

Fort Lauderdale-Hollywood International Airport



Monthly Operations & RNAV Use Report



BROWARD COUNTY AVIATION DEPARTMENT MONTHLY RNAV REPORT July 2023

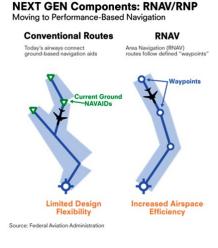
This *RNAV Report* provides a monthly overview of aircraft arriving and departing from Fort Lauderdale-Hollywood International Airport (FLL). The purpose of this report is to determine the number of aircraft that utilize Area Navigation (RNAV) procedures using the FLL Airport Noise and Operations Monitoring System (ANOMS).

OVERVIEW OF NEXTGEN

The Next Generation Air Transportation System (NextGen) is the FAA-led modernization of the United States National Airspace System (NAS). Goals include using new technologies and procedures to increase the safety, efficiency, and predictability of the NAS, as well as reducing the overall environmental impact of aviation. The FAA implemented the South-Central Florida Metroplex Project on August 12, 2021. This project is aimed at improving the safety and efficiency of airspace in South-Central Florida by optimizing arrival and departure procedures at 21 regional airports.

RNAV 🦽

RNAV is a method of navigation that consists of routes formed from a series of waypoints (geographical points on the ground) that may have required altitude or performance characteristics. Aircraft said to be navigating on RNAV procedures must fly over or near these waypoints (within a given tolerance), attaining the given altitude or performance settings set by the FAA and air traffic control (ATC). The potential advantages of RNAV routes include time and fuel savings, reduced dependency on radar vectoring, reduced ATC transmissions, and more efficient use of airspace.



Operations and Runway Use 🛫

This section provides a tabular and graphical summary of monthly operations and runway use at FLL. Monthly operations are broken down by airframe type, arrivals,

and departures, time of day (night defined as 10:30 pm to 6:00 am) and runway use is separated graphically by east and west flow.

RNAV PROCEDURES FOR FLL 🛫

This report provides a tabular and graphical summary of overall RNAV procedures for FLL. For aircraft arriving to or departing from FLL, there are 14 published RNAV procedures in total. These procedures each consist of waypoints and have multiple routes. This report will allow residents near the airport to understand, at a glance, the usage of RNAV procedures that most affect them.

Standard Instrument Departures (SIDs)

• AGERS, BNICE, FEALX, GLADZ, FRSBE, HROCK, LIFRR, MAYNR, REGAE, SNAPR

Standard Arrival Routes (STARs)

• BHHIA, CUUDA, OLAHS, TEEKY

FLIGHT TRACK DENSITY PLOTS

Flight track density plots show the relative use of the airspace surrounding FLL. Color ranges are assigned based on the relative density of traffic (from low to high) for several categories:

- Jet Arrivals
- Jet Departures
- Jet Departures Close Up
- Non-Jet Operations

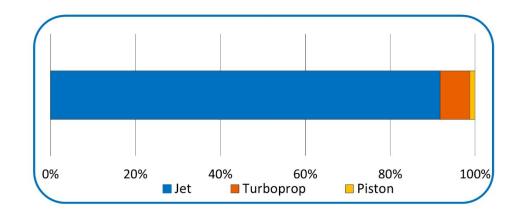
RESOURCES 🗳

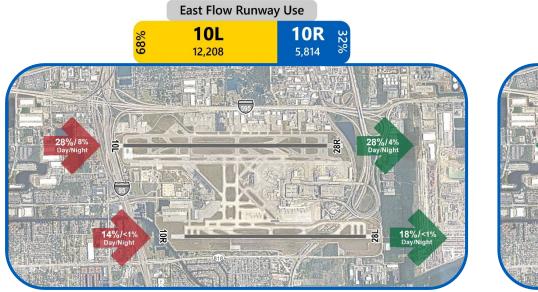
- https://www.faa.gov/air traffic/community engagement/florida/
- <u>http://metroplexenvironmental.com/fl_metroplex/fl_introduction.html</u>
- <u>http://www.metroplexenvironmental.com/fl_metroplex/fl_docs.html</u>
- https://www.faa.gov/nextgen/this-is-nextgen/

