

1 Introduction

The Lexington-Fayette Urban County Airport Board (LFUCAB) retained CHA Consulting, Inc. (CHA) to prepare a Master Plan (Study) for Blue Grass Airport (LEX or Airport). The purpose of the Study was to evaluate the current space utilization and operational characteristics of the airfield, terminal facility, support facilities, ground access, and land development considerations. It was intended to consider all alternatives that can be developed for the best use of space and logical guidance provided for the continued improvements necessary to accommodate projected aviation activity in a logical and financially feasible manner throughout a 20-year planning period.

This introductory chapter provides a description of the project and a background overview of the Airport and its facilities. Additional information about the Airport and the Study can be found at www.bluegrassairport.com/masterplan/. The Airport's website, www.bluegrassairport.com, also has destination and flight information, airport maps, driving directions, ground transportation options, and parking information.

1.1 Project Description

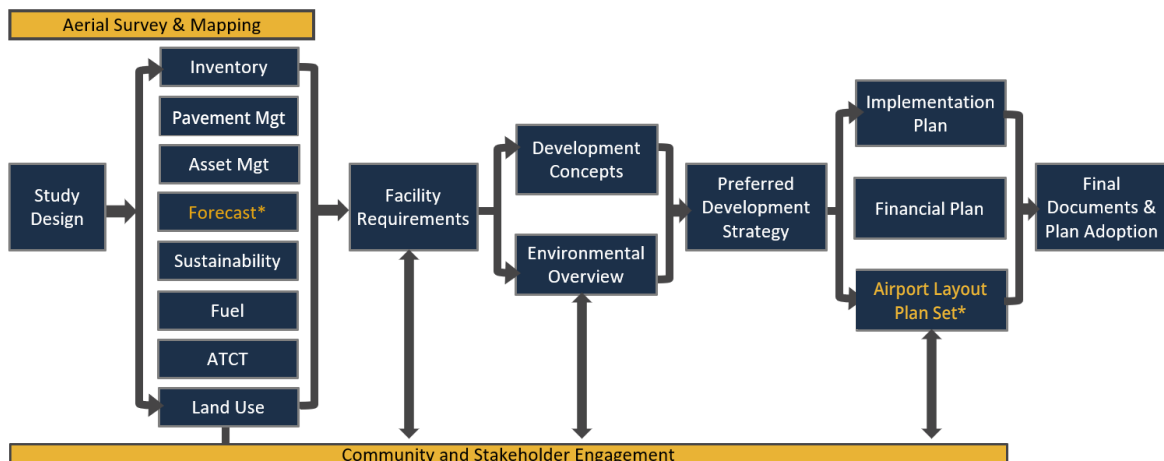
Airport master planning systematically evaluates existing facility and market conditions, identifies anticipated stakeholder needs, and formulates both near- and long-term development strategies. The results of the Master Plan provide the guidance necessary for the Airport to address the need for airport facilities' improvements and land development considerations for the next 20 years (planning horizon) and beyond. This technical document and the associated Airport Layout Plan (ALP) set are a strategic development tool for guiding ongoing improvements to airport facilities.

The process, methods, and ultimate products are guided by the Federal Aviation Administration (FAA) [Advisory Circular \(AC\) 150/5070-6B, Airport Master Plans](#).

Consistent with this guidance, the process followed for preparing the LEX Master Plan are outlined in **Figure 1-1**. Throughout the master planning process, three components require FAA approval: aviation activity forecasts, future critical aircraft, and the ALP.

The results of the Master Plan provide the guidance necessary for the Airport to address the need for airport facilities' improvements and land development considerations for the next 20 years and beyond.

Figure 1-1
Master Planning Process



*Requires FAA approval.

1.1.1 Purpose and Objectives

The purpose of the Study was to provide long-term guidance for continued airport improvements necessary to satisfy projected aviation demand in a logical and financially feasible manner. Consistent with this purpose, objectives were established for the Master Plan after coordination with LFUCAB and can be found in the Appendices.

