



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Federal Aviation Administration  
Southwest Region, Airports Division  
Texas Airports Development Office

FAA-ASW-650  
10101 Hillwood Pkwy.  
Fort Worth, Texas 76177

April 28, 2023

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DFW International Airport  
3003 S. Service Road, Annex A  
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Federal Aviation Administration (FAA)  
DFW International Airport (DFW) Aviation Activity Forecast Approval  
DFW Operations Memo: Additional Gate and Cargo Capacity

The FAA Airports District Office has reviewed the aviation forecast for the DFW International Airport (DFW) Additional Gate and Cargo Capacity dated April 24, 2023. The FAA approves these forecasts for airport planning purposes, including Airport Layout Plan (ALP) development, in addition to the existing and future critical aircraft.

Our approval is based on the following:

- The forecast is supported by reasonable planning assumptions and current data
- The forecast appears to be developed using acceptable forecasting methodologies
- The difference between the FAA Terminal Area Forecast (TAF) and the Airport's forecast for total operations is within the 10 percent and 15 percent allowance for the 5 and 10 year planning horizons.

Approval of this forecast does not automatically justify any of the capital improvements shown on the ALP or recommended in the master plan. All future projects will need to be justified by current activity levels at the time of proposed implementation. Lastly, the approved forecasts may be subject to additional analysis, or the FAA may request a sensitivity analysis if this data is to be used for environmental or Part 150 noise planning purposes.

Accordingly, FAA approval of this forecast does not constitute justification for future projects. Justification for future projects will be made based on activity levels at the time the project is requested for development. Documentation of actual activity levels meeting planning activity levels will be necessary to justify AIP funding for eligible projects.

If you have any questions about this forecast approval, please call me at (XXX) XXX-XXXX.

Sincerely,

# DFW OPERATIONS MEMO

March 23, 2023; Updated: April 24, 2023

To: Federal Aviation Administration

Subject: Additional Gate and Cargo Capacity at DFW

**Objective of Memorandum.** The objectives of this Operations Memorandum (Memo) are to: 1) outline the Dallas Fort Worth International Airport's (DFW) concurrence and alignment with the FAA's 2021 Terminal Area Forecast (TAF) released in March of 2022, 2) discuss DFW's terminal and cargo operational needs, 3) request FAA's approval of the aviation activity forecast and aircraft fleet mix that will be used to support the National Environmental Policy Act (NEPA) process, including noise and air quality modeling, and (4) to provide further details in support of pending environmental reviews and federal actions for the needed commercial service terminal and cargo development projects. The FAA's TAF, by design, is an unconstrained forecast, and this memo seeks to identify the constraints at DFW Airport. The objective of this memo is to request FAA's approval of the aviation activity forecast and aircraft fleet mix that will be used to support the National Environmental Policy Act (NEPA) process, including noise and air quality modeling.

This Operational Memo demonstrates that a total of 31 contact gates are needed to meet DFW's forecasted passenger operational demand by 2039. Additionally, this memo demonstrates that two cargo buildings and five cargo-aircraft parking positions are needed to meet the forecasted cargo demand by 2026. Since late 2021, DFW Airport has been working collaboratively with the FAA on advancing the Central Terminal Area (CTA) expansion project and 19<sup>th</sup> Street Cargo Redevelopment project.

The CTA expansion project was originally envisioned as constructing two piers at Terminals A and C for a net increase of nine gates. However, DFW Airport has been rapidly recovering from the impacts of the COVID-19 pandemic, serving approximately 55.4 million passengers in Fiscal Year 2021 (FY21) and approximately 72.1 million passengers in FY22. This growth in passengers demonstrates a 30.2 percent year-over-year increase. As DFW continues to rapidly recover from the impact of the pandemic and serve forecast demand beyond 2019 levels, in both operations and passenger demand, it is critical for DFW to consider the Airport's needs

beyond the initial nine gates. As the analysis, detailed in this memo, illustrates, additional passenger gates are necessary to meet the needs of the Airport beyond the originally planned nine gates in addressing demand through 2039.

In addition to the commercial passenger service growth outlined above, DFW's air cargo operations have grown substantially over the past six years. From 2013 to 2019, DFW's air cargo growth rate was more than double the global average (5.88% vs. 2.45%). In FY22, DFW cargo volumes were approximately 941,587 tons, and by 2038, approximately 1.5 million tons of cargo will move through DFW. Cargo volumes are projected to increase at an annual average growth rate of approximately 2.6 percent. DFW identified that much of the anticipated cargo growth would come from Asian and Latin American markets, which makes DFW uniquely positioned, as six of the top 10 cargo airlines operating at DFW are Asian carriers. Based on actual cargo throughput and forecasted air cargo growth, the existing cargo facilities (buildings and ramp space) do not have the capacity to meet the growing demand and DFW became cargo-constrained in Fall 2022. DFW is now lagging behind the global average growth rate, due to cargo space limitations, herein referred to as the cargo capacity constraint, in the existing cargo buildings and on the associated aprons. Given the cargo capacity constraint, DFW has identified a need to construct additional cargo buildings and associated apron space for the parking, loading, and unloading of aircraft.

This Operations Memo is formatted into the following sections for ease of review:

- FAA Terminal Area Forecast Analysis
- FAA Forecast of Operational Activity
- Suitability of 2021 TAF for Planning Needs
- Cargo Operations
  - Cargo Development Background
  - DFW Cargo Only Historical and Future Activity
  - Anticipated Cargo Growth
  - Definition of Cargo Constraint
  - Cargo Facility Operational Needs
  - Cargo Conclusion
- Passenger Operations
  - Terminal Development Background
  - FAA Forecast of Enplanement Activity
  - Aircraft Gate Operational Needs
  - DFW Historic Gate Turn Activity

- DFW Current Gate Turn Activity
- Gate Turns Per Day Constraint
- DFW Aircraft Gate Needs Conclusion
- Conclusion
- Addendum 1
- Appendix 1

**FAA Terminal Area Forecast Analysis.** Since the initial publication of this Operations Memo, which used the FAA’s 2021 TAF, the FAA released its updated 2022 TAF. The 2022 TAF forecasted fewer operations than the 2021 forecast, with approximately 5% fewer operations in the near term (late 2020s) and 2% fewer in the out years (2030s), as illustrated in Table 1 below. The 2021 TAF is within the FAA’s acceptable differences, as defined in FAA guidance titled *Review and Approval of Aviation Forecasts* dated June 2008 (Forecast differ less than 10 percent in the 5-year forecast period and 15 percent in the 10-year forecast period).

**Table 1 – FAA 2021 & 2022 TAF Comparison**

Annual Operations			
TAF Year	2021 TAF	2022 TAF	% Change
2022	674,314	663,426	-1.61%
2023	740,015	704,475	-4.80%
2024	789,504	732,873	-7.17%
2025	808,211	760,091	-5.95%
2026	816,119	775,774	-4.94%
2027	830,295	791,420	-4.68%
2028	846,510	808,541	-4.49%
2029	861,641	825,837	-4.16%
2030	876,197	843,168	-3.77%
2031	890,476	860,465	-3.37%
2032	904,988	877,567	-3.03%
2033	919,278	894,735	-2.67%

DFW Airport has seen a consistent growth trend in its annual operations and enplaned passengers. It has also recovered from the pandemic more quickly than other large hub airports. In fact, in 2022, Airports Council International North America (ACI-NA) ranked DFW as the 2nd busiest airport for total passengers and 10th for air cargo volume. Given DFW’s recovery, as evidenced by robust operational rankings and a review of the 2022 TAF, which reflects lower growth levels, DFW determined that the 2021 TAF is more relevant to the existing and anticipated operating environment. The growth rate within the 2021 TAF more accurately mirrors DFW’s recovery from the COVID-19 pandemic and DFW’s anticipated future growth.

The sections below contain the analysis undertaken using the 2021 TAF.

**FAA Forecast Operational Activity.** The FAA TAF for historical and forecast DFW operations is provided in **Table 2. Figure 1** provides a graphical illustration of the historical and forecast operations shown in Table 2. As shown, historical DFW operations have remained consistent until a sharp decline in 2020 due to the COVID pandemic. With the recovery in air travel post-

pandemic, and the continued growth in air cargo operations, the FAA forecasts DFW's operations to surpass 2019 operations levels by 2023 and exceed 900,000 operations by 2032.

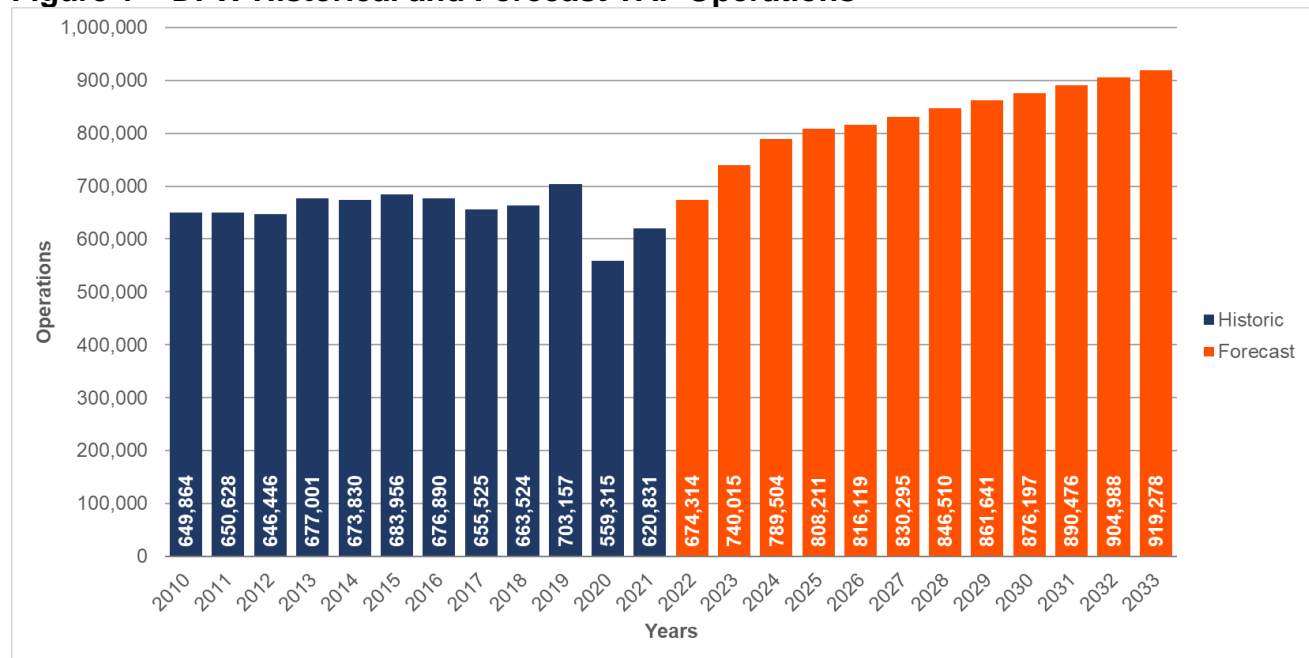
**Table 2 – DFW Historical and Forecast TAF Operations**

Historic Aircraft Operations					
TAF Year	Air Carrier	Air Taxi & Commuter	General Aviation	Military	Total Operations
2003	481,987	269,560	6,837	153	758,537
2004	517,964	278,011	6,470	183	802,628
2005	492,457	233,207	8,520	261	734,445
2006	479,877	214,559	9,660	336	704,432
2007	475,455	205,731	7,655	483	689,324
2008	480,888	181,032	5,861	948	668,729
2009	472,554	158,512	4,800	582	636,448
2010	470,969	173,257	5,149	489	649,864
2011	470,851	173,474	6,087	216	650,628
2012	445,404	194,982	5,874	186	646,446
2013	451,992	218,507	6,359	143	677,001
2014	463,223	203,034	7,406	167	673,830
2015	500,909	175,911	6,964	172	683,956
2016	523,903	145,944	6,787	256	676,890
2017	555,478	93,155	6,747	145	655,525
2018	578,295	78,497	6,572	160	663,524
2019	611,239	85,517	6,156	245	703,157
2020	482,529	72,186	4,388	212	559,315
2021	540,327	75,488	4,803	213	620,831
Forecast Aircraft Operations					
TAF Year	Air Carrier	Air Taxi & Commuter	General Aviation	Military	Total Operations
2022	594,676	73,140	6,285	213	674,314
2023	665,928	67,569	6,305	213	740,015
2024	729,813	53,154	6,324	213	789,504
2025	760,859	40,796	6,343	213	808,211
2026	781,450	28,093	6,363	213	816,119
2027	798,840	24,859	6,383	213	830,295
2028	814,665	25,230	6,402	213	846,510
2029	829,425	25,581	6,422	213	861,641
2030	843,620	25,922	6,442	213	876,197
2031	857,544	26,258	6,461	213	890,476
2032	871,694	26,600	6,481	213	904,988
2033	885,625	26,939	6,501	213	919,278
2034	899,891	27,288	6,521	213	933,913
2035	914,167	27,640	6,541	213	948,561
2036	928,457	27,994	6,561	213	963,225

Source: FAA 2021 TAF, queried September 2022.

Note: Data in table is based on FY

**Figure 1 – DFW Historical and Forecast TAF Operations**



Source: FAA 2021 TAF, queried September 2022.

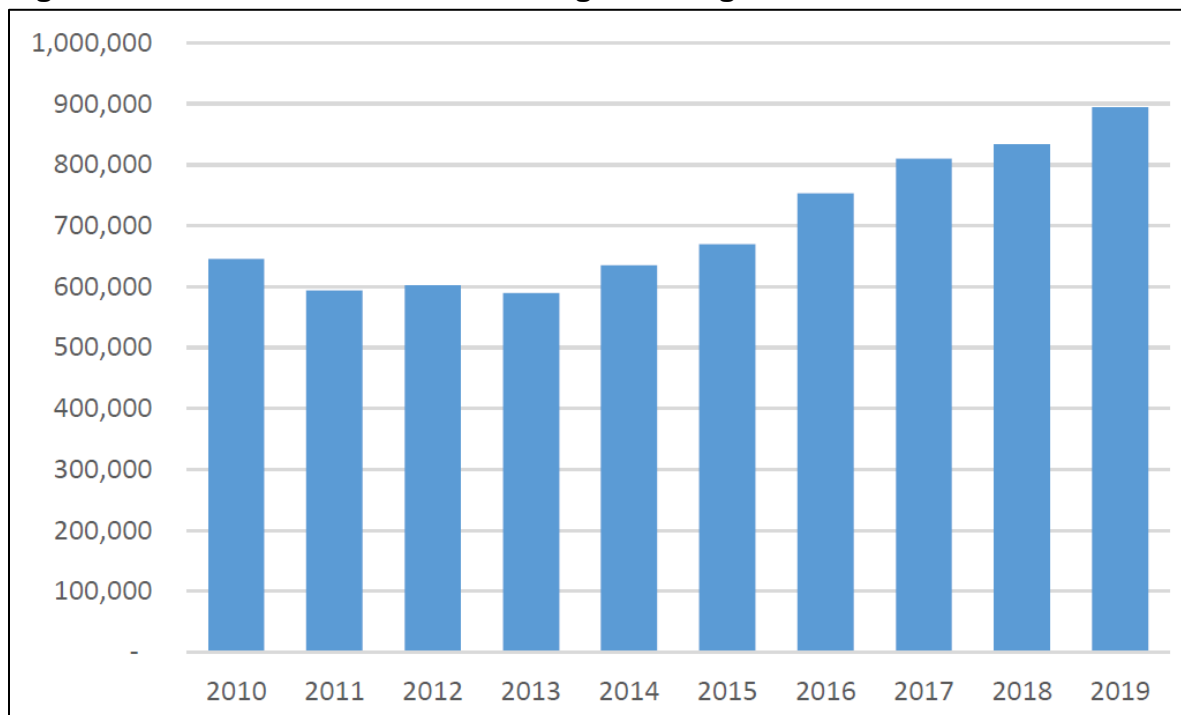
**Suitability of 2021 TAF for Planning Needs.** Upon a detailed review of the 2021 TAF, it was determined that the Air Carrier and Air Taxi operational forecast is in line with current operational levels and anticipated airport growth. For the 12-months ending September 2022, DFW Airport accommodated approximately 655,000 Air Carrier and Air Taxi operations. This is in line with the 667,816 operations forecast in the 2021 TAF for the year 2022, as operations through the end of the calendar year 2022 are expected to continue to grow. Therefore, the Airport determined that the 2021 TAF reflects an unconstrained forecast for the purposes of determining passenger and cargo needs at DFW.

