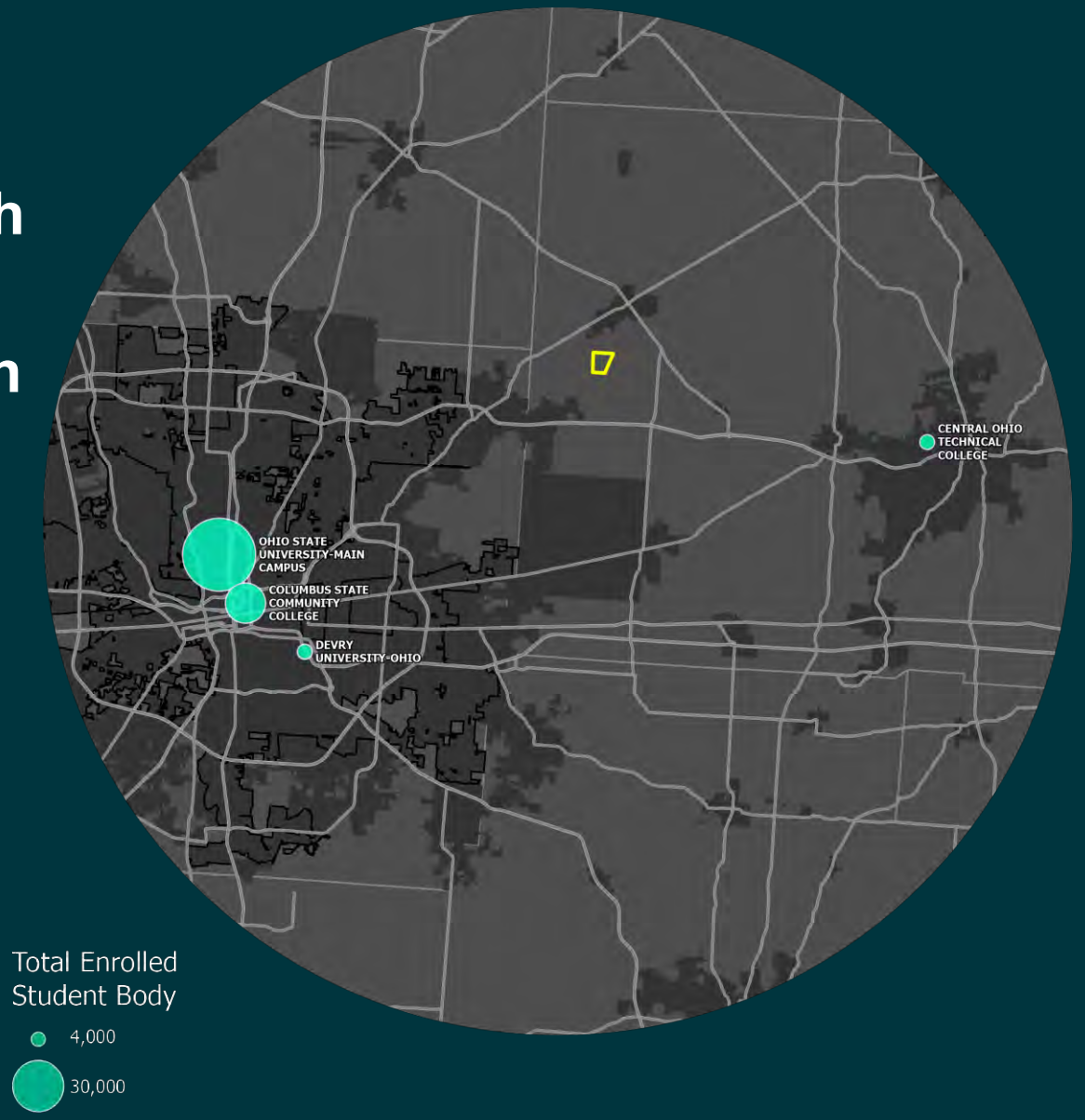




Education & Workforce

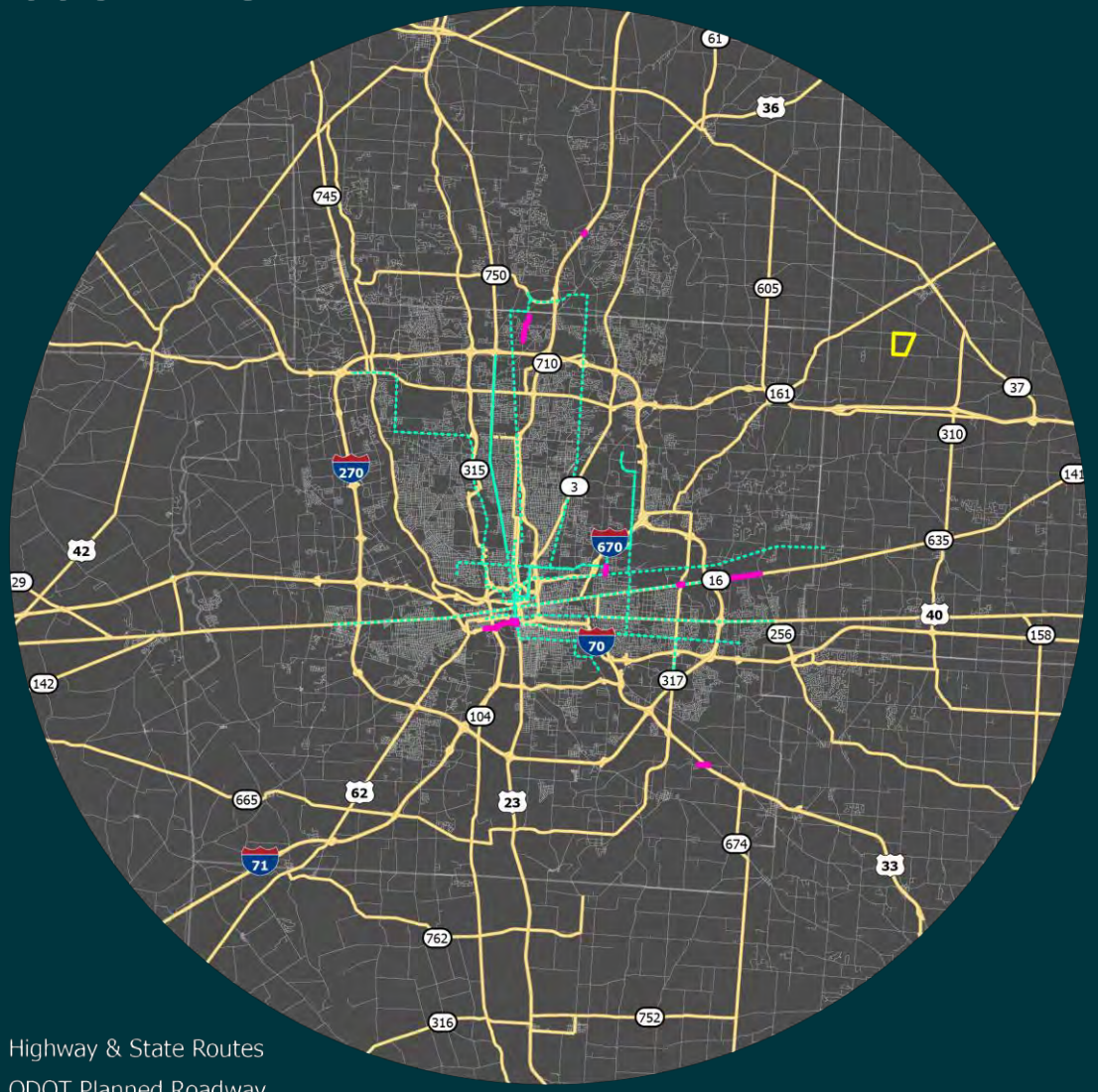
- Just 4 universities in the region currently offer **Electrical Engineering & related tech degrees**
- Intel has pledged an additional **$100 million** toward partnerships with educational institutions to build a pipeline of talent & bolster R&D in the region

