

Airport Master Plan Update

Cincinnati Municipal Airport- Lunken Field

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1.0 EXISTING CONDITIONS

1.0 EXISTING CONDITIONS

The initial step in the Lunken Airport Master Plan Update process is to collect data about the existing conditions at Lunken Airport and in the area it serves. The data collection task has incorporated a broad spectrum of information, including data on airside and landside facilities, surface transportation, surrounding land uses, air traffic activity, laws, ordinances, airspace structure, runway approach obstructions, navigational aids (NAVAID's), and socioeconomic factors. Much of the large volume of data collected is summarized in this chapter and the remainder is described accordingly in subsequent chapters.

The data collection was conducted through on-site visits, airport user surveys, and the analysis of existing reports and studies. The summary of this effort is described in the following sections:

- Lunken Airport Profile
- Existing Airport Facilities
- Airspace System
- Existing Recommended Noise Abatement Procedures
- Meteorological Analysis
- Area Land Use
- Airport Operations Summary
- Economic Impact of Lunken Airport

1.1 Lunken Airport Profile

This section provides a general description of Lunken Airport and its service area, summarizing data on the Airport's history, geographical location, and operational role.

1.1.1 Airport History

Lunken Airport now occupies the area on which the early settlers built the town of "Columbia", later to be called "Cincinnati". Since this area was subject to

flooding, the development of Cincinnati moved to higher ground in succeeding decades, while the original site became grain fields.

After World War I, a group of ex-army pilots leveled off one of these grain fields, and built a small barnstorming airport. With the subsequent interest shown in aviation by Charles Lindbergh's trans-oceanic solo flight, a prominent Cincinnati industrialist, Mr. Edmund H. Lunken, purchased the property. In 1928, Mr. Lunken gave the City of Cincinnati this piece of property under a perpetual lease with the understanding that the City of Cincinnati would build a Municipal Airport to be known as "Lunken Airport". The City of Cincinnati accepted 204 acres and purchased additional adjacent acreage bringing the total to 1,025 acres (989 acres in fee simple, and 36 acres in aviation easement) as described in the perpetual lease. As a result, Lunken Airport became one of the first and largest municipal airports in the United States.

As shown on **Exhibit 1-1**, Lunken Airport has been an integral part of the Cincinnati tri-state airport system for the past 75 years. It is the original home of Embry-Riddle Aeronautical University and American Airlines. Until the flood of 1937, it was the site of the Aeronca Aircraft Manufacturing Company. The year 1947 was a turning point in the Airport's history, the Airport's role changed from a commercial air passenger airport to a general aviation reliever airport. Lunken Airport is currently recognized as a prototypical FAA Design Group III airport operating under FAA Federal Aviation Regulation (FAR) Part 139 criteria for transport airports.

Once the region's main commercial air carrier airport, Lunken Airport has had many different roles since it was first built, adapting to the changing aviation industry. The following timeline denotes both changing and constant roles of the Airport over time:

1919 – Three Army Air Corp bombers land on corn fields near the Little Miami River.



Lunken Airport 1930



Lunken Airport 2002



1928 – Mr. Edmund H. Lunken purchased 204 acres of land and then donated the property to the City of Cincinnati for use as an airport. The City then supplemented this gift with an additional 800 acres and constructed Lunken Airport, four and one-half air miles east of downtown Cincinnati.

1930 – Formal dedication of Lunken Airport took place in 1930. There were three City hangars, one aeronautical factory, two U.S. Army hangars, and one U.S. Army administration building with three dwellings. The original runway system consisted of three short runways, with two of the original Runways (3L-21R and 7-25) still in use today.

1938 – Lunken Terminal was dedicated to serve American and Marquette Airlines. The terminal was constructed as a joint Works Progress Administration (WPA) and City of Cincinnati project at a cost of approximately \$172,000.

1947 – Due to the seasonal fog conditions in the Little Miami River Valley, the lack of an instrument landing system (ILS), and the introduction of large four engine passenger aircraft, scheduled airline service was transferred from Lunken Airport to the Greater Cincinnati Airport in 1947.

1964 – The FAA designates Lunken Airport a general aviation reliever for Greater Cincinnati Airport in 1964. Also, with the advent of corporate business jets, the three existing runways were extended and a new 6,100 foot by 150 foot concrete Runway 3R-21L was constructed 2,100 feet parallel to Runway 3L-21R. This project also included the installation of a category I ILS on Runway 21L and a new FAA air traffic control tower. This new runway project required the Little Miami River to be relocated and a flood control levee be constructed on three sides of the Airport.

1999 – The University of Cincinnati conducts an Economic Impact Study and determines annual economic impact of \$235 million within the region.

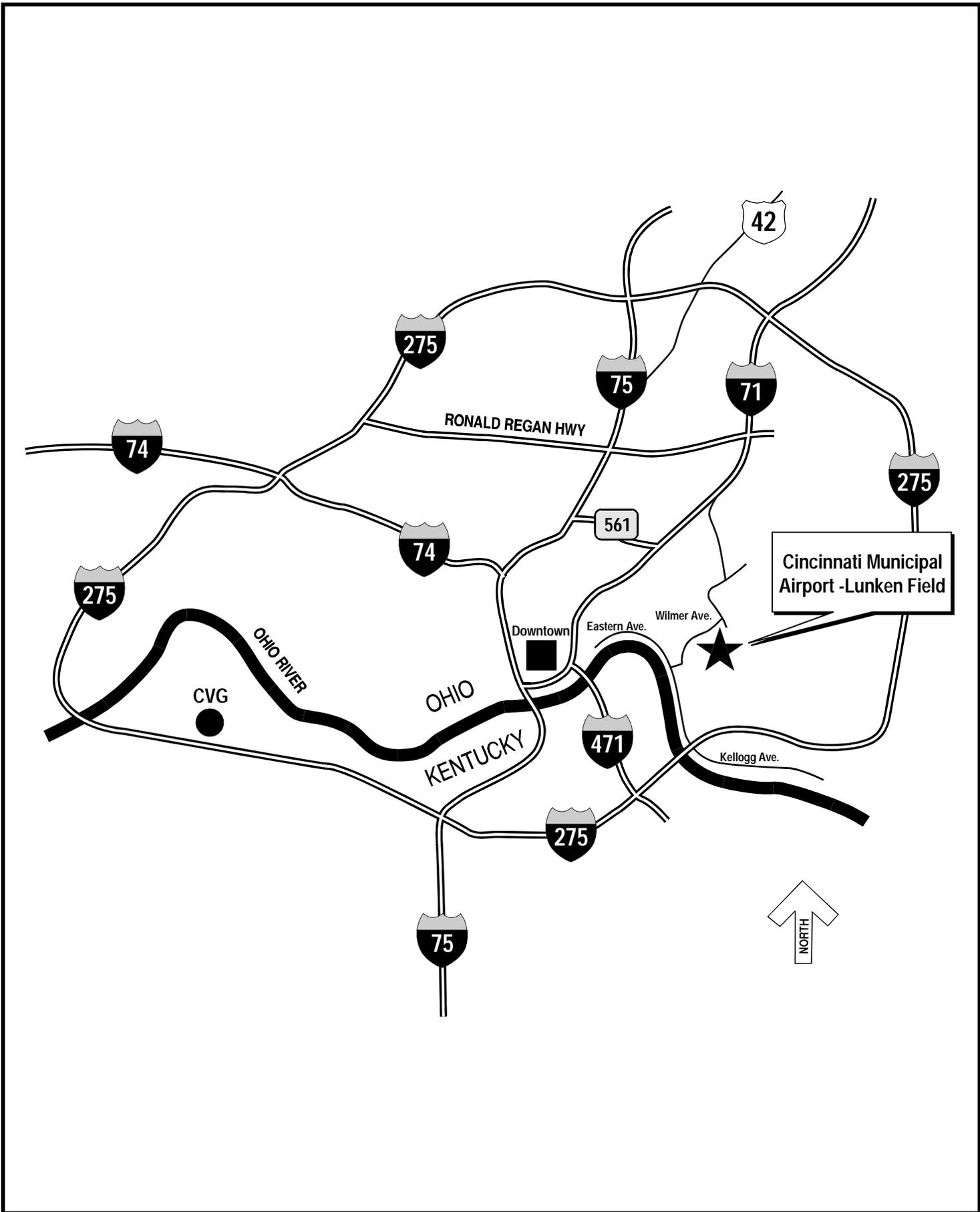
2003 – Lunken Airport now occupies approximately 1,025 acres of land and is home to approximately 262 based aircraft, which include approximately 60 corporate jet aircraft. The greater Cincinnati corporate and general aviation air transportation market is supported by approximately 68 aviation-related businesses that are located at the Airport.

1.1.2 Airport Role

The National Plan of Integrated Airport Systems (NPIAS) as established by the Federal Aviation Administration (FAA) has designated Lunken Airport as a general aviation reliever facility to Cincinnati/Northern Kentucky International Airport (CVG). This designation means that Lunken Airport provides runway capacity and landside support facilities relief to CVG in order to reduce airspace congestion, and improve the safety of the runway system. Lunken Airport also reduces capacity conflicts with the large passenger aircraft that serve CVG. This reliever role for Lunken Airport is classified as a Transport Category III Airport which includes business jets, including other aircraft that operate under the airport safety and security regulations as described in the FAR Part 139.

1.1.3 Airport Location

As Shown on **Exhibit 1-2**, Lunken Airport is located approximately 6.2 miles east of downtown Cincinnati, within southern Hamilton County, Ohio. Ground access to Lunken Airport is provided primarily via Kellogg Avenue, Wilmer Avenue, and Beechmont Avenue. Access may be gained to Interstates 71, 471, 75, and 275 within five to ten minutes from the Airport. On-Airport parking is generally provided by each tenant at the Airport. The terminal building provides approximately 200 spaces for public parking.



1.2 Existing Airport Facilities

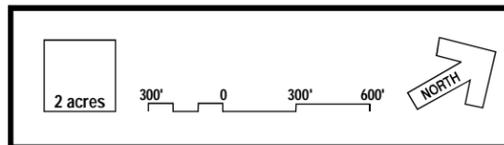
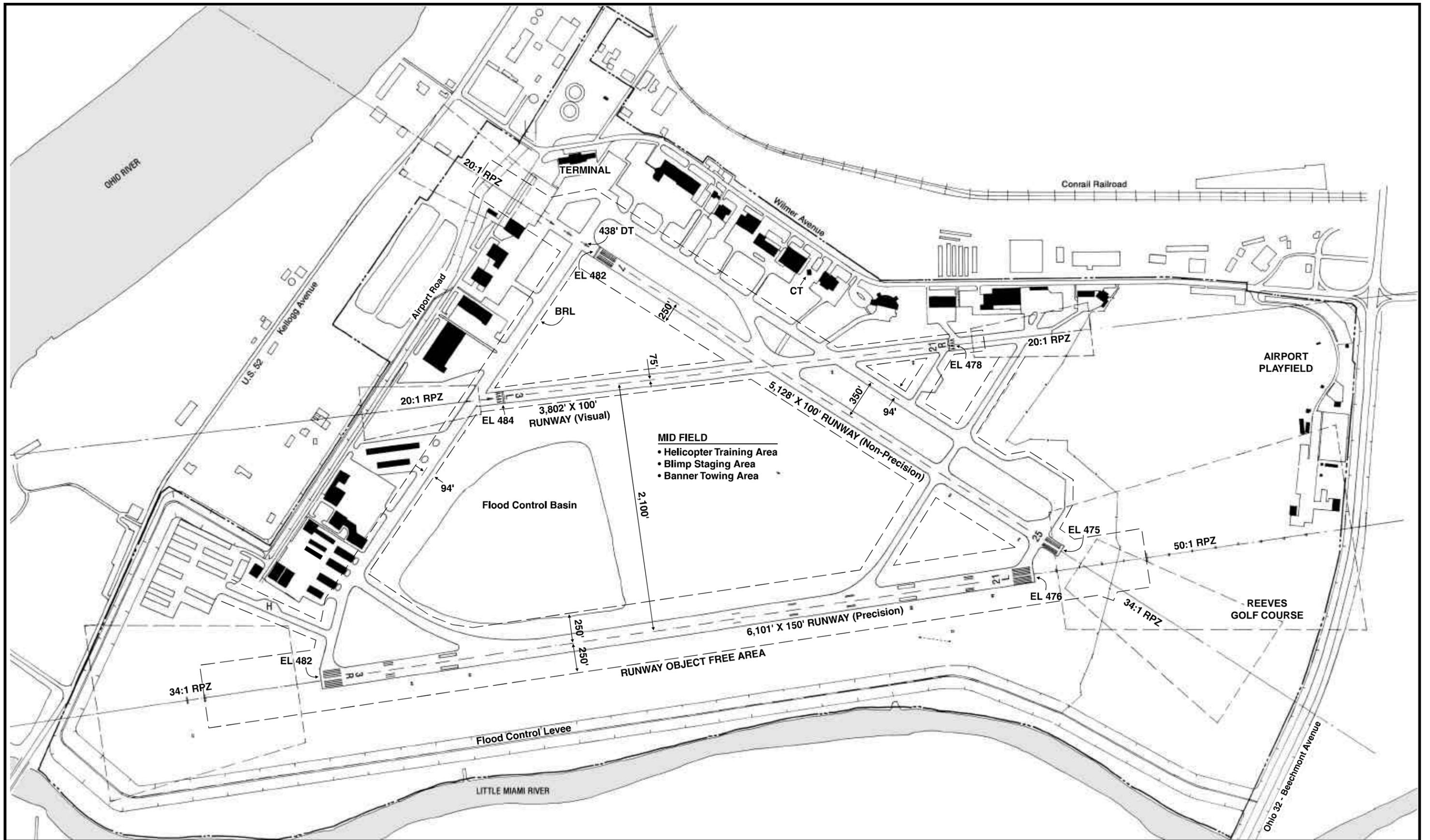
Airport facilities data was collected through physical inspection of the Airport's airside and landside facilities, analysis of aerial photography, discussions with Airport staff, and interviews with airport tenants.