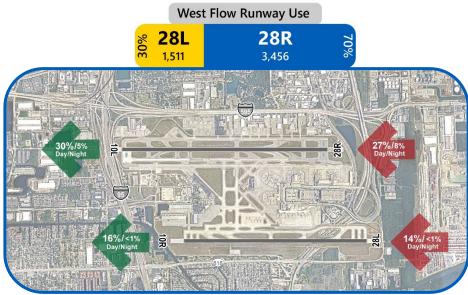


Monthly Operations and Runway Use

Туре	Arrivals	Departures	Total
Jet	10,519	10,567	21,086
Turboprop	820	791	1,611
Piston	148	144	292
Total	11,487	11,502	22,989

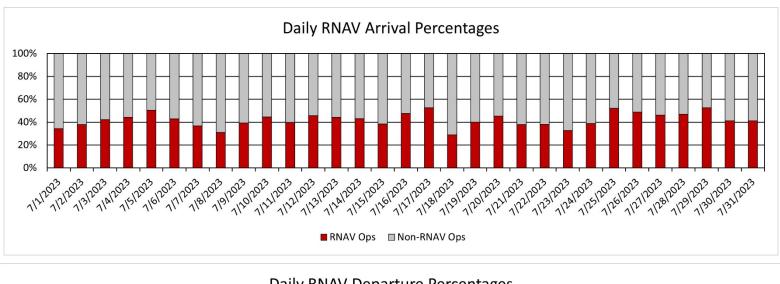


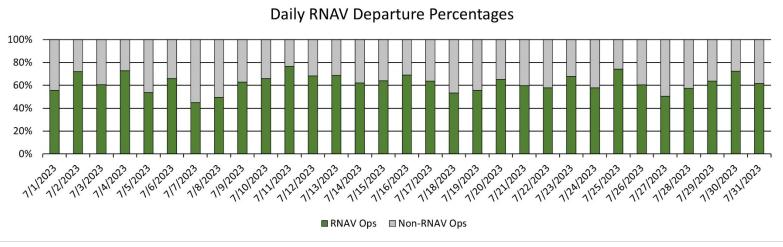






Arrival and Departure Daily RNAV Percentages







FLL RNAV East Flow Operations 📥

Monthly RNAV Use Summary



Note: The Arrivals and Departures tables on the right represent the total number of flights during the month flying the full procedure for each procedure listed. Percentages represent any jet flying on an RNAV within Broward County. Flights that are vectored early are not included in this list.

STARS	Arrivals	
<u>Procedure Name</u> BHHIA	<u># of Operation</u> 10	<u>s</u>
CUUDA	444	
OLAHS	181	4 40/
ТЕЕКҮ	1853	44%
		1170

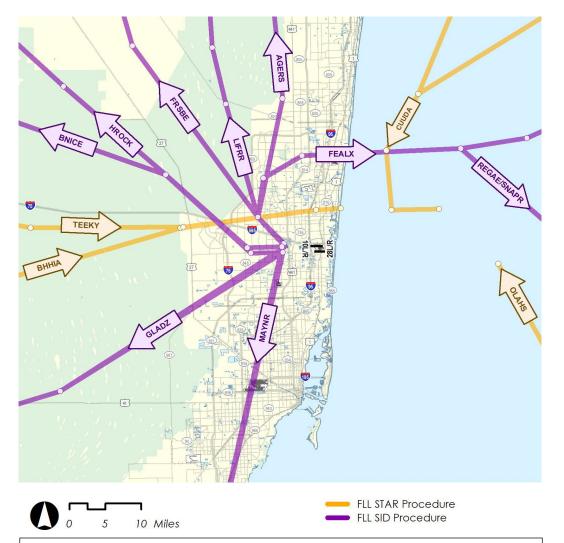
SIDS | Departures

	<u># of Operatio</u>	ns
	123	
	379	
	1095	
	371	
	82	
	329	
	238	
	70	
	5	C 10/
	1125	b4%
\leq		
		379 1095 371 82 329 238 70 5



FLL RNAV West Flow Operations 🛫

Monthly RNAV Use Summary



Note: The Arrivals and Departures tables on the right represent the total number of flights during the month flying the full procedure for each procedure listed. Percentages represent any jet flying on an RNAV within Broward County. Flights that are vectored early are not included in this list.