	Program Graduates 2020	Growth (YOY) 2020	Tuition
Ohio State University - Main Campus	388	-11%	$11,518
Columbus State Community College	373	578%	$4,888
DeVry University – Ohio	8	-20%	$15,256
Central Ohio Technical College	5	67%	$4,776



Transportation & Land Use Patterns

- MORPC is proposing **9 new roadway projects** that would widen & add turn lanes to accommodate growth around the Intel site
- Currently, there are no plans to extend **public transit connections** to connect the greater northeast with downtown
- A significant regional increase in POVs could worsen **traffic congestion** & could compromise the region's goals for **carbon neutrality by 2050**



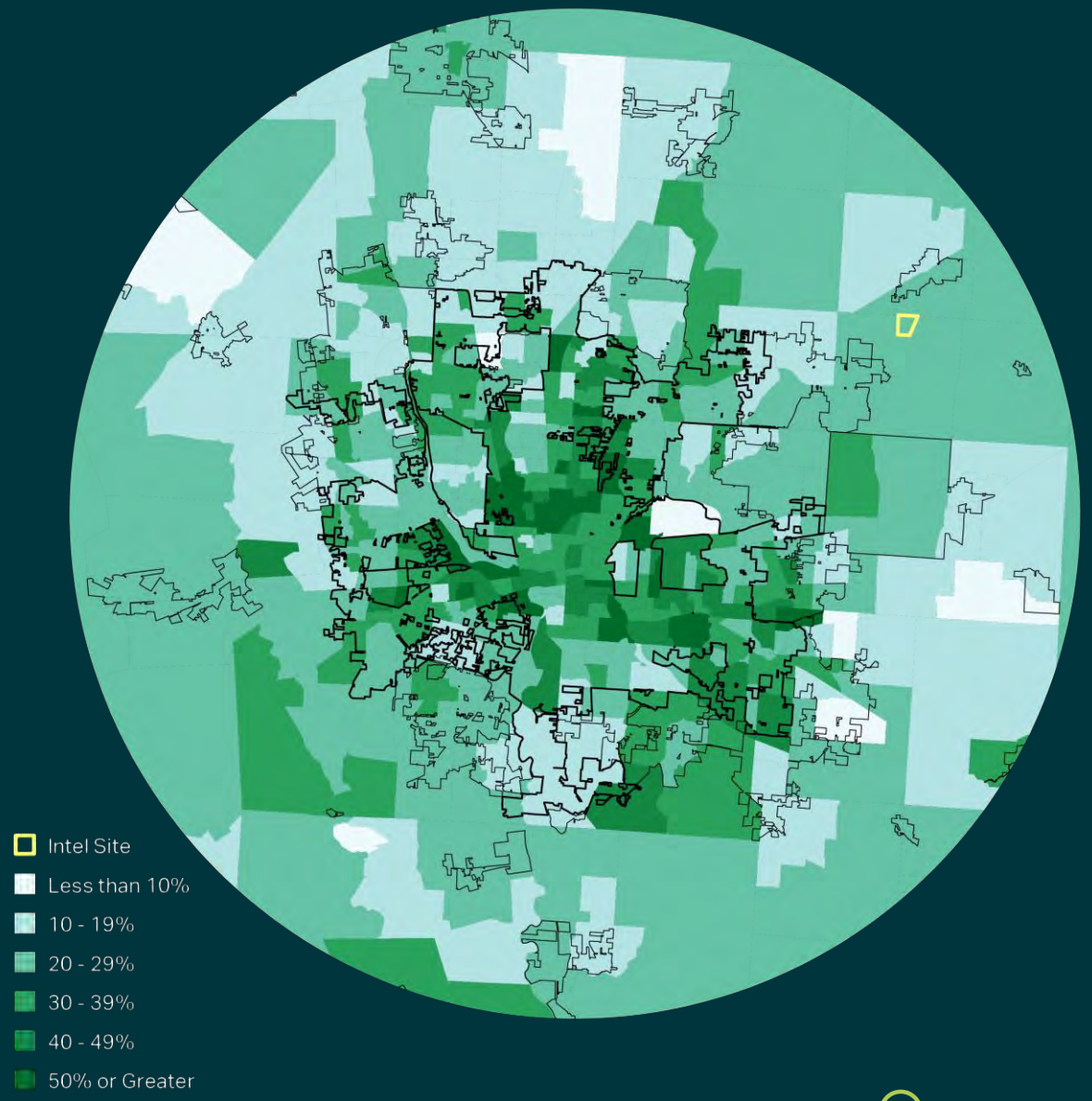
Highway & State Routes

ODOT Planned Roadway Expansion Projects thru 2035

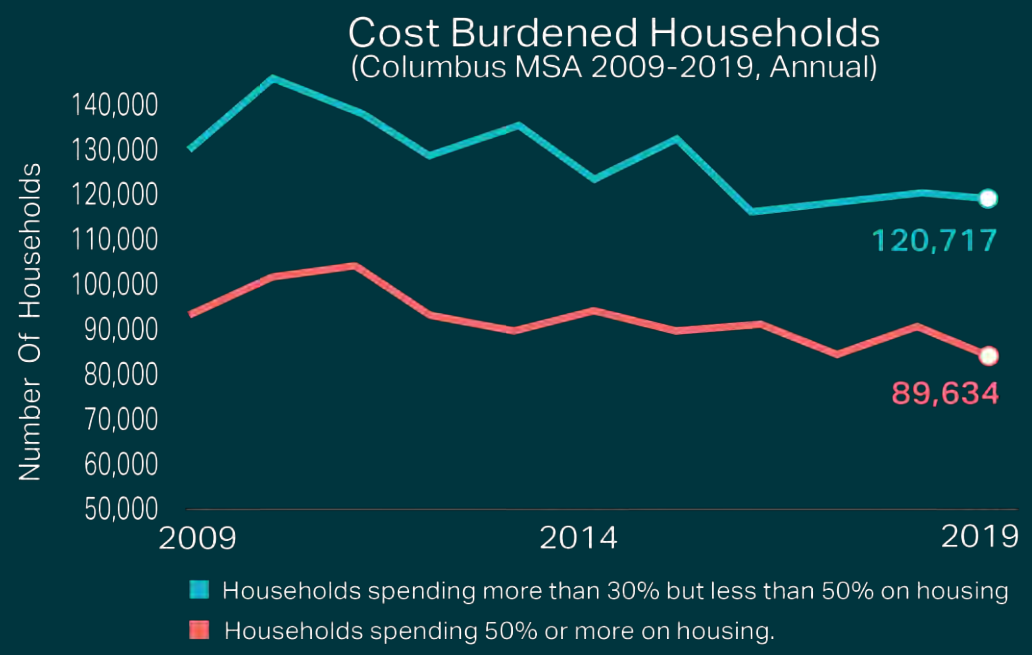
COTA Planned High Capacity Bus Corridors

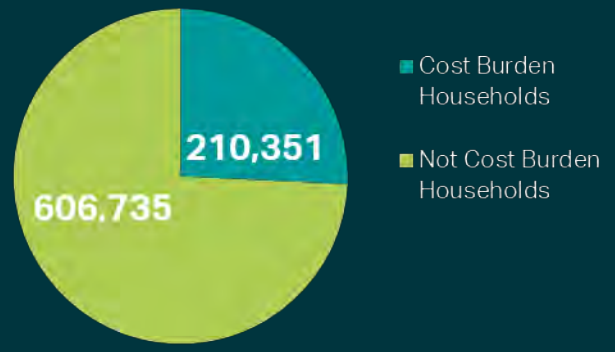
Housing Affordability

- Without adequate preparation, an influx of new residents & investment may impact affordability of housing given **constrained supply**
- The largest populations of cost-burdened households are concentrated in the **City of Columbus** – this will likely increase without a regional focus on affordable & workforce housing development