## CARGO OPERATIONS

**Cargo Development Background.** The aircraft operational impact of air cargo is often difficult to forecast as cargo arrives at the airport via a number of modes, those primarily being within the belly of commercial or general aviation aircraft or via dedicated cargo operators such as Federal Express or UPS. As a result of the mixed delivery methods, cargo forecasts are often done using tonnage versus aircraft operations.

As shown in **Figure 2**, DFW's annual cargo tonnage totals have continually grown since 2013, with a 51.7 percent increase in air cargo over the last six years and a 39 percent increase over the last ten years. DFW receives substantial cargo contributions from FedEx, UPS, and American Airlines'; historically, American Airlines, UPS, and FedEx have accounted for nearly 62 percent of total air cargo tonnage at DFW.

**Figure 2 – DFW Historical Annual Cargo Tonnage**



Source: Landrum and Brown Analysis, June 2020.

As a result of this increase in cargo tonnage from 2013 through 2019, combined with an increase in cargo demand during the COVID pandemic, DFW undertook a cargo tonnage forecast along with a cargo building facility assessment. The purpose of these activities



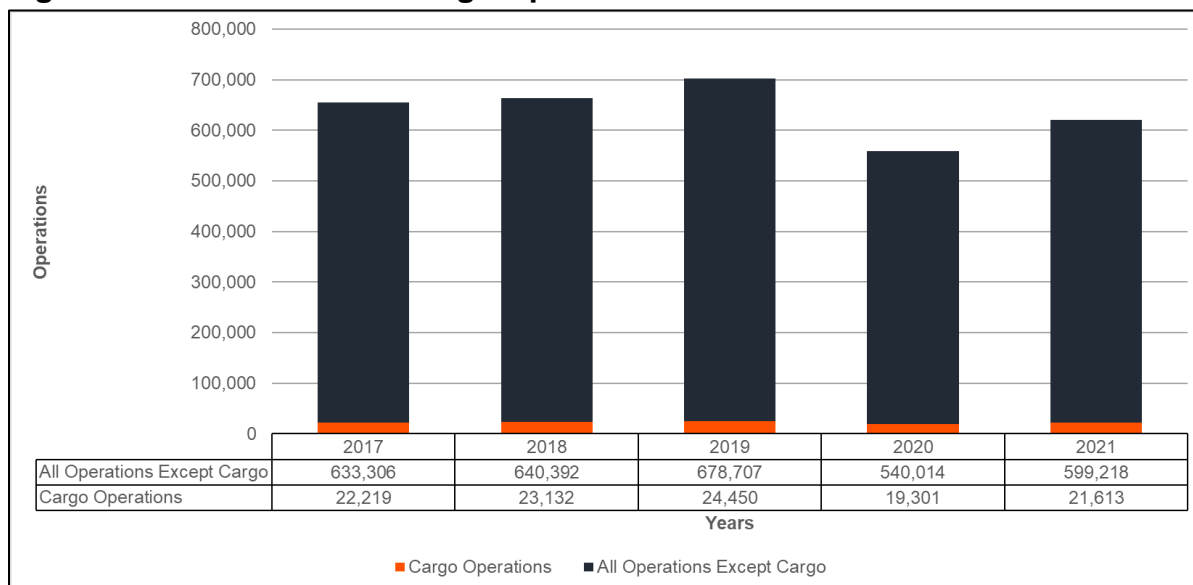
was to identify future cargo demands and determine if existing facilities can accommodate the processing and transfer of cargo from aircraft to the end destination.

The total forecast volume of air cargo at DFW was forecast to have growth in belly cargo from American Airlines, as well as growth in the overall cargo market. Total cargo tonnage was projected to increase from 911,489 tons in 2018 to approximately 1,514,889 tons in 2038, a Compound Annual Growth Rate (“CAGR”) of 2.6 percent.

For this operational memo, the portion of tonnage transported via commercial service belly operations will be separated from the “cargo only” operators at DFW. The purpose of the discussion above was to communicate the means of cargo transport and the expected growth. For the purposes of the aircraft operational impact of cargo growth, analysis in later sections will focus on “cargo only” operators at the airport.

**DFW Cargo-Only Historical and Future Activity.** Based on a review of operational data, historical operations by “cargo-only” operators were approximately four percent of total commercial operations. **Figure 3** shows the historical relationship of air cargo operators within the overall commercial service operational category between 2017 and 2021.

**Figure 3 – DFW Historical Cargo Operations**

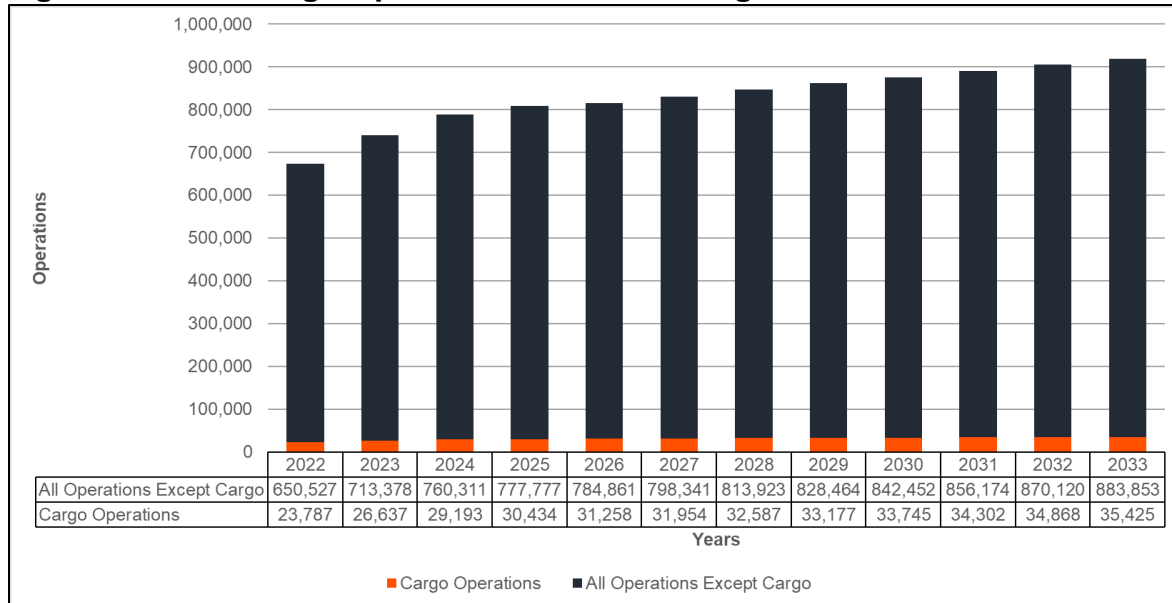


Source: FAA 2021 TAF; Landrum and Brown Analysis, October 2022; Centurion Planning and Design Analysis, December 2022.

Assuming a similar percentage of the total commercial service operations moving forward, **Figure 4** illustrates the FAA TAF Commercial Service forecasts broken between

air carriers and cargo carriers. These forecasts are representative of not only the TAF, but also internal DFW analysis.

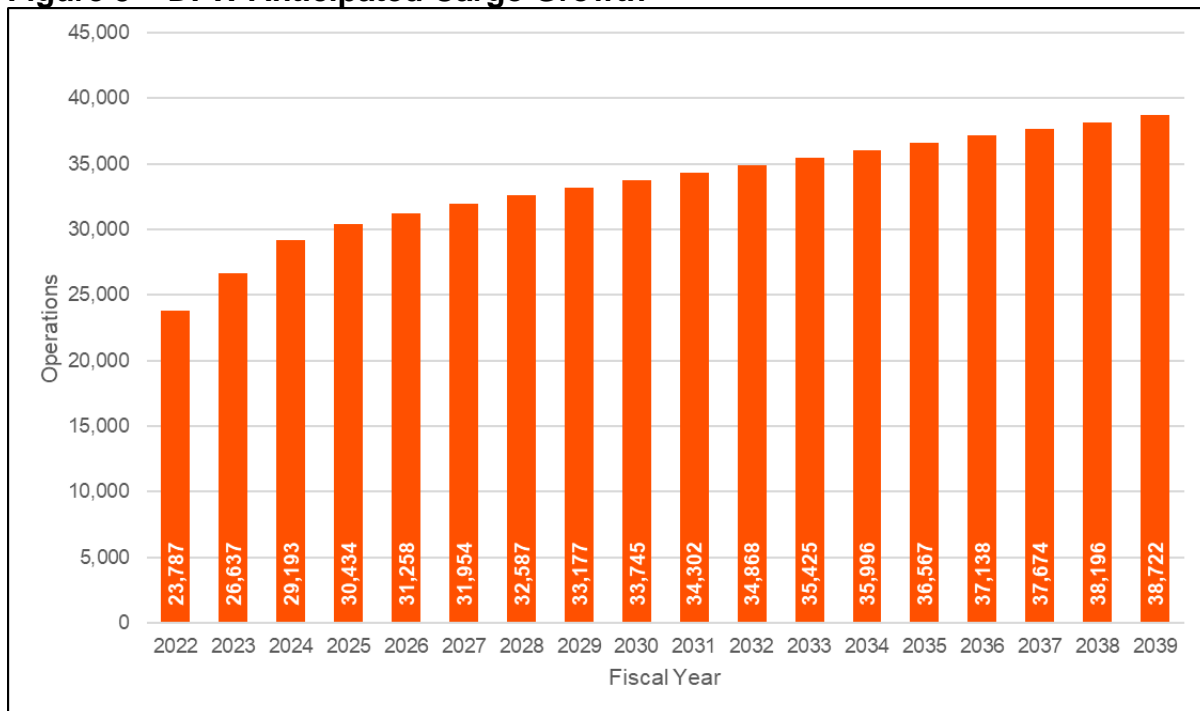
**Figure 4 – DFW Cargo Operations as a Percentage of the TAF**



Source: FAA 2021 TAF; Landrum and Brown Analysis, October 2022; Centurion Planning and Design Analysis, December 2022.

**Anticipated Cargo Growth.** Utilizing the 2021 TAF, and the understanding that cargo-only operations have historically been 4% of commercial service operations, operational growth in the cargo-only aircraft fleet is depicted in **Figure 5**. As shown, operations are expected to grow from approximately 23,800 in 2022 to 38,800 in 2039.

**Figure 5 – DFW Anticipated Cargo Growth**

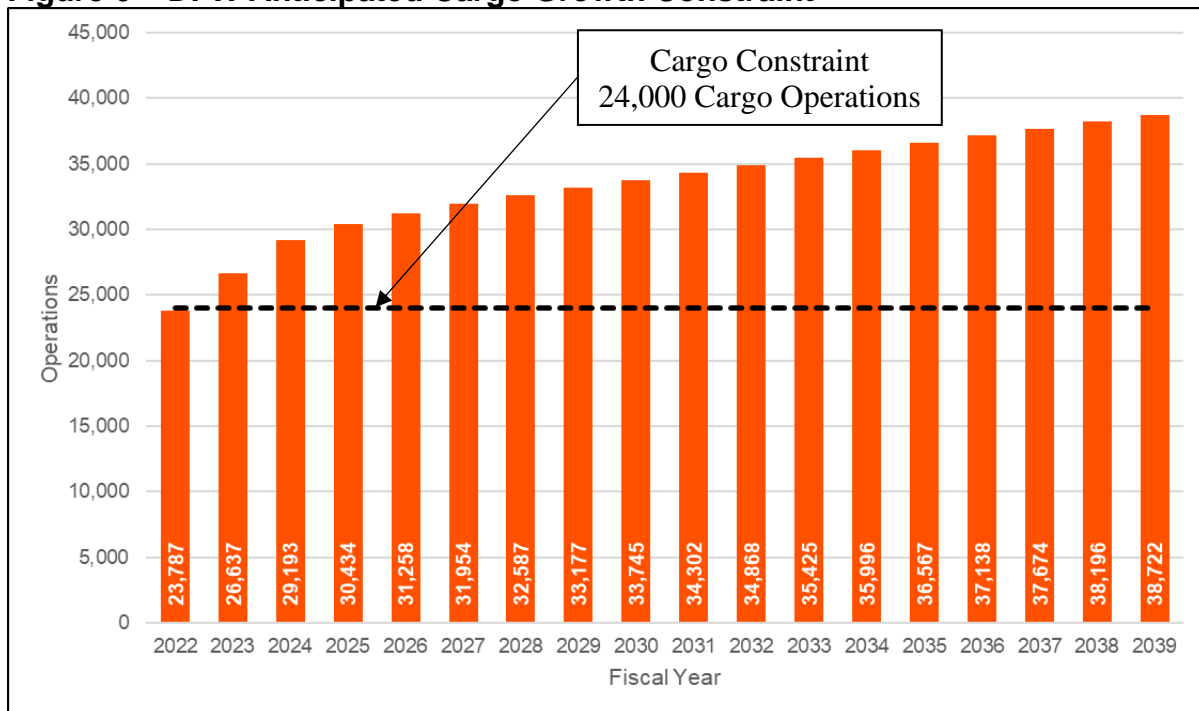


Source: FAA 2021 TAF; Landrum and Brown Analysis, December 2022; Centurion Planning and Design Analysis, December 2022.

**Definition of Cargo Constraint.** Based on input received from current cargo operators at DFW, facilities are currently operating at maximum capacity. To maintain cargo operations at approximately 4% of the total Air Carrier operations, additional apron and building facilities will be necessary as current operators have maximized the use of existing facilities; therefore, the constrained cargo-only aircraft operational level is determined to be the current 24,000 annual operations.

**Figure 6** illustrates the constrained operational level compared to the 2021 TAF forecast. To meet forecasted cargo demand, additional apron, and processing facilities will be necessary. The size and location of these facilities will depend on tenant and user needs.

**Figure 6 – DFW Anticipated Cargo Growth Constraint**



Source: FAA 2021 TAF; Landrum and Brown Analysis, December 2022; Centurion Planning and Design Analysis, December 2022.

**Cargo Facility Operational Needs.** DFW has reviewed the plan for the 19<sup>th</sup> Street development with a current tenant to ensure the spatial requirements associated with the 19<sup>th</sup> Street development are consistent with industry needs. This project is anticipated to consist of two cargo facility warehouses totaling approximately 280,000 square feet and five new aircraft parking positions at an estimated two turns per day. The 19<sup>th</sup> Street project will alleviate the cargo constraint in the near term; however, it is anticipated that cargo will continue to be constrained in future without additional facilities.

**Cargo Conclusion.** As outlined, without creating additional facilities to include both buildings and aircraft ramp spaces, DFW cannot meet the demand forecasted by the 2021 TAF. Cargo facilities and associated infrastructure are developed on an individual site basis as is the case with the proposed 19<sup>th</sup> Street project.

## PASSENGER OPERATIONS

**Terminal Development Background.** In 2019, DFW announced plans to construct Terminal F to meet the growing needs of commercial service airlines. Shortly after this announcement, the aviation industry was greatly impacted by the COVID pandemic, and operational levels immediately experienced a decline. The unpredictable impact of the pandemic on airlines caused DFW to postpone the development and construction of Terminal F.