1.1.2 Public Involvement Program

Public involvement is an integral part of any significant airport planning study. It encourages information sharing and collaboration among the community and the airport stakeholders, who hold a collective interest in the Study's outcome. Stakeholders include the airport sponsor, airlines, tenants, users and travelers, local businesses and residents, resource agencies, elected and appointed public officials, and the public. With such a diverse stakeholder group, it is important to use a variety of forums such as committees, public involvement meetings, and public awareness campaigns to enhance the program's effectiveness.

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Community Leadership Advisory Committee

A Community Leadership Advisory Committee (CLAC) was established, consisting of 15 to 20 leaders within the community, and included economic development, travel, government, and business organizations. The committee met two times during the Study period to discuss significant initiatives and goals, gather feedback, and facilitate study-related discussions. The CLAC will be a key force in ensuring that major community organizations and/or business interests are incorporated into the Study.

Technical Advisory Committee

To support the Study, a Technical Advisory Committee (TAC) was established for participants to provide technical assistance and advice about the current and future operations and development at LEX. TAC participants ranged from technical level representatives of the Airport, air traffic control, airlines, airport tenants, general aviation (GA) users, FAA, Kentucky Transportation Cabinet (KYTC), local municipalities, regional planning agencies, economic development organizations, land use and transportation planning groups, business-related organizations, and other key agencies and interest groups. The TAC met two times during the duration of the Study.

Lexington-Fayette Urban County Airport Board (LFUCAB) Briefings

The Master Plan team provided the LFUCAB members with periodic Board Briefings and updates throughout the Master Plan process. By the conclusion of this Study, in collaboration with the LEX Management team, the Master Plan team provided eight briefings to discuss major components and findings and to gain their feedback.

Public Information Workshops

In addition to the TAC, CLAC and LFUCAB Briefings, public meetings are also an essential component of the program. These meetings provide opportunities for public comment on the Master Plan process while it is ongoing, and they are structured as interactive, open-house gatherings that include several workstations to provide information on various topics and to give the public an opportunity to ask questions and solicit feedback. Two Public Information Workshops were held to inform the public of the Study's progress and findings as it advanced. A link to the Study's website was also introduced to further keep the public involved and informed throughout the process. That website link enabled the public to conveniently access project-specific information in narrative and graphical format throughout the Study's duration. **Table 1-1** presents a summary of the various stakeholder involvement meetings.

Table 1-1
Stakeholder Involvement Meetings

Meeting	Date
Project Kickoff Meeting	03-17-2022
Board Briefing #1	06-22-2022
Leadership Committee Meeting #1	08-16-2022
Technical Advisory Committee Meeting #1	08-16-2022
Public Information Workshop #1	09-22-2022
Leadership Committee Meeting #2	04-11-2023
Technical Advisory Committee Meeting #2	04-11-2023
Board Briefing #2	06-22-2023
Public Information Workshop #2	08-06-2023
Board Retreat	08-30-2023
Board Briefing #3	03-27-2024

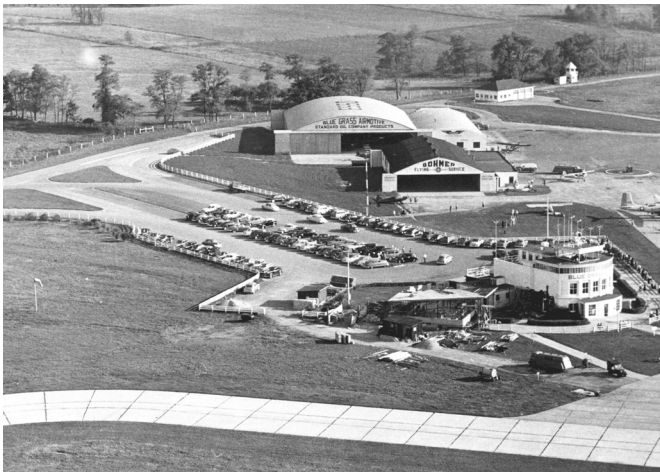
Source: CHA, 2024.