Housing Instability

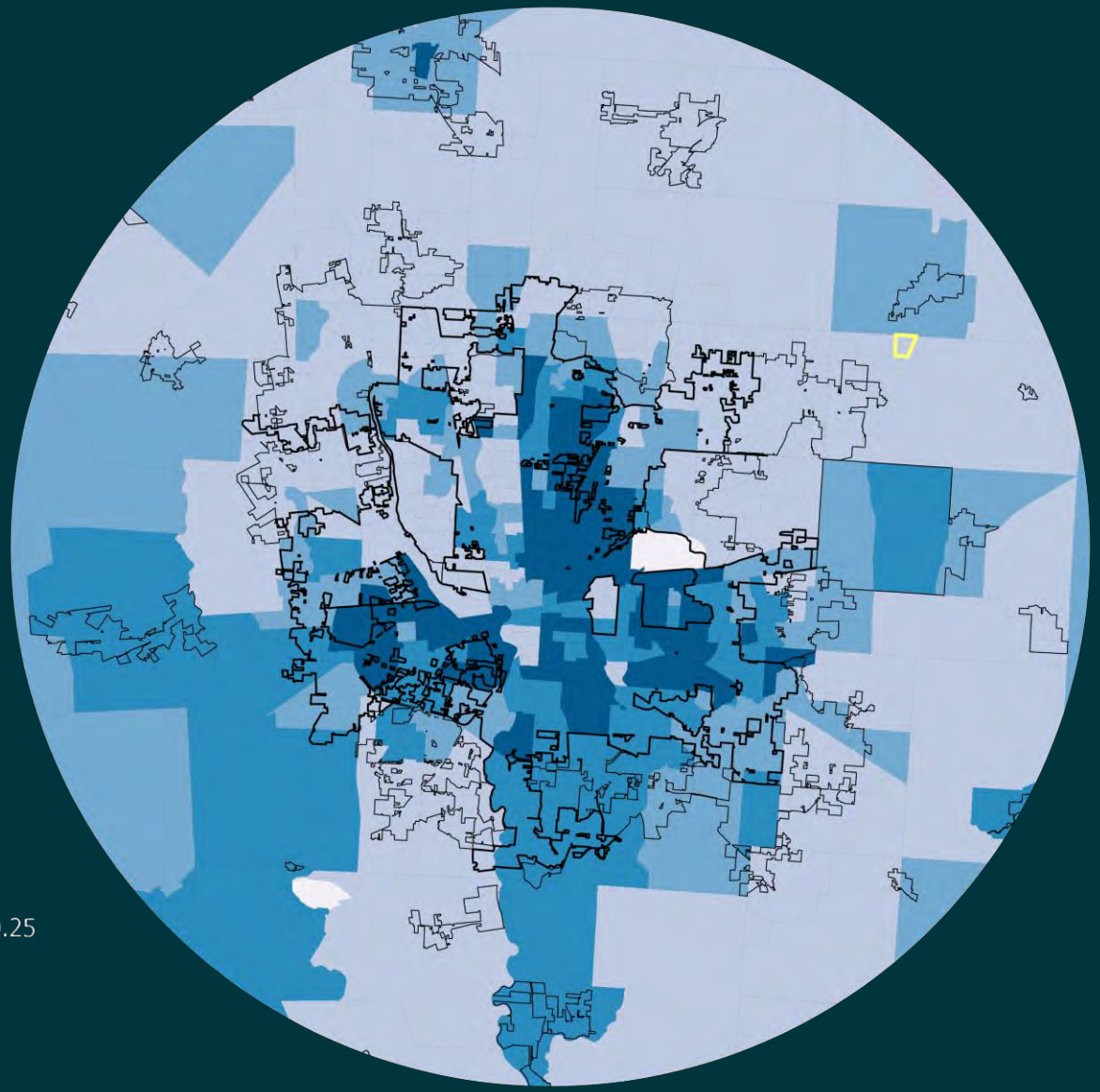




- Over 25% of households in the Columbus MSA are considered **cost-burdened**
- 74% of those households are considered **"extremely" cost burdened**, spending more than 50% of their incomes on housing costs
- How will the housing needs of lower-income residents be met in an **increasingly competitive market?**

Vulnerable Communities

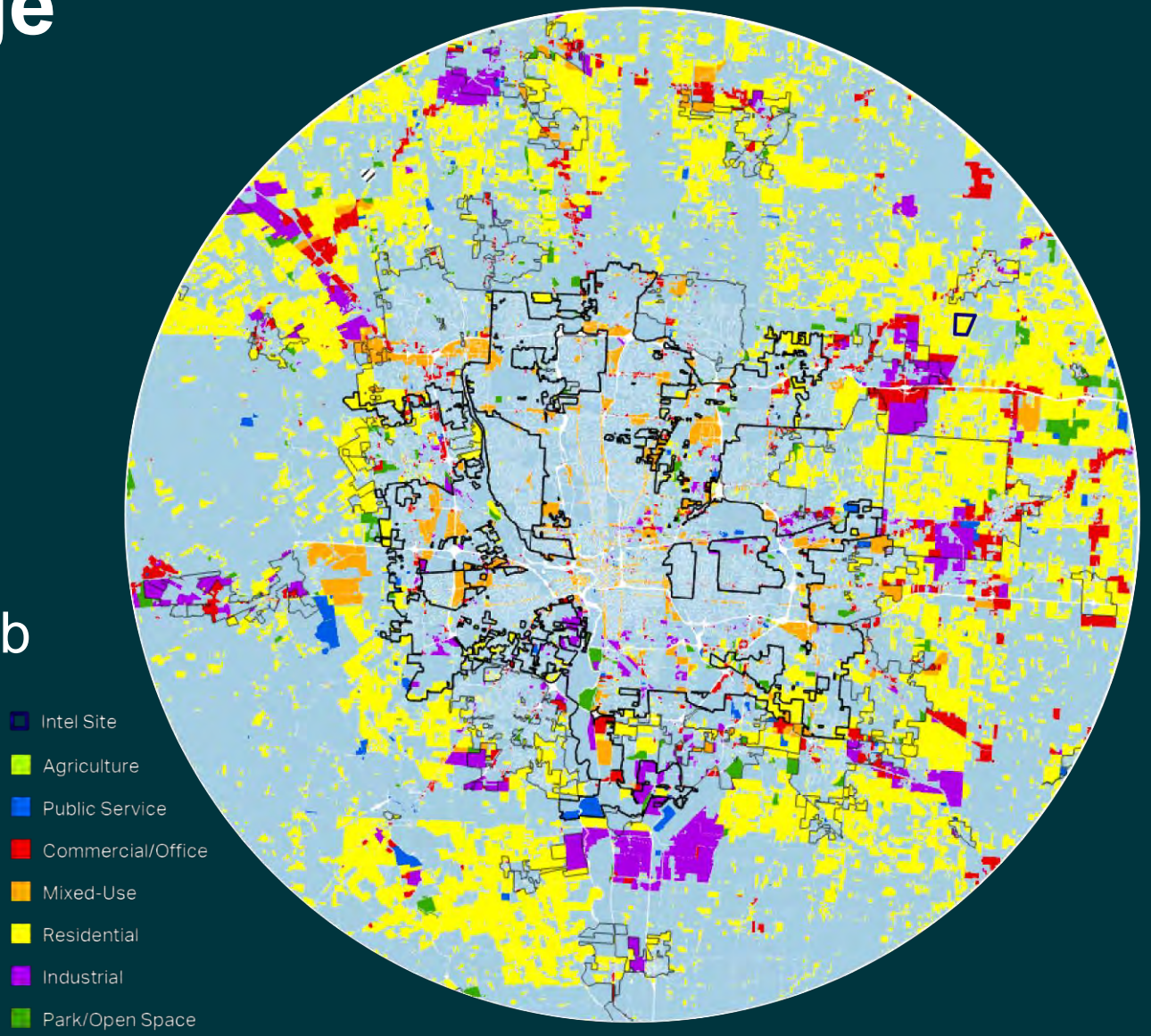
- Evidence indicates certain populations (low-income, minority, non-English speaking, elderly, disabled, etc.) are **more vulnerable to shocks and stresses**
- Vulnerable populations in the region are concentrated closer to the City; however, **"ripple effects"** from a surge of growth in the northeast could directly impact these areas



