

Appendix E

Fleet Mix Forecast

**Draft Environmental Assessment for the
Reconstruction of DAL Runway 13R-31L and Associated Improvements**

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Attachments

Attachment 1. Detailed Fleet Mix

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APPENDIX E:

Fleet Mix Forecast

This appendix summarizes the assumptions and methodologies used to develop the fleet mixes for the Environmental Assessment (EA) for the Dallas Love Field Airport Runway 13R-31L Reconstruction. The base year fleet mix was based on 2017 annual radar data and was updated and extrapolated to represent the base year 2018 operations using the most recent airport traffic statistics and FAA data. The future fleet mix represents the future year 2021 and was based on the base year fleet mix and published airline fleet replacement plans, and the adjusted 2017 Terminal Area Forecast (2017 TAF)¹. Detailed base year (2018) and future year (2021) fleet mixes are provided in **Attachment 1, Detailed Fleet Mix**.

1 Available Aviation Activity Forecasts

Several forecasts for DAL are available including the 2015 Master Plan Update (2015 MPU) and the most recent 2017 TAF. This section discusses historical operations and forecasts presented in the 2015 MPU and 2017 TAF.

1.1 Master Plan Update (2015 MPU)

The most recent Master Plan Update was initiated in 2012 and completed in 2015.² The first iteration of forecasts was prepared in 2013. The base year in the 2015 MPU was 2012, as well as two short-term forecasts for the pre-Wright Amendment repeal period (fiscal years 2013 and 2014) and the post-Wright Amendment period (fiscal years 2015 through 2032). However, after the Wright Amendment was fully repealed in October 2014, air carrier operations increased by approximately 43.4% in 2015, a pace faster than forecasted in the 2015 MPU. Therefore, a sensitivity analysis³ was prepared in 2017 that re-examined the forecasts included in the 2015 MPU to project the pre- and post-Wright Amendment operations. The sensitivity analysis includes a baseline forecast, a low growth scenario and a high growth scenario. The forecast horizon includes a base year (fiscal year 2015) and two future years (fiscal years 2024 and 2032).

Table 1 shows the 2015 MPU aircraft operations forecast. The latest operations statistics show that during fiscal year 2017, DAL recorded a total of 225,754 operations, which is approximately 10.5% higher than the 2015 MPU forecast. Among them, air carrier operations are approximately 15.1% higher than the 2015 MPU forecast. The Airport experienced faster growth than originally expected in the 2015 MPU.

Table 2 shows the 2017 MPU Sensitivity Analysis forecast. Although some assumptions in the sensitivity analysis did not materialize, the baseline forecast tracks well with recorded airport operations. During the fiscal year 2017, the Airport recorded 225,754 operations, which is only slightly higher than the baseline forecast of 223,530 operations.

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Table 1
Historical and Forecast Aircraft Operations from 2015 MPU

Fiscal Year	Passenger Airlines			All-Cargo Airlines	Other Air Taxi	General Aviation	Military	Total
	Mainline	Regional/Commuter	Total					
Historical								
2002	83,944	7,652	91,596	52	35,647	110,399	2,038	239,732
2003	82,480	6,416	88,896	1,540	35,877	111,984	1,604	239,901
2004	82,996	5,262	88,258	1,601	40,156	121,474	1,953	253,442
2005	77,626	6,538	84,164	1,632	39,861	107,774	2,468	235,899
2006	80,526	11,988	92,514	1,734	37,719	107,220	2,803	241,990
2007	87,768	17,990	105,758	1,111	39,976	97,991	2,498	247,334
2008	91,734	16,760	108,494	1,260	40,572	78,767	2,255	231,348
2009	88,488	9,116	97,604	208	22,276	55,420	1,469	176,977
2010	85,318	6,758	92,076	88	21,325	53,795	1,089	168,373
2011	84,110	7,398	91,508	82	23,801	61,578	1,087	178,056
2012	84,232	9,502	93,734	94	25,936	55,807	1,496	177,067
Forecast								
2013	85,410	9,614	95,024	94	26,027	55,305	1,496	177,946
2014	86,879	9,614	96,493	94	26,118	55,379	1,496	179,580
2015	110,074	10,127	120,201	94	26,209	55,454	1,496	203,454
2016	110,074	10,351	120,425	94	26,301	55,529	1,496	203,845
2017	110,074	10,573	120,647	94	26,393	55,604	1,496	204,234
2022	110,088	11,641	121,729	94	26,858	55,980	1,496	206,157
2027	110,057	12,647	122,704	94	27,332	56,359	1,496	207,985
2032	110,060	13,562	123,622	94	27,813	56,741	1,496	209,766
Compound Annual Growth Rate								
2012-2014	1.6%	0.6%	1.5%	0.0%	0.4%	-0.4%	0.0%	0.7%
2012-2015	9.3%	2.1%	8.6%	0.0%	0.3%	-0.2%	0.0%	4.7%
2015-2032	0.0%	1.7%	0.2%	0.0%	0.4%	0.1%	0.0%	0.2%
2012-2032	1.3%	1.8%	1.4%	0.0%	0.3%	0.1%	0.0%	0.9%

Sources: City of Dallas Department of Aviation; FAA Air Traffic Activity Data System; U.S. DOT T-100 database, accessed March 2013; Ricondo & Associates, Inc. (forecasts), March 2013.

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Table 2
2017 MPU Sensitivity Analysis Forecasts

Fiscal Year	Baseline Forecast			High Growth Scenario			Low Growth Scenario		
	Passenger	Non-Passenger	Total	Passenger	Non-Passenger	Total	Passenger	Non-Passenger	Total
2014 ¹	91,200	85,689	176,889	91,200	85,689	176,889	91,200	85,689	176,889
Forecast									
2015	127,152	85,830	212,982	125,740	85,830	211,570	125,740	85,830	211,570
2016	137,440	85,940	223,380	134,380	85,980	220,360	134,380	85,980	220,360
2017	137,440	86,090	223,530	134,980	86,130	221,110	131,160	86,130	217,290
2022	137,440	86,840	224,280	136,980	86,880	223,860	127,940	86,880	214,820
2027	137,440	87,590	225,030	138,480	87,630	226,110	127,940	87,630	215,570
2032	137,440	88,340	225,780	139,880	88,380	228,260	127,940	88,380	216,320
Compound Annual Growth Rate									
2014-2015	39.40%	0.20%	20.40%	37.90%	0.20%	19.60%	37.90%	0.20%	19.60%
2015-2032	0.50%	0.20%	0.30%	0.60%	0.20%	0.40%	0.10%	0.20%	0.10%

Notes:

For fiscal years ending September 30.

CAGR – Compound Annual Growth Rate

Years 2017-2032 are only shown in 5 year increments due to the small year-to-year variation.

^{1/} Represents forecast data for MPU and actual data for high growth scenario and low growth scenario forecasts.

Sources: City of Dallas Aviation Department; Innovata, October 2017; Ricondo & Associates, Inc., October 2015.

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1.2 FAA Terminal Area Forecast (TAF)

The most recent available TAF is the 2017 TAF which provides historical (fiscal years 1990 – 2016) and projected (fiscal years 2017 – 2045) operations and enplanements. The 2017 TAF includes categories for Air Carrier, Air Taxi, General Aviation (GA), and Military. It also provides a breakdown of itinerant and local operations. **Table 3** shows the historical and projected operations by category for the Airport.