1.2 Airport Background

1.2.1 History

The City of Lexington and the Fayette County Government purchased 523 farmland acres off Versailles Road in 1940. The Airport's construction began in 1941, like many other airports in the era, to help with the World War II effort. The airfield eventually became known as 'Blue Grass Airport' or, as it was known until 1984, 'Blue Grass Field,' see **Figure 1-2**. An Army Air Corps B-25 bomber was the first aircraft to officially land at Blue Grass Field on July 11, 1942. In 1946, the first commercial aircraft operation took place by a Delta Air Lines 21-passenger Douglas DC-3.

Figure 1-2
Original Blue Grass Airport Photos



Source: Lexington Herald-Leader Archives (1940s-1960s).

Since the first commercial passenger flight in 1946, the Airport has undergone many expansions and renovations. In 1976, the Airport opened a new terminal, which remains as the main passenger facility today, though renovations and expansions have been made since then. Over the last decade, the Airport has invested \$100 million in enhancements to its airfield and multiple support facilities.

1.2.2 Location and Service Area

The Airport is less than six miles west of downtown Lexington and less than a mile south of Route 60. **Table 1-2** presents airports that are in close proximity to and/or serve similar functions to LEX. Their roles as classified by the National Plan for Integrated Airport Systems (NPIAS), their distance in nautical miles, and their driving time to/from LEX are included. The FAA defines an airport's service area as a 30-minute drive time for GA airports and a 60-minute drive time for commercial passenger service airports like LEX. Drive time is not the only factor influencing a passenger's decision to go to a particular airport. There are other factors such as prices of air travel, destinations provided, throughput capacity (level of activity or congestion in an airport's operations), travel services and amenities offered, the condition of different facilities, etc., which may affect the distance a passenger is willing to travel to use one airport over another.

Table 1-2
Nearby and Similar Airports

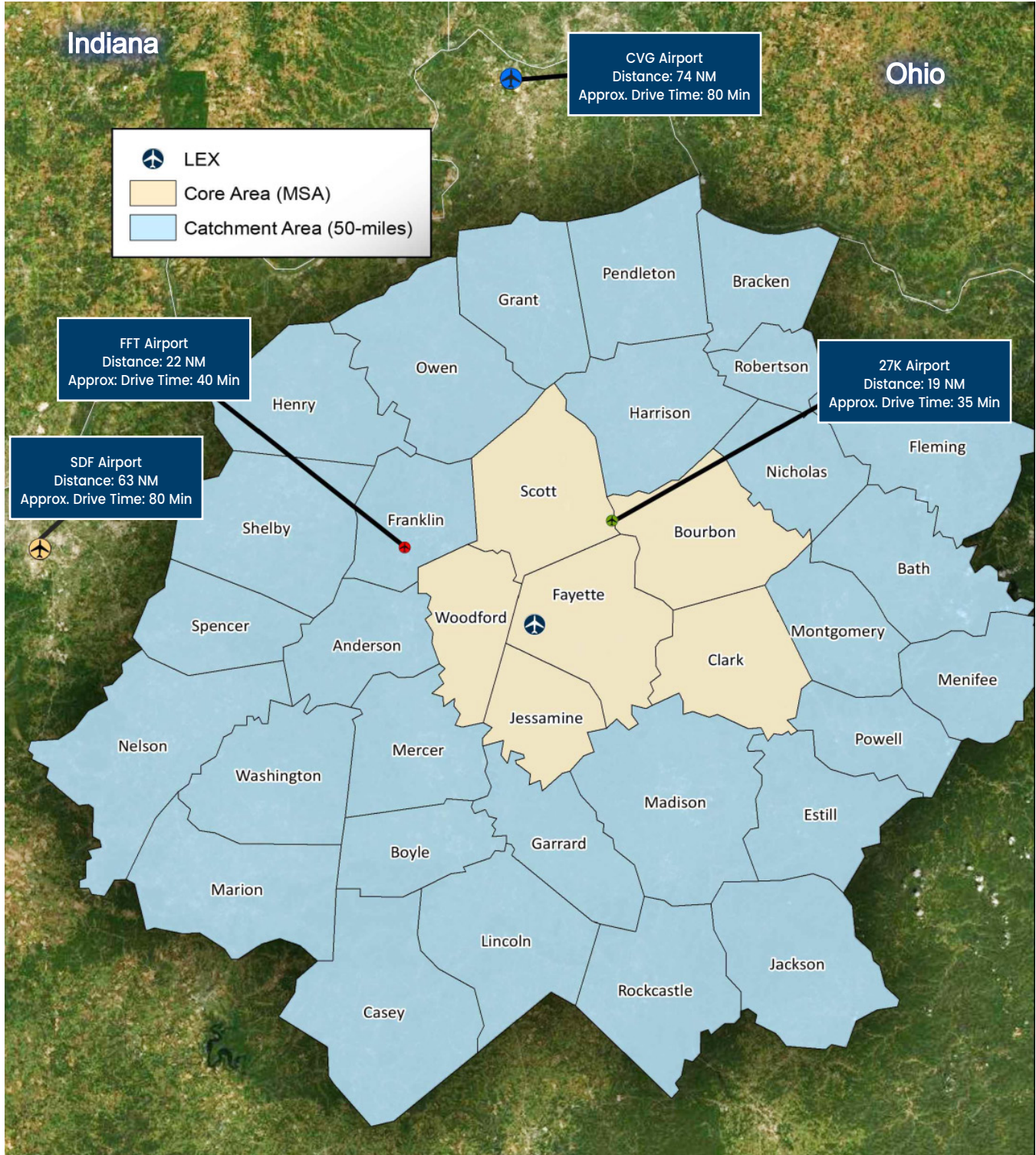
Blue Grass Airport (LEX)	NPIAS Role: Primary Small Hub		
Airport	NPIAS Role	Approx. Nautical Miles (NM) From LEX	Approx. Driving Time From LEX
Georgetown-Scott County Regional (27K)	Regional GA	13 NM	28 minutes
Capital City (FFT)	Regional GA	17 NM	33 minutes
Louisville International Airport (SDF)	Primary Small Hub	54 NM	79 minutes
Cincinnati/Northern Kentucky International Airport (CVG)	Primary Medium Hub	60 NM	98 minutes
Owensboro-Daviess County Regional Airport (OWB)	Primary Nonhub	122 NM	154 minutes