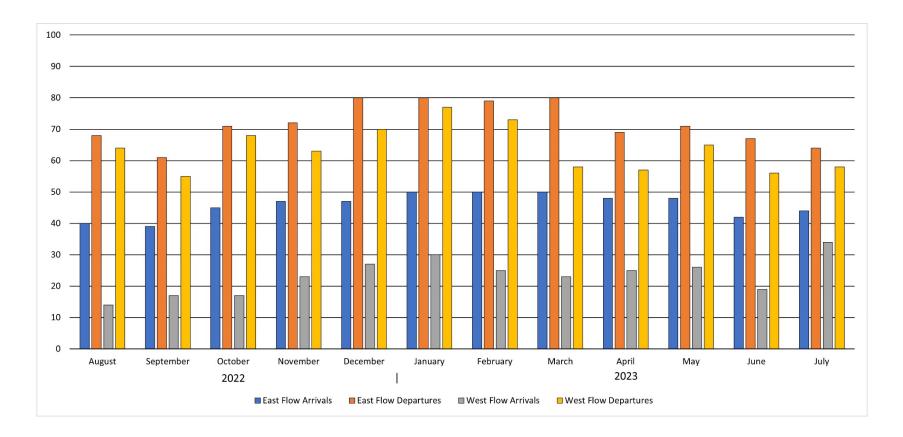
STARS	A	rrivals		
Procedure Name		<u># of Operat</u>	ions	
BHHIA		2		
CUUDA		56		
OLAHS		50		
ТЕЕКҮ		175	2	10/
		_	J2	4%

SIDS | Departures

Procedure Name	<u># of Op</u>	<u>erations</u>
AGERS	22	
BNICE	120	
FEALX	291	
FRSBE	143	
GLADZ	1	
HROCK	84	
LIFRR	7	
MAYNR	147	
		58%
	<u>~</u>)	JO /0



Monthly East and West Flow RNAV Percentages





Monthly RNAV Use by Operator

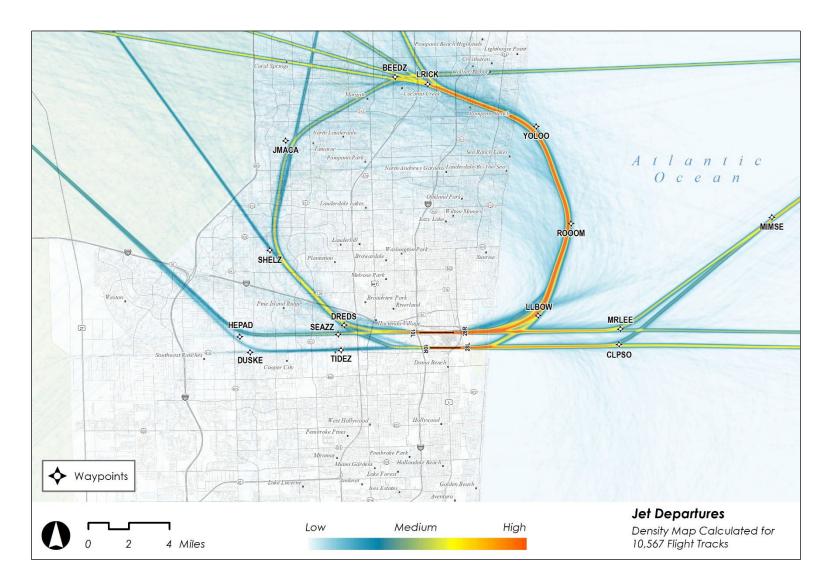
Number of Operations Percent RNAV Operations Air Carrier RNAV Total 50% 100% Air Canada Rouge 249 100 Air Transat 82 39 Alaska Airlines 62 33 Allegiant Air 607 319 American Airlines 907 519 **Avelo Airlines** 118 51 Avianca 28 10 Azul Linhas Aereas Brasileiras 176 86 Bahamas Air Holdings Ltd. 92 186 **Copa Airlines** 50 24 **Delta Airlines** 1917 1135 Flair Airlines 18 10 JetBlue Airways 4264 2104 Southwest Airlines 3402 1931 **Spirit Airlines** 5016 2672 **United Airlines** 560 999 WestJet 44 12

