CHAPTER FOUR
AFFECTED ENVIRONMENT

The Affected Environment chapter provides a description of the existing environmental conditions[1] in and around the vicinity of Port Columbus International Airport (CMH or Airport). This description of existing conditions describes the area(s) that may be affected by the Sponsor's Proposed Project. It also provides a basis of comparison to determine the environmental consequences of the Sponsor's Proposed Project and remaining alternatives, relative to existing social, economic, and environmental settings. A complete description of baseline conditions for each environmental resource category is found in Chapter Five, *Environmental Consequences.*

The affected environment is described in terms of:

- Surrounding Environment;
- Political Jurisdictions;
- Land Use and Zoning;
- Noise-Sensitive Facilities;
- Socioeconomic Overview;
- Population Trends;
- Economic Growth and Employment;
- General Ecological Characteristics;
- Water Resources;
- Wetlands and Floodplains;
- Public Parks and Recreation Facilities;
- Endangered and Threatened Species of Flora and Fauna;
- Historic, Architectural, Archaeological, and Cultural Resources;
- Future Planning Activities;
- Future Residential Development Tracts;
- Existing Noise Exposure; and
- Baseline Emissions.

[1] The existing or baseline year for these analyses is 2006; the most recent complete calendar year with available data prior to the beginning of these analyses.

4.1 AIRPORT ENVIRONS

CMH is located in northeastern Franklin County, Ohio, approximately five miles northeast of downtown Columbus (see **Exhibit 4-1, *Airport Regional Location***). CMH is situated between Akron-Canton Airport (CAK), 134 miles to the northeast, and Dayton International Airport (DAY), 77 miles to the southwest, as shown on Exhibit 4-1. The Airport encompasses approximately 2,191 total acres of land. The airfield, terminal areas, and directly related support facilities are bound by I-670 and I-270 to the north, N. Hamilton Road/State Route 317 to the east, East Fifth Avenue to the south, and Stelzer Road to the west. The characteristics of adjacent land uses and zoning, location of nearby communities, and general characteristics of the Airport vicinity are discussed below.

4.1.1 STUDY AREAS

For the purposes of this EIS, two study areas have been defined. The General Study Area (GSA) depicts the communities surrounding the Airport. A further refined Detailed Study Area (DSA) depicts the potential land area that may be physically disturbed by the development of the Sponsor's Proposed Project. Exhibits depicting these two study areas show the existing political jurisdictional boundaries; noise-sensitive land uses; compatible land uses; major and minor streets and roadways; and major physical, geographic, and natural features, along with selected place names, road names, and names of major geographic features.

The GSA, shown in **Exhibit 4-2, *General Study Area*** covers a broad area so that potential impacts that may result from the development of the Sponsor's Proposed Project or any of its alternatives can be adequately assessed, such as potential noise impacts upon surrounding communities. The GSA boundary was developed using a composite of the projected future 60 Day-Night Average Sound Level (DNL) noise contours. A buffer area was then added to allow for potential future growth in the 60 DNL noise contour for the existing runway configuration and the runway configuration that would result from the Sponsor's Proposed Project.

The DSA, shown in **Exhibit 4-3, *Detailed Study Area*** covers a smaller area to allow a more detailed discussion and analysis of construction and development-related impacts that would result from the Sponsor's Proposed Project. The DSA boundary was developed using a composite of the airfield and operational changes that would result from the Sponsor's Proposed Project, such as the Runway Safety Areas (RSAs) and Runway Protection Zones (RPZs).

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Port Columbus International Airport

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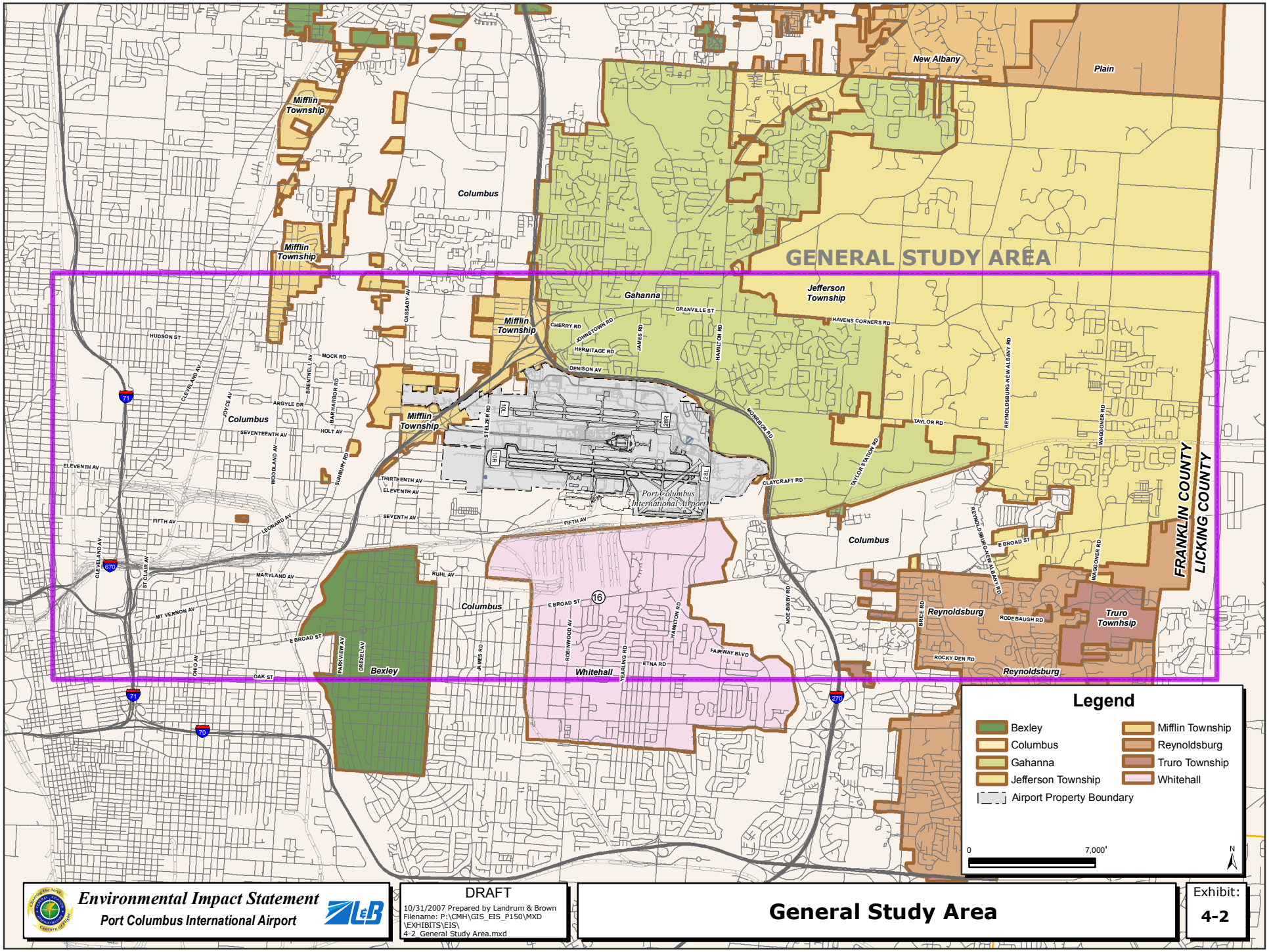
Airport Regional Location

Exhibit: **4-1**



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10/31/2007 Prepared by Landrum & Brown
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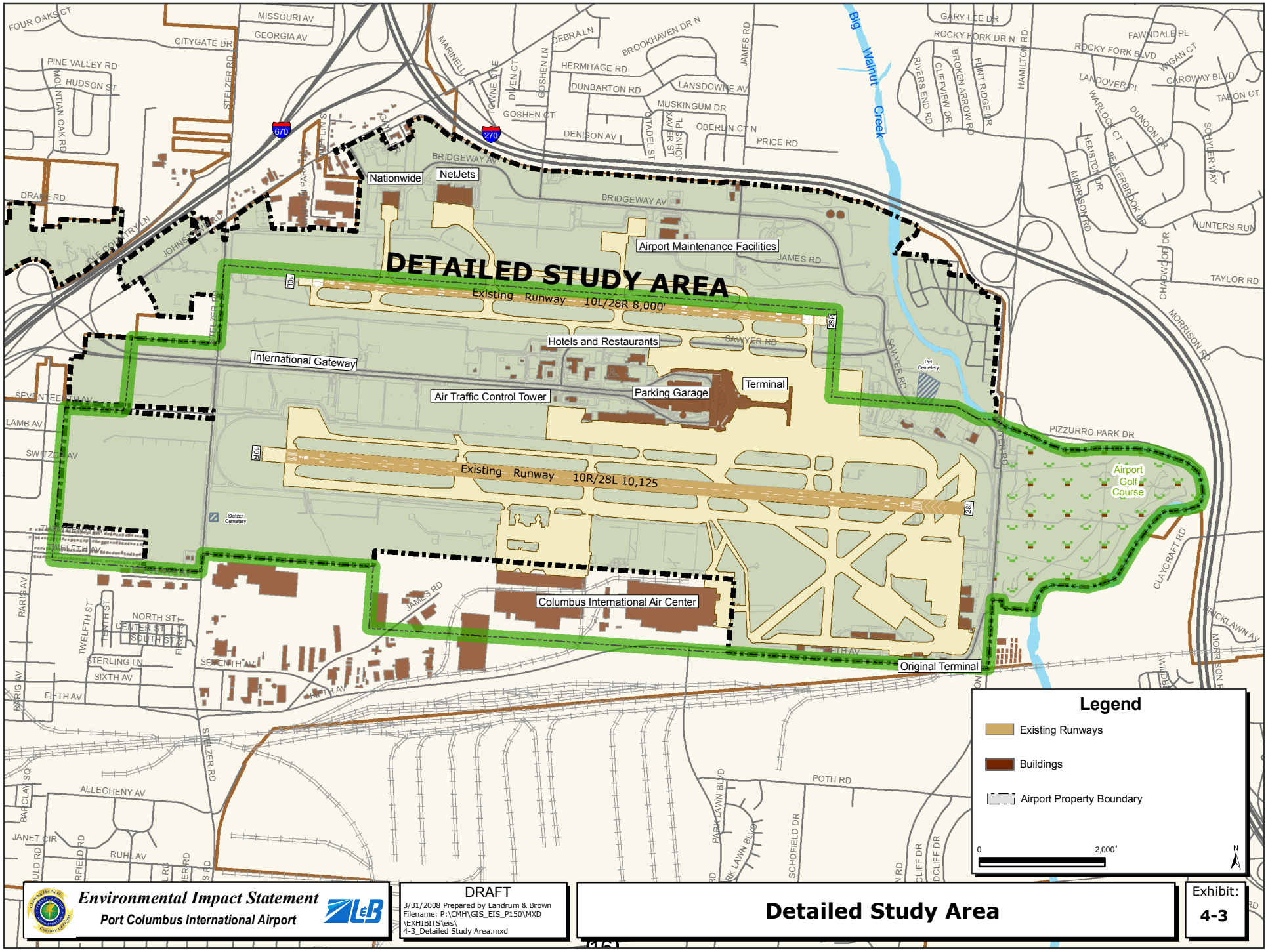
General Study Area

