

Chapter 2 Affected Environment

Airports and aircraft operations generally have direct benefits and impacts on surrounding communities as aviation activity is inherently intertwined with its neighbors. This includes both positive and negative impacts. Identifying and evaluating land uses surrounding an airport is an important step in quantifying potential impacts through the Noise Compatibility Study process. This evaluation identifies the residential and other noise-sensitive land uses around CMH. A discussion of the land use mapping methodology and zoning information is provided in **Appendix D, Land Use Assessment Methodology**.

2.1 Airport Location

CMH is located on the eastern edge of the City of Columbus in Franklin County, Ohio, to the north of the cities of Bexley and Whitehall, southwest of the City of Gahanna, west of Jefferson Township, and northwest of the City of Reynoldsburg. These jurisdictions generally share both the benefits and the potentially negative impacts of airport operations at CMH, and therefore, are the subject of the land use evaluation in this study.

2.1.1 Columbus Regional Airport Authority

CMH is operated by the Columbus Regional Airport Authority (CRAA), which sets the policies under which the airport is operated. The CRAA is an independent governmental entity responsible for the operation of CMH as well as Rickenbacker International Airport (LCK) and Bolton Field Airport (TZR). The creation of the CRAA was a result of a merger between the Columbus Municipal Airport Authority and the Rickenbacker Port Authority (RPA) on January 1, 2003.

A Board of Directors is the governing body of the CRAA and is composed of nine business and community leaders. Four members of the Board are appointed by the Mayor of the City of Columbus with the advice and consent of City Council, four are appointed by the Franklin County Board of Commissioners, and one member is appointed jointly by the Mayor and the Franklin County Board of Commissioners. All Board members serve four-year staggered terms.

2.1.2 Airport Environs

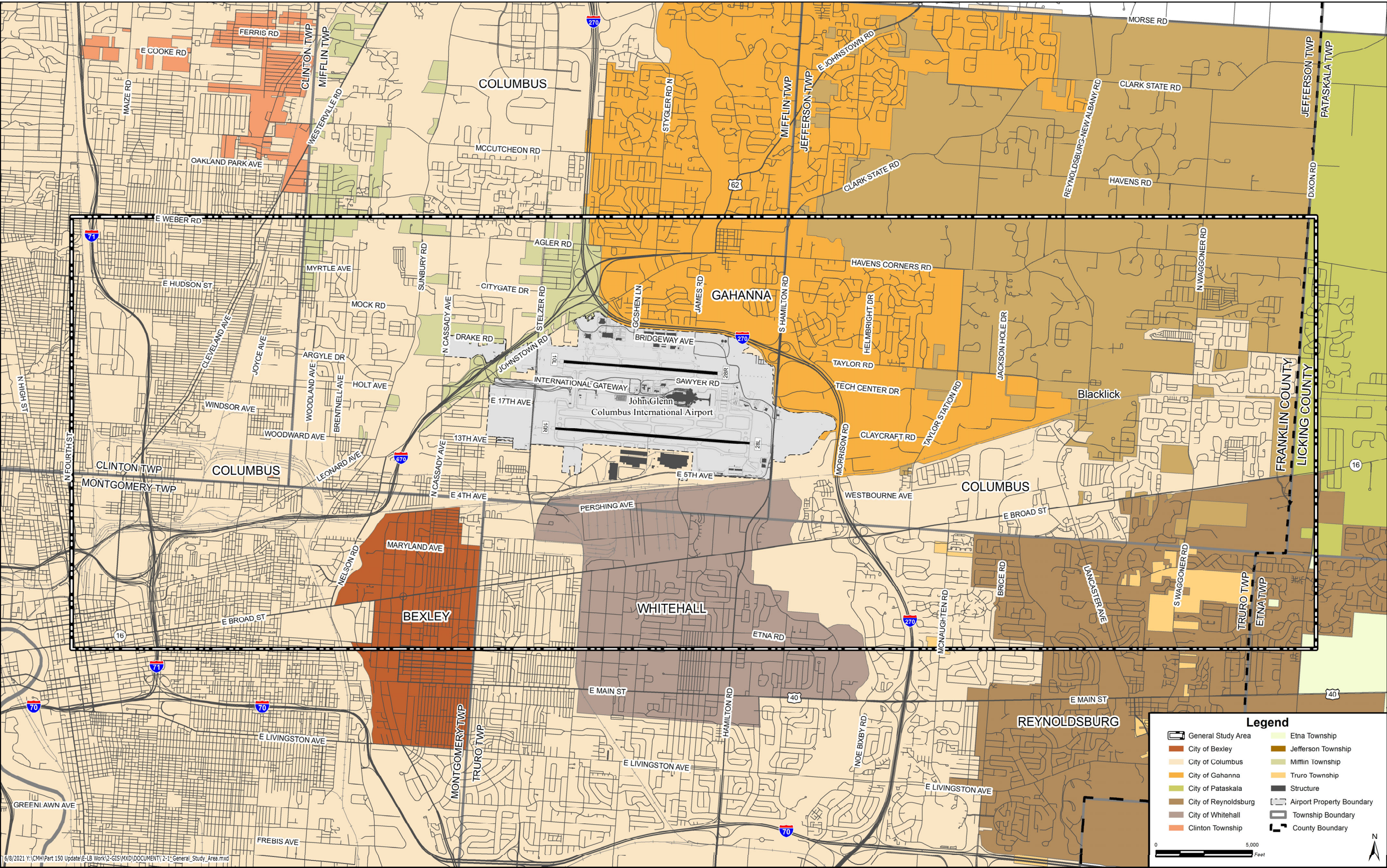
The airport environs refers to the regional area that may experience broader effects from the noise due to aircraft operations. The airport environs does not have a specifically defined boundary as these effects do not stop at geographic or jurisdictional lines. The airport environs roughly encompasses the area of northeast Columbus and other jurisdictions in eastern Franklin County and western Licking County as shown in **Exhibit 2-1, Airport Environs and General Study Area**. This map includes jurisdictional boundaries, local roads and major highways, the airport property boundary, and other geographical features. For the purpose of this study, the airport environs encompasses an area approximately 14 by 9 miles (126 square miles). The area extends approximately four miles to the north and south of the airport, and six miles to the east and west, covering the full extent of Exhibit 2-1. The area is of adequate size to depict flight tracks and the jurisdictional boundaries used in this study.

