

An important factor in facility planning is estimating the demand that can be reasonably expected to occur during the useful life of an airport's key components (e.g., runways, taxiways, terminal facilities, etc.). In airport master planning, this involves projecting potential aviation activity for at least a 20-year timeframe. Aviation demand forecasting for Gainesville Municipal Airport (GLE) will primarily consider based aircraft, aircraft operations, peak activity periods, and critical aircraft.

The Texas Department of Transportation (TxDOT) Aviation Division has oversight responsibility to review and approve aviation forecasts developed in conjunction with airport planning studies. TxDOT will review individual airport forecasts with the objective of comparing them to the FAA *Terminal Area Forecast* (TAF) for GLE.

When reviewing a sponsor's forecast (from the master plan), TxDOT must ensure that the forecast is based on reasonable planning assumptions, uses current data, and is developed using appropriate forecast methods. According to the Federal Aviation Administration (FAA), forecasts should be:

- Realistic;
- Based on the latest available data;
- Reflective of current conditions at the airport (as a baseline);
- Supported by information in the study; and
- Able to provide adequate justification for airport planning and development.

The forecast process for an airport master plan consists of a series of basic steps that vary in complexity, depending on the issues to be addressed and the level of effort required. The steps include a review of previous forecasts, determination of data needs, identification of data sources, collection of data, selection of forecast methods, preparation of the forecasts, and documentation and evaluation of the results. FAA Advisory Circular (AC) 150/5070-6B, Airport Master Plans, outlines the following seven standard steps involved in the forecast process.



- 1. **Identify Aviation Activity Measures**: The level and type of aviation activities likely to impact facility needs. For general aviation, this typically includes based aircraft and operations.
- 2. **Review Previous Airport Forecasts**: May include the FAA TAF, state or regional system plans, and previous master plans.
- 3. **Gather Data**: Determine what data are required to prepare the forecasts, identify data sources, and collect historical and forecast data.
- 4. Select Forecast Methods: Several appropriate methodologies and techniques are available, including regression analysis, trend analysis, market share or ratio analysis, exponential smoothing, econometric modeling, comparison with other airports, survey techniques, cohort analysis, choice and distribution models, range projections, and professional judgment.
- 5. **Apply Forecast Methods and Evaluate Results**: Prepare the actual forecasts and evaluate them for reasonableness.
- 6. **Summarize and Document Results**: Provide supporting text and tables, as necessary.
- 7. **Compare Forecast Results with the FAA's TAF**: Based aircraft and total operations are considered consistent with the TAF if they meet one of the following criteria:
 - Forecasts differ by less than 10 percent in the five-year forecast period and less than 15 percent in the 10-year forecast period;
 - Forecasts do not affect the timing or scale of an airport project; or
 - Forecasts do not affect the role of the airport as defined in the current version of FAA Order 5090.5, Formulation of the National Plan of Integrated Airport Systems and Airports Capital Improvement Program.

Aviation activity can be affected by many influences on the local, regional, and national levels, making it virtually impossible to predict year-to-year fluctuations of activity over 20 years with any certainty; therefore, it is important to remember that forecasts are to serve only as guidelines, and planning must remain flexible enough to respond to a range of unforeseen developments.

The following forecast analysis for the airport was produced following these basic guidelines. Existing forecasts are examined and compared against current and historical activity. The historical aviation activity is then examined along with other factors and trends that can affect demand. The intent is to provide an updated set of aviation demand projections for the airport that will permit airport management to make planning adjustments as necessary to maintain a viable, efficient, and cost-effective facility.

The forecasts for this master plan will utilize a base year of 2025 with a long-range forecast out to 2045.



NATIONAL AVIATION TRENDS

Each year, the FAA updates and publishes a national aviation forecast. Included in this publication are forecasts for large air carriers, regional/commuter air carriers, general aviation, and FAA workload measures. The forecasts are prepared to meet the budget and planning needs of the FAA and provide information that can be used by state and local authorities, the aviation industry, and the public. At the time this chapter was prepared, the most recent edition was FAA Aerospace Forecast – Fiscal Years (FY) 2025-2045. The FAA primarily uses the economic performance of the United States as an indicator of future aviation industry growth. Similar economic analyses are applied to the outlook for aviation growth in international markets. The following discussion is a brief synopsis of highlights from the FAA's national general aviation forecasts. A summary of the FAA's forecasts is also shown on **Exhibit 2A**.

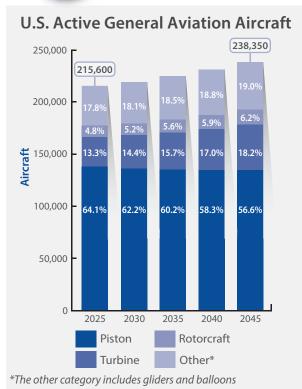
NATIONAL GENERAL AVIATION TRENDS

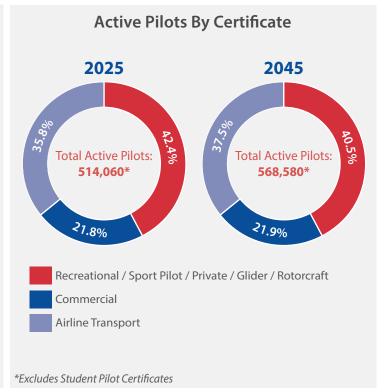
The long-term outlook for general aviation is promising, as growth at the high end of the segment (more sophisticated aircraft such as business jets, turboprops, and helicopters) offsets continuing retirements at the traditional low end (piston-powered aircraft). The active general aviation fleet is forecast to remain relatively stable between 2025 and 2045, increasing by just 0.5 percent. While steady growth in both gross domestic product (GDP) and corporate profits results in continued growth of the turbine and rotorcraft fleets, the largest segment of the fleet – fixed-wing piston aircraft – continues to shrink over the forecast period.

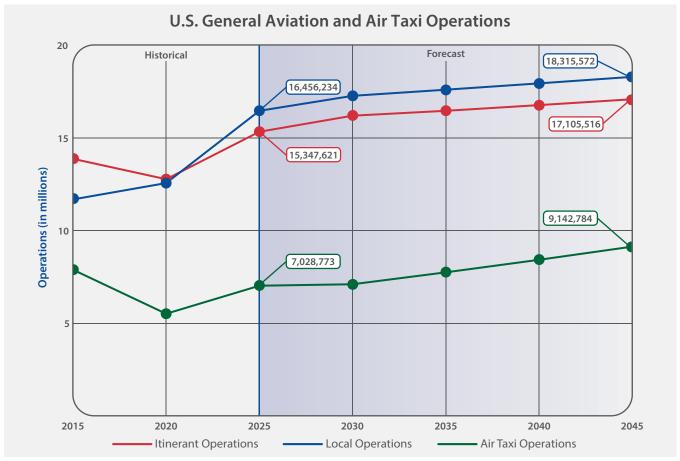
The FAA forecasts the fleet mix and hours flown for single-engine piston (SEP) aircraft; multi-engine piston (MEP) aircraft; turboprops; business jets; piston and turbine helicopters; and light sport, experimental, and other aircraft (e.g., gliders and balloons). These forecasts only consider active aircraft, not total aircraft. An active aircraft is one that is flown at least one hour during the year. From 2010 through 2013, the FAA undertook an effort to have all aircraft owners re-register their aircraft. This effort resulted in a 10.5 percent decrease in the number of active general aviation aircraft, mostly in the piston category. **Table 2A** shows the primary general aviation demand indicators, as forecast by the FAA.

Demand Indicator	2025	2045	CAGR			
General Aviation Fleet						
Total Fixed-Wing Piston	138,270	134,850	-0.1%			
Total Fixed-Wing Turbine	28,605	43,405	2.1%			
Total Helicopters	10,420	14,715	1.7%			
Total Other (experimental, light sport, etc.)	38,305	45,380	0.9%			
Total GA Fleet	215,600	238,350	0.5%			
General Aviation Operations						
Local	16,456,234	18,315,572	0.5%			
Itinerant	15,347,621	17,105,516	0.5%			
Total General Aviation Operations	31,803,855	35,421,088	0.5%			
CAGR = compound annual growth rate (2025-2045)						
Source: FAA Aerospace Forecast – FY 2025-2045						









Source: FAA Aerospace Forecasts FY2025-2045



FAA forecasts of total operations are based on activity at control towers across the United States and are categorized as air carrier, air taxi/commuter, general aviation, and military. While the fleet size remains relatively level, the number of general aviation operations at towered airports is projected to increase from 31.8 million in 2025 to 35.4 million in 2045, with an average increase of 0.8 percent per year as growth in turbine, rotorcraft, and experimental hours offsets a decline in fixed-wing piston hours. This includes annual growth rates of 0.5 percent for both local and itinerant general aviation operations.

BUSINESS JET OPERATIONAL TRENDS

General aviation airports are often hubs of diverse activity, although they frequently experience a predominance of piston-powered aircraft. These aircraft, including single-engine and light twin-engine aircraft, comprise most of the based aircraft and operations at general aviation airports. Their routine activities include everything from local flights and flight training to recreational flying and short-haul travel. Piston-powered aircraft are generally more numerous and engage in more frequent, shorter operations, which contributes to a busy and vibrant atmosphere at general aviation airports.

In contrast, business jets are less numerous and conduct fewer operations overall but are physically demanding in a different way. Business jets require more space for their operations due to their larger size and need for longer runways. Their arrivals and departures can place greater demands on airport infrastructure, such as requiring more intensive ground handling, fueling, and maintenance services. The operational impacts of business jets require increased coordination with ground support services and infrastructure support (e.g., larger hangars, apron/taxilanes, and fuel loads), making their presence felt more prominently even if they operate less frequently than their piston-powered counterparts. At general aviation airports with higher amounts of jet traffic, such as GLE, business jets drive the critical aircraft discussion. For this reason, additional focus is placed on national business jet trends to help understand growth patterns and how they might impact future operations at GLE.

Since the early 2000s, business jet operational trends have significantly evolved, driven by advancements in technology, changing economic conditions, and shifts in travel preferences. Progress in aircraft technology has led to the development of business jets with greater range and performance capabilities. Newer models can cover longer distances non-stop, reducing the need for intermediate stops. Ultralong-range business jets, such as the Gulfstream G700/G800, Bombardier Global 7500, and Boeing Business Jet (BBJ), have ranges of over 7,000 nautical miles (nm) and are experiencing growing demand from corporations and high-net-worth individuals who seek more flexibility and range (ability to travel longer distances). Fuel efficiency improvements and operating cost reductions are focal points; modern business jets are designed with more efficient engines and aerodynamic enhancements that lower fuel consumption and operational expenses. Some of the most fuel-efficient business jet models include the Embraer Phenom 300, Pilatus PC-24, Cessna Citation XLS, and Learjet 75.

The FAA's *Traffic Flow Management System Counts* (TFMSC) database captures an operation when a pilot files a flight plan and/or when a flight is detected by the National Airspace System, usually via radar. As shown in **Table 2B**, the top 15 business jets with the most operations in 2024 (the last full calendar year of available data) are led by two of the most efficient business jets, the Embraer Phenom 300 and the Cessna Citation Excel/XLS. Of the top 15 business jets, eight have experienced declining growth rates over the past five years, reflecting a shift in operations to newer models.



TABLE 2B | 2024 Top 15 Busiest Business Jets by Operations

Aircraft Type		OPERATIONS						
All Craft Type	2019	2020	2021	2022	2023	2024	CAGR	
E55P – Embraer Phenom 300	247,960	213,923	335,646	354,249	364,496	399,592	10.01%	
C56X – Cessna Excel/XLS	340,406	242,977	357,612	380,367	348,207	341,568	0.07%	
C68A – Cessna Citation Latitude	150,649	133,150	229,559	252,954	280,931	335,968	17.40%	
CL35 – Bombardier Challenger 300	143,688	140,716	217,882	235,031	247,705	270,003	13.45%	
C25B – Cessna Citation CJ3	146,270	125,983	179,269	193,852	205,427	221,978	8.70%	
CL60 – Bombardier Challenger 600/601/604	185,781	131,174	193,995	202,902	191,212	192,776	0.74%	
H25B – BAe HS 125/700-800/Hawker 800	205,703	158,778	240,801	229,572	199,976	188,903	-1.69%	
C560 – Cessna Citation V/Ultra/Encore	208,845	170,545	228,409	219,329	197,471	183,614	-2.54%	
GLF4 – Gulfstream IV/G400	177,559	133,027	202,549	196,146	175,091	167,300	-1.18%	
CL30 – Bombardier (Canadair) Challenger 300	200,584	127,629	172,303	169,523	162,654	162,026	-4.18%	
BE40 – Raytheon/Beech Beechjet 400/T-1	239,224	209,219	244,373	234,904	200,363	157,608	-8.01%	
C525 – Cessna CitationJet/CJ1	156,999	124,413	166,026	166,923	152,957	142,491	-1.92%	
GLF5 – Gulfstream V/G500	133,554	89,818	127,765	150,344	136,684	135,606	0.31%	
F2TH – Dassault Falcon 2000	141,059	90,177	131,785	149,210	142,465	132,020	-1.32%	
C680 – Cessna Citation Sovereign	148,348	101,731	151,397	158,480	137,461	125,118	-3.35%	
CAGR = compound annual growth rate								

Source: FAA TFMSC

Table 2C lists the business jets with the fastest operational growth rates over the past five years. These aircraft represent newer models, such as the Cessna Citation Longitude and Latitude (newest Cessna models), the Gulfstream G500 and Bombardier Global 7500 (ultra-long-range aircraft), and the Cirrus Vision SF50 (Vision Jet), HondaJet, and Cessna Citation Bravo (light business jets).