Source: Centers for Disease Control and Prevention/ Agency for Toxic Substances and Disease Registry/ Geospatial Research, Analysis, and Services Program. CDC/ATSDR Social Vulnerability Index

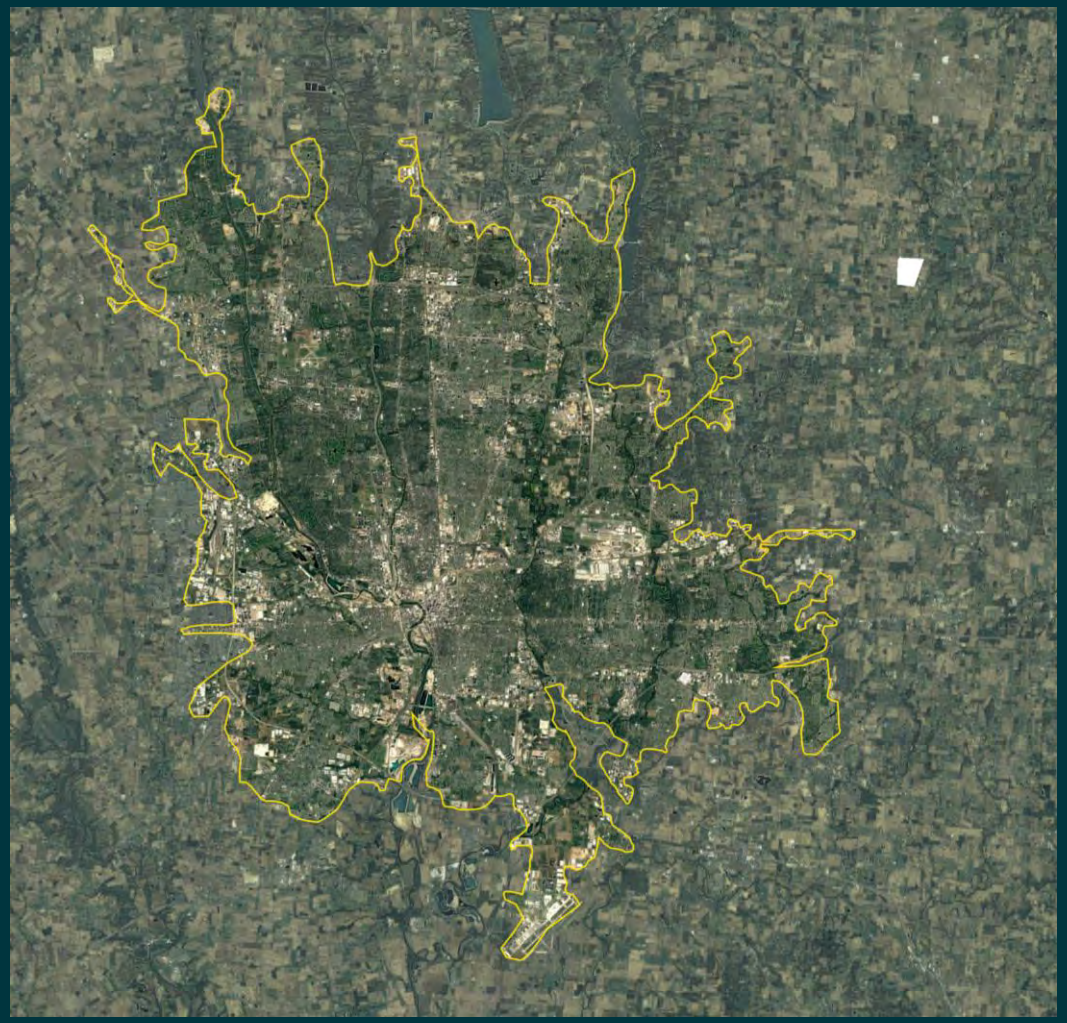
Planned Land Use Change

- MORPC's regional future land use map shows mostly **low-density** residential development for the northeast region
- Can the region envision a **different, denser, more connected future**, given the magnitude of the potential impacts from regional population & job growth?



