



2022
**AEROZONE CURRENT
CONDITIONS ASSESSMENT**
EXECUTIVE SUMMARY



ACKNOWLEDGMENTS

SPECIAL THANKS

Thank you to community stakeholders, regional partners, and the Aerozone Alliance for their ongoing contributions to the future growth and success of the Aerozone.

- City of Berea
- City of Brook Park
- City of Cleveland
- City of Fairview Park
- City of Fairview Park
- City of Middleburg Heights
- City of North Olmsted
- City of Rocky River
- City of Strongsville
- Baldwin Wallace University
- Ceres Enterprises, LLC
- Cleveland Hopkins International Airport (CLE)
- Cleveland Metroparks
- Cleveland Planning Commission
- Cuyahoga County Department of Public Works
- Destination Cleveland
- Fund for Our Economic Future
- Greater Cleveland Regional Transit Authority (GCRTA)
- Industrial Realty Group, LLC (IRG)
- NASA Glenn Research Center
- TeamNEO
- West Park Kamm's (Cleveland CDC)

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Our mission is to inform and provide professional services in support of the short and long term comprehensive planning, quality of life, environment, and economic development of Cuyahoga County and its cities, villages and townships.



Cover Image Source: Cuyahoga County



Imagine if you will, it is summer of 2032. What is the experience of a newly arrived young family that has just flown into Cleveland Hopkins International Airport, direct from Shanghai, China, for the first time? What will this family find most striking? Will it be the array of Fortune 1000 Aerospace Companies that have established innovation centers around the NASA Glenn Research Center. Will it be the buzz of the young startups looking to capitalize on the evolving and dynamic industries spanning from energy sustainability, deep space communication & propulsion, etc.

Or will it be the Biomimicry corridor incubator that has been successfully designed and deployed and is now a global benchmark on how communities, businesses and learnings from nature can come together to co-create a sustainable economy.

Or will it be the integrated multi-model transit network that is bringing cutting edge solutions such as hydrogen powered mass transit buses, automated drone base cargo delivery, or electrified vertical take-off and landing vehicles.

Or will it be the outdoor public spaces, the vibrancy, the arts, the sculptures that showcase the creative vibrancy and the unique aerospace and aviation history of the region.

Or is it something that we can't yet imagine? The Aerozone District is a canvas upon which the citizens of northeast Ohio have an opportunity to paint their economic vision. The Aerozone District currently is an idea. An idea that is germinating in the minds of key leaders. These leaders are beginning to see beyond the current lackluster identity of the Aerozone District and are beginning to envision a compelling possibility.

The Current Conditions Assessment is the starting place for this compelling journey. We are incredibly thankful to Cuyahoga County Councilman Dale Miller and the Cuyahoga County leadership for their support. We are thankful to the Cuyahoga County Planning Commission for their expertise in leading the study. And, finally are thankful to our many Alliance stakeholders who have provided their valuable insights that have made this study possible.

A handwritten signature in black ink, appearing to read "Hrishue Mahalaha".

Hrishue Mahalaha
Executive Director
Aerozone Alliance



PROJECT STUDY AREA

WHAT IS THE AEROZONE?

The Aerozone is an employment center of technology, research, development, and logistics jobs clustered within the communities surrounding the Cleveland Hopkins International Airport and NASA Glenn Research Center. These jobs and the entire economic development district support the engineering, science, and performance fulfillment outcomes of NASA Glenn Research Center as it performs its key role for the mission to Mars. NASA Glenn, with the support of the Aerozone, will continue to play an active role in its success.

The mission of the Aerozone Alliance is to create a world-class innovation hub to attract more smart jobs and greater capital investment to the region. These efforts capitalize on the unique strength of this nearly 1,200 acre district to create regional economic growth by working collaboratively with communities and employers alike. The Alliance includes both public and private stakeholders who aim to attract small-to-mid-sized companies and multi-national corporations as well as entice developing technologies to commercialize in the geographic area near Cleveland Hopkins International Airport and the NASA Glenn Research Center facilities. The vision is further sharpened with the remarkable success NASA Glenn has achieved supporting emerging entrepreneurs and minority and female businesses through the Federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STIR) Programs.

The Aerozone Alliance represents an unprecedented partnership between business representatives, county officials, mayors and managers, community planners, and regional/federal technology and innovation experts. Together, these partners—nonprofits, federal labs, government agencies, private sector actors, and municipalities—are collectively tackling what none of them can

accomplish alone: creating a world-class innovation district to live, work, and grow. These partners are empowered to create an environment with fewer obstacles on the path to innovation and business growth. The district builds upon the already impressive ecosystem radiating from Cleveland Hopkins International Airport and the NASA Glenn facility. The Ohio Department of Transportation estimates the annual economic output from Hopkins alone at \$4.6 billion.