TABLE 2C | Top 15 Fastest Operational Growth Business Jets

Aircraft Tuno			OPERA	TIONS			2019–2024
Aircraft Type	2019	2020	2021	2022	2023	2024	CAGR
C700 – Cessna Citation Longitude	2,204	8,484	29,044	51,928	69,960	99,626	114.3%
GL7T – Bombardier Global 7500	1,356	3,351	8,808	15,338	20,692	29,921	85.7%
GA5C – G-7 Gulfstream G500	5,080	6,464	13,900	17,868	26,823	33,460	45.8%
C55B – Cessna Citation Bravo	7,218	11,275	21,828	27,608	33,537	31,035	33.9%
SF50 – Cirrus Vision SF50	25,240	36,700	62,547	82,853	98,641	94,984	30.4%
E545 – Embraer EMB-545 Legacy 450	39,244	39,788	62,344	71,203	82,854	92,470	18.7%
C68A – Cessna Citation Latitude	150,649	133,150	229,559	252,954	280,931	335,968	17.4%
HDJT – Honda HA-420 HondaJet	24,899	27,295	48,402	67,416	61,348	54,212	16.8%
C25M – Cessna Citation M2	25,696	25,778	38,670	49,915	52,383	53,121	15.6%
E550 – Embraer Legacy 500	26,790	20,039	30,973	36,636	42,616	53,739	14.9%
FA8X – Dassault Falcon 8X	3,572	2,503	4,146	7,052	7,028	6,880	14.0%
CL35 – Bombardier Challenger 300	143,688	140,716	217,882	235,031	247,705	270,003	13.4%
E55P – Embraer Phenom 300	247,960	213,923	335,646	354,249	364,496	399,592	10.0%
GLF6 – Gulfstream	52,603	37,724	55,534	73,457	79,805	84,261	9.9%
C25B – Cessna Citation CJ3	146,270	125,983	179,269	193,852	205,427	221,978	8.7%
CAGR = compound annual growth rate							

Source: FAA TFMSC

Table 2D provides a five-year breakdown of business jet operations by aircraft reference code (ARC). These data show that the B-II and C-II categories account for over 68 percent of total business jet operations in 2024. The highest growth categories are the A-I (small/efficient jet) and B-III (ultra long-range



jet) categories. The A-I category has grown at a compound annual growth rate (CAGR) of 30.35 percent and is represented by a single aircraft: the Cirrus Vision SF50. The B-III category has a CAGR of 12.87 percent and is primarily comprised of the Dassault Falcon F7X and 8X and the Bombardier Global 7500.

ABC / Evample Aircraft	OPERATIONS CONTRACTOR OF THE PROPERTY OF THE P							
ARC / Example Aircraft	2019	2020	2021	2022	2023	2024	CAGR	
A-I / Cirrus Vision SF50	25,240	36,700	62,547	82,853	98,641	94,984	30.35%	
B-I / Beechjet 400	751,782	619,231	788,859	805,071	719,090	647,915	-2.93%	
C-I / Learjet 45	368,053	292,293	397,439	385,763	335,363	311,994	-3.25%	
B-II / Phenom 300	1,660,622	1,310,085	1,948,103	2,046,043	2,004,440	2,078,328	4.59%	
C-II / Challenger 300	1,429,196	1,054,897	1,560,040	1,634,500	1,554,549	1,553,837	1.69%	
D-II / Gulfstream G400	177,559	133,027	202,549	196,146	175,091	167,300	-1.18%	
B-III / Falcon F7X	39,309	28,092	42,908	59,531	64,428	72,020	12.87%	
C-III / Global Express	178,013	128,218	195,516	234,013	249,617	258,536	7.75%	
D-III / Gulfstream G500	133,554	89,818	127,765	150,344	136,684	135,606	0.31%	

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CAGR = compound annual growth rate

Source: FAA TFMSC

RISKS TO THE FORECAST

While the FAA is confident that its forecasts for aviation demand and activity can be reached, these forecasts are dependent on several factors, including the strength of the global economy, security (including the threat of international terrorism), and oil prices. Higher oil prices could lead to further shifts in consumer spending away from aviation, dampening a recovery in air transport demand. The COVID-19 pandemic introduced a new risk, and although the industry has rebounded, the threat of future global health emergencies and potential economic fallout remains. The anticipated widespread deployment of unmanned aircraft systems (UAS) and advanced air mobility (AAM) vehicles into the national airspace system will introduce new challenges, including the potential replacement of traditional aircraft.

AIRPORT SERVICE AREA

The initial step in determining the aviation demand for an airport is to define its generalized service area for various segments of aviation. The service area is primarily defined by evaluating the locations of competing airports and their capabilities, services, and relative attraction and convenience. In determining the aviation demand for an airport, it is necessary to identify the role of the airport, as well as the specific areas of aviation demand the airport is intended to serve. GLE is classified in the *National Plan of Integrated Airport Systems* (NPIAS) as a general aviation airport with a regional designation, meaning that its main purpose is to serve general aviation operators, including moderate levels of jet and multiengine propeller aircraft, within the broader regional area.

The service area for an airport is a geographic region from which an airport can be expected to attract the largest share of its activity. The definition of the service area can then be used to identify other



factors, such as socioeconomic and demographic trends, that influence aviation demand at an airport. Aviation demand will also be impacted by the proximity and strength of aviation services offered at competing airports, as well as the local and regional surface transportation network.

As in any business enterprise, the more attractive the facility is in terms of services and capabilities, the more competitive it will be in the market. If an airport's attractiveness increases in relation to nearby airports, so will the size of its service area. If facilities and services are adequate and/or competitive, some level of aviation activity might be attracted to an airport from more distant locales.

As a rule, a general aviation airport's service area can extend for approximately 30 nautical miles (nm). There are four public-use airports with at least one paved runway within a 30-nm radius of GLE, as previously identified on Exhibit 1H. They are:

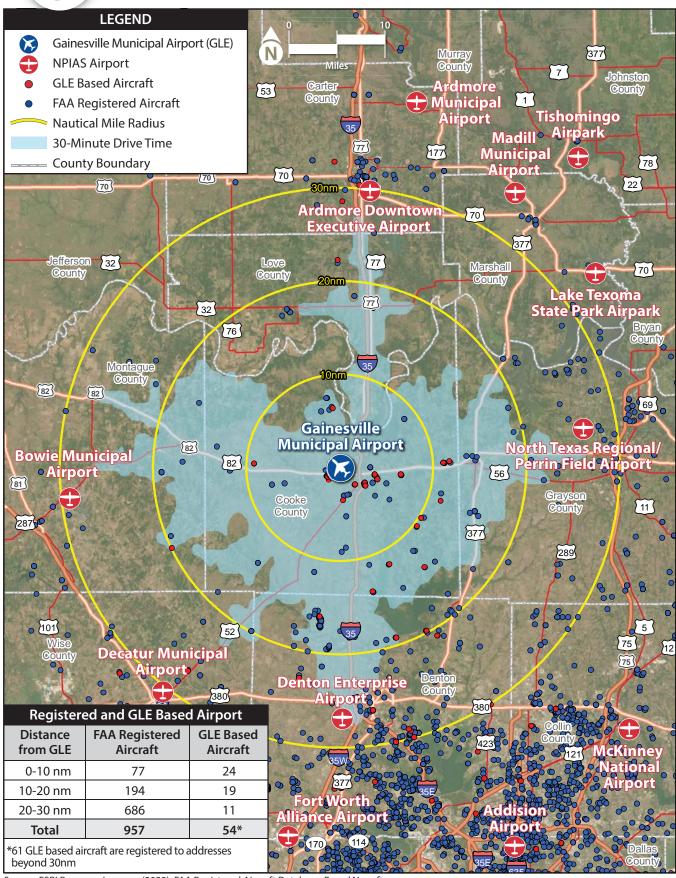
- North Texas Regional Airport (GYI)
- Denton Enterprise Airport (DTO)
- Bowie Municipal Airport (0F2)
- Ardmore Downtown Executive Airport (1F0)

Of these airports, only GYI and DTO offer a longer runway length, at 9,000 feet and 7,002 feet, respectively. 1F0 offers just over 5,000 feet of available runway length, while 0F2 provides 3,603 feet of runway. All have published instrument approaches, with GYI and DTO providing precision approach capability with ½-mile visibility minimums. By comparison, GLE's longest runway is 6,000 feet, and the lowest minimums available are ¾-mile.

When evaluating the GA service area for forecasting purposes, two primary demand segments must be considered: based aircraft and itinerant operations. An airport's ability to attract based aircraft is an important factor when defining the service area, as proximity is a consideration for most aircraft owners. Aircraft owners typically choose to base at airports that are close to their homes or businesses. Exhibit 2B depicts a radius of 10, 20, and 30 nm from GLE, extending beyond Cooke County and into several neighboring counties. The 30-minute drive time from GLE also shows that the reach from the airport extends into all adjacent counties - Montague, Wise, Denton, and Grayson Counties in Texas, and Love County in Oklahoma. Registered aircraft in the region and aircraft based at GLE are also shown on the exhibit, with smaller clusters of registered aircraft located around GLE and GYI, and many more located farther south on the northern edge of the Dallas-Fort Worth Metroplex. Registered aircraft within the service area can provide a correlation to based aircraft levels; however, it is not uncommon for some aircraft to be registered in a particular county but be based at an airport outside the county, or vice versa. In total, there are 957 registered aircraft within a 30-nm radius of GLE (which extends into 10 regional counties), with the majority of those (72 percent) within 20-30 nm of GLE. The FAA has validated 115 based aircraft at GLE, of which 47 percent are attributed to addresses within 30 nm of the airport. This map indicates that GLE's primary based aircraft service area primarily consists of Cooke County but also includes Montague, Grayson, Wise, and Denton Counties as secondary service areas, based on their proximity to GLE and convenient highway access.

The second demand segment to consider is itinerant operations. These operations are performed by aircraft that arrive from outside the airport area and land at or depart from GLE to fly to other airports.





Source: ESRI Basemap Imagery (2023), FAA Registered Aircraft Database, BasedAircraft.com



In most cases, pilots will use airports nearer their intended destinations; however, this is dependent on the airport's ability to accommodate aircraft operators in terms of the facilities and services available. As a result, airports with better facilities and services are more likely to attract a larger portion of the region's itinerant operations.

When compared to other public-use airports in the region, GLE offers a comprehensive array of general aviation services and amenities, including fueling services, aircraft maintenance and repairs, ground handling, passenger and crew services, flight planning and support, aircraft storage and tiedowns, and administrative support, as well as a runway capable of accommodating business jets. From a location standpoint, GLE is a convenient option for pilots wishing to remain outside the Metroplex's Class B airspace but remain near the metropolitan area. The airport is also an attractive option for visitors to the WinStar World Casino, a significant tourist draw.

Based on this discussion, GLE's service area for the purposes of this study includes Cooke, Montague, Wise, Denton, and Grayson Counties. As of 2025, the five-county primary service area contains 2,287 registered aircraft.

SERVICE AREA SOCIOECONOMICS

The socioeconomic characteristics of an airport's service area can provide valuable information from which an understanding of the dynamics of growth near that airport can be derived. This information is crucial in determining aviation demand level requirements, as most aviation demand is directly related to the socioeconomic conditions of the surrounding region. Statistical analysis of population, employment, income, and gross regional product (GRP) trends outline the economic strength of a region and can help determine the ability of the area to sustain a strong economy in the future. Socioeconomic data utilized in the development of new based aircraft and operations forecasts for GLE include historical and projected population, employment, per capita personal income (PCPI), and GRP data from Woods & Poole Economics, Inc. Ten years of historical data and projections through 2045 for the service area are summarized in **Exhibit 2C**.

FORECASTING APPROACH

The development of aviation forecasts involves both analytical processes and expert judgment. A series of mathematical relationships is tested to establish statistical logic and rationale for projected growth; however, the judgment of the forecast analyst, which is based on professional experience, knowledge of the aviation industry, and assessment of the local situation, is important in the final determination of the preferred forecast. The most reliable approach to estimating aviation demand is through the utilization of more than one analytical technique. Methodologies frequently considered include trendline/time-series projections, correlation/regression analysis, and market share analysis. The forecast analyst may elect not to use certain techniques, based on the accuracy of the forecasts produced using other methods.



