AECOM

Community Impact Analysis

Intel Impact Study

Columbus Foundation

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Intel Impact Study Overview

Key Questions

- What are the major **potential impacts** of Intel's investment to the immediate area, and the Columbus region more broadly?
- How can negative impacts/challenges (pressures on housing supply/affordability, traffic congestion, environmental consequences, etc.) be **mitigated**, or turned into **opportunities**?
- How can the region use this investment as a **catalyst** for better, **"smarter"** growth and development, and leverage the initial investment by Intel to spur additional public and private sector investment, provide economic and workforce development opportunities, strengthen regional partnerships, and **improve quality of life for all residents**, existing and new?

Impact Areas

- Housing
- Education & Workforce
- Transportation & Land Use Patterns
- Environment
- Economy & Employment

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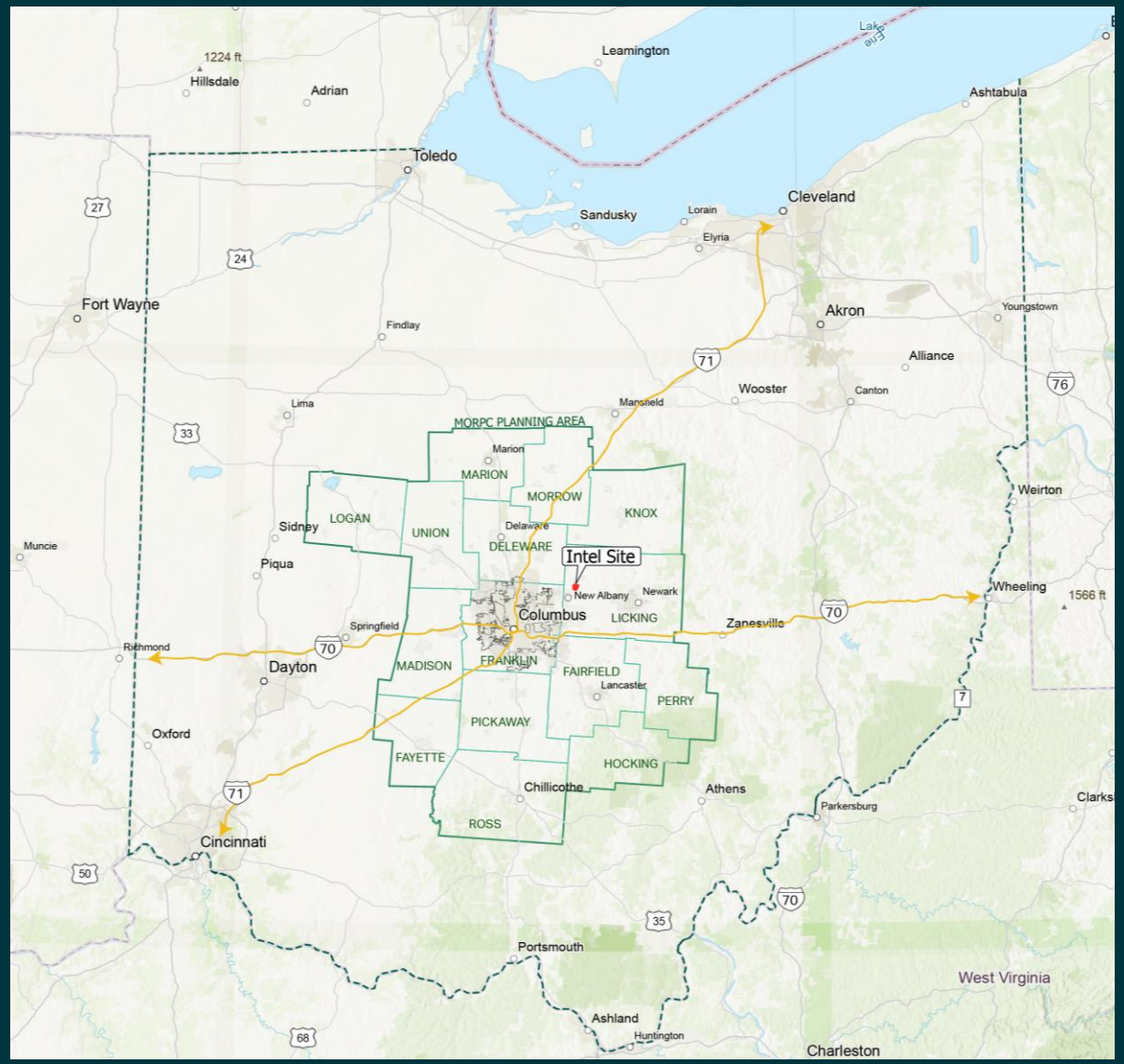
Existing Conditions

Context

Where will immediate impacts be felt?

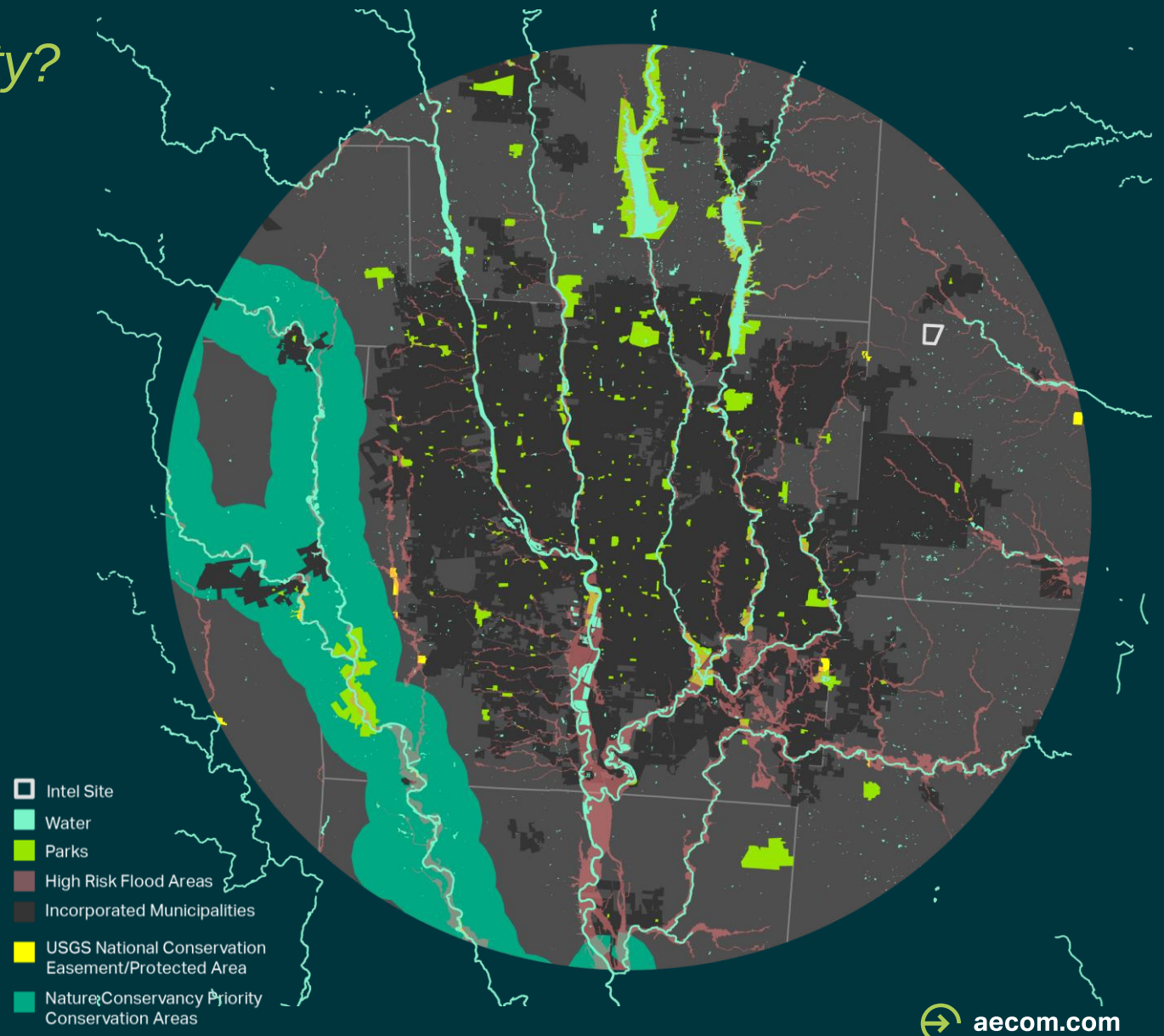
- Proposed Intel plant site will be near New Albany, a northeast suburb of Columbus, OH
- The area around New Albany is more **affluent than Columbus as a region** - Columbus metro area median income was ~$67,000 in 2019, New Albany's was ~$203,000
- Site will add 1,000 acres to 5,000-acre New Albany International Business Park
- Intel investment will not just bring high-paying jobs to the region, but will also spur growth in other industries, which may be lower-paying – **how can the greater region plan to accommodate people at all income levels?**



Environment

What are key areas of concern/sensitivity?