Table 3
DAL Historical and Projected Operations from 2017 TAF

Fiscal Year	Itinerant				Local		Total
	Air Carrier	Air Taxi	GA	Military	GA	Military	
Historical							
1990	61,556	18,226	79,484	1,380	21	2	160,669
1991	85,145	19,602	101,871	1,305	92	0	208,015
1992	89,174	24,110	97,404	1,357	4	0	212,049
1993	91,658	25,037	94,579	1,554	6	20	212,854
1994	93,501	31,901	90,434	1,495	0	0	217,331
1995	95,553	28,443	83,292	1,480	0	0	208,768
1996	99,508	26,482	93,413	1,176	30	42	220,651
1997	98,735	28,319	99,603	1,056	0	0	227,713
1998	99,209	28,406	106,357	987	3	0	234,962
1999	104,393	37,138	100,634	975	0	0	243,140
2000	104,046	52,457	101,468	1,135	0	0	259,106
2001	101,571	49,353	97,532	1,367	0	0	249,823
2002	84,566	42,729	110,251	1,981	148	57	239,732
2003	83,209	43,104	111,984	1,604	0	0	239,901
2004	85,618	44,397	121,474	1,953	0	0	253,442
2005	80,794	44,863	107,740	2,468	34	0	235,899
2006	83,423	48,544	107,219	2,803	1	0	241,990
2007	90,593	56,252	97,731	2,491	260	7	247,334
2008	95,282	55,044	78,761	2,255	6	0	231,348
2009	90,827	29,261	55,420	1,469	0	0	176,977
2010	87,599	25,890	53,795	1,089	0	0	168,373
2011	87,074	28,317	61,576	1,087	2	0	178,056
2012	87,864	31,900	55,807	1,495	0	1	177,067
2013	88,131	33,594	55,462	1,045	0	0	178,232
2014	85,144	33,313	57,633	799	0	0	176,889
2015	122,877	28,158	57,343	743	0	0	209,121
2016	138,692	24,824	59,505	976	0	0	223,997

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Table 3
DAL Historical and Projected Operations from 2017 TAF

Fiscal Year	Itinerant				Local		Total
	Air Carrier	Air Taxi	GA	Military	GA	Military	
			Future				
2017	138,946	26,658	59,064	1,086	0	0	225,754
2018	142,015	26,925	58,923	1,086	0	0	228,949
2020	145,898	27,466	59,195	1,086	0	0	233,645

Source: FAA 2017 TAF.

2 Base Year (2018) Fleet Mix Development

The base year fleet mix was developed based on the 2017 radar data. The number of operations reported by the radar data was adjusted to reflect the latest airport statistics in 2018 (January to May). This section provides a review of the received radar data and the subsequent processing to develop the base year fleet mix. Detailed base year fleet mix is presented in *Table 1.1 of Attachment 1*.

2.1 Review of the 2017 Radar Data

The 2017 annual radar data includes 220,631 operations. Daytime (7:00 am to 21:59 pm) or nighttime (22:00 pm to 6:59 am) designations were assigned to each operation based on the runway time, and flying distances were calculated for departures to determine stage lengths for noise modeling. Multiple integrity reviews were also performed on the received dataset to make the data suitable for noise analysis.

Operations without aircraft type information were removed, which affected 1,699 operations. Operations without destination airports were also removed, which affected 11 operations. In the Air Taxi and GA categories, aircraft with fewer than one operation per week were removed, which affected a total of 2,020 operations. Military operations identified from the 2017 FAA Traffic Flow Management System Counts (TFMSC)⁴ were added to the base year fleet mix as the radar data does not explicitly identify military flights. Daytime and nighttime percentages of these military operations were assumed to be the same as the overall daytime and nighttime percentages. Flight distances for military operations without origin and destination information were assumed to be within 500 nautical miles (nm). Departures with a reported flight distance of more than 4,500 nm were verified based on aircraft performance. If the reported distance is beyond the maximum range of the aircraft, the maximum range was used instead.

In 2017, Virgin America flights were reported under its own brand name. Since Virgin America fully merged with Alaska Airlines in April 2018, all the Virgin America flights were reported under Alaska Airlines in the base year fleet mix. It was also assumed that Southwest Airlines would replace Boeing 737-300 flights in 2017 with Boeing 737-800 and MAX 8 flights in 2018, consistent

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with its flight retirement plan. In addition, it was assumed that Alaska Airlines would introduce the Airbus A321neo to the fleet mix in 2018, which was reflected in the January to April T100 database.

2.2 Base Year Fleet Mix Development

After the data integrity review, total operations reported by the radar data was adjusted to reflect the latest airport statistics in 2018 (January to July). The total operations of the first seven months in 2018 increased by approximately 3.0% compared with the same period in 2017. Monthly data from the FAA Air Traffic Activity Data System (ATADS)⁵ from 2010 to 2017 was used to extrapolate the latest airport statistics in 2018 to the full year. Operations from January through July were extrapolated to annual operations using the January through July percentages (using historical data from 2010 to 2017) of annual operations for operation groups including air carrier, air taxi, GA, and military operations. Different factors were applied to different operation groups to ensure the fleet mixes are accurately extrapolated, especially for aircraft in the air carrier and air taxi groups, which include many turbojets and are primary drivers of the noise contours. **Table 4** shows the extrapolation and the estimated 2018 operations.

Table 4
Projected 2018 Operations

	Air Carrier	Air Taxi	GA	Military	Total
Jan - July 2018 Operations ¹	82,075	18,759	32,570	584	133,988
Percentage of Jan - July Operations ²	57.6%	57.2%	56.8%	59.2%	
Projected 2018 Operations	142,596	32,813	57,364	986	233,759

Notes:

¹: DAL Traffic Statistics

²: FAA ATADS

Sources: DAL Traffic Statistics, FAA ATADS, and HNTB Analysis, 2018.

In addition, expected changes in the fleet mix of the Southwest Airlines were incorporated in the base year fleet mix, as it accounts for the majority of the air carrier operations. Southwest Airlines provided an estimate of the operations by the 737-800 sized aircraft (Boeing 737-800 and Boeing 737 MAX 8) as a percentage of the total Southwest operations in 2018. The projected schedule of new aircraft deliveries in Southwest's most recent financial statements was then used to estimate the distribution of operations between the Boeing 737-800 and the MAX 8 aircraft.

In the base year fleet mix, approximately 88.7% of the arrivals occur during daytime hours and 11.3% during nighttime hours. For departures, approximately 90.0% of operations occur during daytime hours and 10.0% during nighttime hours. Approximately 52.1% of the departures have a flying distance of less than 500 nm, 29.6% between 501 nm and 1,000 nm, and 18.1% between 1,001 nm and 1,500 nm. Operations by jet aircraft account for approximately 89.6% of the total operations, followed by 5.2% multi-engine turboprop operations, 1.7% single engine turboprop

operations, 1.5% single engine piston operations, 1.8% multi-engine piston operations, and 0.2% helicopter operations. The detailed base year fleet mix is included in *Table 1.1 of Attachment 1*.

3 Future (2021) Fleet Mix Development

This section discusses the approach and assumptions used to develop the 2021 fleet mix. The 2021 fleet mix applies to both the No Action Alternative and the Proposed Action Alternative. *Appendix G, Airfield Capacity Analysis*, provides additional discussion regarding the ability of the Airport to accommodate the No Action Alternative fleet mix and operations with Runway 13R-21L temporarily closed. The development of the annual 2021 operations forecast is discussed first, followed by the development of the detailed fleet mix forecast.

3.1 2021 Aircraft Operations Forecast

The 2021 annual operations forecast was based on the 2017 TAF with adjustments to convert from fiscal year to calendar year and to reflect the most recent available base year data. Other recent activity forecasts for DAL were also considered when developing the 2021 operations forecast.

Table 5 shows the unadjusted 2017 TAF, along with the adjustments applied for use in the EA analysis. The first adjustment was to convert the TAF forecast from representing the federal fiscal year ending September 30 to representing a calendar year. Historical monthly distributions of aircraft operations at DAL were used to develop seasonality factors that were used for the calendar year conversion. As shown, the calendar year conversion results in a slightly higher number of 2021 total operation, from 234,082 to 234,191. The second step in the approach was to adjust the TAF calendar year estimate for the latest available base year data. An adjustment is necessary because aircraft operation levels at DAL are currently tracking above the 2017 TAF projections for 2018. The unanticipated increase is primarily due to additional regional jet flights by Alaska Airlines. To avoid underestimating the 2021 noise and air quality impacts, the ratio of estimated 2018 operations from the base year fleet mix (see Section 2.2) was applied to the TAF 2018 calendar year forecast to develop a base year adjustment ratio. The base year adjustment ratio was then used to modify the TAF calendar year forecasts. Calendar year 2021 operations are projected to be 238,092 once the adjustment is applied.