Exhibit: 4-2



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4-3_Detailed Study Area.mxd

Detailed Study Area

Exhibit:
4-3

4.1.2 LAND USE AND ZONING

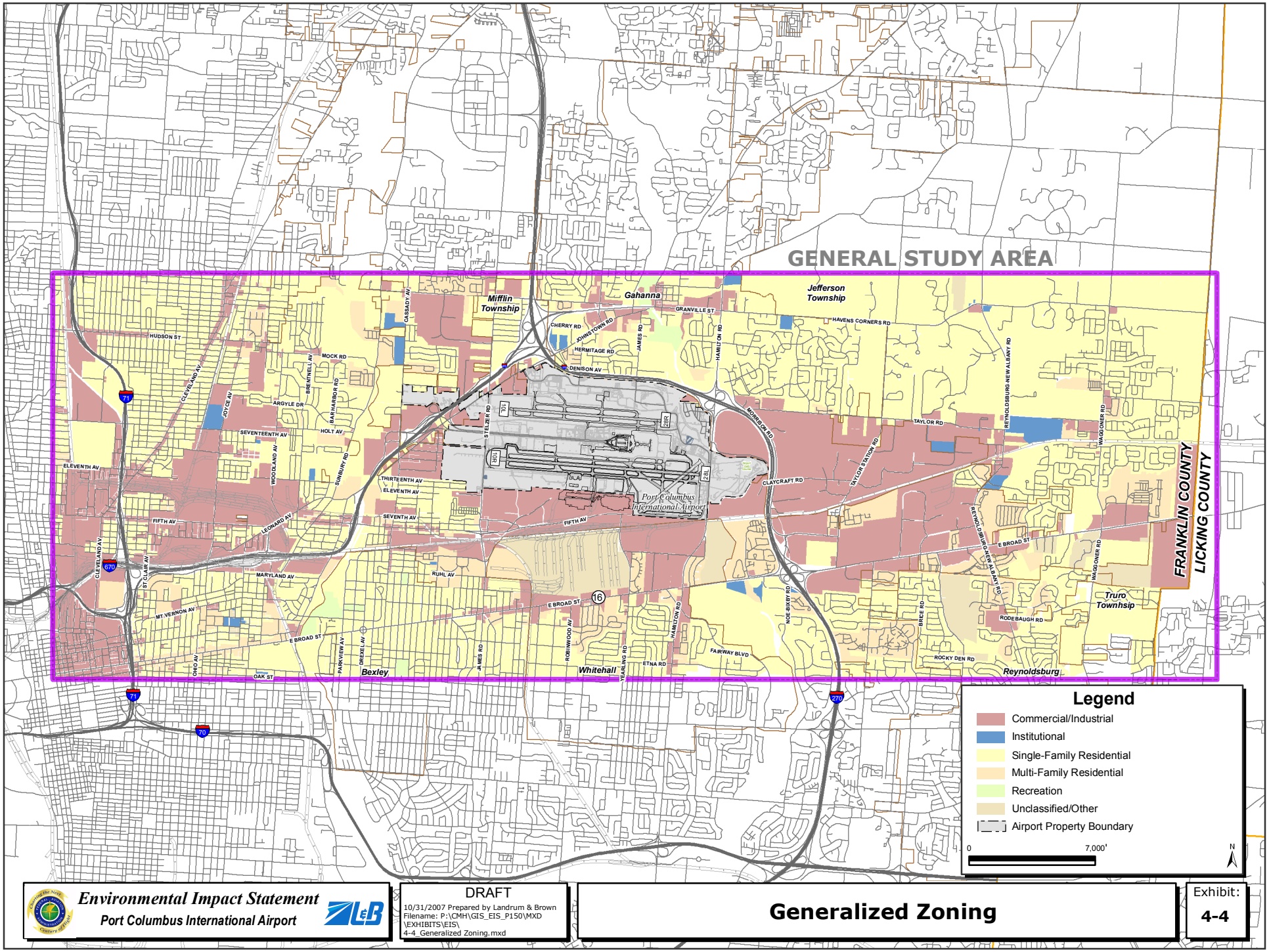
Zoning is one of the primary tools available to local communities to ensure land use compatibility. Zoning ordinances and regulations are implemented to promote public health, safety, and welfare by regulating the use of the land within a jurisdiction, based on factors such as existing and expected socioeconomic conditions. The following section describes existing land use patterns and zoning districts around the Airport.

Existing land use data was collected from the counties, municipalities, and townships within the GSA, as well as from reports generated by the Mid-Ohio Regional Planning Commission (MORPC). Land uses in the vicinity of CMH were categorized in terms of the general land use classifications presented, including residential (single and multi-family), commercial, public/institutional, and agricultural/recreational/open space. These land uses were identified based on Franklin County's Geographical Information System (GIS) database, previous studies, and additional land use surveys provided by the Columbus Regional Airport Authority (CRAA) or local jurisdictions, and was supplemented as necessary by field verification. **Table 4-1** shows the generalized land use categories and examples of specific land uses that would be grouped into these general land use categories. **Exhibit 4-4, *Generalized Zoning,*** and **Exhibit 4-5, *Existing Land Use,*** depict the generalized zoning and existing land use patterns in the GSA.

Table 4-1
GENERALIZED LAND USE CLASSIFICATIONS
Port Columbus International Airport

GENERALIZED LAND USE CATEGORY	SPECIFIC LAND USE EXAMPLES
Single-Family Residential	Single-Family Homes
Multi-Family Residential	Multi-Family Homes Apartments
Mobile Home Park	Mobile Home Parks
Commercial / Industrial	Manufacturing Warehousing Mining / Quarry / Excavating Food Service Gas Stations Retail
Public / Institutional	Schools Libraries Churches Government Buildings
Open Space	Agricultural / Farming / Nurseries Wooded Parks / Recreation
Exempt/Unclassified	Transportation Facilities Public Utilities Parking

Source: Landrum & Brown, 2007.



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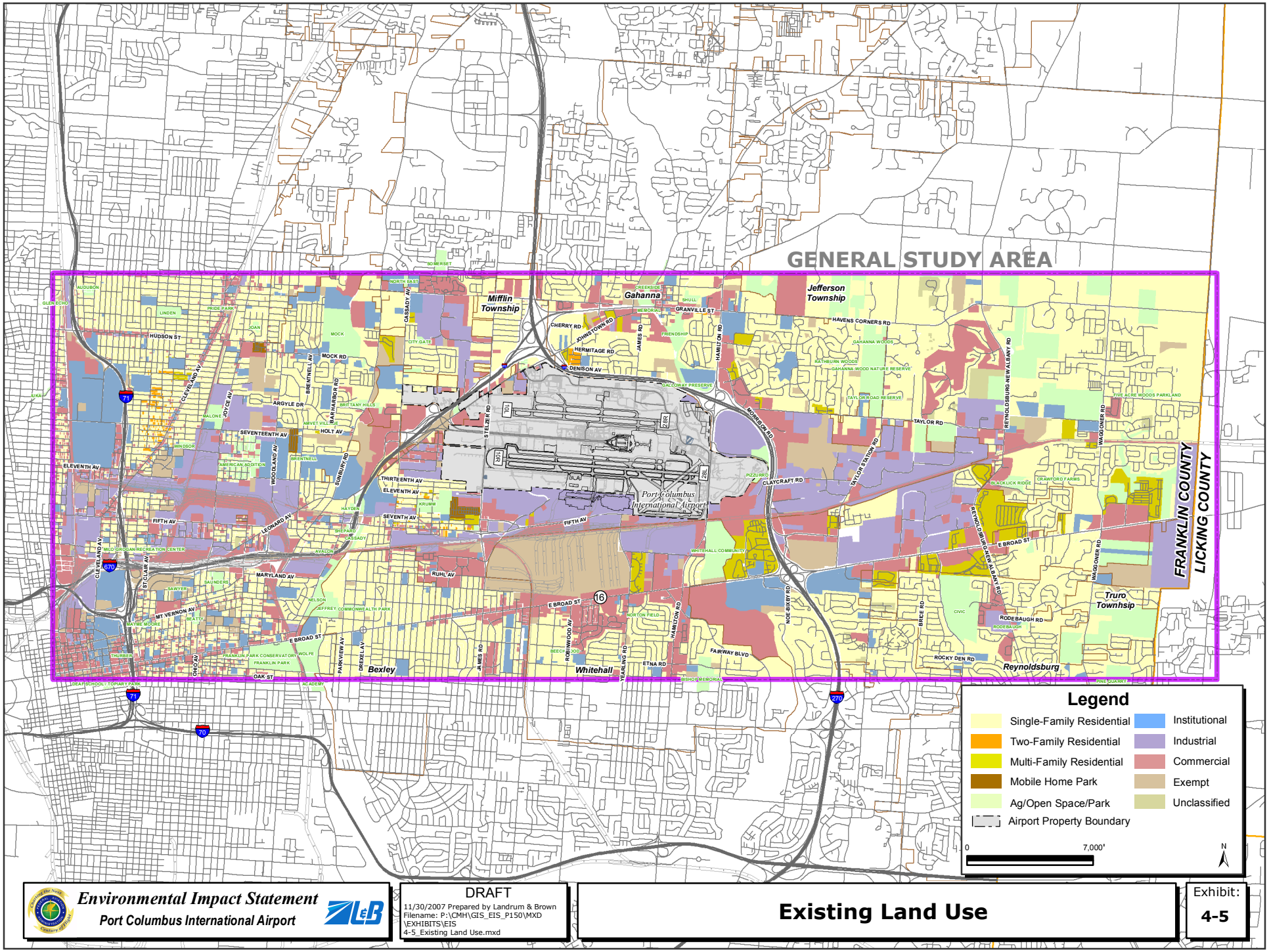
Generalized Zoning

Exhibit: 4-4



Environmental Impact Statement
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Existing Land Use

Exhibit: 4-5

4.1.3 NOISE-SENSITIVE FACILITIES

As shown on **Exhibit 4-6, *Noise-Sensitive Facilities,*** several public and community facilities occur within the GSA including: 74 schools, 226 churches, five libraries, and two hospitals. Within the area encompassed by the 65 DNL of the Existing (2006) Baseline noise contour, there are no schools, churches, libraries, hospitals, or nursing homes. The complete list of noise-sensitive land uses in the GSA is included in Chapter Five, Section 5.2, *Compatible Land Use*.

4.1.4 GROWTH RISK/SIGNIFICANT DEVELOPMENT TRENDS

The Central Ohio Region[2] is currently experiencing rapid growth that began nearly 20 years ago. Between 1990 and 2000, the population of the Central Ohio Region grew by 15 percent, compared to a growth rate of five percent statewide.[3] The population of Franklin County is projected to grow by an additional 26 percent between 2000 and 2030. Employment in Franklin County is also expected to grow by 43 percent between 2000 and 2030. The jurisdictions within the GSA are expected to experience population growth at 20 percent and employment growth at nearly 30 percent during the same timeframe. This growth is expected to be highest in the jurisdictions of New Albany and Gahanna, to the north of CMH.[4]

Land use in the Central Ohio Region is changing in response to the growth trend. The amount of agricultural land decreased by ten percent from the early 1980s through the late 1990s. In the Central Ohio region, Franklin County has experienced the largest share of population growth over the past 20 years. However, its share of growth is projected to decline in the coming years as the surrounding counties attract more people. Forty percent of new houses are being built outside of Franklin County in low density residential areas at the outer edge of existing urbanized areas.

Predominant land uses in the areas surrounding CMH are medium- to high-density residential and commercial/industrial. Future plans for the municipalities surrounding CMH include the preservation of existing residential neighborhoods and the development of new neighborhoods and associated commercial/industrial services. Future residential growth near CMH is inevitable and, if not specifically restricted through zoning, could occur in areas that receive noise in excess of 65 DNL. To the west of the Airport new residential development is a combination of infill within existing neighborhoods and some limited subdivision development. Examples of the new subdivisions can be found northwest of the Airport in the City of Columbus along Sunbury Road. East of the Airport, particularly in Jefferson

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2 The "Central Ohio Region" is defined by the Mid-Ohio Regional Planning Commission as the area contained in the seven counties of Delaware, Fairfield, Franklin, Licking, Madison, Pickaway, and Union. *Regional Fact Book, Regional Growth Strategy, Central Ohio*, Mid-Ohio Regional Planning Commission. August 2004.

3 U.S. Census Bureau, 1990 and 2000 Population Counts.

4 2030 *Population, Household and Employment Forecast*, Mid-Ohio Regional Planning Commission. April 2006.

Township, large residential subdivisions are being constructed and others are planned. The closest large residential subdivision to CMH is being constructed on Taylor Station Road with plans for 485 new homes to be built.

4.2 SOCIOECONOMIC OVERVIEW

Population, growth, and employment trends are used to evaluate the socioeconomic characteristics of an area. A socioeconomic overview for the land area surrounding the Airport identifies the patterns of growth and economic development.