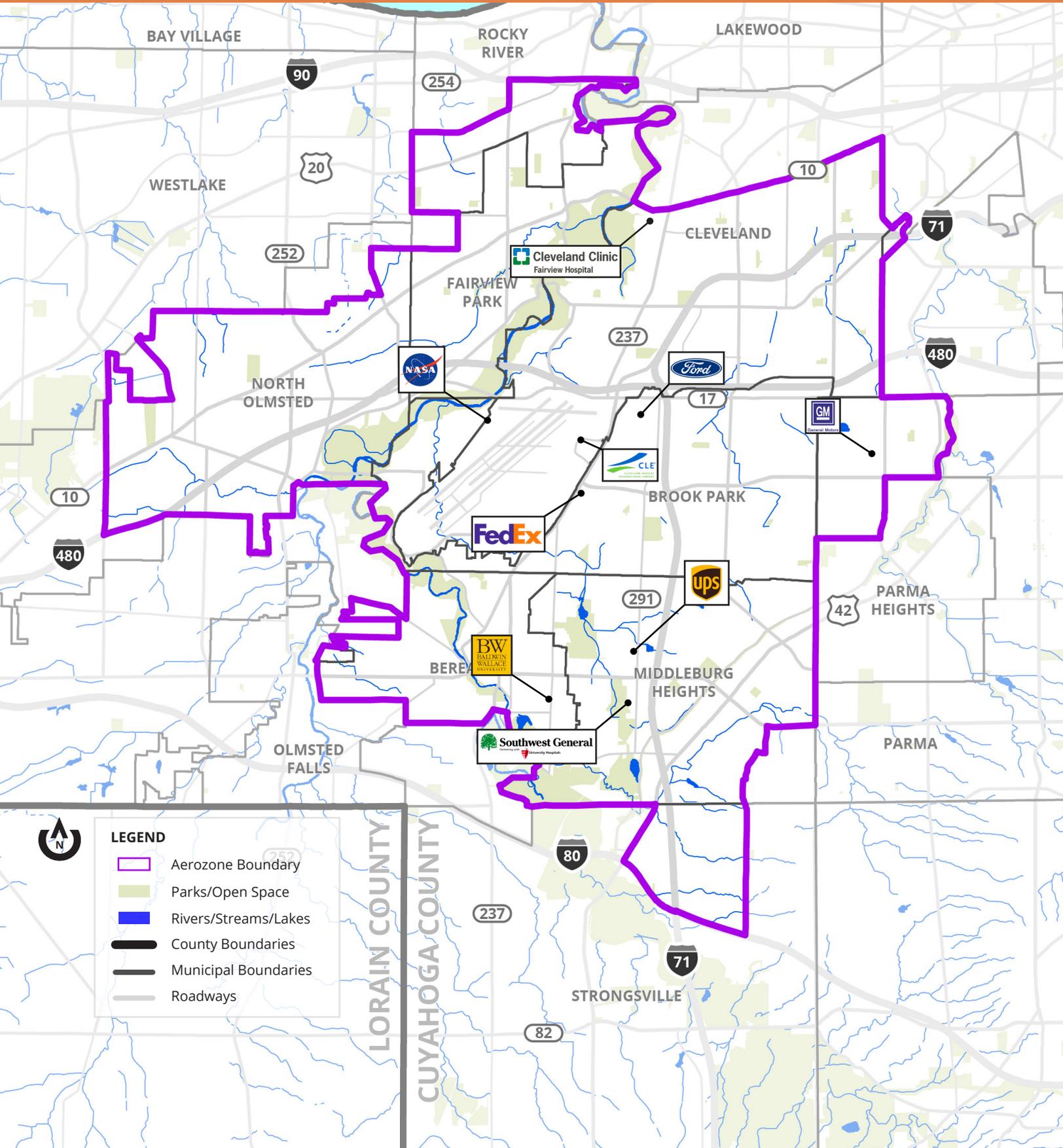
The Aerozone is a prime place to locate for organizations intent on reaching global markets, leveraging highly skilled talent and those that are doing or want to do business with NASA. The proximity to these unique assets can catalyze the commercialization of research & development and spin-off activity. It's a proven cycle with a strong track record: Where smart people and smart organizations congregate, good things happen.

WHAT IS THE CURRENT CONDITIONS ASSESSMENT?

The Current Conditions Assessment provides a point-in-time snapshot of the Aerozone area and can identify issues that need to be addressed, areas of overlapping efforts that can be coordinated, clusters of assets that can be built upon, and opportunities for engagement, collaboration, and growth.

This analysis lays the groundwork for future planning efforts and provides communities, partners, and major employers the opportunity to grow the economic future of the Aerozone, together.

The Current Conditions Assessment includes a deep analysis of data across multiple topics to better understand the Aerozone Area.





AEROZONE AT A GLANCE

WHERE ARE WE TODAY?

100,684

total jobs are located within the Aerozone, making it one of the largest employment hubs in the County.

10,275

new jobs were added between 2010 and 2019—an 11% increase, which is a faster rate of growth than the County as a whole.

2.94 LQ score

for Transportation & Warehousing is the highest among all employment sectors—indicating the Aerozone is more highly concentrated in this sector than the seven county region.

LQ = Location Quotient

18%

of all Aerozone jobs are within the Health Care & Social Assistance industry—the highest within the Aerozone.



16,411

workers live and work within the Aerozone, while 84,273 workers commute into the Aerozone for their jobs.

1.2 million

people live within a 45 minute commute to Cleveland Hopkins International Airport—making for a large and diverse pull of potential workers.

48.6%

of all jobs located within the Aerozone are accessible via the Greater Cleveland Regional Transit Authority (GCRTA).