2.1.3 General Study Area (GSA)

The General Study Area (GSA) is defined as the area that experiences direct overflights of aircraft at lower altitudes. The GSA was determined by examining the boundaries of previous 65 Day-Night Average Sound Level (DNL) noise exposure contours (the FAA-defined threshold for significant noise impacts), and by reviewing flight tracks of aircraft operating in the airport vicinity and/or under the control of the CMH Air Traffic Control Tower (ATCT). The GSA, shown in Exhibit 2-1, is the map used to show existing and future noise contours, as well as noise abatement alternatives in this document.

To the north, the GSA extends past Agler Road in Columbus, Granville Street in Gahanna, and Havens Corners Road in Jefferson Township. To the east, the GSA extends just beyond the Franklin/Licking County border. To the south the GSA extends past East Broad Street/State Route 16 and almost to U.S. Route 40. To the west, the GSA extends into downtown Columbus, just past I-71.

Exhibit 2-1 Airport Environs and General Study Area



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2.1.4 Existing Land Uses in the General Study Area

Land uses in the GSA were identified, mapped, and categorized in terms of the general land use classifications presented in 14 CFR Part 150, which includes residential (single and multi-family), commercial, industrial/manufacturing, public/institutional, parks/recreational, and agriculture/open space. These uses were identified based on each county's Geographic Information System (GIS) database (where available), and was supplemented as necessary by review of current aerial photography and field verification. Appendix D, *Land Use Assessment Methodology*, provides additional detailed information regarding the classification and identification of land uses. **Exhibit 2-2, Existing Land Uses**, depicts the existing land uses within the GSA.

The area for which existing land uses were identified involves two levels of delineation: 1) the area directly adjacent to the airport and the areas directly in line with the east/west orientation of the runways that may be affected by specific localized impacts of noise abatement measures; and 2) the regional area that may experience the broader incompatibilities of aircraft overflight and noise impacts. To the immediate east and within previous 65 DNL noise exposure contours, land uses are characterized by commercial/industrial areas, interspersed with low density to medium density residential areas. To the west of CMH, land uses include a mix of medium density residential, commercial and industrial development.

2.1.5 Existing Noise-Sensitive Public Facilities in the General Study Area

Land uses that could be considered incompatible with airport operations include more than just residential uses. 14 CFR Part 150 defines certain public facilities as noise-sensitive: churches, schools, nursing homes, libraries, and hospitals. Within the GSA there are 160 schools (including licensed daycare facilities), 230 churches, two hospitals, and three libraries as shown on **Exhibit 2-3, Existing Noise-Sensitive Public Facilities**. Appendix D, *Land Use Assessment Methodology*, presents the methodology for collecting and organizing the noise-sensitive facility data and **Table D-2** provides a list of all facilities.

