



NOISE MITIGATION EVALUATION

OPF

Opa Locka Airport

Prepared For:



MIAMI-DADE AVIATION DEPARTMENT

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In Association With:



September, 2003

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NOISE MITIGATION EVALUATION OPA LOCKA AIRPORT

SECTION 1: INTRODUCTION

At the request of communities located in the vicinity of Opa Locka Airport (OPF), the Miami-Dade Aviation Department (MDAD) has evaluated a series of operational noise mitigation procedures for OPF. Over the past months, issues were identified, baseline noise conditions were established and potential operational noise abatement procedures were evaluated. The results of these evaluations will be used to establish a preferred combination of procedures to form a recommended operational noise mitigation program at the Airport. Once approved, the procedures selected for implementation would be incorporated into a Comprehensive Fly Neighborly Program for OPF.

As part of the Procedures evaluation, coordination occurred with the OPF Noise Abatement Task Force that included representatives of OPF area communities, MDAD, and airport users. In addition, meetings with ATCT personnel were held to aid in determining existing air traffic data such as operational activity, time of day/night of activity; departure, arrival and touch and go procedures; current noise abatement procedures (including formal and informal operational agreements); noise complaint data and similar information to establish the existing (2000) condition. Additional meetings were held to review and analyze future procedure noise mitigation measures.

During preliminary meetings a total of twenty-one (21) noise abatement procedures were developed for initial evaluation.

In conducting the evaluation, operations and fleet mix for the year 2000 were used for each noise abatement procedure. A base case (No-Action Condition) was developed which represented the noise exposure occurring around OPF without any operational procedural changes. Each noise mitigation procedure was then compared with the No-Action condition in terms of total population affected, minority and low-income population affected, noise exposure at noise sensitive sites located around the Airport and changes in noise exposure/land use compatibility. The Airport Layout is shown on Exhibit 1-1.

These results will then be analyzed to determine which procedures should be incorporated into the combined noise abatement program. The recommended noise mitigation program will be established through the coordination with MDAD staff and consultants, FAA's air traffic control personnel, and the OPF Noise Abatement Task Force.

Airport Layout



SECTION 2: APPROACH

The following provides an overview of the approach in evaluating noise mitigation measures for OPF.

Identification of Issues

At the outset of the study, noise issues were identified based on complaint data received by MDAD, the FAA tower and information provided by community interests through the Noise Abatement Task Force. In general, these issues included noise from arrivals and departures, ground generated noise, noise associated with flight training patterns and noise exposure at night. These issues formed the basis for developing a series of procedures for noise abatement measures. Specific procedures developed are included in Section 4 of this report.

Analysis of Procedures

In order to determine the effectiveness of the procedures in reducing noise exposure, both quantitative and qualitative analyses were conducted for each procedure. This included tables and exhibits comparing land use compatibility, population, sensitive site analysis and environmental justice considerations with each procedure compared to the baseline condition. This information is presented Section 5.

Following the completion of the evaluation of each procedure, a listing of those procedures that remain viable and those that are rejected (and the reasons for rejection) will be developed. This will be accomplished following discussions with the Noise Abatement Task Force, the FAA Tower and MDAD representatives.

In addition, the evaluation indicated those viable procedures that could be implemented without NEPA, FAR Part 150 or FAR Part 161 involvement and those that would need additional documentation prior to approval and implementation.

GIS Mapping

Digital mapping data, from the Miami Dade Geographic Information System (GIS), as well as aerial mapping has been used to identify off-Airport environs. The GIS system includes both graphic and data information that allows for analysis of procedure impacts. The base sheets used for the Flight Track and Noise Contour Exhibits include a combination of aerial photography for the area overlaid with existing land use indicators. The land use is color coded to identify specific types of land use occurring in proximity to the Airport.

Noise Sensitive Sites

In addition to land use descriptors, a windshield survey of development around OPF was conducted to identify the location of specific noise sensitive sites (churches, schools, parks, day care centers, cemeteries etc.). The area of coverage included representative sites located within the 65 DNL limits for one or more of the procedures evaluated. The representative noise sensitive sites resulting from the windshield survey are listed in Table 2-1 and located on Exhibit 2-1.

Population Data

Population in the Airport area was developed based on the 2000 census for Miami-Dade County. Population data used in the analysis included total population, minority population and low-income population currently located within significant noise exposure areas (65 and greater DNL contour limits).