The existing Lunken Airport facilities are described in two sections; airside facilities and landside facilities. Airside facilities include runways, taxiways, runway approach areas, NAVAIDs, and other areas that directly relate to aircraft operations. Landside facilities consist of the terminal area, all aircraft parking aprons, aircraft storage hangars, fuel storage facilities, vehicle parking, and other visitor related facilities. The material discussed in these sections is graphically shown on **Exhibit 1-3**, Existing Airport Layout Plan. The Airport property includes the Airport's facilities and the Lunken Playfield/Reeves golf course. The playfield is located on the north side of the Airport and includes the Carl and Edyth Linder Family Tennis Center. All of these playfield facilities are owned and managed by the Cincinnati Recreation Commission.

1.2.1 Airside Facilities

Lunken Airport's primary airside facilities include two parallel runways and one cross-wind runway. Runway 3R-21L is the primary parallel runway and is 6,101 feet long by 150 feet wide. Runway 3L-21R is the second parallel runway and is 3,802 feet long by 100 feet wide, and is located 2,100 feet west of Runway 3L-21L. Runway 7-25 is the cross-wind runway and is 5,128 feet long by 100 feet wide. The three runways are supported by east-west Taxiway 'C' and north-south Taxiway 'A' which is parallel to Runway 7-25.

The most recent FAA 5010 Airport Master Record for Lunken Airport lists the pavement strength ratings for the primary Runway 3R-21L as 60,000 pounds for single wheel loading, 70,000 pounds for dual wheel loading, and 140,000 pounds



for dual tandem wheel loading. Runway 3R-21L has sufficient length to accommodate most corporate aviation jet aircraft and sufficient length to accommodate most corporate jets that can fly non-stop to the west coast of the United States.

Runway 3R-21L is equipped with high intensity runway lights and precision runway markings. It is also equipped with a Category I Precision Instrument Landing System (CAT-I ILS) that has aircraft descent minimums of 200 feet above the Airport, with one-half mile visibility. Runway 3R-21L is primarily utilized by large corporate twin-engine turbo-prop and corporate twin-engine jet aircraft.

Parallel Runway 3L-21R is utilized as a visual runway that is equipped with medium intensity runway lights and a Visual Approach Slope Indicator (VASI). Runway 3L-21R is principally utilized by small general aviation aircraft for flight training purposes. Runway 3L-21R provides airspace and ground taxiing safety benefits by providing airspace operational separation between small single-engine private aircraft and the twin-engine corporate jet aircraft. Although Runway 3L-21R is not technically required for peak hour runway capacity purposes, the ability to separate small aircraft from corporate jets results in a safer aircraft operating environment. Lunken Airport is the only general aviation airport in the region that benefits in this aspect from having two parallel runways.

The cross-wind Runway 7-25 is equipped with medium intensity runway edge lights and nonprecision runway markings. Runway 25 has a nonprecision Global Positioning System (GPS) approach with aircraft descent minimums of 900 feet above the airport, with one-mile visibility. Due to the close proximity of a hangar that is located near the end of Runway 7, the FAA has required that this runway approach have a Displaced Threshold (DT) of 439 feet, which restricts the Runway 7 landing distance to 4,689 feet. The summary of the Lunken Airport airside facilities is shown on **Table 1-1**.

TABLE 1-1						
Cincinnati Municipal Airport-Lunken Field						
EXISTING AIRSIDE FACILITIES						
Runway Data	Runways					
	3R	21L	3L	21R	7	25
Length	6,101 ft.		3,802 ft.		5,123 ft.	
Width	150 ft.		100 ft.		100 ft.	
Displaced Threshold	-	-	-	-	439 ft.	-
Surface Composition	Asphalt (GR)		Asphalt (GR)		Asphalt (GR)	
Surface Condition	Good		Fair		Good	
Bearing Capacity						
▪ Single Wheel	60,000 lbs.		11,000 lbs.		11,000 lbs.	
▪ Dual Wheel	70,000 lbs.		-		20,000 lbs.	
▪ Dual Tandem	140,000 lbs.		-		55,000 lbs.	
Lighting	HIRL		MIRL		MIRL	
Marking	Precision		Visual		Nonprecision	
Approach Type	NP	P	V	V	V	NP
Approach Aids	REIL	ILS	-	VASI-4	-	GSP
	PAPI	VASI-4				VASI-4
Elevation (MSL)	482	476	484	478	482	475
Obstruction Approach Ratio	24:1	34:1	14:1	19:1	9:1	24:1
Special Operating Conditions	<ul style="list-style-type: none"> ▪ 48 hours notice for unscheduled aircraft operations with more than 30 passengers ▪ Noise Abatement Procedures in effect. ▪ All runups restricted between 2100/0700 					

Source: FAA Airport Master Record Form 5010 (2003)

1.2.2 Landside Facilities

As shown on **Exhibit 1-4** and the Airport Facility Legend **Table 1-2**, the existing Airport landside facilities include 48 major structures that are located to the north along Wilmer Avenue and to the west along Airport Road.

The 15 facilities along Wilmer Avenue include corporate hangars, the Air Traffic Control Tower (ATCT), the City's joint-use fire-rescue station, a major Fixed Base Operator (FBO), and the Lunken Airport terminal building. There are limited expansion areas available along Wilmer Avenue.

The 23 existing facilities along Airport Road include aircraft maintenance hangars, multi-unit T-hangars, air charter operators, a major FBO, and Airport maintenance facilities. In 2002, a hangar apron measuring approximately 800

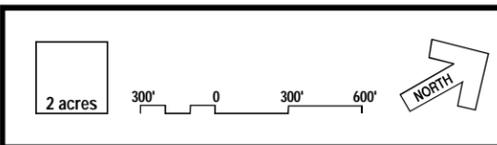
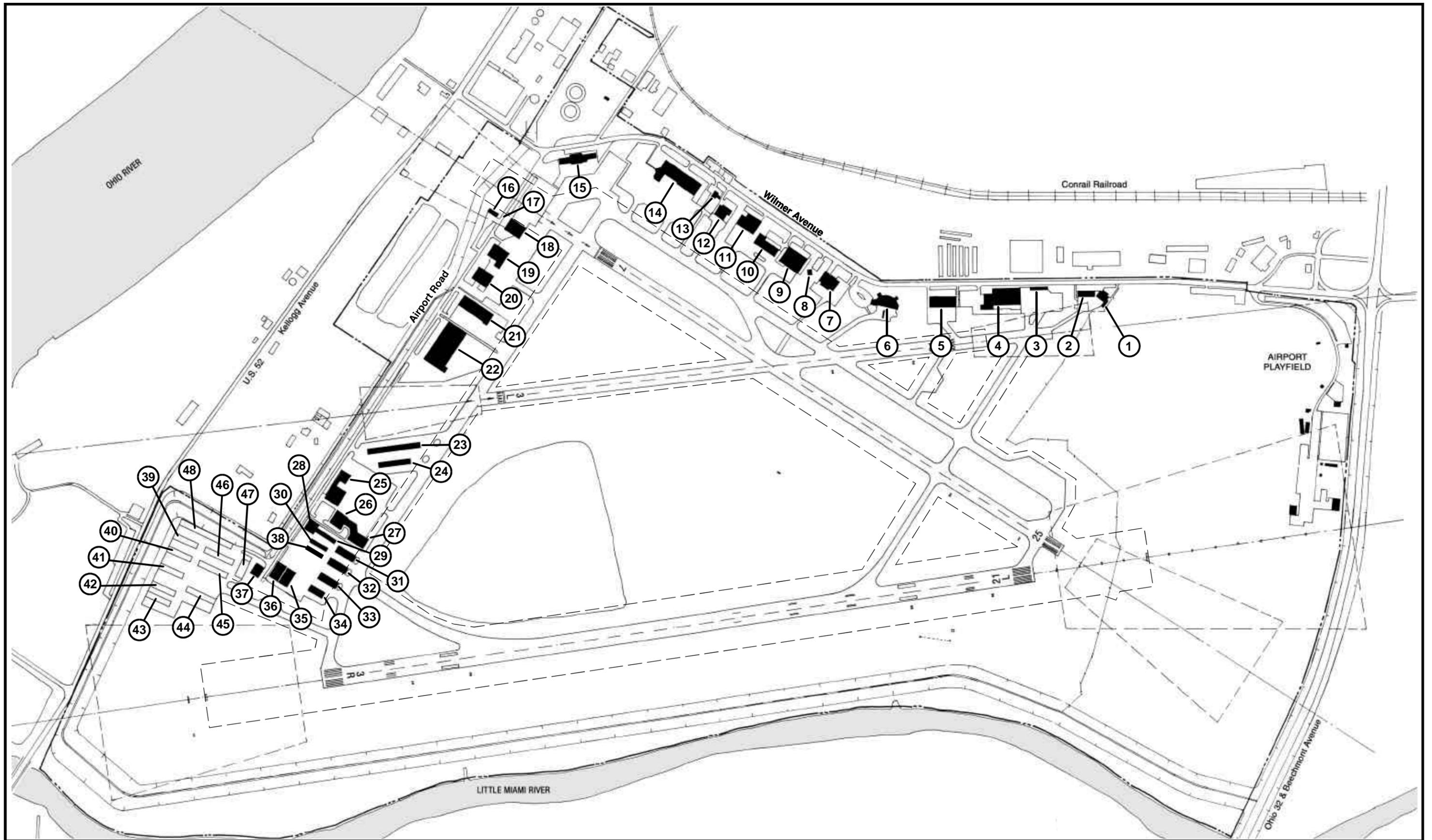


TABLE 1-2 (1 of 2)
Cincinnati Municipal Airport-Lunken Field
AIRPORT FACILITY LEGEND

Map Location Number	Primary Tenant	LUK Facility Number	Primary Use	Land Use	Building Area (sf)	Apron Area (sf)	Based Aircraft				Fuel Storage		Auto Parking Space	Lease Number	Lease Area (acres)	Lease Expiration	Remarks
							Single Engine	Multi Engine	Jet	Helicopter	Avgas (gals)	Jet A (gals)					
1	Condor	Hangar 32	Corporate Hangar	CORP	6,900	10,800			3				17	LA47	1.58	2011	
2	Condor	Hangar 32	Corporate Hangar	CORP	7,000	10,800		1	2		12,000	12,000		LAA7			
3	Procter & Gamble	Hangar 4	Auto Parking	CORP	4,800								16	LA4			
4	Procter & Gamble	Hangar 4	Corporate Hangar	CORP	53,200	52,500					2,000	54,000	111	LA4	4.99	2019	
5	Kroger	Hangar 33	Corporate Hangar	CORP	24,000	28,800			5			60,000	80	LA46	1.62	2007	
6	American Financial	Hangar 30	Corporate Hangar	CORP	16,000	24,000			3			50,000	60	LA41 LA45	3.97 1.49	2021 2004	•Vacant parcel (LA45)
7	City of Cincinnati Fire Department	478 Wilmer Ave.	ARFF	ASA	16,000								25		2.3		•City owned building
8	Midwest ATC	465 Wilmer	Control Tower	ASA	3,600								20		0.8	2031	•City owned building-leased to FAA
9	Jet Resources/Chemed	Hangar 27	Corporate Hangar	CORP	23,400	28,000			4			30,000	8	LA44	1.96	2018	
10	Federated Department Stores	Hangar 28	Corporate Hangar	CORP	19,500	27,000	1	1	2			60,000	30	LA32	2.26	2020	
11	Cintas	Hangar 29	Corporate Hangar	CORP	18,400	28,000			2			30,000	10	LA35	1.7	2016	
12	Cin Air	Hangar 31	Corporate Hangar	CORP	11,120	40,000			3			36,800	32	LA39	1.98	2008	
13	Midwest Jet Center/Butler	A-Frame	Flight Training	FBO	2,500	40,000	6						20	LA30	1.4	2009	•Building to be relocated •New hangar proposed for site
14	Midwest Jet Center/Butler	Hangar 5-14	FBO	FBO	32,800	240,000	34	13	1	1		20,000	130	LA30	9.954	2019	
15	Lunken Airport Terminal	262 Wilmer Ave.	Multi-Tenant	Terminal	20,000	132,000							150		8.05		•Constructed in 1936 •City owned building
16	Airport Maintenance	M-3	Vehicle Storage	ASA	7,500								50		1		•City owned building
17	Airport Security		Guard Post	ASA	100												•FAR Part 139 criteria •City owned building
18	Avionics Incorporated	Hangar 3	Aircraft Maintenance	SASO	16,675	45,000	10	2					10	LA27	1.39	2006	•Constructed in 1920's •City owned building
19	Diamond Avionics	Hangar 2	Aircraft Maintenance	SASO	16,675	40,000	3				10,000		20	LA28	1.35	2007	•Constructed in 1920's •City owned building
20	E. J. Aircraft Ltd	Hangar 1	Aircraft Maintenance	SASO	18,675	60,000	2	2		1			20	LA29 LA11	1.91 0.05	2012	•Constructed in 1920's •City owned hangar
21	ExJet Aviation Onflight Ohio National	Hangar 12	Corporate Hangar	SASO	30,000	56,000	1	11	3			5,000	70	LA12	3.37	2030	
22	Executive Jet Management	Hangar 24	Air Charter	SASO	64,800	90,000			24				150	LA31	5.86	2030	
23	Zinzinnati Estates/AeroTec	Hangar 25	T-Hangars	SASO	26,000	63,000	24	3						LA52	3.71	2030	
24	Zinzinnati Estates/AeroTec	Hangar 26	T-Hangars	SASO	16,000	32,000	19	1						LA52		2030	
25	Million Air	Hangar 21	FBO	FBO	20,000	135,000	5	2			20,000	20,000	20	LA40	7.6	2022	