Greater Columbus: Then & Now

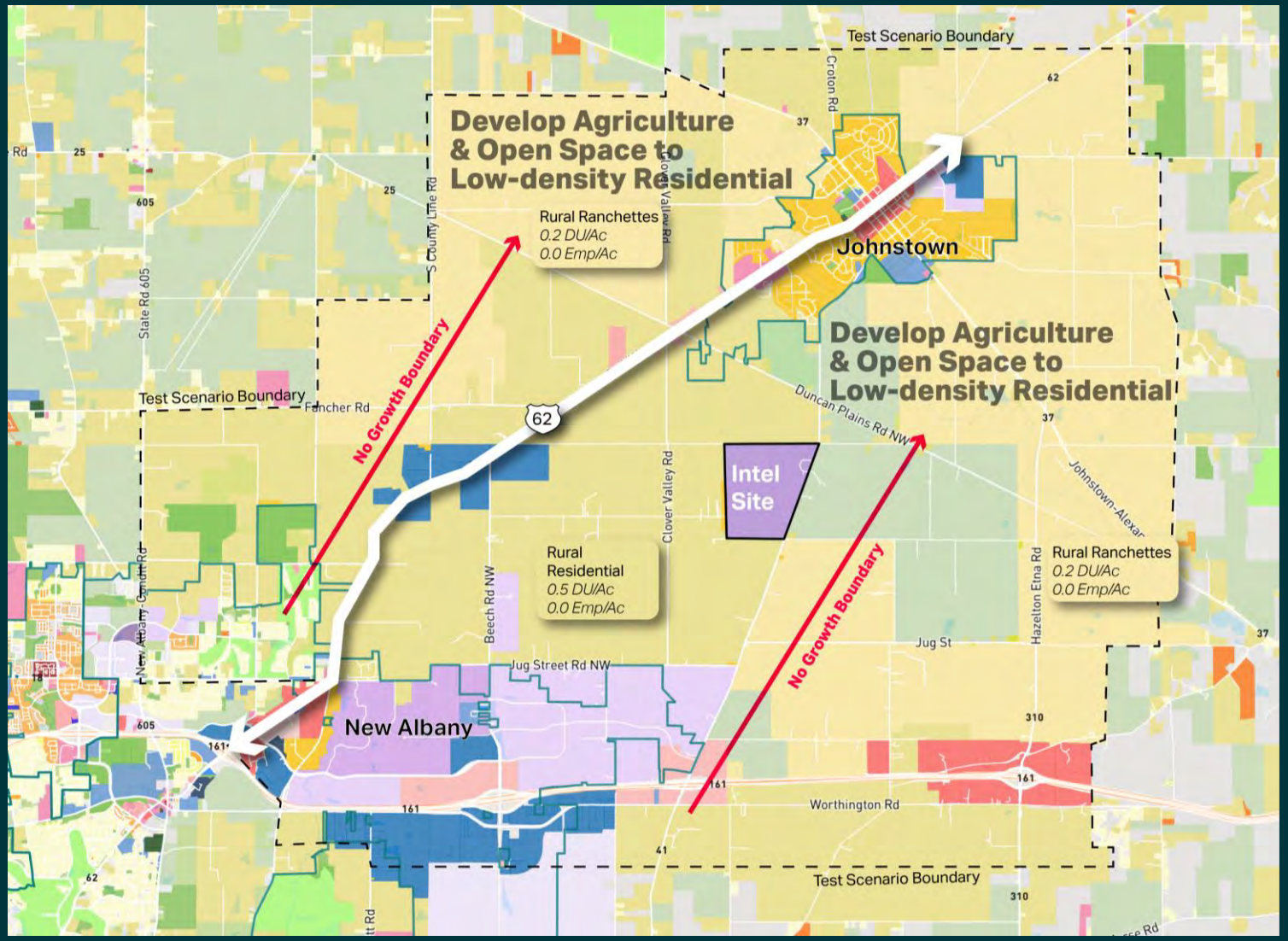
2000



2020

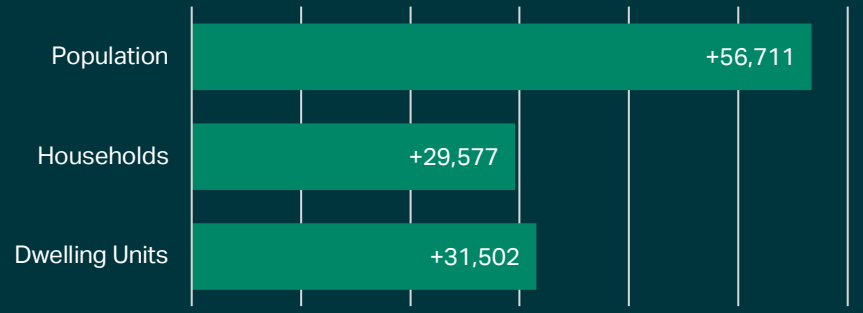
Development Test Scenarios

Status Quo



