
Section 3.0 Affected Environment

3.1 Introduction

The Cuyahoga County Airport - Robert D. Shea Field (Airport or CGF) is part of a local and regional community and is connected in a variety of ways. The Airport is an employer and supports local business activity. Also, airport operations impact the land uses that are directly adjacent. This chapter presents geographic, demographic and economic information about the community in order to establish the role of the Airport within the community and the region. The topics discussed include the history of the Airport, existing facilities at the Airport, surrounding land uses, population statistics and industrial and commercial growth characteristics.

3.2 Project Location and History

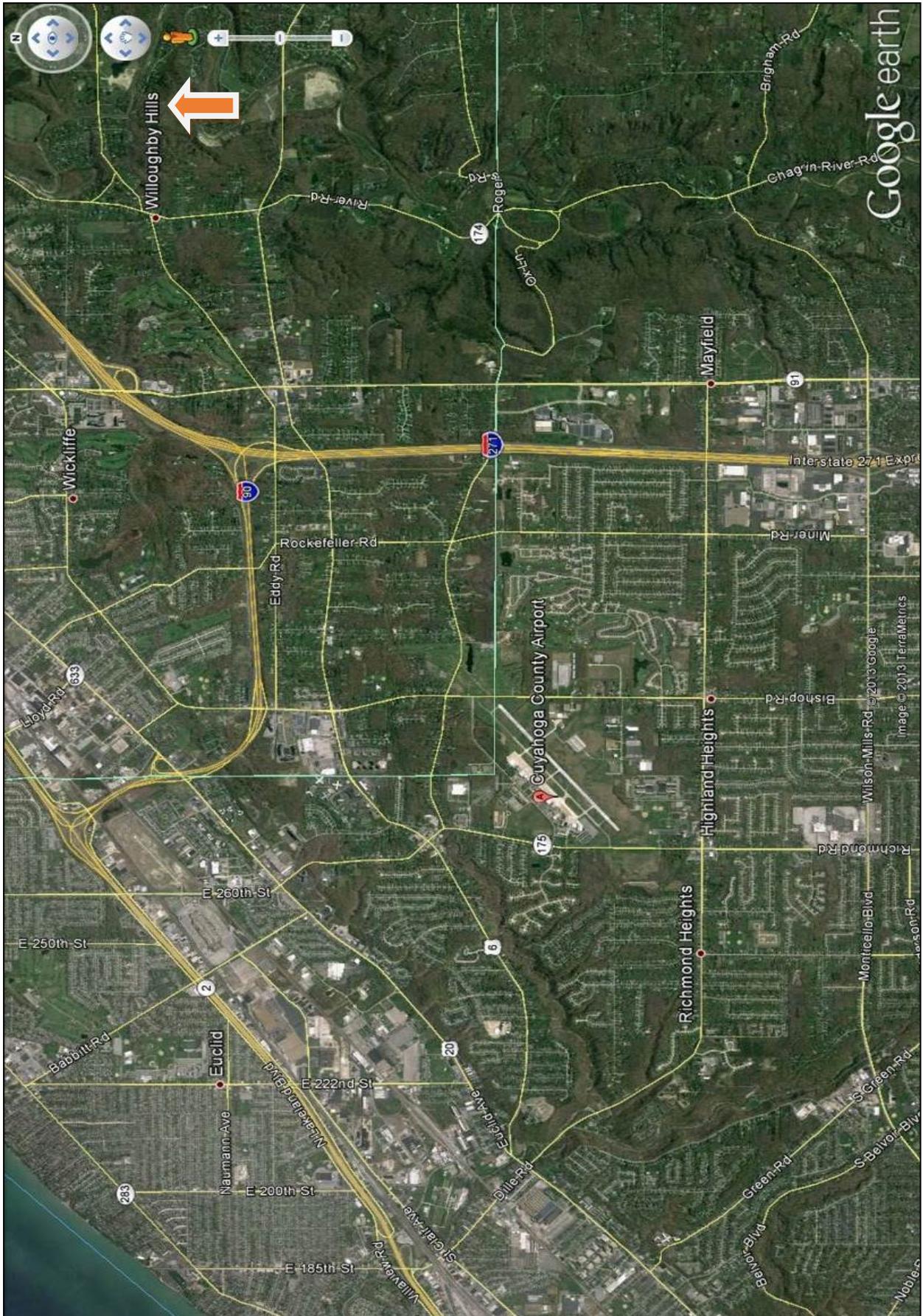
Cuyahoga County is located in northern Ohio along the shore of Lake Erie. The City of Cleveland is located in Cuyahoga County. The Airport is located approximately 11 miles east of downtown Cleveland, Ohio and approximately 4 miles south of the Lake Erie shoreline. The Airport is located between I-90 and I-271 with each major transportation corridor approximately 10 minutes away (**Figure 3-1 Vicinity Map**).

The Airport is located in both Cuyahoga and Lake Counties. It is also located in three cities: Richmond Heights, Highland Heights and Willoughby Hills. The Airport is located between Bishop Road (east), Richmond Road (west), Highland Road (south) and White Road (north). The Airport property includes approximately 660 acres.

The Airport began in Cuyahoga County in 1928 when a privately-owned airport called Curtiss Wright Field opened for business. In 1946, Cuyahoga County purchased the airport property and in 1950, the County Airport opened for business with two grass strip runways. In 1956, the first Airport Master Plan was commissioned. Another Master Plan was adopted in 1977.

In 1999, the Federal Aviation Administration (FAA) made standard Runway Safety Areas (RSAs) a priority through a directive that requires all airports to correct RSA deficiencies; RSA compliance is “triggered” by a runway construction or rehabilitation project. This means that Airport Improvement Project (AIP) funding for runway rehabilitation work is contingent on meeting the FAA’s RSA design standards. According to FAA regulations, the existing RSA lengths at the Airport are currently deficient at both runway ends. The pavement conditions are also poor and in need of improvement. As a result, planning efforts began in 2003 for a combined Airport Master Plan and RSA Study.

Figure 3-1 Vicinity Map



Not to Scale

In February 2009, the Cuyahoga Board of County Commissioners considered a draft Airport Master Plan Update that recommended Alternative 38 as the Preferred Alternative. Alternative 38 provides 6,002 feet of runway length for take-off in both directions by extending the runway by 900 feet and realigning both Richmond and Bishop Roads. The recommendation was met with significant organized public resistance and the FAA responded by asking Cuyahoga County to consider an intermediate alternative to provide 5,500 feet of runway length for take-off in each direction. As a result, Alternative 23 was recommended as the Preferred Alternative for the intermediate term and Alternative 38 was preserved as the ultimate plan. In 2010, the County Board of Commissioners adopted the current Airport Master Plan Update that this EA is based upon.