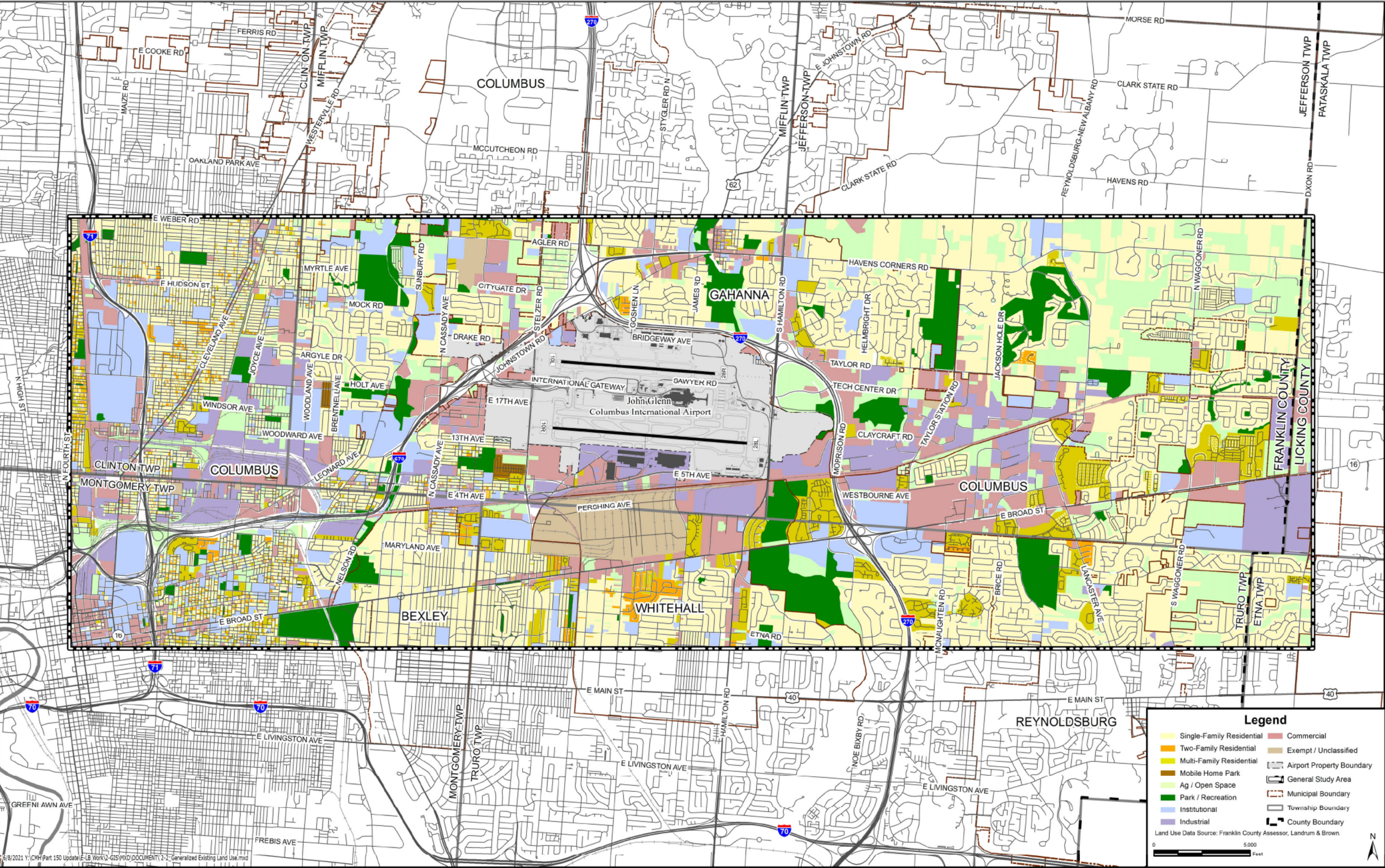
2.1.6 Existing Historic Sites

Historic properties on or eligible for inclusion in the National Register of Historic Places (NRHP) should be identified on the NEMs per 14 CFR Part 150. The NRHP is the official list of historic places worthy of preservation in the U.S. as authorized by the National Historic Preservation Act of 1966. Efforts to identify historic structures within the GSA included reviewing the list of properties on the NRHP maintained by the U.S. National Park Service, as well as reviewing previous environmental studies, including the 2009 Final Environmental Impact Statement (EIS).⁶ Within the GSA, there are 72 existing structures that are listed on or determined eligible for the NRHP. These historic sites are shown on **Exhibit 2-4, Existing Historic Sites** and listed in Appendix D, **Table D-3**.

6 Port Columbus International Airport Final Environmental Impact Statement Section 303(C) And Section 106 of the National Historic Preservation Act Evaluation U.S. Department of Transportation Federal Aviation Administration, March 2009