2000 Baseline Noise Contours and Procedure Analysis Contours

Baseline 65, 70 and 75 DNL noise contours were developed for the 2000 condition without any change in the current operational procedures. These are provided in Section 3. In addition, 65, 70 and 75 DNL noise contours were also prepared for each of the noise mitigation procedures and are included in Section 5.

Representative Noise Sensitive Sites



Basemap Source: Miami-Dade County and USGS



- | | | | | |
|-----------------|---------------|---------------------------|----------|----------|
| Agriculture | Commercial | Single Family Residential | Church | Park |
| Park / Cemetery | Industrial | Multi Family Residential | School | Day Care |
| Water | Institutional | | Cemetery | |



Miami Dade Aviation Department

Exhibit 2-1

**TABLE 2-1
REPRESENTATIVE NOISE SENSITIVE SITES**

SITE	DESCRIPTION
Churches	
2	Miami Lakes Baptist Church
4	St. Margaret's Episcopal Church
5	Our Lady of The Lakes Catholic Church
7	Voice of Jesus Family Center
9	Christian Faith Fellowship Church
15	Iglesia Christiana Berea
35	St. Andrew Missionary Baptist Church
38	First Baptist Church of Bunche Park
40	Church of the Kingdom of God
41	House of Prayer
42	Faith Truth & Deliverance Ministries, Inc.
54	Church of The Transfiguration
55	Croom Temple Church of God and Christ
56	Mt. Zion AME Church
57	Magnolia Park Church of Christ
63	Free Will Baptist Church
64	Iglesia Betesda
65	St. Kevin's Episcopal Church
87	Mt. Hope Fellowship Baptist Church
Schools	
3	Miami Lakes Technological Center
6	Miami Lakes Middle School
19	Florida Memorial College
30	St. Thomas University
43	North Dade Center for Modern Language
44	North Dade Middle School
46	Rainbow Park Elementary School
Day Care	
37	Bunche Park Headstart
72	Kid's Choice Learning Center
73	Montessori Children's House
74	Little Tigers Day Care
75	Little Dividends Child Development Center
80	Love Thy Kids Academy
81	Wanza and Braxton Pink and Blue
82	Harvey (Residence/Day Care)
84	Earlene L Dorsett (Day Care)
85	Vankara: A Learning Exchange (Day Care)
86	Angelee Day Care Center
Parks	
88	Vista Memorial Gardens Cemetery
89	Miami Lakes Park
93	Bunche Park & Pool

SECTION 3: BASELINE CONDITIONS

Airport Runways and Runway Use

The Airport currently operates with three runways:

09L-27R – 8,002 feet by 150 feet

09R-27L – 4,306 feet by 100 feet

12-30 – 6,800 feet by 150 feet

There is also a 4,394 by 100 foot Runway 18-36 at the Airport that is not currently in use.

The Airport operates in an east flow approximately 66 percent of the time and a west flow the remaining 34 percent. This flow is primarily a result of wind conditions that predominately occur from the east and south east. During east flow, arrivals and departures occur on the Runways 9L, 9R and 12 and during west flow Runways 27L, 27R and 30 are used.

Current Noise Abatement Procedures

The noise abatement procedures currently in effect at OPF include the following

- * For noise abatement, Runway 12-30 is the preferred runway of use,
- * Departure and approach noise abatement procedures applicable to close in noise sensitive sites are to be utilized,
- * Traffic pattern altitudes should be maintained as long as possible,
- * Airport engine maintenance run-up limitations are in effect per airport rule 24 hours a day. No run-ups are allowed between 11:00pm and 7:00 am local time Monday through Friday and between 11:00pm and 10:00am on Saturdays and Sundays.

Operations and Fleet Mix

Baseline operations and fleet mix for the year 2000 condition were determined through the review of FAA and Airport records. See Table 3-1 for itinerant activity and Table 3-2 for local operations. As shown in these Tables, in 2000, OPF averaged approximately 400 aircraft operations per 24-hour day with approximately two-thirds of these being itinerant and about one-third local (pattern operations).