Source: FAA 2021-2025 NPIAS, CHA, 2022.

The Airport is located within the Lexington-Fayette, Kentucky Metropolitan Statistical Area (MSA), comprising Fayette County, Bourbon County, Clark County, Jessamine County, Scott County, and Woodford County. According to data provided by Woods and Poole Economics, Inc., the MSA had a population of approximately 525,156 in 2021. The MSA includes the cities of Lexington, Georgetown, Nicholasville, Winchester, and Paris.

As the third busiest airport in Kentucky (after Cincinnati/Northern Kentucky International Airport and Louisville International Airport), the service area (or 'catchment area') extends beyond the Lexington-Fayette MSA into as far north as Pendleton County and as far south as Casey County, as well as much more of the remaining Commonwealth of Kentucky. Based on county data provided by Woods and Poole Economics, Inc., the Airport's catchment area had a population of approximately 1,175,759 in 2021. Shown in **Figure 1-3** is the Airport's catchment area, driving time, and distances to the other nearby large airports in the area.

Figure 1-3
Blue Grass Airport 'Catchment Area'




Source: CHA, 2022.

1.2.3 Airport Role

In addition to connecting the MSA to the global transportation network, the Airport plays a significant role in the United States air travel system. The Airport is classified as a 'Commercial Service, Primary – Small Hub' airport according to the FAA's NPIAS, which means that it receives between 0.05 and 0.25 percent of the annual United States commercial passenger enplanements. The NPIAS identifies existing and proposed airports that are important to national air transportation and provides a future estimate of the type and cost of Airport Improvement Program (AIP) funding each is eligible to receive to meet the development needs of civil aviation. Airports included in the NPIAS are considered significant to national air transportation and can receive grants under the FAA's AIP.

The NPIAS further categorizes the nation's airports based on the types of service provided and the number of passengers enplaned. **Table 1-3** outlines the specifics of each NPIAS category and provides examples of each type in the region.