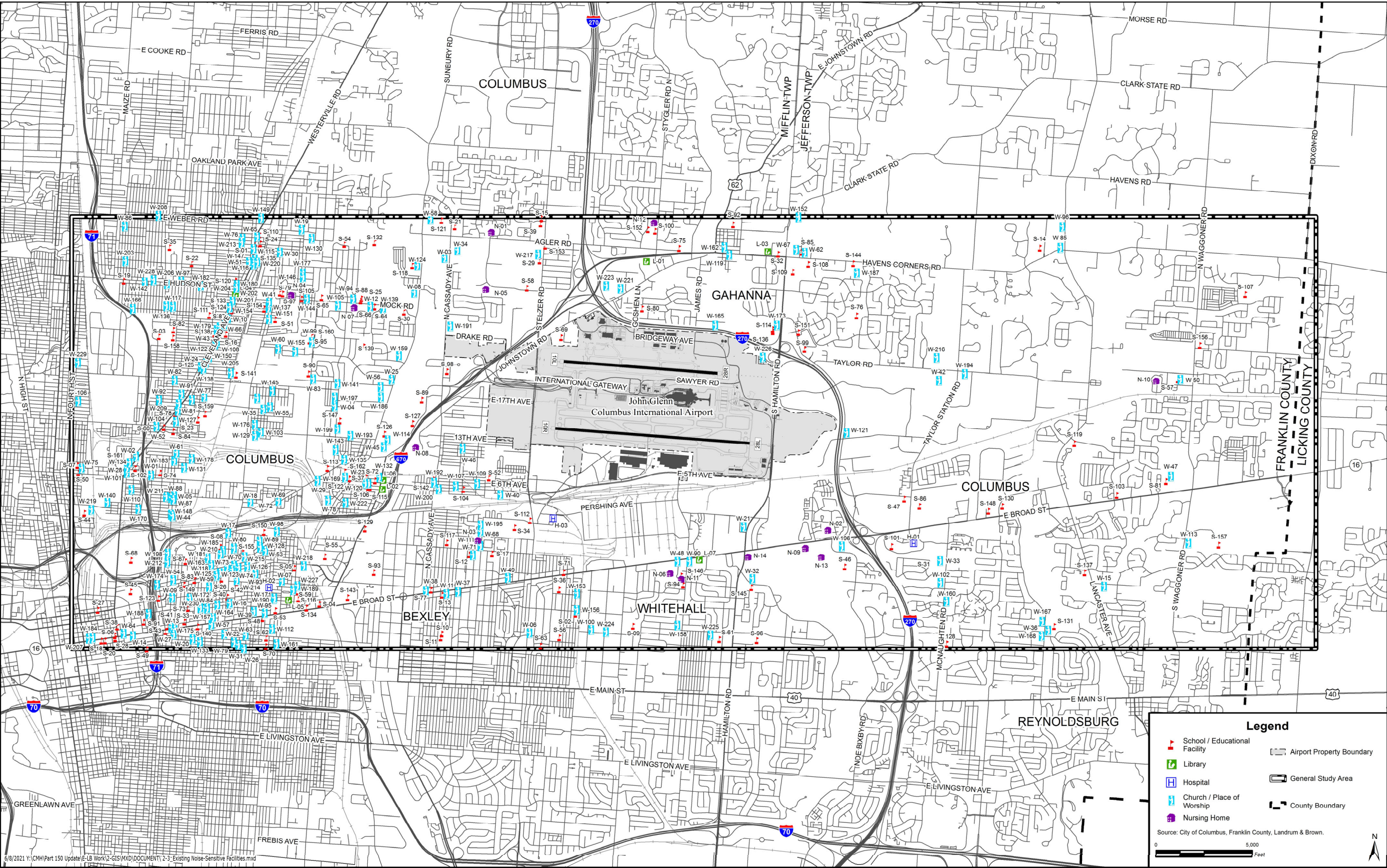
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Exhibit 2-2 Existing Land Uses