	Number o	of Operations	Percent RNAV Operation	ons
GA / Charter	Total	RNAV	50%	100%
Corporate Flight Management	40	20		
Delta Private Jets	23	11		
Flexjets	66	28		
Mountain Aviation	14	7		
NetJets	164	79		
Red Wing Aeroplane Company	14	4		
Sun Country Airlines	21	11		
Western Air Charter	18	7		
Cargo				
FedEx	208	138		
UPS Airlines	56	30		
Arrivals 🗕		Departures		



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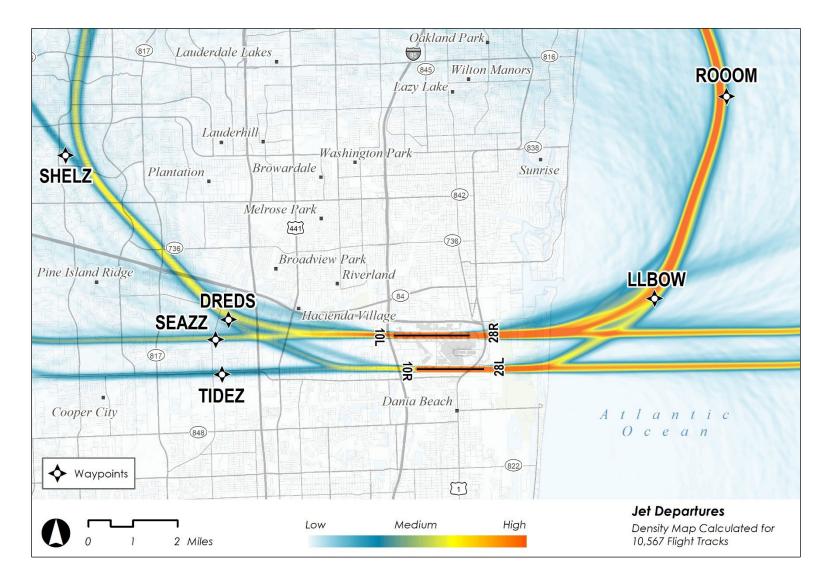
Relative Airspace Density J