TABLE 1-2 (2 of 2)

Cincinnati Municipal Airport-Lunken Field

AIRPORT FACILITY LEGEND

Map Location Number	Primary Tenant	LUK Facility Number	Primary Use	Land Use	Building Area (sf)	Apron Area (sf)	Based Aircraft				Fuel Storage		Auto Parking Space	Lease Number	Lease Area (acres)	Lease Expiration	Remarks
							Single Engine	Multi Engine	Jet	Helicopter	Avgas (gals)	Jet A (gals)					
26	Million Air	Hangar 22	FBO	FBO	15,000	30,000	2	6	3			60	LA40		2022		
27	Million Air	Hangar 23	FBO	FBO	11,000	21,600		3	5			10	LA40		2022		
28	Air Tolin	Hangar 8	Aircraft Storage	SASO	8,000	8,000	3						LA14	1.77	2018		
29	Air Tolin/ TFLtd.	Hangar 9	T-Hangars	SASO	5,400	1,800	3						LA14		2018		
30	Air Tolin/ TFLtd.	Hangar 51	T-Hangars	SASO	10,000	8,000	11								2018		
31	Southline City FFI Management	Hangar 34	T-Hangars	SASO	5,400	1,800	8						LA54		2005	•City owned hangar	
32	Southline City FFI Management	Hangar 35	T-Hangars	SASO	10,000	8,000	6	2					LA54		2005	•City owned hangar	
33	Southline City FFI Management	Hangar 36	T-Hangars	SASO	10,000	10,000	7	1					LA54		2005	•City owned hangar	
34	Southline City FFI Management	Hangar 37	T-Hangars	SASO	7,500	7,000	6						LA54		2005	•City owned hangar	
35	Franklin Aviation	Hangar 6	Aircraft Storage	SASO	9,656	40,000						6	LA24	0.8	2007	•City owned hangar •Constructed in 1920's	
36	Signature Engines	Hangar 7	Aircraft Storage	SASO	9,656	20,000	1					6	LA23	0.77	2012	•City owned hangar •Constructed in 1920's	
37	Airport Maintenance	M-1	Workshop	ASA	7,500							14		1.72		•City owned building	
38	Southline City	A-10 Unit	Aircraft Storage	SASO	22,500	10,000							LA50	12.36		•Hangar construction pending	
39	Southline City	B-10 Unit	T-Hangars	SASO	11,000	10,000							LA50			•Hangar construction pending	
40	Southline City	C-10 Unit	T-Hangars	SASO	12,000	10,000							LA50			•Hangar construction pending	
41	Southline City	D-10 Unit	T-Hangars	SASO	11,000	10,000							LA50			•Hangar construction pending	
42	Southline City	E-10 Unit	T-Hangars	SASO	12,000	10,000							LA50			•Hangar construction pending	
43	Southline City	F-10 Unit	T-Hangars	SASO	11,000	10,000							LA50			•Hangar construction pending	
44	Southline City	G-10 Unit	T-Hangars	SASO	12,000	10,000							LA50			•Hangar construction pending	
45	Southline City	H-10 Unit	T-Hangars	SASO	11,000	10,000							LA50			•Hangar construction pending	
46	Southline City	I-10 Unit	T-Hangars	SASO	11,000	10,000							LA50			•Hangar construction pending	
47	Airport Maintenance	M-2	Vehicle Storage	ASA	11,840	7,200										•Building construction pending	
48	Air Tolin/ TFL Ltd.	Hangar 52	T-Hangars	SASO	10,000	8,000							LA 14		2018		
TOTAL					720,097	1,444,300	152	48	60	2	44,000	377,800	1,145		88		

Source: LUK Lease Information

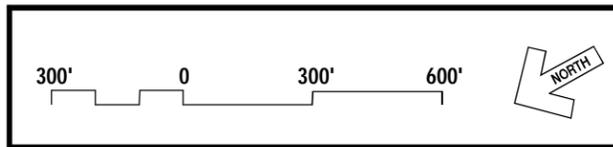
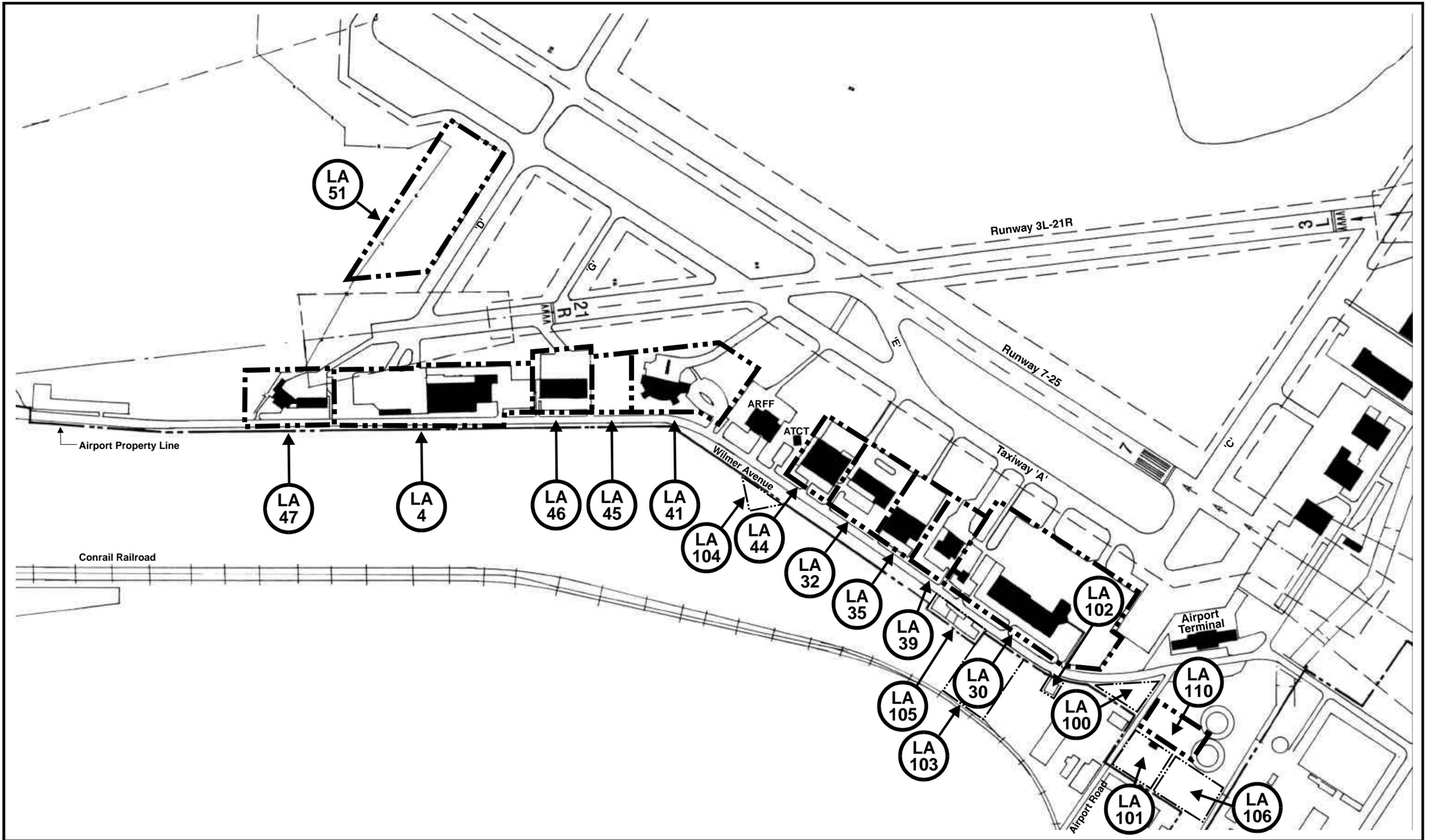
feet by 600 feet with an access taxiway from Taxiway 'C' was constructed on the eastern end of Airport Road. This apron is slated to support eight proposed 10-unit T-hangars, one 10-unit single-sided box hangar, and a proposed Airport maintenance vehicle storage building. Similar to the Wilmer Avenue area, the south airfield hangar areas are fully developed with very limited space for additional development. These landside facility expansion issues are addressed in later sections of the study.

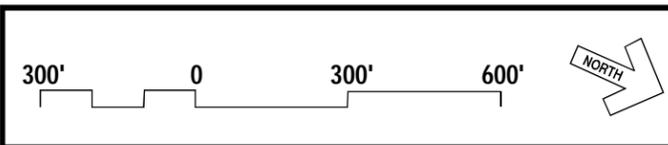
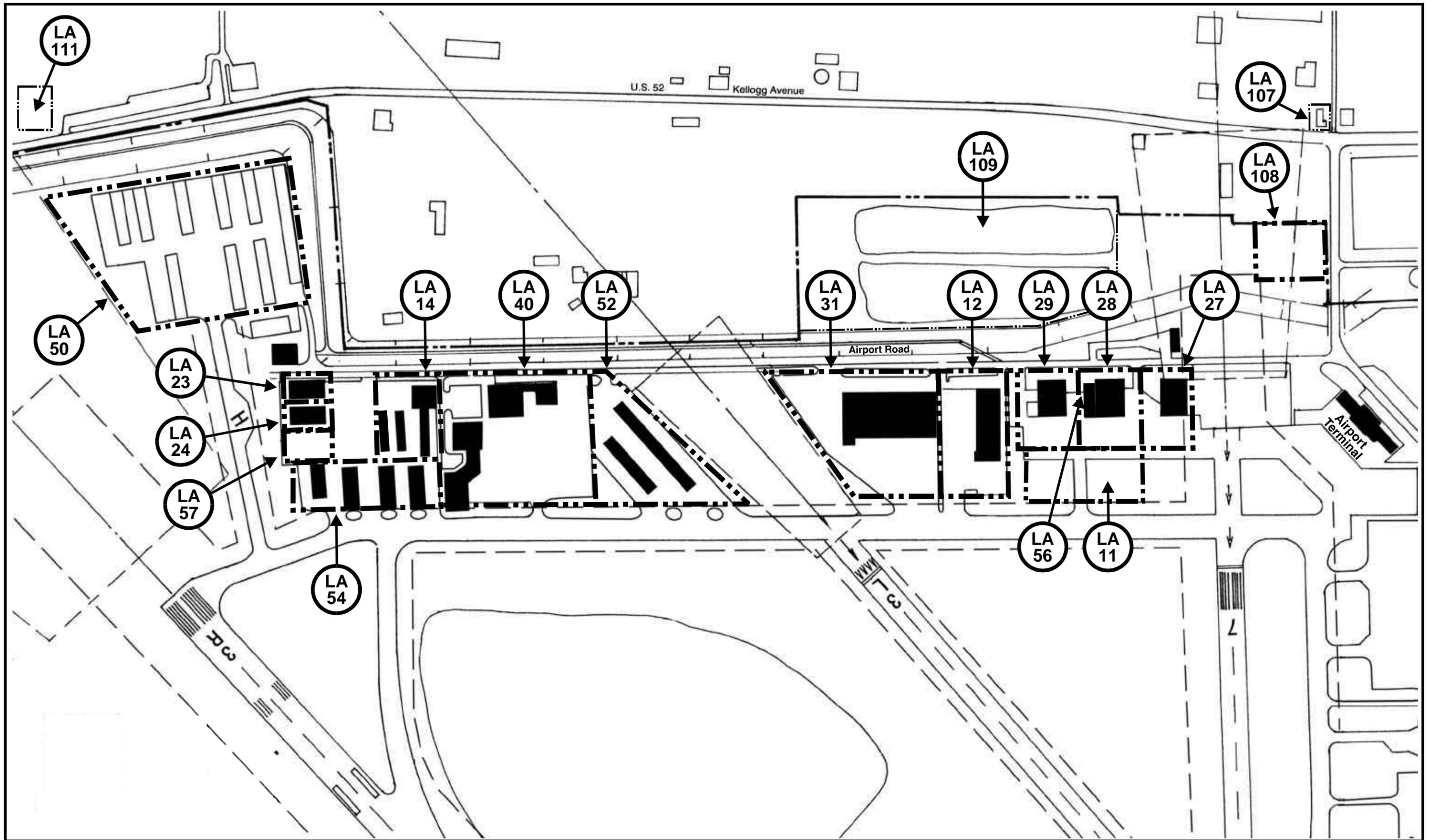
Unlike most general aviation airports, Lunken Airport does not have a central fuel storage facility. Fuel storage facilities are located on selected corporate hangar lease areas, which currently include ten separate underground fuel storage facilities containing approximately 378,000 gallons of Jet A fuel and 44,000 gallons of Avgas (100 octane). For fuel distribution to both based and itinerant aircraft, the two FBO's provide Jet-A and Avgas from individual 20,000 gallon underground fuel storage facilities.