3.3 Existing Airport Facilities

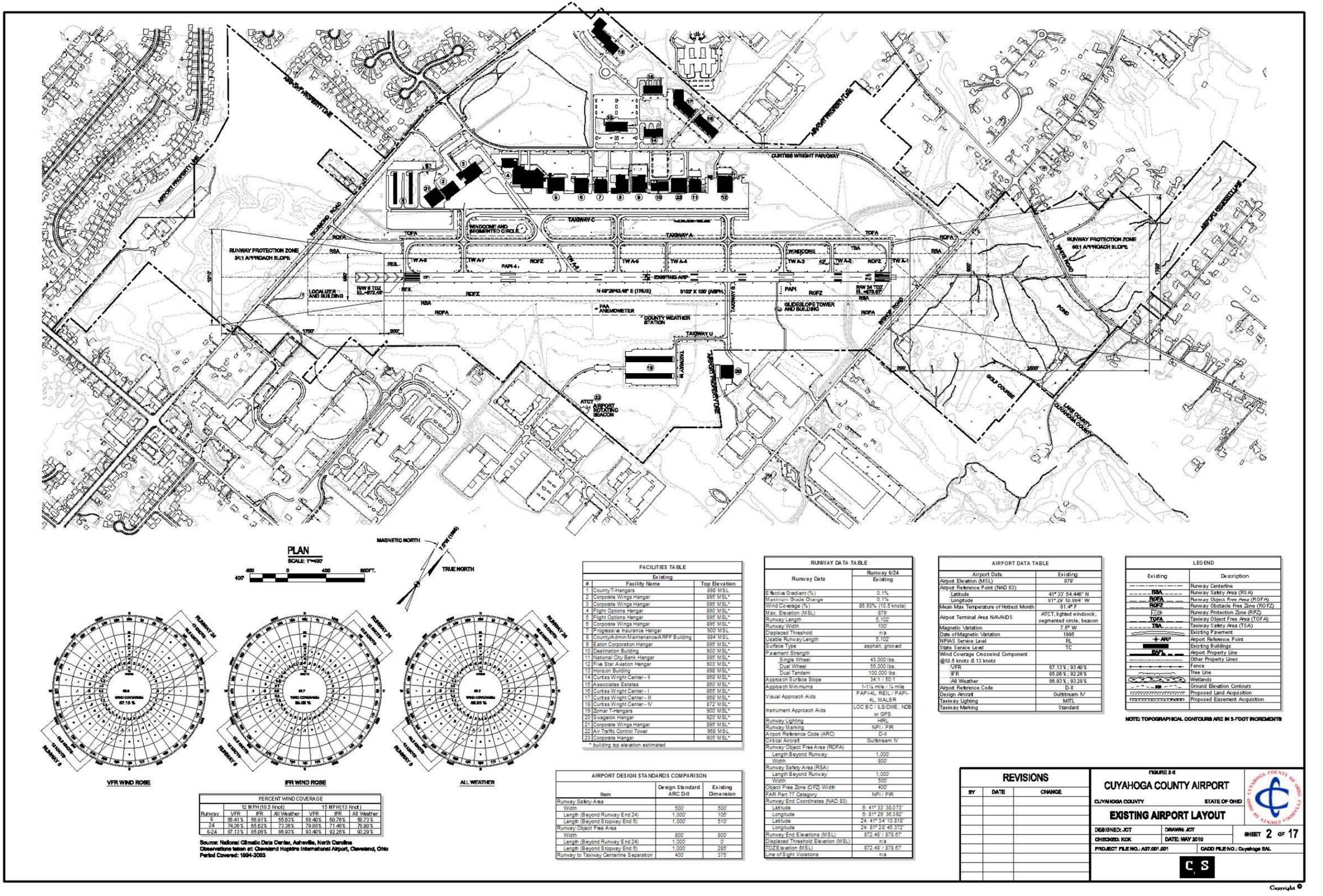
Airside Facilities: The discussion of existing facilities includes both airside and landside facilities. The Airport is equipped with a single runway, designated as Runway 6/24. The runway is 5,102 feet long and 100 feet wide, with a northeast-southwest orientation. At the southwest end of the runway (the Runway 6 end), there is a 500-foot paved stopway/overrun. The runway is served by a full-length parallel taxiway, Taxiway A, along with eight taxiways labeled A-1 through A-8 that provide connections between the runway and Taxiway A. In addition, Taxiway B is a crossfield taxiway that connects the north end of the main apron area to additional aviation facilities on the southeast portion of the field. Taxiways U and W connect with Taxiway B, providing access to the T-hangars on the east side of the airfield. For a graphic representation of the airport facilities see **Figure 3-2 Existing Airport Layout.**

A variety of lighting supports nighttime operations at the Airport. A rotating beacon that identifies the airport location at night is located on the southeast side of the airfield, north of the control tower. Runway and taxiway edge lighting contributes to safe operations at night and during times of poor visibility. The runway has high intensity runway lighting (HIRL) and taxiway edge lighting is medium intensity (MITL). Runway 6 is equipped with a four-light precision approach path indicator (PAPI) on the left side of the runway. A four-light PAPI is located on the left side of Runway 24 as well. Both of these aid a pilot in navigating to the runway during landing. A 1,400-foot medium intensity approach lighting system with runway alignment indicator lights (MALSR) and a glide slope and localizer antenna are associated with the instrument landing system (ILS) for Runway 24. Airfield lighting systems can be activated through a pilot-controlled lighting system (PCL) when the control tower is closed.

To provide additional navigation support, the airfield is equipped with a segmented circle and lighted wind cone located at the intersection of Taxiways A-6 and C. The segmented circle provides traffic pattern information to pilots. Weather reports can be given by the air traffic control tower during the hours of operation.

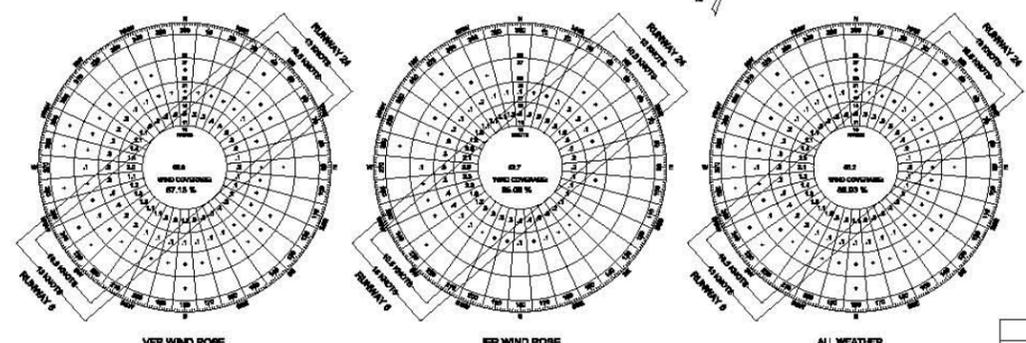
Landside Facilities: The landside facilities are the ground-based facilities that support the operation, function and promotion of the Airport. These include public and private facilities used for aviation as well as facilities for non-aviation-related commercial enterprises.