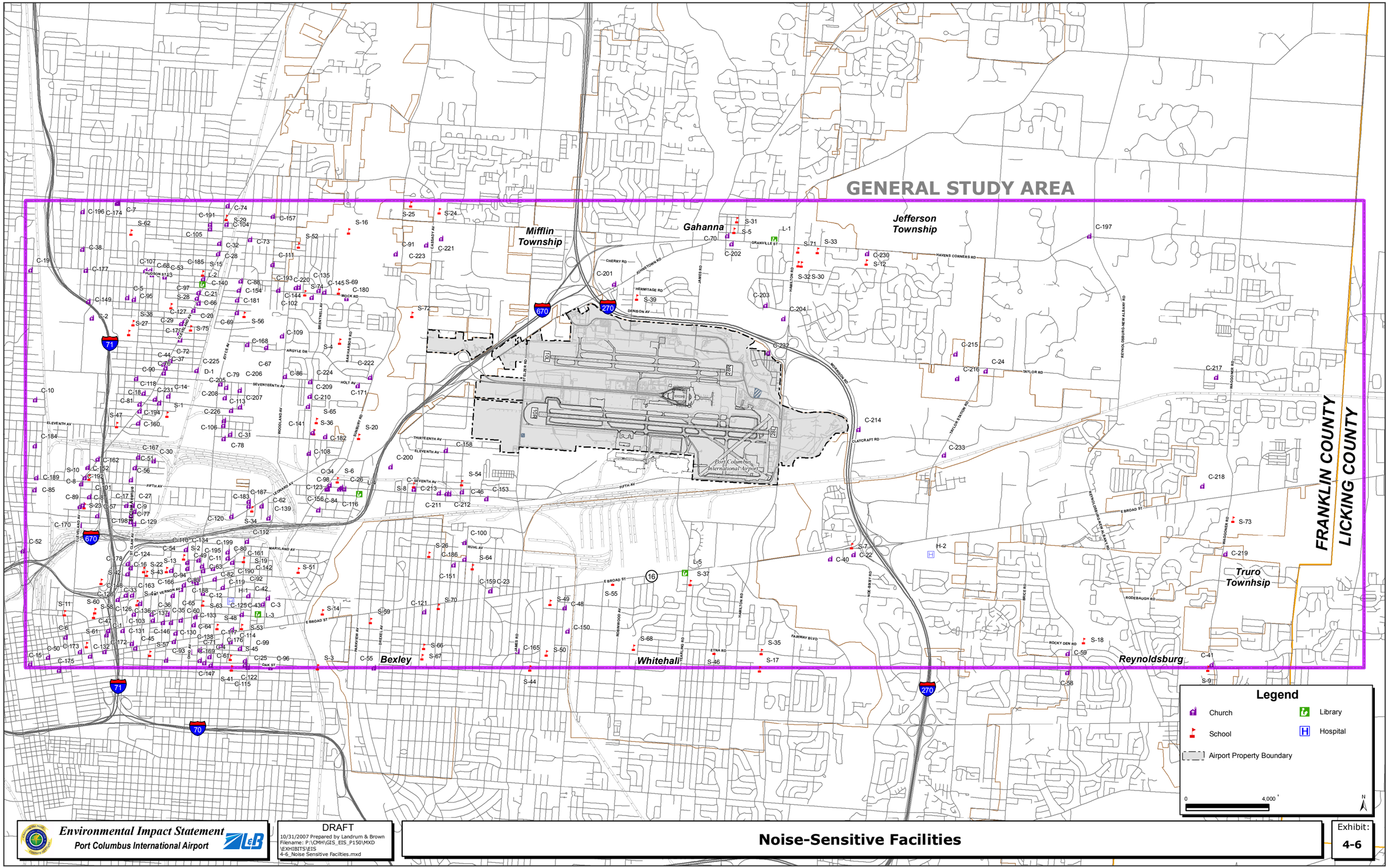
4.2.1 POPULATION TRENDS

Population trends and forecasts for the Columbus Metropolitan Statistical Area (MSA) area are presented in **Table 4-2**. According to 2006 Census estimates, there are over 1.7 million residents in the Columbus MSA area. This area includes Delaware, Fairfield, Franklin, Licking, Madison, Morrow, Pickaway, and Union counties. Overall, the population of the Columbus MSA is projected to increase by 16 percent from 2006 to 2020. As shown in **Table 4-3**, Franklin County is the most populous county within the Columbus MSA with over 63 percent of the total population.

Table 4-2
POPULATION PROJECTIONS WITHIN THE COLUMBUS MSA
Port Columbus International Airport

COUNTY	2000 CENSUS	2006 CENSUS ESTIMATE	POPULATION PROJECTIONS		
			2010	2015	2020
Delaware County	109,989	156,697	161,730	188,250	215,480
Fairfield County	122,759	140,591	143,860	155,330	169,540
Franklin County	1,068,978	1,095,662	1,155,910	1,195,310	1,238,250
Licking County	145,491	156,287	161,280	169,350	179,050
Madison County	40,213	41,496	43,130	44,290	45,190
Morrow County	31,628	34,529	34,410	35,380	36,890
Pickaway County	52,727	53,606	55,680	57,140	58,200
Union County	40,909	46,702	50,740	56,590	64,570
Total	**1,612,694**	**1,725,570**	**1,806,740**	**1,901,640**	**2,007,170**

Source: U.S. Census Bureau, Ohio Department of Development, 2007.



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Noise-Sensitive Facilities

Exhibit: 4-6

Table 4-3
SHARE OF REGIONAL POPULATION BY COUNTY
Port Columbus International Airport

COUNTY	SHARE OF MSA POPULATION (2006 ESTIMATE)
Delaware County	9.1%
Fairfield County	8.1%
Franklin County	63.5%
Licking County	9.1%
Madison County	2.4%
Morrow County	2.0%
Pickaway County	3.1%
Union County	2.7%
Total	100.0%

Source: U.S. Census Bureau, Landrum & Brown, 2007.

Table 4-4, shows the pattern of workers commuting to Franklin County from counties within the Columbus MSA. In 2000 over 143,000 (22.05 percent) people commuted to Franklin County from outlying counties.[5] Over two-thirds of the work force (77.95 percent) commutes from within Franklin County.

Table 4-4
DAILY COMMUTER TOTALS TO FRANKLIN COUNTY IN 2000
Port Columbus International Airport

COUNTY	PERSONS COMMUTING TO FRANKLIN COUNTY IN 2000	PERCENT OF PERSONS COMMUTING TO FRANKLIN COUNTY IN 2000
Franklin	508,393	77.95%
Delaware	31,708	4.86%
Fairfield	28,259	4.33%
Licking	23,755	3.64%
Pickaway	9,613	1.47%
Madison	7,921	1.21%
Union	5,473	0.84%
Morrow	3,108	0.48%
All other areas outside Columbus MSA	34,015	5.22%
Total from outside Franklin County	*143,852*	22.05%

Source: *County to County Worker Flow Files*, 2007, US Census Bureau.

[5] *County to County Worker Flow Files*, 2007, US Census Bureau.

4.3 ECONOMIC GROWTH AND EMPLOYMENT

Columbus, named for explorer Christopher Columbus, was created as the capital of Ohio. Manufacturing and transportation have helped to shape the past and present of Columbus, and will certainly play a role in the area's future. In the last ten years, that focus has shifted more towards the retail, service, and finance industries. Transportation, also a key factor in the growth of Columbus, began in the late 1820s when the Erie Canal was completed, linking the Hudson River to Lake Erie via Buffalo, and effectively connecting the Great Lakes to the Atlantic Seaboard. In 1831, the National Road reached Columbus from Baltimore, complementing the recently completed Erie Canal. In 1850, the Columbus and Xenia Railroad became the first railroad to serve the City. By 1875, Columbus was served by eight railroad companies. The advent of the railroad led to rapid industrial expansion.[6]

Based on recent reports from the Columbus Chamber of Commerce, the Columbus MSA is expected to continue the modest economic and employment growth that has occurred since the recession in 2001.[7] Among major employment sectors, healthcare, business, and professional services are expected to continue to be strong. In the short-term, continued decline in the housing market will result in decreased employment in the construction, real estate, and financing sectors. **Table 4-5** lists the most recent information available on industry sectors, number of employees in each sector, and number of firms in each sector. **Table 4-6** lists the Fortune 500 companies headquartered in the Columbus MSA (2007). These companies include: Abercrombie & Fitch, American Electric Power, Big Lots, Bob Evans Farms, Cardinal Health, Limited Brands, Nationwide, Retail Ventures, Wendy's International, and Worthington Industries. As the table illustrates, there is a mix between service/retailers and industrial firms. **Table 4-7** highlights the top employers in the Columbus MSA.

[6] *Columbus: The Story of a City*, 2003, Charleston: Arcadia Publishing.
[7] Columbus Chamber's Eighth Annual Blue Chip Economic Forecast, February 2008. Accessed online on February 21, 2008 at http://www.columbus.org/region/news/index.aspx?yr=2008.

Table 4-5
ESTIMATED EMPLOYMENT BY SECTOR, COLUMBUS MSA
Port Columbus International Airport

SECTOR	2000	2001	2002	2003	2004	NET CHANGE 2000-2004
Construction & Mining	41,700	42,600	40,200	39,700	39,600	-5%
Manufacturing	89,500	83,000	77,200	72,600	71,500	-20%
Wholesale Trade	35,400	39,000	38,200	36,500	37,600	6%
Retail Trade	119,900	117,700	113,100	108,300	104,800	-13%
Transportation & Utilities	35,000	35,300	35,100	35,100	35,600	2%
Information	23,100	22,600	21,200	20,500	20,000	-13%
Finance	73,200	75,800	74,900	76,100	77,100	5%
Professional & Business Services	127,000	128,700	125,000	122,700	123,100	-3%
Educational & Health Services	88,700	90,600	93,000	95,800	97,500	10%
Hospitality & Leisure Services	78,400	79,400	82,000	83,300	82,800	6%
Other Services	35,100	34,600	35,600	36,300	36,100	3%
Government	141,300	143,700	145,700	146,400	147,100	4%
Total	888,700	893,000	881,100	873,200	872,800	-2%

Note: Column totals might not sum due to rounding.

Source: *U.S. Bureau of Labor Statistics Current Employment Statistics Series*, 2007, provided by the Greater Columbus Chamber.

Table 4-6
FORTUNE 500 COMPANIES HEADQUARTERED IN THE COLUMBUS MSA
Port Columbus International Airport

COMPANY	CITY	COUNTY	INDUSTRY
Abercrombie & Fitch	New Albany	Franklin	Specialty Retailers
American Electric Power	Columbus	Franklin	Energy
Big Lots	Columbus	Franklin	Specialty Retailers
Bob Evans Farms	Columbus	Franklin	Food Services
Cardinal Health	Dublin	Franklin	Wholesalers, Health Care
Greif	Delaware	Delaware	Packaging, Containers
Hexion Specialty Chemicals	Columbus	Franklin	Chemicals
Huntington Bancshares	Columbus	Franklin	Commercial Banks
Limited Brands	Columbus	Franklin	Specialty Retailers
Mettler-Toledo International	Columbus	Franklin	Scientific, Photo, Control Equipment
Nationwide	Columbus	Franklin	Insurance
Retail Ventures	Columbus	Franklin	General Merchandisers
Scotts Miracle-Gro	Marysville	Union	Chemicals
Wendy's International	Dublin	Franklin	Food Services
Worthington Industries	Columbus	Franklin	Metals

Source: *Fortune* Magazine, 2007.

Table 4-7
TOP EMPLOYERS IN THE COLUMBUS MSA IN 2006
Port Columbus International Airport

COMPANY / ORGANIZATION	SECTOR	LOCAL FULL-TIME EMPLOYMENT
The State of Ohio	Government	26,613
The Ohio State University	Government Education	19,919
JP Morgan Chase & Co	Financial Activities	14,276
United States Government	Government	12,800
Nationwide	Financial Activities	11,834
OhioHealth	Health Care	9,413
City of Columbus	Government	8,106
Columbus Public Schools	Government Education	7,432
Limited Brands	Corp. Mgt/Retail Trade	7,200
Honda of America Manufacturing Inc.	Manufacturing	6,900
Wal-Mart Stores	Retail Trade	6,449
Franklin County	Government	6,164
Mount Carmel Health	Health Care	4,660
American Electric Power	Utilities	4,128
Huntington Bancshares Inc.	Financial Activities	4,000
Kroger Co.	Retail Trade	3,626
Children's Hospital Inc.	Health Care	3,307
AT&T Ohio	Utilities	3,000
Battelle	Professional Services	2,478
Medco Health Solutions Inc.	Health Care/Wholesale Trade	2,470
South-western City Schools	Government Education	2,454
Cardinal Health Inc.	Health Care/Wholesale Trade	2,000
Dispatch Printing Co.	Information	2,000
Ross Products, Div. of Abbott Labs	Manufacturing	1,958
United Parcel Service	Transportation	1,898
State Farm	Financial Activities	1,893
Retail Ventures Inc.	Corp. Mgt/Retail Trade	1,892
Hilliard City Schools	Government Education	1,852
Alliance Data Systems	Information	1,800
ARC Industries Inc.	Manufacturing	1,800
Teleperformance	Professional and Business Services	1,797
Big Lots Inc.	Corp. Mgt/Retail Trade	1,778
McDonalds Corp.	Corp. Mgt/Retail Trade	1,755
Emerson Network Power/Liebert Corp.	Manufacturing	1,743
National City Corp.	Financial Activities	1,680
Dublin City Schools	Government Education	1,600
TS Tech North America	Manufacturing	1,568
Westerville City Schools	Government Education	1,532
Owens Corning	Manufacturing	1,531
NetJets	Transportation/Financial Activities	1,500

Source: *Business First of Columbus & US Bureau of Labor Statistics,* 2006, provided by the Greater Columbus Chamber.

4.4 GENERAL ECOLOGICAL CHARACTERISTICS

The Airport is located within the Loamy High Lime Till Plains of the Eastern Corn Belt ecoregion. This sub-ecoregion is characterized by till plains of level to rolling terrain with low gradient streams, ground moraines, end moraines, and glacial outwash features. Soils are derived from loamy, limey glacial deposits of the Wisconsin age. In general, these soils show better drainage characteristics and more natural fertility than Eastern Corn Belt soils encountered north of the Morrow County line.[8] The terrain is generally flat and lacks swamps, lakes, and relief (except near streams, glacial moraines, and resistant bedrock) typical of glaciated areas. The site is located within the Big Walnut Creek Drainage Basin. Surface water runoff and stormwater drainage from CMH is discharged into Mason and Turkey runs. Both creeks enter from the north of the Airport and flow south. After leaving the Airport, Mason Run becomes a 10- to 20-foot wide sporadically vegetated creek. Turkey Run becomes a densely vegetative natural stream about one-foot deep and ten feet wide. The creeks join and flow south through urban residential and industrial areas before reaching the Big Walnut Creek five miles downstream of the site.[9] Big Walnut Creek is a tributary of the Scioto River, which is the principal river in Franklin County. The Scioto River flows south through downtown Columbus and ultimately into the Ohio River. There are three main forested areas within the DSA. Two are west of Stelzer Road, and the third borders the Airport Golf Course and Big Walnut Creek. A more detailed discussion of all ecological characteristics is included in Chapter Five, *Environmental Consequences.* **Exhibit 4-7, *General Ecological Characteristics in the Detailed Study Area***, depicts these areas within the DSA.