1,135 acres

of land within the Aerozone has been identified as having the potential for redevelopment.

69%

of total land area is being used by two main land uses: single-family and institutional.

77%

of potential redevelopment sites are zoned for industrial uses—876 acres of land, which indicates a high level of opportunity for new economic drivers for the Aerozone.

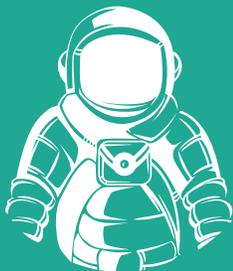


3,172

hotel and motel rooms are available within the Aerozone—with the highest concentration being located in the City of Cleveland (1,209).

\$102 million

in taxable building value—impacting 324 parcels—was added within the Aerozone from 2019 to 2021.



Only 10

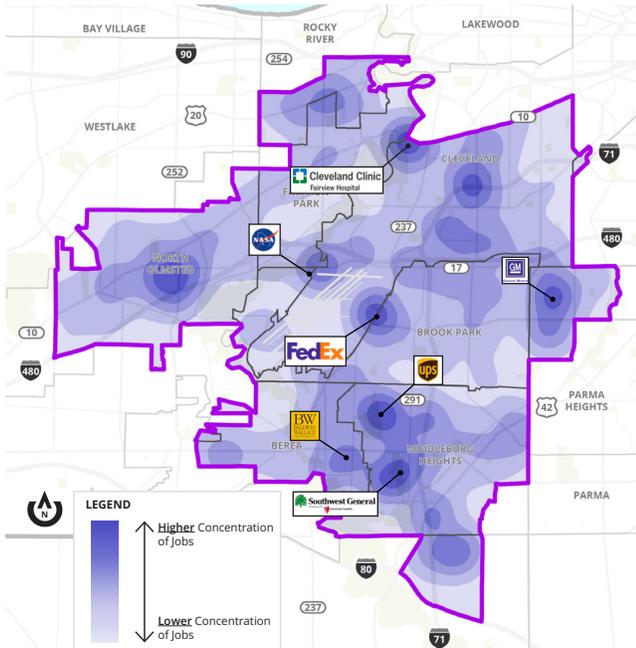
major NASA centers exist throughout the country—making NASA Glenn a critical institution for the advancement of space exploration.



THE ANALYSIS

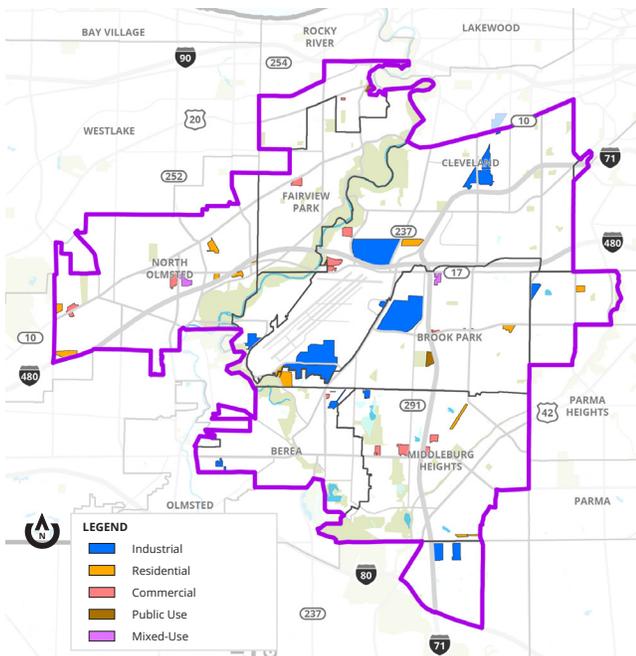
WHAT DID WE FIND?

INTERNATIONAL EXPOSITION CENTER



THE LARGEST EMPLOYMENT SECTOR WITHIN THE AEROZONE IS HEALTH CARE & SOCIAL ASSISTANCE

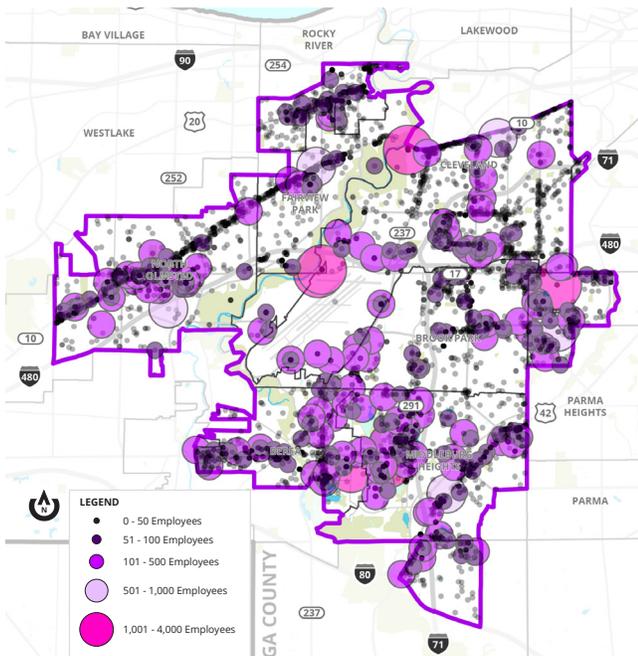
Accounting for 18% or 17,639 jobs, Health Care & Social Assistance is the largest industry sector within the Aerozone—due to two major hospitals in the area. However the Aerozone is more concentrated than the seven county region in Transportation & Warehousing (2.94 location quotient). Additionally, Target industries, or sectors of high importance for continued Aerozone job growth, include Manufacturing (12%); Transportation & Warehousing (12%); Professional, Scientific, & Technical Services (5%); and Public Administration (3%). Together, these target industries account for 32% of total Aerozone jobs and are anchor industries for continued growth.