Since late 2021, DFW Airport has been working collaboratively with the FAA on advancing the Central Terminal Area (CTA) expansion project. The CTA expansion project was originally envisioned as constructing piers on Terminals A and C for a net increase of nine new gates.

The 2021 TAF highlighted the airlines and, subsequently, DFW's rapid recovery from COVID. Given the TAF forecast, DFW responsibly considered the Airport's forecasted needs beyond the initial nine gates and revisited the need for Terminal F.

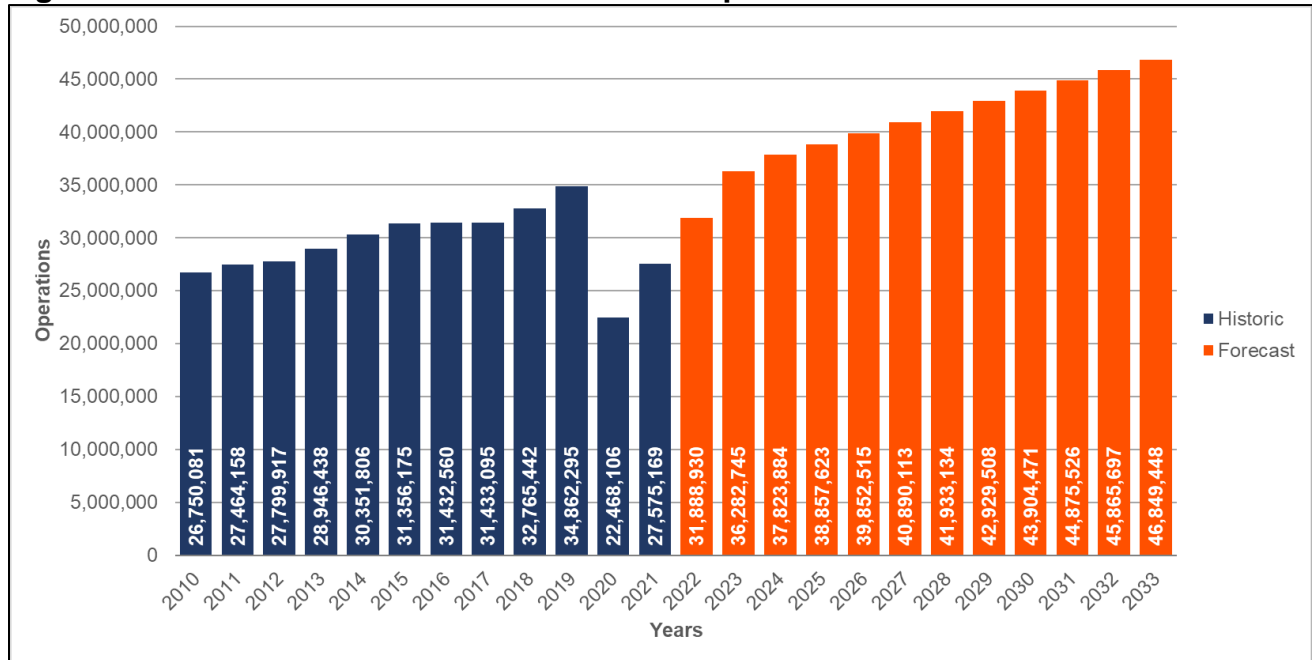
**FAA Forecast of Enplanement Activity.** Aviation forecasting often begins with examining forecast passenger demand, which is then translated into operations. Thus, DFW staff reviewed the 2021 TAF enplaned passenger forecast before reviewing the annual aircraft operations forecast. The 2021 FAA TAF for historical and forecast DFW enplanements is provided in **Table 3**. In addition, **Figure 7** provides a graphical illustration of the historical and forecast DFW enplanements from Table 3. Historical DFW enplanements have increased from 2010 through 2019 but declined by over 35% from 2019 to 2020 due to the pandemic. 2021 enplanements recovered to levels from the mid-2010s, with 2019 levels expected to be surpassed in 2023. DFW is forecast to exceed 45 million enplanements by 2032.

**Table 3 – DFW Historical and Forecast TAF Enplanements**

Historic Passenger Enplanements			
TAF Year	Air Carrier	Commuter	Total Enplanements
2010	22,498,994	4,251,087	26,750,081
2011	23,117,592	4,346,566	27,464,158
2012	23,438,053	4,361,864	27,799,917
2013	24,346,676	4,599,762	28,946,438
2014	25,699,892	4,651,914	30,351,806
2015	25,489,407	5,866,768	31,356,175
2016	25,016,146	6,416,414	31,432,560
2017	25,108,840	6,324,255	31,433,095
2018	26,573,503	6,191,939	32,765,442
2019	28,252,269	6,610,026	34,862,295
2020	17,623,662	4,844,444	22,468,106
2021	21,020,665	6,554,504	27,575,169
Forecast Passenger Enplanements			
TAF Year	Air Carrier	Commuter	Total Enplanements
2022	25,311,338	6,577,592	31,888,930
2023	28,827,529	7,455,216	36,282,745
2024	30,071,455	7,752,429	37,823,884
2025	30,895,270	7,962,353	38,857,623
2026	31,688,516	8,163,999	39,852,515
2027	32,515,341	8,374,772	40,890,113
2028	33,346,451	8,586,683	41,933,134
2029	34,140,582	8,788,926	42,929,508
2030	34,918,401	8,986,070	43,904,471
2031	35,693,444	9,182,082	44,875,526
2032	36,482,739	9,382,958	45,865,697
2033	37,266,982	9,582,466	46,849,448

Source: FAA 2021 TAF, queried September 2022.

**Figure 7 – DFW Historical and Forecast TAF Enplanements**



Source: FAA 2021 TAF, September 2022.

As indicated in Figure 7, enplanements are anticipated to grow at a similar rate as operations within the TAF.

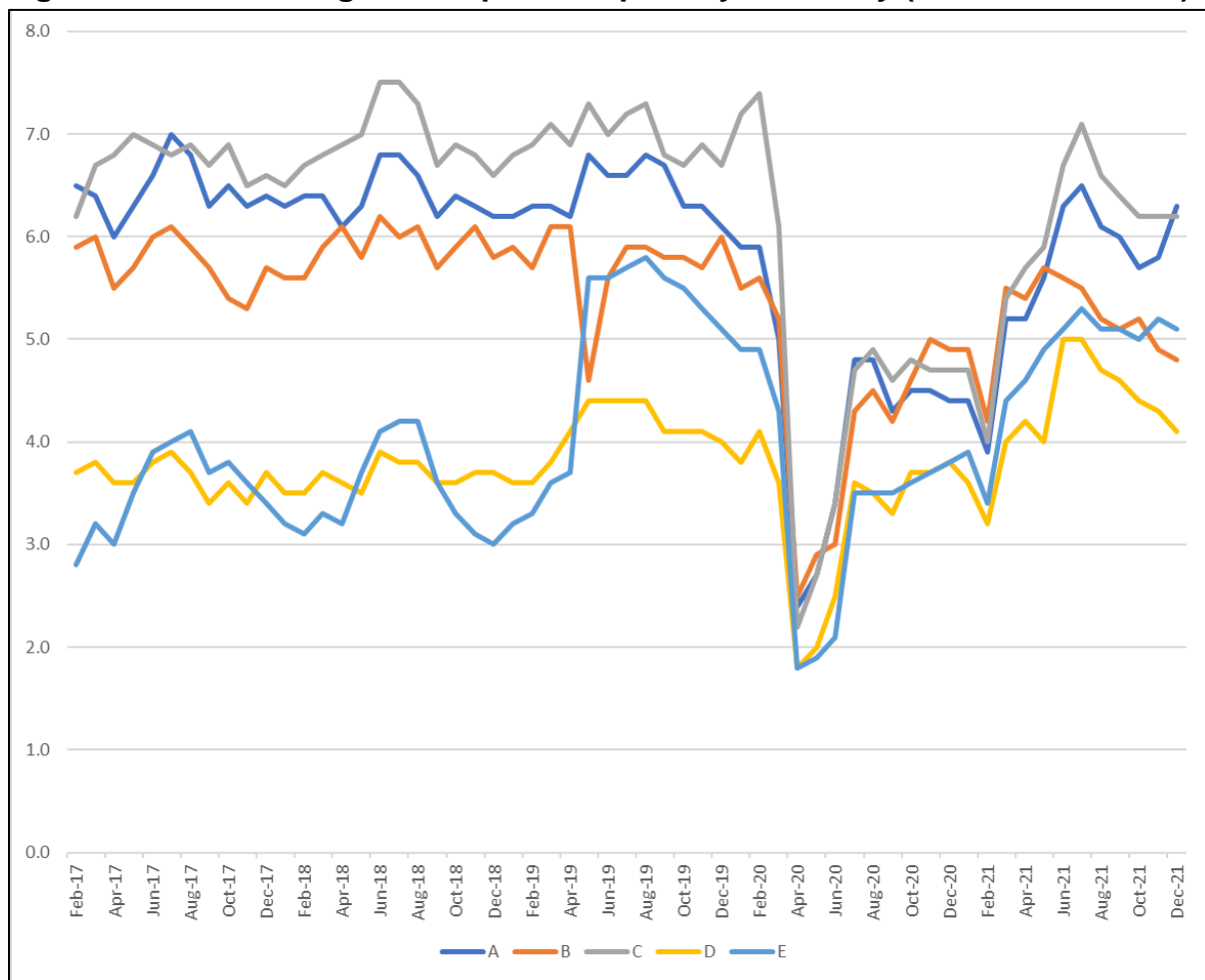
**Aircraft Gate Operational Needs.** ACRP Research Report 163, *Guidebook for Preparing and Using Airport Design Day Flight Schedules*, provides planning level guidance to assist with the determination of needed commercial service passenger facilities at small, medium, and large hub airports. Within this guidebook, it is stated that:

*At large airports, gating models can theoretically schedule 15 to 20 daily flights at one gate (usually the first to be gated) and only one peak-hour flight at another gate (usually the last to be gated). This scheduling does not occur in the real world. Airlines and airport operators will attempt to balance gate use to avoid overly stressing a given facility. Utilization across gates in the design day schedule should be balanced to match current use patterns. In general, airlines rarely exceed 8 to 10 daily turns per gate.*

As recommended in the paragraph above, an evaluation of current use patterns and historic gate turn utilization was performed to determine an appropriate constrained gate turns per day metric for DFW.

**DFW Historic Gate Turn Activity. Figure 8** illustrates data obtained for the monthly turns per gate from 2017 through 2021. A review of this information revealed that the Airport’s ability to exceed more than 7 turns per day was localized to activity in Terminal C. From February of 2017 through February of 2020, Terminal A daily turns per gate were within the 6 to 7 range and Terminal B was primarily within the 5 to 6 range. Terminals D and E experience much lower turns per gate per day, Terminal D accommodates the vast majority of international operations and Terminal E accommodates the regional and non-hub airlines.

**Figure 8 – DFW Average Turns per Gate per Day – Monthly (02/2017 – 12/2021)**



Source: Landrum and Brown Analysis, October 2022; Centurion Planning and Design Analysis, December 2022.



**Figure 9** consolidates the data above and provides an overview of the annual average DFW historical aircraft turns per gate, per year from 2017 to 2021. An evaluation of the data prior to the COVID impact found the terminals performed in the following manner beginning in 2017 through 2020:

- Terminal A – average 6.43 turns per day
- Terminal B – average 5.8 turns per day
- Terminal C – average 6.87 turns per day
- Terminal D – average 3.8 turns per day
- Terminal E – average 3.93 turns per day

(Please note, the raw data used for this analysis is included as Appendix 1)

**DFW Current Gate Turn Activity.** Based on Aerobahn operations data for 12-months ending September 2022, DFW Airport accommodated over 655,000 Air Carrier and Air Taxi operations. From these operations, the Airport experienced an average of approximately 5.2 turns per gate across all available gates<sup>1</sup>. **Figure 10** provides an overview of the average daily number of turns per gate grouped by terminal over this timeframe.

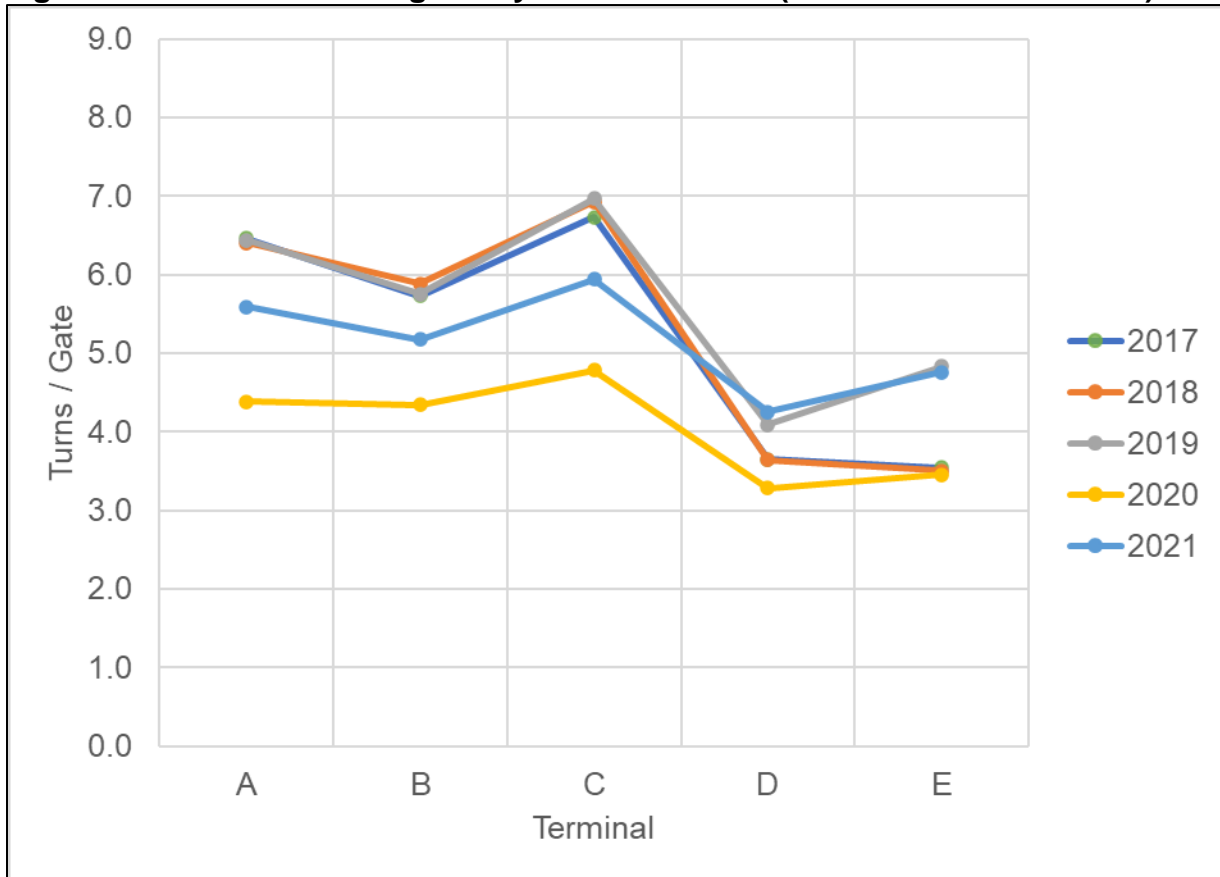
While turns per gate for the Airport averages out to 5.2 over the past 12 months, **Figure 11** helps visualize the high and low number of turns per gate for each terminal which make up that average.

Depending on the terminal, an average of 4.3 to 6.1 turns per gate is currently experienced. Terminals A and C are historically the highest, in terms of gate turns, with an average of 5.8 and 6.1 turns per day, respectively, which is primarily driven by their operations type. The lower average turns per gate at Terminals B, D and E are a result of the types of operations accommodated in these terminals (i.e., international operations, regional operations, etc.)