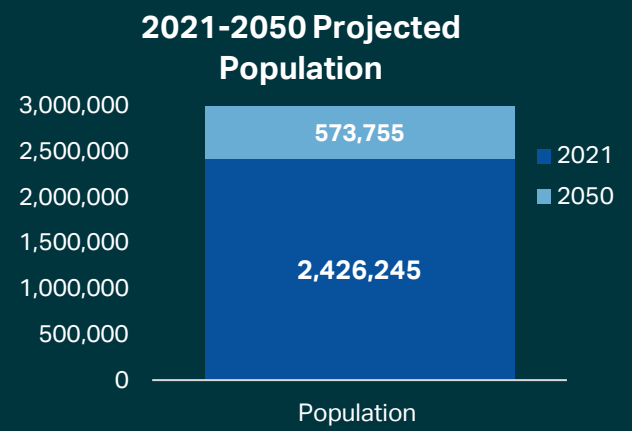
- Most natural assets in the region surround rivers and lakes
- Increased development in the northeast will have minimal impacts from waterways and protected lands; however, the northeast region will need to be cognizant of **flood hazard areas** near future development spurred by Intel
- As noted in the Peer Cities analysis, chip fab plants typically require **2 – 4 million gallons of water per day,** so local utilities will need to ensure infrastructure **supply and capacity** is adequate to support new plants
- Broader **environmental impacts of adding population** to the region are a key consideration

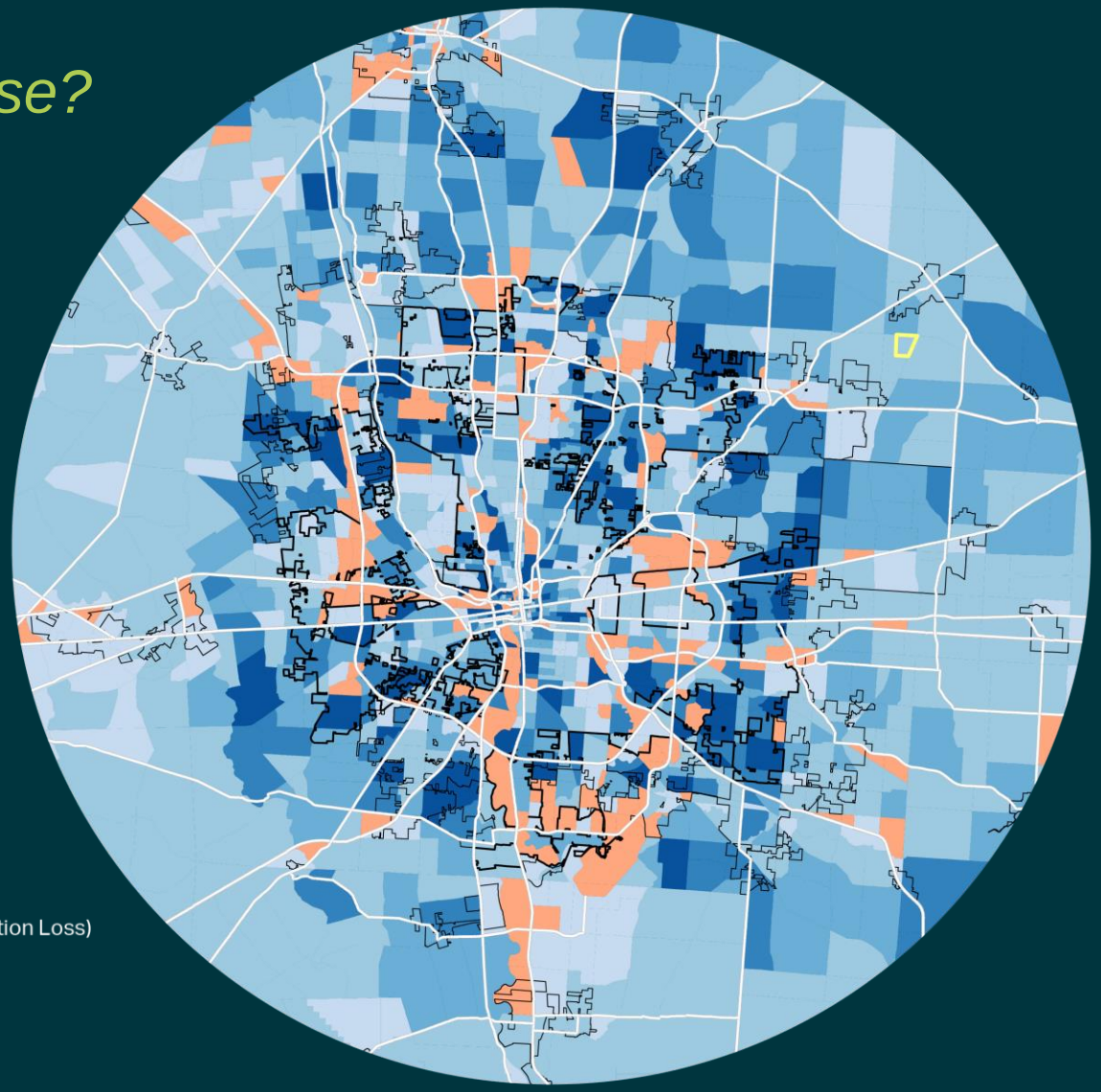


Population

Where is population already expected to increase?

- 15-County MORPC Region = 2,426,245 residents in 2021; projected to add over **half a million new residents by 2050**
- 70% of regional population growth since 2010 was in **Franklin County**
- MORPC estimates that the region will need an estimated **270,000 additional housing units by 2050** – Intel investment may increase this considerably
- As emphasized by regional plans like insight2050, traditional suburban development patterns are **less than ideal** for accommodating this level of growth

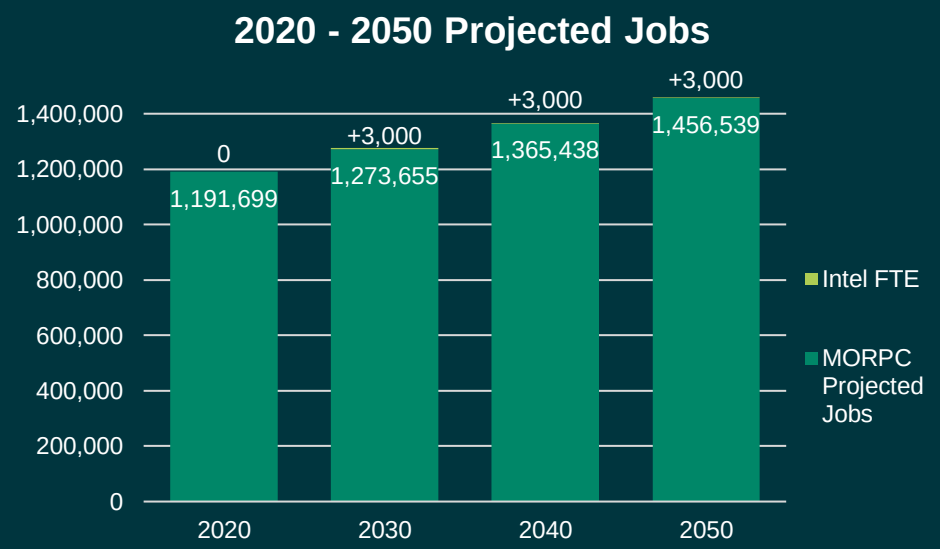


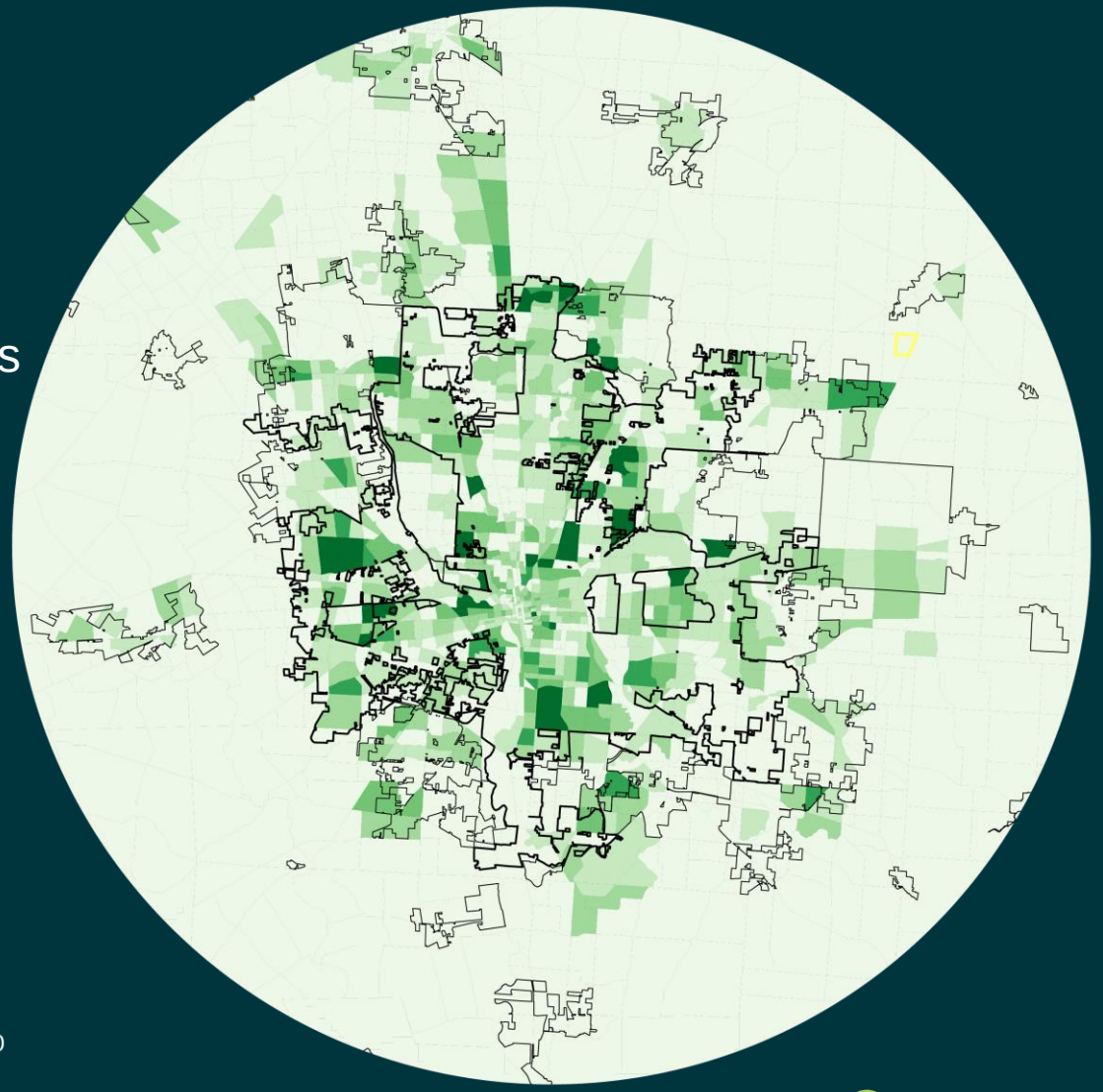


Economy & Employment

How might regional employment change?

- MORPC projects 1.5 million jobs by 2050, an additional **267,840 jobs** on top of 2020 numbers
- Intel expects to bring 3,000 direct jobs to the region, plus 7,000 construction jobs (not included in the MORPC estimates) – this estimate does not include other indirect jobs in **symbiotic and service industries**
- Trends show regional employment growth is increasingly occurring in **downtowns** and surrounding neighborhoods





Education & Workforce

Who will support & grow tech talent?