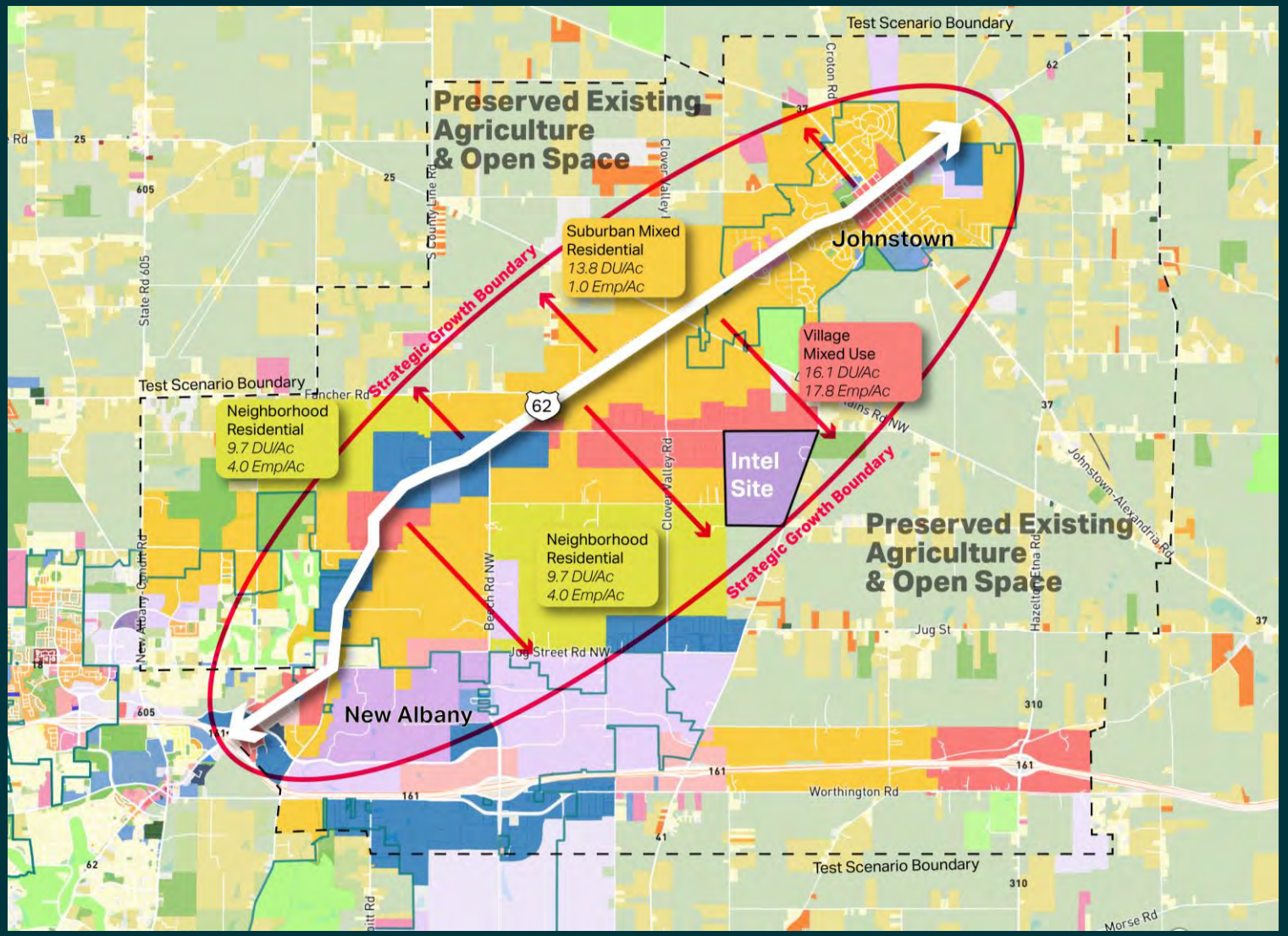
- Maintaining the regional "status quo" could easily translate to a disconnected "suburban sprawl" pattern of land use without **intentional planning**