			Popu	lation			Employment					
	Cooke County	Wise County	Denton County	Montague County	Grayson County	Total Service Area	Cooke County	Wise County	Denton County	Montague County	Grayson County	Total Service Area
Historical												
2015	39,377	61,807	776,005	19,283	124,514	1,020,986	25,168	34,678	363,123	11,512	67,265	501,746
2016	39,538	63,224	804,275	19,426	126,878	1,053,341	24,742	33,976	376,890	10,576	67,999	514,183
2017	40,119	64,356	830,752	19,454	129,414	1,084,095	24,505	34,591	393,859	10,440	69,639	533,034
2018	40,776	66,539	853,441	19,641	131,860	1,112,257	24,853	35,691	416,086	10,378	71,626	558,634
2019	41,468	67,921	883,317	19,890	134,023	1,146,619	25,251	35,791	427,954	10,481	72,160	571,637
2020	41,749	68,936	914,510	20,043	136,152	1,181,390	24,656	35,995	439,264	10,302	72,929	583,146
2021	42,399	71,862	944,086	20,483	139,652	1,218,482	25,119	37,303	480,791	10,740	75,831	629,784
2022	43,047	74,900	980,355	21,134	143,292	1,262,728	26,667	39,216	511,765	11,106	77,044	665,798
2023	43,779	78,051	1,013,736	21,680	147,056	1,304,302	27,034	39,918	530,965	11,141	77,831	686,889
2024	44,258	81,275	1,045,120	21,890	150,532	1,343,075	27,303	40,500	546,129	11,167	78,491	703,590
2025	44,469	82,127	1,068,481	21,944	151,441	1,368,462	27,566	41,082	562,227	11,181	79,135	721,191
Forecast												
2030	45,542	86,546	1,190,260	22,211	156,084	1,500,643	28,796	43,986	652,758	11,253	82,274	819,067
2035	46,641	91,246	1,319,528	22,484	160,896	1,640,795	29,975	46,900	756,968	11,343	85,454	930,640
2045	48,927	101,550	1,598,791	23,041	171,044	1,943,353	32,431	53,037	1,008,548	11,569	92,311	1,197,896
CAGRs												
2015-2020	1.2%	2.2%	3.3%	0.8%	1.8%	3.0%	-0.4%	0.7%	3.9%	-2.2%	1.6%	3.1%
2015-2025	1.2%	2.9%	3.3%	1.3%	2.0%	3.0%	0.9%	1.7%	4.5%	-0.3%	1.6%	3.7%
2025-2045	0.5%	1.1%	2.0%	0.2%	0.6%	1.8%	0.8%	1.3%	3.0%	0.2%	0.8%	2.6%

	Income (2017 Dollars)					GRP (millions of 2017 dollars)						
	Cooke	Wise	Denton	Montague	Grayson	Total	Cooke	Wise	Denton	Montague	Grayson	Total
	County	County	County	County	County	Service Area	County	County	County	County	County	Service Area
Historical												
2015	\$49,831	\$42,681	\$53,375	\$43,044	\$40,496	\$45,885	\$3,648	\$3,839	\$28,782	\$937	\$4,712	\$41,918
2016	\$46,542	\$41,662	\$54,263	\$38,038	\$41,431	\$44,387	\$3,356	\$3,208	\$30,522	\$737	\$4,784	\$42,607
2017	\$49,600	\$43,087	\$55,129	\$39,307	\$41,492	\$45,723	\$3,118	\$2,912	\$32,503	\$768	\$4,703	\$44,005
2018	\$49,545	\$44,073	\$57,502	\$40,475	\$42,513	\$46,822	\$2,736	\$3,002	\$33,833	\$749	\$4,977	\$45,298
2019	\$50,382	\$45,760	\$59,759	\$40,917	\$43,913	\$48,146	\$2,346	\$2,983	\$36,543	\$688	\$5,046	\$47,606
2020	\$52,093	\$48,255	\$61,345	\$41,330	\$45,958	\$49,796	\$1,987	\$2,636	\$40,288	\$552	\$4,994	\$50,457
2021	\$53,788	\$49,670	\$64,803	\$42,624	\$48,112	\$51,799	\$2,063	\$3,140	\$43,961	\$679	\$5,404	\$55,248
2022	\$51,130	\$47,796	\$63,166	\$40,398	\$45,692	\$49,636	\$2,284	\$3,745	\$48,029	\$752	\$5,644	\$60,454
2023	\$51,564	\$49,071	\$64,130	\$41,548	\$46,385	\$50,540	\$2,488	\$3,736	\$49,728	\$677	\$6,050	\$62,678
2024	\$53,183	\$47,263	\$64,451	\$42,240	\$46,411	\$50,710	\$2,516	\$3,787	\$51,837	\$681	\$6,148	\$64,969
2025	\$54,306	\$48,040	\$65,729	\$43,138	\$47,231	\$51,689	\$2,545	\$3,840	\$54,077	\$684	\$6,248	\$67,395
Forecast												
2030	\$59,853	\$51,972	\$72,623	\$47,660	\$51,260	\$56,674	\$2,688	\$4,124	\$66,934	\$696	\$6,772	\$81,214
2035	\$65,411	\$55,998	\$80,178	\$52,356	\$55,342	\$61,857	\$2,828	\$4,416	\$82,598	\$711	\$7,339	\$97,891
2045	\$77,277	\$64,623	\$97,664	\$62,456	\$64,099	\$73,224	\$3,115	\$5,035	\$124,576	\$746	\$8,641	\$142,113
CAGRs												
2015-2020	0.9%	2.5%	2.8%	-0.8%	2.6%	1.6%	-11.4%	-7.2%	7.0%	-10.0%	1.2%	3.8%
2015-2025	0.9%	1.2%	2.1%	0.0%	1.6%	1.2%	-3.5%	0.0%	6.5%	-3.1%	2.9%	4.9%
2025-2045	1.8%	1.5%	2.0%	1.9%	1.5%	1.8%	1.0%	1.4%	4.3%	0.4%	1.6%	3.8%

CAGR = compound annual growth rate Source: Woods & Poole Economics Inc. 2025





Trendline/time-series projections are probably the simplest and most familiar of the forecasting techniques. By fitting growth curves to historical data and then extending them into the future, a basic trendline projection is produced. A basic assumption of this technique is that outside factors will continue to affect aviation demand in the same manner as in the past. As broad as this assumption may be, the trendline projection serves as a reliable benchmark for comparing other projections.

Correlation analysis provides a measure of the direct relationship between two separate sets of historical data. If there is a reasonable correlation between the data sets, further evaluation using regression analysis may be employed. Regression analysis measures statistical relationships between dependent and independent variables, thereby yielding a correlation coefficient. The correlation coefficient (Pearson's r) measures association between the changes in the dependent variable and the independent variable(s). If the r² value (coefficient determination) is greater than 0.95, it indicates good predictive reliability. A value less than 0.95 may be used, but with the understanding that the predictive reliability is lower.

Market share analysis involves a historical review of the airport activity as a percentage, or share, of a larger regional, state, or national aviation market. A historical market share trend is determined, providing an expected market share for the future. These shares are then multiplied by the forecasts for the larger geographical area to produce a market share projection. This method has the same limitations as trendline projections but can be used to check the validity of other forecasting techniques.

Forecasts age, and the farther a forecast is from the base year, the less reliable it may become, particularly due to changing local and national conditions. Nevertheless, the FAA requires that a 20-year forecast be developed for long-range airport planning to assess and preserve options for future facility needs. Facility and financial planning usually require at least a 10-year view because it often takes more than five years to complete a major facility development program; however, it is important to use forecasts that do not overestimate revenue-generating capabilities or understate the demand for facilities needed to meet public (user) needs.

A wide range of factors is known to influence the aviation industry and can have significant impacts on the extent and nature of aviation activity in both the local and national markets. Historically, the nature and trend of the national economy has had a direct impact on the level of aviation activity. Recessionary periods have been closely followed by declines in aviation activity; nevertheless, trends emerge over time and provide the basis for airport planning.

Future facility requirements, such as hangar, apron, and terminal needs, are derived from projections of various aviation demand indicators. Using a broad spectrum of local, regional, and national socioeconomic and aviation information, as well as analyzing the most current aviation trends, forecasts are presented for the following aviation demand indicators:

- Based aircraft
- Based aircraft fleet mix
- General aviation operations
- Air taxi and military operations
- Operational peaks



BASED AIRCRAFT AND OPERATIONS FORECASTS

The number of based aircraft and operations are the most basic indicators of aviation demand. By first developing a forecast of based aircraft for the airport, other demand indicators can be projected. The process of developing forecasts of based aircraft begins with an analysis of aircraft ownership in the primary general aviation service area through a review of historical aircraft registrations. An initial forecast of registered aircraft is developed and used as one data point to arrive at a based aircraft forecast for the airport. To determine the types and sizes of facilities that should be planned to accommodate activity at GLE, certain elements must be forecasted. These indicators of demand include based aircraft fleet mix, and annual operations.

BASED AIRCRAFT FORECAST

Forecasts of based aircraft may directly influence needed facilities and applicable design standards. Needed facilities may include hangars, parking aprons, taxilanes, etc. The applicable design standards may include separation distances and object clearing surfaces. The sizes and types of based aircraft are also an important consideration; the addition of numerous small aircraft may have no effect on design standards, while the addition of a few larger business jets can have a substantial impact on applicable design standards.

Because of the numerous variables known to influence aviation demand, several separate forecasts of based aircraft are developed. Each forecast is then examined for practicality, and any outliers are discarded or given less weight. Collectively, the remaining forecasts will create a planning envelope. A single planning forecast is then selected for use in developing facility needs for the airport. The selected forecast of based aircraft can be one of the forecasts developed, based on the experience and judgment of the forecaster, or it can be a blend of the forecasts.

Based Aircraft Inventory

The FAA did not require airports to report based aircraft numbers until recently, with the establishment of a based aircraft inventory in which it is possible to cross-reference based aircraft claimed by one airport with other airports. The FAA now utilizes this inventory as a baseline for determining how many and what type(s) of aircraft are based at any individual airport. Based aircraft levels factor into the formulation of asset classifications within the NPIAS and apply only to airports included in the NPIAS. This database evolves daily as aircraft are added or removed. It is the responsibility of the sponsor (owner) of each airport to input based aircraft information into the FAA database (www.basedaircraft.com).

Airport staff have undertaken and submitted a comprehensive physical count to the FAA for validation. The most recent validation of based aircraft at GLE identified 115 validated based aircraft. Of the validated based aircraft, there are 92 single-engine piston aircraft, 15 multi-engine piston aircraft, two turboprop aircraft, five business jets, and one helicopter.



Registered and Based Aircraft Forecasts

Aircraft ownership trends for the primary service area (Cooke, Wise, Denton, Montague, and Grayson Counties) typically dictate based aircraft trends for an airport. As such, a forecast of registered aircraft for the five-county service area has been developed for use as an input to the subsequent based aircraft forecast.

Table 2E presents the historical registered aircraft for the service area counties over the past 10 years. These figures are derived from the FAA aircraft registration database, which categorizes aircraft registrations by county based on the zip codes of aircraft owners. Although this information generally provides a correlation to based aircraft, it is not uncommon for some aircraft to be registered in the county but be based at an airport outside the county, or vice versa.

TABLE 2E | Historical Registered Aircraft - Five-County Service Area

Year	Cooke	Wise	Denton	Montague	Grayson	Total Service Area Registrations
2015	104	254	1,005	64	216	1,643
2016	99	264	1,028	65	228	1,684
2017	93	251	1,044	60	220	1,668
2018	94	226	1,036	54	199	1,609
2019	93	240	1,086	53	208	1,680
2020	97	237	1,124	49	216	1,723
2021	92	245	1,129	47	213	1,726
2022	93	244	1,133	47	221	1,738
2023	98	262	1,378	49	209	1,996
2024	96	360	1,442	51	241	2,190
2025*	91	266	1,638	49	243	2,287
10-Year CAGR	-1.3%	0.5%	5.0%	-2.6%	1.2%	3.4%
5-Year CAGR	-1.3%	2.3%	7.8%	0.0%	2.4%	5.8%
*Active aircraft registrat	ions as of July 31,	2025				

Source: FAA Aircraft Registration Database

The registered aircraft in the service area show a generally increasing trend over the last several years, with nearly 650 new aircraft registrations since 2015. Registrations in 2025 are now at the highest level since 2015, at 2,287. However, the most significant growth has occurred over the last five years, with a 5.8 percent CAGR over this period.

Although there are no recently prepared forecasts for the service area counties regarding registered aircraft, one was prepared for this study using market share, ratio, and historical growth rate projection methods. Several regression forecasts were also considered, which examined the correlation of registered aircraft (dependent variable) with the service area population, employment, income, and GRP. Table 2F details Source: Coffman Associates analysis the results of this analysis.

TABLE 2F Regression Analysis						
Independent Variable	r²					
Time-Series	0.708					
Population	0.743					
Employment	0.717					
Income	0.434					
Gross Regional Product	0.754					



None of the regressions produced a correlation over 0.90, which is the threshold that indicates a reliable predictive value. Because of the low predictive value of the regressions, they have been excluded from consideration.

Trendline/Historical Growth Rate Projections

Utilizing the last 10 years of registered aircraft data, a trendline projection was prepared, which predicted 3,298 registered aircraft by 2045 (1.8% CAGR). A five-year trend was also prepared, which reflected the more recent trend of registered aircraft growth. The five-year trendline projection resulted in 4,808 registered aircraft by 2045 (3.8% CAGR). Over the last ten years, the number of registered aircraft in the service area has had a CAGR of 3.4 percent. By applying this CAGR to the current number of registered aircraft, a forecast emerges that results in 4,431 registered aircraft by 2045. Applying the five-year growth rate of registered aircraft (5.8% CAGR) to the forecast years results in 7,099 aircraft registrations by 2045.

Market Share of Texas Based Aircraft

Market share projections consider the ratio of service area registered aircraft to the total number of based aircraft in the State of Texas, both historically and forecasted by the FAA. A market share projection was prepared due to the expected growth in based aircraft numbers at the state level, as opposed to the general declining historical trend of national registrations. The service area count of 2,287 registered aircraft in 2025 represents approximately 16.65 percent of all based aircraft in Texas. If the service area maintained this market share, it would result in 2,811 aircraft by 2045 (1.0% CAGR). Two additional growth forecasts were prepared based on a mid-range and a high-range increasing market share scenario. The mid-range forecast considers a scenario in which the service area experiences a 1.9% CAGR, which is reflective of the service area's growth in market share over the last 10 years. Applying this growth rate to the forecast years results in a total service area aircraft count of 3,305 by 2045. The high-range forecast applies the 10-year growth rate of registered aircraft in the service area — 3.4% CAGR — to the forecast years, yielding a total of 4,431 registered aircraft in the five-county service area by 2045. **Table 2G** shows the historic and forecast market share of the service area compared to the total of based aircraft in Texas.