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<sup>1</sup> While DFW normally operates 170 gates, there is occasionally a slight variance in the total due to construction activity and/or MARS configurations being utilized.

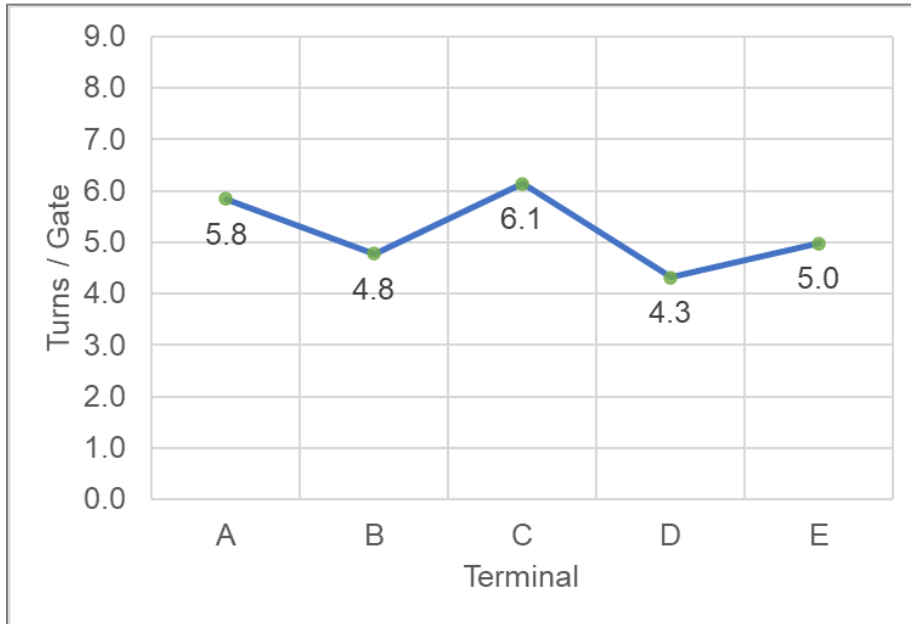
**Figure 9 – Historical Average Daily Turns Per Gate (02/01/2017 – 12/31/2021)**



	A	B	C	D	E	Average
2017	6.5	5.7	6.7	3.7	3.5	<b>5.2</b>
2018	6.4	5.9	6.9	3.6	3.5	<b>5.3</b>
2019	6.4	5.8	7.0	4.1	4.8	<b>5.6</b>
2020	4.4	4.3	4.8	3.3	3.5	<b>4.1</b>
2021	5.6	5.2	5.9	4.3	4.8	<b>5.1</b>

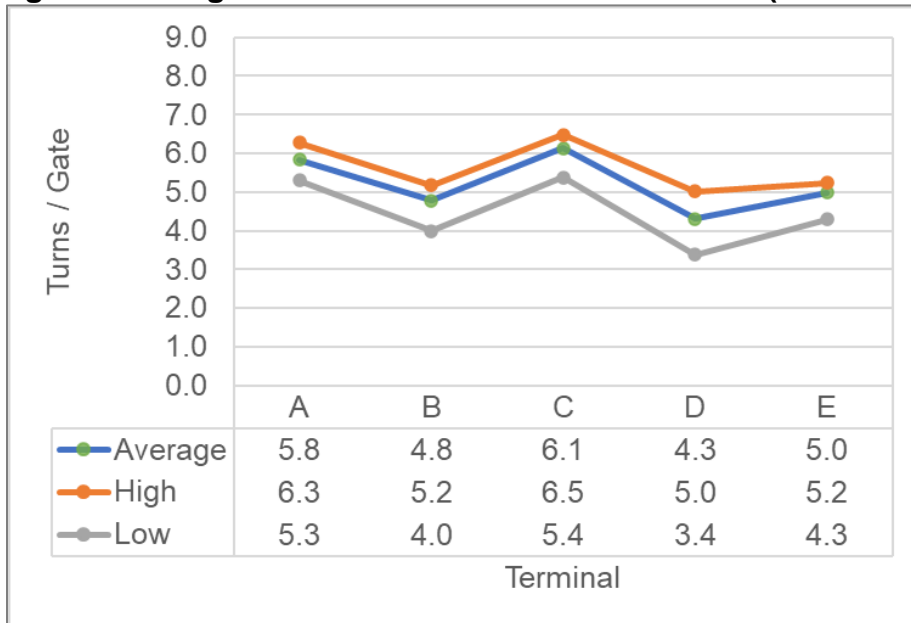
Source: Landrum & Brown Analysis, October 2022; Centurion Planning and Design Analysis, December 2022.

**Figure 10 – Average Daily Turns Per Gate (10/01/2021 – 09/30/2022)**



Source: DFW Airport Data (Aerobahn); Landrum & Brown Analysis, September 2022.

**Figure 11 – High & Low Number of Turns Per Gate (10/01/2021 – 09/30/2022)**



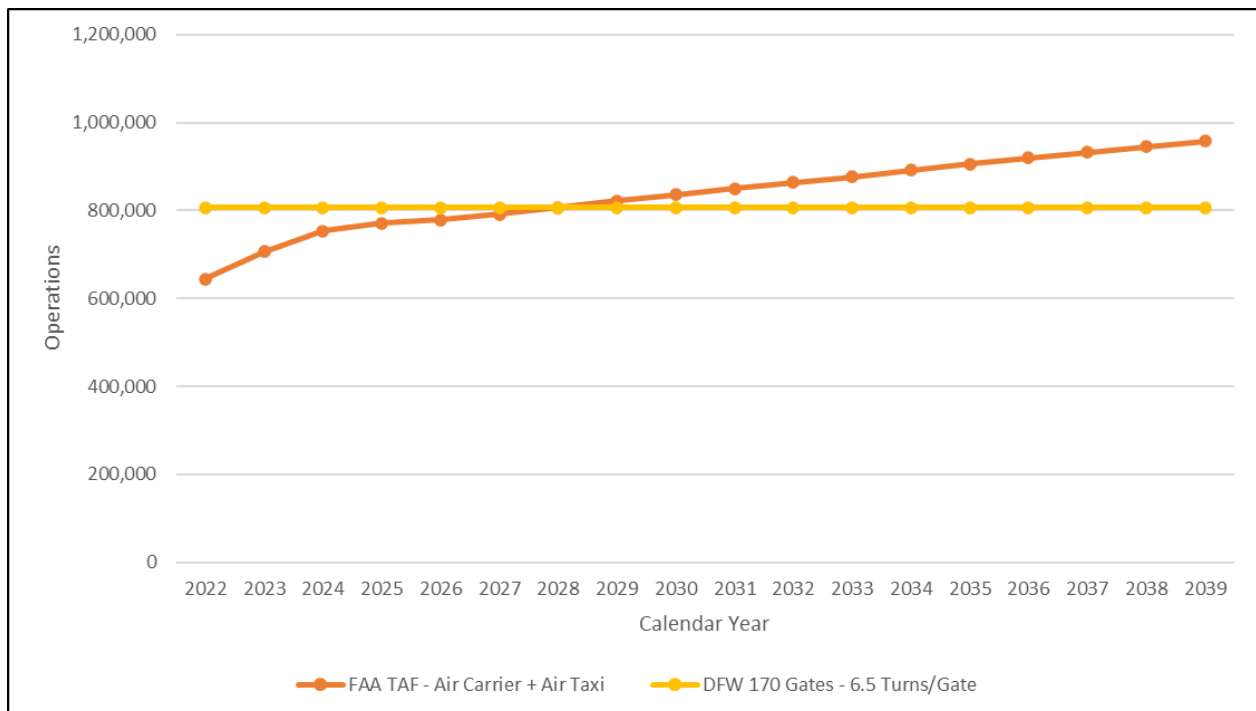
Source: DFW Airport Data (Aerobahn); Landrum & Brown Analysis, September 2022.

**Gate Turns Per Day Constraint.** Recognizing the cost and impact of providing additional gates, DFW is continually striving to become operationally more efficient. DFW chose to utilize 6.5 turns per gate, as this value represents the historical average maximum gate utilization described in the previous section.

Assuming 6.5 turns per gate per day with the existing 170 gates, DFW is constrained to 806,650 operations per year ( $6.5 \times 170 \times 365 \times 2 = 806,650$ ). **Figure 12** illustrates the 806,650 operations as compared to the FAA TAF. Based on this analysis, the airport requires additional gates as early as 2028.

*(Please note, the TAF values for this chart have been reduced to account for air cargo being approximately 4% of the total Air Carrier operations since this chart only focuses on Air Carrier operations that utilize the terminal gates.)*

**Figure 12 – DFW Constrained Operations Related to the TAF – 170 Gates at 6.5 Turns Per Gate**

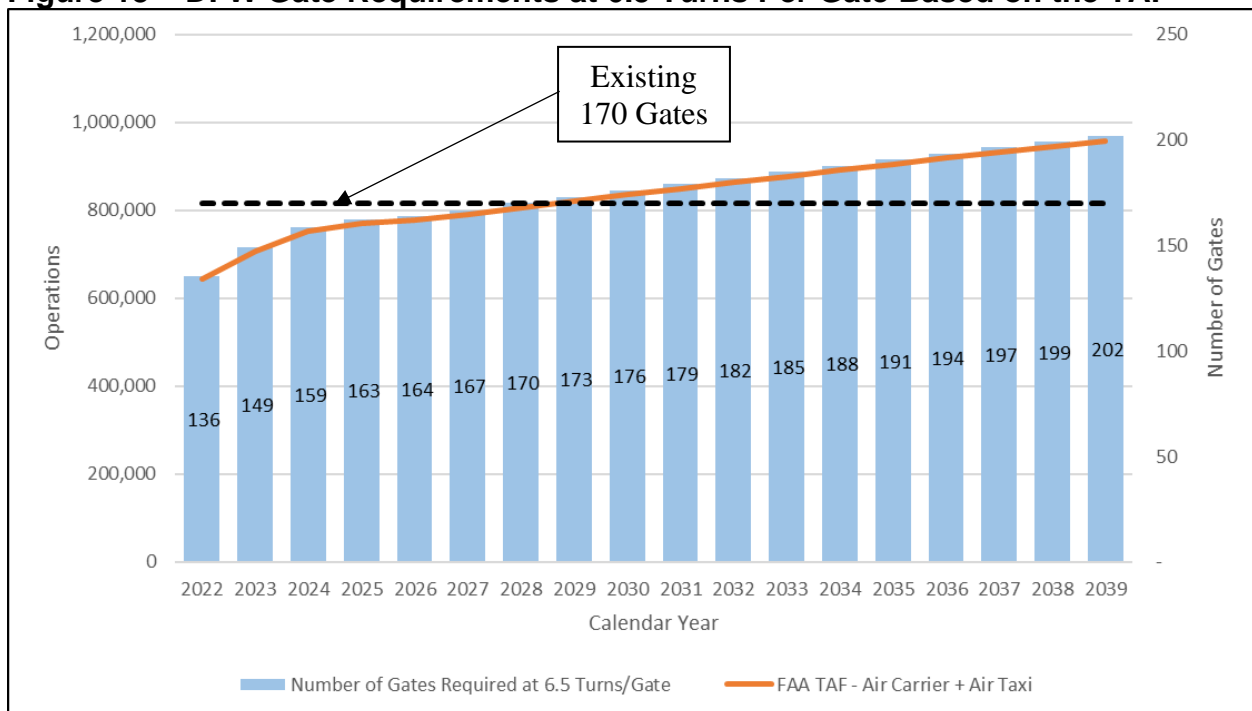


Source: DFW Airport Data; FAA 2021 TAF; Centurion Planning and Design Analysis, December 2022.  
 Note: the orange line represents Air Carrier + Air Taxi – 4% Air Cargo

**Figure 13** depicts the number of gates necessary to accommodate FAA forecasted, unconstrained demand through 2039. As shown, to accommodate the unconstrained 2039 forecast of 960,000 operations, using the previously defined 6.5 turns per gate, DFW will require an additional 31 gates for a total of 201 by 2039 ( $960,000 / 2 / 365 / 6.5 = \sim 201$ ).

The black dashed line in Figure 13 depicts the constraint of the existing 170 gates. The area between the black dashed line, and the orange line is representative of available and needed capacity. As with Figure 10, the TAF values in this chart have been reduced to reflect only those Air Carrier and Air Taxi operations that utilize the terminal gates. Approximately 4% of the Air Carrier operations are conducted by air cargo carriers and have been factored out of the gate analysis.

**Figure 13 – DFW Gate Requirements at 6.5 Turns Per Gate Based on the TAF**



Source: DFW Airport Data; FAA 2021 TAF; Centurion Planning and Design Analysis, December 2022.

**DFW Aircraft Gate Requirements Conclusion.** According to the analysis above, beginning in 2028, additional gates are needed to accommodate FAA forecasted demand through the year 2039. It is important to note that although 6.5 turns per day per gate is used for this analysis, the actual, current airport-wide average for turns per gate is 5.2. Understanding the cost and impact of gate construction at a busy airport, DFW will continue to work with the airlines to achieve a higher turn per gate than currently realized.

Based upon forecast increases in air travel demand, the need for the additional gates continues to increase over the next 17 years, requiring the Terminals A, C, and F projects to occur concurrently. A total of 31 gates will need to be brought online to meet anticipated demand at DFW by 2039.

To provide the necessary 31 gates, nine will be provided through the Terminal A and C Piers project, and the remaining 22 are planned to be provided through the construction of Terminal F.

## **CONCLUSION**

To meet the needs of existing and future airport users, DFW regularly engages in planning activities to ensure adequate facilities are available from both a localized and national airspace perspective. The 2021 TAF provided the necessary information to allow DFW to make further decisions regarding future planning of commercial passenger service and air cargo development needs. After reviewing historical data and assessing the needs of airlines and tenants, DFW recommends adoption of the 2021 TAF as the unconstrained forecast of future airport activity and identified facility needs necessary to meet future demand.

Addendum 1 contains additional information on two active projects the Airport is currently pursuing. The No Action and Proposed Action scenarios for those two projects are included therein.

## Addendum 1

DFW has two distinct and independent projects currently in the planning process, the 19th Street Cargo Development, and the Central Terminal Area Expansion project. Both projects are ripe for NEPA processing and require FAA approval of the No Action and Proposed Action operational numbers.

The 19th Street Cargo Development project implementation year is 2025; a build plus five-year timeline for analysis of impacts will be used for the cargo development project. As such, the horizon year to be analyzed will be 2030. The Airport proposes the following operational scenarios for the cargo EA for the implementation year of 2025 and Build+5 years of 2030:

- 19th Street Cargo No Action: Assume constrained cargo and constrained passenger gate activity.
- 19th Street Cargo Proposed Action: Assume relieved cargo constraint, but passenger gate constraint remains.

The CTA Development project implementation year is 2026, a build plus five years timeline for analysis of impacts will be used for the CTA project. As such, the horizon year to be analyzed will be 2031. As the project will not be fully implemented in five years, a ten-year outlook for 2036 is included as well. The Airport proposed the following operational scenarios for the CTA EA for the implementation year of 2026 and Build+5 years of 2031:

- CTA Expansion Project No Action: Assumes that the EA has been completed for the 19th Street project, and thus, the No Action scenario would include the additional cargo operations disclosed in the 19th Street Cargo EA Proposed Action.
- CTA Expansion Project Proposed Action: Assumes that cargo facilities are operational and supporting 7,300 annual cargo operations and also assumes relieved constraint of passenger operations due to the addition of 31 new gates; this Proposed Action scenario would be relieved of constraints and therefore aligned with the 2021 TAF.

The following pages provide the operational forecasts for each scenario, as well as the fleet mix which will be, is used for air and noise quality modeling for each NEPA document. Please note that the types of aircraft used for various operations were developed in coordination with the FAA and are not under the direction of airport users and tenants. Future fleet mix determinations are made based on the best available information.