1.2.3 Airport Ground Leases

As shown on **Exhibit 1-5**, **Exhibit 1-6**, and **Table 1-3**, the City of Cincinnati currently has 27 aviation-related ground leases totaling approximately 84 acres. This includes 12 land parcels along Wilmer Avenue, totaling 39 acres and 16 parcels of land along Airport Road, totaling approximately 46 acres. The lease areas are aviation-related land uses, except for the Farmers' Produce Market, which is located in the Runway Protection Zone (RPZ) for Runway 7.

On-airport parcels of land not included in the 27 land lease areas include the 4.1 acre City joint-use fire rescue station facility that houses nine emergency vehicles. Two of these vehicles are categorized as Index C, which complies with FAR Part 139 airport operations criteria. The 4.1 acre ATCT site, which is open daily from 7:00 a.m. until 11:00 p.m., is staffed by a private control tower operator. The 5.0 acre Airport terminal site includes the terminal and the terminal apron.





**TABLE 1-3
Cincinnati Municipal Airport-Lunken Field
Airport Ground Lease Summary**

Lease Area Number	Tenant	Area (SQ.FT)	Lease Expiration Date	Primary Land Use
LA 47	Condor	68,607	2011	Corporate flight facilities
LA 4	Procter & Gamble	217,355	2019	Corporate flight facilities
LA 46	Kroger	70,579	2007	Corporate flight facilities
LA 45	American Financial	64,906	2004	Corporate flight facilities
LA 41	American Financial	173,196	2021	Corporate flight department
LA 44	Jet Resources/Chemed	85,579	2018	Corporate flight department
LA 32	Federated Department Stores	98,615	2020	Corporate flight department
LA 35	Cintas	74,118	2016	Corporate flight department
LA 39	Cin-Air	86,271	2008	Specialized aviation service operator
LA 30	Midwest Jet Center	476,430	2019	Full service fixed base operator
LA 51	Open Parcel	186,000	TBD	TBD
LA 100	Andrew Thul & Associates	26,894	2020	Commercial
LA 101	Open parcel (behind city fuel farm)	TBD	NA	NA
LA 102	Andrew Thul & Associates	26,894	2020	Commercial
LA 103	Dennert Distributing	49,350	2045	Commercial
LA 104	Stevenson Photo Color	52,228	2059	Commercial
LA 105	Vacant (old fuel farm)	NA	NA	NA
LA 106	Land and Stone Landscaping	60,123	2012	Commercial
LA 110	Vacant (potential development site)	80,000	TBD	Off airfield lease option
Total		1,897,145	44	Acres
WILMER AVENUE LEASE AREAS				
LA 27	Avionics, Inc.	60,340	2006	City owned building with ground
LA 28	Diamond Avionics	58,729	2007	City owned building with ground
LA 29	E.J. Aircraft Ltd.	83,094	2012	City owned building with ground
LA 12	OnFlight	146,630	2030	Corporate flight facility
LA 31	Executive Jet Management	255,217	2030	Specialized aviation service operator
LA 52	Zinzinnzi Estates/Aerotec	161,600	2030	Specialized aviation service operator
LA 40	Million Air	331,098	2022	Full service fixed base operator
LA14	Air Tolin/TF Ltd.	77,145	2018	Specialized aviation service operator
LA54	Southline City T-Hangers	120,000	2005	City owned building with ground
LA24	Franklin Aviation	34,781	2007	City owned building with ground
LA23	Signature Engines	34,252	2012	City owned building with ground
LA50	T-Hangar Development	538,444	TBD	Specialized aviation service operator
LA56	Elite Flight Academy	625	2006	Flight training
LA57	Franklin Aviation	16,000	TBD	Aircraft storage
LA 107	Perter Georgetown (night club and parking lot)	9,288	2004	Parking
LA 108	Farmer's Produce Market	71,500	2006	Commercial
LA 109	Metropolitan Sewer District (MSD)	NA	Letter of Agreement	Government (ash pit)
LA 111	Vacant (potential marina lease off Kellogg Avenue)	NA	NA	Commercial
Total		1,998,743	46	Acres
AIRPORT ROAD LEASE AREAS				
Grand Total		3,895,888	89	Acres

Source: LUK Lease Information

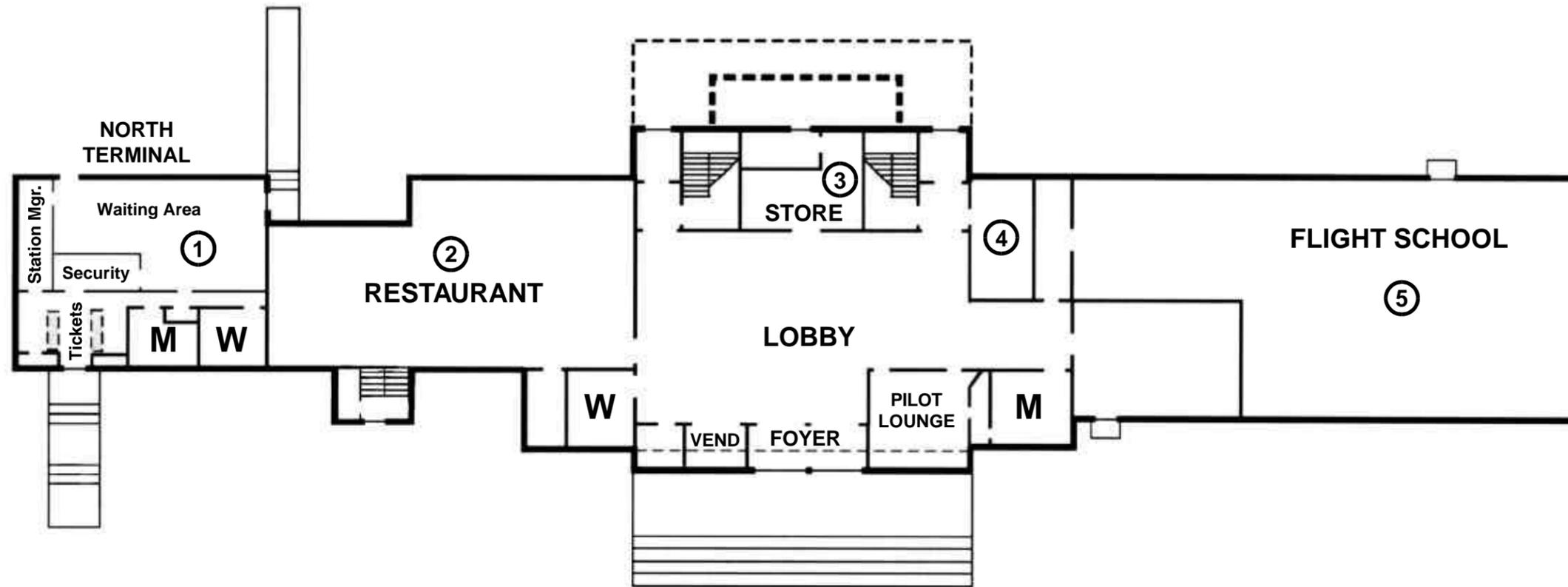
Space within the terminal is leased to several public and private tenants. The largest parcel of land controlled by the Airport not included in the aviation-related land lease descriptions is the approximately 165 acres of property located on the northern edge of the Airport. This unique parcel of Airport property is managed by the City of Cincinnati's Recreation Commission. This property includes an 18-hole public golf course, baseball fields, tennis courts, play grounds, and public picnic areas. Also associated with the golf course and playfields is a six-mile long paved bikeway and walking trail that encircles the Airport. This public use trail passes through the golf course, runs along the top of the Little Miami River levee, and parallels the west side of the Airport along Wilmer Avenue. Currently, the bikeway/walking trail passes directly in front of the terminal building which causes conflicts with the public access to the terminal as well as the public parking area located in front of the terminal.

This joint utilization of Airport property with other City departments is considered a model situation for general aviation airport land use planning. This joint utilization of City-owned properties provides Airport management with the ability to control airspace obstructions to the runway system, provide an aircraft noise buffer with the surrounding residential communities, and provide the public with recreational facilities.

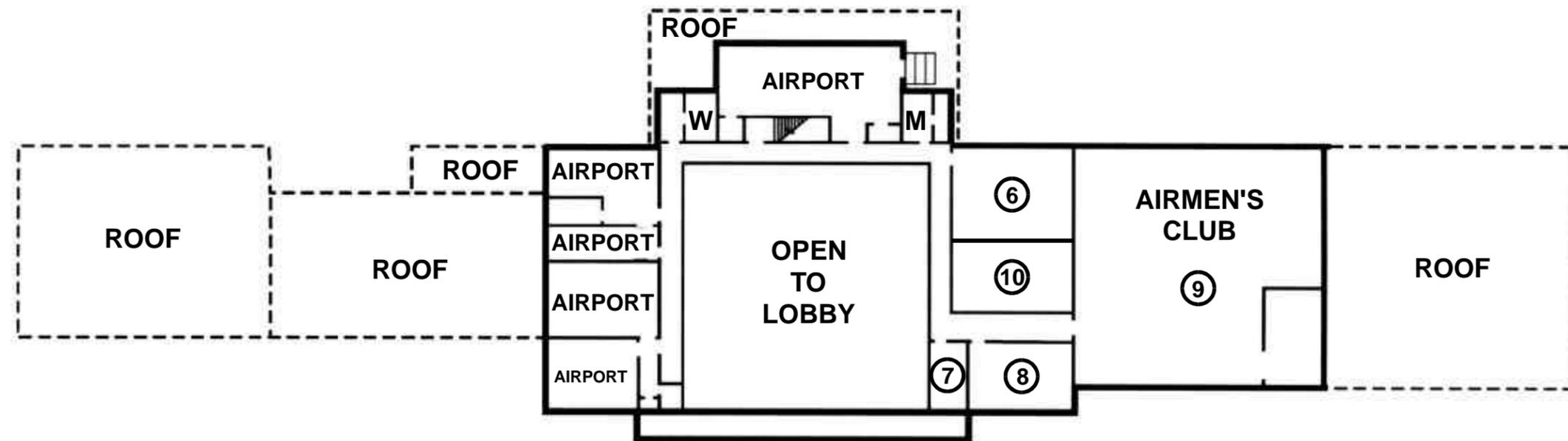
1.2.4 Terminal Building Leases

The Airport's two-story, multi-use terminal building is located on the western boundary of the Airport, which fronts along Wilmer Avenue. As shown on **Exhibit 1-7** and **Table 1-4**, the two-story terminal has nine individual lease areas.

The Sky Galley Restaurant, originally American Airline's Sky Chief Restaurant, has been the terminal's anchor tenant since the Airport opened in the 1930's. The restaurant has been periodically upgraded and serves both the Airport users as well as the local community.



FIRST FLOOR PLAN



SECOND FLOOR PLAN



TABLE 1-4 Cincinnati Municipal Airport-Lunken Field Terminal Building Lease Summary (As of July 2003)					
FIRST FLOOR					
Map ID	Location	Tenant	Area (SQ. FT)	Lease Expiration Date	Remarks
1	North Terminal	Vacant	2,100	TBD	Lease in progress (Jet Link Express)
2	Restaurant	Sky Galley Restaurant	3,308	2006	Full service restaurant
3	Lobby Center	Flight Depot	400	2001	Pilot supply store/gift shop
4	Room 1	Flemingo Air	200	Month to Month	Charter
5	South Wing	Franklin Aviation Academy	4,300	2005	Flight training school
	Total		10,308		
SECOND FLOOR					
6	Room 26	The Observation Deck	338	Month to Month	Private company
7	Room 24	W. Glen Ellerbe	500	Month to Month	Private company
8	Room 27	O.W. Hardin	140	Month to Month	Private company
9	Club Room	Greater Cincinnati Airmen	4,494	Month to Month	Pilots' club
10	Room 25	Ken Kamphaus	162	Month to Month	Private company
	Total		5,634		
	Grand Total		15,942		

Source: LUK Lease Information

The first-floor lease areas include a pilots' supply shop located off the lobby, a charter operation, a vacant passenger hold room, a security baggage facility, and the Franklin Aviation Flight School. The flight school leases the entire south wing of the terminal. The second floor of the terminal is utilized for Airport Administration offices, as well as offices for various small businesses. The major second-floor tenant is the Greater Cincinnati Airmen's Club, which has occupied the south wing of the terminal since the 1940's.