Table 6 provides a comparison of the adjusted forecast used in this EA to the unadjusted 2017 TAF as well as a DAL Forecast Update completed by Ricondo Associates in August 2018. Evaluated in 2021, the EA operations forecast is 1.6 percent higher than the unadjusted TAF and 4.5 percent higher than the DAL Forecast Update. The EA forecast is higher than the TAF because of the recent increase in base year numbers noted earlier in this section. The DAL Forecast Update projects a decline in operations numbers between 2018 and 2021. This is primarily attributable to a projected decline in air taxi operations based on the FAA national forecast of air taxi operations. The decline in the national air taxi forecast is primarily attributable to the continued phase-out of 50-seat commuter regional jets. These aircraft account for a very small percentage of operations at DAL. As a result, it is unlikely that the trend for a national reduction in air taxi operations will also occur at DAL. Consequently, unlike the DAL Forecast Update, the EA forecast does not assume a reduction in air taxi operations.

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Table 5
Adjustments to 2017 Terminal Area Forecast (TAF)

Year	Air Carrier	Air Taxi	General Aviation	Military	Total
Unadjusted TAF					
2017	138,946	26,658	59,064	1,086	225,754
2018	142,015	26,925	58,923	1,086	228,949
2019	145,710	27,194	59,059	1,086	233,049
2020	145,898	27,466	59,195	1,086	233,645
2021	145,924	27,740	59,332	1,086	234,082
2022	145,927	28,018	59,469	1,086	234,500
TAF Adjusted for Calendar Year¹					
2018	142,975	26,995	58,959	1,086	230,015
2019	145,759	27,265	59,095	1,086	233,205
2020	145,905	27,537	59,231	1,086	233,759
2021	145,925	27,812	59,368	1,086	234,191
2022	145,927	28,091	59,505	1,086	234,609
TAF Adjusted for Calendar Year and Base Year²					
2018	142,596	32,813	57,364	986	233,759
2019	145,373	33,141	57,496	986	236,996
2020	145,518	33,472	57,629	986	237,605
2021	145,538	33,806	57,762	986	238,092
2022	145,540	34,145	57,895	986	238,566

Notes:

¹ Calculated by applying January to September ratio of operations of current fiscal year and October to December ratio of operations from succeeding fiscal year.

² Calculated by applying ratio of 2018 estimated operations to 2018 TAF CY operations to all forecast years.

Sources: FAA 2017 Terminal Area Forecast and HNTB analysis.

Table 6
Forecast Comparisons

	2018		2021	
	Operations	Difference ¹	Operations	Difference ¹
EA Forecast ²	233,759		238,092	
TAF Unadjusted CY ²	230,015	-1.6%	234,191	-1.6%
DAL 2018 Forecast ³	224,530	-3.9%	227,467	-4.5%

Notes:

¹ Difference from EA forecast.

² Table 5.

³ DAL Forecast Update - Baseline Constrained Forecast (Ricondo Associates, August 2018).

Sources: As noted and HNTB analysis.

3.2 2021 Fleet Mix Forecast

Separate approaches were used to forecast the passenger carrier and the air taxi/general aviation fleet mix. The focus of the passenger fleet mix analysis was Southwest Airlines, since it accounts for the majority of air carrier aircraft operations at DAL. Southwest Airlines provided an estimate of the distribution between 737-700 sized aircraft and 737-800 sized aircraft in 2021. The projected schedule of new aircraft deliveries in Southwest's most recent financial statements was then used to estimate the distribution between Next Generation 737's and MAX aircraft in each class. **Table 7** shows the estimated 2021 distribution of Southwest aircraft between the Boeing 737-700, 737-800, 737 MAX 7 and 737 MAX 8. Most of the new aircraft orders are 737 MAX 8 aircraft, which will result in a larger average aircraft size.

Table 7
Estimated Southwest Airlines 2021 Fleet Mix

Aircraft	Estimated Distribution
Boeing 737-700 ¹	59.0%
Next Generation ²	0.8%
MAX 7 ²	58.2%
Boeing 737-800 ¹	41.0%
Next Generation ²	13.7%
MAX 8 ²	27.3%

Notes:

¹ Southwest Airlines email transmittal dated July 13, 2018.

² Split between Next Generation and MAX versions of each aircraft category based on Southwest Airlines fleet plan provided in SEC Form 10-Q for first quarter of 2018.

Sources: As noted and HNTB analysis.

The 2021 passenger fleet mix also reflects recent service and fleet developments by Delta Air Lines and Alaska Airlines. Delta is projected to replace some of its Boeing 717 aircraft with the new Airbus 220 (formerly Bombardier C-series) aircraft. Embraer 175 aircraft flown by SkyWest on behalf of Alaska Airlines are also included.

The fleet mixes for non-commuter air taxi and general aviation operations were developed using a two-step process. First, the 2021 distribution between jet, turboprop, and single- and multi-engine piston categories was estimated by applying FAA national forecast rates for hours flown to each category and then adjusting the results proportionately to match the forecast in Table 5. This resulted in an increase in jet and turboprop operations at the expense of piston-powered operations. The second step was the forecast of individual aircraft types within each category. The number of operations by older aircraft no longer in production was projected to decrease while the number of operations by newer aircraft still in production was projected to increase. The detailed 2021 fleet mix is presented in *Table 1.2 of Attachment 1*.

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Endnotes

¹ FAA Terminal Area Forecast (TAF), https://www.faa.gov/data_research/aviation/taf/, accessed July 2018.

² Dallas Love Field Master Plan Update, Grant Number 3-48-0062-42, May 2015.

³ Airport Master Plan Update Sensitivity Analysis, Prepared for The City of Dallas – Department of Aviation, Prepared by Ricondo & Associates, August 2017.

⁴ FAA Traffic Flow Management System Counts (TFMSC), <https://aspm.faa.gov/tfms/sys/main.asp>, accessed July 2018.

⁵ FAA Air Traffic Activity System (ATADS), <https://aspm.faa.gov/opsnet/sys/main.asp>, accessed July 2018.

**Attachment 1
Detailed Fleet Mix**

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**Table 1.1
Detailed Base Year (2018) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
AIR CARRIER	Alaska Airlines	321N	Airbus A321neo series	25	4	29	28	1	29	57
		A319	Airbus A319 series	3,167	83	3,250	3,151	99	3,250	6,501
		A320	Airbus A320 series	368	565	932	926	6	932	1,865
	Delta Air Lines	A319	Airbus A319 series	6	1	7	6	1	7	14
		A320	Airbus A320 series	248	1	249	249	-	249	498
		B712	Boeing 717-200 / Extended Range	1,128	329	1,457	1,446	11	1,457	2,914
		B752	Boeing 757-200	67	25	91	39	52	91	182
	SkyWest Airlines	E75L	Embraer E175	667	5	672	574	98	672	1,344
	Southwest Airlines	B38M	Boeing 737 MAX 8	1,886	256	2,142	1,886	256	2,142	4,283
		B737	Boeing 737-700	38,656	5,135	43,791	38,106	5,685	43,791	87,582
		B738	Boeing 737-800	16,260	2,206	18,466	16,260	2,206	18,466	36,932
	Miscellaneous	A319	Airbus A319 series	15	4	19	10	9	19	39
		A320	Airbus A320 series	1	1	2	2	-	2	4
		A321	Airbus A321 series	2	1	3	3	-	3	6
		B734	Boeing 737-400	45	18	64	42	22	64	127
		B737	Boeing 737-700	1	-	1	1	-	1	2
		B738	Boeing 737-800	30	4	34	26	8	34	68
		B739	Boeing 737-900	2	-	2	2	-	2	4
		B752	Boeing 757-200	1	-	1	1	-	1	2
		B762	Boeing 767-200	6	25	31	28	3	31	61
		B763	Boeing 767-300	2	-	2	2	-	2	4
		CRJ9	Canadair CRJ 900 Regional Jet	1	-	1	1	-	1	2
		E170	Embraer ERJ-170	1	1	2	2	-	2	4
		MD82	McDonnell Douglas MD-82	2	-	2	2	-	2	4
		B722	Boeing 727-200	19	-	19	19	-	19	39
		CRJ7	Canadair CRJ 700 Regional Jet	10	-	10	10	-	10	20