THERE ARE APPROXIMATELY 1,135 ACRES OF LAND AVAILABLE THAT HAVE BEEN IDENTIFIED FOR POTENTIAL REDEVELOPMENT WITHIN THE AEROZONE

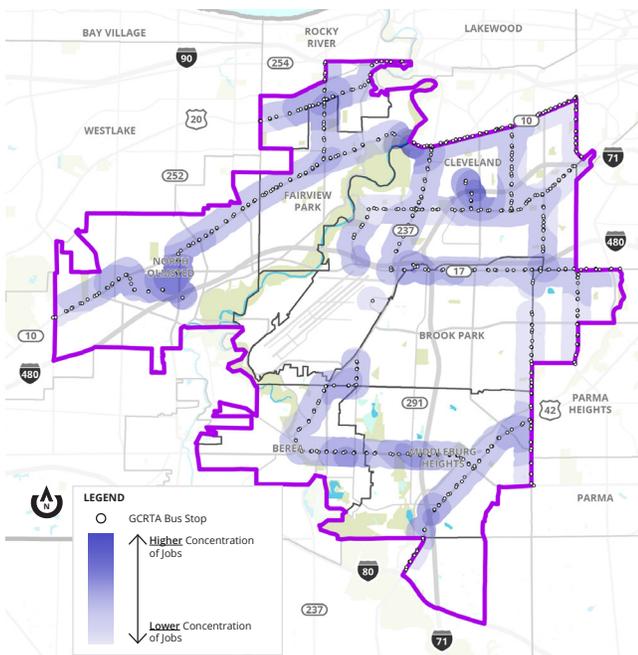
Through an analysis of existing vacant land, inventorying land being marketed by TeamNEO, and by conversations with local municipalities, a collection of potential Aerozone redevelopment sites were established. The largest redevelopment opportunities are currently zoned for industrial uses and are located within the Cities of Cleveland and Brook Park. In general, these sites vary greatly in size, ownership, and redevelopment readiness, but all share an opportunity to support the economic development initiatives of the Aerozone.

Source: Longitudinal Employer-Household Dynamics (LEHD), Area Profile Analysis by All Jobs, 2019; Source: County Planning; TeamNEO; Cuyahoga County Department of Development; City of Berea; City of Brook Park; City of Cleveland; City of Fairview Park; City of Middleburg Heights; City of North Olmsted; City of Rocky River; City of Strongsville; West Park Kamm's CDC



NASA IS ONE OF THE LARGEST AEROZONE EMPLOYERS WITH MORE THAN 7,000 EMPLOYEES

The Aerozone's largest employers also correspond with many of the area's largest industry sectors, such as Health Care & Social Assistance, Manufacturing, and Transportation & Warehousing. Though not one of the highest industry sector concentrations found within the Aerozone, Public Administration (13th highest concentration) has one of the largest employers—NASA Glenn Research Center. The facility and its research centers employ more than 7,000 workers and is one of only ten NASA Centers in the country.



JUST UNDER 50% OF TOTAL JOBS ARE ACCESSIBLE VIA PUBLIC TRANSPORTATION (48.6%)

Of the Aerozone's 100,684 jobs in 2019, 48,932 are located within one quarter mile of a GCRTA bus stop. Comparatively, target industries or sectors of high importance for continued Aerozone job growth consistently have less access to public transportation than non-target industry sectors. Industries such as Professional, Scientific, & Technical Services have less direct access to public transportation for its employees. Additionally, the target sectors of Manufacturing and Transportation & Warehousing are disproportionately underserved based on overall employment numbers, indicating more employees working within those sectors have fewer commuting options.

Source: Reference USA, May 2022; TeamNEO; U.S. Bureau of Labor Statistics, National Business Employment Dynamics Data by Firm Size Class; Longitudinal Employer-Household Dynamics (LEHD), Area Profile Analysis by All Jobs, 2019



THE ANALYSIS

WHAT DID WE FIND?

INTERNATIONAL EXPOSITION CENTER

THE AEROZONE IS SEEING JOB GROWTH WITHIN TWO OF ITS FOUR KEY TARGET INDUSTRIES CRITICAL TO SUPPORTING THE ADVANCEMENT OF ITS ECONOMIC GOALS

The Aerozone is seeing job growth within two of its four key target industries critical to supporting the advancement of its economic goals. From 2010 to 2019, Manufacturing saw an increase of 13% (1,331 jobs); and Professional, Scientific, & Technical Services saw an increase of 17% (689 jobs). However, both Transportation and Warehousing (5% decrease, loss of 564 jobs), and Public Administration (22% decrease, loss of 739 jobs) saw decreases. These industries should be monitored to ensure they are not negatively impacted in the future.