1.2.5 Proposed Airport Capital Improvement Program

In response to the on-going facility improvements and maintenance needs for the airfield, and City-owned buildings at Lunken Airport, there 21 major capital improvement projects currently proposed for Lunken Airport.

Exhibit 1-8 and **Table 1-5** show a list of proposed capital improvement projects to be utilized by the City of Cincinnati and the FAA for short-range and long-range Lunken Airport grant budgeting purposes.

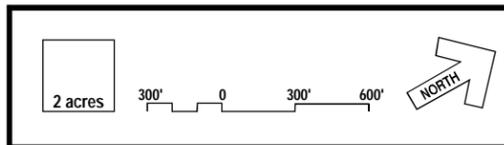
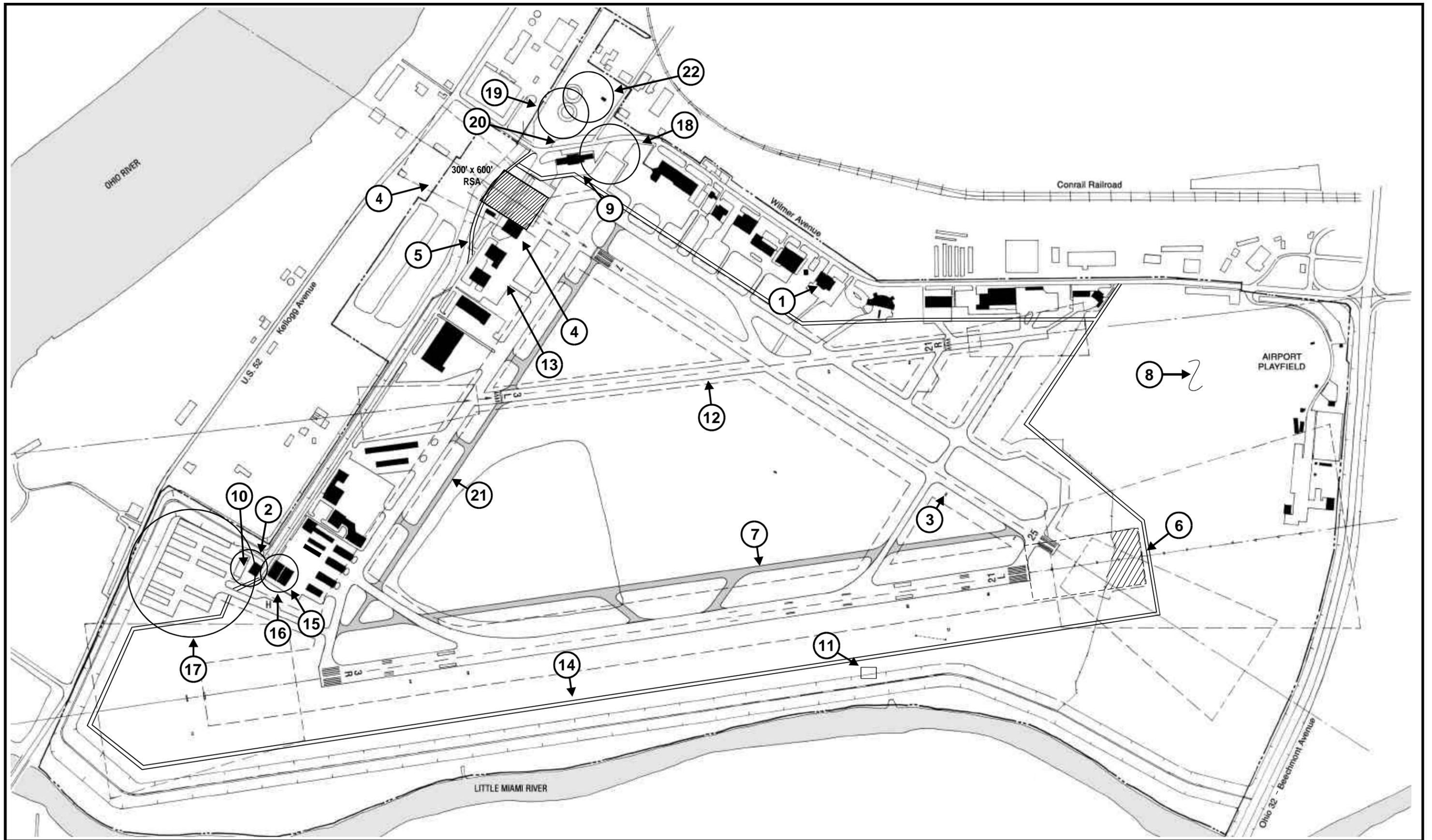


TABLE 1-5				
Cincinnati Municipal Airport-Lunken Field				
PROPOSED AIRPORT CAPITAL IMPROVEMENT PROJECTS (AIP)				
Map Reference & Priority	Project Description	Estimated Capital Cost	Estimated Construction Date	Remarks
SAFETY-RELATED PROJECTS				
1	Airport Rescue & Fire Fighting Vehicle	\$350,000	TBD	Dependent on FAA grants
2	Snow Removal Equipment	\$180,000	TBD	Dependent on FAA grants
3	VASI Replacement R/W 25	\$150,000	TBD	Dependent on FAA grants
4	R/W 7 RSA Obstruction Removal (Hanger #3)	\$120,000	TBD	Dependent on FAA grants
5	Relocate Airport Road around R/W 7 RSA	\$600,000	TBD	Dependent on FAA grants
6	R/W 21L RSA Obstruction Removal (Golf Tee)	TBD	TBD	Dependent on FAA grants
7	Parallel Taxiway R/W 3R-21L (Design & Construction)	\$3,665,000	TBD	Dependent on FAA grants
NOISE MITIGATION PROJECTS				
8	Part 150 Mitigation Projects	TBD	TBD	Part 150 study in progress
AIRPORT MAINTENANCE-RELATED PROJECTS				
9	Terminal Apron Rehabilitation	\$109,000	TBD	Dependent on FAA grants
10	Airport Maintenance Vehicle Storage Building	\$650,000	TBD	Dependent on FAA grants
11	Auxiliary Pumps for Flood Control	\$950,000	TBD	Dependent on FAA grants
12	R/W's 3L/21R Surface Maintenance	\$150,000	TBD	Dependent on FAA grants
13	Hangars 1, 2, & 3 Ramp Rehabilitation	\$270,000	TBD	Dependent on FAA grants
14	Perimeter Road	TBD	TBD	Dependent on FAA grants
DEMAND/CAPACITY-RELATED PROJECTS				
15	Remove Old Hangars 6 & 7	\$35,000	2003	
16	Construct New Replacement Hangars for 6 & 7	\$200,000	TBD	Dependent on private funding
17	Develop 90 T-Hangar Units on New South Apron	\$2,000,000	TBD	Dependent on private funding
18	Develop North Terminal Parking Lot & Apron Improvements	\$100,000	2003	Construction in progress
19	Develop Parking Lot & Improve Wilmer Avenue	TBD	TBD	Dependent on federal funding
20	Relocate Bike Trail to West Side of Wilmer Avenue	TBD	TBD	Dependent on FAA grants
21	Taxiway C Relocation (Design & Construction)	\$3,190,000	TBD	Dependent on FAA grants

Source: PB Aviation

The proposed Airport capital improvement projects are grouped into three major categories: Aircraft Operational Safety, Airfield Maintenance, and Demand/Capacity-Related projects.

Aircraft Operational Safety: Seven proposed capital improvement projects are related to addressing existing airfield operational safety issues. These include the acquisition of fire-rescue equipment, snow removal equipment, and runway

safety issues. The runway safety projects include the removal of airspace obstructions from the Runway Safety Areas (RSA) for Runway 7, Runway 21L, and a new parallel taxiway for Runway 3R-21L, which will help reduce the number of existing runway crossing conflicts. In August of 2000 the FAA conducted a RSA determination survey for Lunken Airport. From this survey it was found that the extended Runway 7 RSA (600 feet by 300 feet) was in violation of minimum FAA standards and that Hangar No. 3, Airport Road and a maintenance building will have to be relocated. For the extended RSA (1,000 feet by 500 feet) for Runway 21L, it was determined that the bike trail and a golf tee will have to be relocated outside the RSA. These two RSA obstruction removal projects are underway at this time.

Two other related projects that will eliminate runway crossings, as well as reduce community impacts related to engine maintenance run-up noise, include two new aircraft run-up pads that are to be located in the mid-field adjacent to Taxiway 'D' and north of Taxiway 'C'.

Airfield Maintenance: Six proposed capital improvement projects are required to maintain the existing paved areas and provide maintenance of the surface water drainage system.

Demand/Capacity-Related Projects: The remaining seven capital improvement projects are intended to address the need for additional aircraft storage hangar space and the upgrading of the Airport terminal area.

1.3 Airspace System

There are three major components of the airspace system which encompass the operation of Lunken Airport: enroute, terminal, and local airport control. Each component has a specific function and is supported in its role by a network of air traffic control facilities and NAVAIDs.

1.3.1 Enroute Control

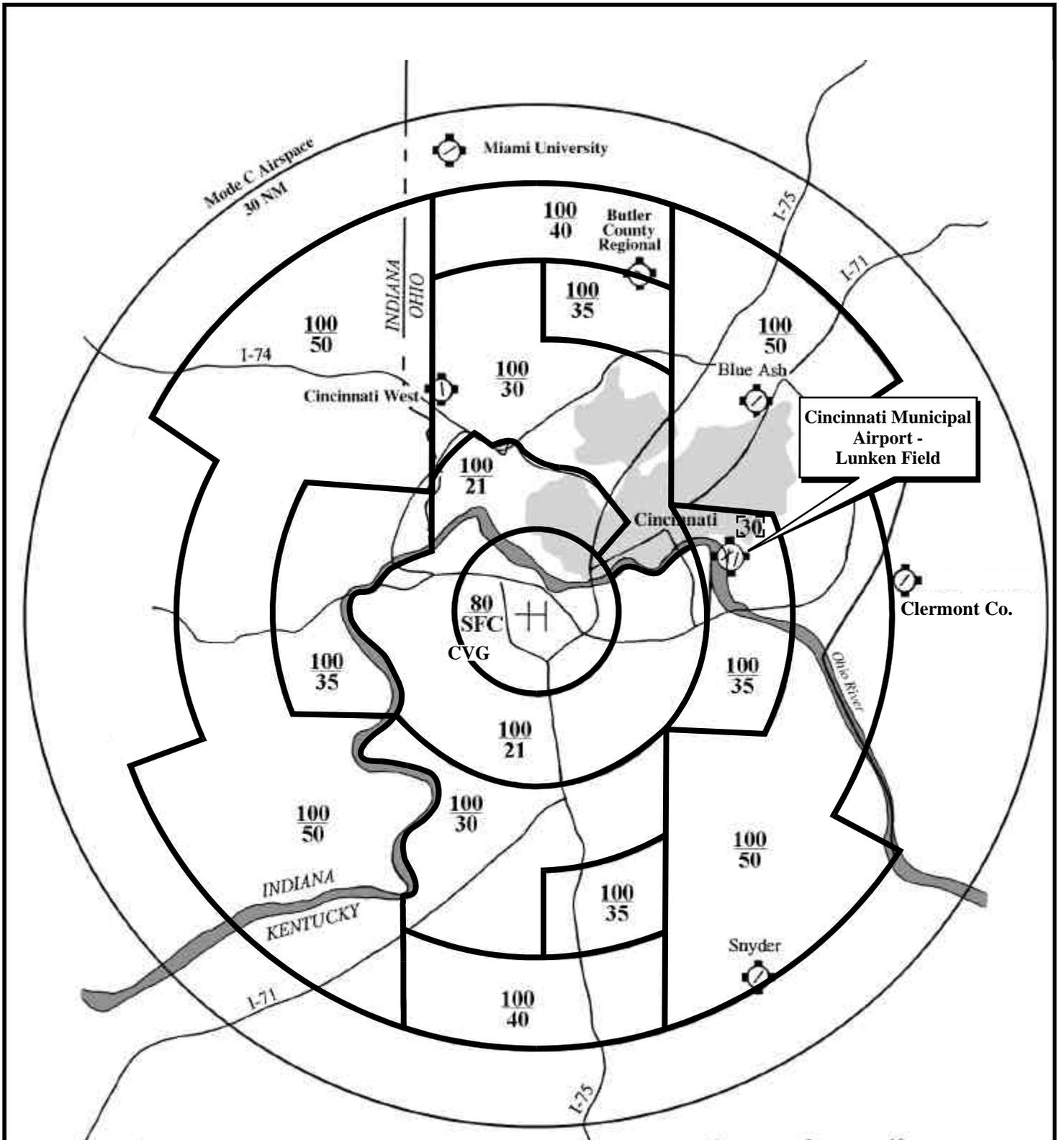
Air traffic flying under instrument flight rules (IFR) enroute to the Cincinnati area is the responsibility of the Indianapolis Air Route Traffic Control Center (ARTCC). Aircraft flying through the region, or to an airport in the area, typically follow designated routes known as victor airways, or jet routes. These airways are delineated on the ground by a radio equipment system called VOR's (Very High Frequency Omnidirectional Range equipment). More recently, enroute navigation is being accommodated by GPS, which according to the FAA, is expected to replace the VOR system in the 2015-2020 timeframe.