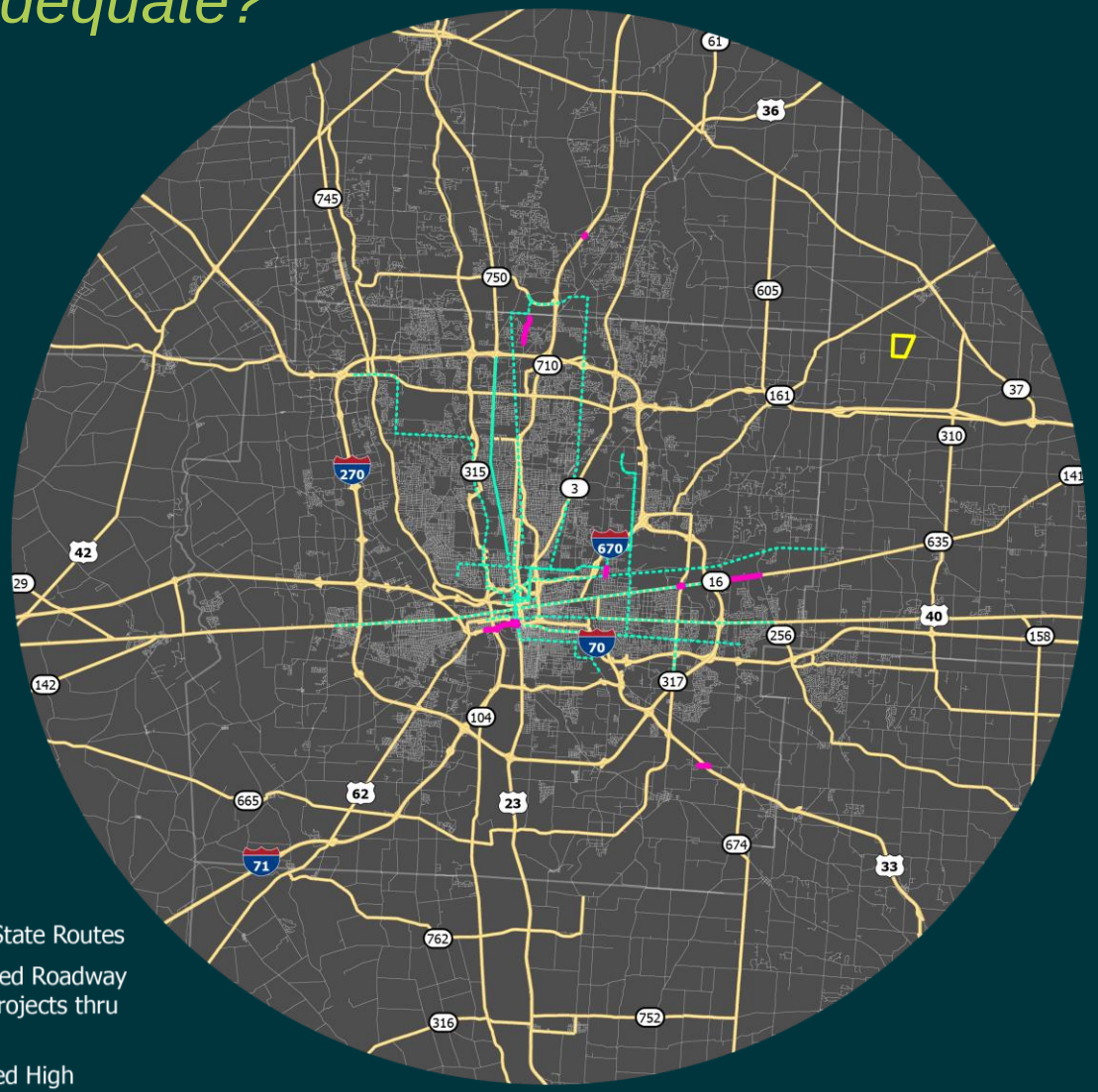
- Just four universities in the region currently offer **Electrical Engineering** degrees – is this enough to accommodate increased demand spurred by Intel?
- No programs in close proximity to New Albany
- Intel has pledged an additional **$100 million** toward partnerships with educational institutions to build a pipeline of talent and bolster research programs 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

What are regional connections like? Are they adequate?

- There are no ODOT planned roadway improvements that would increase capacity on the roadways surrounding the Intel Site
- COTA currently offers limited bus service to/from New Albany, but does not have plans to extend the **High-Capacity Bus Corridor** to the northeast
- Currently, there are no plans to extend additional public transit connections to connect New Albany/the Intel site with greater Columbus
- Primary access to the site would mainly be via car, which would worsen **traffic congestion** and could compromise the region's goals for **carbon neutrality by 2050**



Highway & State Routes

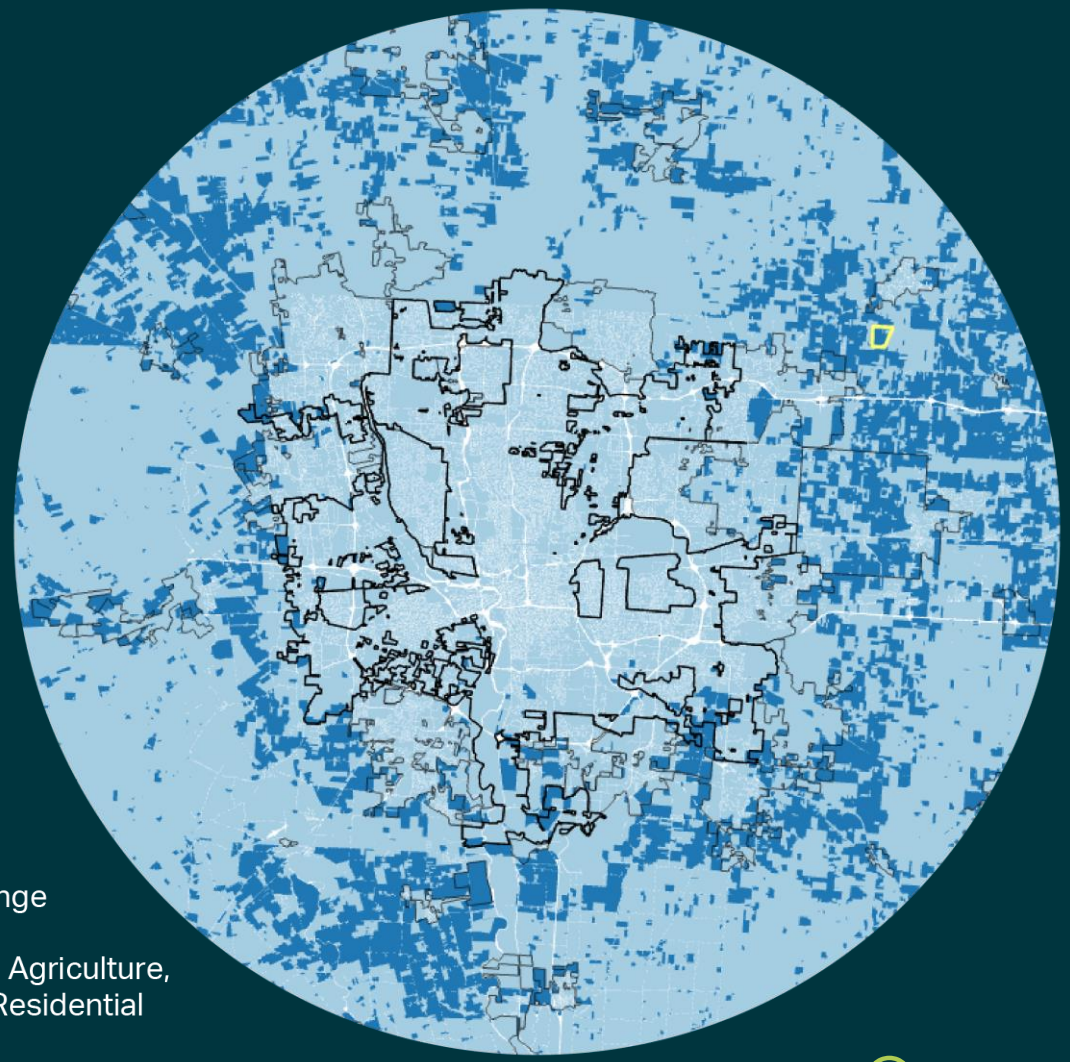
ODOT Planned Roadway Expansion Projects thru 2035

COTA Planned High Capacity Bus Corridors

Planned Land Use Change

Where is MORPC showing changes in land use from agricultural to residential?