**TABLE 3-1
YEAR 2000 BASE CASE ITINERANT OPERATIONS**

AIRCRAFT TYPE	DEPARTURES		ARRIVALS		TOTALS	
	Day	Night	Day	Night	Day	Night
Commercial Jets						
727EM2	0.220	0.000	0.220	0.000	0.440	0.000
727EM1	0.220	0.000	0.220	0.000	0.440	0.000
74710Q	0.019	0.000	0.019	0.000	0.038	0.000
757RR	0.055	0.000	0.055	0.000	0.110	0.000
767300	0.055	0.000	0.055	0.000	0.110	0.000
DC870	0.047	0.000	0.047	0.000	0.094	0.000
DC95HW	0.082	0.000	0.082	0.000	0.164	0.000
Sub-Total	0.698	0.000	0.698	0.000	1.396	0.000
Regional/GA Jets						
CIT3	0.468	0.120	0.468	0.120	0.936	0.240
CL600	1.093	0.281	1.093	0.281	2.186	0.562
CNA500	1.093	0.281	1.093	0.281	2.186	0.562
FAL20	0.937	0.241	0.937	0.241	1.874	0.482
GIIB	0.625	0.161	0.625	0.161	1.250	0.322
GIV	0.468	0.120	0.468	0.120	0.936	0.240
IA1125	0.468	0.120	0.468	0.120	0.936	0.240
LEAR25	1.874	0.482	1.874	0.482	3.748	0.964
LEAR35	4.667	1.124	4.667	1.124	9.334	2.248
MU3001	4.216	1.084	4.216	1.084	8.432	2.168
Sub-Total	15.909	4.014	15.909	4.014	31.818	8.028
Turboprops						
DHC6	10.495	0.000	10.495	0.000	20.990	0.000
CNA441	13.552	0.000	13.552	0.000	27.104	0.000
Sub-Total	24.047	0.000	24.047	0.000	48.094	0.000
Piston Props						
BEC58P	6.778	0.000	6.778	0.000	13.556	0.000
GASEPV	24.261	5.218	24.261	5.218	48.522	10.436
GASEPF	26.323	5.218	26.323	5.218	52.646	10.436
DC3	3.419	0.000	3.419	0.000	6.838	0.000
Sub-Total	60.781	10.436	60.781	10.436	121.562	20.872
Military						
LEAR 35	4.797	0.000	4.797	0.000	9.594	0.000
HS748A	0.533	0.000	0.533	0.000	1.066	0.000
C130	0.279	0.000	0.279	0.000	0.558	0.000
LEAR25	0.253	0.000	0.253	0.000	0.506	0.000
Sub-Total	5.862	0.000	5.862	0.000	11.724	0.000
Helicopters						
S-76	5.892	1.605	5.892	1.605	11.784	3.210
HH65	4.796	0.000	4.796	0.000	9.592	0.000
Sub-Total	10.688	1.605	10.688	1.605	21.376	3.210
TOTALS	117.985	16.055	117.985	16.055	235.970	32.110

**TABLE 3-2
YEAR 2000 BASE CASE LOCAL (PATTERN) OPERATIONS**

AIRCRAFT TYPE	DEPARTURES		ARRIVALS		TOTALS	
	Day	Night	Day	Night	Day	Night
Turboprops						
CNA441	5.827	0.000	5.827	0.000	11.654	0.000
Sub-Total	5.827	0.000	5.827	0.000	11.654	0.000
Piston Props						
GASEPV	23.307	0.000	23.307	0.000	46.614	0.000
GASEPF	23.307	0.000	23.307	0.000	46.614	0.000
Sub-Total	46.614	0.000	46.614	0.000	93.228	0.000
Military						
LEAR 35	0.493	0.000	0.493	0.000	0.986	0.000
Sub-Total	0.493	0.000	0.493	0.000	0.986	0.000
Helicopters						
S-76	5.826	0.000	5.826	0.000	11.652	0.000
HH65	9.377	0.000	9.377	0.000	18.754	0.000
Sub-Total	15.203	0.000	15.203	0.000	30.406	0.000
TOTALS	68.137	0.000	68.137	0.000	136.274	0.000

Note: This table indicates a Pattern to be a departure and an arrival (or one Pattern equals two operations)

Of the itinerant operations, approximately 15 percent included jet activity and 70 percent involved piston and turbo prop aircraft. The remaining 15 percent of the itinerant operations included helicopter and military operations (with less than one percent being air carrier size aircraft). As shown on Table 3-2, of the local (pattern) operations, nearly 70 percent were single engine piston aircraft.

Time of Day/Night of Operations

Table 3-3 identifies the year 2000 daytime (7:00 am to 10:00 pm) and nighttime (10:00 pm to 7:00 am) operational activity at OPF. As shown in the Table, the overall airport use during the daytime hours is 92.1 percent with nighttime being 7.9 percent. The greatest percentage of nighttime use is by regional and general aviation jet aircraft with about 20 percent of this activity occurring at night (approximately 32 daytime operations and 8 nighttime per average 24-hour day).