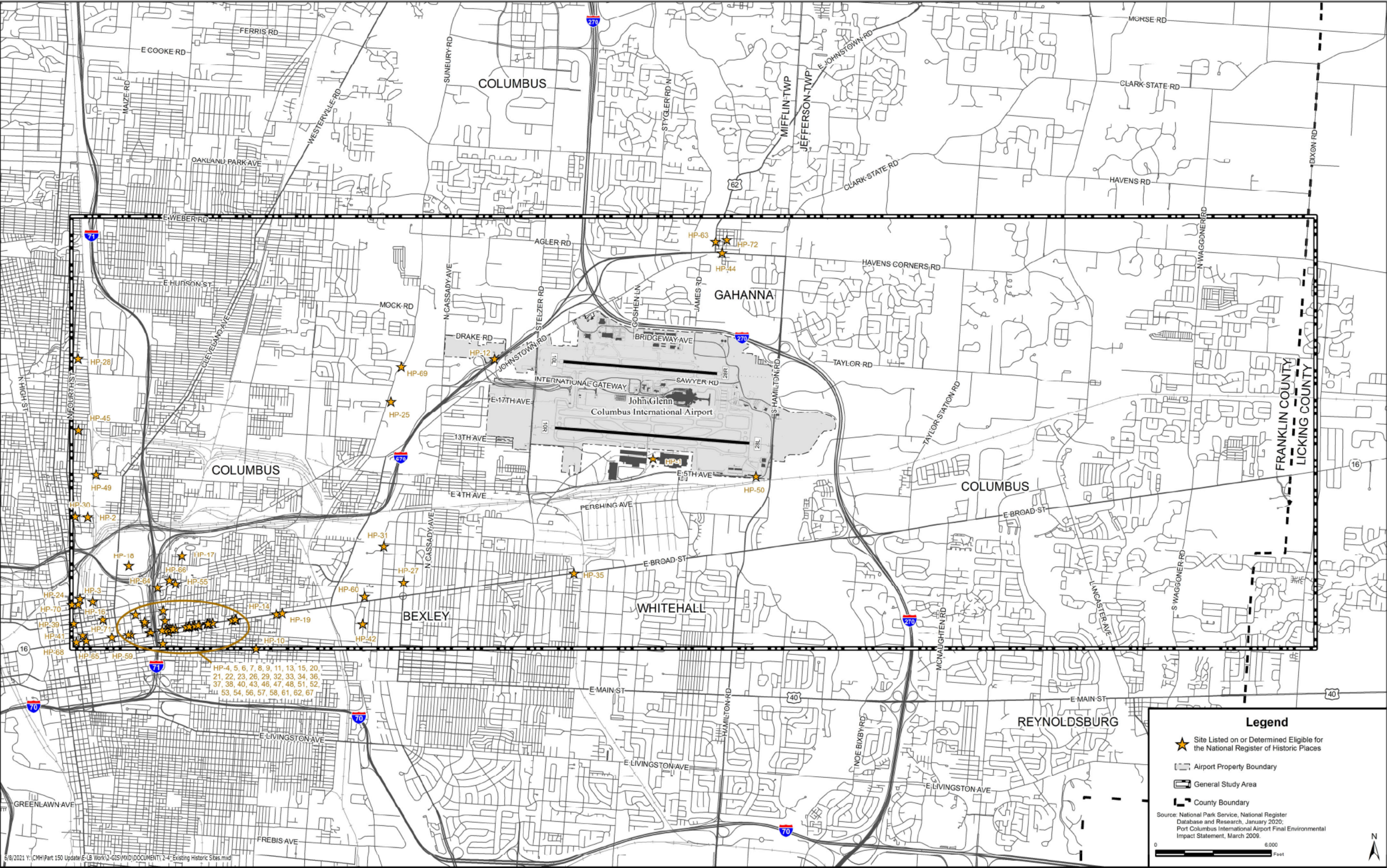
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Exhibit 2-3 Existing Noise-Sensitive Public Facilities



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Exhibit 2-4 Existing Historic Sites



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2.2 Land Use Policies and Regulatory Authority

Neither the CRAA nor the Federal government has the authority to implement or enforce local land use policies and regulations. That responsibility falls to the local jurisdictions, which in Ohio could include a county, city, or township. The Part 150 process includes a review of local comprehensive planning efforts, land use regulations, zoning ordinances, building codes, and subdivision regulations.

In most cities and counties, the chief land use regulatory document is the zoning ordinance, which regulates the types of uses, building height, bulk, and density permitted in various locations. Subdivision regulations are another important land use tool, regulating the platting of land. Local communities also regulate development through building codes and, in some cases, enforce noise regulations. The local capital improvements program, a schedule for constructing and improving public facilities such as streets, sewers, and water lines, is another important policy document that could influence development; although, on its own it does not involve regulation.

The Part 150 planning process does not propose, recommend, or fund the mitigation of future proposed development. It does, however, identify areas of potential future noise exposure for use by local planners in the development of comprehensive planning documents and land use policies. By preparing a comprehensive plan and setting land use policies, a jurisdiction or community can develop land appropriately and according to a locally accepted, approved plan. It is important that these planning efforts identify the likely development potential of land near the airport, within the published airport noise contours, or under existing or proposed future aircraft flight tracks. The local land use planning policies provide the airport sponsor with a description of the types of future development that should occur in areas not yet developed or to be redeveloped within the community.

Within the CMH GSA, six municipalities (Bexley, Columbus, Gahanna, Pataskala, Reynoldsburg, and Whitehall), Franklin County, and Jefferson Township share the responsibility for land use regulations. Summaries of the existing and future land use and zoning plans for these jurisdictions are included in Section 2.2.1.1 through Section 2.2.1.7 of this chapter.

2.2.1 Existing Land Use Planning and Development Regulations

This section summarizes the land use development regulations related to airport noise compatibility planning for each jurisdiction within the GSA. Coordination with local governments to plan for airport noise compatibility is an integral step in the Part 150 Noise Compatibility Planning process.

The previous Part 150 Noise Compatibility Study in 1993 recommended the establishment of an Airport Environs Overlay (AEO) Zone to assist in controlling residential development within the higher noise levels resulting from Airport activity. Two jurisdictions within the GSA, the City of Columbus and Franklin County, have adopted the AEO to limit development within areas that are significantly impacted by airport noise. The local ordinances are based on model regulations developed by the Mid-Ohio Regional Planning Commission (MORPC) in 1991. The City of Columbus adopted the AEO in 1994 and Franklin County adopted a similar ordinance in 1996. Both ordinances added an overlay zone that established additional development standards and criteria for property within areas that are significantly impacted by noise. The AEO ordinances establish subdistricts according to the 65+, 70+, and 75+ DNL indicated by the most recently published NEM. Within these subdistricts, land use is regulated to prevent non-compatible development that is incompatible with high levels of aircraft noise. The overlay zone boundary changes accordingly to updates to the NEM and is therefore not static. Specific regulations from each jurisdiction's zoning ordinance regarding the application of the AEO are discussed in the following sections.