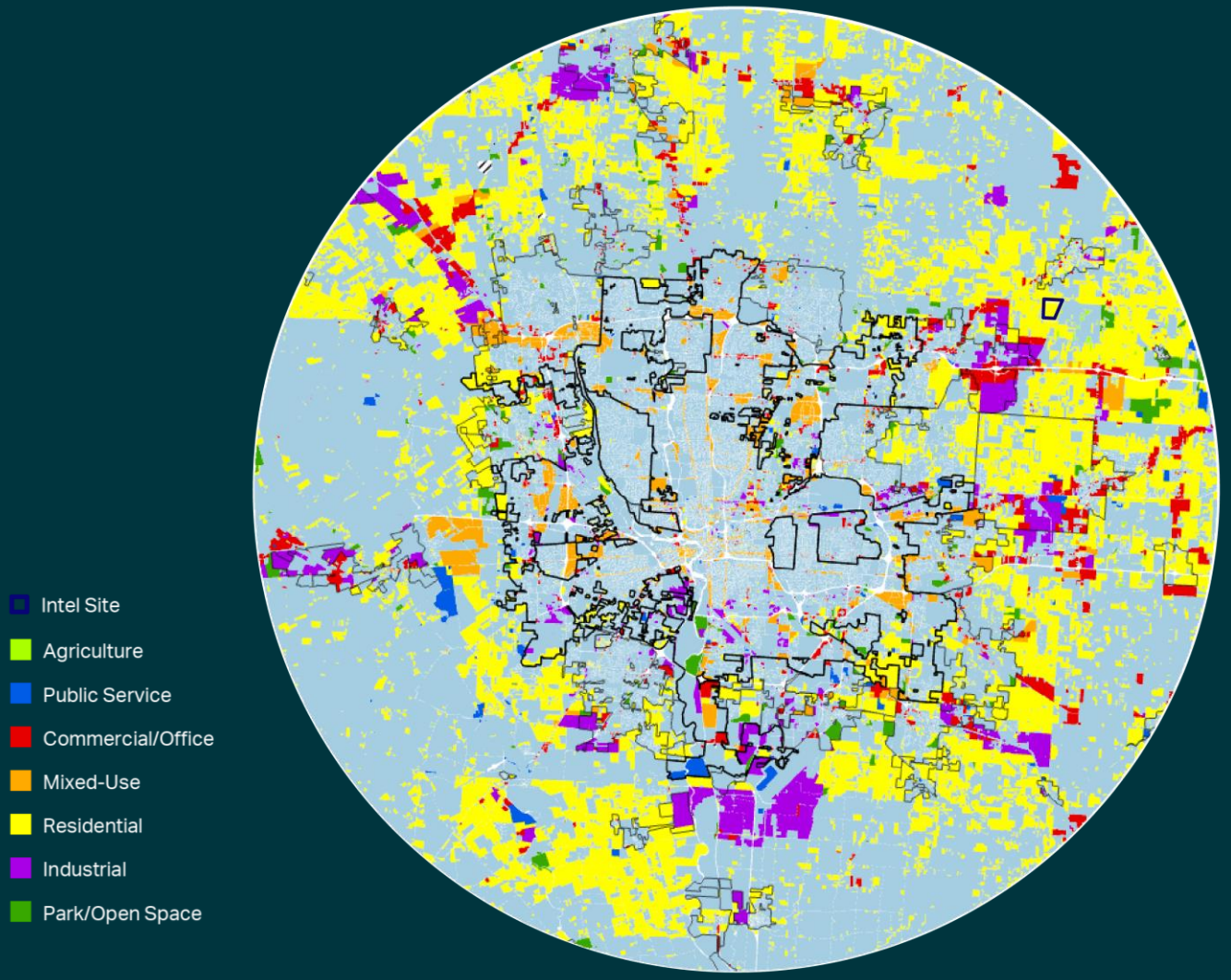
- MORPC expects roughly **212,875 acres** of existing agricultural land within the region to become developed by 2050
- Without intentional planning, this could lead to **significant suburban sprawl** for the region, especially as population and housing pressures increase
- This also raises concerns about the adequacy of **infrastructure and services** to reach/service these disparate, low-density areas
- Open space transitioning to impervious area could also have environmental and climate consequences, including **stormwater management** challenges and increased **heat island** effects



Planned Land Use Change

Where is MORPC showing changes in other land use categories?

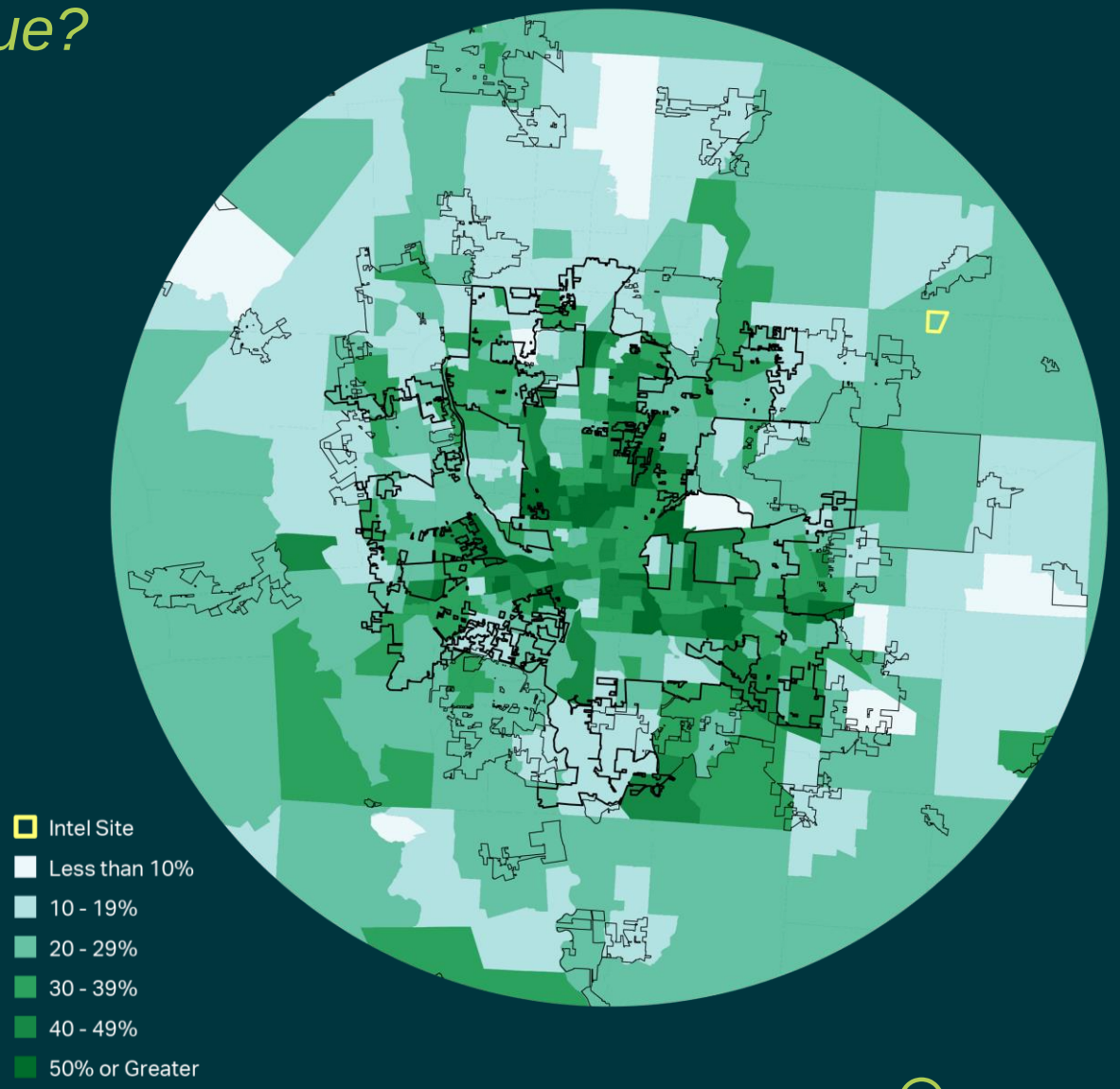
- MORPC future land use for 2050 does not incorporate Intel investment considerations
- The regional future land use map shows **low-density** residential development on the future Intel site
- Can the region envision a **different, denser future for the area and environs**, given the magnitude of the potential impacts from this new investment?



Housing Affordability

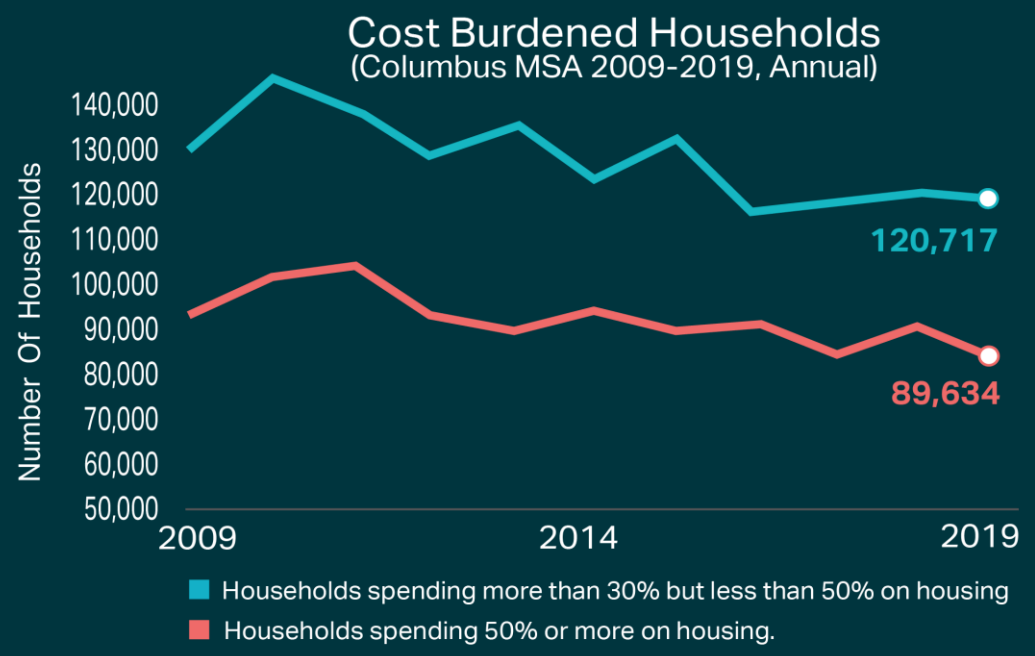
Where is housing affordability already an issue?

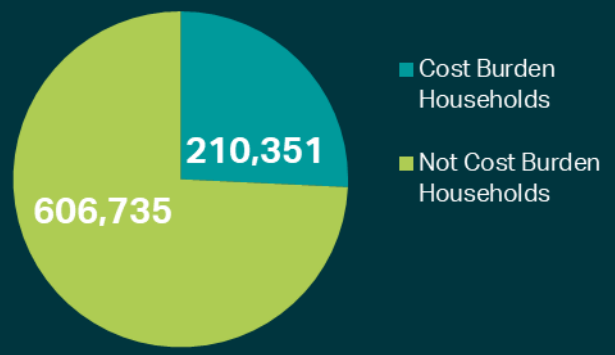
- **Access to affordable & workforce housing will worsen if the status quo continues:** cost-burden is lower in the more rural and suburban areas of the region; however, the Intel plants may impact affordability of housing given the **already limited supply**
- The largest populations of cost-burdened households are concentrated in the **City of Columbus – this will likely increase** without a regional focus on affordable & workforce housing development
- The communities surrounding the Intel Site have fewer cost-burdened households (between 10-30% of total households) & higher median incomes
- **Where will workers in symbiotic & service industry jobs supporting the Intel project live?**



Housing Instability

What if this worsens?