Table 1-3
NPIAS Airport Classifications

Airport Classifications		Hub Type: Percent of US Annual Passenger Enplanements	Example Airport
Commercial Service: <i>Publicly-owned airports that have at least 2,500 passenger boardings each calendar year and receive scheduled passenger service</i>	Primary: <i>Have more than 10,000 passenger boardings each year</i>	Large Hub: <i>1% or more</i>	Chicago O'Hare International (ORD)
		Medium Hub: <i>At least .25%, but less than 1%</i>	Cincinnati/Northern Kentucky International (CVG)
		Small Hub: <i>At least .05%, but less than .25%</i>	 Blue Grass Airport LEXINGTON, KENTUCKY
		Nonhub Primary: <i>More than 10,000, but less than .05%</i>	Owensboro-Daviess County Regional (OWB)
	Nonprimary	Nonprimary Commercial Service: <i>At least 2,500, but no more than 10,000</i>	Topeka Regional (FOE)
Nonprimary <i>(Except Commercial Service)</i>		Reliever	Capital City (FFT)
		General Aviation	Bowman Field (LOU)

Source: FAA 2021-2025 NPIAS, CHA, 2022.

1.3 Airport Governance

The Airport is owned and operated by the LFUCAB, which is responsible for implementing policies and carrying out the Airport's daily functions. The Board is comprised of 10 members appointed by the mayor of Lexington and confirmed by the Urban County Council.

1.4 Major Airport Tenants

The Airport hosts a variety of aviation and non-aviation tenants that provide services to the traveling public and aviation community. Major tenants include airlines, a fixed-base operator (FBO), corporate aviation businesses, rental car companies, and concessionaires, each of which are detailed in the following sections.

1.4.1 Passenger Airlines

Prior to the onset of COVID-19, the Airport experienced a record-high passenger enplanement count of 607,089 in 2019. The domestic airline carriers that serve the Airport include Allegiant Air, American Airlines, Avelo Airlines (scheduled to begin service in October 2022), Delta Air Lines, and United Airlines.

At the commencement of the Study, the Airport provided non-stop, scheduled or charter air service to nearly 40 destination airports via the previously mentioned domestic airline carriers, as well as via six charter air service operators. **Table 1-4** presents those destinations, carriers, and nautical mile (NM) distances from LEX, and **Figure 1-4** illustrates the current scheduled air service providers and their destinations.

Table 1-4
2022 Air Service Destinations/Airports Provided from LEX

No.	Destination	Airport	I.D.	Air Carrier(s) & Air Operators (Charters)	Dist. (NM) from LEX
1	Morristown, TN	Morristown Regional Airport	MOR	Zorex*	126
2	Evansville, IN	Evansville Regional Airport	EVV	Zorex*	139
3	Columbus, OH	Columbus John Glenn International Airport	CMH	Delta Air Lines	143
4	Nashville, TN	Nashville International Airport	BNA	NetJets*	152
5	Atlanta, GA	Atlanta Cobb County Airport	RYY	Zorex*	242
6	Charlotte, NC	Charlotte Douglas International Airport	CLT	American Airlines	254
7	Detroit, MI	Detroit Metropolitan Wayne County Airport	DTW	Delta Air Lines	258
8	Atlanta, GA	Atlanta Hartsfield-Jackson International	ATL	Delta Air Lines	265
9	Chicago, IL	Chicago Midway International Airport	MDW	NetJets*	268
10	Chicago, IL	Chicago O'Hare International Airport	ORD	American Airlines & United Airlines	281
11	Chicago, IL	Chicago Executive Airport	PWK	Loon Air*	288
12	Washington, DC	Washington Ronald Reagan National	DCA	Delta Air Lines	360
13	Myrtle Beach, SC	Myrtle Beach International Airport	MYR	Allegiant Air	380
14	Little Rock, AR	Little Rock Clinton National Airport	LIT	Zorex*	418
15	Philadelphia, PA	Philadelphia International Airport	PHL	American Airlines	451
16	Valparaiso/Destin-Fort Walton Beach, FL	Destin-Fort Walton Beach Airport	VPS	Allegiant Air	463
17	Teterboro, NJ	Teterboro Airport	TEB	Ibex Airlines*	517
18	Ocala, FL	Ocala International Airport	OCF	NetJets* & Zorex*	546
19	Alexandria, LA	Alexandria International Airport	AEX	Zorex*	562
20	New Haven, CT	Tweed/New Haven Airport	HVN	Zorex*	576
21	Sanford, FL	Orlando Sanford International Airport	SFB	Allegiant Air	582
22	Lafayette, LA	Lafayette Regional Airport	LFT	Zorex*	597
23	Orlando, FL	Orlando International Airport	MCO	Avelo Airlines	600