2.2.1.1 *Franklin County*

Franklin County encompasses approximately 540 square miles, of which the unincorporated areas of Mifflin Township comprise approximately 1.4 square miles and unincorporated Truro Township comprises just over one square mile. The county has a total estimated population of 1,310,300 in 2018, including 38,166 and 28,793 in Mifflin and Truro Townships, respectively.⁷ Franklin County administers planning and zoning within the unincorporated areas, excluding Jefferson Township which has a separate planning and zoning department. Franklin County administers planning and zoning on behalf of Mifflin and Truro Townships, both of which are partially within the GSA.

The Franklin County Board of Commissioners approved the Clinton-Mifflin Land Use Plan on January 13, 2009.⁸ This plan identified land use and development goals; including the topics of safe neighborhoods, complete streets, and economic development; within the planning area bounded by Morse Road to the north, I-270 to the east, Mock Road and I-670 to the south, and Karl Road to the west. The plan includes land use recommendations for minimizing noise sensitive land uses along Drake Road to the northwest of CMH.⁹

The county has adopted an Airport Environs Overlay (AEO) District to restrict development within areas impacted by aircraft noise. **Table 2-1** shows the land use development standards for Franklin County within the Airport Environs Overlay District.

Franklin County has subdivision regulations that address platting of new land subdivision within the AEO District. Section 307.03(U) stipulates that the final plat shall contain a “note identifying whether or not the plat is located wholly or in part in an established Airport Land Use Management District.” Furthermore, under Section 404.15 an aviation easement and nonsuit covenant may be required within identified airport noise zones.¹⁰

⁷ US Census Bureau, Annual Population Estimates, 2018.

⁸ Clinton-Mifflin Land Use Plan, Clinton and Mifflin Townships, Franklin County, Ohio; Online at <https://development.franklincountyohio.gov/planning-zoning/land-use-planning/clinton-mifflin-land-use-plan>, Accessed: June 2, 2021.

⁹ Franklin County Zoning Resolution, Amended and readopted August 13, 2019.

¹⁰ Franklin County Subdivision Regulations, for unincorporated areas of Franklin County, Ohio, Adopted March 27, 2012.

Table 2-1 Franklin County Airport Environs Overlay District Land Use Compatibility Standards

Land Use (provided it is permitted in the district overlaid)	Subdistrict A	Subdistrict B	Subdistrict C
	65 DNL	70 DNL	75 DNL
Residential			
Single, Two & Multi	Y(1)	N	N
Manufactured housing	N	N	N
Hotels, Motels	Y(2)	Y(3)	N
All other residential	Y(1)	Y(1)	N
Commercial			
Retail	Y	Y(2)	Y(3)
Business services	Y	Y(2)	Y(3)
Personal services	Y	Y(2)	N
Professional services	Y	Y(2)	Y(3)
Offices	Y	Y(2)	N
All other commercial	Y	Y(2)	Y(3)
Manufacturing			
Manufacturing, warehousing, distribution	Y	Y(2)	Y(3)
Parking facilities	Y	Y(2)	Y(3)
All other manufacturing	Y	Y(2)	Y(3)
Institutional			
Hospitals, Nursing	Y(2)	Y(3)	N
Other medical facilities	Y	Y(2)	Y(3)
Educational facilities	Y(2)	Y(3)	N
Public assembly, churches	Y(2)	Y(3)	N
Government facilities	Y	Y(2)	Y(3)
Parks, recreation	Y	Y(2)	Y(3)
All other public/semi public	Y	Y	Y
All Other Uses	Y	Y	Y

Key:

Y – Land use is permitted

N – Land use is prohibited

(1) Interior noise level reduction of 25dB required in District A, 30 dB in District B

(2) Interior noise level reduction of 25dB is required for all areas where the public is received, office areas, noise sensitive areas, or where normal noise level is low.

(3) Interior noise level reduction of 30dB is required for all areas where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.

Source: Franklin County Zoning Resolution, Section 660, Airport Environs (Noise) Overlay District.

2.2.1.2 City of Bexley

The City of Bexley is located to the south of CMH and encompasses approximately 2.4 square miles. It had an estimated population of over 13,800 in 2018 according to the U.S. Census Bureau.¹¹ The City updated its Strategic Plan in 2013.¹² It contains no land use provisions regarding compatibility with airport operations.

2.2.1.3 City of Columbus

The City of Columbus is located to the north, south, east, and west of CMH and encompasses approximately 225.9 square miles. It had an estimated population of over 892,000 in 2018 according to the U.S. Census Bureau.¹³ Development within the City of Columbus is guided by its Comprehensive Plan, adopted in December of 1993.¹⁴ The Columbus Comprehensive Plan includes recommendations for limiting noise-sensitive development within the current 65 DNL (Ldn) noise contour, requiring soundproofing and other preventative measures for new development. In addition to the Comprehensive Plan, the Columbus Citywide Planning Policies (C2P2), adopted in July 2018, and various neighborhood plans, address targeted areas.