### 19th Street Cargo Redevelopment:

**No Action.** For the purposes of NEPA analysis, the constrained cargo operations assume that no additional cargo facilities or associated aircraft parking is built, and additional gates are not provided for passenger operations. **Table 1** below illustrates the operational activity with these assumptions, while **Table 2** and **Table 3** provide an overview of the No-Action cargo fleet mix for 2025 and 2030. The constrained cargo-only aircraft operational level is determined to be the current 24,000 annual operations which are approximately 4% of the 2022 air carrier and air taxi operations. Please note, commercial service operations were capped at 806,650 in 2026 as previously described, with a minimal air carrier and air taxi growth rate of 0.25% for the remaining years.

**Table 1 – No Action – 19<sup>th</sup> Street Cargo**

No Action - Cargo					
TAF Year	Cargo	Air Carrier & Air Taxi	General Aviation	Military	Total Operations
2022	24,000	643,816	6,285	213	674,314
2023	24,000	709,497	6,305	213	740,015
2024	24,000	758,967	6,324	213	789,504
2025	24,000	770,355	6,343	213	800,911
2026	24,000	772,281	6,363	213	802,857
2027	24,000	774,212	6,383	213	804,808
2028	24,000	776,148	6,402	213	806,763
2029	24,000	778,088	6,422	213	808,723
2030	24,000	780,033	6,442	213	810,688

Source: FAA 2021 TAF; Centurion Planning and Design Analysis, January 2023.



**Table 2 – 19<sup>th</sup> Street No Action Cargo Fleet Mix – 2025**

Category	Propulsion Class	AEDT Aircraft Type	Arrivals			Departures			Total
			Day	Night	Total	Day	Night	Total	
Air Carrier	Jet	7478	1.3	0.9	2.2	1.7	0.5	2.2	4.5
		7879	15.3	2.5	17.8	17.2	0.6	17.8	35.6
		737700	62.5	2.8	65.4	56.9	8.4	65.4	130.7
		737800	211.8	13.3	225.1	213.8	11.3	225.1	450.2
		747400	3.3	0.7	4.0	3.4	0.7	4.0	8.0
		777200	6.1	3.2	9.2	8.6	0.7	9.2	18.4
		777300	4.4	1.5	6.0	4.0	2.0	6.0	12.0
		7378MAX	23.1	1.6	24.7	23.0	1.7	24.7	49.4
		747400RN	0.0	0.0	0.1	0.0	0.0	0.1	0.1
		757PW	0.5	1.5	2.0	0.4	1.6	2.0	4.0
		757RR	0.6	2.3	2.9	0.6	2.3	2.9	5.8
		7673ER	7.3	3.0	10.4	6.1	4.1	10.2	20.6
		7773ER	5.1	0.3	5.4	4.5	0.9	5.4	10.8
		7878R	3.7	0.9	4.6	4.4	0.2	4.6	9.2
		A300-622R	2.1	2.3	4.4	1.4	3.0	4.4	8.8
		A319-131	98.5	3.1	101.6	97.1	4.5	101.6	203.2
		A320-211	17.0	2.7	19.7	16.4	3.3	19.7	39.5
		A320-232	34.3	6.5	40.8	34.0	6.7	40.8	81.5
		A320-271N	39.5	4.9	44.4	40.6	3.8	44.4	88.7
		A321-232	205.7	23.3	229.0	209.5	19.6	229.1	458.1
	A350-941	1.2	0.0	1.2	1.2	0.0	1.2	2.5	
	A380-841	1.0	0.0	1.0	1.0	0.0	1.0	2.0	
	DC1010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	DC1030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	EMB190	2.1	0.0	2.1	2.1	0.0	2.1	4.2	
	MD11GE	0.6	0.4	1.0	0.6	0.4	1.0	2.0	
	MD11PW	0.8	0.5	1.3	0.8	0.5	1.3	2.6	
Regional Jet	CRJ9-ER	99.3	3.9	103.2	96.7	6.5	103.2	206.3	
	EMB170	90.6	2.9	93.5	85.7	7.8	93.5	187.0	
	EMB175	9.3	0.8	10.1	9.6	0.5	10.1	20.2	
	<b>Subtotal</b>	<b>946.8</b>	<b>86.1</b>	<b>1032.9</b>	<b>941.2</b>	<b>91.7</b>	<b>1032.9</b>	<b>2065.8</b>	
Air Taxi	Jet	CNA680	0.8	0.0	0.8	0.8	0.0	0.8	1.6
	Nonjet	1900D	0.8	0.0	0.9	0.3	0.6	0.9	1.8
		CNA208	1.5	0.5	2.0	1.7	0.3	2.0	3.9
		DHC6	0.9	0.2	1.1	0.6	0.4	1.1	2.2
	Regional Jet	EMB14L	49.4	1.3	50.7	48.8	1.9	50.7	101.4
	<b>Subtotal</b>	<b>53.4</b>	<b>2.0</b>	<b>55.4</b>	<b>52.2</b>	<b>3.2</b>	<b>55.4</b>	<b>110.8</b>	
General Aviation	Jet	CL600	0.3	0.0	0.3	0.3	0.0	0.3	0.6
		CNA525C	0.5	0.0	0.5	0.5	0.0	0.5	1.1
		CNA55B	0.3	0.0	0.3	0.3	0.0	0.3	0.7
		CNA560XL	0.5	0.0	0.5	0.5	0.0	0.5	1.0
		G650ER	0.0	0.0	0.0	0.0	0.0	0.0	0.1
		GIV	0.5	0.1	0.6	0.4	0.1	0.5	1.0
		GV	0.2	0.0	0.2	0.2	0.0	0.2	0.4
	LEAR35	0.3	0.0	0.3	0.3	0.0	0.3	0.6	
	Nonjet	CNA208	5.8	0.3	6.1	5.8	0.3	6.1	12.3
	<b>Subtotal</b>	<b>8.5</b>	<b>0.4</b>	<b>8.9</b>	<b>8.4</b>	<b>0.4</b>	<b>8.8</b>	<b>17.7</b>	
<b>Grand Total</b>		<b>1008.6</b>	<b>88.5</b>	<b>1097.2</b>	<b>1001.8</b>	<b>95.4</b>	<b>1097.1</b>	<b>2194.3</b>	

**Table 3 – 19<sup>th</sup> Street No Action Cargo Fleet Mix – 2030**

Category	Propulsion Class	AEDT Aircraft Type	Arrivals			Departures			Total
			Day	Night	Total	Day	Night	Total	
Air Carrier	Jet	7478	1.3	0.9	2.3	1.7	0.5	2.3	4.5
		7879	14.9	2.5	17.3	16.8	0.6	17.3	34.7
		737700	72.3	2.7	75.0	65.7	9.3	75.0	150.0
		737800	225.0	13.8	238.8	226.7	12.1	238.8	477.6
		747400	3.2	0.8	4.0	3.2	0.8	4.0	8.0
		777200	6.4	3.6	10.0	8.7	1.3	10.0	20.1
		777300	5.1	0.9	6.0	4.7	1.3	6.0	12.0
		7378MAX	49.0	3.3	52.4	49.2	3.2	52.4	104.7
		747400RN	0.0	0.0	0.1	0.0	0.0	0.1	0.1
		757PW	0.6	1.6	2.1	0.5	1.7	2.1	4.3
		757RR	0.6	2.4	3.1	0.6	2.5	3.1	6.2
		7673ER	7.7	3.3	11.0	6.9	4.2	11.0	22.1
		7773ER	5.2	0.6	5.8	4.6	1.2	5.8	11.7
		7878R	3.7	0.9	4.6	4.5	0.2	4.6	9.3
		A300-622R	1.7	1.9	3.6	1.1	2.5	3.6	7.2
		A319-131	96.0	3.1	99.0	94.6	4.4	99.0	198.1
		A320-211	15.3	2.5	17.7	14.8	3.0	17.7	35.5
		A320-232	34.9	6.7	41.6	34.6	7.0	41.6	83.1
		A320-271N	39.6	5.1	44.7	40.8	3.8	44.7	89.3
		A321-232	218.6	24.2	242.8	222.0	20.8	242.8	485.6
		A350-941	1.2	0.0	1.2	1.2	0.0	1.2	2.3
		A380-841	1.2	0.0	1.2	1.2	0.0	1.2	2.4
		DC1010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DC1030	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EMB190	1.9	0.0	1.9	1.9	0.0	1.9	3.9	
	MD11GE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	MD11PW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Regional Jet	CRJ9-ER	88.0	3.0	90.9	85.5	5.4	90.9	181.8
	EMB170	80.1	2.6	82.7	75.8	6.9	82.7	165.5	
	EMB175	8.1	0.7	8.8	8.4	0.5	8.8	17.6	
	<b>Subtotal</b>	<b>981.6</b>	<b>87.1</b>	<b>1068.7</b>	<b>975.6</b>	<b>93.1</b>	<b>1068.7</b>	<b>2137.4</b>	
Air Taxi	Jet	CNA680	0.5	0.0	0.5	0.5	0.0	0.5	1.1
	Nonjet	1900D	0.6	0.0	0.6	0.2	0.3	0.5	1.1
		CNA208	1.0	0.3	1.4	1.2	0.2	1.4	2.8
		DHC6	0.6	0.1	0.7	0.4	0.2	0.7	1.4
	Regional Jet	EMB14L	27.3	0.9	28.2	26.9	4.4	31.2	59.4
	<b>Subtotal</b>	<b>30.0</b>	<b>1.4</b>	<b>31.4</b>	<b>29.2</b>	<b>5.1</b>	<b>34.3</b>	<b>65.7</b>	
General Aviation	Jet	CL600	0.2	0.0	0.2	0.2	0.0	0.2	0.4
		CNA525C	0.4	0.0	0.4	0.4	0.0	0.4	0.8
		CNA55B	0.2	0.0	0.2	0.2	0.0	0.2	0.5
		CNA560XL	0.4	0.0	0.4	0.4	0.0	0.4	0.8
		G650ER	0.0	0.0	0.0	0.0	0.0	0.0	0.1
		GIV	0.4	0.0	0.4	0.4	0.0	0.4	0.8
		GV	0.2	0.0	0.2	0.1	0.0	0.1	0.3
	LEAR35	0.4	0.0	0.4	0.4	0.0	0.4	0.8	
	Nonjet	CNA208	6.4	0.3	6.7	6.4	0.3	6.7	13.4
	<b>Subtotal</b>	<b>8.7</b>	<b>0.4</b>	<b>9.1</b>	<b>8.6</b>	<b>0.4</b>	<b>9.0</b>	<b>18.0</b>	
<b>Grand Total</b>			<b>1020.2</b>	<b>88.9</b>	<b>1109.2</b>	<b>1013.3</b>	<b>98.6</b>	<b>1112.0</b>	<b>2221.1</b>

**19<sup>th</sup> Street Cargo Proposed Action.** For the purposes of the 19<sup>th</sup> Street cargo project NEPA, the Proposed Action will consist of the operations shown in **Table 4** below, with the proposed action cargo aircraft fleet mix for 2025 and 2030 provided in **Table 5** and **Table 6**: As shown in Table 4, the Proposed 19<sup>th</sup> Street Cargo project would be complete and operational in 2025, adding an additional 7,300 cargo operations, which represents the project implementation year. However, as shown in Table 4, cargo operations continue to be constrained in future years without additional facilities.

**Table 4 – 19<sup>th</sup> Street Proposed Action – Cargo**

No Action Terminal - Proposed Action Cargo					
TAF Year	Cargo	Air Carrier & Air Taxi	General Aviation	Military	Total Operations
2024	24,000	758,967	6,324	213	789,504
2025	31,300	770,355	6,343	213	808,211
2026	31,300	772,281	6,363	213	810,157
2027	31,300	774,212	6,383	213	812,108
2028	31,300	776,148	6,402	213	814,063
2029	31,300	778,088	6,422	213	816,023
2030	31,300	780,033	6,442	213	817,988

Source: FAA 2021 TAF; Centurion Planning and Design Analysis, January 2023.

**Table 5 – 19<sup>th</sup> Street Proposed Action Cargo Fleet Mix – 2025**

Category	Propulsion Class	AEDT Aircraft Type	Arrivals			Departures			Total
			Day	Night	Total	Day	Night	Total	
Air Carrier	Jet	7478	1.4	0.9	2.3	1.7	0.5	2.3	4.5
		7879	15.4	2.6	18.0	17.4	0.6	18.0	35.9
		737700	63.1	2.9	66.0	57.5	8.5	66.0	131.9
		737800	213.7	13.4	227.1	215.7	11.4	227.1	454.3
		747400	7.2	0.8	8.0	7.2	0.8	8.0	16.0
		777200	6.1	3.2	9.3	8.6	0.7	9.3	18.6
		777300	9.9	2.1	12.0	9.5	2.5	12.0	24.0
		7378MAX	19.4	1.4	20.7	19.3	1.5	20.7	41.5
		747400RN	0.0	0.0	0.1	0.0	0.0	0.1	0.1
		757PW	0.5	1.5	2.0	0.4	1.6	2.0	4.0
		757RR	0.6	2.3	2.9	0.6	2.3	2.9	5.8
		7673ER	7.4	3.0	10.4	6.2	4.1	10.3	20.7
		7773ER	5.1	0.4	5.5	4.5	1.0	5.5	10.9
		7878R	3.8	0.9	4.6	4.5	0.2	4.6	9.3
		A300-622R	2.1	2.3	4.4	1.4	3.0	4.4	8.9
		A319-131	99.4	3.2	102.5	97.9	4.6	102.5	205.1
		A320-211	17.1	2.8	19.9	16.6	3.3	19.9	39.8
		A320-232	34.6	6.5	41.1	34.3	6.8	41.1	82.3
		A320-271N	36.1	4.5	40.5	37.1	3.4	40.5	81.1
		A321-232	206.1	23.5	229.7	209.9	19.8	229.8	459.4
	A350-941	1.3	0.0	1.3	1.2	0.0	1.2	2.5	
	A380-841	1.0	0.0	1.0	1.0	0.0	1.0	2.0	
	DC1010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	DC1030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	EMB190	2.1	0.0	2.1	2.1	0.0	2.1	4.3	
	MD11GE	0.6	0.4	1.0	0.6	0.4	1.0	2.0	
	MD11PW	0.8	0.5	1.3	0.8	0.5	1.3	2.6	
Regional Jet	CRJ9-ER	100.2	3.9	104.1	97.5	6.6	104.1	208.2	
	EMB170	91.4	2.9	94.4	86.5	7.8	94.4	188.7	
	EMB175	9.4	0.8	10.2	9.6	0.6	10.2	20.4	
<b>Subtotal</b>			<b>955.6</b>	<b>86.8</b>	<b>1042.4</b>	<b>949.8</b>	<b>92.6</b>	<b>1042.4</b>	<b>2084.8</b>
Air Taxi	Jet	CNA680	0.8	0.0	0.8	0.8	0.0	0.8	1.6
		1900D	0.9	0.0	0.9	0.3	0.6	0.9	1.8
	Nonjet	CNA208	1.5	0.5	2.0	1.7	0.3	2.0	4.0
		DHC6	0.9	0.2	1.1	0.6	0.5	1.1	2.2
	Regional Jet	EMB14L	49.8	1.3	51.1	49.2	1.9	51.1	102.3
<b>Subtotal</b>			<b>53.8</b>	<b>2.0</b>	<b>55.9</b>	<b>52.7</b>	<b>3.2</b>	<b>55.9</b>	<b>111.8</b>
General Aviation	Jet	CL600	0.3	0.0	0.3	0.3	0.0	0.3	0.6
		CNA525C	0.5	0.0	0.5	0.5	0.0	0.5	1.1
		CNA55B	0.3	0.0	0.3	0.3	0.0	0.3	0.7
		CNA560XL	0.5	0.0	0.5	0.5	0.0	0.5	1.0
		G650ER	0.0	0.0	0.0	0.0	0.0	0.0	0.1
		GIV	0.4	0.1	0.4	0.4	0.1	0.4	0.8
		GV	0.2	0.0	0.2	0.2	0.0	0.2	0.4
	LEAR35	0.3	0.0	0.3	0.3	0.0	0.3	0.6	
	Nonjet	CNA208	5.9	0.3	6.2	5.9	0.3	6.2	12.4
<b>Subtotal</b>			<b>8.4</b>	<b>0.4</b>	<b>8.8</b>	<b>8.4</b>	<b>0.4</b>	<b>8.8</b>	<b>17.7</b>
<b>Grand Total</b>			<b>1017.8</b>	<b>89.3</b>	<b>1107.2</b>	<b>1010.9</b>	<b>96.2</b>	<b>1107.1</b>	<b>2214.3</b>