No.	Destination	Airport	I.D.	Air Carrier(s) & Air Operators (Charters)	Dist. (NM) from LEX
24	Wichita, KS	Wichita Dwight D. Eisenhower National Airport	ICT	Zorex*	609
25	Tampa, FL	Tampa International Airport	TPA	Avelo Airlines	613
26	St. Petersburg-Clearwater, FL	St. Petersburg Clearwater International Airport	PIE	Allegiant Air	616
27	Oklahoma City, OK	Oklahoma City Wiley Post Airport	PWA	NetJets*	645
28	Dallas, TX	Dallas Love Field Airport	DAL	NetJets* & Zorex*	675
29	Punta Gorda, FL	Punta Gorda Airport	PGD	Allegiant Air	681
30	Dallas-Fort Worth, TX	Dallas Fort Worth International Airport	DFW	American Airlines	682
31	Fort Myers, FL	Southwest Florida International Airport	RSW	Avelo Airlines	705
32	Conroe, TX	Conroe Lone Star Executive Airport	CXO	Zorex*	708
33	Boca Raton, FL	Boca Raton Airport	BCT	New England Airlines*	737
34	Fort Lauderdale, FL	Fort Lauderdale Executive Airport	FXE	Zorex*	746
35	Fort Lauderdale, FL	Fort Lauderdale-Hollywood International Airport	FLL	Allegiant Air	754
36	Quebec, Canada	Quebec City International Airport	YQB	Zorex*	786
37	Rockland, ME	Knox County Regional Airport	RKD	NetJets*	788
38	Amarillo, TX	Amarillo Rick Husband International Airport	AMA	Zorex*	841
39	San Antonio, TX	San Antonio Stinson Municipal Airport	SSF	Zorex*	867

*Charter/Commuter/Air Taxi Carrier; not on the US Certificated Air Carriers list.

Note: Destinations that are bold indicate non-stop scheduled service provided from LEX.

Source: www.bluegrassairport.com/airline-destinations/, www.flightradar24.com/data/airports/lex/routes, CHA, 2022.

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**Figure 1-4
Non-Stop Service Destinations at LEX (2024)**



Source: Blue Grass Airport.

1.4.2 Air Cargo Operations

While the Airport does not have scheduled cargo services, cargo operators have operated there, with annual operations ranging between 127 and 456 over the last ten years (2011 through 2021), or an average of 254 operations annually. The Airport does have an air freight facility located east of the terminal that can support air cargo-related activity. Currently, the facility is being used for non-cargo-related activities, including those related to US Customs and Border Protection.

Table 1-5 provides a list of air cargo operators and their number of operations conducted at the Airport in 2021.

Table 1-5
Air Cargo Operations (2021)

Cargo Carrier	Cargo Operations
ABS JETS A.S.	1
Acropolis Aviation Ltd.	1
Ameristar Air Cargo	9
Caribbean Sun Airlines, Inc./World Atlantic Airlines	1
CFM Inc./Contour Airlines/One Jet Shuttle	7
Chartright Air Inc.	7
Delta Air Lines Inc.	12
Global Crossing Airlines, Inc.	1
Gulf And Caribbean Cargo	1
Jet Aviation Flight Services, Inc.	1
Kalitta Charters II	33
Piedmont Airlines	3
SkyWest Airlines Inc.	2
Sun Country Airlines d/b/a MN Airlines	13
Swift Air, LLC/Eastern Air Lines/Eastern	10
USA Jet Airlines Inc.	20
Western Air Charter, Inc./Jet Edge	5
Grand Total	127

Source: Bureau of Transportation Statistics (BTS) T-100 data, CHA, 2022.