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**Table 1.1
Detailed Base Year (2018) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		B732	Boeing 737-200 Modified Stage 3	3	1	4	2	2	4	8
		MD81	McDonnell Douglas MD-81	2	1	3	1	2	3	6
		MD87	McDonnell Douglas MD-87	3	-	3	3	-	3	6
		B735	Boeing 737-500	3	-	3	-	3	3	6
		DC91	McDonnell Douglas DC-9-10 with ABS3 Hushkit	2	-	2	1	1	2	4
		MD83	McDonnell Douglas MD-83	1	1	2	2	-	2	4
		AIR CARRIER TOTAL		62,632	8,666	71,298	62,831	8,467	71,298	142,596
AIR TAXI	Miscellaneous	AC50	Rockwell Aero Commander 500	1	340	341	341	-	341	683
		B350	Beechcraft Super King Air 350/300B	882	65	947	887	59	947	1,893
		B350	Beech Super King Air 350	657	-	657	657	-	657	1,314
		BE20	Beechcraft Model 200 (Super) King Air 200	145	56	200	141	59	200	401
		BE20	Beech 200 Super King	206	-	206	206	-	206	411
		BE30	Beechcraft Super King Air 300	150	57	207	156	50	207	414
		BE40	Beechcraft Beechjet 400	418	39	456	432	25	456	913
		BE9L	Beechcraft Model 90 King Air	88	63	151	94	57	151	303
		C25A	Cessna CitationJet CJ2, 525A	137	10	147	140	8	147	295
		C25B	Cessna CitationJet CJ3, 525B	59	3	62	58	4	62	124
		C510	Cessna Citation Mustang	53	21	74	50	23	74	147
		C525	Cessna CitationJet CJ1, 525	47	1	48	44	4	48	96
		C550	Cessna Citation 550 Citation II	80	23	103	91	13	103	207
		C560	Cessna 560 Citation V, Ultra & Ultra Encore	252	12	264	248	16	264	528
		C56X	Cessna 560XL Citation Excel	1,743	115	1,858	1,786	72	1,858	3,717
		C650	Cessna Citation III	43	13	56	44	12	56	111

**Draft Environmental Assessment for the
Reconstruction of DAL Runway 13R-31L and Associated Improvements**

**Table 1.1
Detailed Base Year (2018) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		C680	Cessna 680 Citation Sovereign	657	34	691	654	36	691	1,381
		C68A	Cessna Citation Latitude	202	5	207	200	6	207	414
		C750	Cessna 750 series/Citation X	550	40	590	553	36	590	1,179
		CL30	Bombardier Challenger 300	863	53	916	875	40	916	1,831
		CL35	Bombardier Challenger 350	466	19	485	454	31	485	970
		CL60	Canadair Bombardier CL600/610 Challenger Twin Jet	454	31	485	456	28	485	970
		E135	Embraer ERJ-135	79	8	87	80	6	87	173
		E145	Embraer ERJ-145	3	-	3	3	-	3	5
		E50P	Embraer EMB500 Phenom 100	460	908	1,368	1,064	304	1,368	2,736
		E545	Embraer Legacy 545	150	6	156	147	9	156	313
		E550	Embraer EMB550 Phenom 300	88	3	91	84	6	91	181
		E55P	Embraer EMB550 Phenom 300	1,323	72	1,395	1,331	65	1,395	2,791
		F2TH	Dassault Falcon 2000	490	21	511	493	18	511	1,022
		F900	Dassault Falcon 900	75	3	78	72	5	78	155
		FA20	Dassault Falcon 20 Mystere 20 /200	30	12	41	30	12	41	83
		FA7X	Dassault Falcon 7X	78	18	96	91	5	96	191
		G150	Gulfstream G150	50	3	53	53	-	53	106
		G280	Gulfstream G280	256	-	256	255	1	256	512
		GALX	IAI 1126 Astra Galaxy/Gulfstream 200	167	17	184	175	9	184	367
		GL5T	Bombardier Global 5000 BD-700	102	9	111	101	10	111	222
		GLEX	Bombardier BD-700 Global Express	88	10	98	87	12	98	197
		GLF4	Gulfstream IV	225	13	238	221	17	238	476
		GLF5	Gulfstream V	67	1	69	65	4	69	137
		H25A	Hawker Siddeley HS-125	38	26	63	40	23	63	127

**Draft Environmental Assessment for the
Reconstruction of DAL Runway 13R-31L and Associated Improvements**

**Table 1.1
Detailed Base Year (2018) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		H25B	Hawker 800/800 XP/850 XP Twin Turbojet/Bae (Hawker-Siddeley) 125-800	476	52	528	485	43	528	1,055
		LJ35	Learjet 35 Twin Jet	40	5	45	40	5	45	91
		LJ40	Learjet 40 Twin Jet	84	10	94	88	6	94	189
		LJ45	Learjet 45 Twin Jet	284	17	301	288	13	301	603
		LJ55	Learjet 55 Twin Jet	106	18	124	96	28	124	248
		LJ60	Learjet 60 Twin Jet	270	52	322	273	49	322	644
		LJ75	Learjet 75 Twin Jet	160	4	164	160	4	164	328
		MU2	Mitsubishi MU-2 Marquise / Solitaire	8	57	65	9	56	65	129
		MU30	Mitsubishi MU-300 Diamond	93	66	159	128	31	159	318
		PC12	Pilatus PC-12	519	35	553	513	40	553	1,107
		CRJ2	Canadair CRJ 200 Regional Jet	-	3	3	3	-	3	5
AIR TAXI TOTAL				13,960	2,447	16,407	15,043	1,363	16,407	32,813
General Aviation	Miscellaneous	AC90	Rockwell Turbo Commander 690	91	5	96	91	5	96	192
		AC95	Rockwell / Gulfstream 695 Jetprop Commander 1000	97	2	99	92	7	99	199
		ASTR	IAI 1125 Astra	119	7	126	125	1	126	252
		B350	Beechcraft Super King Air 350/300B	1,241	31	1,272	1,186	85	1,272	2,543
		B752	Boeing 757-200	13	31	44	32	12	44	88
		BE20	Beechcraft Model 200 (Super) King Air 200	1,012	192	1,204	1,075	129	1,204	2,409
		BE30	Beechcraft Super King Air 300	288	27	315	296	19	315	630
		BE33	Beechcraft Model 33 Debonair/Bonanza	40	9	48	46	2	48	96