Figure 3-2 Existing Airport Layout



PLAN
SCALE 1"=400'

MAGNETIC NORTH
TRUE NORTH



PERCENT WIND COVERAGE							
Runway	VFR	IFR	All Weather	VFR	IFR	All Weather	
6	56.41%	56.81%	55.83%	58.46%	60.76%	58.73%	
24	74.28%	85.62%	73.36%	79.88%	71.48%	78.90%	
6-24	87.13%	85.08%	86.93%	93.40%	92.26%	93.29%	

Source: National Climatic Data Center, Asheville, North Carolina
Observations taken at Cleveland Hopkins International Airport, Cleveland, Ohio
Period Covered: 1964-2003

FACILITIES TABLE		
#	Facility Name	Top Elevation
1	County T-Hangars	888 MSL
2	Corporate Wings Hangar	887 MSL
3	Corporate Wings Hangar	887 MSL
4	Flight Options Hangar	890 MSL
5	Flight Options Hangar	890 MSL
6	Corporate Wings Hangar	885 MSL
7	Progressive Insurance Hangar	900 MSL
8	County Admin/Maintenance/ARFF Building	884 MSL
9	Eaton Corporation Hangar	885 MSL
10	Destination Building	900 MSL
11	National City Bank Hangar	885 MSL
12	Fire Star Aviation Hangar	903 MSL
13	Horizon Building	888 MSL
14	Curtiss Wright Center - II	888 MSL
15	Associates Estates	890 MSL
16	Curtiss Wright Center - I	885 MSL
17	Curtiss Wright Center - II	885 MSL
18	Curtiss Wright Center - IV	872 MSL
19	Zomar T-Hangars	900 MSL
20	Swagelok Hangar	920 MSL
21	Corporate Wings Hangar	885 MSL
22	Air Traffic Control Tower	883 MSL
23	Corporate Hangar	900 MSL

AIRPORT DESIGN STANDARDS COMPARISON		
Item	Design Standard	Existing Dimension
Runway Safety Area		
Width	500	500
Length (Beyond Runway End 24)	1,000	1,005
Length (Beyond Stopway End 8)	1,000	510
Runway Object Free Area		
Width	800	800
Length (Beyond Runway End 24)	1,000	0
Length (Beyond Stopway End 8)	1,000	235
Runway to Taxiway Centerline Separation	400	375

RUNWAY DATA TABLE	
Runway Data	Runway 8/24 Existing
Effective Gradient (%)	0.1%
Maximum Grade Change	0.1%
Wind Coverage (%)	88.53% (10.3 knots)
Max. Elevation (MSL)	879
Runway Length	5,102
Runway Width	100
Displaced Threshold	n/a
Usable Runway Length	5,102
Surface Type	asphalt, grooved
Faenent Strength	
Single Wheel	43,000 lbs
Dual Wheel	55,000 lbs
Dual Tandem	100,000 lbs
Approach Surface Slope	34.17:50.1
Approach Minimums	1-1/2 mile / 1/2 mile
Visual Approach Aids	PAPI 4L, REIL / PAPI-4L, MALS/R
Instrument Approach Aids	LOC B/C, LS/DME, NDB or GPS
Runway Lighting	REIL
Runway Marking	NPI / PIR
Airport Reference Code (ARC)	D-II
Obical Aircraft	Gulfstream IV
Runway Object Free Area (ROFA)	
Length Beyond Runway	1,000
Width	800
Runway Safety Area (RSA)	
Length Beyond Runway	1,000
Width	800
Object Free Zone (OFZ) Width	400
FAR Part 77 Category	NPI / PIR
Runway End Coordinates (NAD 83)	
Latitude	8° 41' 33" 38.973"
Longitude	8° 31' 39" 34.392"
Latitude	24° 41' 34" 10.818"
Longitude	24° 51' 28" 45.372"
Runway End Elevations (MSL)	872.48 / 875.87
Displaced Threshold Elevation (MSL)	n/a
TDZE Elevation (MSL)	872.48 / 875.87
Line of Sight Violations	n/a

AIRPORT DATA TABLE	
Airport Data	Existing
Airport Elevation (MSL)	879'
Airport Reference Point (NAD 83)	
Latitude	41° 33' 54.446" N
Longitude	81° 29' 10.884" W
Mean Max Temperature of Hottest Month	81.4° F
Airport Terminal Area NAVAIDS	ATCT, lighted windsock, segmented circle, beacon
Magnetic Variation	7.6° W
Date of Magnetic Variation	1995
State Service Level	RL
NPIAS Service Level	RL
Wind Coverage Crosswind Component @10.5 knots & 13 knots	TC
VFR	87.13% ; 93.40%
IFR	85.08% ; 92.26%
All Weather	86.93% ; 93.29%
Airport Reference Code	D-II
Design Aircraft	Gulfstream IV
Taxiway Lighting	MTL
Taxiway Marking	Standard

LEGEND	
Existing	Description
---	Runway Centerline
---	Runway Safety Area (RSA)
---	Runway Object Free Area (ROFA)
---	Runway Obstacle Free Zone (ROFZ)
---	Runway Protection Zone (RPZ)
---	Taxiway Object Free Area (TOFA)
---	Taxiway Safety Area (TSA)
---	Existing Pavement
---	Airport Reference Point
---	Existing Buildings
---	Airport Property Line
---	Other Property Lines
---	Fence
---	Tree Line
---	Wetlands
---	Ground Elevation Contours
---	Proposed Land Acquisition
---	Proposed Easement Acquisition

REVISIONS		
BY	DATE	CHANGE

FIGURE 3-4
CUYAHOGA COUNTY AIRPORT
CLYAHOGA COUNTY STATE OF OHIO

EXISTING AIRPORT LAYOUT

DESIGNED: JCT DRAWN: JCT
CHECKED: KCK DATE: MAY 2010 SHEET 2 OF 17

PROJECT FILE NO.: A27.001.001 CADD FILE NO.: Cuyahoga_BAL

CS

The apron area, which is used for the tie-down, fueling, and taxiing of aircraft and other airport-related service vehicles totals nearly 80,000 square yards of pavement. The apron area serving the corporate hangars is 48,500 square yards.