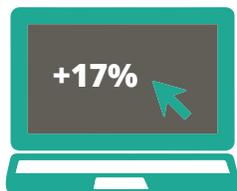
In addition to evaluating change over time to understand employment trends, a location quotient (LQ) analysis compares the concentration of employment in a smaller area to that of a much larger area to show the extent to which certain industries are clustered within that smaller

area. This type of clustering can indicate unique locational advantages or the extent to which an area excels in certain industries. Those industries with a LQ greater than the number one indicate a greater concentration of employment within the Aerozone, while those industries with a LQ less than one indicate a lower concentration.

Within the Aerozone, there are four industry sectors that have a location quotient greater than one—Retail Trade (1.22); Real Estate, Rental, & Leasing (1.30); Finance & Insurance (1.47); and Transportation & Warehousing (2.94). This indicates that these industries in particular are more highly concentrated within the Aerozone than throughout the seven county region.

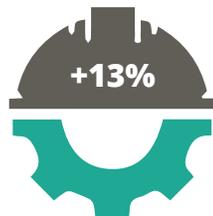
Target Industry Sectors that GAINED Jobs from 2010-2019

1 Professional, Scientific, & Technical Services



Increase of 689 Jobs

2 Manufacturing



Increase of 1,331 Jobs

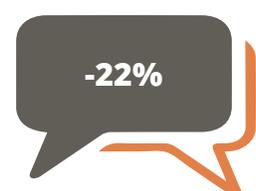
Target Industry Sectors that LOST Jobs from 2010-2019

3 Transportation & Warehousing



Decrease of 564 Jobs

4 Public Administration



Decrease of 739 Jobs

Source: Longitudinal Employer-Household Dynamics (LEHD), Area Profile Analysis by All Jobs, 2010-2019



THE AEROZONE'S WORKFORCE IS CONTINUING TO SEE JOB GROWTH, AND EDUCATIONAL ATTAINMENT AND SALARIES ARE ALSO GROWING TO REFLECT THESE CHANGES

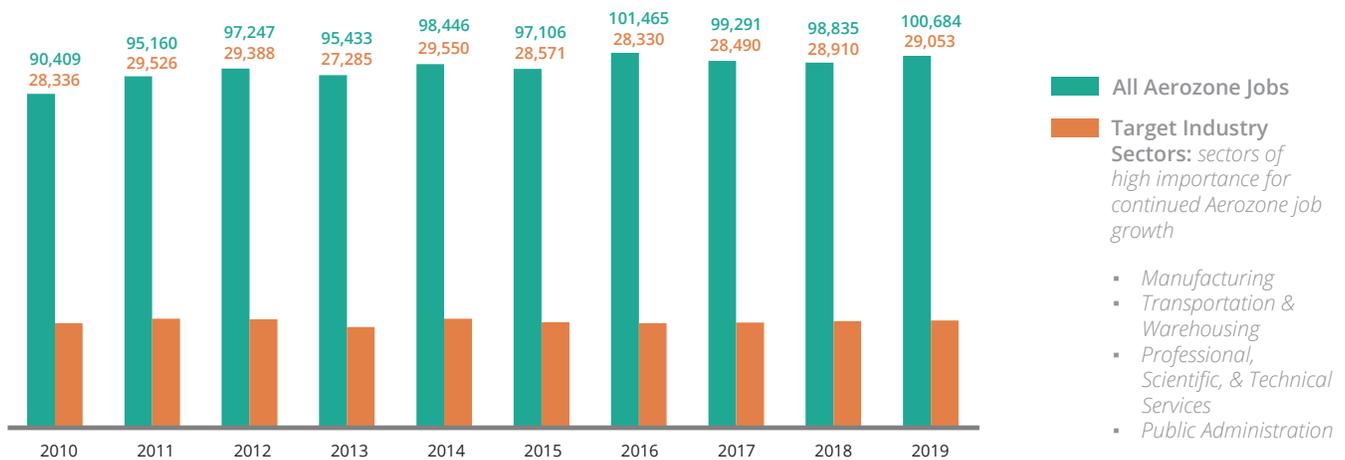
From 2010 to 2019, the Aerozone saw relatively steady job growth, adding 10,275 new jobs—an 11% increase. The majority of that growth has been in high-paying jobs. During that time period, jobs paying more than \$3,333 per month increased by 39% equating to nearly 13,000 new, high-paying jobs.

This increase in salaries also corresponds to upward trends in educational attainment among employees, with significant increases in workers with a college degree. From 2010 to 2019, there was a 14% increase in workers with a Bachelor's degree or another advanced degree (2,743 workers), and a 12% increase in workers with some college or an Associate degree (2,837 workers).

Additionally, Aerozone workers are trending towards older age groups. From 2010 to 2019, workers over the age of 55 have increased 48% (gain of 8,850 workers).

In general, the current Aerozone workforce is becoming older, holding more advanced degrees, and salaries are increasing to reflect these changes. This indicates a need and an opportunity to prepare for a potentially large outgoing workforce in the next decade by training new employees to undertake their roles.

TOTAL NUMBER OF AEROZONE JOBS, 2010-2019



Source: Longitudinal Employer-Household Dynamics (LEHD), Area Profile Analysis by All Jobs, 2010-2019



CHARACTER AREAS

WHERE DO INDUSTRIES CONCENTRATE?