1.3.2 Terminal Control Area

Control of aircraft arrivals, departures, and over flights operating below 8,000 feet above the surface within a radius of 30 nautical miles (NM) of CVG is the responsibility of the Cincinnati Terminal Approach Control Facility. As shown on **Exhibit 1-9**, this Class B Terminal Control Area (TCA) facility that is located at CVG, is also responsible for providing guidance for aircraft that are going to and from other public use satellite airports located within 30 NM of CVG, including Lunken Airport, Blue Ash Airport, and Clermont County Airport.

The CVG TCA consists of controlled airspace extending upward from the surface, or higher to specified altitudes, where all aircraft are subject to the operating rules and pilot/equipment requirements specified in FAR Part 91.

Regardless of weather conditions, an Air Traffic Control (ATC) authorization is required prior to operating within a TCA. Unless otherwise authorized by ATC, aircraft must be equipped with an operable two-way radio capable of communicating with ATC on appropriate frequencies for that TCA.



Cincinnati Municipal Airport - Lunken Field

LEGEND

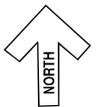
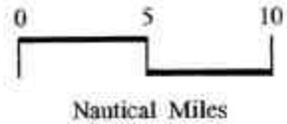


Public Use Airports within Class B-Airspace

80 Ceiling in hundreds of feet MSL

35 Floor in hundreds of feet MSL

Mode C Airspace - Requiring two-way radio communication



Cincinnati Municipal Airport - Lunken Field
AIRPORT MASTER PLAN STUDY UPDATE

**TERMINAL CONTROL AREA
(CLASS B AIRSPACE)**

**EXHIBIT
1-9**

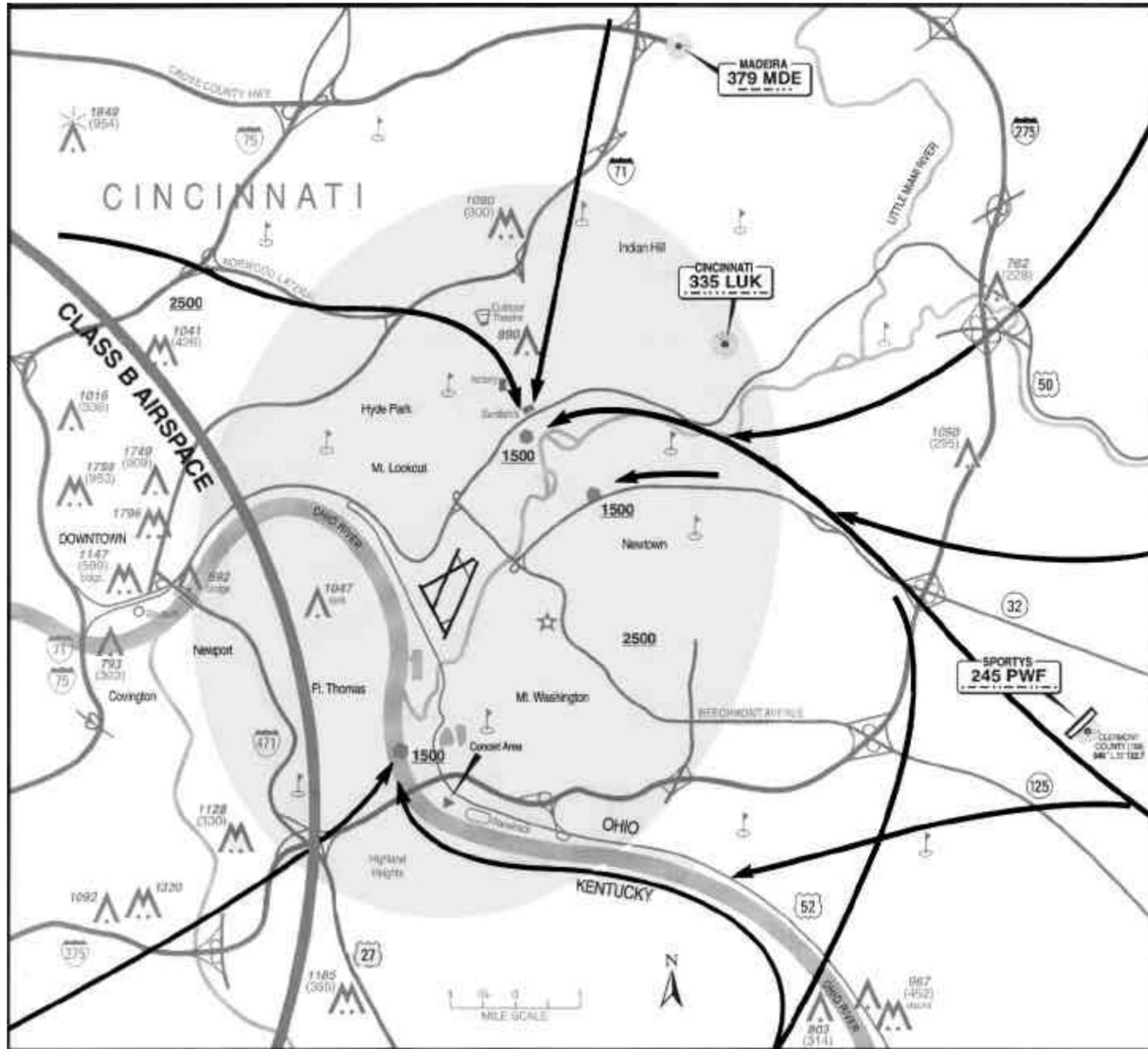
The FAA establishes a TCA at an airport that has 3.5 million annual passengers, or 300,000 total aircraft operations, of which 50 percent are air carrier. The establishment of the Delta and Comair passenger hubs, and the DHL air cargo hub, caused CVG to exceed this threshold. In 2002, CVG processed approximately 22 million total passengers and approximately 400,000 total aircraft operations.

1.3.3 Local Airspace Control

Lunken Airport's air traffic control area is wholly contained within CVG's 30 NM TCA radius. When the Lunken ATCT is not in operation, (11:00 p.m. to 7:00 a.m.), aircraft are directed to the Lunken Airport runway system by the CVG ATC. Local airspace control facilities for Lunken Airport include all visual and electronic equipment located at the Airport. The Lunken Airport ATCT directs all traffic at the Airport, including the immediate airspace, up to approximately five miles from the control tower. The ATCT is responsible for issuing clearances to aircraft landing or departing the Airport. Lunken Airport has four published instrument approaches to the airfield. Of these, the approach to Runway 21L is equipped with a Category-I ILS. Nonprecision Instrument (NPI) approach procedures are provided for Runways 3R, 21L, and 25. The other three runway approaches, Runway 3L, Runway 21R, and Runway 7 have visual approach procedures.

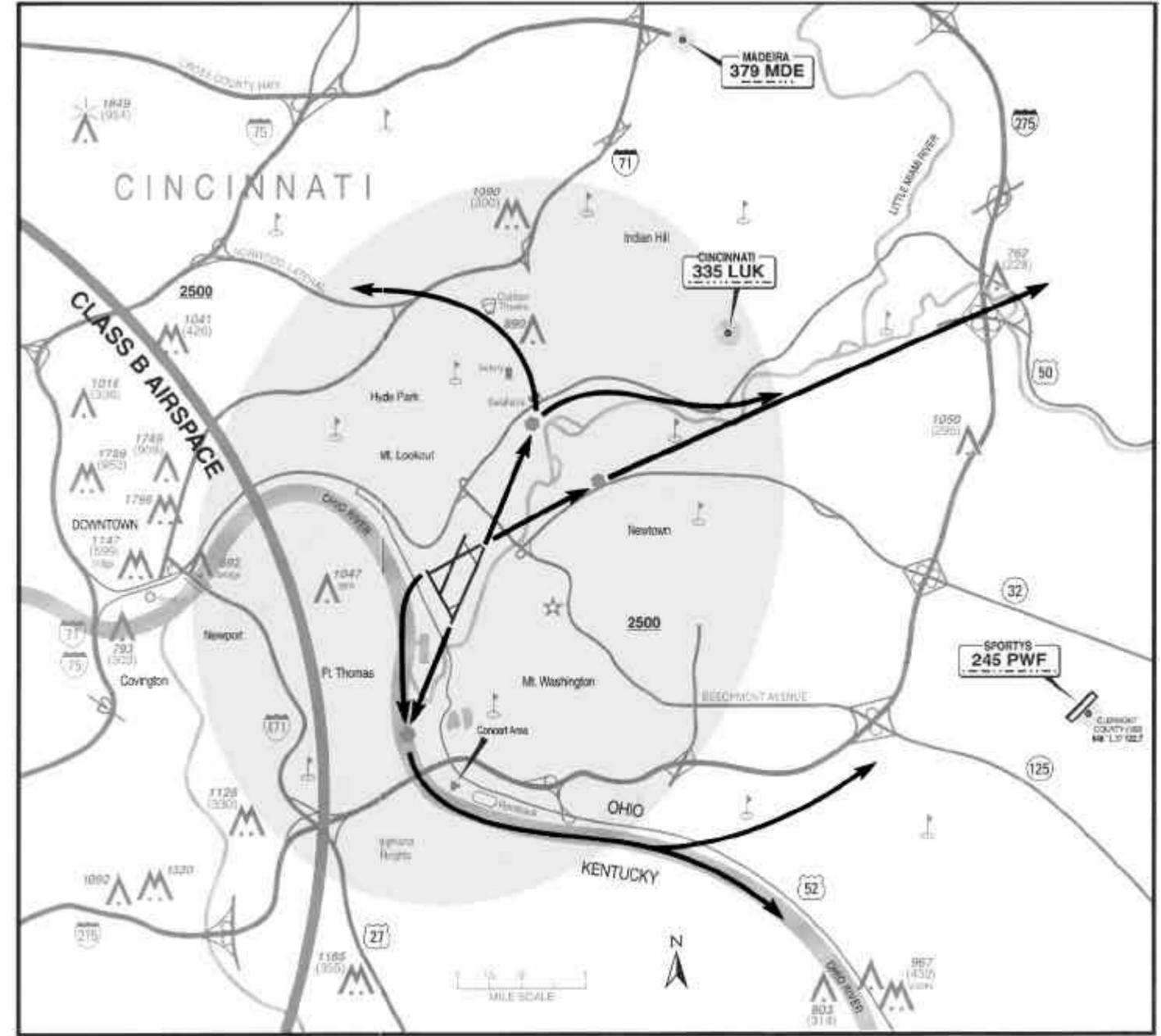
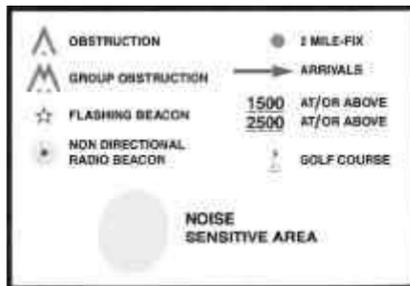
1.4 Existing Recommended Noise Abatement Procedures

In 1992, the City of Cincinnati implemented recommended aircraft noise abatement procedures for both turbine-powered and training aircraft. Most recently, the Airport administration has restricted nighttime aircraft maintenance run-ups between 9:00 p.m. and 7:00 a.m., and posted recommended noise abatement procedures signage on the airfield. As depicted on **Exhibit 1-10**, for the past three years, the following recommended noise abatement measures for turbine-powered aircraft, operating between 11:00 p.m. and 7:00 a.m., have been implemented at Lunken Airport.



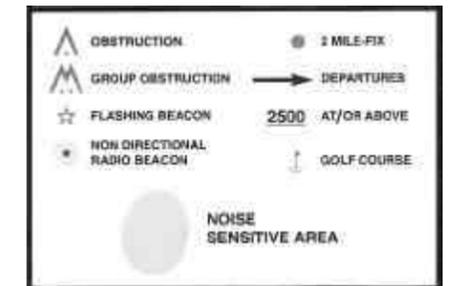
Pilots are not prohibited from flying other than recommended altitudes and/or headings if operational requirements dictate. These procedures do not relieve the pilot of the responsibility to maintain appropriate terrain and obstruction clearance.

ARRIVALS



Pilots are not prohibited from flying other than recommended altitudes and/or headings if operational requirements dictate. These procedures do not relieve the pilot of the responsibility to maintain appropriate terrain and obstruction clearance.