The airport administration building was constructed in 1973 and incorporates airport management offices, airport maintenance equipment and operations facilities, and Airport Rescue and Fire Fighting (ARFF) facilities. The fire apparatus room has three truck bays opening to the aircraft parking apron. The building contains a total of 21,136 square feet.

The Airport has an Air Traffic Control Tower (ATCT) located on the southeast side of the airfield. The ATCT operates between the hours of 7 AM and 11 PM daily.

Two County-owned T-hangar buildings, able to accommodate 40 aircraft, are located at the south end of the airfield adjacent to Richmond Road. The two T-hangar buildings on the east side of the airfield are privately owned and have access to the runway with a through-the-fence arrangement. Numerous box-style corporate hangars provide storage options for a number of additional aircraft. In total, the airport houses 206 based aircraft, including Flight Options, LLC, which is the world's second-largest private aviation company.

Four aviation fuel systems are located at the Airport. All four facilities are owned by private tenants on the airport providing both 100 low lead (100 LL) and Jet A fuel. The County has two underground tanks to service their maintenance vehicles. One 4,000-gallon tank is for diesel fuel; the second tank with a 2,500-gallon capacity is for unleaded auto fuel. These tanks are located between the airport administration building and Curtiss Wright Parkway. Two other tenants also have vehicle fueling facilities.

Curtiss Wright Parkway is the main access road to most airport facilities. The parkway is aligned with the runway and connects Richmond Road (a state route to the west of the airfield site) and Bishop Road, a county route to the east. From the Airport, there is interstate access within three miles to I-90 via Highland Road and to I-271 via Wilson Mills Road.

The Airport is supported by a full array of public utilities. Specifically, the Airport is served by Cleveland's city sewer and water systems. Electric service is provided by Cleveland Electric Illuminating Company (CEI). East Ohio Gas provides natural gas to the site.

3.4 Land Use and Zoning

Land use in Richmond Heights, Highland Heights and Willoughby Hills is primarily residential. In Highland Heights, 98 percent of all housing units are single-family residential while Richmond Heights and Willoughby Hills report 64.8 and 52.8 percent single-family housing units respectively. The 2010 Airport Master Plan Update estimated that the residential population located within a 5-mile radius of the airfield was over 400,000.

Although the overall land use across the three communities is primarily residential, there is a cluster of commercial, industrial and recreational uses around the airport. Directly adjacent to the

Airport on the northwest side of the Airport, Curtis Wright Parkway provides vehicle access to the commercial and industrial uses on the airport side and to commercial uses located across the street to the west. A collection of industrial uses are located on the Airport's southeast side with road access from Bishop Road and Avion Parkway, although only one business has access to the airfield. North of the Airport, at the Runway 24 end, land uses east of Bishop Road are open space and recreation uses, including the Airport Greens Golf Course. South of the Airport at the Runway 6 end, the airport owns and maintains a natural open space west of Richmond Road. Adjacent to the Airport, on the corner of Highland and Richmond Roads, is a block of land that is owned by the Richmond Heights Schools. The Richmond Heights Elementary School (grades K-6) and Secondary School (grades 7-12) are both located on the property. The Richmond Heights Community Park is also located there.

The Willoughby Hills zoning map defines the airfield as industrial. Some properties along Curtis Wright Parkway are also zoned industrial. However, all other properties in the area are zoned single-family residential including frontage parcels on the south side of White Road, and on both sides of Bishop Road. The zoning classification around the Airport in Highland Heights and Richmond Heights is industrial from Richmond Road to Bishop Road. That district continues past Bishop Road to the east. The Stonewater Golf Club and the associated residential development in Highland Heights are zoned "Mixed." There are a few commercial zones at major intersections and some additional industrial zoning along I-271. Otherwise, most property is zoned for residential development in both communities. See **Figure 3-3 Land Use Map** for a graphic representation of the current land use around the airport.

3.5 Population Growth Characteristics

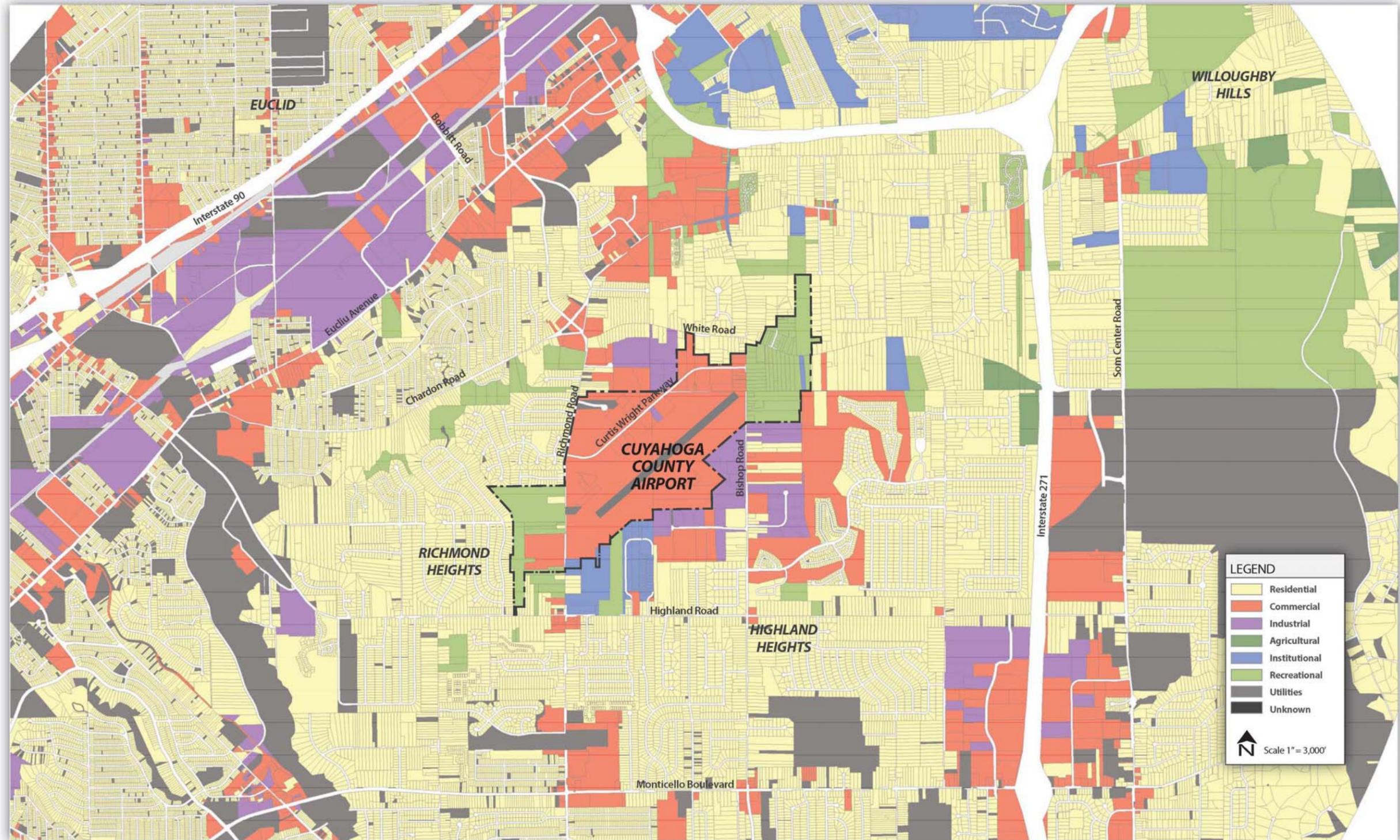
The State of Ohio experienced a slight population increase between 2000 and 2010. State population projections anticipate a continued population increase through 2040.¹ The Cleveland-Akron-Elyria Combined Statistical Area (CSA), an eight-county area around Cleveland that includes both Cuyahoga and Lake Counties, experienced a population decline from 2000 to 2010 but that trend reversed after 2010. A gradual, continuous population increase is projected in the CSA region through 2040.² Within the CSA, Cuyahoga County experienced an overall population decrease from 2000 to 2010 while Lake County experienced a population increase from 2000-2010. Both county trends are projected to continue through 2040.³