TABLE 2G	Registered	l Aircraft Pro	ojections – Mar	ket Share of	Texas Basec	l Aircraft

Year	Registered Aircraft	Texas Based Aircraft	Service Area Market Share %
2015	1,643	11,865	13.85%
2016	1,684	13,065	12.89%
2017	1,668	12,416	13.43%
2018	1,609	12,920	12.45%
2019	1,680	11,968	14.04%
2020	1,723	11,600	14.85%
2021	1,726	11,977	14.41%
2022	1,738	12,937	13.43%
2023	1,996	13,080	15.26%
2024	2,190	13,605	16.10%
2025*	2,287	13,739	16.65%
2015-2025 CAGR	3.4%	1.5%	1.9%
2020-2025 CAGR	5.8%	3.4%	2.3%
Constant Market Share			
2030	2,404	14,444	16.65%
2035	2,528	15,186	16.65%
2045	2,811	16,885	16.65%
2025-2045 CAGR	1.0%	1.0%	
Increasing Market Share – N	lid-Range		
2030	2,507	14,444	17.36%
2035	2,749	15,186	18.10%
2045	3,305	16,885	19.57%
2025-2045 CAGR	1.9%	1.0%	
Increasing Market Share – H	igh-Range		
2030	2,698	14,444	18.68%
2035	3,183	15,186	20.96%
2045	4,431	16,885	26.24%
2025-2045 CAGR	3.4%	1.0%	
*Registered aircraft in service ar	ea as of July 31, 2025		

Sources: Texas TAF, January 2025; Coffman Associates analysis

Ratio of Registered Aircraft to Population

The number of registered aircraft in an area often fluctuates based on population trends. As of 2025, the service area has 1.7 registered aircraft per 1,000 residents. Over the past five years, this ratio has remained fairly static, averaging 1.5 registered aircraft per 1,000 residents. Two projections have been prepared: one based on maintaining the current ratio over the forecast period, and another projecting an increasing ratio based on the 5-year growth rate of aircraft per 1,000 residents. Maintaining the current ratio (1.7) through 2045 results in 3,248 registered aircraft (1.8% CAGR). The increasing ratio projection results in 3,984 registered aircraft by 2045 (2.8% CAGR).

Registered Aircraft Forecast Summary

Table 2H summarizes the nine registered aircraft forecasts for the GLE primary service area. Overall, registrations show a growth trend since the COVID-19 pandemic, and there is no indication that this trend will shift. Service area socioeconomic data projections show growth, and the overall state market



for aircraft is strong. This is reflected by the state CAGR of 1.0 percent, which is significantly higher than the 0.5 percent CAGR projected nationally for active general aviation aircraft. It is important for the forecast to be realistic, and it is likely that the service area's five-year growth rate will moderate over the next 20 years, accounting for unforeseen economic downturns and risks. For this reason, the mid-range increasing market share projection with a CAGR of 1.9 percent is viewed as the most realistic scenario. This forecast carries forward the service area's historical growth trend in market share at a more modest rate than the projection of an increase in aircraft per 1,000 people or the five- and ten-year growth rates. Moreover, the mid-range increasing market share projection closely resembles the ten-year trendline projection, which has a CAGR of 1.8 percent, giving it more historical validity. The selected registered aircraft forecast results in 2,507 registered aircraft in 2030, 2,749 in 2035, and 3,305 in 2045.

TABLE 2H Registered Aircraft Forecast Summary								
Projection	2030	2035	2045	CAGR 2025-2045				
5-Year Trendline	2,892	3,531	4,808	3.8%				
10-Year Trendline	2,407	2,704	3,298	1.8%				
5-Year Growth Rate	3,036	4,029	7,099	5.8%				
10-Year Growth Rate	2,698	3,183	4,431	3.4%				
Constant % of TX Based Aircraft	2,404	2,528	2,811	1.0%				
Increasing % of TX Based Aircraft (Mid)	2,507	2,749	3,305	1.9%				
Increasing % of TX Based Aircraft (High)	2,698	3,183	4,431	3.4%				
Constant Aircraft/1,000 Population	2,508	2,742	3,248	1.8%				
Increasing Aircraft/1,000 Population	2,650	3,053	3,984	2.8%				
Boldface indicates selected forecast.								
CAGR = compound annual growth rate								
Source: Coffman Associates analysis	·							

Based Aircraft Market Share of Registered Aircraft Forecast

Utilizing the forecast of registered aircraft in GLE's five-county service area, a market share forecast of based aircraft at GLE has been developed. In 2025, the 115 based aircraft at GLE represented 5.03 percent of the aircraft registered in the service area. By maintaining this market share as a constant through the planning years, a forecast emerges resulting in 166 based aircraft by 2045 (1.9% CAGR). Historical based aircraft data was not available, so trend analysis was not possible for the development of the based aircraft

forecasts. However, there is no indication that the airport will experience a decline in based aircraft. In fact, demand for hangar space is strong, and the positive economic outlook for Gainesville and the region bodes well for future hangar development. For these reasons, an increasing market share projection was prepared, which assumed an increase to 5.50 percent of the market share, resulting in 182 based aircraft by 2045 (2.3% CAGR). **Table 2J** presents the two market share projections.

TABLE 2J Bas	TABLE 2J Based Aircraft Market Share of Registered Aircraft Forecast							
Year	GLE Based Aircraft	Service Area Registered Aircraft	GLE Market Share %					
2025	115	2,287	5.03%					
Constant Market Share								
2030	126	2,507	5.03%					
2035	138	2,749	5.03%					
2045	166	3,305	5.03%					
CAGR	1.9%	1.9%	ı					
Increasing Ma	rket Share							
2030	129	2,507	5.15%					
2035	145	2,749	5.26%					
2045	182	3,305	5.50%					
CAGR	2.3%	1.9%	ı					
CAGR = compo	ound annual growtl	h rate						

Sources: basedaircraft.com; GLE records; Coffman Associates analysis



Growth Rate Projections

Given that registered aircraft within the state and service area are projected to grow over the planning period, a growth rate projection utilizing the state's 20-year CAGR of 1.0 percent has also been considered. When the 20-year CAGR is applied to GLE based aircraft, a forecast emerges that yields 141 based aircraft by 2045.

Socioeconomic Growth Projections

Based aircraft growth is often related to population and economic activity in the service area. For this reason, based aircraft projections tied to the projected service area CAGRs for population (1.8%), employment (2.6%), income (1.8%), and GRP (3.8%) were also prepared. Applying these CAGRs results in 163 based aircraft for population, 191 for employment, 163 for income, and 242 for GRP by 2045.

Selected Based Aircraft Forecast

Selecting a based aircraft forecast ultimately falls on the judgment of the forecast analyst. The selected forecast should be reasonable and based on a sound methodology. The methodology presented in this analysis first examines the history of aircraft ownership in the service area (Cooke, Wise, Denton, Montague, and Grayson Counties). Utilizing the selected registered aircraft projection, a market share analysis was conducted based on maintaining a constant market share and an increasing market share over the forecast period. Additional projections considered growth in the state and growth rates based on key socioeconomic indicators (population, employment, income, and GRP). The FAA TAF projection for based aircraft at GLE is also included for comparison purposes. These eight projections are summarized in **Table 2K**.

TABLE 2K Based Aircraft Forecast Summary
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Projection	Base Year	2030	2035	2045	CAGR 2025-2045
Constant Market Share	115	126	138	166	1.9%
Increasing Market Share		129	145	182	2.3%
State TAF Growth Rate		121	127	141	1.0%
Service Area Population Growth Rate		126	137	163	1.8%
Service Area Employment Growth Rate		131	148	191	2.6%
Service Area Income Growth Rate		125	137	163	1.8%
Service Area GRP Growth Rate		139	167	242	3.8%
GLE 2025 TAF	96	121	146	226	4.4%
Boldface indicates selected forecast.					
CAGR = compound annual growth rate					

Sources: FAA TAF; basedaircraft.com; Coffman Associates analysis

Future aircraft basing at the airport will depend on several factors, including the state of the economy, fuel costs, available facilities, competing airports, and hangar development potential. Forecasts assume a reasonably stable and growing economy, as well as reasonable development of airport facilities necessary to accommodate aviation demand. GLE will not experience significant based aircraft growth unless new hangar facilities are constructed. Competing airports will play a role in deciding demand;



however, GLE should fare well in this competition, as it is served by a runway system capable of handling most general aviation aircraft, including business jets, with on-site amenities that are attractive to aircraft owners, such as aircraft maintenance.

Consideration must also be given to the current and future aviation conditions at the airport. GLE provides an array of aviation services and will continue to be favored by aviation operators due to its location and accessibility just north of the Dallas-Fort Worth Metroplex, as well as nearby attractions in neighboring Oklahoma.

The potential for available hangar space is not the only factor in future based aircraft levels. Economic conditions within the service area are projected to increase at strong rates, which will support aviation and based aircraft growth. As such, the constant market share projection has been selected as the preferred forecast. The selected forecast projects moderate growth in based aircraft, with 166 based aircraft by 2045 – an addition of 51 aircraft over the next 20 years. This forecast is reasonably optimistic and assumes GLE can continue to maintain a consistent market share of registered aircraft in the service area, resulting in steady growth over the plan years. It also assumes continued economic growth in the local area will drive demand for more based aircraft.

Exhibit 2D presents the eight based aircraft forecasts that comprise the planning envelope.

Based Aircraft Fleet Mix Forecast

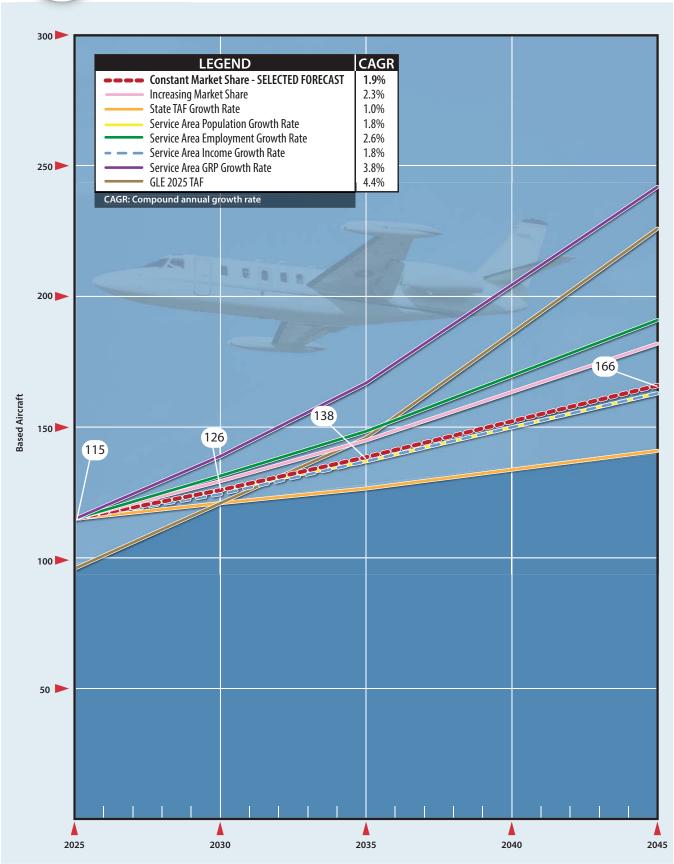
It is important to understand the current and projected based aircraft fleet mix at an airport to ensure the planning of proper facilities. For example, the addition of one or several larger turboprop or business jet aircraft to the airfield could have a significant impact on the separation requirements and various obstacle clearing surfaces.

The current based aircraft fleet mix consists of 92 single-engine piston aircraft, 15 multi-engine piston aircraft, two turboprop aircraft, five jets, and one helicopter. As a general aviation airport with a significant level of both small aircraft and business jet activities, GLE should continue to have a diverse fleet mix, including small single-engine pistons, turbine-powered aircraft, and helicopters. The forecasted growth trends in the GLE based aircraft fleet mix take FAA projections of the national general aviation fleet mix into consideration. Growth is anticipated to occur within the more sophisticated categories, including the turboprop, jet, and helicopter categories, consistent with national aviation trends. **Table 2L** presents the forecasted fleet mix for based aircraft at GLE.

Aircraft Type	2025	%	2030	%	2035	%	2045	%
SEP	92	80.0%	98	77.8%	106	76.8%	122	73.5%
MEP	15	13.0%	14	11.1%	10	7.2%	7	4.2%
Turboprop	2	1.7%	4	3.2%	6	4.3%	10	6.0%
Jet	5	4.3%	7	5.6%	10	7.2%	16	9.6%
Helicopter	1	0.9%	3	2.4%	4	2.9%	6	3.6%
Glider/Other	0	0.0%	0	0.0%	2	1.4%	5	3.0%
Total	115	100%	126	100%	138	100%	166	100%

Sources: FAA Based Aircraft Registry; Coffman Associates analysis







OPERATIONS FORECASTS

Operations at GLE are classified as general aviation (GA), air taxi, or military. GA operations include a wide range of activities, from recreational use and flight training to business and corporate uses. Air taxi operations are those conducted by aircraft operating under Title 14 Code of Federal Regulations (CFR) Part 135, otherwise known as for-hire or on-demand activity. Military operations are those conducted by various branches of the U.S. military. Air carrier operations are an additional category of operations that are conducted by large aircraft with 60 or more passenger seats.

Aircraft operations are further classified as local and itinerant. A local operation is a takeoff or landing performed by an aircraft that operates within sight of an airport or executes simulated approaches or touch-and-go operations at an airport. Local operations are generally characterized by training activity. Itinerant operations are those performed by aircraft with specific origins or destinations away from an airport. Typically, itinerant operations increase with business and commercial use because business aircraft are primarily used to transport passengers between locations.