4.4.1 WATER RESOURCES

CMH is situated within the Big Walnut Creek Drainage Basin. The total area of CMH is approximately 2,191 acres. Stormwater drainage from CMH discharges into four receiving streams: Turkey Run, Mason Run, Big Walnut Creek, and Alum Creek. Approximately five miles south of CMH, Turkey Run flows into Mason Run, which ultimately discharges into Big Walnut Creek.

Big Walnut Creek, which originates north of CMH, is located on the eastern boundary of CMH and flows in a southerly direction. It receives flow from a series of internal outfalls and open channels on the north and southeast sides the Airport.

The drainage network discharging to the lower reach of Turkey Run originates at Stelzer Road, west of Runway 10L/28R. It flows southward under International Gateway, then enters a box culvert underneath existing Runway 10R/28L. South of Runway 10R/28L, the box culvert drains into an open channel. Additional drainage from the western portion of CMH enters the open channel south of the box culvert.

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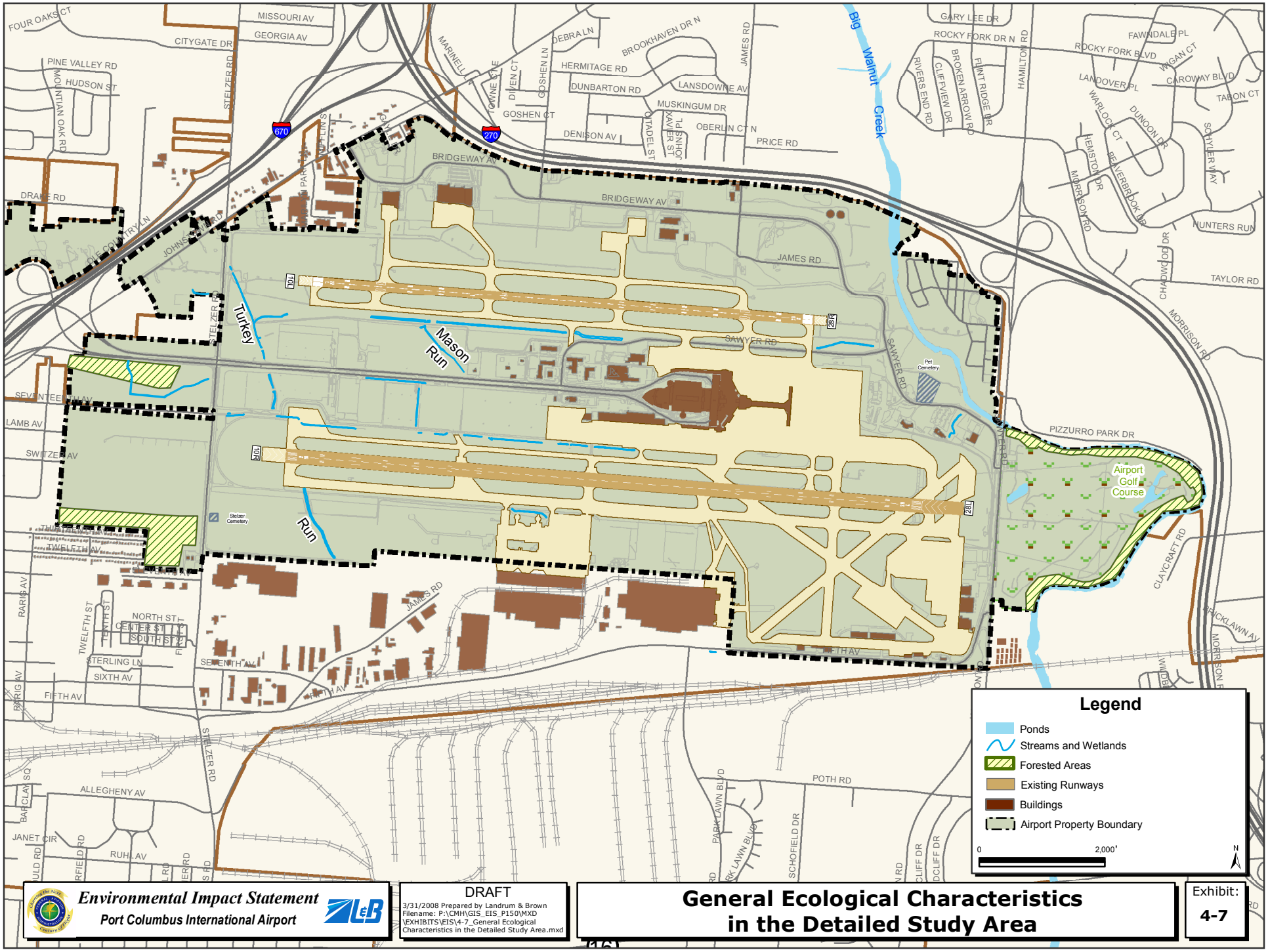
[8] *Biological and Water Quality Study of the Big Walnut Creek Basin, Delaware, Fairfield, Franklin, Morrow, and Pickaway Counties (Ohio)*, November 26, 2003, Ohio EPA. http://www.epa.state.oh.us/dsw/documents/BigWalnutCreekTSD.pdf. accessed February 21, 2008

[9] Public Health Assessment, Air Force Plant 85, Columbus, Franklin County, Ohio. http://www.atsdr.cdc.gov/hac/PHA/agriculturestreet/airforce/air_p1.html. accessed May 21, 2007.


Legend
Ponds
Streams and Wetlands
Forested Areas
Existing Runways
Buildings
Airport Property Boundary
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Turkey Run
Mason Run
Big Walnut Creek
Airport Golf Course
Environmental Impact Statement
Port Columbus International Airport
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General Ecological Characteristics in the Detailed Study Area
Exhibit:
4-7

The drainage network discharging to the lower reach of Mason Run originates on the south side of Runway 10L/28R. Mason Run flows southeast under International Gateway to a series of box culverts passing under Runway 10R/28L and under former Air Force Plant 85 (currently Million Air, Inc. and the Columbus International Air Center (CIAC)). Mason Run is enclosed for approximately 2,000 feet under former Air Force Plant 85.[10]

Approximately 50 acres of CMH property on the southwest corner of the Airport drains through a series of offsite storm sewers into Alum Creek. Alum Creek is located west of the Airport and flows in a southerly direction.

4.4.2 WETLANDS AND FLOODPLAINS

Wetlands located on the entire Airport were delineated and classified in 2003. In 2006 the DSA (approximately 1,750 acres) was re-delineated through field verification. Wetland communities in the DSA included palustrine broad-leaf deciduous forests and palustrine emergent wetlands. Three jurisdictional waterways, totaling approximately 8,292 linear feet, were identified in the DSA. Two streams are considered headwater streams, while the Big Walnut Creek is considered a non-headwater stream.

Areas of 100-year floodplain are located in the eastern portion of the Airport surrounding Big Walnut Creek. However, most of the DSA is outside of the 100-year floodplain.

4.4.3 PUBLIC PARKS AND RECREATION FACILITIES

Fifty-six public parks that have the potential to be impacted by Airport noise exist within the Airport environs. The locations of these areas are depicted on Exhibit 4-5. The following parks, listed by area, are located within the Airport environs.

- **Bexley:** Commonwealth Park, Jeffrey Park
- **City of Columbus:** Academy Park, American Addition Park, American Veteran Village Park, Audubon Park, Avalon Park, Beatty Park, Brentnell Park, Brittany Hills Park, Cassady Park, City Gate Park, Topiary Park, Franklin Park, Franklin Park Conservatory, Glen Echo Park, Hayden Park, Iuka Park, Joan Park, Krumm Park, Linden Park, Maloney Park, Mayme Moore Park, Milo-Grogan Recreation Center, Mock Park, Nelson Park, North East Park, Pride Park, Saunders Park, Sawyer Park, Shepard Park, Somerset Park, Thurber Park, Windsor Park, Wolfe Park
- **Gahanna:** Creekside Park, Friendship Park, Gahanna Woods Nature Reserve, Gahanna Woods, Galloway Preserve, Memorial Park, Pizzurro Park, Rathburn Woods, Shull Park, Taylor Road Reserve
- **Jefferson Township:** Blacklick Ridge Park, Crawford Farms, Five Acre Woods Parkland

[10] *Environmental Baseline Survey for Air Force Plant 85*, 1996, Earth Tech, Inc.

- **Reynoldsburg:** Civic Park, Pine Quarry Park, Rodebaugh Park
- **Whitehall:** Beechwood Park, Bishop Memorial Park, Norton Field, Whitehall Community Park

4.4.4 ENDANGERED AND THREATENED SPECIES OF FLORA AND FAUNA

The U.S. Fish and Wildlife Service (USFWS) reported that CMH is within the range of four endangered species: Scioto madtom (*Noturus trautmani*), northern riffleshell mussel (*Epioblasma torulosa rangiana*), clubshell mussel (*Pleurobema clava*), Indiana bat (*Myotis sodalis*), and one Federal candidate, rayed bean mussel (*Villosa fabalis*). The Ohio Department of Natural Resources has no records for any of these species within a one-mile radius of the project area. The USFWS stated that the proposed project should have no impact on the clubshell mussel, northern riffleshell mussel, rayed bean mussel, and Scioto madtom individuals or habitats.[11]

Approximately 21 suitable roost trees and foraging habitat for the Indiana bat are present within the second-growth forest areas of the project area along Big Walnut Creek. However, no bats were observed during a 2006 survey.[12]

4.4.5 HISTORIC, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Historic, architectural, archaeological, and cultural resources found within the Airport environs were examined pursuant to the requirements of Section 106 and Section 110 of the National Historic Preservation Act of 1966, as amended; implementing regulations 36 CFR Part 800; the National Environmental Policy Act of 1969 (NEPA), as amended; the Archaeological and Historical Preservation Act of 1974; and other applicable Federal and State guidelines and regulations. A historic architectural inventory of the GSA resulted in the identification of approximately 427 residential buildings that are 50 years of age or older.

The historic architectural inventory identified four historic resources that are listed, eligible for listing, or potentially eligible for listing in the National Register of Historic Places (NRHP). The Elam-Drake Residence was listed on the NRHP in 1978. This property may be moved or demolished in an independent project being conducted by the CRAA. As such, the Sponsor's Proposed Project will have no impact on the Elam-Drake Residence. Two other structures listed on the NRHP include the Old Port Columbus Airport Control Tower and the Valley Dale Ballroom, listed in the NRHP in 1979 and 1982, respectively. The Air Force Plant 85 complex has several buildings constructed between 1940 and 1944. Air Force Plant 85 is eligible for the NRHP as a historic district. Chapter Five, Section 5.8, *Historic, Architectural, Archaeological, and Cultural Resources*, Table 5.8-1 contains an inventory of architectural sites of historic value. Historic sites are shown on **Exhibit 4-8,**

[11] *Wetland Delineation and Threatened and Endangered Species Survey Report for the Port Columbus International Airport,* May 15, 2007, ASC Group.
[12] *Wetland Delineation and Threatened and Endangered Species Survey Report for the Port Columbus International Airport,* May 15, 2007, ASC Group.

Historic Resources. Nearly all of the residential buildings that would be acquired due to the Proposed Project have been built over 50 years ago; however, outside of those buildings mentioned all of them lack historical significance.

Two archaeological sites have been identified within the DSA. Neither of these sites is eligible for the NRHP.[13] Field review of these sites indicate both were apparently destroyed by construction at the Airport. Additional field work on the east side of the Airport in the area of the Airport Golf Course has been completed. No significant archaeological remains were found at these sites.