MORPC Future Land Use 2050, Test Scenario



Development Test Scenarios

Strategic Density



- Intentional planning for the northeast Columbus region could yield a more **sustainable, human-scale, transit-oriented** pattern of development
- This is a **critical opportunity** to **improve regional connections** & mobility

Strategies & Opportunities

Population

Strategies and Opportunities

- **Regional partnerships – more collaboration =** better planning, federal grants
- **Engage community stakeholders -** increase equity & address quality of life
- Community organizations are a **critical lynchpin**
- Diversity, equity, and inclusion - improving **social infrastructure** is essential

Schiller Park, Columbus, OH. This Photo by Unknown Author is licensed under CC BY-SA

Housing

Strategies and Opportunities

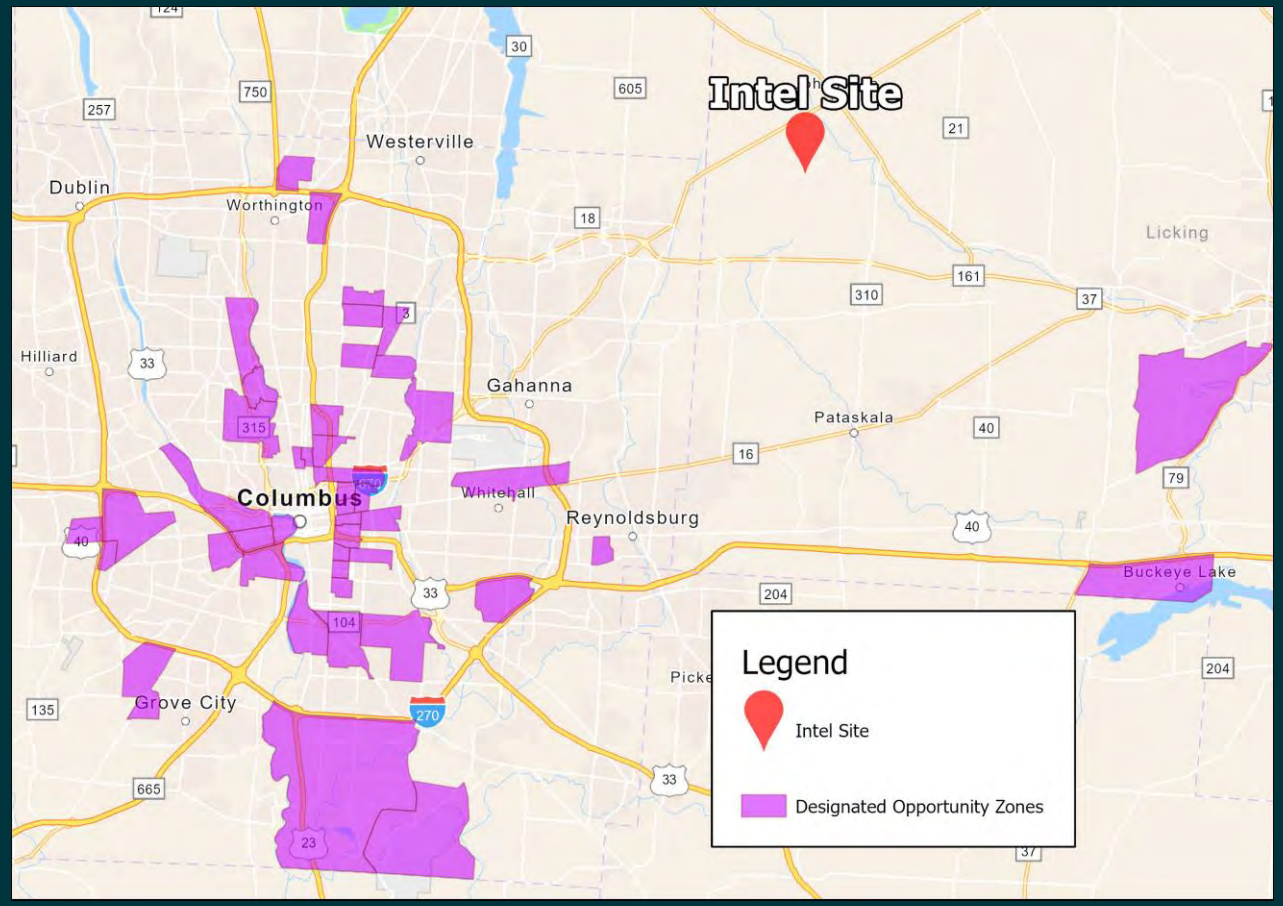
ADU in Stapleton, CO
This Photo by Unknown Author is licensed under CC BY

- **Housing studies & policies**, especially in northeast Columbus communities - assess the gaps in current housing stock
- **Incentivize the private sector** to build more workforce and “missing middle” housing - tax incentives, density bonuses, other local/regional incentives
- Reduce **gentrification & displacement** with inclusionary zoning, allowing accessory dwelling units (ADUs), implementing deed restrictions, rental assistance programs, etc.