Because GLE is not equipped with an airport traffic control tower (ATCT), precise historical operational (takeoff and landing) counts are not available; however, the airport has contracted with Virtower, an air traffic management system, to provide operational data collected by utilizing automatic dependent surveillance-broadcast (ADS-B) technology. Virtower began providing operational data to GLE in June 2024. Based on the most recent 12-month period ending May 2025, GLE's total baseline operation count is 114,451 operations. The Virtower data does not differentiate between local and itinerant operations; however, airport management estimates that approximately 75 percent, or 85,838 operations, are local in nature, with the remainder (28,613 operations) considered to be itinerant. The only other source for historical operational data at GLE is the FAA TAF, which has flatlined operations since 2016 at 24,300, a figure which is also included for future years. Given the unreliability of the TAF compared to actual operations counts collected over the past several months, the TAF will no longer be utilized for general aviation operations in this forecast analysis.

For air taxi operations, the FAA's Traffic Flow Management System Count (TFMSC) database indicates that there were a combined 279 total air taxi and air carrier operations at GLE during the 12-month period ending May 2025. The TFMSC also reports that there were 15 total military operations at GLE over the same period. There is no data suggesting any of the military operations are local operations; therefore, it is assumed they were all itinerant. These data establish an operational baseline for the generation of forecasts. The FAA TAF reports no air carrier or air taxi operations, but it does estimate 100 military operations at GLE in 2025 and in future years. TFMSC data for the years 2020 to 2025 have been utilized to establish historical operations levels for military and air taxi operators at GLE.

It should be noted that the FAA's forecast of air taxi operations nationwide trends lower in the short term but returns to growth after 2028 due to ongoing changes to the scheduled airline aircraft fleet mix. Airlines are transitioning away from 50-seat regional jets, which are counted under the air taxi category, to larger jets with seating capacities of 60 seats or more, which are counted under the air carrier category. This airline fleet mix transition should have no impact on unscheduled GLE air taxi operations.

A summary of historical operations data for GLE is shown in **Table 2M**. Because the 2025 baseline data are supported by actual ADS-B data, this is considered an accurate account of airport operations, whereas 2020 through 2024 counts are estimated using a combination of TAF and TFMSC data.



TABLE 2M | Historical Operations Data

Year			ITINERANT		Total				
rear	Air Carrier	Air Taxi	General Aviation	Military	Total	Civil	Military	Total	Operations
2020	0	241	12,100	11	12,441	12,100	0	12,100	24,541
2021	0	245	12,100	7	12,445	12,100	0	12,100	24,545
2022	0	184	12,100	1	12,384	12,100	0	12,100	24,484
2023	0	286	12,100	0	12,486	12,100	0	12,100	24,586
2024	0	291	12,100	3	12,491	12,100	0	12,100	24,591
2025	0	279	28,319	15	28,613	85,838	0	85,838	114,451

*2025 data represent a 12-month period ending May 2025.

2020-2024 general aviation operations are estimates only and are not supported by a data collection process.

Sources: Virtower data, 2025; FAA TFMSC (air carrier, air taxi, and military operations); FAA TAF (GA operations), 2020-2024

Market Share Projections

Market share analysis compares GLE's operations to operations occurring in Texas, as reported in the TAF. The first projection compares the current market share of GA (itinerant and local) and air taxi operations at the airport to the FAA TAF for Texas operations. In 2025, GLE accounted for 1.11 percent of itinerant GA operations in Texas; 2.91 percent of Texas local GA operations; and 0.05 percent of Texas air taxi operations. By carrying these percentages forward through the planning horizon, a constant market share forecast emerges, resulting in CAGRs of 0.6% for itinerant operations, 0.6% for local operations, and 1.0% for air taxi operations. While these growth rates mirror those in the Texas TAF for each operational segment, this is considered the low range forecast, as additional based aircraft and strong economic growth in the region are likely to spur stronger growth in activity at the airport. For these reasons, two increasing market share forecasts have also been prepared, as shown in **Table 2N**.

TABLE 2N	Operations Market Share Projections
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	G <i>A</i>	GA ITINERANT			GA LOCAL			AIR TAXI	
Year	GLE	Texas	GLE Market %	GLE	Texas	GLE Market %	GLE	Texas	GLE Market %
2025*	28,319	2,558,879	1.11%	85,838	2,953,025	2.91%	279	507,409	0.05%
Constar	nt Market Share	 Low Range 							
2030	29,500	2,664,154	1.11%	89,120	3,066,004	2.91%	260	474,416	0.05%
2035	30,200	2,731,181	1.11%	91,330	3,141,966	2.91%	290	519,741	0.05%
2045	31,900	2,879,282	1.11%	96,250	3,311,064	2.91%	340	622,098	0.05%
CAGR	0.6%	0.6%	_	0.6%	0.6%	_	1.0%	1.0%	_
Increasi	ng Market Share	e – Mid Rang	e						
2030	30,000	2,664,154	1.13%	91,400	3,066,004	2.98%	300	474,416	0.06%
2035	31,200	2,731,181	1.14%	95,900	3,141,966	3.05%	300	519,741	0.06%
2045	34,000	2,879,282	1.18%	106,000	3,311,064	3.20%	400	622,098	0.07%
CAGR	0.9%	0.6%	_	1.1%	0.6%	_	1.8%	1.0%	_
Increasi	ng Market Share	e – High Rang	e						
2030	32,100	2,664,154	1.21%	93,700	3,066,004	3.06%	300	474,416	0.07%
2035	35,600	2,731,181	1.30%	100,600	3,141,966	3.20%	400	519,741	0.08%
2045	43,200	2,879,282	1.50%	115,900	3,311,064	3.50%	600	622,098	0.10%
CAGR	2.1%	0.6%		1.5%	0.6%	_	3.9%	1.0%	_

Boldface indicates selected forecast.

*2025 data represent a 12-month period ending May 2025

CAGR = compound annual growth rate

N/A = not available

Sources: FAA TAF (Texas operations); Virtower data, 2025; FAA TFMSC (air taxi operations); Coffman Associates analysis



A mid-range increasing market share projection was prepared that increases GLE's market share of itinerant GA operations to 1.18 percent, 3.20 percent for local GA operations, and 0.07 percent for air taxi operations. The results of the mid-range projections are also shown in **Table 2N**.

High-range increasing market share projections were also prepared, which consider the potential for more aggressive growth in each operational category. The resulting projections take GLE's 2045 market shares to 1.50 percent (itinerant GA), 3.50 percent (local GA), and 0.10 percent (air taxi), as shown in **Table 2N**.

Regression Analysis

Development of regressions requires reliable historical data so that correlations between dependent and independent variables can be examined. Because GLE does not have reliable historical operational data (all data prior to 2025 are estimates), regression analysis cannot be used; therefore, regressions are not included in the operations forecast analysis.

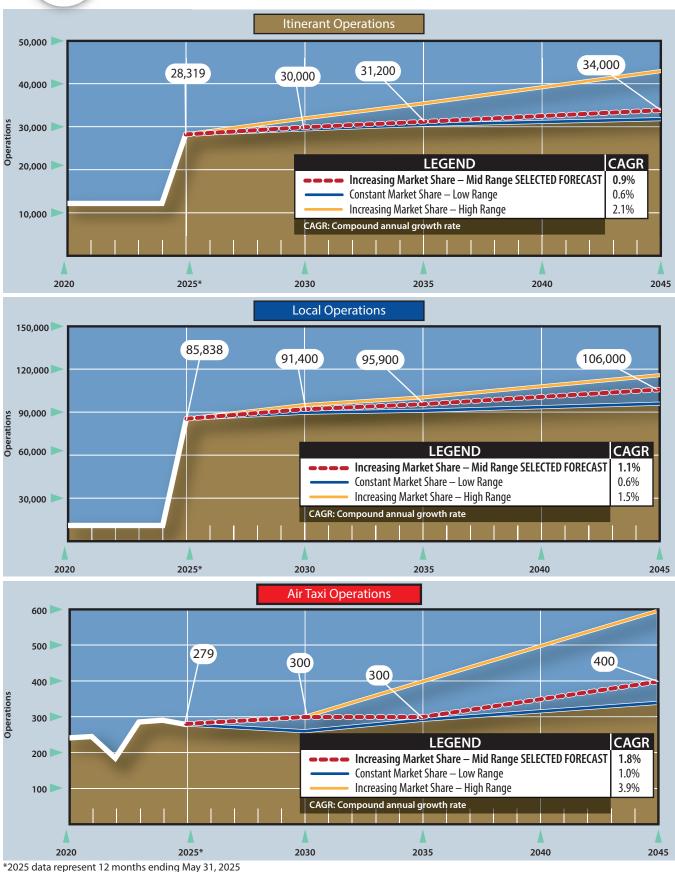
General Aviation and Air Taxi Operations Forecast Summary

When reliable historical operational trends are unavailable to predict future activity, an approach that considers a variety of forward-looking factors must be used to select an operations forecast. Market trends indicate that GA and air taxi operations will continue to grow in the State of Texas. More people are traveling to Texas for business and recreation, and many travel by air. Airlines are developing new programs to grow the next generation of pilots, which has led to the establishment of new flight schools and flight training programs. Many operations occurring at GLE are associated with flight training, and the airport is a popular choice for students and instructors seeking to remain outside of Dallas-Fort Worth's Class B airspace. Moreover, socioeconomic indicators suggest GLE's service area will continue to thrive over the planning period, bringing new business opportunities that typically correlate to higher levels of activity by corporate users. For these reasons, the mid-range increasing market share projections of itinerant GA, local GA, and air taxi operations have been selected. These projections reflect a marginal growth rate increase as compared to the current Texas TAF that takes into consideration the development potential of the airport. **Exhibit 2E** graphically represents the operations projections that comprise the planning envelope.

Military Operations Forecast

Military aircraft utilize civilian airports across the country, including GLE; however, it is inherently difficult to project future military operations due to their national security nature and the fact that missions can change without notice, so it is typical for the FAA to use a flat-line number for military operations. For this planning study, military operations at GLE are projected to remain at 100 annual itinerant operations throughout the planning period, in accordance with the GLE TAF.





Sources: Virtower data, 2025; FAA Traffic Flow Management System Count (air taxi), FAA TAF (historic operations)



Total Operations Forecast Summary

Table 2P presents the summary of the selected operations forecasts. The summary table details the culmination of each selected operations forecast. Over the planning horizon, total operations at GLE are projected to grow from 114,451 in 2025 to 140,500 by 2045, with a CAGR of 1.0 percent.

TABLE 2P	Total O	perations Forecast Summary
----------	---------	----------------------------

	ITINERANT						LOCAL			
Year	Air Carrier	Air Taxi	General Aviation	Military	Subtotal	General Aviation	Military	Subtotal	Total Operations	
2025*	0	279	28,319	15	28,613	85,838	0	85,838	114,451	
2030	0	300	30,000	100	30,400	91,400	0	91,400	121,800	
2035	0	300	31,200	100	31,600	95,900	0	95,900	127,500	
2045	0	400	34,000	100	34,500	106,000	0	106,000	140,500	
CAGR	0	1.8%	0.9%	10.0%	0.9%	1.1%	0.0%	1.1%	1.0%	

^{*}Baseline represents a 12-month period ending July 2024.

PEAK PERIOD FORECASTS

Peaking characteristics play an important role in determining airport capacity and facility requirements. The Virtower data collected over the 12-month period ending May 2025 have been examined to identify peaking periods. The peaking periods used to develop facility requirements are described as follows.

- Peak Month | The peak month for the baseline year was August 2024, which held 9.9 percent of the year's operations. Carrying the 9.9 percent peak month forward through the forecast period results in a peak month of 13,974 by 2045.
- Design Day | Design day is calculated by dividing the peak month by the number of days of the month. Because August 2024 was the peak month, the design day is calculated as the peak month divided by 31.
- Busy Day | Busy day is calculated by averaging the busiest day each week during the peak month. In this case, the busiest day each week during the month of August 2024 represented approximately 19.9 percent of each week's total operations.
- Design Hour | Design hour is calculated by identifying the average hourly operations during design days. Calculations excluded overnight hours (between 11:00 p.m. and 6:00 a.m.), which would skew down the design hour. The design hour of August 2024 represented 5.9 percent of design day operations.

Peak period projections based on the baseline calculations are included in **Table 2Q**.

CAGR = compound annual growth rate

Source: Coffman Associates analysis



TABLE 2Q | Peak Period Forecasts

	2025	2030	2035	2045
Annual Operations	114,451	121,800	127,500	140,500
Peak Month	11,383	12,114	12,681	13,974
Design Day	367	391	409	451
Busy Day	512	545	570	629
Design Hour	22	23	24	27
Source: Coffman Associates of	nalysis			

FORECAST SUMMARY

This chapter has outlined the various activity levels that might reasonably be anticipated over the planning period. **Exhibit 2F** presents a summary of the aviation forecasts prepared in this chapter. The base year for these forecasts is 2025 with a 20-year planning horizon to 2045. The primary aviation demand indicators are based aircraft and operations. The number of based aircraft at GLE is forecast to increase from 115 in 2025 to 166 by 2045 (1.9% CAGR). Total operations at GLE are forecast to increase from 114,451 in 2025 to 140,500 by 2045 (1.0% CAGR).

Projections of aviation demand will be influenced by unforeseen factors and events in the future; therefore, it is not reasonable to assume future demand will follow the exact projection line, but forecasts of aviation demand tend to fall within the planning envelope over time. The forecasts developed for this master planning effort are considered reasonable for planning purposes. The need for additional facilities will be based on these forecasts; however, if demand does not materialize as projected, the implementation of facility construction can be slower. Likewise, if demand exceeds these forecasts, the airport may accelerate construction of new facilities to accommodate such.