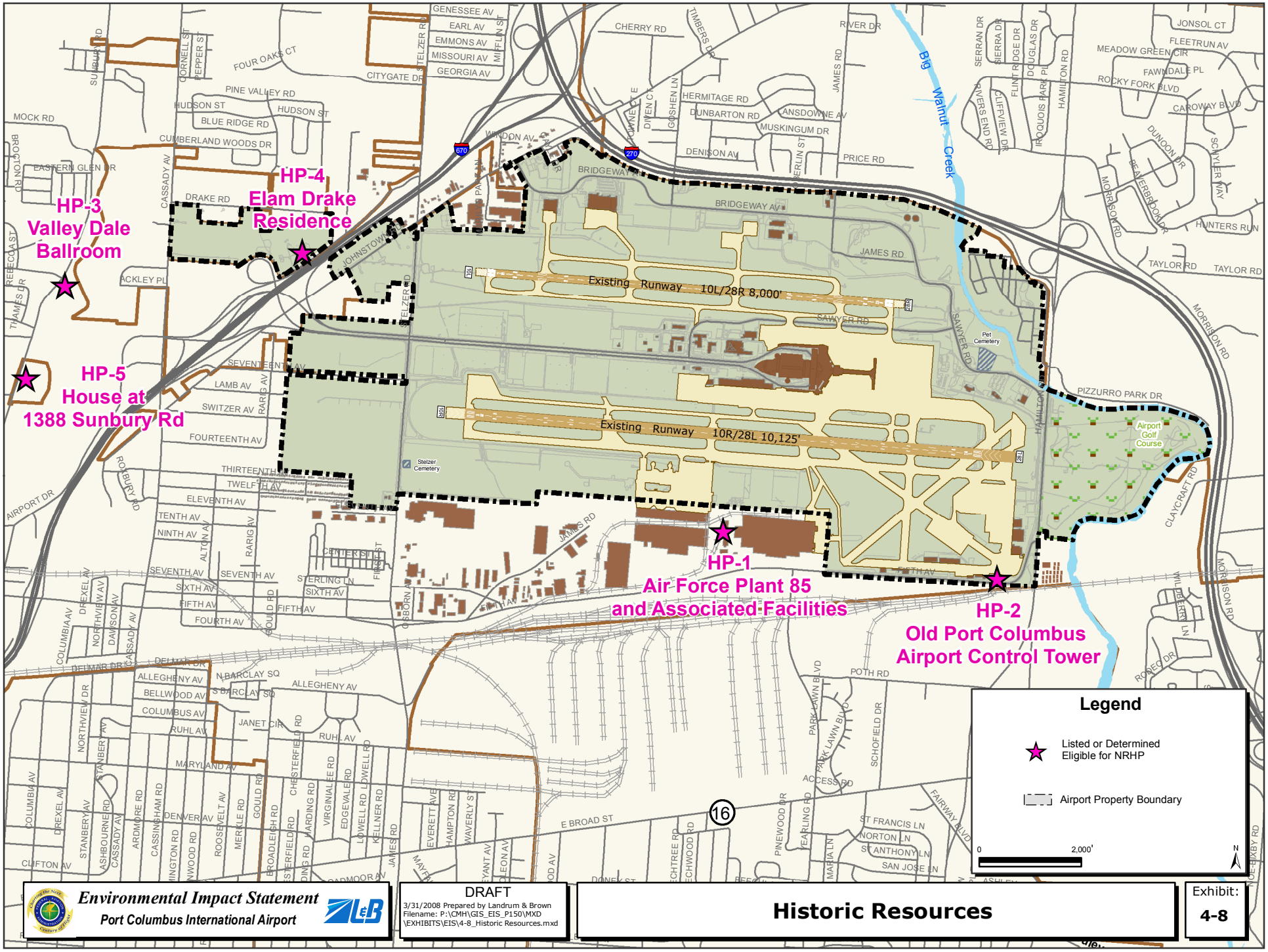
4.5 FUTURE PLANNING ACTIVITIES

The Columbus Comprehensive Plan[14] is intended to serve as a guide to protect and enhance the quality of life in Columbus through the year 2010. The plan provides a picture of where the City is now, where the City is headed, and the goals and policies that will be used to guide future development. It focuses on plans citywide, Downtown, and in specific neighborhoods. There are also development districts and environmental districts identified. There are a number of neighborhood plans that cover the Airport area. Each of those and the development recommendations are summarized below. **Exhibit 4-9, *Future Planning Activity Areas***, depicts the neighborhoods where future planning activities are planned.

4.5.1 EAST BROAD STREET CORRIDOR STUDY[15]

Rapid growth around East Broad Street, east of I-270, has resulted in traffic congestion, poor development patterns, and inadequate parkland. The East Broad Street Corridor Study confirms that staggering growth and development has occurred along the East Broad Street corridor. The residential population has increased by more than 200 percent since 1970, with over 11,000 people now residing in the area. This figure will continue to rise in the next couple years as previously approved development is built. This will include more than 250 additional single-family and 1,600 additional multi-family residential units. The commercial portion of the area developed rapidly in the past decade as well, with over 300,000 square feet of retail space constructed along East Broad Street. This pace will continue because at a minimum, another 250,000 square feet has been approved and will be built in the next few years. The vast amount of residential and commercial development has combined to generate huge traffic volumes on East Broad Street. All of these developments rely on East Broad Street as the primary ingress and egress commuter route of the area, and the retail fronting on Broad Street provides much of their retail service needs. Based on the results,

[13] *Cultural Resources Existing Conditions and Survey Methodology Report for the Port Columbus International Airport*, dated February 1, 2007, ASC Group.
[14] *Columbus Comprehensive Plan, City of Columbus*, 1993, Planning Division, Department of Development.
[15] *East Broad Street Study*, 1993, Planning Division, Department of Development.


HP-3
Valley Dale
Ballroom
HP-4
Elam Drake
Residence
HP-5
House at
1388 Sunbury Rd
HP-1
Air Force Plant 85
and Associated Facilities
HP-2
Old Port Columbus
Airport Control Tower
Existing Runway 10L/28R 8,000'
Existing Runway 10R/28L 10,125'
Big Walnut Creek
Airport Golf Course
Pet Cemetery
Stelzer Cemetery
Legend
Listed or Determined Eligible for NRHP
Airport Property Boundary
0
2,000'
N
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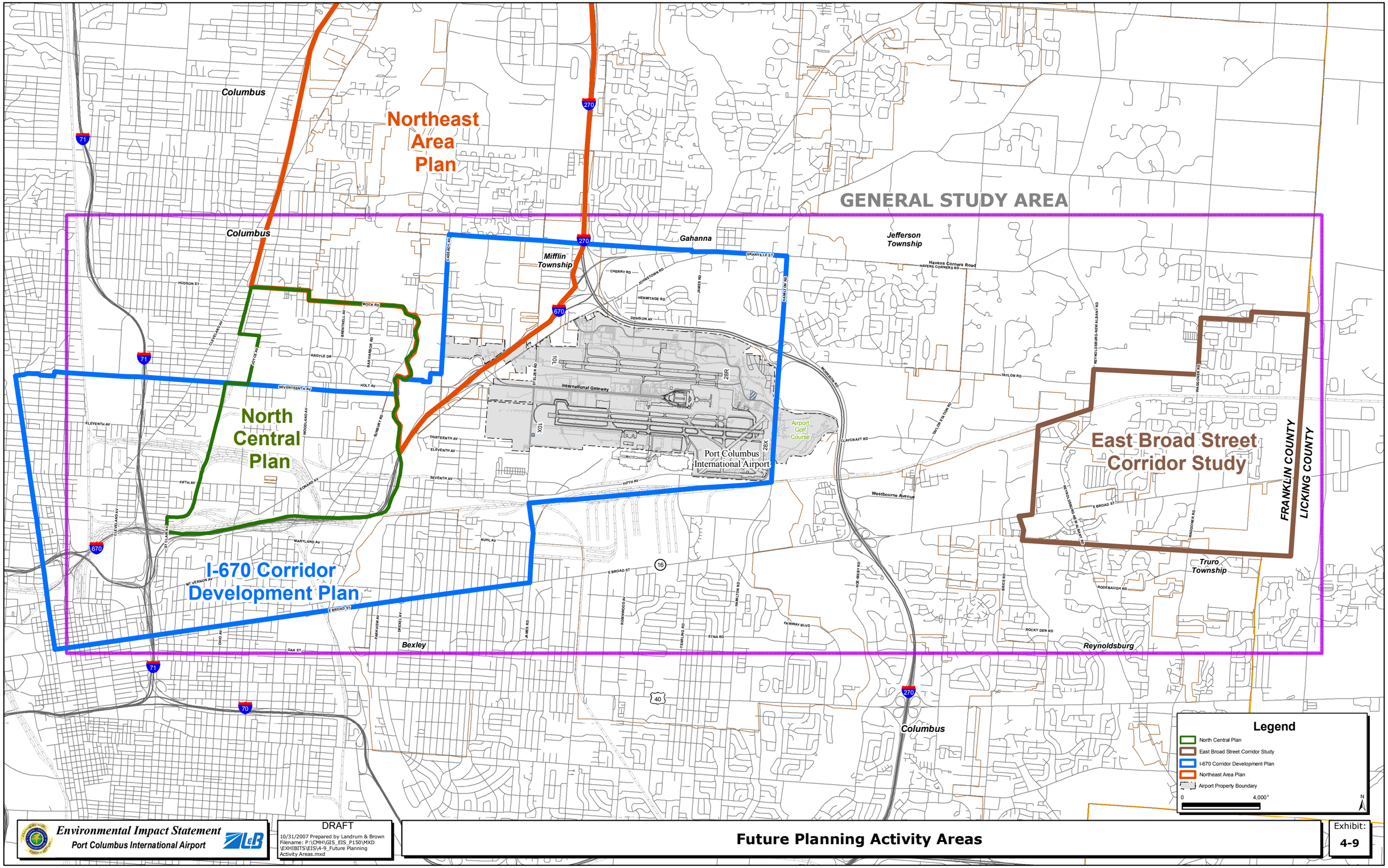
Historic Resources
Exhibit:
4-8



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Future Planning Activity Areas

Exhibit: 4-9

the East Broad Street Study finds that the corridor has several challenges, but options to improve the area include ways to mitigate the traffic impact on Broad Street itself and improve the overall design philosophy of development in the area.

4.5.2 I-670 CORRIDOR DEVELOPMENT PLAN[16]

The I-670 Corridor Development Plan includes an Airport sub-area. Approximately two miles of I-670, from the Fifth Avenue interchange at Alum Creek, to I-270, are located within the sub-area. The area also encompasses three Columbus neighborhoods: Cumberland Ridge, East Columbus, and Broadleigh. The northern portion of Bexley and a small section of Gahanna are also located within the Airport sub-area. Cassady Avenue and Stelzer Road are the major north-south streets through the area.

The prime development objective of the Airport sub-area is to create a "Gateway" to the City of Columbus that will be remembered by business people traveling to the area. High quality office and commercial uses are recommended, with development standards tailored to create an executive park appearance. The opportunity exists for the development of executive offices wishing to create a strong corporate image. With high visibility from I-670, travelers will associate businesses in this area with the "Gateway" image.

4.5.3 THE NORTH CENTRAL PLAN[17]

The North Central Plan addresses the entire area under the jurisdiction of the North Central Area Commission. The boundaries are as follows: Hudson/Mock roads to the north; Alum Creek to the east; Conrail tracks/I-670 to the south; and Conrail tracks/17th Avenue/Joyce Avenue, and 25th Avenue to the west. The North Central area is in large part a residential area. However, due to the proximity of the area to the freeway system, there are also many manufacturing uses within the neighborhood. These uses are predominantly in the western and southern portions of the neighborhood. In some instances manufacturing uses are located adjacent to residential areas.

One of the issues the North Central Plan addresses is the area's close proximity to CMH. It is in the flight path of many planes departing and arriving into the Airport. Noise from the airplanes has been an ongoing issue for the residents of the area. Some portions of North Central Area are within the boundaries of the Airport Environs Overlay (AEO). Recommendations from the study include:

- Requiring all new development or redevelopment to comply with the regulations of the AEO, as defined in the Zoning Code, in terms of land use and building standards. No variances or waivers should be granted to the regulations; and

[16] *I-670 Corridor Development Plan, City of Columbus*, 1989, Planning Division, Department of Development.

[17] *The North Central Plan, City of Columbus*, May 2002, Planning Division, Department of Development.

- Encourage the continued communications between the City, North Central community, and the CRAA.

In the 2007 Part 150 Noise Compatibility Study Update prepared by the CRAA, a recommendation was made to update the AEO boundary with an Airport Land Use Management District (ALUMD). The ALUMD is depicted in **Exhibit 4-10, *Proposed Airport Land Use Management District***.

4.5.4 THE NORTHEAST AREA PLAN[18]

This plan examined land use and zoning uses, as well as private and public concerns for the Northeast planning area. The overall goal of the area plan was to ensure compatible land uses that enhance the quality of life for Northeast Area residents. This was accomplished by providing guidelines for adequate land development, appropriate zoning regulations, recreation and open space, community facilities and services, efficient traffic circulation, and safe pedestrian movement.

The Northeast planning area contains an abundance of undeveloped land, as well as densely populated urban areas. Many churches and a small number of neighborhood scale commercial establishments are interspersed throughout the area.