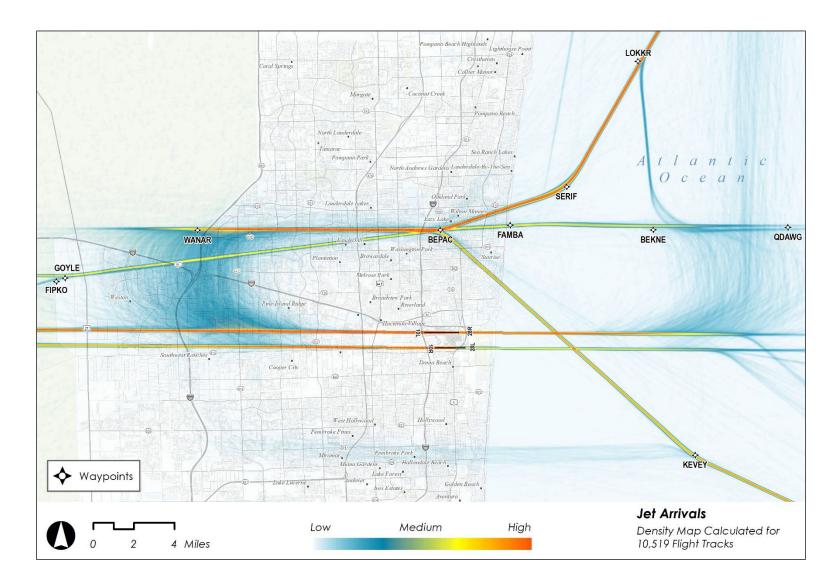
Relative Airspace Density

For All Jet Departures July 2023





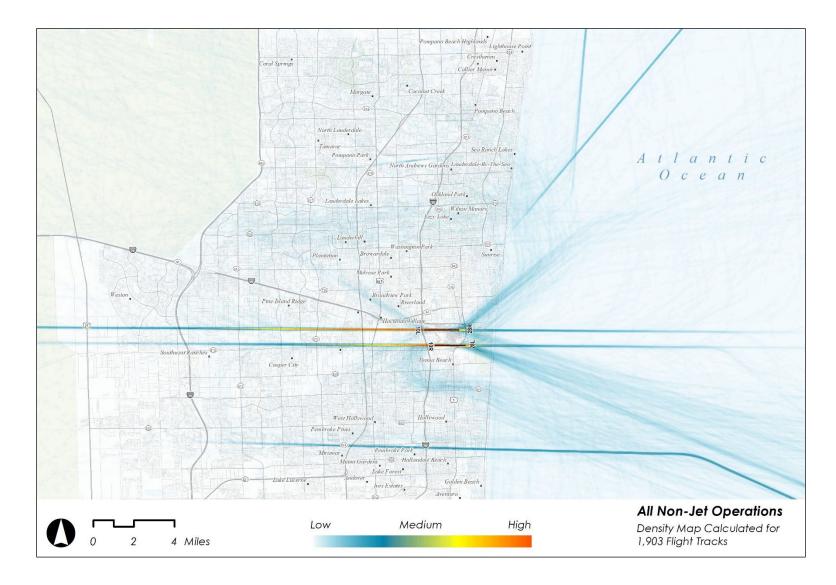
Relative Airspace Density July 2023





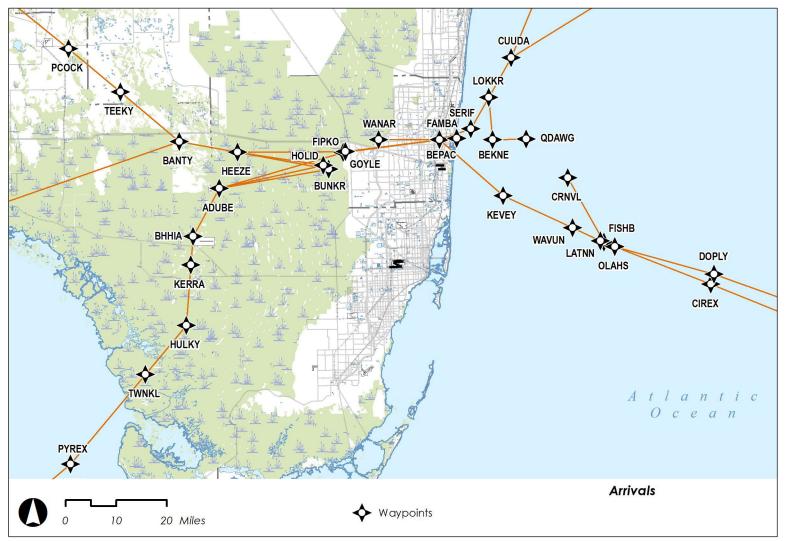
Relative Airspace Density

For All Non-Jet Arrival and Departures July 2023





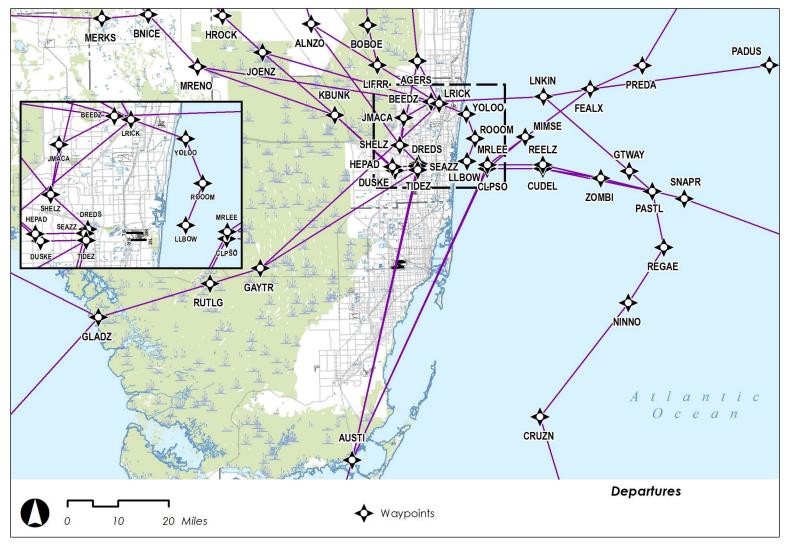
South-Central Florida Metroplex FLL Arrivals (STARS)



Source: http://www.metroplexenvironmental.com/fl_metroplex/fl_docs.html

Appendix

South-Central Florida Metroplex FLL Departures (SID)



Source: http://www.metroplexenvironmental.com/fl_metroplex/fl_docs.html



South-Central Florida Metroplex Waypoints by Procedure