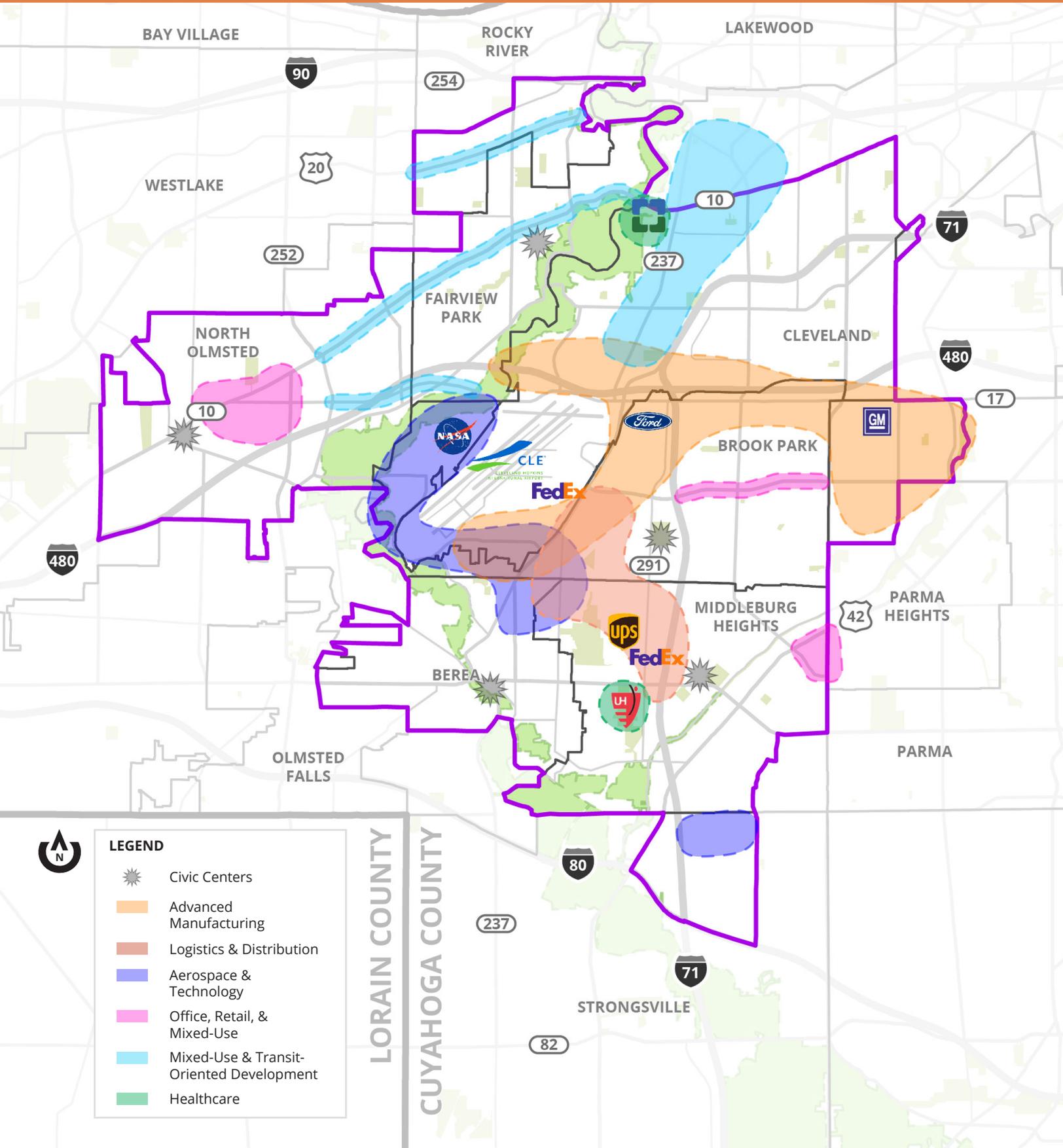
Character areas are general locations within and around the Aerozone where broad land use and business types currently exist and where they could be focused in the future. The map is a tool to show how economic and transportation initiatives could be focused to specific areas as part of a comprehensive effort to grow jobs in the Aerozone. These areas were determined through a detailed land use analysis, in addition to 21 individual stakeholder interviews to best understand how and where growth would make the most sense. There are six overall character areas defined within and around the Aerozone.

CHARACTER AREAS

There are six overall character areas defined within and around the Aerozone:

- 1) **Advanced Manufacturing:** This area encompasses many of the existing, major manufacturers within the Aerozone including GM and Ford. This area is primed for advanced manufacturers that can support job growth and harness the transportation assets of the Aerozone District.
- 2) **Aerospace & Technology:** This area encompasses much of the zone around NASA and areas south of the airport, as well as the technology district in Strongsville. This area includes the unique test facilities at NASA Glenn and envisions additional aerospace and technology companies to service and support NASA Glenn and Cleveland Hopkins International Airport.
- 3) **Logistics & Distribution:** This area is shown in the northern half of Middleburg Heights and along Engle Road. It includes existing logistics companies such as FedEx and UPS and is envisioned as an expansion of distribution companies that rely on the Aerozone's transportation assets, especially freight distribution through Cleveland Hopkins International Airport.
- 4) **Mixed-Use & Transit-Oriented Development:** These areas follow major existing or planned train and bus routes, especially the GCRTA Red Line that runs north into Cleveland. Higher-density mixed-use development can focus on transit access, and these areas are important for providing access to jobs, new housing types, and activity hubs for Aerozone workers. Airport.
- 5) **Office, Retail, & Mixed Use:** These areas include the Great Northern Mall area and Snow Road. Similar to the Mixed-Use & Transit-Oriented Development areas, these nodes could provide dense, walkable clusters of office, retail, hotels, and housing development.
- 6) **Healthcare:** These two nodes are centered around Fairview Hospital and Southwest General Hospital. The Aerozone is unique in the number of healthcare jobs located so close to the airport and NASA, and it provides the opportunity to consider how transportation and healthcare can collaborate.

Though broad in nature, these character areas help provide an overview of where different land uses exist and begin to outline targeted attraction zones for continued economic growth.



BAY VILLAGE

ROCKY RIVER

LAKWOOD

WESTLAKE

NORTH OLMS TED

FAIRVIEW PARK

CLEVELAND

BROOK PARK

MIDDLEBURG HEIGHTS

PARMA HEIGHTS

OLMS TED FALLS

BEREA

PARMA

STRONGSVILLE

LORAIN COUNTY
CUYAHOGA COUNTY

LEGEND

-  Civic Centers
-  Advanced Manufacturing
-  Logistics & Distribution
-  Aerospace & Technology
-  Office, Retail, & Mixed-Use
-  Mixed-Use & Transit-Oriented Development
-  Healthcare



STRATEGIC INVESTMENTS

WHERE DO WE MAKE TARGETED IMPROVEMENTS?

Infrastructure is a key asset for the Aerozone district, which is sited in a densely developed part of the region. Combining existing assets with opportunities for future improvements can create a dynamic district that attracts and grows jobs and workforce.

ASSETS

In terms of existing infrastructure, the Aerozone is generally in good condition and poised to support future investments. Some of the largest assets for the district include the robust highway network that includes three major interstates in close proximity; over 23 miles of existing all-purpose trails that largely follow Cleveland Metroparks reservations; and core transit assets including the GCRTA Red Line that provides direct access from the airport to Downtown Cleveland.

Additionally, two of the Aerozone's major employers—NASA Glenn Research Center and Cleveland Hopkins International Airport (CLE)—are major forms of infrastructure as well. NASA Glenn includes substantial research facilities that can be used by corporations and researchers, and CLE is a major airport with connections throughout the United States and internationally, including a direct connection to Europe.

OPPORTUNITIES

In addition to these robust assets, there are also many opportunities to expand upon existing infrastructure and strengthen the Aerozone District. Throughout the Aerozone there are several key corridors that are excellent candidates for streetscape improvements such as landscaping, signage, and lighting. These corridors could become gateways into the Aerozone and include Engle Road, Snow Road, Brookpark Road, Aerospace Parkway, Rocky River Drive, Berea Freeway, Front Street, Lorain Road, and Center Ridge Road. Furthermore, roundabouts at Rocky River Drive and Front Street as well as at Aerospace

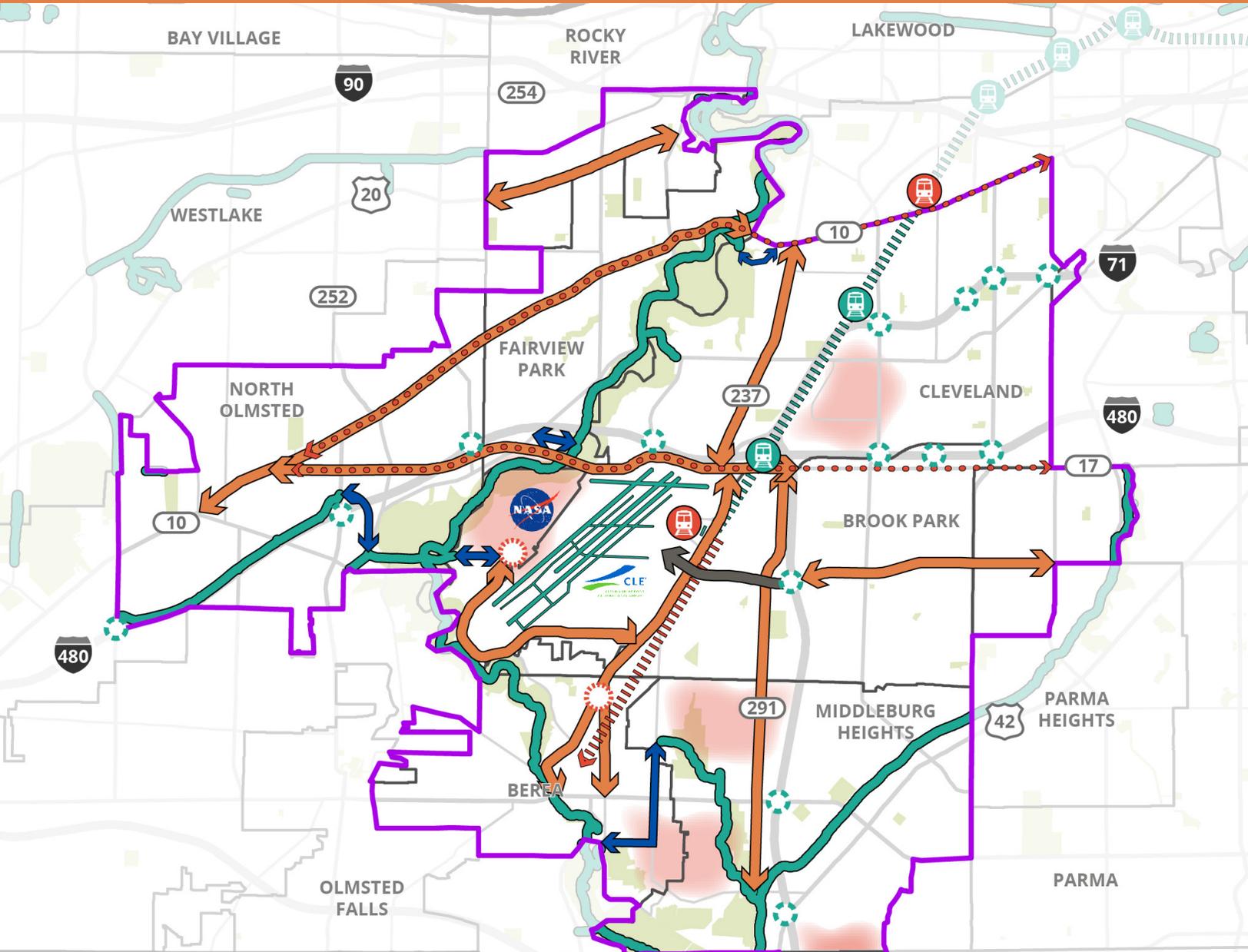
Parkway and Cedar Point Road could help improve the overall safety for users and reduce traffic congestion. Other roadway opportunities include a direct highway connection from I-71 to the airport.