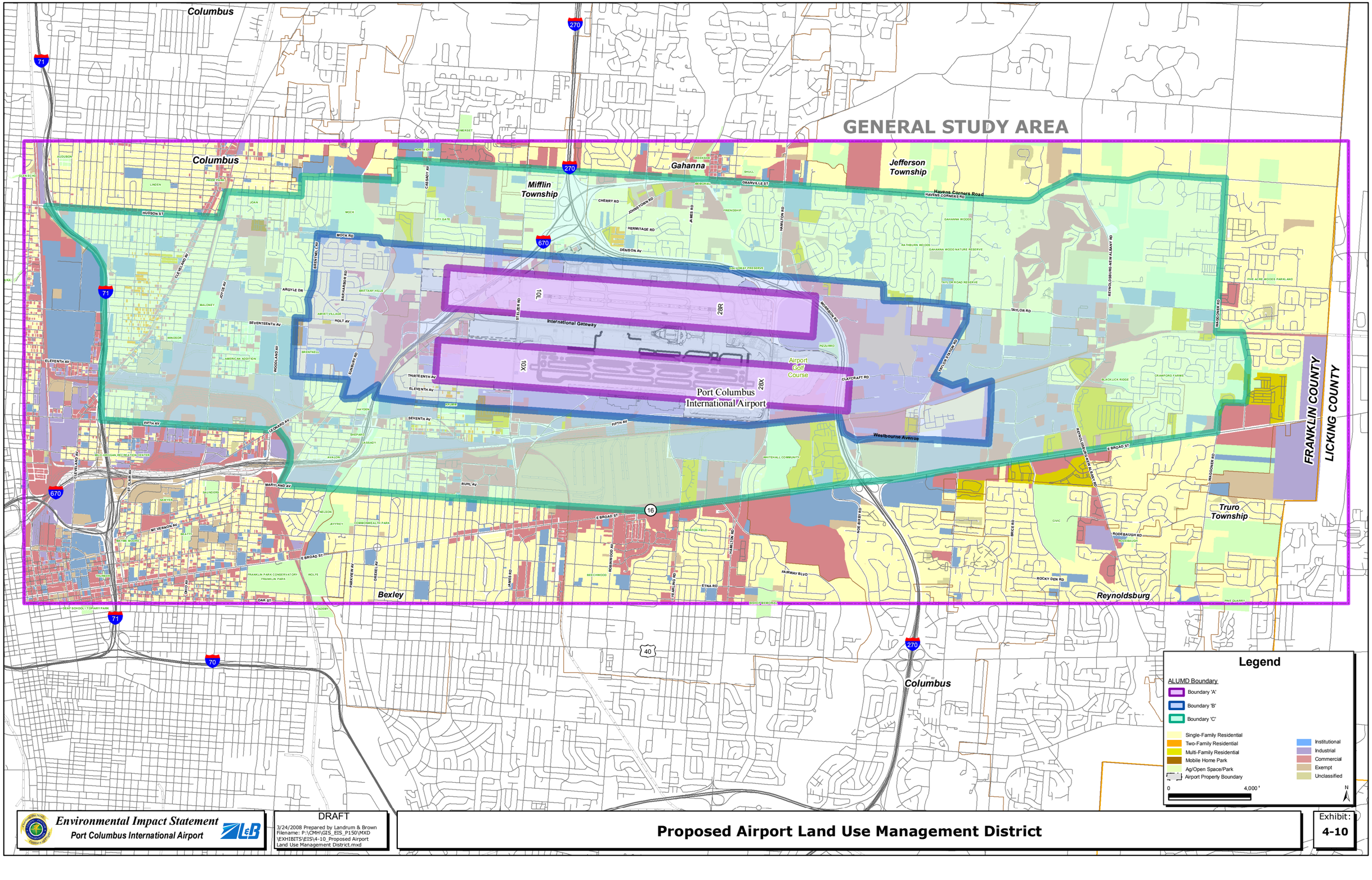
The Plan recommends against constructing residential developments within the 65 DNL noise contours. However, if there is construction of new residential units, it is not permitted without appropriate soundproofing. The construction of new residential units is prohibited in the 70 DNL noise contour.

Much of the area on the east side of Alum Creek, north of McCutcheon Road, is planned for retail, office, industrial, warehouse, or mixed-use development. The Plan recommends this area for commercial and mixed-use development because of its proximity to CMH, the I-670/I-270 interchange, and proposed improvements to I-270. In addition, the stretch of land between Stelzer Road and I-270 is recommended to be reserved for light industrial development. The Northeast Plan considers Airport-related uses the most appropriate recommendation for this area because of its proximity to the Airport and potential visibility to I-670 and I-270.

4.6 FUTURE RESIDENTIAL DEVELOPMENT TRENDS

Predominant land uses in the area surrounding CMH are medium to high density residential and commercial/industrial. Future plans for the municipalities surrounding CMH include the preservation of existing residential neighborhoods and the development of new neighborhoods and associated commercial/industrial services. To the west of the Airport, new residential development is a combination of infill within existing neighborhoods and some limited subdivision development. Examples of the new subdivisions can be found northwest of the Airport in the City of Columbus along Sunbury Road. East of the Airport, particularly in Jefferson

[18] *The Northeast Area Plan, City of Columbus*, January 1994, Planning Division, Department of Development.



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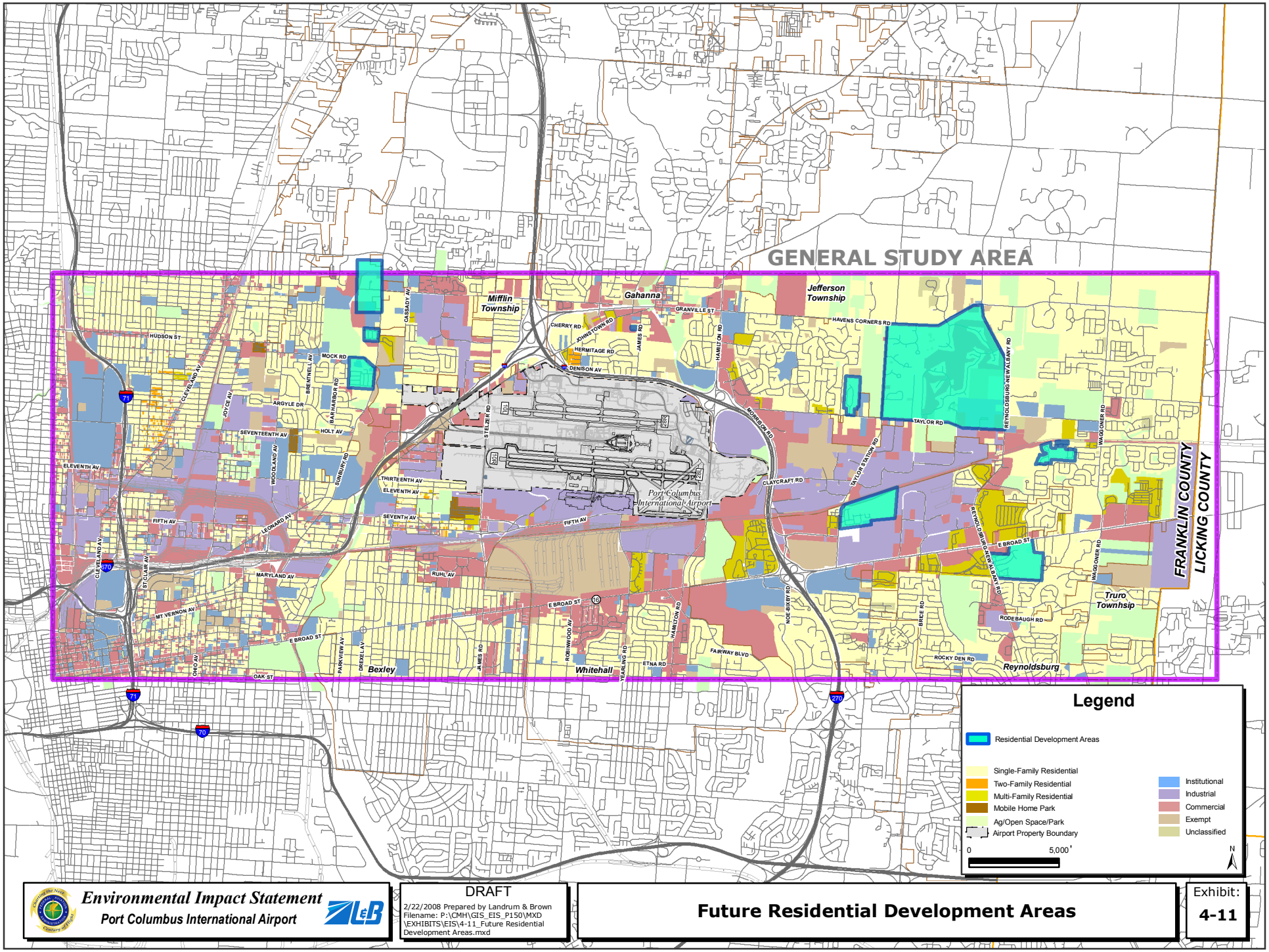
Land Use Management District.mxd

Proposed Airport Land Use Management District

Exhibit:
4-10



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Future Residential Development Areas

Exhibit: **4-11**

Township, large residential subdivisions are being constructed, with others planned. The closest large residential subdivision to CMH is being constructed near Taylor Station Road with plans for 485 new homes to be built. **Exhibit 4-11, *Future Residential Development Areas*,** depicts the referenced development areas.

4.7 EXISTING NOISE EXPOSURE

The following section describes the existing noise exposure at CMH. The detailed description of the number of operations, runway use, flight track, and trip length data used as input to the Integrated Noise Model (INM) version 6.2 for calculation of noise exposure is presented in Appendix D, *Noise*. **Exhibit 4-12, *Existing (2006) Baseline Noise Exposure Contour*** reflects the average-annual noise exposure pattern present at the Airport during the existing baseline period. **Table 4-8** summarizes the area within each noise contour level. Noise contours are presented for the 60, 65, 70, and 75 DNL. The Federal Aviation Administration (FAA) uses the 65 DNL as the noise level in which noise-sensitive land uses (residences, churches, schools, libraries, and nursing homes) become significantly impacted. Below the 65 DNL, all land uses are determined to be compatible. However, the 60 DNL is shown because it is useful for planning purposes.

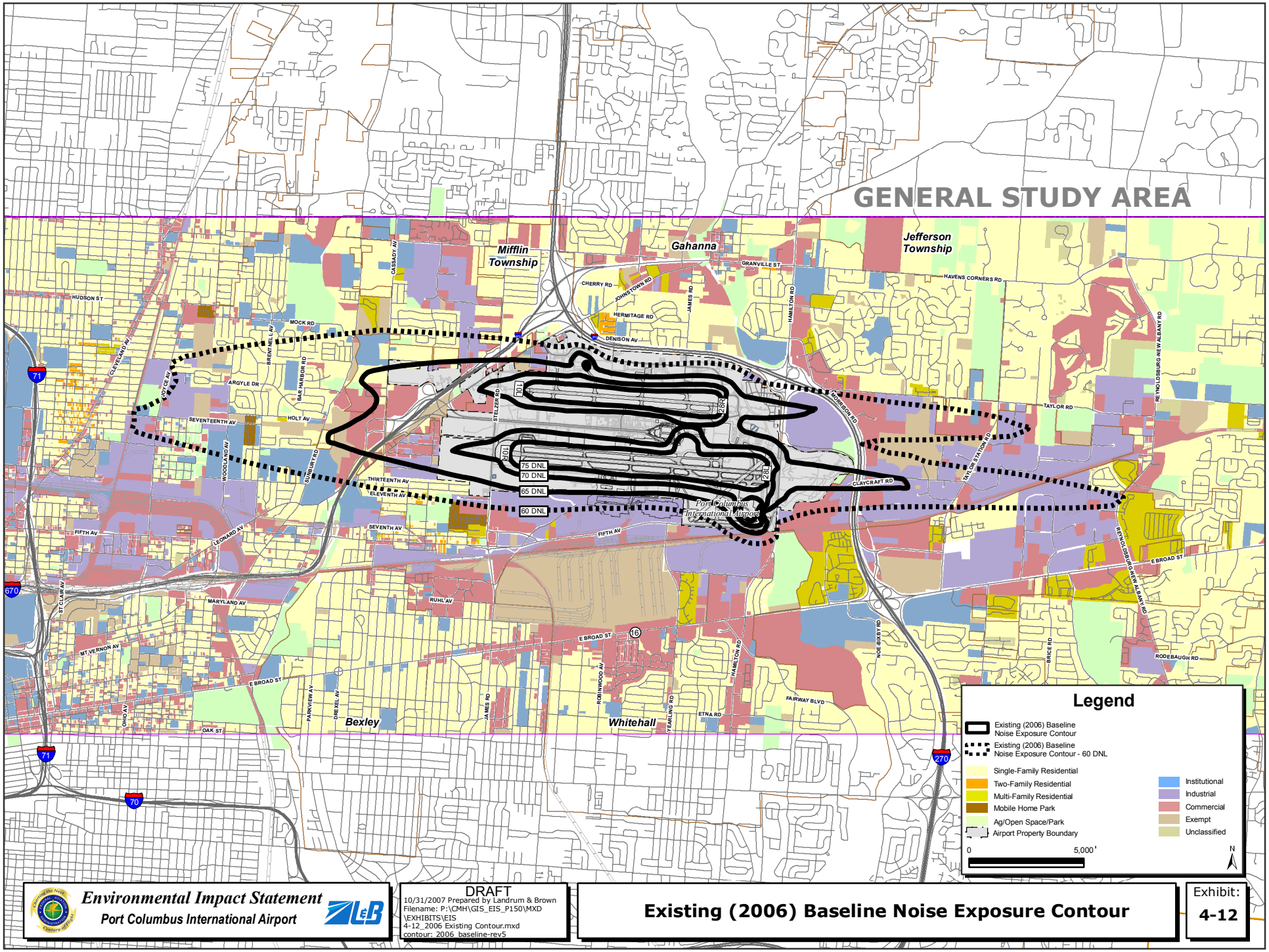
Table 4-8
AREAS WITHIN EXISTING NOISE EXPOSURE CONTOUR (IN SQUARE MILES)
Port Columbus International Airport

CONTOUR RANGE	EXISTING (2006) BASELINE
60-65 DNL	4.3
65-70 DNL	2.1
70-75 DNL	0.7
75 + DNL	0.8
65 + DNL	3.6

Contour: 2006_Baseline-rev7
Source: Landrum & Brown, 2007.