**Draft Environmental Assessment for the
Reconstruction of DAL Runway 13R-31L and Associated Improvements**

**Table 1.1
Detailed Base Year (2018) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		BE35	Beechcraft Model 35 Bonanza	82	1	83	83	-	83	167
		BE36	Beechcraft Model 36 Bonanza	259	6	266	254	12	266	532
		BE40	Beechcraft Beechjet 400	303	18	321	304	17	321	643
		BE55	Beechcraft Model 58 Baron	46	2	48	42	6	48	96
		BE58	Beechcraft Model 58 Baron	327	18	345	332	13	345	690
		BE9L	Beechcraft Model 90 King Air	546	97	643	534	109	643	1,285
		BE9T	Beechcraft Super King Air F90	90	4	94	89	5	94	188
		C172	Cessna 172 Single Engine SEPF	108	14	122	98	23	122	243
		C182	Cessna 182 Skylane	224	12	236	233	3	236	472
		C206	Cessna 206 Stationair	36	4	41	40	1	41	81
		C208	Cessna 208 Caravan I	111	13	124	111	13	124	248
		C210	Cessna 210 Centurion	44	1	45	45	-	45	90
		C25A	Cessna CitationJet CJ2, 525A	273	7	281	269	12	281	562
		C25B	Cessna CitationJet CJ3, 525B	426	19	445	426	19	445	890
		C25C	Cessna CitationJet CJ4, 525C	330	10	340	318	21	340	679
		C25M	Cessna CitationJet/M2/CJ	41	-	41	41	-	41	81
		C310	Cessna 310 Twin Engine Piston aircraft	31	2	33	31	2	33	66
		C340	Cessna 340 Twin Piston MEVP	61	-	61	56	5	61	122
		C414	Cessna 414 Chancellor MEVP	82	3	85	79	6	85	171
		C421	Cessna 421 Golden Eagle	208	13	221	208	13	221	442
		C425	Cessna 425 (Corsair/Conquest)	85	1	86	85	1	86	173
		C441	Cessna 441 (Conquest/Conquest2)	174	11	185	169	16	185	369
		C501	Cessna Citation I Single Pilot Twin Jet	79	3	82	79	3	82	164
		C510	Cessna Citation Mustang	210	7	218	209	9	218	436

**Draft Environmental Assessment for the
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**Table 1.1
Detailed Base Year (2018) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		C525	Cessna CitationJet CJ1, 525	672	38	710	669	41	710	1,420
		C550	Cessna Citation 550 Citation II	439	29	468	455	13	468	935
		C560	Cessna 560 Citation V, Ultra & Ultra Encore	1,029	119	1,148	1,064	83	1,148	2,295
		C56X	Cessna 560XL Citation Excel	1,006	60	1,066	1,031	34	1,066	2,131
		C650	Cessna Citation III	763	48	811	763	48	811	1,623
		C680	Cessna 680 Citation Sovereign	874	42	916	885	31	916	1,832
		C68A	Cessna Citation Latitude	64	2	66	65	1	66	132
		C750	Cessna 750 series/Citation X	353	27	380	354	26	380	760
		CL30	Bombardier Challenger 300	1,087	38	1,125	1,090	35	1,125	2,251
		CL35	Bombardier Challenger 350	120	5	125	119	6	125	250
		CL60	Canadair Bombardier CL600/610 Challenger Twin Jet	981	67	1,048	990	59	1,048	2,097
		COL4	Cessna 400 Corvalis/Lancair LC41/Columbia 400	41	-	41	38	2	41	81
		E135	Embraer ERJ-135	86	7	94	89	5	94	188
		E35L	Embraer E135	49	3	52	49	3	52	105
		E50P	Embraer EMB500 Phenom 100	273	17	290	277	14	290	581
		E55P	Embraer EMB550 Phenom 300	414	28	442	422	20	442	884
		EA50	Eclipse 500 VLJ	138	3	141	139	2	141	282
		EC45	Eurocopter EC-145	27	4	31	17	14	31	62
		F2TH	Dassault Falcon 2000	510	29	539	523	16	539	1,078
		F900	Dassault Falcon 900	824	65	889	819	70	889	1,779
		FA10	Dassault Falcon 10	78	11	89	79	10	89	177
		FA20	Dassault Falcon 20 Mystere 20 /200	121	27	147	140	7	147	295
		FA50	Dassault Falcon 50	430	34	464	440	25	464	929

**Draft Environmental Assessment for the
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**Table 1.1
Detailed Base Year (2018) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		FA7X	Dassault Falcon 7X	257	26	283	266	17	283	566
		G150	Gulfstream G150	301	12	313	300	13	313	626
		G280	Gulfstream G280	426	33	459	421	38	459	918
		GALX	IAI 1126 Astra Galaxy/Gulfstream 200	324	31	354	335	19	354	709
		GL5T	Bombardier Global 5000 BD-700	59	10	68	64	4	68	137
		GLEX	Bombardier BD-700 Global Express	201	16	217	202	15	217	433
		GLF2	Gulfstream II	31	4	35	34	1	35	70
		GLF3	Gulfstream III	50	9	59	56	3	59	117
		GLF4	Gulfstream IV	766	85	851	776	75	851	1,702
		GLF5	Gulfstream V	889	93	982	918	64	982	1,965
		GLF6	Gulfstream VI / G650	102	12	114	112	2	114	228
		H25B	Hawker 800/800 XP/850 XP Twin Turbojet/Bae (Hawker-Siddeley) 125-800	948	82	1,030	974	57	1,030	2,061
		H25C	Hawker 1000 / Bae 125-1000	69	7	77	74	3	77	154
		HA4T	Hawker Beechcraft 4000 Horizon (Horizon 1000)	35	3	38	37	1	38	77
		HELO	Unidentifiable Helicopter	112	33	145	105	41	145	290
		LJ31	Learjet 31 Twin Jet	144	12	156	145	11	156	312
		LJ35	Learjet 35 Twin Jet	139	27	165	139	27	165	331
		LJ40	Learjet 40 Twin Jet	128	3	131	124	7	131	263
		LJ45	Learjet 45 Twin Jet	534	29	563	533	30	563	1,125
		LJ60	Learjet 60 Twin Jet	538	60	598	563	35	598	1,196
		LJ75	Learjet 75 Twin Jet	227	9	236	233	3	236	472
		M20P	Mooney Mark 20 Series	42	3	45	43	2	45	90

**Draft Environmental Assessment for the
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**Table 1.1
Detailed Base Year (2018) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		P180	Piaggio P180 Avanti	37	2	40	38	1	40	79
		P28A	Piper PA-28-140/150/160/180 Cherokee	36	2	38	36	2	38	77
		P46T	Piper PA-46-500TP Malibu Meridian	202	3	205	200	5	205	410
		PA31	Piper PA-31 Navajo	68	27	95	62	33	95	190
		PA32	Piper PA-32 Cherokee Six	61	2	63	59	4	63	126
		PA34	Piper PA-34 Seneca	37	5	43	23	19	43	85
		PA46	Piper PA-46 Malibu	88	4	92	91	1	92	184
		PAY2	Piper PA-31T-2 Cheyenne I/II	78	7	85	76	10	85	171
		PC12	Pilatus PC-12	847	61	908	840	67	908	1,815
		PRM1	Raytheon 390 Premier	223	1	224	215	10	224	448
		SB20	Saab 2000	114	4	119	117	1	119	237
		SR22	Cirrus SR22	423	15	438	426	12	438	875
		SW3	Swearingen Merlin III /Fairchild Merlin III	125	5	130	120	11	130	261
		TBM7	Socata TBM 700	70	1	72	70	1	72	143
		TBM8	Socata TBM 850 Single Engine Turboprop	100	2	102	97	5	102	205
		TBM9	Daher TBM900	31	1	32	31	1	32	64
		WW24	IAI 1124 Westwind	321	22	344	314	30	344	688
GENERAL AVIATION TOTAL				26,642	2,040	28,682	26,862	1,820	28,682	57,364
Military	Miscellaneous	AC90	Rockwell Turbo Commander 690	4	1	5	4	1	5	10
		B17	Boeing B-17 Flying Fortress	4	1	5	4	1	5	10
		B24	Consolidated B-24 Liberator	4	1	5	4	1	5	10
		B25	North American B-25 Mitchell	6	1	7	6	1	7	13