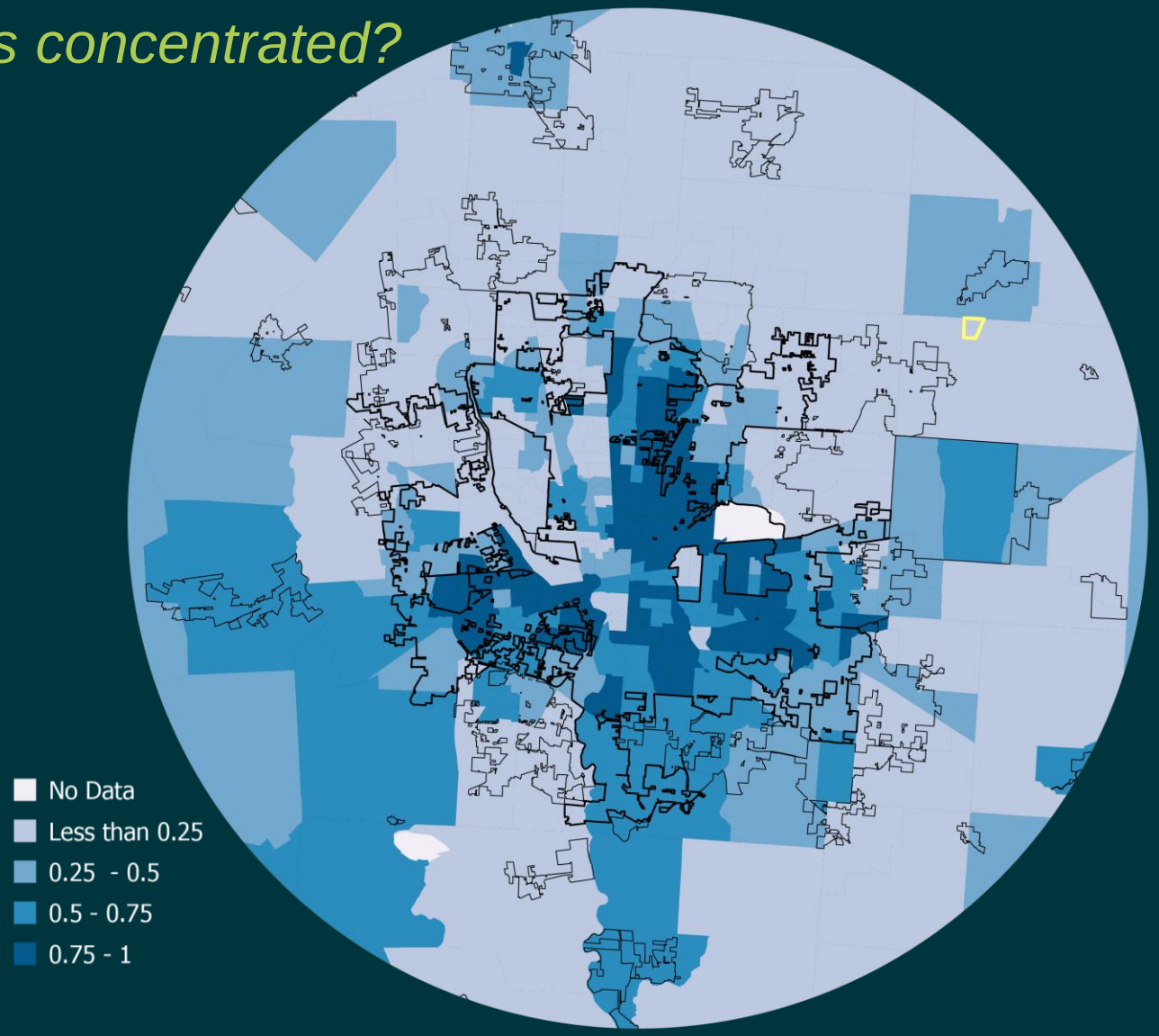


- Where will new **moderate-to-lower-income households** go? What about **existing residents**? How will their housing needs be met in an increasingly competitive market?
- Over 25% of households in the Columbus MSA are considered **cost-burdened**
- **74% of those households are considered "extremely" cost burdened**, spending more than 50% of their incomes on housing costs
- The number of cost-burdened households will most likely increase as the region grows, if nothing is done to address **affordable/workforce housing supply**

Vulnerable Communities

Where are socially vulnerable communities concentrated?

- Evidence indicates certain populations (such as low-income, minority, non-English speaking, elderly, disabled, etc.) are **more vulnerable to shocks and stresses**
- The New Albany area has an SVI of under 0.25
- The Johnstown area population, just north of the proposed site, is considered **more vulnerable**
- New development in the region has the potential to **displace more vulnerable populations and exacerbate overcrowding** in the limited housing market



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

Development

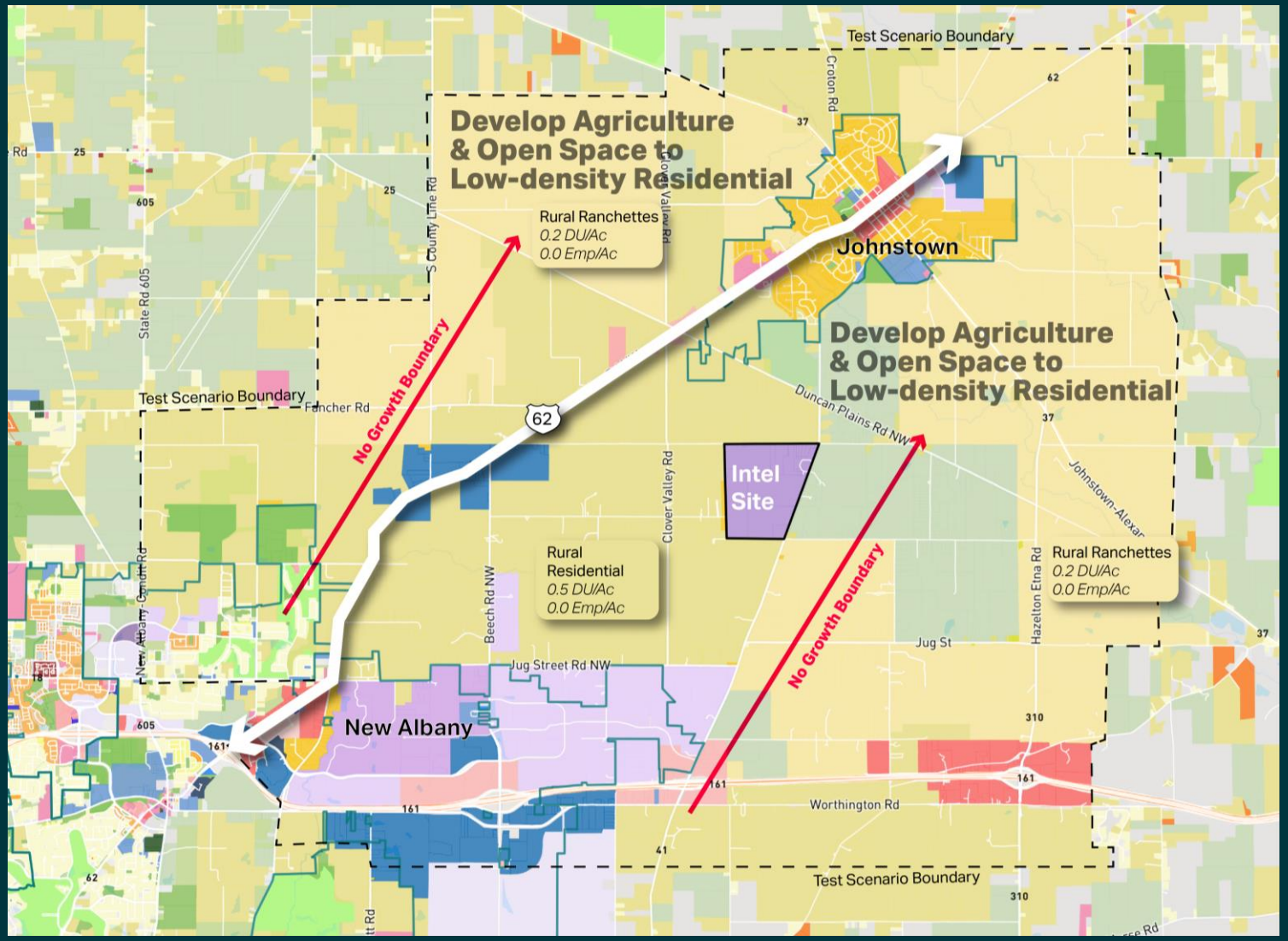
What has the historical development pattern been in the region?

2000

2020

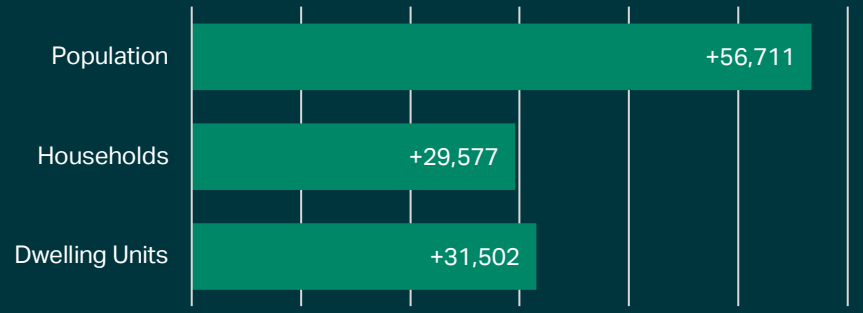
Development Test Scenarios

What does future development look like if the status quo is continued?