¹ Woods & Poole Economics, Inc. 2011

² *ibid*

³ *ibid*

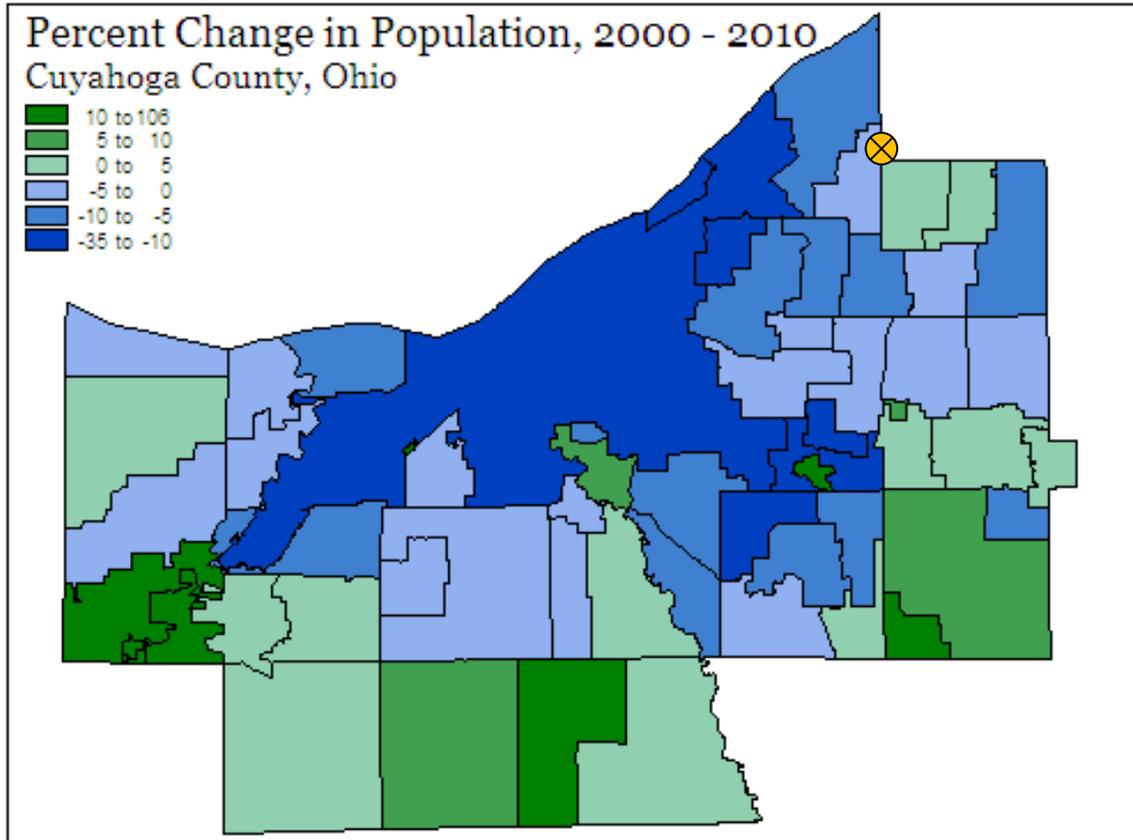
Figure 3-3 Land Use Map



Source: Mead & Hunt based on GIS Data from Cuyahoga and Lake Counties

Figure 3-4 Regional Growth Trends demonstrates regional population growth characteristics that can be described in relationship to the City of Cleveland in Cuyahoga County and in relation to Painesville in Lake County. Population trends in Cuyahoga County show the largest population decrease in the City of Cleveland, modest declines in communities near Cleveland and population increases on the periphery to the west, south and east.