**Draft Environmental Assessment for the
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**Table 1.1
Detailed Base Year (2018) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		B350	Beechcraft Super King Air 350/300B	18	2	20	18	2	20	40
		B737	Boeing 737-700	11	1	12	11	1	12	25
		BE20	Beechcraft Model 200 (Super) King Air 200	19	3	22	20	2	22	44
		BE40	Beechcraft Beechjet 400	3	-	3	3	-	3	6
		BE9L	Beechcraft Model 90 King Air	19	3	22	20	2	22	44
		C130	Lockheed Martin C-130	39	5	44	39	5	44	88
		C17	Boeing C-17 Globemaster III	4	-	4	4	-	4	8
		C30J	Lockheed Martin C-130J Super Hercules	12	1	13	12	1	13	27
		C560	Cessna 560 Citation V, Ultra & Ultra Encore	5	1	6	5	1	6	11
		CN35	CASA/IPTN CN-235 Turboprop	3	-	3	3	-	3	6
		D328	Dornier Do-328	4	-	4	4	-	4	8
		EC45	Eurocopter EC-145	4	-	4	4	-	4	8
		F15	Boeing F-15 Eagle	5	1	6	5	1	6	11
		F16	General Dynamics F-16 Fighting Falcon	4	-	4	4	-	4	8
		F18S	McDonnell Douglas (Boeing) F/A-18 Hornet	4	1	5	4	1	5	10
		GLF4	Gulfstream IV	5	1	6	5	1	6	11
		GLF5	Gulfstream V	4	-	4	4	-	4	8
		H25A	Hawker Siddeley HS-125	4	1	5	4	1	5	10
		H60	Sikorsky UH-60 Black Hawk Helicopter	4	1	5	4	1	5	10
		HAWK	British Aerospace BAE 125 Series 800A	4	-	4	4	-	4	8

**Draft Environmental Assessment for the
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**Table 1.1
Detailed Base Year (2018) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		LJ35	Learjet 35 Twin Jet	4	-	4	4	-	4	8
		LJ60	Learjet 60 Twin Jet	4	-	4	4	-	4	8
		P3	Lockheed P-3C Orion	126	16	142	128	14	142	285
		P8	Boeing P-8 Poseidon	79	10	89	80	9	89	178
		PC12	Pilatus PC-12	5	1	6	5	1	6	11
		S76	Sikorsky S-76	3	-	3	3	-	3	6
		SR22	Cirrus SR22	3	-	3	3	-	3	6
		SW4	Swearingen Merlin IV /Fairchild Merlin IV	3	-	3	3	-	3	6
		T38	Northrop T-38 Talon	9	1	10	9	1	10	19
		TEX2	Beechcraft T-6 Texan II	13	2	15	13	2	15	31
MILITARY TOTAL				439	54	493	444	49	493	986
GRAND TOTAL				103,673	13,207	116,880	105,181	11,699	116,880	233,759

Sources: DAL Traffic Statistics, BTS, FAA, and HNTB Analysis, 2018.

**Draft Environmental Assessment for the
Reconstruction of DAL Runway 13R-31L and Associated Improvements**

**Table 1.2
Detailed Future Year (2021) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
AIR CARRIER	Delta Air Lines	A319	Airbus A319 series	6	1	7	7	-	7	14
		A320	Airbus A320 series	200	-	200	200	-	200	400
		A333	Airbus A330-300	-	-	-	-	-	-	-
		B712	Boeing 717-200 / Extended Range	881	244	1,125	1,125	-	1,125	2,250
		B737	Boeing 737-700	-	-	-	-	-	-	-
		B739	Boeing 737-900	111	39	150	83	67	150	300
		B752	Boeing 757-200	-	-	-	-	-	-	-
		A221	Airbus A220-100	294	81	375	375	-	375	750
		MD88	McDonnell Douglas MD-88	-	-	-	-	-	-	-
		MD90	McDonnell Douglas MD-90	-	-	-	-	-	-	-
	DAL Total			1,491	366	1,857	1,790	67	1,857	3,714
	SkyWest Airlines	E75L	Embraer E175	943	7	950	811	139	950	1,900
	SKW Total			943	7	950	811	139	950	1,900
	Southwest Airlines	B38M	Boeing 737 MAX 8	7,847	1,065	8,912	7,831	1,080	8,912	17,823
		B37M	Boeing 737 MAX 7	455	60	515	447	68	515	1,031
		B733	Boeing 737-300	-	-	-	-	-	-	-
		B737	Boeing 737-700	33,398	4,436	37,835	32,857	4,978	37,835	75,669
		B738	Boeing 737-800	15,619	2,119	17,738	15,588	2,150	17,738	35,477
		B739	Boeing 737-900	-	-	-	-	-	-	-
	SWA Total			57,320	7,680	65,000	56,724	8,276	65,000	130,000
	Alaska Airlines	A319	Airbus A319 series	3,350	-	3,350	3,248	102	3,350	6,700

**Draft Environmental Assessment for the
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**Table 1.2
Detailed Future Year (2021) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		A320	Airbus A320 series	488	712	1,200	1,192	8	1,200	2,400
		321N	Airbus A321neo series	177	23	200	193	7	200	400
		B737	Boeing 737-700	-	-	-	-	-	-	-
		ASA Total		4,014	736	4,750	4,633	117	4,750	9,500
	Miscellaneous	B738	Boeing 737-800	44	5	49	36	13	49	98
		B762	Boeing 767-200	8	31	39	34	5	39	78
		B734	Boeing 737-400	33	12	45	29	16	45	90
		B722	Boeing 727-200	-	-	-	-	-	-	-
		CRJ7	Canadair CRJ 700 Regional Jet	20	-	20	19	1	20	40
		B732	Boeing 737-200 Modified Stage 3	-	-	-	-	-	-	-
		MD81	McDonnell Douglas MD-81	1	1	2	1	1	2	4
		MD87	McDonnell Douglas MD-87	2	-	2	2	0	2	4
		B735	Boeing 737-500	2	-	2	-	2	2	4
		A321	Airbus A321 series	3	2	5	5	0	5	10
		B739	Boeing 737-900	3	-	3	3	0	3	6
		DC91	McDonnell Douglas DC-9-10 with ABS3 Hushkit	-	-	-	-	-	-	-
		E170	Embraer ERJ-170	1	1	2	2	0	2	4
		MD83	McDonnell Douglas MD-83	1	0	1	1	0	1	2
		B763	Boeing 767-300	2	-	2	2	0	2	4
		MD82	McDonnell Douglas MD-82	1	-	1	1	0	1	2
		A320	Airbus A320 series	1	1	2	2	0	2	4

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**Table 1.2
Detailed Future Year (2021) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		A319	Airbus A319 series	19	5	24	12	12	24	48
		B737	Boeing 737-700	1	-	1	1	0	1	2
		B752	Boeing 757-200	1	-	1	1	0	1	2
		CRJ9	Canadair CRJ 900 Regional Jet	11	-	11	11	0	11	22
	MISC Total			154	58	212	162	50	212	424
	AIR CARRIER Total			63,922	8,847	72,769	64,119	8,650	72,769	145,538
AIR TAXI	Miscellaneous	CRJ2	Canadair CRJ 200 Regional Jet	-	2	2	2	0	2	4
		E145	Embraer ERJ-145	3	0	3	3	0	3	5
		C56X	Cessna 560XL Citation Excel	1,913	168	2,081	1,986	95	2,081	4,163
		E50P	Embraer EMB500 Phenom 100	396	806	1,202	929	274	1,202	2,404
		E55P	Embraer EMB550 Phenom 300	1,626	124	1,750	1,657	93	1,750	3,500
		B350	Beechcraft Super King Air 350/300B	1,312	83	1,395	1,334	61	1,395	2,789
		CL30	Bombardier Challenger 300	971	81	1,051	998	53	1,051	2,103
		C680	Cessna 680 Citation Sovereign	739	54	793	746	47	793	1,586
		C750	Cessna 750 series/Citation X	596	57	653	609	44	653	1,306
		H25B	Hawker 800/800 XP/850 XP Twin Turbojet/Bae (Hawker-Siddeley) 125-800	329	43	372	339	32	372	744
		F2TH	Dassault Falcon 2000	512	32	544	521	23	544	1,088
		CL60	Canadair Bombardier CL600/610 Challenger Twin Jet	370	33	403	377	26	403	807
		CL35	Bombardier Challenger 350	719	45	764	710	54	764	1,528
		BE40	Beechcraft Beechjet 400	300	35	335	314	20	335	669