**Table 6 – Proposed Action 19<sup>th</sup> Steet Cargo Fleet Mix – 2030**

Category	Propulsion Class	AEDT Aircraft Type	Arrivals			Departures			Total
			Day	Night	Total	Day	Night	Total	
Air Carrier	Jet	7478	1.4	0.9	2.3	1.8	0.5	2.3	4.6
		7879	15.6	2.6	18.2	17.6	0.6	18.2	36.4
		737700	69.0	3.1	72.1	62.8	9.3	72.1	144.3
		737800	216.3	13.6	229.9	218.3	11.5	229.9	459.8
		747400	7.2	0.8	8.0	7.2	0.8	8.0	16.0
		777200	8.7	4.7	13.5	11.6	1.9	13.5	27.0
		777300	9.9	2.1	12.0	9.5	2.5	12.0	24.0
		7378MAX	48.8	2.8	51.6	48.3	3.4	51.6	103.3
		747400RN	0.0	0.0	0.1	0.0	0.0	0.1	0.1
		757PW	0.5	1.5	2.0	0.4	1.6	2.0	4.1
		757RR	0.6	2.3	3.0	0.6	2.4	3.0	5.9
		7673ER	7.6	3.1	10.6	6.5	4.2	10.6	21.3
		7773ER	5.2	0.4	5.5	4.6	1.0	5.5	11.0
		7878R	3.8	0.9	4.7	4.5	0.2	4.7	9.4
		A300-622R	2.1	2.4	4.5	1.4	3.1	4.5	9.0
		A319-131	92.3	2.7	95.0	90.9	4.3	95.2	190.2
		A320-211	17.4	2.8	20.2	16.8	3.4	20.2	40.3
		A320-232	35.0	6.6	41.6	34.8	6.9	41.6	83.3
		A320-271N	36.5	4.5	41.0	37.6	3.5	41.0	82.1
		A321-232	217.9	24.9	242.8	221.9	20.9	242.8	485.5
		A350-941	1.3	0.0	1.3	1.3	0.0	1.3	2.5
		A380-841	1.0	0.0	1.0	1.0	0.0	1.0	2.0
		DC1010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DC1030	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EMB190	2.1	0.1	2.1	2.1	0.1	2.2	4.3	
	MD11GE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	MD11PW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Regional Jet	CRJ9-ER	91.3	3.6	94.8	98.7	6.6	105.3	200.1
		EMB170	83.3	2.7	86.0	78.8	7.1	86.0	171.9
		EMB175	8.5	0.7	9.3	8.8	0.5	9.3	18.6
	<b>Subtotal</b>	<b>983.2</b>	<b>89.9</b>	<b>1073.1</b>	<b>987.5</b>	<b>96.3</b>	<b>1083.7</b>	<b>2156.8</b>	
Air Taxi	Jet	CNA680	0.8	0.0	0.8	0.8	0.0	0.8	1.6
	Nonjet	1900D	0.8	0.0	0.9	0.3	0.5	0.9	1.7
		CNA208	1.5	0.5	2.0	1.7	0.3	2.0	3.9
		DHC6	0.9	0.2	1.1	0.6	0.4	1.1	2.1
	Regional Jet	EMB14L	27.7	0.7	28.4	27.7	0.8	28.5	56.9
	<b>Subtotal</b>	<b>31.6</b>	<b>1.4</b>	<b>33.1</b>	<b>31.1</b>	<b>2.1</b>	<b>33.2</b>	<b>66.3</b>	
General Aviation	Jet	CL600	0.3	0.0	0.3	0.3	0.0	0.3	0.6
		CNA525C	0.5	0.0	0.5	0.5	0.0	0.5	1.0
		CNA55B	0.3	0.0	0.3	0.3	0.0	0.3	0.7
		CNA560XL	0.5	0.0	0.5	0.5	0.0	0.5	0.9
		G650ER	0.0	0.0	0.0	0.0	0.0	0.0	0.1
		GIV	0.6	0.0	0.6	0.6	0.0	0.6	1.1
		GV	0.2	0.0	0.2	0.2	0.0	0.2	0.4
	LEAR35	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
	Nonjet	CNA208	6.1	0.4	6.5	6.1	0.4	6.5	13.1
	<b>Subtotal</b>	<b>8.5</b>	<b>0.5</b>	<b>9.0</b>	<b>8.5</b>	<b>0.5</b>	<b>9.0</b>	<b>18.0</b>	
<b>Grand Total</b>		<b>1023.4</b>	<b>91.8</b>	<b>1115.2</b>	<b>1027.0</b>	<b>98.9</b>	<b>1125.9</b>	<b>2241.1</b>	

**19<sup>th</sup> Street Cargo Summary:** The 19<sup>th</sup> Street project would add 5 new positions at two turns per day or 20 additional daily operations (7,300 additional annual operations) in the proposed implementation (Build) year of 2025. The Build plus 5 was included as well; however, as there continues to be a cargo constraint, no additional operations are anticipated. The operational changes are summarized in **Table 7** below:

**Table 7 –19<sup>th</sup> Street Cargo Project – No Action and Proposed Action Comparison**

19th Street No Action						
Year	Cargo	Passenger	GA	Military	Annual Total	Daily Ops
2025	24000	770355	6343	213	800911	2194.3
2030	24000	780033	6442	213	810688	2221.1

19th Street Proposed Action						
Year	Cargo	Passenger	GA	Military	Annual Total	Daily Ops
2025	31300	770355	6343	213	808211	2214.3
2030	31300	780033	6442	213	817988	2241.1

## CTA Expansion Project

**No Action.** For the purposes of NEPA analysis, the No Action scenario (constrained passenger operations) assumes that no additional passenger gates are built, but assumes the 19<sup>th</sup> Street Project is built including their corresponding operations. This reflects a building block approach recognizing that the cargo facilities will be constructed prior to the terminal facilities. **Table 8** below illustrates the operational activity with these assumptions. The No Action analysis will utilize a minimal air carrier and air taxi growth rate for the remaining years of 0.25%. Table 8 reflects the constrained No Action operations. **Table 9**, **Table 10**, and **Table 11** outline the No Action CTA fleet mix for 2026, 2031, and 2036, respectively.

**Table 8 – Build Cargo – No Action CTA**

No Action Terminal - Proposed Action Cargo				
TAF Year	Air Carrier & Air Taxi	General Aviation	Military	Total Operations
2022	667,816	6,285	213	674,314
2023	733,497	6,305	213	740,015
2024	782,967	6,324	213	789,504
2025	801,655	6,343	213	808,211
2026	803,581	6,363	213	810,157
2027	805,512	6,383	213	812,108
2028	807,448	6,402	213	814,063
2029	809,388	6,422	213	816,023
2030	811,333	6,442	213	817,988
2031	813,361	6,461	213	820,035
2032	815,394	6,481	213	822,088
2033	817,433	6,501	213	824,147
2034	819,477	6,521	213	826,211
2035	821,526	6,541	213	828,280
2036	823,580	6,561	213	830,354
2037	825,639	6,582	213	832,434
2038	827,703	6,602	213	834,518
2039	829,772	6,622	213	836,607

Source: FAA 2021 TAF; Centurion Planning and Design Analysis, January 2023.

**Table 9 – No Action CTA Fleet Mix – 2026**

Category	Propulsion Class	AEDT Aircraft Type	Arrivals			Departures			Total
			Day	Night	Total	Day	Night	Total	
Air Carrier	Jet	7478	1.3	0.9	2.2	1.7	0.5	2.2	4.5
		7879	14.9	2.5	17.3	16.8	0.6	17.3	34.7
		737700	66.3	2.5	68.8	59.7	9.1	68.8	137.6
		737800	204.7	13.0	217.7	206.7	11.1	217.8	435.5
		747400	7.2	0.8	8.0	7.2	0.8	8.0	16.0
		777200	6.4	3.6	10.0	8.7	1.3	10.0	20.0
		777300	9.9	2.1	12.0	9.5	2.5	12.0	24.0
		7378MAX	48.7	3.3	52.1	48.9	3.2	52.1	104.1
		747400RN	0.0	0.0	0.1	0.0	0.0	0.1	0.1
		757PW	0.7	1.9	2.5	0.5	2.0	2.5	5.1
		757RR	0.8	2.9	3.6	0.7	2.9	3.6	7.3
		7673ER	8.8	4.0	12.8	7.8	4.9	12.8	25.6
		7773ER	4.9	0.3	5.3	4.3	0.9	5.3	10.5
		7878R	3.7	0.9	4.6	4.4	0.2	4.6	9.2
		A300-622R	2.2	2.4	4.6	1.5	3.1	4.6	9.2
		A319-131	90.9	3.1	94.0	89.5	4.4	93.9	187.9
		A320-211	15.8	2.5	18.3	15.3	3.1	18.3	36.6
		A320-232	34.9	6.7	41.5	34.6	6.9	41.5	83.1
		A320-271N	42.1	7.5	49.6	43.4	6.2	49.6	99.2
		A321-232	205.8	23.6	229.4	209.2	20.3	229.5	458.9
	A350-941	1.2	0.0	1.2	1.2	0.0	1.2	2.3	
	A380-841	1.2	0.0	1.2	1.2	0.0	1.2	2.4	
	DC1010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	DC1030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	EMB190	1.9	0.0	1.9	1.9	0.0	1.9	3.9	
	MD11GE	0.6	0.4	1.0	0.6	0.4	1.0	2.0	
	MD11PW	0.8	0.5	1.3	0.8	0.5	1.3	2.6	
	Regional Jet	CRJ9-ER	97.1	3.3	100.4	94.4	6.0	100.4	200.7
	EMB170	88.5	2.9	91.4	83.8	7.6	91.4	182.8	
	EMB175	9.1	0.8	9.9	9.3	0.5	9.9	19.7	
	<b>Subtotal</b>	<b>970.3</b>	<b>92.4</b>	<b>1062.7</b>	<b>963.7</b>	<b>99.0</b>	<b>1062.7</b>	<b>2125.4</b>	
Air Taxi	Jet	CNA680	0.6	0.0	0.6	0.6	0.0	0.6	1.2
	Nonjet	1900D	0.7	0.0	0.7	0.2	0.4	0.6	1.3
		CNA208	1.2	0.4	1.5	1.3	0.2	1.5	3.1
		DHC6	0.7	0.1	0.8	0.5	0.3	0.8	1.6
	Regional Jet	EMB14L	31.8	1.1	32.8	31.3	5.1	36.4	69.2
	<b>Subtotal</b>	<b>34.9</b>	<b>1.6</b>	<b>36.5</b>	<b>33.9</b>	<b>6.0</b>	<b>39.9</b>	<b>76.4</b>	
General Aviation	Jet	CL600	0.2	0.0	0.2	0.2	0.0	0.2	0.4
		CNA525C	0.4	0.0	0.4	0.4	0.0	0.4	0.8
		CNA55B	0.2	0.0	0.2	0.2	0.0	0.2	0.5
		CNA560XL	0.4	0.0	0.4	0.4	0.0	0.4	0.8
		G650ER	0.0	0.0	0.0	0.0	0.0	0.0	0.1
		GIV	0.3	0.0	0.3	0.3	0.0	0.3	0.6
		GV	0.1	0.0	0.1	0.1	0.0	0.1	0.3
	LEAR35	0.3	0.0	0.4	0.4	0.0	0.4	0.8	
	Nonjet	CNA208	6.4	0.3	6.7	6.4	0.3	6.7	13.4
	<b>Subtotal</b>	<b>8.4</b>	<b>0.4</b>	<b>8.9</b>	<b>8.5</b>	<b>0.4</b>	<b>8.9</b>	<b>17.8</b>	
<b>Grand Total</b>		<b>1013.7</b>	<b>94.4</b>	<b>1108.1</b>	<b>1006.1</b>	<b>105.4</b>	<b>1111.6</b>	<b>2219.6</b>	



**Table 10 – No Action CTA Fleet Mix – 2031**

Category	Propulsion Class	AEDT Aircraft Type	Arrivals			Departures			Total
			Day	Night	Total	Day	Night	Total	
Air Carrier	Jet	7478	1.4	0.9	2.3	1.8	0.5	2.3	4.6
		7879	15.1	2.5	17.5	17.0	0.6	17.5	35.1
		737700	73.1	2.7	75.8	66.5	9.4	75.8	151.7
		737800	227.6	14.0	241.6	229.3	12.3	241.6	483.1
		747400	7.2	0.8	8.0	7.2	0.8	8.0	16.0
		777200	6.5	3.6	10.1	8.8	1.4	10.1	20.3
		777300	9.9	2.1	12.0	9.5	2.5	12.0	24.0
		7378MAX	49.1	3.3	52.4	49.2	3.2	52.4	104.8
		747400RN	0.0	0.0	0.1	0.0	0.0	0.1	0.1
		757PW	0.6	1.6	2.2	0.5	1.7	2.2	4.3
		757RR	0.6	2.5	3.1	0.6	2.5	3.1	6.2
		7673ER	7.8	3.4	11.2	6.9	4.2	11.2	22.3
		7773ER	5.3	0.6	5.9	4.7	1.2	5.9	11.8
		7878R	3.8	0.9	4.7	4.5	0.2	4.7	9.4
		A300-622R	1.7	1.9	3.7	1.2	2.5	3.7	7.3
		A319-131	97.1	3.1	100.2	95.7	4.5	100.2	200.3
		A320-211	15.4	2.5	17.9	15.0	3.0	17.9	35.9
		A320-232	35.3	6.8	42.0	35.0	7.0	42.0	84.1
		A320-271N	40.3	5.2	45.5	41.6	3.9	45.5	90.9
		A321-232	214.2	24.5	238.6	217.6	21.1	238.6	477.2
		A350-941	1.2	0.0	1.2	1.2	0.0	1.2	2.4
		A380-841	1.2	0.0	1.2	1.2	0.0	1.2	2.4
		DC1010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DC1030	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EMB190	2.0	0.0	2.0	2.0	0.0	2.0	3.9	
	MD11GE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	MD11PW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Regional Jet	CRJ9-ER	86.4	3.0	89.4	83.9	5.5	89.4	178.8
	EMB170	81.0	2.7	83.7	76.7	7.0	83.7	167.4	
	EMB175	8.3	0.7	9.0	8.6	0.5	9.0	18.1	
	<b>Subtotal</b>	<b>991.9</b>	<b>89.4</b>	<b>1081.2</b>	<b>985.8</b>	<b>95.4</b>	<b>1081.2</b>	<b>2162.4</b>	
Air Taxi	Jet	CNA680	0.5	0.0	0.5	0.5	0.0	0.5	1.1
	Nonjet	1900D	0.6	0.0	0.6	0.2	0.3	0.5	1.1
		CNA208	1.1	0.3	1.4	1.2	0.2	1.4	2.8
		DHC6	0.6	0.1	0.7	0.4	0.2	0.7	1.4
	Regional Jet	EMB14L	27.5	0.9	28.4	27.1	4.4	31.5	59.9
	<b>Subtotal</b>	<b>30.2</b>	<b>1.4</b>	<b>31.6</b>	<b>29.4</b>	<b>5.2</b>	<b>34.6</b>	<b>66.2</b>	
General Aviation	Jet	CL600	0.2	0.0	0.2	0.2	0.0	0.2	0.4
		CNA525C	0.4	0.0	0.4	0.4	0.0	0.4	0.8
		CNA55B	0.2	0.0	0.3	0.2	0.0	0.3	0.5
		CNA560XL	0.4	0.0	0.4	0.4	0.0	0.4	0.8
		G650ER	0.0	0.0	0.0	0.0	0.0	0.0	0.1
		GIV	0.3	0.0	0.3	0.3	0.0	0.3	0.7
		GV	0.2	0.0	0.2	0.1	0.0	0.2	0.3
	LEAR35	0.4	0.0	0.4	0.4	0.0	0.4	0.8	
Nonjet	CNA208	6.5	0.3	6.8	6.5	0.3	6.8	13.6	
	<b>Subtotal</b>	<b>8.7</b>	<b>0.4</b>	<b>9.1</b>	<b>8.6</b>	<b>0.4</b>	<b>9.0</b>	<b>18.1</b>	
<b>Grand Total</b>			<b>1030.8</b>	<b>91.2</b>	<b>1122.0</b>	<b>1023.9</b>	<b>100.9</b>	<b>1124.8</b>	<b>2246.7</b>