FORECAST COMPARISON TO FAA FORECASTS

Historically, forecasts have been submitted to the FAA to be evaluated and compared to the TAF, with five-year forecasts differing from the TAF by less than 10 percent, and 10-year forecasts differing by less than 15 percent. In August 2024, the FAA issued new guidance for forecast review and approvals. For non-towered airports such as GLE, the master plan forecasts are to be compared to the annual growth rates included in the FAA's Aerospace Forecasts, rather than the TAF. The FAA prefers that forecasts differ from the Aerospace Forecasts growth rates by less than 10 percent at year five, and less than 15 percent at year ten. For years 11 through 20, the FAA may "accept for planning purposes" growth rates that are within 0.5 percent of the long-term growth rates identified in the Aerospace Forecasts.

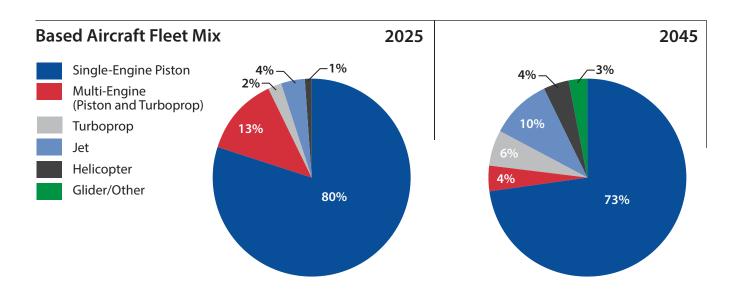
Table 2R presents a summary of the selected forecasts and a comparison to both the FAA's Aerospace Forecasts and the FAA TAF for GLE. When comparing to the growth rates included in the Aerospace Forecasts, the master plan forecasts are within the defined tolerances for operations. Assuming a 10 percent increase, the maximum allowable growth rate for the 5-year period is 1.6 percent, and 1.4 percent for the 10-year period. The master plan forecasts for total operations fall within these parameters.



	BASE	FORECAST			CAGR
	2025	2030	2035	2045	2025-2045
ITINERANT OPERATIONS					
Air Carrier	0	0	0	0	N/A
Air Taxi	279	300	300	400	1.8%
General Aviation	28,319	30,000	31,200	34,000	0.9%
Military	15	100	100	100	10.0%
Itinerant Subtotal	28,613	30,400	31,600	34,500	0.9%
LOCAL OPERATIONS					
General Aviation	85,838	91,400	95,900	106,000	1.1%
Military	0	0	0	0	N/A
Local Subtotal	85,838	91,400	95,900	106,000	1.1%
TOTAL OPERATIONS	114,451	121,800	127,500	140,500	1.0%

BASED AIRCRAFT					
Single-Engine Piston	92	98	106	122	1.4%
Multi-Engine Piston	15	14	10	7	-3.7%
Turboprop	2	4	6	10	8.4%
Jet	5	7	10	16	6.0%
Helicopter	1	3	4	6	9.4%
Glider/Other	0	0	2	5	N/A
TOTAL BASED AIRCRAFT	115	126	138	166	1.9%

PEAKING ACTIVITY PROJECTIONS					
Peak Month	11,383	12,114	12,681	13,974	
Design Day	367	391	409	451	
Busy Day	512	545	570	629	
Design Hour	22	23	24	27	



Notes: N/A = Not Applicable Source: Coffman Associates analysis



In terms of based aircraft, the FAA's projected growth rate for the national fleet mix is 0.4 percent in the 5-year period and 0.4 percent in the 10-year period. Given the dynamic growth in registered aircraft in GLE's service area and the positive economic outlook for the region, the master plan projects stronger growth in this demand segment, at 1.5 percent in the 5-year period and 1.8 percent in the 10-year period. This is outside the tolerance; however, if the Aerospace Forecast growth rates were applied to the baseline total for based aircraft at GLE, it would assume an addition of just two aircraft in the 5-year period and five in the 10-year period. In addition to the growth factors mentioned above, the selected forecast takes into account the potential for new hangar development at the airport. For these reasons, the master plan assumes a more realistic scenario for based aircraft growth that exceeds that which the Aerospace Forecasts projects.

When comparing the master plan forecasts to the TAF for GLE, an adjustment to the TAF operations must be made to account for the ADS-B data that reflects a true baseline of annual operations at the airport. The adjusted figures for the forecast years are based on Texas TAF forecasted growth rates. With this adjustment, the master plan forecasts are within the tolerance for the five- and ten-year periods for annual operations. The based aircraft forecast also meets the TAF tolerance.

TABLE 2R Comparison to FAA Forecasts							
, ,	2025	2030	2035	2045			
FAA AEROSPACE FORECAST COMPARISON							
Operations							
Master Plan Forecast	114,451	121,800	127,500	140,500			
Master Plan Growth Rate		1.3%	1.1%	1.03%			
FAA Aerospace Forecasts Growth Rate		1.4%	1.2%	1.12%			
Max Allowable Master Plan CAGR		1.6%	1.4%				
Based Aircraft							
Master Plan Forecast	115	124	138	166			
Master Plan Growth Rate		1.5%	1.8%	1.85%			
FAA Aerospace Forecasts Growth Rate		0.4%	0.4%	0.50%			
Max Allowable Master Plan CAGR		0.4%	0.5%				
TAF COMPARISON							
Operations							
Master Plan Forecast	114,451	121,800	127,500	140,500			
FAA TAF	24,300	24,300	24,300	24,300			
% Difference	129.9%	133.5%	136.0%	141.0%			
Adjusted FAA TAF	114,451	119,685	125,158	136,866			
% Difference from Adjusted TAF	0.0%	1.8%	1.9%	2.6%			
Based Aircraft							
Master Plan Forecast	115	124	138	166			
FAA TAF	96	121	146	226			
% Difference from TAF	18.0%	2.4%	5.6%	30.6%			
Sources: Coffman Associates Analysis, FAA Aerospace Fo	recast – FY 2025-204	45, FAA 2025 TAF					

POTENTIAL COMMERCIAL PASSENGER SERVICE ENPLANEMENTS

Although scheduled commercial service is not currently offered at GLE, as part of this master plan, an analysis of potential passenger enplanements and commercial operations is being examined to determine possible opportunities and facility needs, should the airport pursue this segment of air travel in the future.



Over the past several years, there have been significant changes in the commercial service industry serving airports. Airline business practices have evolved recently to help airlines become more profitable. Most carriers charge for checked luggage. Most also charge for defined "extras" or "perks" such as greater seat depth, expanded leg room, or window/aisle seats. These charges have generated significant profit centers for the airlines.

In 2007, the U.S. economy was just entering the most significant recession since the Great Depression. Prior to the COVID-19 pandemic, economic conditions had improved with nominal growth rates annually since 2009. During the financial crisis of 2008-09, airlines slashed their flying capacities substantially in response to the sudden decline in demand for air travel. In the following years, even as the demand environment improved, network airlines did not add significant capacity. This was a practice commonly referred to as capacity discipline. The airlines have held back increasing capacity until more recently, which resulted in increased profitability, but fewer network flights and fewer new market routes have been added.

At present, commercial service opportunities at GLE are extremely limited due to the proximity of scheduled air service in the Dallas-Fort Worth Metroplex, with Dallas Fort Worth International Airport (DFW) and Dallas Love Field (DAL) currently offering service. A third Metroplex airport, McKinney National Airport (TKI), recently broke ground on a new passenger terminal, with scheduled commercial passenger airline flights anticipated to begin in late 2026. With access from Gainesville to each of these airports less than 1.5 hours by vehicle, the likelihood of any traditional mainline legacy carrier (American, Delta, and United) and/or Southwest Airlines serving GLE is highly improbable. These airlines are strong anchors at DFW and DAL, and historic trends would suggest that moving to an outlying, tertiary market is unlikely. Moreover, these carriers are similarly unlikely to add operations to a regional nearby airport, thereby competing with themselves at the larger airports in the area. This type of move is considered "splitting" operations. This creates higher local costs, as the airline must staff operations at both locations, which increases operational costs and reduces profitability. These carriers tend to favor the trappings of a larger hub airport, as they depend upon the ability to link their passengers via the "huband-spoke" system.

GLE, as a general aviation airport, is not nor is it planned to offer scheduled passenger service like commercial service airports. Passenger enplanement activity is limited to charter operations only. Paying passengers boarding charter flights are considered enplanements by the FAA. Total enplanements can be an important metric for airports, as airports that exceed 10,000 enplanements are entitled to at least \$1.3 million in capital improvement funding from the FAA via the Airport Improvement Program (AIP). A forecast of charter passenger enplanements is necessary so airports can effectively plan for capital improvements and the funding thereof.

It is also worth noting that, depending on the type of service (scheduled vs. unscheduled, number of seats on the aircraft), the airport may be required to become 14 Code of Federal Regulations (CFR) Part 139 certified. Obtaining a Part 139 certification involves several facility upgrades/modifications, including the installation of passenger and baggage screening facilities, on-site aircraft rescue and firefighting (ARFF) capabilities, and an approved Airport Certification Manual (ACM), among other requirements. In general, an airport must be Part 139-certified if it serves scheduled flights with nine or more passenger seats or unscheduled flights with 31 or more passenger seats. The majority of these



flights operate under Part 121, which governs most scheduled air carriers and sets a rigorous standard for compliance. However, some of the newer entrants, such as JSX, are able to circumvent these requirements through the use of 30-seat aircraft operating under Part 135, which applies to on-demand charters and has less stringent rules than Part 121. In essence, if the City of Gainesville elects to pursue some level of passenger service, consideration must be given to the type of service and the service provider to determine what, if any, security or other facility upgrades would be necessary to support it.

PUBLIC CHARTER ENPLANEMENT FORECAST

At the most basic level, an enplanement forecast can be developed based on the flight schedule, number of available seats, and the board loading factor (BLF). The BLF is the percentage of available seats that are filled. Factors that may positively affect enplanement levels include the reliability of the airline, frequency of the schedule, convenience, and advertising budget, as well as an unlimited number of community factors, such as industry, businesses, places of higher education, and recreational attractions. The purpose is to identify multiple scenarios of potential enplanement and operational figures that can be refined later, if necessary. One additional factor to consider is the willingness of a passenger to drive a longer distance to a hub airport.

Table 2S presents three different potential commercial passenger enplanement and operations scenarios based on potential operator types: passenger membership model carriers, regional jet operators, and irregularly scheduled carriers, such as Allegiant Airlines, Breeze Airlines, or Avelo Airlines. The first scenario is strictly based on passenger membership models, such as Surf Air and similar operators. This scenario uses the eight-seat Pilatus PC-12 single-engine turboprop, at an estimated 80 percent boarding load factor (BLF). Weekly schedules considered 12, 24, and 48 weekly departures, which correlate to two, four, and eight departures daily, Monday through Friday, and one day (or halved each day) on the weekend. Under these scenarios, GLE could experience an estimated annual enplanement level ranging between 3,700 and 15,000 enplanements and an annual commercial aircraft operations level between 1,248 and 4,992.

A second scenario assumes a "hop-on jet service," such as JSX, begins operations at GLE. JSX utilizes 30-seat Embraer E135 and 145 aircraft. A 90 percent BLF was considered, with six, 12, and 24 weekly departures. This resulted in projected enplanements ranging from 8,400 per year on the low end, to 33,700 annual enplanements on the high end. Annual operations ranged from 624 to 2,496.

The third set of scenarios assumed a regional carrier, such as SkyWest Airlines, which operates under contracts with Delta Air Lines, United Airlines, and American Airlines. The analysis offered three different aircraft models: the CRJ200 with 50 passenger seats, the CRJ700 with 70 passenger seats, and the Embraer E175 with 76 passenger seats. The daily departures considered were lower than the passenger membership scenarios, as the aircraft have higher seating capacities. Based on the analysis, the potential enplanements ranged from a low of 12,500 to a high of 49,900. Annual aircraft operations ranged from a low of 624 to a high of 2,496.

Finally, the fourth scenario assumed an irregularly scheduled airline, such as Sun Country Airlines or Allegiant Airlines, which could be utilized to serve demand for local/regional options such as WinStar Casino. This model considered the 186-seat Boeing 737-800 as a typical aircraft for charter operations.



As shown, the analysis considered a range of two to eight weekly departures. Based on the factors presented, the enplanement range was between 15,500 to 62,000. Annual operations ranged from 208 to 832.