STARS | Arrivals

BHHIA TWO: 10L: [PYREX+ TWNKL+]-HULKY-KERRA-BHHIA-ADUBE-HOLID BHHIA TWO: 10R: [PYREX+ TWNKL+]-HULKY-KERRA-BHHIA-ADUBE-BUNKR	OLAHS TWO: 10L/R: [DOPLY+ CIREX+]-OLAHS-LATNN-WAVUN-KEVEY-BEPAC-WANAR OLAHS TWO: 28L/R: [DOPLY+ CIREX+]-OLAHS-FISHB-CRNVL
BHHIA TWO: 28L/R: [PYREX+ TWNKL+]-HULKY-KERRA-BHHIA-ADUBE-FIPKO-BEPAC-FAMBA	
	TEEKY TWO: 10L: [PCOCK+ MARCI+]-TEEKY-BANTY-HEEZE-HOLID
CUUDA TWO: 10L/R: [MACKL+ PLAID+]-CUUDA-LOKKR-SERIF-BEPAC-WANAR	TEEKY TWO: 10R: [PCOCK+ MARCI+]-TEEKY-BANTY-HEEZE-BUNKR
CUUDA TWO: 28L/R: [MACKL+ PLAID+]-CUUDA-LOKKR-BEKNE-QDAWG	TEEKY TWO: 28L/R: [PCOCK+ MARCI+]-TEEKY-BANTY-HEEZE-GOYLE-BEPAC-FAMBA