A DNL noise contour does not represent the noise levels present on any specific day, but represents the energy-average of all 365 days of operation during the year. Noise contour patterns extend from an airport along each extended runway centerline, reflective of the flight tracks used by all aircraft. The relative distance of a contour from the airport along each route is a function of the frequency of use of each runway end for total arrivals and departures, as well as its use at night, and the type of aircraft assigned to it.

The size and shape of the noise contours for CMH are a function of the combination of flight tracks and runway use. During the existing baseline period, the Airport operated 75 percent of the time in west flow (arriving to and departing from Runways 28L/28R) and 25 percent of the time in east flow (arriving to and departing from Runways 10L/10R). As a result, the Existing (2006) Baseline noise contour is longer and wider to the west of the Airport than to the east.



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contour: 2006_baseline-rev5

Existing (2006) Baseline Noise Exposure Contour

Exhibit: **4-12**

The south runway (Runway 10R/28L) is the most heavily used runway because it is the longer of the two runways on the airfield. In addition, the selection of the runway is based on where the aircraft is going to/coming from on the Airport. In general, airlines that are located on the north side of the terminal prefer the north runway and likewise for the airlines on the south side of the terminal. For this reason the Existing (2006) Baseline noise contour extends farther out in both directions along the extended centerline of this runway as compared to the north runway.

West of the Airport, the noise contour primarily reflects usage by aircraft departing to the west, and to a lesser degree, aircraft arriving from the west. The 65 DNL noise contour extends approximately 1.6 miles beyond the west end of Runway 10R/28L and extends approximately 1.4 miles beyond the west end of Runway 10L/28R. This area is comprised of a mix of medium density residential, commercial, and industrial uses located in the City of Columbus and Mifflin Township. The 60 DNL noise contour extends approximately 3.2 miles beyond the west end of Runway 10R/28L and extends approximately 3.0 miles beyond the west end of Runway 10L/28R. The area between the 60 and 65 DNL is comprised of a mix of medium to high density residential, commercial, and industrial uses located in the City of Columbus.

To the east of the Airport, the noise contour primarily reflects usage by aircraft arriving from the east, and to a lesser degree, aircraft departing to the east. The 65 DNL noise contour extends approximately 1.3 miles east from the end of Runway 10R/28L and extends approximately 0.8 miles east from the end of Runway 10L/28R. The area east of the Airport within the 65 DNL is comprised of commercial and industrial land uses, and undeveloped land within the cities of Columbus and Gahanna. The 60 DNL noise contour extends approximately 3.0 miles beyond the east end of Runway 10R/28L and extends approximately 2.6 miles beyond Runway 10L/28R. The area between the 60 and 65 DNL is comprised of a mix of low to medium density residential, commercial and industrial land uses, and undeveloped property located in the cities of Columbus and Gahanna and Jefferson Township. The 70 and 75 DNL contours remain over the entire Airport property.

Summaries of the residential population, housing units, and noise-sensitive facilities affected by noise levels exceeding 60 DNL for the Existing (2006) Baseline are provided in **Table 4-9**.

There are 12 housing units and an estimated 30 residents located within the 65 DNL of the Existing (2006) Baseline noise contour. All 12 of those housing units have received sound insulation and are therefore considered mitigated. There are no churches, schools, libraries, hospitals, or nursing homes located within the 65 DNL of the Existing (2006) Baseline Noise Exposure Contour. There are approximately 2,636 housing units, an estimated 6,511 residents, 18 churches, and two schools within the 60-65 DNL of the Existing (2006) Baseline Noise Exposure Contour.

Table 4-9
EXISTING (2006) BASELINE HOUSING, POPULATION, AND NOISE-SENSITIVE FACILITY INCOMPATIBILITIES
Port Columbus International Airport

	60-65* DNL	65-70 DNL	70-75 DNL	75+ DNL	65+ DNL
Housing Units					
Columbus	**2,579**	**0**	**0**	**0**	**0**
Mitigated					
Sound Insulated	652	0	0	0	0
Easement	20	0	0	0	0
Unmitigated					
Eligible for Sound Insulation but not Insulated	160	0	0	0	0
Not Previously Mitigated	1,747	0	0	0	0
Mifflin Township	**50**	**12**	**0**	**0**	**12**
Mitigated					
Sound Insulated	24	12	0	0	12
Easement	0	0	0	0	0
Unmitigated					
Eligible for Sound Insulation but not Insulated	19	0	0	0	0
Not Previously Mitigated	7	0	0	0	0
Gahanna	**2**	**0**	**0**	**0**	**0**
Mitigated					
Sound Insulated	2	0	0	0	0
Easement	0	0	0	0	0
Unmitigated					
Eligible for Sound Insulation but not Insulated	0	0	0	0	0
Not Previously Mitigated	0	0	0	0	0
Jefferson Township	**5**	**0**	**0**	**0**	**0**
Mitigated					
Sound Insulated	0	0	0	0	0
Easement	0	0	0	0	0
Unmitigated					
Eligible for Sound Insulation but not Insulated	0	0	0	0	0
Not Previously Mitigated	5	0	0	0	0
Total Housing Units	**2,636**	**12**	**0**	**0**	**12**
Population					
Total Population@	**6,511**	**30**	**0**	**0**	**30**
Noise-Sensitive Facilities					
Churches	18	0	0	0	0
Schools	2	0	0	0	0
Libraries	0	0	0	0	0
Nursing Homes	0	0	0	0	0

* 14 CFR Part 150 Land Use Compatibility Guidelines indicate that residential land uses are compatible with noise levels below 65 DNL.

@ Population numbers are estimates based on the number of housing units.

Source: Landrum & Brown, 2007.

4.8 AIR QUALITY

The assessment of airport air quality for an environmental review prepared pursuant to the NEPA is required to follow the procedures established by the FAA's *Air Quality Procedures for Civilian Airports & Air Force Bases*.[19] The procedures require the assessment of the existing conditions to determine the contribution of airport operations to the local air quality and the potential impact to the community.

4.8.1 AIR QUALITY STATUS OF FRANKLIN COUNTY

CMH is located within Franklin County, Ohio, which is included in the Metropolitan Columbus Intrastate Air Quality Control Region (Columbus AQCR), along with seven other counties in central Ohio.[20] The U.S. Environmental Protection Agency (USEPA) has determined that levels of ozone and emissions of fine particulate matter ($PM_{2.5}$) in the Columbus AQCR exceed the Federal standards defining healthful air quality. At the time of the preparation of this EIS, Franklin County was designated attainment for all the other Federally-regulated pollutants, which are carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), coarse particulate matter (PM_{10}), and lead (Pb). These pollutants are collectively referred to as the criteria pollutants. Some pollutants are considered "precursor" pollutants because they react with sunlight and other gas molecules to form different pollutants. Precursor pollutants that contribute to the formation of ozone include nitrogen oxides (NO_x) and volatile organic compounds (VOCs). Precursor pollutants that contribute to the formation of $PM_{2.5}$ include NO_x, VOCs, and sulfur oxides (SO_x). Consequently, the pollutants of concern in Franklin County, and those which are the focus of the air quality assessment for the EIS, are NO_x, VOC, $PM_{2.5}$, and SO_x. The Ohio EPA Division of Air Pollution Control (DAPC), which has the responsibility of monitoring air quality in Ohio and developing strategies to attain and maintain the National Ambient Air Quality Standards (NAAQS), is preparing to submit a revised State Implementation Plan (SIP)[21] that includes a strategy to control ozone and emissions of $PM_{2.5}$, and their precursors in all the counties included in the Columbus AQCR.

4.8.2 ASSESSMENT OF EXISTING (2006) CONDITIONS

An emission inventory of CMH operations was prepared for the Existing (2006) Conditions using the FAA Emissions and Dispersion Modeling System (EDMS), version 4.5. The model estimated the rate of emissions of the criteria and precursor pollutants in tons per year. The pollutants assessed in the inventory included NO_x, VOCs, CO, PM_{10}, $PM_{2.5}$, and SO_x. The sources of emissions evaluated for the inventory included aircraft, ground support equipment (GSE), auxiliary

[19] *Air Quality Procedures for Civilian Airports & Air Force Bases*, April 1997, FAA.

[20] 40 CFR § 81.200, *Metropolitan Columbus Intrastate Air Quality Control Region*, data current as of May 23, 2007, USEPA.

[21] The State Implementation Plan (SIP) is the State air agency document that sets forth the strategy intended to reduce air emissions in an area of poor air quality and maintain the quality of the air relevant to the Federal air quality standards. The Ohio SIP is included in the Ohio Administrative Code (OAC) Chapter 3745.

power units (APUs), motor vehicles accessing Airport roadways, parking lots and parking garages, and stationary sources, such as fuel storage tanks and diesel-fueled generators. A detailed description of the procedures and methodology to prepare the emission inventory is provided in Appendix E, *Air Quality*.

4.8.3 CRITERIA AND PRECURSOR POLLUTANT EMISSION INVENTORY

The results of the emission inventory are provided in **Table 4-10**, ***Criteria and Precursor Pollutant Emission Inventory - Existing (2006) Conditions***. The approximately 2,760 annual tons of emissions are comprised primarily of CO and NO_x. The majority of those emissions are caused by operation of GSE, APUs, aircraft, and motor vehicles. The largest contributor of CO in the inventory is from the use of GSE and APUs. Emissions of NO_x are mostly from aircraft that use JET A fuel, particularly during takeoff and climbout. Emissions of VOCs are produced almost equally by aircraft, GSE, APUs, and on-road motor vehicles. Emissions of SO_x, PM_{10} and $PM_{2.5}$ are produced primarily by aircraft engines.

Table 4-10
CRITERIA AND PRECURSOR POLLUTANT EMISSION INVENTORY
EXISTING (2006) CONDITIONS
Port Columbus International Airport

EMISSION SOURCES	ANNUAL EMISSIONS (tons per year)						
	CO	VOC	NO_X	SO_X	PM_{10}[1]	$PM_{2.5}$[1]	TOTAL
Aircraft	470.79	39.78	255.22	20.11	13.20	13.20	**812.3**
GSE and APUs	878.29	38.40	83.67	11.59	3.27	3.16	**1,018.4**
Roadways	654.22	44. 18	81. 39	0.37	2.13	1.45	**783.7**
Parking Facilities	40.25	4. 68	3. 88	0.01	0.09	0.06	**49.0**
Stationary Sources	21.45	16.69	35.76	16.64	2.49	2.20	**95.2**
TOTAL	**2,065.0**	**143.7**	**459.9**	**48.7**	**21.2**	**20.1**	**2,758.6**

Note: GSE is ground support equipment and APUs are the auxiliary power units.

[1] Includes PM data calculated using USEPA A-42 *Supplement A to Compilation of Air Pollutant Emission Factors - Volume II: Mobile Sources*, January 1991, for aircraft that have no PM emission factors available in EDMS.

Sources: FAA, Emissions and Dispersion Modeling System (EDMS) Version 4.5, 2007.

4.8.4 CRITERIA POLLUTANT DISPERSION ANALYSIS

Pursuant to the provisions of NEPA, the impact of the Airport's emissions under Existing (2006) Conditions was assessed by conducting a dispersion analysis for comparison to the NAAQS. Results of dispersion modeling provide concentrations of criteria pollutant emissions, relative to time and space, in micrograms per cubic meter ($\mu g/m^3$) for NO_x, CO, PM_{10}, $PM_{2.5}$, and SO_x. The sources of emissions evaluated for the NAAQS comparison were the same as those evaluated for the emission inventory. A detailed description of the procedures and methodology to prepare the dispersion analysis is provided in Appendix E.

For this type of analysis, it is important to incorporate aircraft location in each mode of the Landing and Takeoff Cycle (LTO), and to include the physical location of all other emission sources. The pollutant concentrations were calculated at 136 specific receptor locations positioned around and outside Airport property, within the parking areas along International Gateway, and some locations in the surrounding community areas (see **Exhibit 4-13, *Fenceline and Community Grid Receptors for 2006 Existing Conditions*** and **Exhibit 4-14, *2006 Existing Conditions Terminal Area Dispersion Receptor Locations***). The receptors are not air quality monitors that record actual emission concentrations in the ambient air. Rather, modeling receptors are hypothetical coordinate positions where pollutant concentrations are calculated based on the emission sources included in the model and relative to geographical position and time. A full year of meteorological data was applied one hour at a time to each receptor to allow for dispersion of the pollutants by the wind.

To disclose an accurate accounting of the total pollutant concentrations or design concentrations in the communities around the Airport, monitored ambient background concentrations were added to the modeled dispersion results.[22] The design concentrations were then examined to determine the relative contribution of Airport emissions compared to the NAAQS under the Existing (2006) Conditions. The results of the dispersion analysis for the Existing (2006) Conditions are provided in **Table 4-11**.