DEPARTURES



- Preferential runway uses are recommended during calm wind conditions to decrease aircraft noise. Runway 3R-21L is the “most community friendly runway” because its orientation causes the least aircraft noise impact on the adjacent residential areas.
- Procedures recommend flight tracks that direct approaching and departing aircraft over the City’s commercial land use areas, and over the Little Miami and Ohio Rivers to reduce noise in the residential areas closest the Airport.
- Voluntary fly friendly noise abatement requirements for flight training aircraft.
- Preferred routes for arriving and departing helicopters are recommended to be over major roadways, away from residential areas.
- Voluntary “Fly Neighborly Program” materials and videos have been provided for small aircraft pilot training operations on Runway 3L-21R.
- Handheld noise monitors and radio receivers have been made available to residents for the purpose of monitoring the noise levels of aircraft flying over their homes.
- A Noise Abatement Hotline is available for citizens to report excessive aircraft noise after hours. Residents are encouraged to call the airport administration’s noise abatement officer to report aircraft noise and lodge concerns associated with aircraft operations.
- Information about noise abatement policies and recommendations are now published in pilot flight planning manuals and charts as they are updated.

The Lunken ATCT broadcasts Noise Abatement Information continuously on the Airport Terminal Information and encourages pilots to use it.

- Lunken Airport is working in cooperation with the CVG noise abatement staff to measure and monitor aircraft noise and to track aircraft flight paths over the Airport.
- The “Air Scene” radar system was installed in 2001. This system provides aircraft operations information including: type of aircraft, time of flight, and flight paths that can be linked to sources of complaints.
- Airport management follows up with calls or letters to suspected sources of noise complaints to urge cooperation with the “Fly Neighborly Program” at Lunken Airport.

1.4.1 Published Aircraft Arrival and Departure Procedures

Specific aircraft arrival and departure procedures that have been developed by Lunken Airport Management for Lunken Airport include:

Arrivals from Northeast: Landing south, follow Little Miami River to Runway 21L-21R or 25. Landing aircraft maintain 1500 Mean Sea Level (MSL) or above until 2 mile final. Landing north, follow interstate beltway along river to runways.

Arrivals from South and East: Landing south, maintain 2500 MSL or above while flying over sensitive areas; Maintain 1500 MSL or above until 2 mile final.

Arrivals from Southwest: Landing south, maintain 2500 MSL or above while flying over sensitive areas; maintain 1500 MSL or above until on 2 mile final.

Arrivals from Northwest: To all runways, maintain 2500 MSL or above while flying over sensitive areas; maintain 1500 MSL or above until on 2 mile final.

Departures Runways 3R-3L-7: Fly runway heading to 2000 MSL; avoid depicted sensitive areas.

Departures Runways 21L-21R-25: Follow Ohio River southeast bound to 2000 MSL before turning on course.

1.5 Meteorological Analysis

Weather conditions at Lunken Airport affect runway utilization due to variations in wind direction, wind velocity, and flight visibility. Prevailing wind conditions determine the direction in which landings and takeoffs may be conducted. Flight visibility and cloud ceilings also affect the safe distance between arriving and departing aircraft. The decision to use a particular runway configuration is made by air traffic control, although the pilot has the option to request a specific runway.

All flight operations within the United States must conform to the rules and regulations published in the FAR Part 91. The FAA states that all aircraft operations must be conducted in accordance with visual flight rules (VFR), or instrument flight rules (IFR). VFR applies when weather conditions are such that aircraft can maintain safe operations by visual means, i.e., visual meteorological conditions (VMC). Instrument meteorological conditions (IMC) prevail when the visibility or cloud ceiling falls below those minimums prescribed for VMC operations (1,000 foot ceiling, three-mile visibility). Wind conditions are of prime importance in determining runway use and orientation. Where winds are consistently from one direction, a single runway orientation is adequate. In most areas, however, wind direction is not consistent. In such instances, a multiple runway orientation may be required. The FAA has established criteria which states the most desirable runway orientation is that which has the largest wind coverage and minimum crosswind components. The minimum required wind coverage for a single runway orientation is 95 percent. For Lunken Airport, which predominantly serves small single engine aircraft, 10.5 knots is the maximum allowable crosswind component for each runway.

The data required to conduct weather and wind analysis for Lunken Airport was obtained from the National Oceanic and Atmospheric Administration (NOAA) National Climatic Center in Asheville, North Carolina. NOAA maintains a network of weather

observation stations that record meteorological conditions at many locations throughout the United States. One such station is located at Lunken Airport. The wind data for this analysis contains 79,736 weather observations for the period from 1992 to 2001.

Wind coverage for the runways was determined through the use of a computerized wind program developed and distributed by the FAA. Wind data for all-weather, VFR and IFR was analyzed separately. Weather categories and wind coverage for the two runway orientations and combinations of the two runway orientations under all weather, VFR, and IFR conditions are shown on **Exhibit 1-11**.

The existing two runway orientations provide more than 99 percent wind coverage under all-weather, VFR, and IFR conditions with a 10.5 knot maximum cross wind component. With the predominant wind direction for Lunken Airport being from the southwest, which occurs 17.39 percent of the time during an average year, both runway orientations have approximately 94 percent all-weather wind coverage. Since the FAA requirement is 95 percent all weather wind coverage, the combination of both the 3-21 and 7-25 orientations are required to provide the required coverage. The wind analysis indicates that the combination of 3-21 and 7-25 runway orientations results in combined runway system wind coverage of 98.04 percent.

1.6 Area Land Use

As shown on **Exhibit 1-12**, land use zoning districts surrounding Lunken Airport encompass both the Airport's airspace obstruction control surfaces as well as the environmental sensitive areas. The off-Airport recreational and industrial land uses that are within the Little Miami River Valley are considered compatible with the corporate and general aviation flight activity that occurs at Lunken Airport. In order to establish the long-range viability of Lunken Airport, the aircraft arrival and departure noise occurring over residential areas, situated on the surrounding hills, will require noise mitigation efforts. These efforts include enhancing pilot awareness and modifying FAA City of Cincinnati air traffic control measures. The FAA does not participate in noise

Single Runway ¹	13 Knots Crosswind			10.5 Knots Crosswind		
	IFR	VFR	All Weather	IFR	VFR	All Weather
3	77.82	53.56	55.84	77.25	52.76	55.09
21	67.38	68.73	56.81	66.62	66.63	66.61
7	75.89	50.71	53.09	75.00	49.84	52.22
25	68.75	71.62	71.33	67.75	69.20	69.04
Calms	36.80	24.99	27.03	36.80	24.99	27.03
Combined Runways²						
3/21	98.71	97.20	97.31	97.38	94.32	94.56
7/25	98.12	97.21	97.27	96.24	93.94	94.12
All Runways	99.51	99.35	99.34	98.66	98.01	98.04

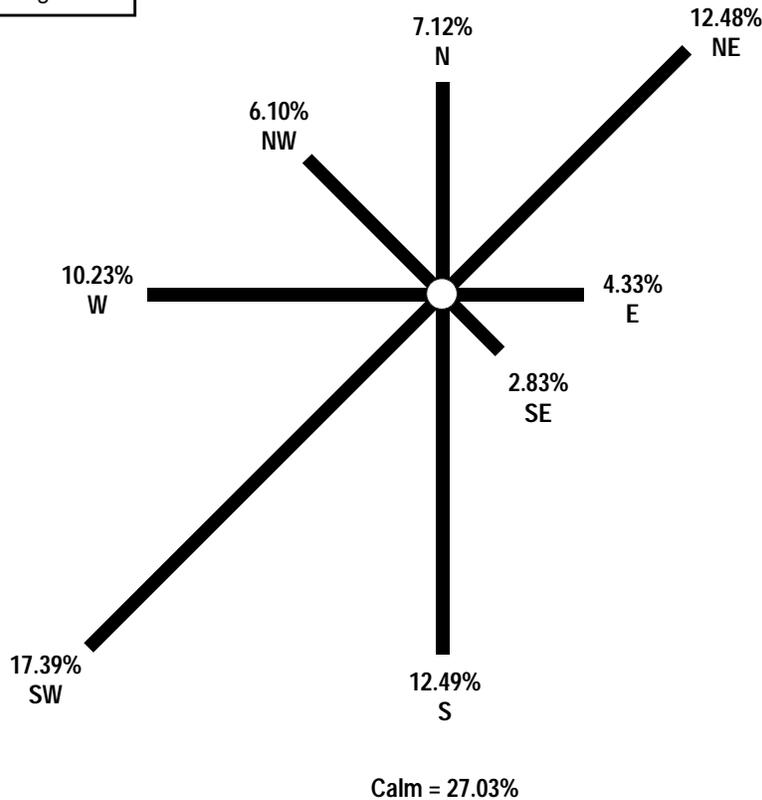
LEGEND

Calms - Less than 3 kts

VFR - Visibility greater than 3 miles and More than 1000 ft ceiling

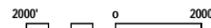
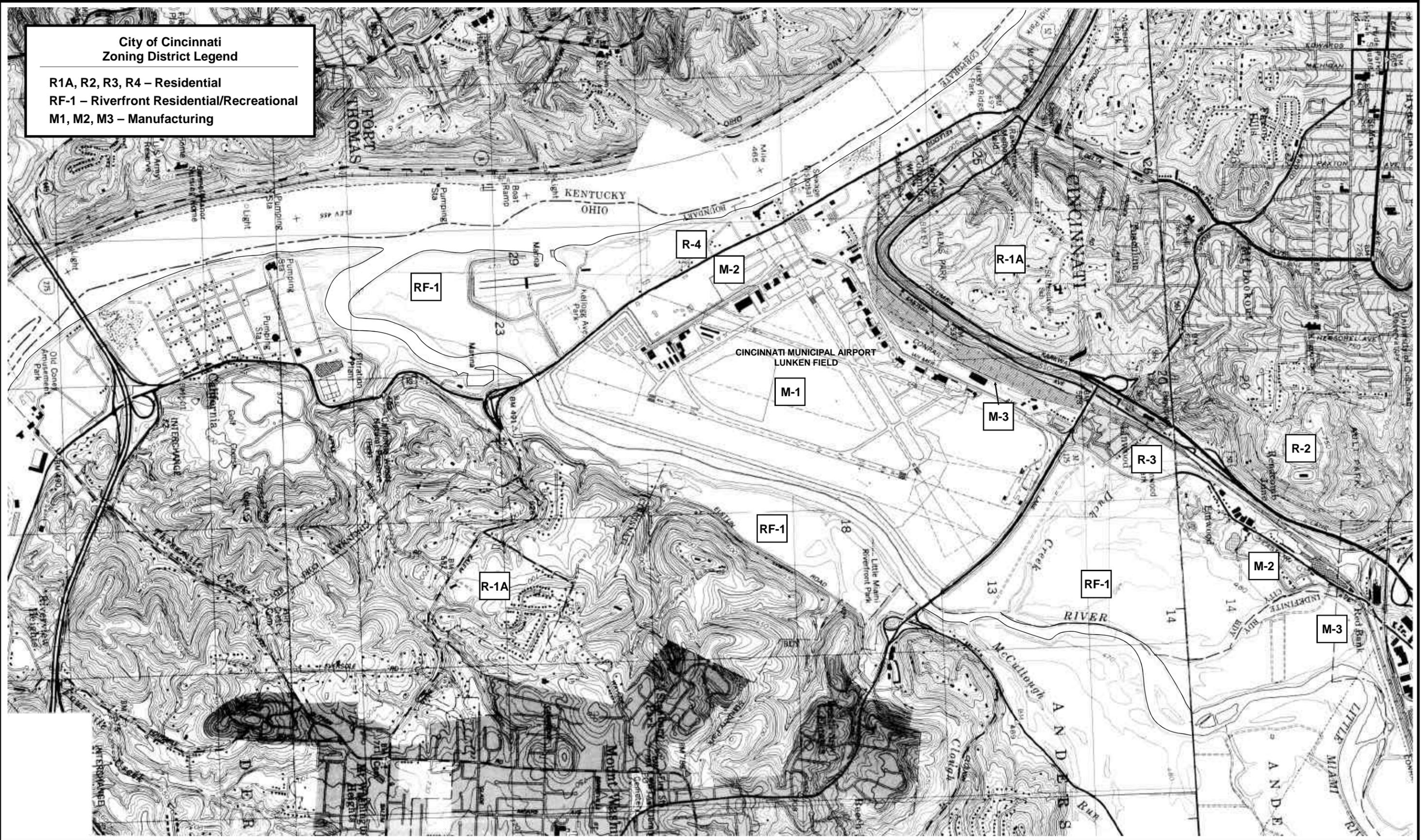
IFR - Visibility less than 3 miles and less than 1000 ft ceiling

- 1 These percentages represent zero allowable tailwind and include calms.
 - 2 These percentages include opposing runways.
 - 3 10.5 knots criteria for category A-1 and B-1 airports.
13.0 knots criteria for category A-II and B-II airports.
- Source: National Oceanic and Atmospheric Administration (NOAA) National Climatic Center in Asheville, NC (1992-2001)



**City of Cincinnati
Zoning District Legend**

- R1A, R2, R3, R4 – Residential
- RF-1 – Riverfront Residential/Recreational
- M1, M2, M3 – Manufacturing



mitigation efforts that relate to the mitigation of homes located outside of the 65 DNL aircraft noise contour.