Land use regulations are enforced through the City Zoning Code. The City of Columbus has established an Airport Environs Overlay (AEO) District to "...protect the public health, safety, and welfare by regulating development and land use within airport environs and airport hazard areas; to ensure compatibility between existing airports, and any future airport and surrounding land uses; and to protect said airports from incompatible encroachment." The AEO is divided into three subdistricts (A,B,C), which represent different levels of noise impact and within which incompatible development is restricted. Subdistrict A includes the 65 DNL to 70 DNL noise exposure area. Subdistrict B includes the 70 DNL to 75 DNL noise exposure area. Subdistrict C includes the 75 DNL and greater noise exposure area.¹⁵ **Table 2-2** shows the land use development standards within the AEO District.

¹¹ U.S. Census Bureau, Annual Population Estimates, 2018.

¹² City of Bexley Strategic Plan, Revised 2013, Version 1.2; Online at <http://www.bexley.org/strategic>, Accessed on June 2, 2021.

¹³ US Census Bureau, Annual Population Estimates, 2018.

¹⁴ Columbus Comprehensive Plan, December 1993; Online at: <https://www.columbus.gov/Templates/Detail.aspx?id=24074>, Accessed: June 2, 2021.

¹⁵ City of Columbus Code, Title 33, Zoning Code, Chapter 3384, Airport Environs Overlay.

Table 2-2 City of Columbus Airport Environs Overlay District Land Use Compatibility Standards

Land Use	Subdistrict A	Subdistrict B	Subdistrict C
	65 DNL	70 DNL	75 DNL
Residential			
Single-, Two-, Three-, or Four-Family	Y	N	N
Apartment	Y	N	N
Manufactured Housing, Mobile Homes	N	N	N
Hotels, Motels	Y	Y	N
Church, House of Worship	Y	Y	N
Public Park, Noncommercial Recreation	Y	Y	Y
All Other Residential	Y	Y	N
Commercial			
Retail	Y	Y	Y
Business Services	Y	Y	Y
Personal Services	Y	Y	N
Professional Services	Y	Y	Y
Offices	Y	Y	N
All Other Commercial	Y	Y	Y
Manufacturing			
Manufacturing, Warehousing, Distribution	Y	Y	Y
Parking Facilities	Y	Y	Y
All Other Manufacturing	Y	Y	Y
Institutional			
Hospitals, Nursing Homes	Y	Y	N
Other Medical Facilities	Y	Y	Y
Educational Facilities	Y	Y	N
Public Assembly	Y	Y	N
Government Facilities	Y	Y	Y
All Other Public and Semi-Public	Y	Y	Y
Industrialized Unit	N	N	N
All Other Uses	Y	Y	Y

Y = Land Use is Permitted

N = Land Use is Not Permitted

Source: City of Columbus Code, Title 33, Zoning Code, Chapter 3384, Airport Environs Overlay.

2.2.1.4 City of Gahanna

The City of Gahanna is located to the north, northeast, and east of CMH and encompasses approximately 12.5 square miles. According to the 2018 U.S. Census Bureau estimates Gahanna had a population of over 35,500.¹⁶ The City updated its Land Use Plan in September 2019.¹⁷ The Plan contains no land use management recommendations regarding compatibility with airport operations. However, the City of Gahanna and the CRAA have coordinated on land use compatibility issues for the areas immediately east of the Airport.

2.2.1.5 City of Reynoldsburg

The City of Reynoldsburg is located approximately 2.5 miles southeast of CMH and encompasses over 10.5 square miles. The city had an estimated population of over 38,000 in 2018 according to the U.S. Census Bureau.¹⁸ The city updated its Comprehensive Plan in 2018,¹⁹ which contains no recommendations regarding compatibility between land use and airport operations.

2.2.1.6 City of Whitehall

The City of Whitehall is located to the south of CMH and encompasses approximately 5.2 square miles. It had an estimated population of just over 19,000 people in 2018 according to the U.S. Census Bureau.²⁰ The City published a draft comprehensive plan in 2019.²¹ The City currently has no plans or zoning codes that address land use and airport noise compatibility.

2.2.1.7 Jefferson Township

Jefferson Township is located to the northeast of CMH and encompasses approximately 17 square miles. The township had an estimated population of over 11,300 in 2018 according to the U.S. Census Bureau.²² Jefferson Township adopted its Comprehensive Plan in September 2018.²³ The Comprehensive Plan contains no recommendations regarding compatibility between land use and airport operations. The Zoning Ordinance includes airports as a special use that will be subject to the Exceptional Use District regulations but does not specifically address the compatibility between airports and the Exceptional Use District and other land uses.²⁴

2.3 Growth/Risk Significant Development Trends

The Central Ohio region continues to experience growth in population and employment. The Mid-Ohio Regional Planning Commission has prepared population and employment estimates for each jurisdiction through the year 2050. **Table 2-4** shows the estimated population growth within the GSA by the year 2025. As shown in **Table 2-3**, the population of the jurisdictions within the GSA is expected to increase by over 7 percent between 2020 and 2025. Similarly, employment within the GSA is expected to increase by over 5 percent between 2020 and 2025 as shown in Table 2-4.