Figure 3-4 Regional Growth Trends: Cuyahoga County



 = approximate airport location

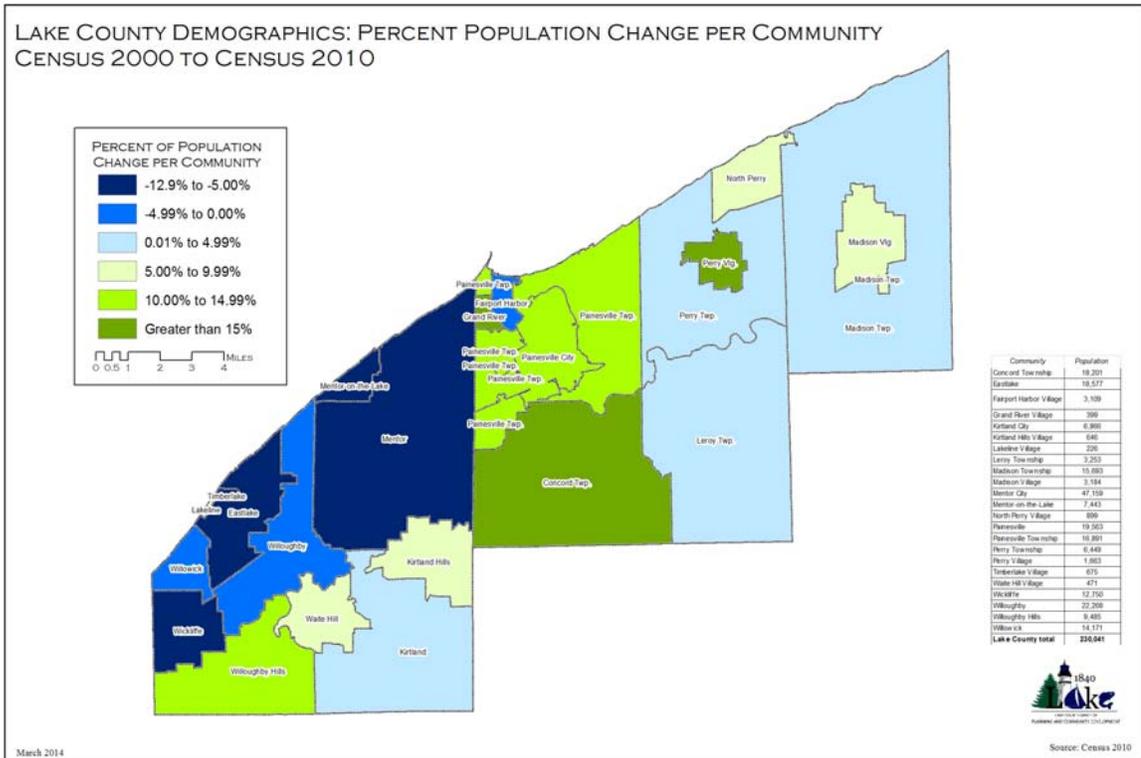
Source: Cuyahoga County Planning Commission website

<http://planning.co.cuyahoga.oh.us/census/2010population.html>

The Cuyahoga County Airport is located on the northeastern edge of the county where Highland Heights experienced a population increase and Richmond Heights a decrease of the smallest magnitude. During the same 10-year period, the US Census Bureau reported a 10.4% population increase in Willoughby Hills and a 1.1% increase in Lake County overall.

Population trends in Lake County (**Figure 3-5 Regional Growth Trends: Lake County**) show population growth in Willoughby Hills, directly adjacent to the Airport, but a loss of population along the lakeshore east of Cleveland. More robust population growth in Lake County appears around Painesville and in Concord Township to the south. Concord Township, which sits at the crossroads of Interstate 90 and State Route 44 grew by more than 15 percent between 2000 and 2010.

Figure 3-5 Regional Growth Trends: Lake County



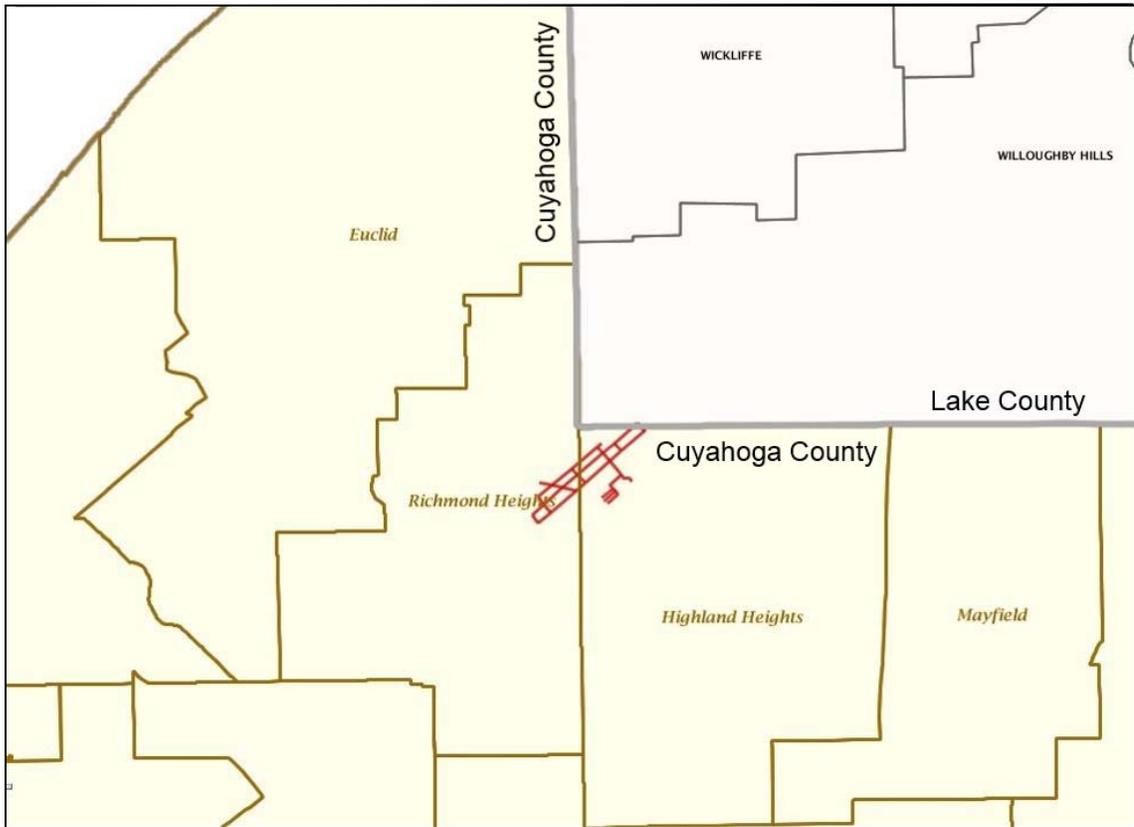
Planning and Community Development, David Radachy, Director

As noted initially, Cuyahoga County overall is projected to experience a population decline from 2012-2040 while Lake County overall is projected to experience a population increase from 2012-2040.⁴ The three communities around the airport experienced population growth or minimal decline from 2000-2010, despite the national economic downturn (termed “the Great Recession”). These three communities are likely to experience some level of continued population growth through 2040 in part because of their proximity to the Airport.

Population Characteristics: As noted earlier, the Airport is located in both Cuyahoga and Lake Counties and it is also located in three cities: Richmond Heights, Highland Heights and Willoughby Hills. The political boundaries are shown in **Figure 3-6 Political Boundaries**.