**Table 11 – No Action CTA Fleet Mix – 2036**

Category	Propulsion Class	AEDT Aircraft Type	Arrivals			Departures			Total
			Day	Night	Total	Day	Night	Total	
Air Carrier	Jet	7478	1.4	0.9	2.3	1.8	0.5	2.3	4.6
		7879	15.3	2.5	17.9	17.3	0.6	17.9	35.7
		737700	75.2	3.9	79.1	68.5	10.6	79.1	158.2
		737800	230.4	14.2	244.6	232.2	12.4	244.6	489.2
		747400	7.2	0.8	8.0	7.2	0.8	8.0	16.0
		777200	6.6	3.7	10.3	8.9	1.4	10.3	20.5
		777300	9.9	2.1	12.0	9.5	2.5	12.0	24.0
		7378MAX	59.8	5.3	65.2	59.7	5.4	65.2	130.3
		747400RN	0.0	0.0	0.1	0.0	0.0	0.1	0.1
		757PW	0.5	1.5	2.0	0.4	1.6	2.0	4.0
		757RR	0.6	2.3	2.8	0.6	2.3	2.8	5.7
		7673ER	7.9	3.4	11.3	7.0	4.3	11.3	22.6
		7773ER	5.3	0.6	6.0	4.7	1.2	6.0	11.9
		7878R	3.8	0.9	4.7	4.6	0.2	4.7	9.5
		A300-622R	0.3	0.3	0.6	0.2	0.4	0.6	1.1
		A319-131	98.3	3.1	101.4	96.9	4.5	101.4	202.9
		A320-211	15.6	2.5	18.2	15.1	3.0	18.2	36.3
		A320-232	35.7	6.9	42.6	35.5	7.1	42.6	85.2
		A320-271N	39.6	5.1	44.7	40.9	3.8	44.7	89.4
		A321-232	216.4	24.8	241.2	219.9	21.3	241.2	482.4
		A350-941	1.2	0.0	1.2	1.2	0.0	1.2	2.4
		A380-841	1.2	0.0	1.2	1.2	0.0	1.2	2.5
		DC1010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		DC1030	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EMB190	2.0	0.0	2.0	2.0	0.0	2.0	4.0	
	MD11GE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	MD11PW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Regional Jet	CRJ9-ER	86.9	2.9	89.8	84.4	5.4	89.8	179.6
	EMB170	77.3	0.7	78.0	73.0	4.9	78.0	155.9	
	EMB175	7.6	0.7	8.3	7.8	0.4	8.3	16.6	
	<b>Subtotal</b>	<b>1006.1</b>	<b>89.1</b>	<b>1095.3</b>	<b>1000.5</b>	<b>94.8</b>	<b>1095.3</b>	<b>2190.6</b>	
Air Taxi	Jet	CNA680	0.5	0.0	0.5	0.5	0.0	0.5	1.1
	Nonjet	1900D	0.6	0.0	0.6	0.2	0.4	0.5	1.2
		CNA208	1.1	0.4	1.4	1.2	0.2	1.4	2.8
		DHC6	0.6	0.1	0.7	0.4	0.3	0.7	1.4
	Regional Jet	EMB14L	27.2	0.9	28.2	26.9	4.4	31.4	59.6
	<b>Subtotal</b>	<b>30.1</b>	<b>1.4</b>	<b>31.5</b>	<b>29.3</b>	<b>5.2</b>	<b>34.6</b>	<b>66.0</b>	
General Aviation	Jet	CL600	0.2	0.0	0.2	0.2	0.0	0.2	0.4
		CNA525C	0.4	0.0	0.4	0.4	0.0	0.4	0.9
		CNA55B	0.3	0.0	0.3	0.3	0.0	0.3	0.5
		CNA560XL	0.4	0.0	0.4	0.4	0.0	0.4	0.8
		G650ER	0.0	0.0	0.0	0.0	0.0	0.0	0.1
		GIV	0.3	0.0	0.3	0.3	0.0	0.3	0.6
		GV	0.2	0.0	0.2	0.1	0.0	0.2	0.4
	LEAR35	0.4	0.0	0.4	0.4	0.0	0.4	0.8	
	Nonjet	CNA208	6.5	0.3	6.9	6.5	0.3	6.9	13.8
	<b>Subtotal</b>	<b>8.8</b>	<b>0.4</b>	<b>9.2</b>	<b>8.7</b>	<b>0.4</b>	<b>9.1</b>	<b>18.3</b>	
<b>Grand Total</b>		<b>1045.0</b>	<b>91.0</b>	<b>1136.0</b>	<b>1038.5</b>	<b>100.5</b>	<b>1139.0</b>	<b>2274.9</b>	

**CTA Expansion Project Proposed Action.** For the purposes of the Central Terminal Area Expansion NEPA, the proposed action will consist of the operations shown in **Table 12**, with the proposed action CTA aircraft fleet mix for 2026 (Implementation Year), 2031 (Implementation Year + 5 years of operations), and 2036 (Implementation Year + 10 years of operations) as shown in **Table 13**, **Table 14**, and **Table 15**.

As shown in Table 12, DFW anticipates the CTA Project construction of the Terminal A and C Piers (net nine gates) and the new Terminal F (22 new gates) would be complete and operational in 2026. As such, the new gates will be available for operations; however, the operational demand is not forecasted to fully exist until later (estimated 2028). Beginning in 2026, the new gates will be used: 1) to offset existing operations from Terminal C during the phased renovation project and 2) to accommodate new operations over time. The new operations are anticipated to initially operate at lower levels of service, and ramp up to the 6.5 turns per day as demand increases in future years. The CTA EA includes operations occurring in 2031 and 2036 to allow for analysis, evaluation, and disclosure of potential and reasonably foreseeable environmental impacts.

**Table 12 – Proposed Action – CTA**

TAF Year	Air Carrier	Air Taxi & Commuter	General Aviation	Military	Total Operations
2022	594,676	73,140	6,285	213	674,314
2023	665,928	67,569	6,305	213	740,015
2024	729,813	53,154	6,324	213	789,504
2025	760,859	40,796	6,343	213	808,211
2026	781,450	28,093	6,363	213	816,119
2027	798,840	24,859	6,383	213	830,295
2028	814,665	25,230	6,402	213	846,510
2029	829,425	25,581	6,422	213	861,641
2030	843,620	25,922	6,442	213	876,197
2031	857,544	26,258	6,461	213	890,476
2032	871,694	26,600	6,481	213	904,988
2033	885,625	26,939	6,501	213	919,278
2034	899,891	27,288	6,521	213	933,913
2035	914,167	27,640	6,541	213	948,561
2036	928,457	27,994	6,561	213	963,225
2037	941,862	28,332	6,582	213	976,989
2038	954,896	28,667	6,602	213	990,378
2039	968,058	29,005	6,622	213	1,003,898

Source: FAA 2021 TAF; Centurion Planning and Design Analysis, January 2023.

**Table 13 – Proposed Action CTA Fleet Mix – 2026**

Category	Propulsion Class	AEDT Aircraft Type	Arrivals			Departures			Total
			Day	Night	Total	Day	Night	Total	
Air Carrier	Jet	7478	1.4	0.9	2.3	1.8	0.5	2.3	4.6
		7879	15.6	2.6	18.1	17.5	0.6	18.1	36.3
		737700	68.8	3.1	72.0	62.7	9.3	72.0	143.9
		737800	215.8	13.6	229.4	217.8	11.5	229.4	458.7
		747400	7.2	0.8	8.0	7.2	0.8	8.0	16.0
		777200	6.2	3.2	9.4	8.7	0.7	9.4	18.8
		777300	9.9	2.1	12.0	9.5	2.5	12.0	24.0
		7378MAX	21.9	1.6	23.5	21.8	1.6	23.5	46.9
		747400RN	0.0	0.0	0.1	0.0	0.0	0.1	0.1
		757PW	0.5	1.5	2.0	0.4	1.6	2.0	4.1
		757RR	0.6	2.3	2.9	0.6	2.4	2.9	5.9
		7673ER	7.5	3.1	10.6	6.5	4.1	10.6	21.2
		7773ER	5.2	0.4	5.5	4.5	1.0	5.5	11.0
		7878R	3.8	0.9	4.7	4.5	0.2	4.7	9.4
		A300-622R	2.1	2.4	4.5	1.4	3.1	4.5	8.9
		A319-131	100.3	3.2	103.5	98.9	4.6	103.5	207.1
		A320-211	17.3	2.8	20.1	16.8	3.4	20.1	40.2
		A320-232	34.9	6.6	41.5	34.7	6.9	41.5	83.1
		A320-271N	36.4	4.5	40.9	37.5	3.5	40.9	81.9
		A321-232	217.2	24.8	242.0	221.3	20.9	242.2	484.2
		A350-941	1.3	0.0	1.3	1.3	0.0	1.3	2.5
		A380-841	1.0	0.0	1.0	1.0	0.0	1.0	2.0
		DC1010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DC1030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	EMB190	2.1	0.1	2.1	2.1	0.1	2.2	4.3	
	MD11GE	0.6	0.4	1.0	0.6	0.4	1.0	2.0	
	MD11PW	0.8	0.5	1.3	0.8	0.5	1.3	2.6	
Regional Jet	CRJ9-ER	101.2	4.0	105.1	98.5	6.6	105.1	210.2	
	EMB170	92.3	3.0	95.3	87.4	7.9	95.3	190.6	
	EMB175	9.5	0.8	10.3	9.7	0.6	10.3	20.6	
	<b>Subtotal</b>	<b>981.4</b>	<b>89.1</b>	<b>1070.5</b>	<b>975.5</b>	<b>95.2</b>	<b>1070.7</b>	<b>2141.2</b>	
Air Taxi	Jet	CNA680	0.8	0.0	0.8	0.8	0.0	0.8	1.6
	Nonjet	1900D	0.9	0.0	0.9	0.3	0.6	0.9	1.8
		CNA208	1.5	0.5	2.0	1.7	0.3	2.0	4.0
		DHC6	0.9	0.2	1.1	0.6	0.5	1.1	2.2
	Regional Jet	EMB14L	32.9	0.9	33.7	32.5	1.3	33.7	67.4
	<b>Subtotal</b>	<b>36.9</b>	<b>1.6</b>	<b>38.5</b>	<b>35.9</b>	<b>2.6</b>	<b>38.5</b>	<b>77.0</b>	
General Aviation	Jet	CL600	0.3	0.0	0.3	0.3	0.0	0.3	0.6
		CNA525C	0.5	0.0	0.5	0.5	0.0	0.5	1.1
		CNA55B	0.3	0.0	0.3	0.3	0.0	0.3	0.7
		CNA560XL	0.5	0.0	0.5	0.5	0.0	0.5	1.0
		G650ER	0.1	0.0	0.1	0.1	0.0	0.1	0.1
		GIV	0.4	0.0	0.4	0.4	0.0	0.4	0.8
		GV	0.2	0.0	0.2	0.2	0.0	0.2	0.4
	LEAR35	0.3	0.0	0.3	0.3	0.0	0.3	0.6	
	Nonjet	CNA208	6.0	0.3	6.3	6.0	0.3	6.3	12.5
	<b>Subtotal</b>	<b>8.5</b>	<b>0.4</b>	<b>8.9</b>	<b>8.5</b>	<b>0.4</b>	<b>8.9</b>	<b>17.8</b>	
<b>Grand Total</b>			<b>1026.8</b>	<b>91.1</b>	<b>1117.9</b>	<b>1019.9</b>	<b>98.2</b>	<b>1118.1</b>	<b>2235.9</b>

**Table 14 – Proposed Action CTA Fleet Mix – 2031**

Category	Propulsion Class	AEDT Aircraft Type	Arrivals			Departures			Total
			Day	Night	Total	Day	Night	Total	
Air Carrier	Jet	7478	1.5	1.0	2.5	1.9	0.6	2.5	5.0
		7879	17.0	2.8	19.8	19.1	0.6	19.8	39.6
		737700	75.1	3.4	78.5	68.4	10.1	78.5	157.1
		737800	235.5	14.8	250.3	237.7	12.6	250.3	500.5
		747400	7.2	0.8	8.0	7.2	0.8	8.0	16.0
		777200	9.5	5.2	14.7	12.6	2.1	14.7	29.3
		777300	9.9	2.1	12.0	9.5	2.5	12.0	24.0
		7378MAX	53.1	3.1	56.2	52.5	3.7	56.2	112.4
		747400RN	0.0	0.0	0.1	0.0	0.0	0.1	0.1
		757PW	0.6	1.6	2.2	0.5	1.8	2.2	4.5
		757RR	0.7	2.5	3.2	0.6	2.6	3.2	6.4
		7673ER	8.2	3.4	11.6	7.1	4.5	11.6	23.2
		7773ER	5.6	0.4	6.0	5.0	1.1	6.0	12.0
		7878R	4.1	1.0	5.1	4.9	0.2	5.1	10.2
		A300-622R	2.3	2.6	4.9	1.5	3.3	4.9	9.8
		A319-131	101.3	3.0	104.3	99.6	4.7	104.3	208.6
		A320-211	18.9	3.1	21.9	18.3	3.7	21.9	43.9
		A320-232	38.1	7.2	45.3	37.8	7.5	45.3	90.6
		A320-271N	39.8	4.9	44.7	40.9	3.8	44.7	89.4
		A321-232	239.0	27.1	266.0	243.4	22.8	266.1	532.1
		A350-941	1.4	0.0	1.4	1.4	0.0	1.4	2.8
		A380-841	1.1	0.0	1.1	1.1	0.0	1.1	2.2
		DC1010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DC1030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	EMB190	2.3	0.1	2.3	2.3	0.1	2.3	4.7	
	MD11GE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	MD11PW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Regional Jet	CRJ9-ER	99.4	3.9	103.2	107.5	7.2	114.7	217.9
	EMB170	90.7	2.9	93.6	85.8	7.8	93.6	187.1	
	EMB175	9.3	0.8	10.1	9.6	0.5	10.1	20.2	
	<b>Subtotal</b>	<b>1071.5</b>	<b>97.6</b>	<b>1169.1</b>	<b>1076.1</b>	<b>104.5</b>	<b>1180.7</b>	<b>2349.7</b>	
Air Taxi	Jet	CNA680	0.8	0.0	0.9	0.8	0.0	0.9	1.7
	Nonjet	1900D	0.9	0.0	0.9	0.4	0.6	0.9	1.9
		CNA208	1.6	0.5	2.1	1.8	0.3	2.1	4.3
		DHC6	1.0	0.2	1.2	0.7	0.5	1.2	2.3
	Regional Jet	EMB14L	30.0	0.8	30.8	30.0	0.9	30.9	61.7
	<b>Subtotal</b>	<b>34.3</b>	<b>1.6</b>	<b>35.9</b>	<b>33.7</b>	<b>2.3</b>	<b>36.0</b>	<b>71.9</b>	
General Aviation	Jet	CL600	0.3	0.0	0.3	0.3	0.0	0.3	0.6
		CNA525C	0.5	0.0	0.5	0.5	0.0	0.5	1.1
		CNA55B	0.4	0.0	0.4	0.4	0.0	0.4	0.7
		CNA560XL	0.5	0.0	0.5	0.5	0.0	0.5	1.0
		G650ER	0.1	0.0	0.1	0.1	0.0	0.1	0.1
		GIV	0.3	0.0	0.3	0.4	0.0	0.4	0.7
		GV	0.2	0.0	0.2	0.2	0.0	0.2	0.4
	LEAR35	0.1	0.0	0.1	0.1	0.0	0.1	0.1	
	Nonjet	CNA208	6.4	0.3	6.6	6.4	0.3	6.6	13.3
	<b>Subtotal</b>	<b>8.6</b>	<b>0.4</b>	<b>9.0</b>	<b>8.7</b>	<b>0.4</b>	<b>9.1</b>	<b>18.1</b>	
<b>Grand Total</b>		<b>1114.4</b>	<b>99.5</b>	<b>1214.0</b>	<b>1118.5</b>	<b>107.2</b>	<b>1225.7</b>	<b>2439.7</b>	