Housing

Strategies and Opportunities

- Community development corporations, land banks, & non-profit housing developers + **federal funding opportunities**
- Leverage **opportunity zones**
- Major companies like Amazon have dedicated funds to building more affordable & workforce housing in communities where they plan to locate –**partnerships with tech leaders & regional conversations** are a must



Education & Workforce

Strategies and Opportunities

- Intel, Honda, TS Tech, etc. should work with K-12+ educational institutions across the region to support **workforce development** & training programs
- Community colleges – critical resource for **filling the upskilling gap**
- Equal **access to opportunity** – support for workers w/diverse backgrounds

- Explore opportunities for **clustering tech, R&D** – e.g., the Owens Corning Research and Development Center in Granville
- Support **symbiotic & service** industries

Transportation & Land Use

Strategies and Opportunities

This Photo by Unknown Author is licensed under CC BY-SA

- Replicate Pivot Columbus's **multimodal Smart Mobility transit hubs** across the region
- Use Pivot Columbus's P3 approach to form **new partnerships** around transit, access, equity, & sustainable development
- Fund **"last-mile"** transit & roadway connections through IIJA and other federal grants
- insight 2050 and LinkUS recommend higher-density, transit-oriented development – time to **rethink "greater Columbus"**

Environment

Strategies and Opportunities

- Leverage proposed Intel **Water Reclamation Facility** for broader regional benefits
- Like Bloomington, MN, incentivize major emitters to utilize **on-site, renewable energy** generation
- Push **low-impact development (LID)** through local codes & ordinances – higher density, clustered development

- Break down **silos** between planning, economic development, & utilities
- Engage groups like the **Licking Land Trust** in broader regional conversations about open space preservation

Economy & Employment

Strategies and Opportunities

- Build **entrepreneurial ecosystems**
- Incentivize labor force participation by providing **opportunities for sidelined workers**
- Peer City Malta, NY utilized a **public benefit corporation** to foster additional economic growth
- Place-based economic development opportunities – building on **what makes Columbus great** TODAY

Intel is coming – it's up to Greater Columbus to **choose how to respond**

AECOM

Thank you!

Delivering a better world

aecom.com

AECOM General Limiting Conditions

Deliverables and portions thereof shall be subject to the following General Limiting Conditions:

AECOM devoted the level of effort consistent with (i) the level of diligence ordinarily exercised by competent professionals practicing in the area under the same or similar circumstances, and (ii) consistent with the time and budget available for the Services to develop the Deliverables. The Deliverables are based on estimates, assumptions, information developed by AECOM from its independent research effort, general knowledge of the industry, and information provided by and consultations with Client and Client's representatives. No responsibility is assumed for inaccuracies in data provided by the Client, the Client's representatives, or any third-party data source used in preparing or presenting the Deliverables. AECOM assumes no duty to update the information contained in the Deliverables unless such additional services are separately retained pursuant to a written agreement signed by AECOM and Client.

AECOM's findings represent its professional judgment. Neither AECOM nor its parent corporations, nor their respective affiliates or subsidiaries ("AECOM Entities") make any warranty or guarantee, expressed or implied, with respect to any information or methods contained in or used to produce the Deliverables. The Deliverables shall not to be used in conjunction with any public or private offering of securities, debt, equity, or other similar purpose where it may be relied upon to any degree by any person other than the Client. The Deliverables shall not be used for purposes other than those for which they were prepared or for which prior written consent has been obtained from AECOM.

Possession of the Deliverables does not carry with it any right of publication or the right to use the name of "AECOM" in any manner without the prior express written consent of AECOM. No party may reference AECOM with regard to any abstract, excerpt or summarization of the Deliverables without the prior written consent of AECOM. AECOM has served solely in the capacity of consultant and has not rendered any expert opinions in connection with the subject matter hereof. Any changes made to the Deliverables, or any use of the Deliverables not specifically identified in the Agreement between the Client and AECOM or otherwise expressly approved in writing by AECOM, shall be at the sole risk of the party making such changes or use.

The Deliverables were prepared solely for the use by the Client. No third party may rely on the Deliverables unless expressly authorized by AECOM in writing (including, without limitation, in the form of a formal reliance letter. Any third party expressly authorized by AECOM in writing to rely on the Deliverables may do so only on the Deliverable in its entirety and not on any abstract, excerpt or summary. Entitlement to rely upon the Deliverables is conditioned upon the entitled party accepting full responsibility for such use, strict compliance with this Agreement and not holding AECOM liable in any way for any impacts on the forecasts or the earnings resulting from changes in "external" factors such as changes in government policy, in the pricing of commodities and materials, changes in market conditions, price levels generally, competitive alternatives to the project, the behavior of consumers or competitors and changes in the Client's policies affecting the operation of their projects.

The Deliverables may include "forward-looking statements". These statements relate to AECOM's expectations, beliefs, intentions or strategies regarding the future. These statements may be identified by the use of words like "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "project," "will," "should," "seek," and similar expressions. The forward-looking statements reflect AECOM's views and assumptions with respect to future events as of the date of the Deliverables and are subject to future economic conditions, and other risks and uncertainties. Actual and future results and trends could differ materially from those set forth in such statements due to various factors, including, without limitation, those discussed in the Deliverables. These factors are beyond AECOM's ability to control or predict. Accordingly, AECOM makes no warranty or representation that any of the projected values or results contained in the Deliverables will actually occur or be achieved. The Deliverables are qualified in their entirety by, and should be considered in light of, these limitations, conditions and considerations.

AECOM Delivering a better world

Acknowledgements
The Columbus Foundation
Douglas F. Kridler, President & CEO
Matthew Martin, Director of Community Research

This report was developed in partnership with the Columbus Foundation by AECOM Economics + Advisory and Urbanism + Planning