**Draft Environmental Assessment for the
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**Table 1.2
Detailed Future Year (2021) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		AC50	Rockwell Aero Commander 500	1	285	286	284	2	286	572
		LJ60	Learjet 60 Twin Jet	210	45	256	215	41	256	511
		LJ45	Learjet 45 Twin Jet	312	25	337	321	17	337	675
		C560	Cessna 560 Citation V, Ultra & Ultra Encore	240	16	256	240	17	256	513
		GLF4	Gulfstream IV	212	17	229	211	18	229	458
		PC12	Pilatus PC-12	479	43	521	480	41	521	1,043
		BE30	Beechcraft Super King Air 300	119	49	168	126	42	168	336
		C68A	Cessna Citation Latitude	311	15	326	314	12	326	652
		BE20	Beechcraft Model 200 (Super) King Air 200	241	44	285	241	43	285	569
		GALX	IAI 1126 Astra Galaxy/Gulfstream 200	142	17	159	150	9	159	319
		MU30	Mitsubishi MU-300 Diamond	79	59	138	111	28	138	277
		LJ75	Learjet 75 Twin Jet	232	10	242	235	7	242	484
		G280	Gulfstream G280	352	7	359	355	4	359	718
		E545	Embraer Legacy 545	254	16	270	253	17	270	541
		BE9L	Beechcraft Model 90 King Air	63	47	110	68	42	110	220
		C25A	Cessna CitationJet CJ2, 525A	122	12	134	126	8	134	269
		LJ55	Learjet 55 Twin Jet	94	18	112	86	26	112	223
		GL5T	Bombardier Global 5000 BD-700	115	13	128	115	13	128	256
		C550	Cessna Citation 550 Citation II	73	23	97	84	13	97	193
		LJ40	Learjet 40 Twin Jet	95	14	108	100	8	108	217

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Detailed Future Year (2021) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		FA7X	Dassault Falcon 7X	90	23	113	107	7	113	227
		E550	Embraer EMB550 Phenom 300	80	4	84	78	7	84	169
		GLEK	Bombardier BD-700 Global Express	96	13	109	96	14	109	219
		E135	Embraer ERJ-135	87	11	98	90	8	98	195
		F900	Dassault Falcon 900	68	4	71	66	5	71	143
		C510	Cessna Citation Mustang	51	21	72	49	23	72	144
		GLF5	Gulfstream V	76	3	79	74	5	79	157
		MU2	Mitsubishi MU-2 Marquise / Solitaire	6	47	53	7	46	53	107
		C25B	Cessna CitationJet CJ3, 525B	67	4	71	66	5	71	143
		H25A	Hawker Siddeley HS-125	28	20	49	31	18	49	97
		C650	Cessna Citation III	39	13	52	41	11	52	104
		C525	Cessna CitationJet CJ1, 525	47	2	49	45	4	49	98
		LJ35	Learjet 35 Twin Jet	35	5	41	36	5	41	81
		FA20	Dassault Falcon 20 Mystere 20 /200	27	11	39	28	11	39	77
		G150	Gulfstream G150	48	4	52	51	0	52	103
AIR TAXI Total				14,378	2,525	16,903	15,503	1,400	16,903	33,806
General Aviation	Miscellaneous	B350	Beechcraft Super King Air 350/300B	1,120	30	1,151	1,071	79	1,151	2,301
		BE20	Beechcraft Model 200 (Super) King Air 200	736	142	878	782	96	878	1,756
		C560	Cessna 560 Citation V, Ultra & Ultra Encore	1,061	124	1,185	1,097	88	1,185	2,370
		CL30	Bombardier Challenger 300	1,324	50	1,373	1,328	46	1,373	2,747

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**Table 1.2
Detailed Future Year (2021) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		C56X	Cessna 560XL Citation Excel	1,195	74	1,268	1,225	43	1,268	2,537
		CL60	Canadair Bombardier CL600/610 Challenger Twin Jet	866	61	927	873	54	927	1,853
		H25B	Hawker 800/800 XP/850 XP Twin Turbojet/Bae (Hawker-Siddeley) 125-800	709	63	771	728	44	771	1,543
		GLF4	Gulfstream IV	782	89	871	793	78	871	1,742
		GLF5	Gulfstream V	1,083	116	1,199	1,118	80	1,199	2,397
		C680	Cessna 680 Citation Sovereign	1,065	53	1,118	1,078	40	1,118	2,236
		F900	Dassault Falcon 900	805	65	871	800	71	871	1,741
		PC12	Pilatus PC-12	828	61	889	822	68	889	1,779
		C650	Cessna Citation III	755	49	805	755	49	805	1,609
		C525	Cessna CitationJet CJ1, 525	732	43	776	730	46	776	1,552
		BE9L	Beechcraft Model 90 King Air	412	74	486	403	83	486	972
		LJ60	Learjet 60 Twin Jet	453	51	504	474	31	504	1,009
		LJ45	Learjet 45 Twin Jet	634	36	670	633	37	670	1,339
		F2TH	Dassault Falcon 2000	576	34	610	591	19	610	1,220
		FA50	Dassault Falcon 50	350	29	378	358	21	378	757
		C550	Cessna Citation 550 Citation II	434	29	464	450	14	464	927
		G280	Gulfstream G280	633	51	684	625	59	684	1,368
		C25B	Cessna CitationJet CJ3, 525B	519	24	543	519	24	543	1,087
		E55P	Embraer EMB550 Phenom 300	551	38	589	561	28	589	1,178
		SR22	Cirrus SR22	404	15	419	407	12	419	837

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**Table 1.2
Detailed Future Year (2021) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		C750	Cessna 750 series/Citation X	415	32	447	416	31	447	894
		GALX	IAI 1126 Astra Galaxy/Gulfstream 200	298	29	327	309	18	327	654
		WW24	IAI 1124 Westwind	319	23	342	311	30	342	683
		BE58	Beechcraft Model 58 Baron	251	14	265	255	10	265	531
		C25C	Cessna CitationJet CJ4, 525C	457	14	471	440	30	471	942
		BE40	Beechcraft Beechjet 400	236	15	250	236	14	250	501
		BE30	Beechcraft Super King Air 300	243	23	266	249	17	266	532
		G150	Gulfstream G150	311	13	324	310	14	324	648
		E50P	Embraer EMB500 Phenom 100	255	16	271	258	13	271	542
		FA7X	Dassault Falcon 7X	323	33	356	334	22	356	713
		C25A	Cessna CitationJet CJ2, 525A	264	8	272	260	12	272	544
		BE36	Beechcraft Model 36 Bonanza	171	5	176	168	8	176	351
		LJ75	Learjet 75 Twin Jet	356	14	370	364	6	370	739
		PRM1	Raytheon 390 Premier	208	1	209	200	9	209	419
		C421	Cessna 421 Golden Eagle	186	12	198	186	12	198	395
		GLEX	Bombardier BD-700 Global Express	237	19	256	238	18	256	513
		C510	Cessna Citation Mustang	218	8	226	216	9	226	452
		P46T	Piper PA-46-500TP Malibu Meridian	202	4	206	200	6	206	412
		C182	Cessna 182 Skylane	184	10	194	191	3	194	389
		C441	Cessna 441 (Conquest/Conquest2)	139	9	148	135	13	148	296
		LJ35	Learjet 35 Twin Jet	132	26	158	132	26	158	317