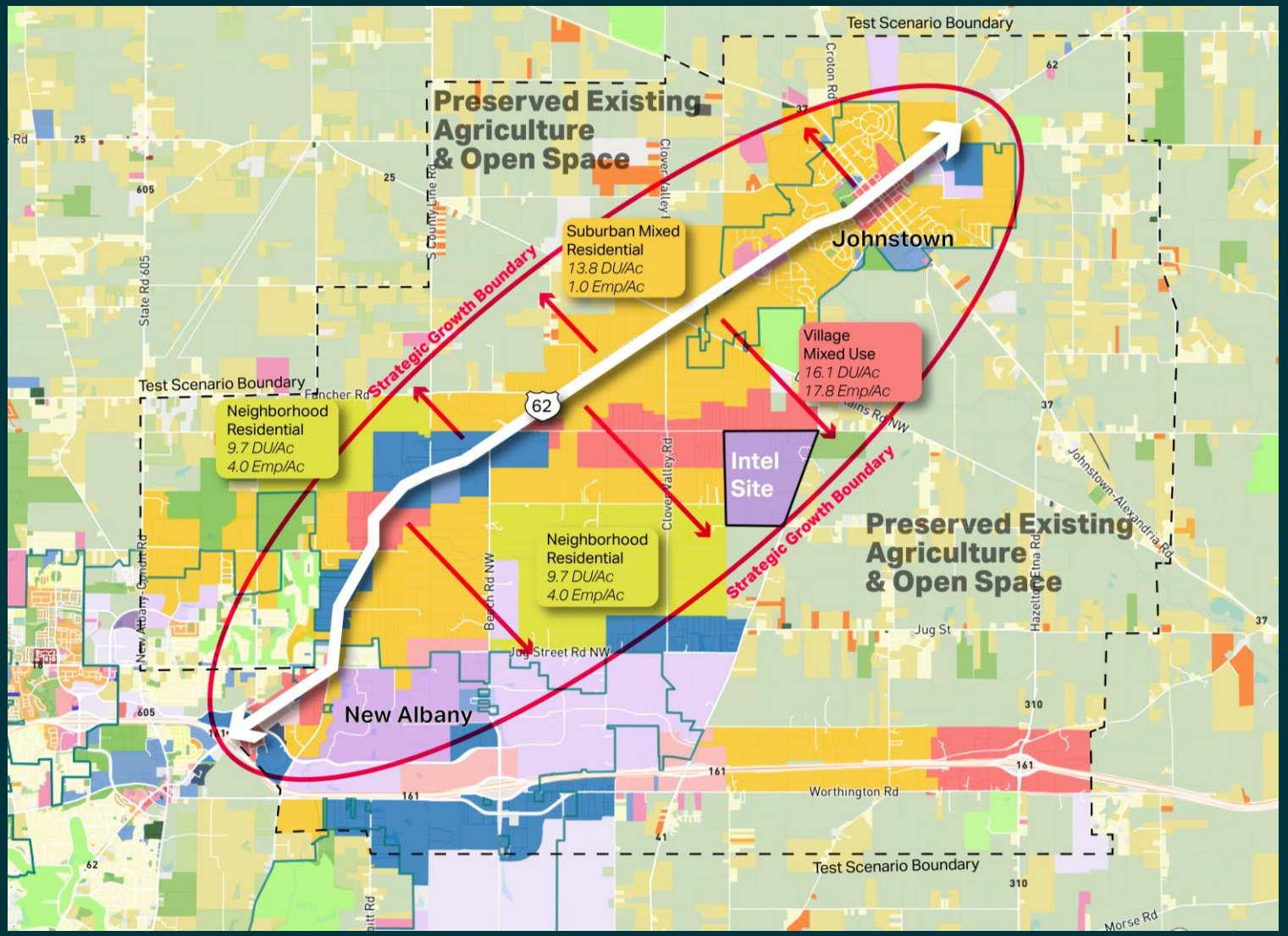
- MORPC's current future land use scenario for 2050 (pre-Intel announcement) shows **low-density residential** along much of the northeast corner of the region
- As housing pressures increase in the region, this could easily translate to a disconnected **"suburban sprawl" pattern of land use**

MORPC Future Land Use 2050, Test Scenario



Development Test Scenarios

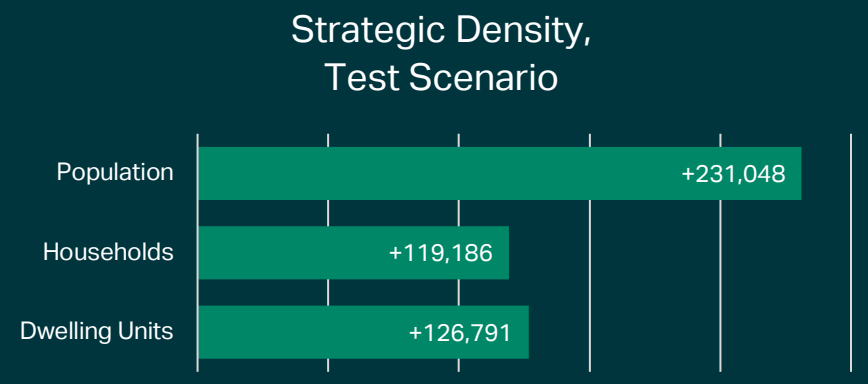
What does it look like if a "strategic density" approach along Rte. 62 is used instead?

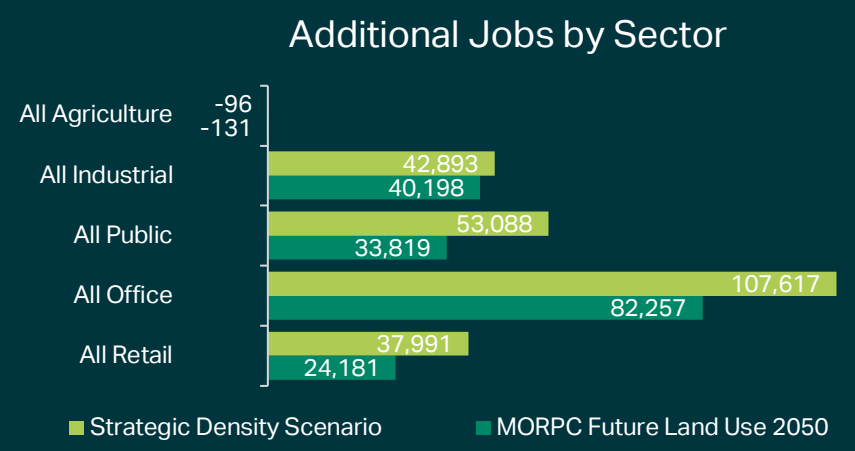


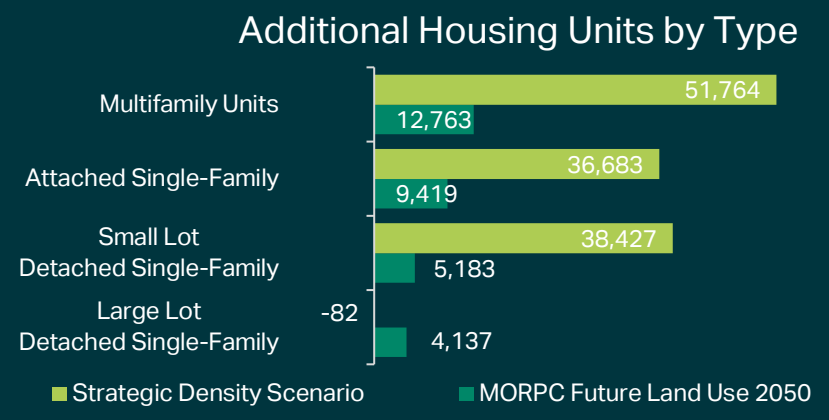
- Under an alternative, higher-density, mixed-use scenario, intentional planning for the northeast Columbus region could yield a more **sustainable, human-scale, transit-oriented pattern of development**
- This could preserve open space, and allow development to cluster closer to transit/transportation corridors, thus **mitigating many of the negative externalities/impacts** typically associated with a large influx of population, and opening up opportunities to **improve regional connections & mobility**

Development Test Scenarios

Strategic Density (Modeling growth along Route 62)







- Compared with MORPC's current projections, **multifamily** would be the predominant residential use, which would also encourage the development of more affordable/workforce housing, as it is less costly to develop than single-family, and uses less land
- Denser development located in intentional clusters could also spur **additional economic development/job growth**, provide environmental benefits, and improve quality of life for all residents

Impacts & Opportunities

Population

Impacts

- Peer cities like Austin and Phoenix saw **significant population increases** as they began to attract more tech companies/workers to the area
- Large, rapid influxes of population create **stress** on regional utility and transportation networks, and put pressures on housing, public schools, and other **public services**
- Additionally, in-migration of people from other areas can **impact the existing social fabric** of an area, creating tensions between new and current residents
- Social services may be inadequate to address an influx of new residents, particularly for new residents on the lower-income spectrum, or those that don't speak English as a first language

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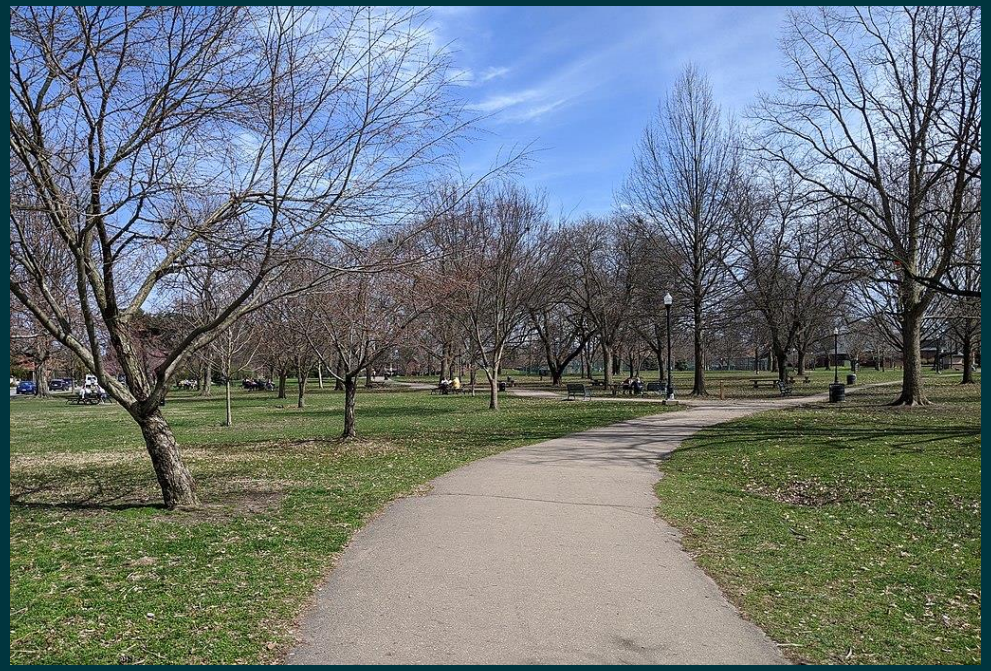
Population