⁴ Ibid

Figure 3-6 Political Boundaries



Source: Cuyahoga County Geographical Information System (GIS)
<http://gis.cuyahogacounty.us/>

All three cities surrounding the Airport are affluent communities with median household incomes and housing values that are higher than Cuyahoga County as a whole. Highland Heights has less racial diversity and higher median household incomes than the other two communities. Richmond Heights is much more racially diverse than the other two cities and the county.

While median household income in Richmond Heights is lower than the other two cities, it is still higher than the Cuyahoga County median income. The same can be said for housing value. Willoughby Hills is in between the other two cities in all of these categories. The “persons below the poverty level” percentages in all three cities are significantly lower than the county percentage. See **Table 3-1 Cuyahoga County Airport Environs - Demographic Profile** for a comparison of demographic trends of the project area.

Table 3-1 Cuyahoga County Airport Environs - Demographic Profile				
Criteria	Highland Heights	Richmond Heights	Willoughby Hills	Cuyahoga County
White alone, 2012	91.0%	48.5%	77.6%	64.8%
Black or African American alone, 2012	1.9%	44.9%	16.1%	30.2%
Asian alone, 2012	5.8%	4.3%	4.3%	2.8%
All other	1.3%	2.3%	2.0%	2.2%
Median household income, 2007-2011	\$98,327	\$47,665	\$60,336	\$44,088
Median value of owner-occupied housing units, 2007-2011	\$280,800	\$169,900	\$250,600	\$134,900
Persons below poverty level, percent, 2007-2011	2.5%	5.7%	2.9%	17.1%
Source: US Census Bureau State & County QuickFacts, 2012				

3.6 Industrial/Commercial Growth Characteristics

The Cleveland-Elyria-Mentor Metropolitan Statistical Area (MSA) is a five-county region around Cleveland. The US Bureau of Labor Statistics produced an economic summary of the MSA dated October 31, 2013. The report provided the following statistics for comparative unemployment rates reported for August 2013. The numbers indicate that the region overall has a lower unemployment rate than the country as a whole (**Table 3-2 Unemployment Rates for August 2013**).

The report also indicates that unemployment rates in the Cleveland area decreased between August 2012 and August 2013 except in Lake County where the rate increased from 6.2% to 6.3%.

Table 3-2 Unemployment Rates for August 2013	
Geographic Area	Unemployment Rate
United States	7.3%
Cleveland MSA	7.0%
Cuyahoga County	7.3%
Lake County	6.3 %
Source: US Bureau of Labor Statistics (BLS) Local Area Unemployment Statistics	

The same report also provides information about average weekly wages for all industries by county compared to the nation and area (**Table 3-3 Average Weekly Wages**). Cuyahoga and Lake Counties had the highest weekly wages by county in the area although they were still lower than those reported for the nation and for the area. Geauga County had the lowest wage range of the five-county area.

Workforce: According to the 2011 County Business Patterns⁵, the total 2011 labor force for Cuyahoga County was 646,638. The largest employment sector was *Health care and social assistance*. There were 136,661 employees in 3,618 establishments

Table 3-3 Average Weekly Wages - 1 st Quarter 2013 (all industries by county)	
Geographic Area	Average weekly wage
United States	\$989
Cleveland MSA	\$948
Cuyahoga County	\$825 or more
Lake County	\$825 or more
Geauga County	\$724 or less
Source: US BLS Quarterly Census of Employment and Wages	

accounting for 21.5% of the county's total payroll. This is consistent with the list of Top 10 Largest Employers where three of the top six are health care providers. The same County Business Patterns report provides a total 2011 labor force for Lake County of 83,423. The largest employment sector in Lake County was *manufacturing* with 17,843 employees in 617 establishments accounting for 25.8% of the county's total annual payroll.

Major Employers: Many firms have headquarters or major operations located in northeast Ohio which includes Cuyahoga, Geauga, Lake, Lorain and Medina Counties as well as four adjacent counties. Crain's Cleveland Business produced a 2011 list of the region's largest employers. The top 10 are summarized in **Table 3-4 Top 10 Largest Employers**.

Cuyahoga County is also the chosen location for many corporate headquarters. Fortune Magazine created a list of the "Top 1,000 Largest US Corporations" ranked by revenues and 14 of them are located in Cuyahoga County as shown in **Table 3-5 Corporations Headquartered in Cuyahoga County**. The highest ranking on the list is the Progressive Corporation, national insurance provider, with headquarters in Mayfield, Ohio. With these major employers located in the local community, the Airport has a perfect opportunity to provide aviation opportunities for travel.

3.7 Environmental Characteristics of the Project Area

The land uses adjacent to the Airport are predominately residential, commercial development, wooded vacant land and recreational facilities (**Figure 3-3 Land Use Map**). The Airport itself is mostly covered with turf grasses that are maintained on a regular basis via mowing with some wetlands, streams and ditches present across the Airport (**Figure 3-7 Environmental Overview Map**).

⁵ <http://www.census.gov/econ/cbp/index.html>

Table 3-4 Top 10 Largest Employers (with headquarters or major operations in northeast Ohio)		
Firm	Number of Employees*	Industry
Cleveland Clinic	34,000	Health care provider
US Office of Personnel Management	15,095	Federal government
University Hospitals/Cleveland	13,726	Health care provider
Giant Eagle, Inc.	10,311	Grocery store chain
Progressive Corporation	8,612	Insurance and Financial Company
City of Cleveland	8,232	Municipal government
Summa Health System	8,000	Health care provider
Cuyahoga County	7,859	County government
State of Ohio	7,792	State government
United States Postal Service	7,362	U.S. Postal Service
Source: Crain's Cleveland Business July 2011 *Includes employees working in Cuyahoga, Geauga, Lake, Lorain, Mahoning, Medina, Portage, Stark and Summit Counties.		

Table 3-5
Corporations Headquartered in Cuyahoga County
Among Fortune's Top 1000 in 2011
(Within the 1000 Largest U.S. Corporations Ranked by Revenues*)

Rank	Company	Revenues (\$Millions)	Major Products
164	Progressive Corporation	14,963.3	Insurance
178	Eaton Corporation	13,715.0	Power Management
248	Parker Hannifin Corp	9,993.2	Hydraulic Components
308	The Sherwin-Williams Company	7,776.4	Paints and Chemicals
385	TravelCenters of America	5,962.5	National Travel Center Chain
417	KeyCorp	5,458.0	Financial Services
477	Cliffs Natural Resources	4,682.2	Mining, Crude Oil Production
520	Aleris International	5,968.2	Metals
711	NACCO Industries	2,687.5	Industrial & Farm Equipment
851	Lincoln Electric Holdings	2,479.1	Industrial Equipment
780	Medical Mutual of Ohio	2,387.1	Health Care Insurance
844	Ferro	2,101.9	Chemicals
907	Applied Industrial Technologies	1,893.2	Industrial Components
998	American Greetings	1,635.9	Greeting Cards, Printing

* Source: 2011 Fortune Directory of the Largest U.S. Corporations (online)

The project study area, or the area of potential impact, is completely contained within existing airport property with the exception of 12 potential parcel acquisitions/easements being in the Runway Protection Zone (RPZ). For a discussion of potential property impacts, see **Section 4.18 Socioeconomic Impacts, Environmental Justice, and Children’s Environmental Health and Safety Risks**.