Outside of roadways, other transportation opportunities could also complete a larger network of multi-modal routes in the Aerozone. Trail connections could better link existing networks to facilitate movement around the district and to major employers.

Transit improvements at GCRTA Red Line Stations—especially a rebuild of the West Park Station—could expand access and spur new development. An extension of the Red Line further south to Berea is also an opportunity to increase transit access and develop connections to Baldwin Wallace. Other areas of the Aerozone are also job hubs that are devoid of current transit access. Improved access to these areas could also open employers to a larger workforce.

Overall, there are many opportunities to strengthen and build upon the Aerozone's existing assets, especially improving access to jobs and job centers. However, many of these identified opportunities will need to be coordinated between multiple communities and partners for successful implementation.

Source: County Planning; City of Berea; City of Brook Park; City of Cleveland; City of Fairview Park; City of Middleburg Heights; City of North Olmsted; City of Rocky River; City of Strongsville; West Park Kamm's CDC; Northeast Ohio Aereawide Coordinating Agency (NOACA) Transportation Improvement Program (TIP), 2024-2027



LEGEND

- | | | | |
|---|---|---|--|
|  | All-Purpose Trail Extension Opportunity |  | Job Hubs without Public Transit Access |
|  | Streetscape Enhancement Opportunity |  | Existing All-Purpose Trail |
|  | Bus Rapid Transit (BRT) Opportunity |  | Highway Extension Opportunity |
|  | RTA Red Line Station Opportunity |  | Existing RTA Red Line Station |
|  | Roundabout Opportunity |  | Existing Highway Ramp |
|  | RTA Red Line Extension Opportunity | | |

AEROZONE MASTER PLANNING: WHAT'S NEXT?

The Aerozone, its communities, and partners are poised for economic growth. The Current Conditions Assessment was the first first step in a much larger Master Planning effort. As seen in the table below, a number of recommendations are outlined as next steps towards a complete Aerozone Master Plan. These are potential options and an agreed upon process should be finalized with the Aerozone Board and its members.

POTENTIAL MASTER PLANNING NEXT STEPS		
RECOMMENDED NEXT STEPS	TIMELINES <i>(APPROXIMATE)</i>	POTENTIAL PARTNERS/SUPPORTING AGENCIES
Identify project liaison to facilitate multi-year Master Planning process	6 months	CCPC, Aerozone Board, Cleveland Foundation, Fund for Our Economic Future
Assemble Master Planning Working Group to create RFP/RFQ for Master Planning Services	6 months	CCPC, Aerozone Board, Cleveland Foundation, Fund for Our Economic Future
Send RFP/RFQ for Master Planning Services to bid and collect responses	3 months	CCPC, Aerozone Board, Master Planning Working Group
Evaluate, score, and hold subsequent interviews with short-listed consultant teams	3 months	CCPC, Aerozone Board, Master Planning Working Group, Consultant Team
Select and bring consultant team under contract for Master Planning Services	1 month	CCPC, Aerozone Board, Master Planning Working Group, Consultant Team
Begin Aerozone Master Planning Process	1 year+	CCPC, Aerozone Board, Master Planning Working Group, Aerozone Communities, CLE, NASA, Consultant Team, Public/Private Stakeholders, Residents



County Planning

FOR OUR COMMUNITY
FOR OUR REGION
FOR OUR FUTURE