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**Table 1.2
Detailed Future Year (2021) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		LJ31	Learjet 31 Twin Jet	108	9	117	109	8	117	233
		FA20	Dassault Falcon 20 Mystere 20 /200	120	27	147	139	8	147	293
		EA50	Eclipse 500 VLJ	128	3	132	129	2	132	263
		LJ40	Learjet 40 Twin Jet	156	4	160	151	9	160	321
		SW3	Swearingen Merlin III /Fairchild Merlin III	105	5	110	100	9	110	219
		HELO	Unidentifiable Helicopter	108	32	140	101	39	140	280
		ASTR	IAI 1125 Astra	89	6	94	93	1	94	189
		CL35	Bombardier Challenger 350	200	9	209	198	11	209	418
		C172	Cessna 172 Single Engine SEPF	89	12	100	81	20	100	200
		C208	Cessna 208 Caravan I	94	11	105	94	11	105	209
		SB20	Saab 2000	78	3	81	80	1	81	162
		GLF6	Gulfstream VI / G650	152	18	170	167	4	170	340
		TBM8	Socata TBM 850 Single Engine Turboprop	90	2	92	87	5	92	184
		AC95	Rockwell / Gulfstream 695 Jetprop Commander 1000	78	2	79	73	6	79	159
		PA31	Piper PA-31 Navajo	61	24	85	55	30	85	170
		E135	Embraer ERJ-135	103	9	113	106	7	113	225
		BE9T	Beechcraft Super King Air F90	77	4	81	76	5	81	161
		PA46	Piper PA-46 Malibu	65	3	68	67	1	68	136
		FA10	Dassault Falcon 10	71	10	81	72	9	81	162
		C414	Cessna 414 Chancellor MEVP	73	3	76	71	6	76	153

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**Table 1.2
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Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		C425	Cessna 425 (Corsair/Conquest)	69	1	70	69	1	70	141
		AC90	Rockwell Turbo Commander 690	78	5	83	78	5	83	165
		BE35	Beechcraft Model 35 Bonanza	58	1	59	59	0	59	118
		C501	Cessna Citation I Single Pilot Twin Jet	72	3	75	72	3	75	151
		PAY2	Piper PA-31T-2 Cheyenne I/II	61	6	67	60	8	67	135
		H25C	Hawker 1000 / Bae 125-1000	58	6	65	62	3	65	130
		TBM7	Socata TBM 700	47	1	48	47	1	48	96
		GL5T	Bombardier Global 5000 BD-700	72	12	84	78	5	84	167
		C68A	Cessna Citation Latitude	107	4	111	109	2	111	222
		PA32	Piper PA-32 Cherokee Six	47	2	49	45	3	49	97
		C340	Cessna 340 Twin Piston MEVP	53	0	53	48	5	53	106
		GLF3	Gulfstream III	47	8	55	52	3	55	110
		E35L	Embraer E135	59	4	63	59	4	63	127
		BE33	Beechcraft Model 33 Debonair/Bonanza	31	7	38	36	2	38	76
		BE55	Beechcraft Model 58 Baron	39	2	41	35	6	41	82
		C210	Cessna 210 Centurion	33	1	34	33	0	34	67
		M20P	Mooney Mark 20 Series	31	2	33	32	2	33	67
		B752	Boeing 757-200	14	33	47	34	13	47	94
		PA34	Piper PA-34 Seneca	29	4	33	18	15	33	66
		P180	Piaggio P180 Avanti	34	2	36	35	1	36	71
		C25M	Cessna CitationJet/M2/CJ	63	0	64	63	0	64	127

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**Table 1.2
Detailed Future Year (2021) Fleet Mix**

Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		COL4	Cessna 400 Corvalis/Lancair LC41/Columbia 400	40	0	40	38	2	40	80
		HA4T	Hawker Beechcraft 4000 Horizon (Horizon 1000)	36	3	40	39	1	40	80
		P28A	Piper PA-28-140/150/160/180 Cherokee	24	1	26	24	1	26	52
		C206	Cessna 206 Stationair	25	3	28	27	1	28	56
		GLF2	Gulfstream II	29	4	33	31	1	33	65
		C310	Cessna 310 Twin Engine Piston aircraft	25	2	27	25	2	27	54
		TBM9	Daher TBM900	45	2	46	45	2	46	93
		EC45	Eurocopter EC-145	29	5	33	18	15	33	66
		General Aviation Total		26,831	2,050	28,881	27,053	1,828	28,881	57,762
Military	Miscellaneous	P3	Lockheed P-3C Orion	126	16	142	128	14	142	285
		P8	Boeing P-8 Poseidon	79	10	89	80	9	89	178
		C130	Lockheed Martin C-130	32	4	35	32	4	35	71
		BE20	Beechcraft Model 200 (Super) King Air 200	19	3	22	20	2	22	44
		BE9L	Beechcraft Model 90 King Air	19	3	22	20	2	22	44
		B350	Beechcraft Super King Air 350/300B	18	2	20	18	2	20	40
		TEX2	Beechcraft T-6 Texan II	13	2	15	13	2	15	31
		B737	Boeing 737-700	11	1	12	11	1	12	25
		C30J	Lockheed Martin C-130J Super Hercules	9	1	10	9	1	10	19

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Operation Group	Airline	Aircraft ID	Aircraft Description	Arrival			Departure			Grand Total
				Day	Night	Total	Day	Night	Total	
		T38	Northrop T-38 Talon	9	1	10	9	1	10	19
		C130	Lockheed Martin C-130	8	1	9	8	1	9	17
		B25	North American B-25 Mitchell	6	1	7	6	1	7	13
		F15	Boeing F-15 Eagle	5	1	6	5	1	6	11
		C560	Cessna 560 Citation V, Ultra & Ultra Encore	5	1	6	5	1	6	11
		GLF4	Gulfstream IV	5	1	6	5	1	6	11
		PC12	Pilatus PC-12	5	1	6	5	1	6	11
		AC90	Rockwell Turbo Commander 690	4	1	5	4	1	5	10
		B17	Boeing B-17 Flying Fortress	4	1	5	4	1	5	10
		B24	Consolidated B-24 Liberator	4	1	5	4	1	5	10
		H25A	Hawker Siddeley HS-125	4	1	5	4	1	5	10
		H60	Sikorsky UH-60 Black Hawk Helicopter	4	1	5	4	1	5	10
		F18S	McDonnell Douglas (Boeing) F/A-18 Hornet	4	1	5	4	1	5	10
		GLF5	Gulfstream V	4	-	4	4	-	4	8
		LJ35	Learjet 35 Twin Jet	4	-	4	4	-	4	8
		D328	Dornier Do-328	4	-	4	4	-	4	8
		HAWK	British Aerospace BAE 125 Series 800A	4	-	4	4	-	4	8
		C17	Boeing C-17 Globemaster III	4	-	4	4	-	4	8
		C30J	Lockheed Martin C-130J Super Hercules	4	-	4	4	-	4	8

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				Day	Night	Total	Day	Night	Total	
		EC45	Eurocopter EC-145	4	-	4	4	-	4	8
		LJ60	Learjet 60 Twin Jet	4	-	4	4	-	4	8
		F16	General Dynamics F-16 Fighting Falcon	4	-	4	4	-	4	8
		BE40	Beechcraft Beechjet 400	3	-	3	3	-	3	6
		SR22	Cirrus SR22	3	-	3	3	-	3	6
		SW4	Swearingen Merlin IV /Fairchild Merlin IV	3	-	3	3	-	3	6
		CN35	CASA/IPTN CN-235 Turboprop	3	-	3	3	-	3	6
		S76	Sikorsky S-76	3	-	3	3	-	3	6
Military				439	54	493	444	49	493	986
Grand Total				105,570	13,476	119,046	107,120	11,926	119,046	238,092