As stated in **Section 2.0 Alternative Considered**, airports are encouraged by the FAA to control the RPZ either through acquiring the property or by placing aviation easements restricting incompatible land uses. Aviation easements purchase the right to control the height of objects on the property and the right to remove objects that penetrate various approach surfaces and can limit certain incompatible land uses. Fee acquisitions transfer ownership and usually require that all objects on the property be removed and the site be returned to a clear parcel. Any property acquisitions will comply with Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

The Airport has worked judiciously to avoid and minimize potential environmental impacts and to limit construction or land disturbance to areas already owned by the Airport. For additional details on potential property impacts see **Section 4.18 Socioeconomic Impacts, Environmental Justice, and Children’s Environmental Health and Safety Risks**.

Streams, wetlands, floodplains and wildlife habitat is found throughout the vicinity of the Airport. However, only those resources within the project limits and likely to be impacted were field delineated. Resources outside of the potential impact area were investigated through various databases (i.e. National Wetland Inventory Maps) and published technical documents. A detailed wetland, stream and habitat delineation/survey was conducted by biologists for resources within the project study area in the spring of 2013.

Major water resources in the area include the East Branch of Euclid Creek, its tributaries and associated wetlands and floodplains. The East Branch of Euclid Creek is located northwest of the Airport with various tributaries surrounding the Airport. The East Branch of Euclid Creek drains 23 square miles, consists of over 43 miles of stream segments and flows directly into Lake Erie. The water quality of the Euclid Creek is not in attainment with the Ohio Environmental Protection Agency’s (OEPA) water quality standards of a fishable and swimmable water body.⁶ As a result, various citizen groups and improvement programs are in place to improve and protect Euclid Creek and its watershed.

Nine streams were identified within the limits of the Airport property. Eight of these appear to be hydrologically connected to the East Branch of Euclid Creek or its tributaries and are regulated under the Clean Water Act (jurisdictional status will be determined by the U.S. Army Corps of Engineers). Although delineated streams were found on Airport property, the Preferred Alternative will avoid streams and no impacts are expected. For a discussion of direct and indirect impacts to the East Branch of Euclid Creek and other water resources in the project area, see **Section 4.20 Water Quality**.

⁶ Euclid Creek Watershed Council Community Specific Watershed Fact Sheet, 2011

Nineteen wetland complexes were delineated within the boundaries of the Airport; however only 11 wetland complexes (3.918 acres) are expected to be impacted by the Preferred Alternative. Proposed mitigation consists of an in-lieu fee option as described in the February 9, 2015, U.S. Army Corps of Engineers letter found in **Appendix N Comments on the Draft EA**. See **Section 4.21 Wetlands** for additional information about the wetland resources in the project area and proposed mitigation.

Limited wildlife habitat is found within the project area. As mentioned previously, the Airport property is mostly mowed turf grasses and provides very little quality habitat. However, coordination with the US Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources (ODNR) confirmed that the Airport is located within the range of a variety of federal or state threatened or endangered species.

Biologists surveyed the project area and confirmed the existence of potential roosting trees for the Indiana Bat and Northern Long-Eared Bat, but determined habitat for other threatened or endangered species was not present and impacts were not expected. To mitigate for any potential Indiana Bat and Northern Long-Eared Bat impacts, tree removal restrictions will be observed. See **Section 4.8 Endangered and Threatened Species** for additional information.

For a detailed analysis of the expected environmental impacts of the Preferred Alternative and the No-Build Alternative on the ecological resources of the area, see **Section 4.0 Environmental Consequences**.

3.8 Resources Not Affected by the Preferred Alternative

As explained in **Section 4.0 Environmental Consequences**, the No-Build and the Preferred Alternative are not expected to affect the following resources:

- Air Quality
- Climate
- Coastal Barriers
- Coastal Zone Management
- Compatible Land Use
- Section 4(f)
- Energy Supplies, Natural Resources, and Sustainable Design
- Farmlands
- Floodplains
- Hazardous Materials
- Historic and Archaeological
- Induced Socioeconomic
- Light Emissions and Visual Effects
- Noise
- Solid Waste
- Wild and Scenic Rivers

- Cumulative Impacts

3.9 Resources Potentially Affected by the Preferred Alternative

The No-Build and the Preferred Alternative would likely have minor impacts on the following resources:

- Biotic Resources/Federally-listed Endangered and Threatened Species: Potential habitat for the Indiana Bat and Northern Long-Eared Bat is present within the expected area of impact. Tree removal restrictions will be implemented to avoid potential impacts.
- Construction Impacts: Temporary construction impacts are anticipated. Best management practices will be implemented to minimize the impacts.
- Socioeconomic Impacts, Environmental Justice and Children's Environmental Health and Safety Risks: Cuyahoga County has begun contacting and coordinating with potentially impacted property owners and if property is purchased, residents will be relocated in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Resources will be made available without discrimination.
- Water Quality: Ditch impacts are expected. Mitigation will be through an in-lieu fee option as described in **Section 4.20 Water Quality**. Best Management Practices (BMPs) will also be implemented during construction and all permitting requirements will be satisfied prior to construction.
- Wetlands: Wetland impacts are expected. Wetland mitigation is expected to be accomplished through an in-lieu fee option as described in **Section 4.21 Wetlands**. All permitting requirements will be satisfied prior to construction.

3.10 Summary

This section provided an overview of the Airport and the community and region that surrounds it. The Airport has a single runway and a full complement of airside and landside facilities that support the predominantly business aviation use at the Airport. The social and economic impacts that will be evaluated in the EA will consider the land uses around the area, the demographic trends of the region and the economic impacts connected to the Airport, all of which are described here. Characteristics of the natural environment are also introduced here with a reference to more detailed technical reports in the appendix sections. There are many resources that are not expected to be affected by the No Action or the Preferred Alternative. Minor impacts are expected in four resource areas. This information will be used as a starting point for the analysis of environmental impacts of the Preferred Alternative that follows in **Section 4.0 Environmental Consequences**.