1.4.3 Fixed-Base Operator (FBO)

Signature Flight Support is the only FBO at the Airport that provides customers with an array of aviation support services with a modern private terminal. Signature Flight Support began operating at the Airport in the summer of 2022 after acquiring TAC Air. Its 12,000 square-foot terminal, shown in **Figure 1-5**, was constructed in 2010 and offers many amenities including, but not limited to:



- ✈️ AVGas and Jet-A fuel service
- ✈️ Quick Turn fuel service
- ✈️ De-icing
- ✈️ Pilot briefing area and weather information center
- ✈️ Hangar space
- ✈️ Corporate aircraft catering
- ✈️ Hertz rental car service
- ✈️ Limo services
- ✈️ On-site US Customs office
- ✈️ Complimentary ramp wireless service

**Figure 1-5
Signature Flight Support**



Source: Blue Grass Airport.

1.4.4 Corporate Aviation

The Airport's corporate aviation and business activity includes services like charter operations, flight training schools, aircraft maintenance, US Customs cargo inspection, and aircraft storage. The Airport currently has multiple supporting facilities and business fronts to accommodate general and corporate aviation activity needs. Those providers and a summary of their available services are as follows:

- | | |
|----------------------------------|---|
| ✈ AirMart, Inc. | ✈ Officer Don's Flight Training Academy |
| ✈ ETL Aviation | ✈ Signature Flight Support |
| ✈ H.E. Sutton Forwarding Company | ✈ Thoroughbred Aviation Maintenance |
| ✈ Lexington Flying Club | ✈ WestLEX General Aviation Services |
| ✈ NextGen Aviation | ✈ Wings Flight Training |

These supporting facilities and operations complement the Airport's continuous daily activities and needs. Six of these businesses provide flight training, including helicopter certification opportunities. H.E. Sutton Forwarding Company is a logistics and freight business specializing in accommodating shipments and transportation of services related to equine interests. Following Signature Flight Services as the primary FBO, Thoroughbred Aviation Maintenance offers full-service avionics and maintenance on most aircraft that operate at the Airport. Hangar storage is accommodated by Signature Flight Support and WestLEX General Aviation Services. WestLEX also provides fueling services, aircraft warming, and aircraft towing services. WestLEX general aviation hangars are depicted in **Figure 1-6**.

Figure 1-6
WestLEX Corporate Hangars



Source: Blue Grass Airport.

1.4.5 Military

The Kentucky National Guard (KyNG) Armory is located outside the airfield and south of the Airport's terminal. The KyNG does not currently have airside facilities or based aircraft at the Airport. However, the Airport had 1,789 itinerant and 74 local military aircraft operations in 2021.

1.4.6 Rental Car Companies

Seven rental car companies currently provide services at the Airport. Each on-site company has a separate counter on the ground level of the arrivals terminal, as well as dedicated ready parking and return parking in the parking garage, with Quick Turn Around (QTA) services and vehicle maintenance located in a consolidated area south of the terminal and parking areas along Rental Car Drive.

The rental car companies operating at the Airport include:



1.4.7 Concessionaires

Existing concessions throughout the terminal facility provide various goods and services for passengers, employees, meeters, and greeters. Concessionaires include food and beverage services, as well as cafés and magazine, book, and gift shops.

The Airport's guests are provided several amenities within the terminal, including the following:

- ✈ Restaurants, cafes, and bars
- ✈ Stores, gift shops, and local souvenir shops
- ✈ Automated Teller Machines (ATM)
- ✈ Mother's Nursing Room
- ✈ Pet relief area

Being in the heart of bourbon country, the Airport offers shops and restaurants that reflect the culture and atmosphere that bring many to Kentucky. Some of the shopping and dining experiences include The Bourbon Library Restaurant & Bar, Cork & Barrel, Dunkin', and Sir Veza's Kitchen & Kantina. Additionally, there are also concessionary venues that provide general items and souvenirs. Two of these storefronts include Blue Grass MarketPlace and LEX News & Gifts.

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