¹⁶ US Census Bureau, Annual Population Estimates, 2018.

¹⁷ Gahanna Land Use Plan, 2019; Online at <https://www.gahanna.gov/planning/>, Accessed: June 2, 2021.

¹⁸ US Census Bureau, Annual Population Estimates, 2018.

¹⁹ Reynoldsburg Comprehensive Plan 2018; Online at <http://www.ci.reynoldsburg.oh.us/departments/development/comp-plan.aspx>, Accessed: June 2, 2021.

²⁰ US Census Bureau, Annual Population Estimates, 2018.

²¹ Whitehall Works Development Blueprint, Draft, March 19, 2019; Online at: <https://whitehallmeansbusiness.com/why-whitehall/economic-community-development-plan/>, Accessed: June 2, 2021.

²² US Census Bureau, Annual Population Estimates, 2018.

²³ Jefferson Township 2050: A Vision for the Future, Adopted September 10, 2018; Online at <https://www.jeffersontownship.org/2050>, Accessed: June 2, 2021.

²⁴ Jefferson Township Zoning Resolution, Amended October 28, 2015; Online at: <https://www.jeffersontownship.org/Departments/Zoning-and-Building/Zoning-Resolution>, Accessed: June 2, 2021.

Overall, the growth trends within the GSA are expected to continue with population expected to increase by nearly 27 percent by 2050 and employment expected to increase by approximately 25 percent by 2050.

Table 2-3 Population Projections, 2020 - 2025

Jurisdiction	Population		Percent Growth, 2020-2025
	2020	2025	
City of Bexley	14,531	14,654	0.85%
City of Columbus	933,427	1,002,035	7.35%
City of Gahanna	38,851	39,785	2.40%
City of Reynoldsburg	42,181	43,313	2.68%
City of Whitehall	18,459	18,771	1.69%
Jefferson Township	13,226	14,341	8.43%
Mifflin Township	852	1,073	25.94%
Total	1,061,527	1,133,972	6.82%

Source: Mid-Ohio Regional Planning Commission, online at: <https://www.morpc.org/tool-resource/estimates-projections/>, 2020

Table 2-4 Employment Projections, 2020 - 2025

Jurisdiction	Workers		Percent Growth, 2020-2025
	2020	2025	
City of Bexley	6,868	6,879	0.16%
City of Columbus	479,733	507,300	5.75%
City of Gahanna	21,146	21,496	1.66%
City of Reynoldsburg	22,372	22,787	1.85%
City of Whitehall	8,460	8,510	0.59%
Jefferson Township	6,548	6,952	6.17%
Mifflin Township	396	475	19.95%
Total	545,523	574,399	5.29%

Source: Mid-Ohio Regional Planning Commission, online at: <https://www.morpc.org/tool-resource/estimates-projections/>, 2020

Currently, predominant land uses in the areas surrounding CMH are medium to high density residential, commercial, industrial/manufacturing, vacant property and parks/open space. Land use patterns are expected to change in response to demand from population and employment growth. Future residential growth near CMH could occur and, if not specifically restricted through zoning, could occur in areas that receive noise in excess of 65 DNL. The Mid-Ohio Regional Planning Commission (MORPC) has developed projected future land use patterns for the year 2025. These future land use projections include additional industrial/commercial development along I-270, and conversion from agricultural to residential land uses east of the Airport, particularly in Blacklick²⁵ and Reynoldsburg. Additional industrial development has occurred along the I-270 corridor near Tech Center Drive and Claycraft Road and this type of development in this location is expected

²⁵ Blacklick is an unincorporated community within Jefferson Township.

to continue in the future. Other infill development and increased development density may occur within vacant and underutilized land surrounding the Airport. This could include conversion of vacant land and pockets of older residential development into commercial and office uses, but may also include new residential uses.²⁶

Development is also expected to occur to meet the demands for residential and commercial uses created by population growth. To the northwest, west, and southwest of CMH, infill development and/or redevelopment could occur along Stelzer Road and Cassady Avenue. To the south and east of the Airport, new residential development could occur through infill within existing neighborhoods and new subdivision development. Details about new residential development that is underway or proposed within the GSA is included in Appendix D. Properties that are under development or proposed for development are displayed as “transitional / mixed-use” on the Future (2025) NEM.

The existing and future noise impacts upon land uses in the vicinity of CMH is discussed in Chapter Three.

²⁶ Mid-Ohio Regional Planning Commission, Land Use Estimates and Forecasts 2015-2020. Population and employment projections were prepared prior to the COVID-19 outbreak. Impacts of COVID-19 are expected to be short-term and the overall trend in growth is expected to resume between 2020 and 2025.