Strategies and Opportunities

- **Regional partnerships** between public, private, and nonprofit entities will be critical for addressing some of these impacts; partnerships are also seen favorably by major federal grantors, including U.S. HUD and the U.S. EDA, among others
- Columbus-area localities may want to consider **partnering with Intel** and other major employers to discuss alternatives for accommodating population growth in a sustainable, equitable manner
- Engaging community stakeholders will be critical for addressing **equity** and quality of life concerns, as well as preserving/enhancing **"social infrastructure"** to support existing residents, and accommodate new growth



Schiller Park, Columbus, OH
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- Existing community organizations should consider forming partnerships, and discussing ways of **integrating new residents** while preserving existing cultural and social heritage
- The Columbus region has a strong direct and indirect commitment to **multiculturalism and social heritage**; this should be celebrated as part of a **strategic effort to be inclusive and welcoming**

Housing

Impacts

- Many growing tech hubs across the U.S. have experienced significant pressure on housing supply and affordability
- New Albany is already an affluent area with higher home values than much of the region; according to Zillow, a “typical” home costs **~$560K**, compared to **~$241K** for a typical home in greater Columbus
- Other townships in Licking County, like Saint Albans, are already concerned about the provision of affordable/workforce housing in their communities
- As population pressures increase throughout the region, lower-income/vulnerable communities in northeast Columbus could face **gentrification/displacement**

East Columbus, OH
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Housing

Strategies and Opportunities

- The Northeast Columbus neighborhoods closer to this site will likely see increased in housing demand, and should consider **re-examining their comprehensive plan/small area plan goals**, and consider conducting **housing studies** to assess the ability of their current housing stock to absorb new demand
- Communities should consider partnering on **incentivizing the private sector** to build more workforce and “missing middle” housing by offering tax breaks, density bonuses, and other local/regional incentives
- Multiple local and regional strategies exist for reducing gentrification & displacement, including inclusionary zoning, encouraging the construction of **accessory dwelling units (ADUs**), deed restrictions, rent control/rental assistance programs, etc.

ADU in Stapleton, CO
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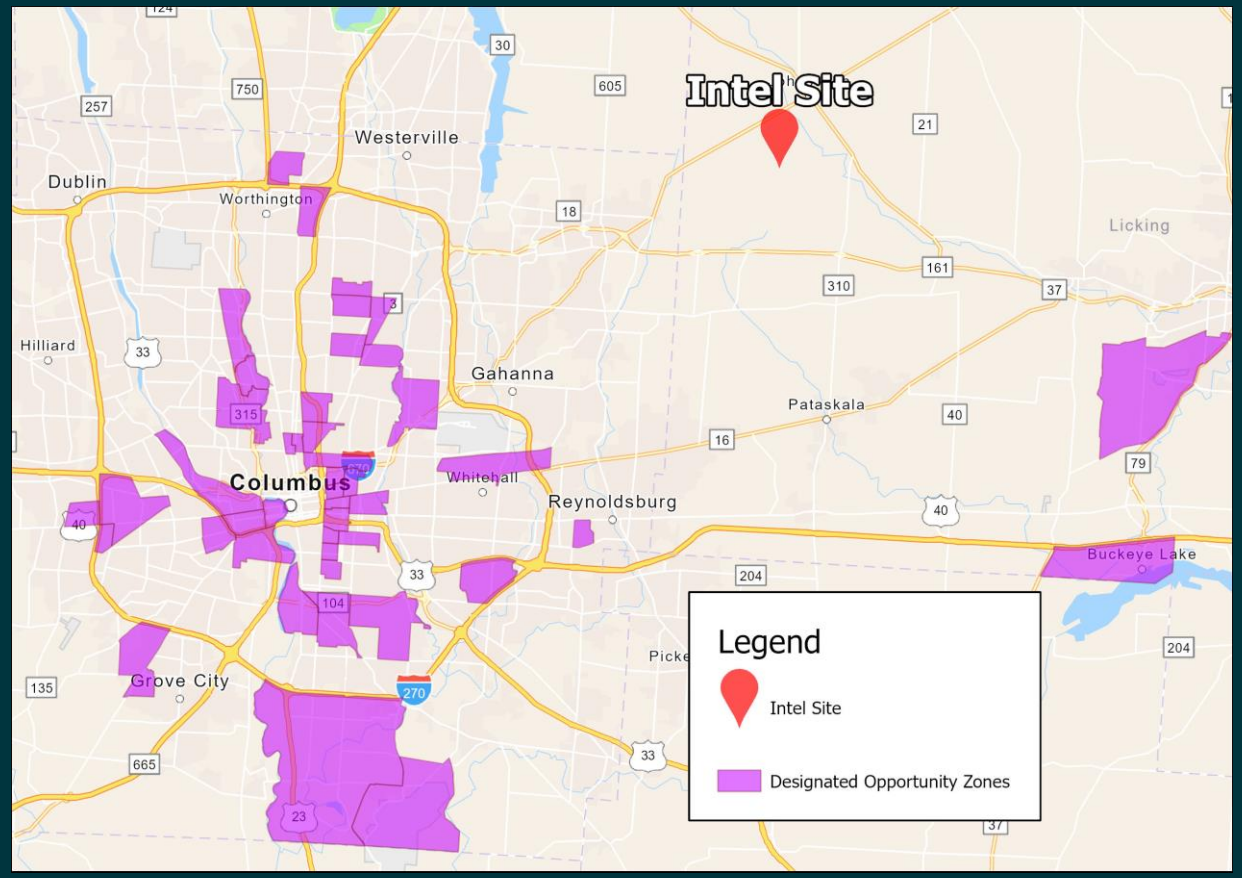
Housing

Strategies and Opportunities

- **Regional partnerships** with community development corporations, land banks, and non-profit housing developers can better take advantage of federal funding for affordable housing, including U.S. HUD Low-Income Housing Tax Credits
- HUD also offers grant funding for communities to build more affordable housing as part of their community development initiatives
- For most HUD grants, preference is given to **opportunity zones,** of which there are many in the Columbus region (see map)
- Recently, major companies like Amazon have dedicated **specific funds to building more affordable & workforce housing** in communities where they plan to locate a large facility/headquarters



Education & Workforce

Impacts

- In most peer tech cities, the number of students graduating with electrical engineering degrees, as well as degrees in other tech fields, has **steadily increased** since tech fields began concentrating in those areas
- Columbus has already seen increases in students seeking tech degrees; it is assumed that students seeking additional education in high-tech fields will **increase significantly**
- The four institutions currently offering additional education in these fields may not have the capacity to take on a significant influx of additional students in the coming years

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- Across the U.S., interest in tech fields is also increasing among K-12 students; Columbus City Schools already offer STEM programs, but they and other local school systems **may not have the capacity to keep up with high demand**

Education & Workforce

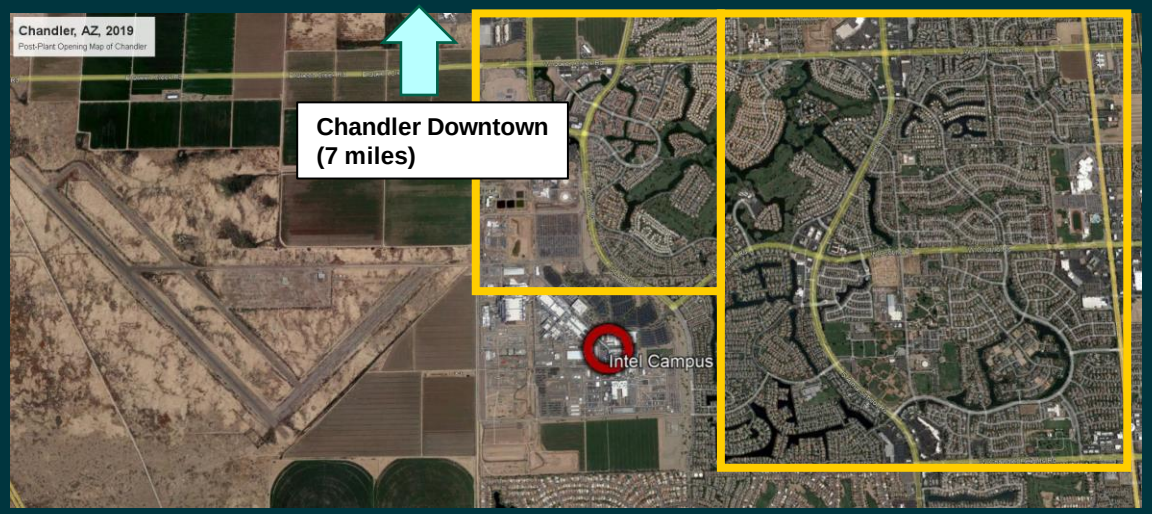
Strategies and Opportunities

- Major private sector tech employers like Intel, Honda, TS Tech and others should consider **partnering with educational institutions across the region**, both K-12 and higher ed, to provide programs for workforce development and training; Intel has already pledged $100 million towards workforce development in the state of Ohio, which should be used to leverage additional investment by other major players for their **collective mutual benefit** and that of the region's residents/workforce
- Community colleges will be a critical resource for **filling the upskilling gap**
- Public-private partnerships could also direct funding to support educating residents who currently have **low access to opportunity** to help them gain training/degrees in tech fields
- Regional governments need to ensure that the **physical, social, and economic/workforce infrastructure** is there to support the demand for tech workers, as well as support for growth in industries "symbiotic" with semiconductor manufacturing, including warehousing, electrical apparatus merchants, market consulting services, etc.
- The **Owens Corning Research and Development Center in Granville** is a potentially opportunity area for **clustering** additional high-tech manufacturing and R&D centers

Transportation & Land Use

Impacts

- Many of Columbus's peer tech cities have seen a **worsening in already high traffic congestion,** particularly on regional roads/interstates
- Peer cities like Chandler, AZ experienced rapid urbanization largely on the **periphery** of more urbanized areas; previously agricultural/open land was converted to low-density suburban neighborhoods, strip retail, etc.
- Without intentional planning for higher-density, walkable, urban, transit-oriented, mixed-use development, **the Columbus region could experience a similar phenomenon**
- Parts of the region that are expected to experience significant growth also lack **"last-mile"** transportation connections