SIDS | Departures

AGERS ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-AGERS-[HURGI+]-PERTS-AARPS-MMART-ENWOD SEAZY-[DUCEN+] AGERS ONE: 28L/R: DREDS-SHELZ-AGERS-[HURGI+]-PERTS-AARPS-MMART-ENWOD-SEAZY-[DUCEN+]	HROCK ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-JOENZ-HROCK-[KPASA+ SMELZ+] HROCK ONE: 28L: TIDEZ-DUSKE-KBUNK-JOENZ-HROCK-[KPASA+ SMELZ+] HROCK ONE: 28R: SEAZZ-HEPAD-KBUNK-JOENZ-HROCK-[KPASA+ SMELZ+]
BNICE ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-MRENO-BNICE-[COREA+ DOLIE+ MERKS+] BNICE ONE: 28L: TIDEZ-DUSKE-KBUNK-MRENO-BNICE-[COREA+ DOLIE+ MERKS+] BNICE ONE: 28R: SEAZZ-HEPAD-KBUNK-MRENO-BNICE-[COREA+ DOLIE+ MERKS+]	LIFRR ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-LIFRR-BOBOE-DURRY-CLEFF-[WIXED+ BAIRN+] LIFRR ONE: 28L/R: DREDS-SHELZ-LIFRR-BOBOE-DURRY-CLEFF-[WIXED+ BAIRN+]
FEALX TWO: 10L: MRLEE-MIMSE- FEALX-[PADUS+ PREDA+ WOLFO+] FEALX TWO: 10R: CLPSO-MIMSE-FEALX-[PADUS+ PREDA+ WOLFO+] FEALX TWO: 28L/R: DREDS-SHELZ-JMACA-BEEDZ-LNKIN-FEALX-[PADUS+ PREDA+ WOLFO+]	MAYNR ONE: 10L: MRLEE-AUSTI-MAYNR-MCLAW-[FUNDI+ JABOX+] MAYNR ONE: 10R: CLPSO-AUSTI-MAYNR-MCLAW-[FUNDI+ JABOX+] MAYNR ONE: 28L: TIDEZ-AUSTI-MAYNR-MCLAW-[FUNDI+ JABOX+] MAYNR ONE: 28R: SEAZZ-AUSTI-MAYNR-MCLAW-[FUNDI+ JABOX+]
GLADZ TWO: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-GAYTR-RUTLG-GLADZ-[WIGNA+ MARCI+] GLADZ TWO: 28L: TIDEZ-GAYTR-RUTLG-GLADZ-[WIGNA+ MARCI+] GLADZ TWO: 28R: SEAZZ-GAYTR-RUTLG-GLADZ-[WIGNA+ MARCI+]	REGAE TWO: 10L: MRLEE-REELZ-PASTL-REGAE-NINNO-CRUZN-GLAMS-LRODD-[URSUS+] REGAE TWO: 10R: CLPSO-CUDEL-PASTL-REGAE-NINNO-CRUZN-GLAMS-LRODD-[URSUS+] REGAE TWO: 28L/R: DREDS-SHELZ-JMACA-BEEDZ-LNKIN-GTWAY-PASTL-REGAE-NINNO-CRUZN-
FRSBE ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-ALNZO-FRSBE-[WAPOM+ STYMY+] FRSBE ONE: 28L/R: DREDS-SHELZ-ALNZO-FRSBE-[WAPOM+ STYMY+]	GLAMS-LRODD-[URSUS+] SNAPR TWO: 10L: MRLEE-REELZ-ZOMBI-SNAPR-KRAFT-HEYDR-[RAJAY+ SUMAC+] SNAPR TWO: 10R: CLPSO-CUDEL-ZOMBI-SNAPR-KRAFT-HEYDR-[RAJAY+ SUMAC+] SNAPR TWO: 28L/R: DREDS-SHELZ-JMACA-BEEDZ-LNKIN-GTWAY-SNAPR-KRAFT-HEYDR-
	SNAPR TWO: 10R: CLPSO-CUDEL-ZOMBI-SNAPR-KRAFT-HEYDR-[RAJAY+ SUMAC+]

To view the active published FAA full procedure plates, please follow the link here:

https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/application/?event=procedure.results&tab=charts&nasrId=FLL#searchResultsTop

Appendix

Noise Information

Ways to File an Aircraft Noise Comment

To file a formal aircraft noise comment, choose one of the following options:

Online: Complete the <u>Noise Comment Form</u> then select the Submit button.

By Phone: Call the Noise Comment Hotline at 954-359-2366

Download the new Noise Comment Web App and use this platform to file a complaint.

Using the New Noise Comment Web App to file a noise complaint.

From a mobile phone, click this link <u>Noise Comment Web App</u> and download to an iPhone or Android phone.

The link is only accessible from a mobile phone. It is not available in the iOS or Google Play App stores. It is only available from the webpage.

Noise Comment Web App Instructions:

Save the app to your home screen using the link above.

From an iPhone: Tap the box with the vertical arrow and select add to the home screen.

From an Android phone: Tap the 3 Menu dots and select add to the homepage.

Go to your home screen and open the new noise comment web app.

Enter your comment information following Steps 1-5 and click Submit.

Note: After using the noise comment web app the first time, user information is saved and does not need to be re-entered. You can submit additional comments by tapping "Submit Comment."

If you have questions or comments about the app, please contact the Aviation Department at 954-359-6181

Prepared by Harris Miller Miller & Hanson Inc. on behalf of Broward County Aviation Department.