**Table 15 – Proposed Action CTA Fleet Mix – 2036**

Category	Propulsion Class	AEDT Aircraft Type	Arrivals			Departures			Total
			Day	Night	Total	Day	Night	Total	
Air Carrier	Jet	7478	1.6	1.1	2.7	2.1	0.6	2.7	5.4
		7879	18.4	3.0	21.4	20.7	0.7	21.4	42.8
		737700	81.3	3.7	84.9	74.0	11.0	84.9	169.9
		737800	254.7	16.0	270.7	257.1	13.6	270.7	541.4
		747400	7.2	0.8	8.0	7.2	0.8	8.0	16.0
		777200	10.3	5.6	15.9	13.6	2.3	15.9	31.7
		777300	9.9	2.1	12.0	9.5	2.5	12.0	24.0
		7378MAX	59.9	5.8	65.7	59.3	6.4	65.7	131.3
		747400RN	0.0	0.0	0.1	0.0	0.0	0.1	0.2
		757PW	0.5	1.5	2.0	0.4	1.6	2.0	4.1
		757RR	0.6	2.3	2.9	0.6	2.4	2.9	5.9
		7673ER	11.3	5.2	16.5	10.0	6.5	16.5	33.0
		7773ER	6.6	0.5	7.1	5.8	1.2	7.1	14.2
		7878R	4.9	1.2	6.0	5.8	0.2	6.0	12.1
		A300-622R	0.3	0.3	0.6	0.2	0.4	0.6	1.2
		A319-131	109.6	3.2	112.8	107.8	5.0	112.8	225.7
		A320-211	20.4	3.3	23.7	19.8	4.0	23.7	47.5
		A320-232	62.2	8.2	70.4	61.9	8.5	70.4	140.9
		A320-271N	64.0	5.7	69.8	65.2	4.5	69.8	139.5
		A321-232	260.2	29.3	289.5	265.0	24.6	289.6	579.1
	A350-941	1.5	0.0	1.5	1.5	0.0	1.5	3.0	
	A380-841	1.2	0.0	1.2	1.2	0.0	1.2	2.4	
	DC1010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	DC1030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	EMB190	2.5	0.1	2.5	2.5	0.1	2.5	5.1	
	MD11GE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	MD11PW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Regional Jet	CRJ9-ER	85.9	3.4	89.2	92.9	6.3	99.1	188.4
	EMB170	78.5	2.5	81.0	74.2	6.7	81.0	161.9	
	EMB175	8.0	0.7	8.7	8.3	0.5	8.8	17.5	
	<b>Subtotal</b>	<b>1161.5</b>	<b>105.5</b>	<b>1267.0</b>	<b>1166.5</b>	<b>110.5</b>	<b>1277.0</b>	<b>2544.0</b>	
Air Taxi	Jet	CNA680	0.9	0.0	0.9	0.9	0.0	0.9	1.8
	Nonjet	1900D	1.0	0.0	1.0	0.4	0.6	1.0	2.0
		CNA208	1.7	0.6	2.3	2.0	0.3	2.3	4.5
		DHC6	1.0	0.2	1.2	0.7	0.5	1.2	2.4
	Regional Jet	EMB14L	32.0	1.0	33.0	32.0	1.0	33.0	65.9
	<b>Subtotal</b>	<b>36.5</b>	<b>1.9</b>	<b>38.3</b>	<b>35.9</b>	<b>2.5</b>	<b>38.3</b>	<b>76.7</b>	
General Aviation	Jet	CL600	0.3	0.0	0.3	0.3	0.0	0.3	0.6
		CNA525C	0.5	0.0	0.5	0.5	0.0	0.5	1.1
		CNA55B	0.4	0.0	0.4	0.4	0.0	0.4	0.8
		CNA560XL	0.5	0.0	0.5	0.5	0.0	0.5	1.0
		G650ER	0.1	0.0	0.1	0.1	0.0	0.1	0.1
		GIV	0.3	0.0	0.3	0.4	0.0	0.4	0.8
		GV	0.3	0.0	0.3	0.2	0.0	0.2	0.5
	LEAR35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Nonjet	CNA208	6.5	0.2	6.7	6.5	0.2	6.7	13.4
	<b>Subtotal</b>	<b>8.8</b>	<b>0.3</b>	<b>9.1</b>	<b>8.9</b>	<b>0.3</b>	<b>9.2</b>	<b>18.3</b>	
<b>Grand Total</b>		<b>1206.8</b>	<b>107.6</b>	<b>1314.4</b>	<b>1211.2</b>	<b>113.3</b>	<b>1324.5</b>	<b>2639.0</b>	

**CTA Passenger Operations Summary:** The CTA project would construct 31 new gates for a total of 201 gates in the six terminals. Gate utilization level of service is expected to increase to 6.5 turns per day as demand increases with full utilization anticipated in 2038 timeframe. For the purposes of the EA, the proposed action CTA aircraft fleet mix for 2026 (Implementation Year), 2031 (Implementation Year + 5 years of operations), and 2036 (Implementation Year + 10 years of operations) are summarized in **Table 16** below:

**Table 16 –CTA Expansion Project: No Action and Proposed Action Comparison**

CTA Project - No Action						
Year	Cargo	Passenger	GA	Military	Annual Total	Daily Ops
2026	31300	772281	6363	213	810157	2219.6
2031	31300	782061	6461	213	820035	2246.7
2036	31300	792280	6561	213	830354	2274.9

CTA Proposed Action						
Year	Cargo	Passenger	GA	Military	Annual Total	Daily Ops
2026	31300	778243	6363	213	816119	2235.9
2031	31300	852502	6461	213	890476	2439.7
2036	31300	925151	6561	213	963225	2639.0

# Appendix 1

Operations (Arr + Dep)							Available Gates						Average Daily Gate Utilization By Month									
Year	Month	Days/ Month	A	B	C	D	E	Year	Start Month	End Month	A	B	C	D	E	Year	Month	A	B	C	D	E
2017	2	28	9394	13955	9687	4809	5697	2017	1	12	26	42	28	23	36	2017	2	6.5	5.9	6.2	3.7	2.8
2017	3	31	10264	15524	11581	5417	7253	2017	1	12	26	42	28	23	36	2017	3	6.4	6.0	6.7	3.8	3.2
2017	4	30	9383	13754	11399	4955	6582	2019	1	4	26	42	28	23	36	2017	4	6.0	5.5	6.8	3.6	3.0
2017	5	31	10163	14740	12212	5187	7822	2019	5	12	26	42	28	23	42	2017	5	6.3	5.7	7.0	3.6	3.5
2017	6	30	10282	15047	11615	5242	8389	2020	1	3	26	42	28	23	42	2017	6	6.6	6.0	6.9	3.8	3.9
2017	7	31	11306	15799	11796	5492	8904	2020	4	10	26	42	24	23	42	2017	7	7.0	6.1	6.8	3.9	4.0
2017	8	31	10927	15453	11996	5287	9044	2020	11	12	26	42	24	23	44	2017	8	6.8	5.9	6.9	3.7	4.1
2017	9	30	9892	14249	11301	4739	8034	2021	1	4	26	42	24	23	44	2017	9	6.3	5.7	6.7	3.4	3.7
2017	10	31	10548	14185	12010	5086	8483	2021	5	12	26	42	24	27	44	2017	10	6.5	5.4	6.9	3.6	3.8
2017	11	30	9824	13258	10951	4750	7748	2022	1	5	26	42	24	27	44	2017	11	6.3	5.3	6.5	3.4	3.6
2017	12	31	10379	14871	11472	5225	7522	2022	6	12	26	42	28	27	44	2017	12	6.4	5.7	6.6	3.7	3.4
2018	1	31	10188	14679	11285	4993	7246								2018	1	6.3	5.6	6.5	3.5	3.2	
2018	2	28	9247	13088	10441	4495	6195								2018	2	6.4	5.6	6.7	3.5	3.1	
2018	3	31	10341	15351	11830	5222	7277								2018	3	6.4	5.9	6.8	3.7	3.3	
2018	4	30	9574	15255	11558	5016	6956								2018	4	6.1	6.1	6.9	3.6	3.2	
2018	5	31	10208	15228	12233	4948	8258								2018	5	6.3	5.8	7.0	3.5	3.7	
2018	6	30	10598	15508	12584	5334	8857								2018	6	6.8	6.2	7.5	3.9	4.1	
2018	7	31	11032	15570	13022	5418	9281								2018	7	6.8	6.0	7.5	3.8	4.2	
2018	8	31	10611	15794	12606	5364	9371								2018	8	6.6	6.1	7.3	3.8	4.2	
2018	9	30	9689	14301	11226	4974	7808								2018	9	6.2	5.7	6.7	3.6	3.6	
2018	10	31	10302	15313	12003	5092	7449								2018	10	6.4	5.9	6.9	3.6	3.3	
2018	11	30	9801	15247	11452	5070	6707								2018	11	6.3	6.1	6.8	3.7	3.1	
2018	12	31	9948	15141	11466	5235	6764								2018	12	6.2	5.8	6.6	3.7	3.0	
2019	1	31	10006	15361	11785	5175	7191								2019	1	6.2	5.9	6.8	3.6	3.2	
2019	2	28	9139	13377	10770	4643	6704								2019	2	6.3	5.7	6.9	3.6	3.3	
2019	3	31	10199	15923	12272	5429	7984								2019	3	6.3	6.1	7.1	3.8	3.6	
2019	4	30	9689	15261	11575	5694	7948								2019	4	6.2	6.1	6.9	4.1	3.7	
2019	5	31	10975	12044	12646	6300	14500								2019	5	6.8	4.6	7.3	4.4	5.6	
2019	6	30	10328	14031	11806	6107	14173								2019	6	6.6	5.6	7.0	4.4	5.6	
2019	7	31	10668	15337	12583	6305	14751								2019	7	6.6	5.9	7.2	4.4	5.7	
2019	8	31	11020	15479	12713	6220	15052								2019	8	6.8	5.9	7.3	4.4	5.8	
2019	9	30	10385	14558	11464	5633	14207								2019	9	6.7	5.8	6.8	4.1	5.6	
2019	10	31	10158	15054	11630	5817	14195								2019	10	6.3	5.8	6.7	4.1	5.5	
2019	11	30	9851	14432	11597	5672	13319								2019	11	6.3	5.7	6.9	4.1	5.3	
2019	12	31	9859	15692	11670	5719	13391								2019	12	6.1	6.0	6.7	4.0	5.1	
2020	1	31	9460	14267	10778	5434	13276								2020	1	5.9	5.5	7.2	3.8	4.9	
2020	2	29	8910	13674	10365	5468	12466								2020	2	5.9	5.6	7.4	4.1	4.9	
2020	3	31	8073	13426	9041	5174	11783								2020	3	5.0	5.2	6.1	3.6	4.3	
2020	4	30	3738	6189	3239	2489	4552								2020	4	2.4	2.5	2.2	1.8	1.8	
2020	5	31	4377	7629	3964	2781	4864								2020	5	2.7	2.9	2.7	2.0	1.9	
2020	6	30	5320	7493	4937	3443	5349								2020	6	3.4	3.0	3.4	2.5	2.1	
2020	7	31	7740	11125	6940	5144	9105								2020	7	4.8	4.3	4.7	3.6	3.5	
2020	8	31	7733	11601	7334	4979	9065								2020	8	4.8	4.5	4.9	3.5	3.5	
2020	9	30	6706	10641	6568	4593	8806								2020	9	4.3	4.2	4.6	3.3	3.5	
2020	10	31	7232	11976	7197	5280	9485								2020	10	4.5	4.6	4.8	3.7	3.6	
2020	11	30	6964	12633	6710	5151	9854								2020	11	4.5	5.0	4.7	3.7	3.7	
2020	12	31	7123	12861	6946	5397	10377								2020	12	4.4	4.9	4.7	3.8	3.8	
2021	1	31	7173	12871	7037	5147	10728								2021	1	4.4	4.9	4.7	3.6	3.9	
2021	2	28	5709	9989	5403	4126	8420								2021	2	3.9	4.2	4.0	3.2	3.4	
2021	3	31	8431	14332	8081	5723	11953								2021	3	5.2	5.5	5.4	4.0	4.4	
2021	4	30	8166	13722	8149	5727	12260								2021	4	5.2	5.4	5.7	4.2	4.6	
2021	5	31	9044	14875	8833	6645	13402								2021	5	5.6	5.7	5.9	4.0	4.9	
2021	6	30	9763	14166	9713	8081	13496								2021	6	6.3	5.6	6.7	5.0	5.1	
2021	7	31	10434	14338	10554	8362	14432								2021	7	6.5	5.5	7.1	5.0	5.3	
2021	8	31	9826	13524	9787	7861	13820								2021	8	6.1	5.2	6.6	4.7	5.1	
2021	9	30	9349	12966	9265	7371	13361								2021	9	6.0	5.1	6.4	4.6	5.1	
2021	10	31	9232	13452	9280	7445	13628								2021	10	5.7	5.2	6.2	4.4	5.0	
2021	11	30	9124	12255	8931	7045	13825								2021	11	5.8	4.9	6.2	4.3	5.2	
2021	12	31	10114	12423	9271	6782	13827								2021	12	6.3	4.8	6.2	4.1	5.1	
2022	1	31	9677	11944	8740	6383	13114								2022	1	6.0	4.6	5.9	3.8	4.8	
2022	2	28	7727	9387	7234	5115	10592								2022	2	5.3	4.0	5.4	3.4	4.3	
2022	3	31	9885	11846	9029	6339	13098								2022	3	6.1	4.5	6.1	3.8	4.8	
2022	4	30	8922	12500	8964	6949	13575								2022	4	5.7	5.0	6.2	4.3	5.1	
2022	5	31	9291	12457	9647	7869	13819								2022	5	5.8	4.8	6.5	4.7	5.1	
2022	6	30	9211	12784	10058	8125	13716								2022	6	5.9	5.1	6.0	5.0	5.2	
2022	7	31	9564	12847	10654	8408	14001								2022	7	5.9	4.9	6.1	5.0	5.1	
2022	8	31	9274	12361	11221	7626	13891								2022	8	5.8	4.7	6.5	4.6	5.1	
2022	9	30	8912	12275	10671	7007	13289								2022	9	5.7	4.9	6.4	4.3	5.0	