Transportation & Land Use

Strategies and Opportunities

- Pivot Columbus's **multimodal Smart Mobility transit hubs** provide a good model for increasing access to multiple modes of transportation; these could be replicated further north and east of the City to strengthen connections to the New Albany area
- Pivot Columbus's P3 approach also provides a good model for **forming new regional partnerships** around transit, access, equity, and sustainable development
- Potential funding sources for "last-mile" highway connections include federal infrastructure development grants (e.g., the Reconnecting Communities program under the Infrastructure Investment and Jobs Act)

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Transportation & Land Use

Strategies and Opportunities

- The 2021 New Albany Strategic plan notes that residents are in favor of a **"green belt,"** an alternative approach to land use planning to help reign in suburban sprawl and preserve open/green space
- Regional plans and initiatives like insight 2050 and LinkUS recommend **higher-density, mixed-use, transit-oriented development** – its surrounding communities may want to consider adopting/aligning with this regional vision
- Communities like New Albany have committed to **shared-use trails** for cyclists and pedestrians and seeks to extend connections regionally; opportunity to connect the new Intel sites to this network

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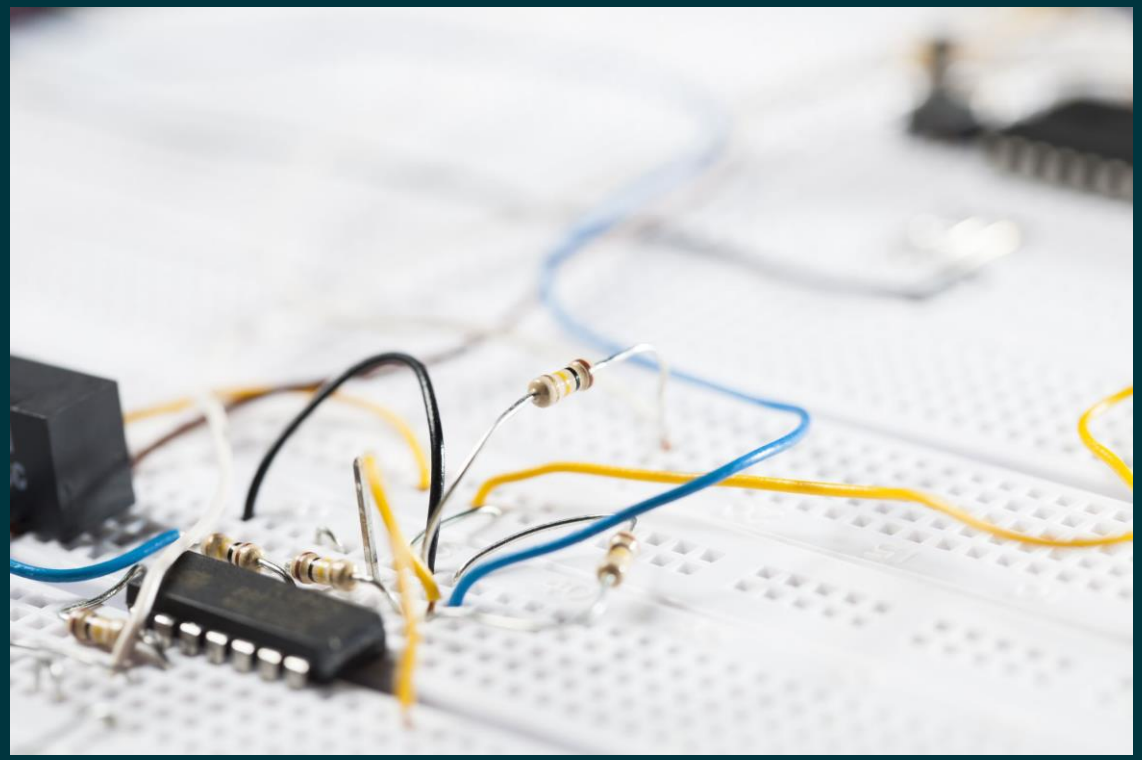
Environment

Impacts

- Intel's two proposed plants could lead to additional direct consumption of to **4 – 8 million gallons of water per day**: although the Columbus region has not experienced the level of pressure on potable water systems that the drought-prone southwest has seen, this level of additional usage could **stress the capacity** of existing infrastructure
- An influx of population nearly always increases strain on **natural resources**, especially as agricultural land and open space develops and becomes impervious – this could have implications for stormwater, natural habitats, and air quality, among other concerns
- GHG Emissions per fab plant ranged from 42,000 metric tons to 679,000 metric tons among selected peer cities in 2019



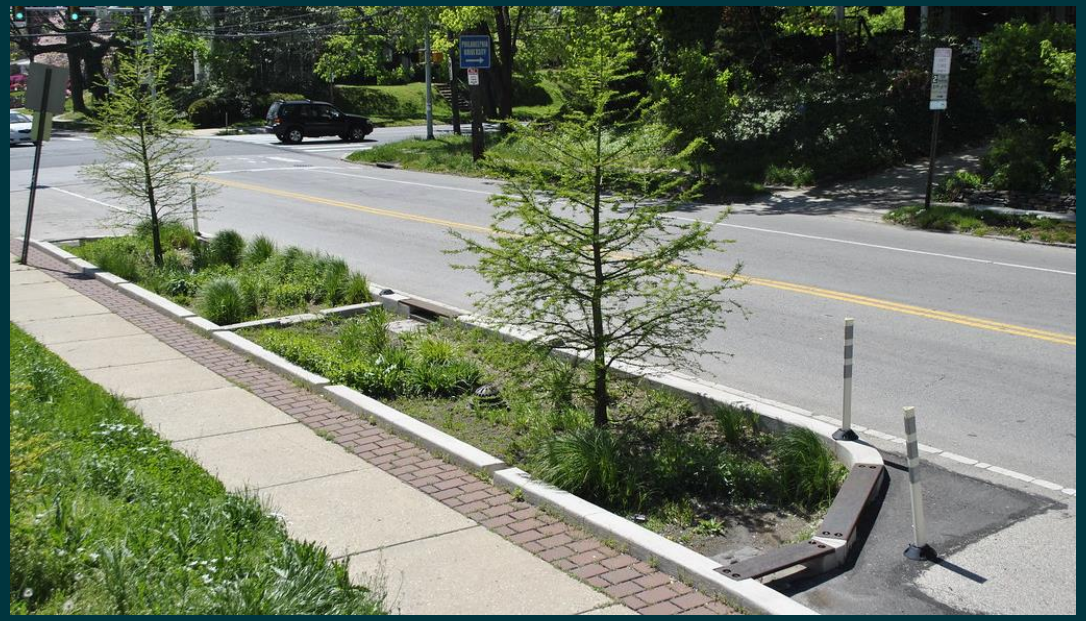
Adobe Stock Imagery

- Increased traffic from new residents + direct impacts from the chip fab plants could make it difficult for the region to reach its **goal of carbon neutrality by 2050**

Environment

Strategies and Opportunities

- Malta, NY, one of Columbus's peer tech-emergent cities, mitigated environmental impacts by incorporating **forestry buffers and wetlands protection** into the Luther Forest Technology District
- Bloomington, MN, also a growing tech hub, has pushed major GHG emitters to convert to **renewable energy** sources through incentives offered through statewide programs, in partnership with private energy utilities; Columbus should consider encouraging Intel to **demonstrate their commitment** to the region's carbon neutrality and other environmental sustainability goals



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- Localities will need to partner to incentivize **low-impact development (LID)** where possible; local codes should consider impacts to stormwater quality/quantity, and encourage higher-density, clustered development when feasible
- Local and regional utilities will need to partner to discuss broader potential impacts to the system and opportunities for mitigation, as well as ways to encourage regional water and energy conservation through use reduction and greywater recycling/on-site collection, and incentivize the use **of renewable, on-site energy generation** whenever possible

Environment

Strategies and Opportunities

- Preserving **natural areas,** including wildlife corridors, should be a priority for Columbus's Northeast region
- Land preservation groups like the **Licking Land Trust** should be engaged in broader regional conversations about open space preservation, and major employers encouraged to demonstrate their commitment
- Other federal and state organizations, like the USDA and Ohio Department of Natural Resources, offer grants to communities for the **acquisition, development, and rehabilitation of recreational areas** that the localities in the northeast Columbus region could apply for to help offset some of the impacts of future development brought on by regional growth

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- The Ohio Department of Air Quality's Clean Air Improvement Program offers **bond financing** for businesses to invest in cleaner technologies

Economy & Employment

Impacts

- The region has experienced labor force participation around 68% since 2014, slightly higher than the state's average of 64%, and higher than the national average of 62%
- Like many areas across the U.S., **unemployment has dropped significantly** over the same time period, to ~ 3.5%
- High labor force participation + low unemployment could mean an **undersupply of available local workers** to fill new jobs
- Although it is anticipated that a significant percentage of tech workers will migrate to the Columbus area in the coming years, the region may experience labor shortages if it is unable to keep up with the demand for skilled workers – not only for semiconductor manufacturing jobs, but for **jobs in "symbiotic" industries like electronics/computer manufacturing, software development, and IT**
- According to EMSI multipliers, a 3,000-job increase in semiconductor manufacturing within the Columbus MSA can induce up to:
    - **6,000** new jobs (direct and induced)
    - **$486 million increase** in earnings and spending across the region
    - **$14.2 million increase** in local taxation on production and imports

Economy & Employment

Strategies and Opportunities

- It is recommended that local employers, economic development organizations, and educational institutions consider partnering to create an **“entrepreneurial ecosystem”**– a network of business incubator spaces, workforce development opportunities, and resources for entrepreneurs & small businesses could capitalize on the momentum spurred by Intel’s investment
- State and federal organizations like the U.S. EDA, U.S. Small Business Administration, Ohio Economic Development Association, Jobs Ohio, and other regional organizations offer **grants and technical assistance** to encourage both place-based economic development, and attract new major employers from outside the region

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- Malta, NY utilized a **public benefit corporation** to foster additional economic growth with the placement of a fabrication plant, an idea that Columbus-area governments could explore

AECOM General Limiting Conditions

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

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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