The data in Table 4-11 show the ten highest design concentrations for each pollutant and averaging period, estimated based on the Existing (2006) Conditions emission inventory. The highest concentrations occurred at receptors located at the arrival curb, and along and south of the International Gateway ramps leading to the rental car and short-term parking garage. All the concentrations, with the exception of $PM_{2.5}$, were well within the limits prescribed by the NAAQS. Airport emissions of $PM_{2.5}$ added slightly to the already high concentration of $PM_{2.5}$ reported for the background ambient air, which exceeds the $PM_{2.5}$ NAAQS, regardless of any contribution from Airport emissions.

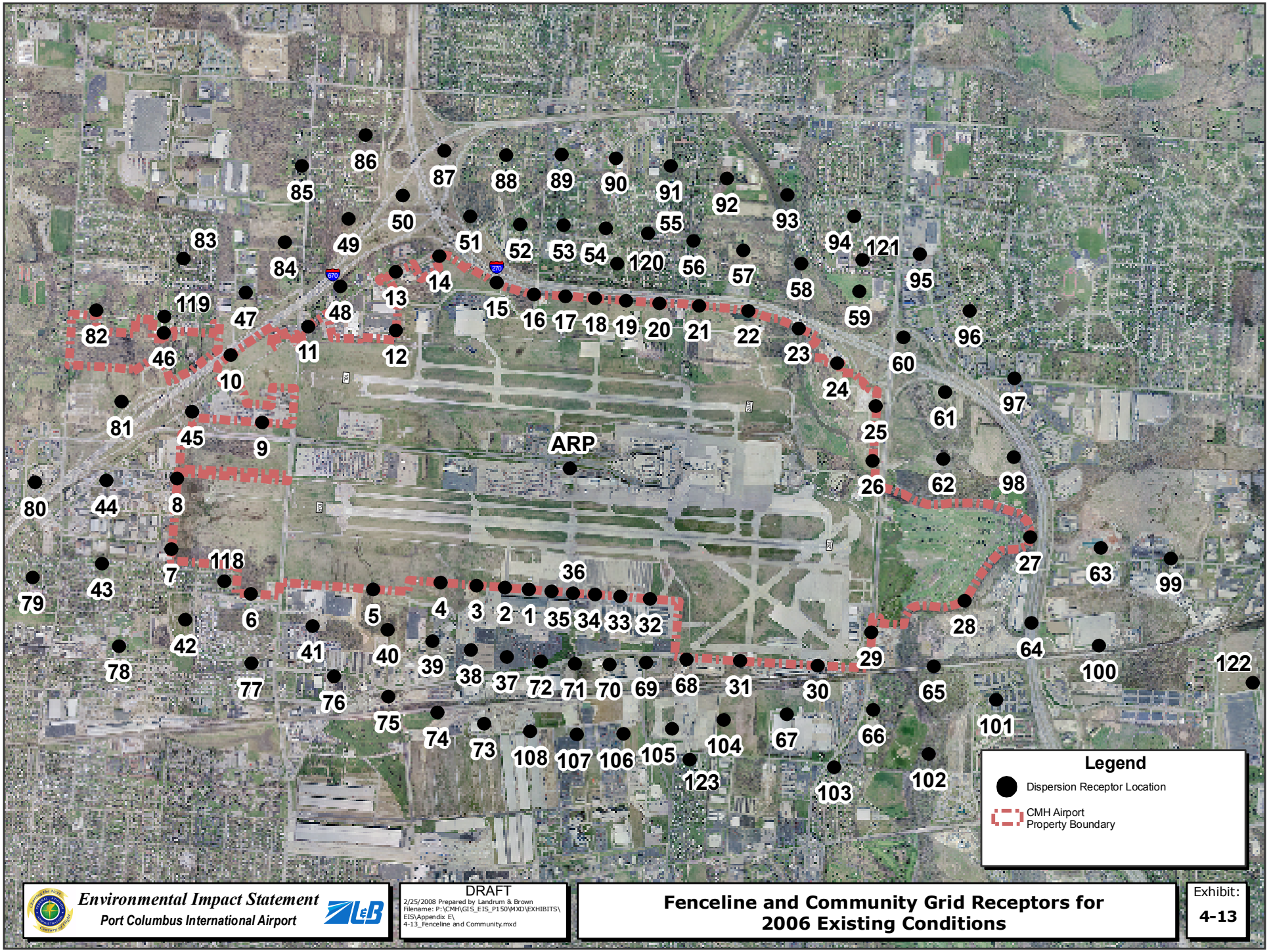
[22] Refer to 40 CFR Part 51, Appendix W, Section 7.2.1.1 *Design Concentrations for SO_2, PM_{10}, CO, Pb, and NO_2*, and Section 7.2.1.2, *Design Concentrations for O_3 and $PM_{2.5}$, March 1, 2007.*

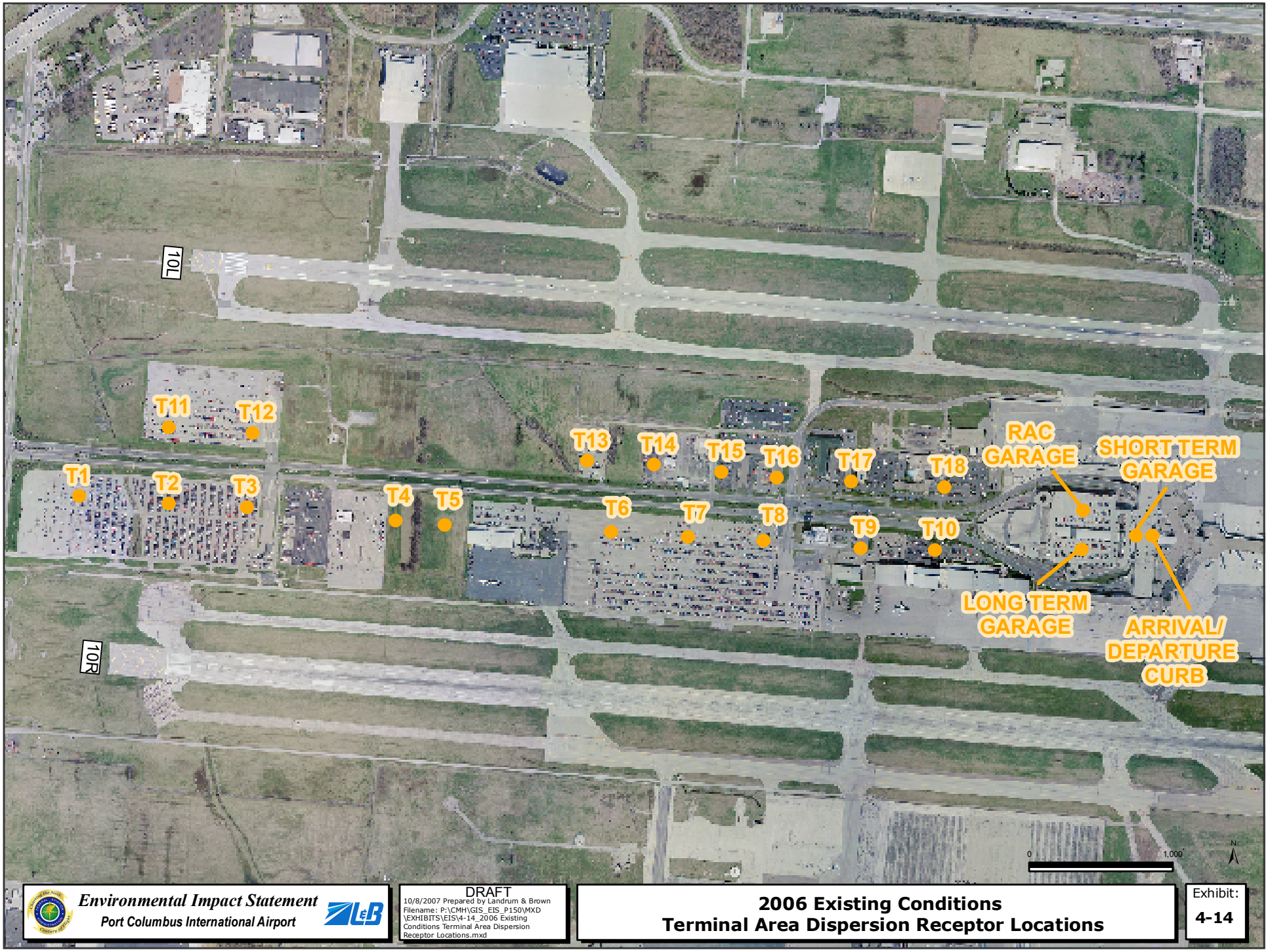
Table 4-11
CRITERIA POLLUTANT DESIGN CONCENTRATIONS
EXISTING (2006) CONDITIONS
Port Columbus International Airport

RANKING OF RESULTS	CONCENTRATIONS BY POLLUTANT AVERAGING PERIOD ($\mu g/m^3$)							
	CO		NO_x	SO_x		PM_{10}	$PM_{2.5}$	
	1-HR	8-HR	ANNUAL	24-HR	ANNUAL	24-HR	24-HR	ANNUAL
USEPA NAAQS[1]	**40,000**	**10,000**	**100**	**365**	**80**	**150**	**35**	**15**
Highest	12,098	3,705	38.2	14	3	4	4	1.4
Background	4,796	2,284	39.0	73	10	85	52	16.6
TOTAL	**16,894**	**5,989**	**77.2**	**87**	**13**	**89**	**56**	**18.1**
2nd Highest	11,776	2,697	25.7	12	2	3	3	0.9
Background	4,796	2,284	39.0	73	10	85	52	16.6
TOTAL	**16,572**	**4,981**	**64.7**	**85**	**12**	**88**	**55**	**17.6**
3rd Highest	10,428	1,939	23.2	10	1	3	3	0.79
Background	4,796	2,284	39.0	73	10	85	52	16.6
TOTAL	**15,224**	**4223**	**62.2**	**83**	**11**	**88**	**55**	**17.4**
4th Highest	10,031	1,887	21.8	10	1	3	3	0.7
Background	4,796	2,284	39.0	73	10	85	52	16.6
TOTAL	**14,827**	**4,171**	**60.8**	**83**	**11**	**88**	**55**	**17.3**
5th Highest	8,881	1,881	21.1	10	1	3	3	0.6
Background	4,796	2,284	39.0	73	10	85	52	16.6
TOTAL	**13,677**	**4,165**	**60.1**	**83**	**11**	**88**	**55**	**17.3**
6th Highest	8,391	1,676	18.2	9	1	3	3	0.5
Background	4,796	2,284	39.0	73	10	85	52	16.6
TOTAL	**13,187**	**3,960**	**57.2**	**83**	**11**	**88**	**55**	**17.2**
7th Highest	8,317	1,505	17.9	9	1	3	2	0.5
Background	4,796	2,284	39.0	73	10	85	52	16.6
TOTAL	**13,113**	**3,789**	**56.9**	**82**	**11**	**88**	**54**	**17.2**
8th Highest	8,181	1,425	16.2	9	1	3	2	0.4
Background	4,796	2,284	39.0	73	10	85	52	16.6
TOTAL	**12,977**	**3,709**	**55.2**	**82**	**11**	**88**	**54**	**17.1**
9th Highest	7,969	1,413	15.6	8	1	2	2	0.4
Background	4,796	2,284	39.0	73	10	85	52	16.6
TOTAL	**12,765**	**3,697**	**54.6**	**81**	**11**	**87**	**54**	**17.0**
10th Highest	7,785	1,406	15.4	8	1	2	2	0.4
Background	4,796	2,284	39.0	73	10	85	52	16.6
TOTAL	**12,581**	**3,690**	**54.4**	**81**	**11**	**87**	**54**	**17.1**

Notes: Pollutant concentration in micrograms per cubic meter, $\mu g/m^3$.
"Background" refers to regional background pollutant concentrations provided by Ohio EPA.
Totals may not sum exactly due to rounding.
[1] USEPA NAAQS are the National Ambient Air Quality Standards for each pollutant, and for each averaging period required for analysis.

Source: FAA, Emissions and Dispersion Modeling System (EDMS) Version 4.5, 2007.


ARP
Legend
Dispersion Receptor Location
CMH Airport
Property Boundary
Environmental Impact Statement
Port Columbus International Airport
DRAFT
2/25/2008 Prepared by Landrum & Brown
Filename: P:\CMH\GIS_EIS_P150\MXD\EXHIBITS\EIS\Appendix E\4-13_Fenceline and Community.mxd
Fenceline and Community Grid Receptors for 2006 Existing Conditions
Exhibit:
4-13



Environmental Impact Statement
Port Columbus International Airport

DRAFT
10/8/2007 Prepared by Landrum & Brown
Filename: P:\CMH\GIS_EIS_P150\MXD\EXHIBITS\EIS\4-14_2006 Existing Conditions Terminal Area Dispersion Receptor Locations.mxd

2006 Existing Conditions
Terminal Area Dispersion Receptor Locations

Exhibit:
4-14