TABLE 2S | Enplanements and Operations Based on Potential Flight Schedules

Aircraft Type	ARC	Seats	BLF %	Occupied Seats	Departure	Total Annual	Total		
					Frequency	Enplanements	Operations		
SCENARIO 1 - PASSENGER MEMBERSHIP MODEL SCENARIOS									
Pilatus PC-12	A-II	8	80%	6	12x Weekly	3,700	1,248		
Pilatus PC-12	A-II	8	80%	6	24x Weekly	7,500	2,496		
Pilatus PC-12	A-II	8	80%	6	48x Weekly	15,000	4,992		
SCENARIO 2 - HOP-ON JET	SERVICE								
ERJ E135/145	C-II	30	90%	27	6x Weekly	8,400	624		
ERJ E135/145	C-II	30	90%	27	12x Weekly	16,800	1,248		
ERJ E135/145	C-II	30	90%	27	24x Weekly	33,700	2,496		
SCENARIO 3 - REGIONAL J	SCENARIO 3 - REGIONAL JET OPERATOR SCENARIOS								
CRJ200	D-II	50	80%	40	6x Weekly	12,500	624		
CRJ200	D-II	50	80%	40	12x Weekly	25,000	1,248		
CRJ200	D-II	50	80%	40	24x Weekly	49,900	2,496		
CRJ700	C-II	70	80%	56	6x Weekly	17,500	624		
CRJ700	C-II	70	80%	56	12x Weekly	34,900	1,248		
ERJ E175	C-III	76	80%	61	6x Weekly	19,000	624		
ERJ E175	C-III	76	80%	61	12x Weekly	38,100	1,248		
SCENARIO 4 - IRREGULAR	SCENARIO 4 - IRREGULARLY SCHEDULED CHARTER OPERATOR SCENARIOS								
Boeing 737-800	D-III	186	80%	149	2x Weekly	15,500	208		
Boeing 737-800	D-III	186	80%	149	4x Weekly	31,000	416		
Boeing 737-800	D-III	186	80%	149	8x Weekly	62,000	832		

POTENTIAL ENPLANEMENTS SUMMARY

Capacity constraints at DFW and DAL have resulted in a need for a third commercial service airport to serve the Metroplex, and TKI will be stepping into that role in 2026. While the market will not support a fourth airport offering commercial service using legacy carriers, there is opportunity to establish commercial service at GLE in the form of air charter using non-traditional carriers. A range of potential enplanement forecasts has been presented, resulting in a wide range of possibilities for GLE using various airline scenarios. The purpose of preparing these enplanement projections is to provide the City of Gainesville with the ability to begin preliminary planning for facilities and services to accommodate commercial activities, should the city decide to pursue commercial passenger operators at GLE in the future.

POTENTIAL AIR CARGO FORECASTS

Air freight includes the combined activities of any scheduled passenger airlines carrying freight on scheduled flights and dedicated all-cargo carriers. Air mail may also be carried by both scheduled passenger airlines and all-cargo carriers. Freight and mail together make up air cargo activity at an airport. This section describes the national aviation trends in the air cargo airline industry, as well as scenario-based projections of air cargo activity that could occur at GLE.



NATIONAL AIR CARGO TRENDS

There are many factors that can have an impact on air cargo. While air cargo activity has historically tracked with gross domestic product (GDP), it is impacted by factors such fuel price volatility, alternative shipping modes (trucks, container ships, rail cars, etc.), movement of real yields, globalization, and trade. The FAA's Aerospace Forecast – Fiscal Years (FY) 2025-2045 presents the most recent data on historic air cargo trends, as well as projections for the future. These forecasts are based on several specific assumptions exclusive to the air cargo industry. First, security restrictions will remain in place. Second, most of the shift from air to ground transportation has occurred. Finally, long-term cargo activity is tied to economic growth.

According to this data, U.S. air carriers flew 48.0 billion revenue ton miles (RTMs) in 2024, a slight increase from the 47.3 billion RTMs flown in 2023. This followed a V-shaped recovery since the COVID-19 pandemic, with numbers now exceeding pre-pandemic levels. Total RTMs are projected to grow 4.2 percent in 2025, with an average annual growth rate of 2.9 percent over the next 20 years.

The number of large cargo jet aircraft is forecast to increase from 861 aircraft in 2024 to 1,399 in 2045, driven by the growth in freight RTMs. The narrow-body cargo jet fleet is projected to increase by just four aircraft per year over the next 20 years as 737s are converted from passenger use to cargo service and older 757's are retired. The wide body cargo fleet is forecast to increase by 22 aircraft a year as new 777-8 and converted 767-300 aircraft are added to the fleet, replacing older MD-11, A300, and 747-400 freighters.

REGIONAL CARGO MARKET

GLE does not currently have regular air cargo services, with freight operations in the region largely accommodated by airports within the Dallas-Fort Worth Metroplex. DFW, DAL, and Perot Field/Fort Worth Alliance Airport (AFW) handle the most air cargo in the region. In 2024, DFW handled 878,101,808 pounds of cargo (combined enplaned and deplaned), with UPS, FedEx, and American Airlines as the largest carriers. AFW handled 655,541,031 pounds of cargo, with the majority handled by Air Transport International, FedEx, and Atlas Air. Finally, DAL handled 29,176,768 pounds of cargo, with Southwest Airlines taking on the majority of cargo handling.

AIR CARGO FORECASTS

DFW is largest air cargo hub in the State of Texas, and AFW is the third largest. Both (along with DAL) can easily serve the Gainesville area due to their proximity (~50 miles) and accessibility via Interstate 35 and are well-positioned to serve other markets/communities in and around the Metroplex. The various cargo operators are well established at these airports, making it less likely for them to relocate or expand service to the north at GLE without a significant reason. However, as detailed in Chapter One, the City of Gainesville established Tax Increment Reinvestment Zone (TIRZ) #2 in late 2023, with the intention of attracting industrial/manufacturing developers. This could also include cargo operators. TIRZ #2 encompasses the entirety of airport property as well as adjacent property, so any facility development that would be necessary to support cargo operations would be fully funded by the city, rather than the



operator. In terms of facilities that would be necessary to support air cargo, a significant portion of GLE property is undeveloped (or underdeveloped) and has the potential to support facilities such as a dedicated cargo apron, associated building(s), and a truck docking area.

Consideration was given to two scenarios in which air cargo service is established at GLE. The first considers the potential for a traditional cargo carrier, such as FedEx or UPS, to provide service using Boeing 757-200 or Boeing 767-300 aircraft. On average, these aircraft have a maximum payload of 109,000 pounds. If these aircraft were to operate at GLE twice daily, it would result in a potential annual landing weight of approximately 80.2 million pounds. Another option to consider may be the potential for GLE to be served by feeder or just-in-time (JIT) cargo carriers, such as Ameriflight, Baron Aviation, or Empire Airlines. These and similar providers operate smaller aircraft, such as the Beechcraft 1900 or the Cessna 208, that have an average maximum payload of 4,570 pounds. Assuming two daily arrivals by one of these aircraft at the average payload results in a potential annual landing weight of approximately 3.4 million pounds.

AIRCRAFT/AIRPORT/RUNWAY CLASSIFICATION

The FAA has established several aircraft classification systems that group aircraft types based on their performance (approach speed in landing configuration) and design characteristics (wingspan and landing gear configuration). These classification systems are used to determine the appropriate airport design standards for specific airport elements, such as runways, taxiways, taxilanes, and aprons.

AIRCRAFT CLASSIFICATION

The selection of appropriate FAA design standards for the development and location of airport facilities is based primarily on the characteristics of the aircraft that currently use or are expected to use an airport. The critical aircraft is used to define the design parameters for an airport. The critical aircraft may be a single aircraft type or a composite aircraft that represents a collection of aircraft with similar characteristics. The critical aircraft is classified by three parameters: aircraft approach category (AAC), airplane design group (ADG), and taxiway design group (TDG).

FAA AC 150/5300-13B, Airport Design, Change 1 describes the following airplane classification systems, the parameters of which are presented on **Exhibit 2G**.

Aircraft Approach Category (AAC) The AAC is a grouping of aircraft based on a reference landing speed (V_{REF}) , if specified. If V_{REF} is not specified, it is based on 1.3 times stall speed (V_{SO}) at the maximum certificated landing weight. V_{REF} , V_{SO} , and the maximum certificated landing weight are values established for the aircraft by the certification authority of the country of registry.

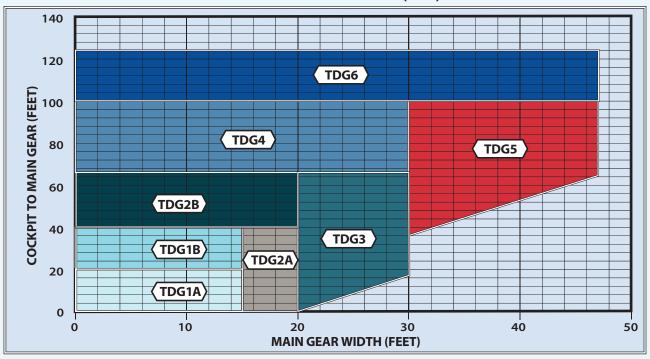
The AAC generally refers to the approach speed of an aircraft in landing configuration. The higher the approach speed, the more restrictive the applicable design standards will be. The AAC is depicted by a letter (A through E) and relates to aircraft approach speed (operational characteristics). The AAC generally applies to runways and runway-related facilities, such as runway width, runway safety area (RSA), runway object free area (ROFA), runway protection zone (RPZ), and separation standards.



AIRCRAFT APPROACH CATEGORY (AAC)								
Category	Approach Speed							
A	Less than 91 knots							
В	91 knots or more but	less than 121 knots						
С	121 knots or more bu	t less than 141 knots						
D	141 knots or more bu	t less than 166 knots						
Е	166 knots or more							
	AIRPLANE DESIGN GROUP (ADG)							
Group #	Tail Height (feet) Wingspan (feet)							
I	<20	<49						
II	20 <u><</u> 30 49 <u><</u> 79							
III	30 <u><</u> 45 79 <u><</u> 118							
IV	45 <u><</u> 60 118 <u><</u> 171							
V	60 <u>≤</u> 66 171≤214							
VI	66≤80 214≤262							
	VISIBILITY MINIMUMS							
RVR* (ft)	Flight Visibility Cate	egory (statute miles)						
VIS	3-mile or greater visibility minimums							
5,000	Not lower than 1-mile							
4,000	Lower than 1-mile but not lower than ¾-mile							
2,400	Lower than ¾-mile but not lower than ½-mile							
1,600	Lower than ½-mile but not lower than ¼-mile							
1,200	Lower that	an ¼-mile						

*RVR: Runway Visual Range

TAXIWAY DESIGN GROUP (TDG)



Source: FAA AC 150/5300-13B, Airport Design, Change 1



A-I	Aircraft	TDG	C/D-II	Aircraft	TDG
N837N	 Beech Bonanza Cessna 150, 172 Piper Comanche, Seneca 	1A 1A 1A		 Challenger 600/604 Cessna Citation III, VI,VII, X Embraer Legacy 135/140 Gulfstream IV (D-II) Gulfstream G280 Lear 70, 75 Falcon 50, 900, 2000 Hawker 800XP, 4000 	1B 1B 2B 2A 1B 1B 2A 1B
B-I	 Eclipse 500 Beech Baron 55/58 Beech King Air 100 Cessna 421 Cessna Citation M2 (525) Cessna Citation 1(500) Embraer Phenom 100 	1A 1A 1A 2A 1A 1A	C/D-III less than 150,000 lbs.	 Gulfstream V Gulfstream 550, 600, 650 Global 5000, 6000 	2B 2B 2B
A/B-II 12,500 lbs. or less	 Beech Super King Air 200 Beech King Air 90 Cessna 441 Conquest Cessna Citation CJ2 Pilatus PC-12 	2A 1A 1A 2A 2	C/D-III over 150,000 lbs.	• Airbus A319, A320, A321 • Boeing 737-800, 900 • MD-83, 88	3 3 4
B-II over 12,500 lbs.	 Beech Super King Air 350 Cessna Citation CJ3(525B) Cessna Citation CJ4 (525C) Cessna Citation Latitude Embraer Phenom 300 Falcon 20 Pilatus PC-24 	2A 2A 1B 1B 1B 1B 2A	C/D-IV	 Airbus A300 Boeing 757-200 Boeing 767-300, 400 MD-11 	5 4 5 6
A/B-III	• Bombardier Dash 8 • Bombardier Global 7500 • Falcon 7X, 8X	3 2B 2A	C/D-V	 Airbus A330-200, 300 Airbus A340-500, 600 Boeing 747-100 - 400 Boeing 777-300 Boeing 787-8, 9 	5 6 5 6 5
C/D-I	• Lear 35, 40, 45 , 55, 60XR • F-16	1B 1A	E-I	• F-15	1B

Note: Aircraft pictured is identified in bold type.



Airplane Design Group (ADG) | The ADG is depicted by a Roman numeral (I through VI) and is a classification of aircraft that relates to aircraft wingspan or tail height (physical characteristics). When the aircraft wingspan and tail height fall in different groups, the higher group is used. The ADG influences design standards for taxiway safety area (TSA), taxiway object free area (TOFA), taxilane object free area, apron wingtip clearance, and various separation distances.

Taxiway Design Group (TDG) | The TDG is a classification of airplanes based on outer-to-outer main gear width (MGW) and cockpit to main gear (CMG) distance. The TDG relates to the undercarriage dimensions of the critical aircraft and is classified by an alphanumeric system (1A, 1B, 2A, 2B, 3, 4, 5, 6, and 7). The taxiway design elements determined by the application of the TDG include the taxiway width, taxiway edge safety margin, taxiway shoulder width, taxiway fillet dimensions, and (in some cases) the separation distance between parallel taxiways/taxilanes. Other taxiway elements – such as the taxiway safety area (TSA), taxiway/taxilane object free area (TOFA), taxiway/taxilane separation to parallel taxiway/taxilanes or fixed or movable objects, and taxiway/taxilane wingtip clearances – are determined solely based on the wingspan (ADG) of the critical aircraft utilizing those surfaces. It is appropriate for taxiways to be planned and built to different TDG standards, based on expected use.

The reverse side of **Exhibit 2G** summarizes the classifications of the most common aircraft in operation today. Generally, recreational and business piston and turboprop aircraft will fall in AAC A and B, and ADG I and II. Business jets typically fall in AAC B and C, while the larger commercial aircraft will fall in AAC C and D.

AIRPORT AND RUNWAY CLASSIFICATIONS

Along with the aircraft classifications defined previously, airport and runway classifications are used to determine the appropriate FAA design standards to which the airfield facilities should be designed and built.