1.6.1 Airspace Obstruction Control

Lunken Airport is situated in the Little Miami River Valley near its intersection with the Ohio River. The Airport is located in the floodplain of both the Little Miami River, as well as the Ohio River. The Airport is enclosed by a flood control levee and has a runway system elevation of 483 MSL.

The Airport is surrounded on three sides by hills, which are obstructions to FAR Part 77 Airspace Obstruction Control Criteria. The area to the northeast of the Airport includes the Little Miami River Valley, which provides clear airspace approaches to the three runways. Due to the close proximity of hills to the Airport, the FAA has required waivers to the FAR Part 77 criteria. To comply with the waivers, the City of Cincinnati and the FAA have installed red obstruction lights on the top of the highest objects located on the surrounding hills. The FAA has also applied aircraft descent height limitations to the Airport's published precision and nonprecision instrument approach procedures.

Based on the current FAA Airspace Obstruction Chart for Lunken Airport (OC-83) and the current FAA runway approach procedures for Lunken Airport, the highest object on top of the hills located within one mile to the east of the Airport (Mount Washington) has an elevation of approximately 1050 MSL or 566 feet above the runways. The highest object on top of the hills located one mile south of the Airport in Northern Kentucky (Fort Thomas), has an elevation of 1047 MSL or 563 feet above the runways. The highest object located on the hills located one-half mile to the west of the Airport (Mount Lookout) has an elevation of 870 MSL or 386 feet above the runways. With the FAR Part 77 obstruction control height criteria being 150 feet above the Airport elevation for a radius of 10,000 feet from each runway end, it results in the existing hills being in violation of FAR Part 77 criteria by over 500 feet.

The floodplain of both rivers, which creates seasonal fog conditions, as well as the 500 foot high hills surrounding the Airport are expected to continue to be permanent physical constraints to the future operation of Lunken Airport.

1.6.2 Adjacent Land Use

The land areas which are located within a radius of approximately three miles of Lunken Airport are described below:

North & Northeast: The area to the north of Lunken Airport includes the Little Miami River Valley flood plain. This area is currently utilized for agricultural purposes, as well as for public soccer fields. In the near future, the City of Cincinnati plans to develop additional public park areas in the area that is located directly northeast of the Beechmont Avenue Levee. The communities of Linwood and the Village of Fairfax, which mainly consist of single-family homes and light industrial land uses, are located along the northwestern edge of the Little Miami River Valley along Columbia Parkway.

Southeast: The predominately single-family residential neighborhood of Mount Washington is located on top of the hills that are southeast of Lunken Airport. The City of Cincinnati's 125-acre Stanbery Park and the highest structure in the area, a recently constructed cell tower (567 feet above the Airport) are located within one and one-half miles from the Airport. The Airport's rotating beacon is located in Mount Washington on top of the City's water reservoir (443 feet above the Airport elevation of 484 MSL).

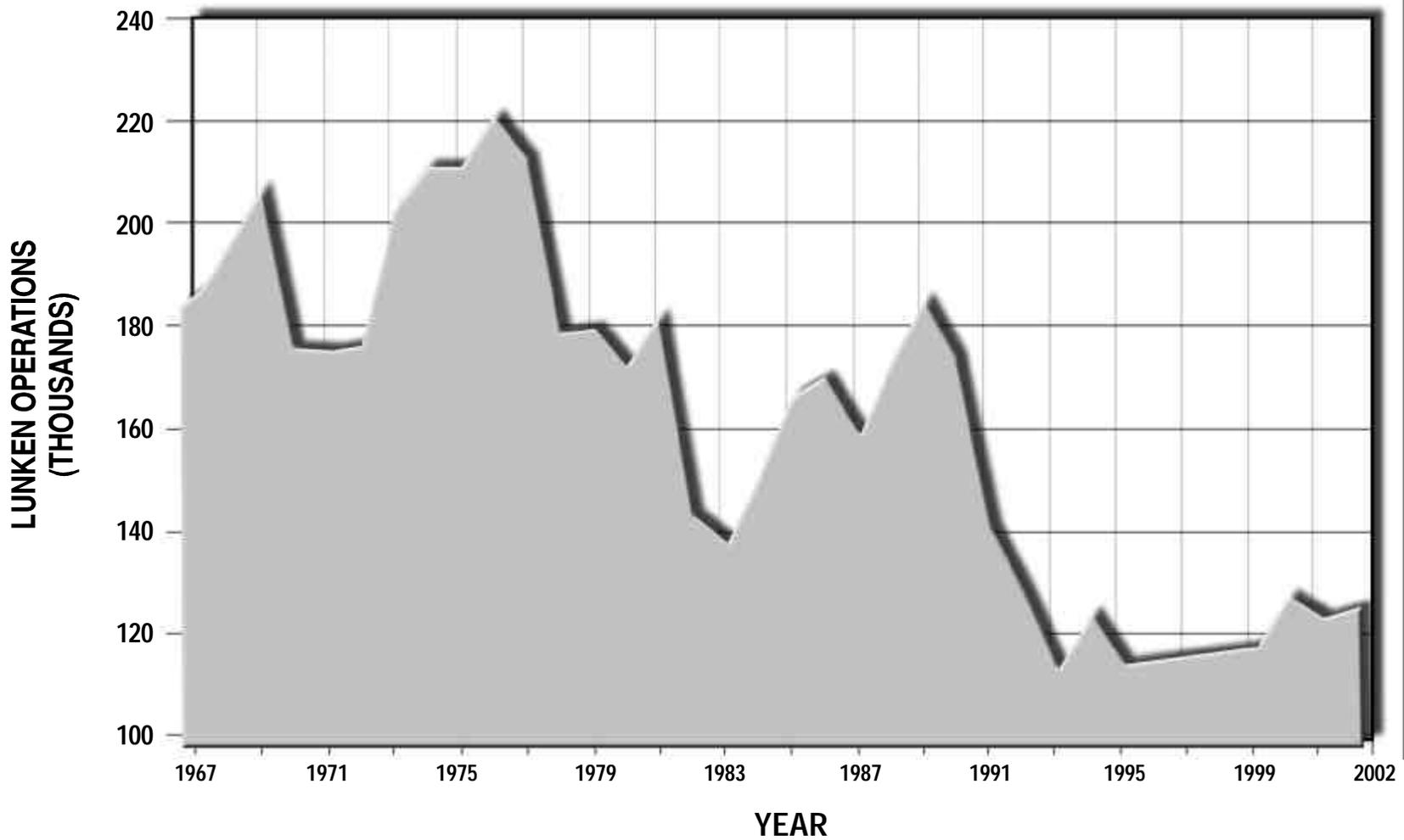
Southwest: The Ohio River and the residential community of Fort Thomas, Kentucky are located southwest of Lunken Airport. The floodplain area along Kellogg Avenue that parallels the Ohio River is utilized for soccer fields, marinas, automobile wrecking yards, petroleum storage tanks, gravel storage areas, and a small number of single-family residences.

Northwest: The area located northwest of Lunken Airport includes the predominately single-family residential neighborhoods of Mount Lookout and Columbia-Tusculum. Three City parks, which include Alms Park, Ault Park, and the Mount Lookout Observatory, are located on the top of the hills that are within one mile of the Airport. The area at the base of the Mount Lookout hills along Wilmer Avenue includes a light industrial area along Wilmer Avenue and the Indiana, and Ohio Railroad yards.

1.7 Airport Operations Summary

The Lunken Airport Master Plan Update was initiated in early 2003; therefore, all aviation activity projections, and aircraft noise analysis, will be based on the full-year 2002 aviation activity data that was collected by the planning team in early 2003. The term “*airport operations*” refers to the volume of aircraft traffic handled by an airport on an annual and daily basis. Specific operation analysis at Lunken Airport includes the annual and peak-hour utilization of the system of three runways. It also includes the varied types of private, corporate, and potential scheduled commercial aircraft that may utilize Lunken Airport over the next 20 years.

General aviation activity, especially the single-engine recreational segment, has experienced a national downturn for the past three decades. The reduced number of operations can be linked to the slow national economy, the rising cost of aircraft ownership, rises in aviation fuel costs, the difficulties associated with small aircraft mixing with large aircraft near the major urban areas, and the overall social trends toward other forms of recreation. Recent national security events which have resulted in the establishment of the Transportation Security Administration (TSA) are expected to add additional airspace and landside access restrictions on the general aviation industry, which in turn may have a negative impact on the short-term growth of small general aviation traffic. As shown on **Exhibit 1-13**, annual aircraft operations at Lunken Airport appear to have followed national trends by recording decreased activity for the past several years. Airport activity records for the past 36 years of aircraft activity by



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General Aviation, Air Taxi, and Military aircraft that have utilized Lunken Airport, report decreasing activity over the past 26 years from a peak of 225,574 operations in 1977 to 132,214 operations in 2002 (an aircraft operation is either a take-off or a landing).

The 2002 count of based aircraft at Lunken Airport has remained constant over the years at approximately 262 aircraft, with the single-engine segment comprising 57 percent of the current fleet, twin-engine comprising 19 percent of the fleet, and corporate jets comprising 24 percent of the fleet. One factor related to the recent increase in the number of aircraft storage hangars at Lunken Airport is a result of the increase in value of single-engine aircraft. Owners want to protect and secure these aircraft from the elements that are currently costing well over \$100,000.

As stated previously, the trend in decreased general aviation activity at Lunken Airport resembles the levels of general aviation air traffic experienced at other general aviation airports across the country during this same time period. Projections of future aircraft activity demand for the design year of 2023 at Lunken Airport will be provided in Chapter 2.0 of this study.

1.8 Economic Impact of Lunken Airport

A study conducted in 1999 by the University of Cincinnati Center for Economic Education, (The UC Study) estimated the economic impact of Lunken Airport. The UC Study shows that Lunken Airport has a significant economic impact on the greater Cincinnati Area. Lunken Airport is the preeminent general aviation airport in the area and serves an important role in the region's transportation infrastructure.

As shown on **Table 1-6**, the total estimate economic impact of Lunken Airport on the Greater Cincinnati economy in 1998 was \$235 million, supporting 3,718 local jobs.

Economic Activity	On-Going Economic Impacts	One-Time Construction Impacts
Lunken and Related Organizations	\$ 118,497,897	\$ 3,945,443
Visitor Spending	\$ 1,072,493	-
Surrounding Development	\$ 115,724,941	\$ 17,225,514
Planned Construction	-	\$ 9,088,308
Total	\$ 235,295,331	\$ 30,259,265

Source: University of Cincinnati

A summary of the specific economic impact factors from the UC Study related to Lunken Airport's contribution to the economic growth of the Greater Cincinnati included the following:

- Lunken Airport and the 60 businesses operating there have a direct contribution of \$66.9 million to the regional economy and directly employ a total of 875 regional residents.
- The direct and indirect economic impacts of Lunken Airport and related organizations contribute a total economic impact of \$118 million on the regional economy. Of this, \$35 million is in the form of business sales, or output, and \$84 million is in the form of household earnings. In addition, 1,956 regional jobs are associated with the operation of Lunken Airport.
- The industries with the largest economic benefit from the operations of Lunken Airport and related organizations include transportation, real estate, business services, health services, and wholesale trade.
- Lunken Airport brings out-of-town travelers into the greater Cincinnati region. Based on a survey of businesses at Lunken, the UC Study estimated a total of 2,668 annual visitors came to the region through Lunken Airport and stayed an average of 1.6 days.
- The UC Study estimated that these visitors will have a total economic impact of \$1,072,492 on the regional economy. Of this, \$742,953 is in the form of business salaries and \$329,539 is in the form of household earnings. In addition, each visitor to the region supports 19 regional jobs.
- The industries that benefit the most from the visitor spending impact are hotels and lodging places, retail trade, restaurants, real estate, and transportation industries.

- In addition to the economic activity that takes place at Lunken, the Airport contributes to economic development by making the surrounding land attractive to businesses that rely on the Airport. Aviation-related businesses are located near the Airport to take advantage of Airport clients and Airport businesses. Some businesses locate near the Airport in order to take advantage of daily flights that are necessary for them to conduct their business. This proximity gives them an advantage over their competitors and makes business development in Cincinnati stronger than it would be otherwise. For example, US Bank chose to build a new facility in the Lunken area because the company has daily flights at Lunken for transporting checks. The US Bank facility created approximately 37 new jobs, maintains 498 jobs, and guarantees a minimum of 1,850 jobs in the City over the next 20 years. Aviall, which sells aircraft parts, is another example of an aviation related business capitalizing on Lunken Airport.
- The total economic impact of future improvements at Lunken Airport is \$30 million. Of this, \$21 million is generated in business sales, and \$9 million is created in household earnings. A total of 351 regional jobs are supported from the direct and indirect economic activity associated with Lunken Airport construction projects.