Runway Design Code (RDC) | The RDC is a code that signifies the design standards to which the runway should be built. The RDC is based on planned development and has no operational component. The AAC, ADG, and runway visual range (RVR) are combined to form the RDC of a runway. The RDC provides the information needed to determine certain applicable design standards. The first component, the AAC, is depicted by a letter and relates to aircraft approach speed (operational characteristics). The second component, the ADG, is depicted by a Roman numeral and relates to either the aircraft wingspan or tail height (physical characteristics), whichever is most restrictive. The third component relates to the currently published¹ instrument approach visibility minimums expressed by RVR values in feet of 1,200 (½-mile), 1,600 (½-mile), 2,400 (½-mile), 4,000 (¾-mile), and 5,000 (1-mile). The RVR values approximate standard visibility minimums for instrument approaches to the runways. The third component is labeled "VIS" for runways that are designed for visual approach use only.

¹ Instrument approach procedures are published in the FAA's Instrument Flight Procedures Information Gateway at: https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/.



Approach Reference Code (APRC) | The APRC is a code that signifies the current operational capabilities of a runway and associated parallel taxiway in regard to landing operations. The APRC has the same three components as the RDC: AAC, ADG, and RVR. The APRC describes the current operational capabilities of a runway under particular meteorological conditions in which no special operating procedures are necessary, as opposed to the RDC, which is based on planned development and has no operational component. The APRC for a runway is established based on the minimum runway-to-taxiway centerline separation.

Departure Reference Code (DPRC) | The DPRC is a code that signifies the current operational capabilities of a runway and associated parallel taxiway in regard to takeoff operations. The DPRC represents those aircraft that can take off from a runway while any aircraft are present on adjacent taxiways, under particular meteorological conditions with no special operating conditions. The DPRC is similar to the APRC but has two components: AAC and ADG. A runway may have more than one DPRC, depending on the parallel taxiway separation distance.

Airport Reference Code (ARC) | The ARC is an airport designation that signifies the airport's highest RDC minus the third (visibility) component of the RDC. The ARC is used for planning and design only and does not limit the aircraft that may be able to operate safely at an airport. The current airport layout plan (ALP) for GLE identifies the existing and ultimate ARCs for Runway 18-36 as B-II (existing) and C/D-II (ultimate) and B-II for Runway 13-31 in the existing and ultimate conditions.

CRITICAL AIRCRAFT

The selection of appropriate FAA design standards for the development and location of airport facilities is based primarily on the characteristics of the aircraft that currently use or are expected to use an airport. The critical aircraft is used to define the design parameters for an airport. The critical aircraft may be a single aircraft or a composite aircraft that represents a collection of aircraft classified by the three parameters: AAC, ADG, and TDG.

The first consideration is the safe operation of aircraft that are likely to use an airport. Any operation of an aircraft that exceeds the design criteria of an airport may result in a lesser safety margin; however, it is not the usual practice to base the design of an airport on an aircraft that uses the airport infrequently.

The critical aircraft is defined as the most demanding aircraft type, or grouping of aircraft with similar characteristics, that makes regular use of the airport. Regular use is 500 annual operations, excluding touch-and-go operations. Planning for future aircraft use is important because the design standards are used to plan separation distances between facilities. These future standards must be considered now to ensure that short-term development does not preclude the reasonable long-range potential needs of the airport.

According to FAA AC 150/5300-13B, Airport Design, Change 1, "airport designs based only on aircraft currently using the airport can severely limit the airport's ability to accommodate future operations of more demanding aircraft. Conversely, it is not practical or economical to base airport design on aircraft that will not realistically use the airport." Selection of the current and future critical aircraft must be practical in nature and supported by current data and realistic projections.



GENERAL AVIATION DESIGN AIRCRAFT

Three elements are used to classify the airport design aircraft: AAC, ADG, and TDG. The AAC and ADG are examined first, followed by the TDG. The FAA's *Aircraft Characteristics Database*² (most recently updated in October 2023) is the source for data pertaining to an aircraft's designated AAC, ADG, and TDG.

The FAA's TFMSC database includes documentation of commercial (air carrier and air taxi), general aviation, and military aircraft traffic. Due to factors such as incomplete flight plans, limited radar coverage, and VFR operations, TFMSC data does not account for all aircraft activity at an airport by a given aircraft type; however, the TFMSC provides an accurate reflection of instrument flight rules (IFR) activity. Operators of high-performance aircraft, such as turboprops and jets, tend to file flight plans at a high rate. According to TFMSC data for GLE, operations conducted by aircraft with an AAC/ADG of B-II have exceeded 500 annual operations at the airport each year since 2020, except for 2020 and 2022. As such, the historical operational activity indicates GLE's existing ARC is B-II.

Of the 772 operations conducted by ARC B-II aircraft in 2025 (12-month period ending May 2025), the most frequent aircraft operating at GLE are the Cessna Excel XLS, the Cessna Citation V, and the Cessna Citation CJ2. The Cessna Excel XLS has the greatest number of operations within the B-II category and is identified as GLE's existing critical aircraft.

To determine the airport's future ARC, annual operations by ARC were forecasted through 2045 using a growth rate forecast based on industry growth trends within each ARC category. Historical and forecast operations by ARC are depicted in **Table 2T**. Operations levels within the higher C-III and D-II/III categories are anticipated to increase, but likely not to levels that will exceed the threshold of 500 annual operations; therefore, for conceptual planning purposes, GLE's future critical aircraft is identified within the C-II category and is represented by the Dassault Falcon 900. It should be noted that this future critical aircraft is assumed to be representative of general aviation activity only, and if commercial service and/or air cargo were to be initiated at GLE, the future critical aircraft is assumed to be larger. This will be discussed in greater detail below.

TABLE 2T	ABLE 2T Historical and Forecast Operations by Airport Reference Code								
Year	B-I	B-II	C-I	C-II	C-III	D-II	D-III		
Historical	Historical								
2020	334	405	119	173	0	0	0		
2021	458	531	96	188	0	2	4		
2022	230	384	65	207	0	0	1		
2023	335	523	73	144	1	10	0		
2024	262	558	121	186	2	6	6		
2025*	509	772	120	189	6	2	0		
CAGR	8.8%	13.8%	0.2%	1.8%					
Forecast									
2030	483	1,034	120	243	10	10	15		
2035	458	1,385	120	311	16	25	60		
2045	412	2,485	120	513	45	50	100		
CAGR	-1.1%	6.0%	0.0%	5.1%	10.6%	17.5%			

A-I and A-II are not shown as smaller/slower aircraft are unlikely to impact critical design aircraft. B-III, C-IV through C-V, and D-IV and above are not shown due to minimal activity at GLE.

*2025 data represent 12 months ending May 31, 2025

Sources: FAA TFMSC; Virtower; Coffman Associates analysis

FAA Aircraft Characteristics Database can be accessed at https://www.faa.gov/airports/engineering/aircraft_char_database.



GENERAL AVIATION TAXIWAY DESIGN GROUP

The TFMSC also provides a breakdown of aircraft operations by TDG. According to GLE operations data (presented in **Table 2U**), the highest TDG that exceeds the threshold of 500 annual operations in 2025 is TDG 1B. However, as previously stated, the TFMSC does not capture all operations occurring at an airport due to limitations in radar coverage and other factors. Moreover, operations within TDG 2A have generally increased since 2020, with over 400 operations by aircraft in 2024 and over 450 operations in 2025. For these reasons, TDG 2A is considered the existing and ultimate TDG critical design aircraft.

TABLE 2U GLE Operations by Taxiway Design Group								
TDG	2020	2021	2022	2023	2024	2025*	CAGR	
1A	990	1,232	975	1,125	1,099	1,165	3.3%	
1B	455	505	388	443	555	525	2.9%	
2A	305	347	287	369	424	454	8.3%	
2B	2	6	1	0	10	4	14.9%	
3	8	0	4	5	0	0	-100.0%	
*2025 data represent a 12-month period ending June 2025.								

Source: FAA TFMSC data

GENERAL AVIATION RUNWAY DESIGN CODE

The RDC relates to specific FAA design standards that should be met in relation to a runway. The RDC takes the AAC, ADG, and the RVR into consideration. In most cases, the critical design aircraft will also be the RDC for the primary runway.

The current runway design at GLE for primary Runway 18-36 should meet the overall airport design aircraft, which has been identified for the existing condition as the Cessna Excel XLS, a B-II aircraft. In the ultimate condition, larger business jets such as the Dassault Falcon 900 are anticipated to use the airport more frequently. This airplane is included within the C-II and TDG 2A families. Both runway ends have a global positioning system (GPS)-based approach with localizer performance with vertical guidance (LPV) with visibility minimums as low as ¾-mile (Runway 36) and ¾-mile (Runway 18). The RVR value assigned to a runway with ¾-mile minimums is 4000; therefore, the applicable existing RDC for Runway 18-36 is B-II-4000, and the ultimate RDC is C-II-4000. The APRC for Runway 18-36, which has a minimum runway/taxiway separation distance of 400 feet, is established as D/IV/4000 & D/V/4000. The DPRC is the same as the APRC with the RVR component removed.

Crosswind Runway 13-31 has historically been designed to ARC B-II standards; there are no published instrument approach procedures. The primary runway provides greater than 95 percent crosswind coverage at 10.5 knots. As a result, the crosswind runway design is only justified to A/B-I design standards; therefore, **the existing and ultimate RDC for Runway 13-31 is A/B-I-VIS**. The critical aircraft for the crosswind runway is identified as the Cessna 421 Golden Eagle, which is the most physically demanding A/B-I and TDG 2A aircraft operating at the airport on a frequent basis. As Runway 13-31 is not served by a parallel or partial-parallel taxiway, there is no APRC or DPRC component.



COMMERCIAL SERVICE/CARGO DESIGN AIRCRAFT

Several scenarios involving different aircraft types were considered when evaluating the potential for commercial passenger service or air cargo. These ranged from smaller aircraft in the A-II family, such as the Pilatus PC-12 or the Cessna 208, to larger aircraft in the C/D-III and IV families, such as the Boeing 737-800 and 767. For future planning purposes, the most physically demanding of these aircraft will be considered the ultimate design aircraft, as the turboprops and small jets considered have similar needs as their general aviation counterparts and are thus encompassed within that segment. As such, the ultimate commercial service critical aircraft is the Boeing 737-800, with an ARC of D-III and a TDG of 3. The ultimate cargo critical aircraft is the Boeing 767-300, a C-IV aircraft with a TDG of 5.

CRITICAL AIRCRAFT SUMMARY

Table 2V summarizes the current and future runway classifications for various segments of activity at GLE, including general aviation, commercial service, and air cargo. With no established commercial service or air cargo operator at the airport, it should be clearly noted that the critical aircraft listed below for these segments are included for ultimate planning purposes only.

	Runway 18-36 (Existing)	Runway 18-36 (Ultimate)	Runway 13-31 (Existing and Ultimate)
GENERAL AVIATION			
Airport Reference Code (ARC)	B-II	C-II	A/B-I
Critical Aircraft	Cessna Excel XLS	Falcon 900	Cessna 421 Golden Eagle
Runway Design Code (RDC)	B-II-4000	C-II-4000	A/B-I-VIS
Taxiway Design Group (TDG)	2A	2A	2A
Approach Reference Code (APRC)	D/IV/4000 D/V/4000	D/IV/4000 D/V/4000	N/A
Departure Reference Code (DPRC)	D/IV D/V	D/IV D/V	N/A
POTENTIAL COMMERCIAL SERVICE			
Airport Reference Code (ARC)	N/A	D-III	N/A
Critical Aircraft	N/A	Boeing 737-800	N/A
Runway Design Code (RDC)	N/A	D-III-2400*	N/A
Taxiway Design Group (TDG)	N/A	3	N/A
POTENTIAL AIR CARGO			
Airport Reference Code (ARC)	N/A	C-IV	N/A
Critical Aircraft	N/A	Boeing 767-300	N/A
Runway Design Code (RDC)	N/A	C-IV-2400*	N/A
Taxiway Design Group (TDG)	N/A	5	N/A

Note: APRC and DPRC data can be found in FAA AC 150/5300-13B, Change 1, Appendix L, Tables L-1 and L-2.

Source: FAA AC 150/5300-13B, Airport Design, Change 1

^{*}Lower approach minimums may be necessary to support potential commercial service or air cargo operations. This will be discussed in greater detail in Chapter Three, Facility Requirements.



SUMMARY

This chapter has outlined the various activity levels that might reasonably be anticipated over the planning period, as well as the critical aircraft for the airport. Total based aircraft are forecast to grow from the current count of 115 to 166 by 2045. Operations are forecast to grow from 114,451 in 2025 to 140,500 by 2045. This projected growth is driven by the FAA's positive outlook for GA activity nationwide, as well as positive socioeconomic outlooks for the region.

The critical aircraft for the airport was determined by examining the FAA TFMSC database of flight plans. The existing general aviation critical aircraft for the primary runway is described as B-II, with the Cessna Excel XLS as the representative aircraft, transitioning to C-II at some point in the future, with the Falcon 900 serving as the representative aircraft. For crosswind Runway 13-31, the existing and ultimate ARC is A/B-I, with the Cessna 421 Golden Eagle as the representative aircraft.

The potential for commercial air service and air cargo was also examined. While GLE is unlikely to ever provide scheduled passenger service involving legacy carriers, there may be opportunities for scheduled public charters using non-traditional carriers. In terms of air cargo potential, GLE has the capability to serve as a hub for a cargo provider but may face challenges due to its proximity to the Metroplex and its three major cargo hubs.

The next step in the planning process is to assess the capabilities of the existing facilities to determine what upgrades may be necessary to meet future demands. The range of forecasts developed here will be carried forward to the next chapter as planning horizon activity levels that will serve as milestones or activity benchmarks in evaluating facility requirements.