**TABLE 3-3
YEAR 2000 BASE CASE DAY/NIGHT DISTRIBUTION**

AIRCRAFT TYPE	ITINERANT OPERATIONS		PATTERN OPERATIONS		TOTAL PERCENTAGES	
	Day	Night	Day	Night	Day	Night
Commercial Jet	1.396	0.000	0.000	0.000	100.0%	0.0%
Regional/GA Jets	31.818	8.028	0.000	0.000	79.9%	20.1%
Turboprops	48.094	0.000	11.654	0.000	100.0%	0.0%
Piston Props	121.562	20.872	93.228	0.000	91.1%	8.9%
Military	11.724	0.000	0.986	0.000	100.0%	0.0%
Helicopters	21.376	3.210	30.406	0.000	94.2%	5.8%
TOTALS	235.970	32.11	136.274	0.000	92.1%	7.9%

Runway Use and Flight Tracks

Tables 3-4 and 3-5 provide the overall distribution of arrivals and departures on Runways at OPF. In addition, Tables 3-6 and 3-7 present this information in terms of a percentage of runway use. As described in these tables, Runway 9L-27R handled the most aircraft activity with approximately 50 percent of the operations.

**TABLE 3-4
RUNWAY USE (ARRIVALS)**

Runway End	Arrivals/Day	Arrivals/Night	Total Arrivals
27R	30.222	3.507	33.729
27L	20.018	0.035	20.053
30	9.408	1.369	10.777
Sub-Total West Flow			64.559
9L	59.975	6.940	66.915
9R	38.456	0.000	38.456
12	17.353	2.596	19.949
Sub-Total East Flow			125.32
Sub-Total Helicopter	10.688	1.605	12.293
TOTALS	186.120	16.052	202.172

**TABLE 3-5
RUNWAY USE (DEPARTURES)**

Runway End	Departures/Day	Departures/Night	Total Departures
27R	30.222	3.507	33.729
27L	20.018	0.035	20.053
30	9.409	1.371	10.780
Sub-Total West Flow			64.562
9L	59.985	6.940	66.925
9R	38.346	0.000	38.346
12	17.344	2.596	19.940
Sub-Total East Flow			125.211
Sub-Total Helicopter	10.688	1.605	12.293
TOTALS	186.012	16.054	202.066

**TABLE 3-6
RUNWAY USE - DEPARTURES (PERCENTAGE)**

Runway End	Percent Departures Day	Percent Departures Night	Runway Use Departures
27R	16.25%	21.85%	16.69%
27L	10.76%	0.22%	9.93%
30	5.06%	8.54%	5.33%
9L	32.25%	43.23%	33.11%
9R	20.61%	0.00%	18.97%
12	9.32%	16.17%	9.87%
Helicopter	5.75%	10.00%	6.09%
TOTALS	100%	100%	100

**TABLE 3-7
RUNWAY USE – ARRIVALS (PERCENTAGE)**

Runway End	Percent Arrivals Day	Percent Arrivals Night	Runway Use Arrivals
27R	16.24%	21.85%	16.68%
27L	10.76%	0.22%	9.92%
30	5.05%	8.54%	5.33%
9L	32.22%	43.23%	33.10%
9R	20.66%	0.00%	19.02%
12	9.32%	16.17%	9.87%
Helicopter	5.74%	10.00%	6.08%
TOTALS	100%	100%	100

Arrival and departure flight tracks at OPF that are used in the Integrated Noise Model are presented on Exhibits 3-1 through 3-5. All exhibits show the arrivals as blue flight tracks and the departures as green flight tracks. Unlike cars on a roadway, aircraft do not follow a single flight track for a specific arrival or departure route but result in a splay of aircraft through a flight corridor. To indicate this splay in Exhibits 3-1 through 3-5, a thicker line is shown to represent the centerline of a flight corridor with the thinner lines being secondary tracks within the corridor.

Exhibit 3-1 shows the Runways 9L-27R and 9R-27L flight tracks at OPF during an east flow operation with Exhibit 3-2 showing a westerly flow for the runways. Exhibits 3-3 and 3-4 present the arrival and departure tracks off Runway 12-30 during east and west flow conditions. The final flight track exhibit shows the local patterns and helicopter routes into and out of the Airport.

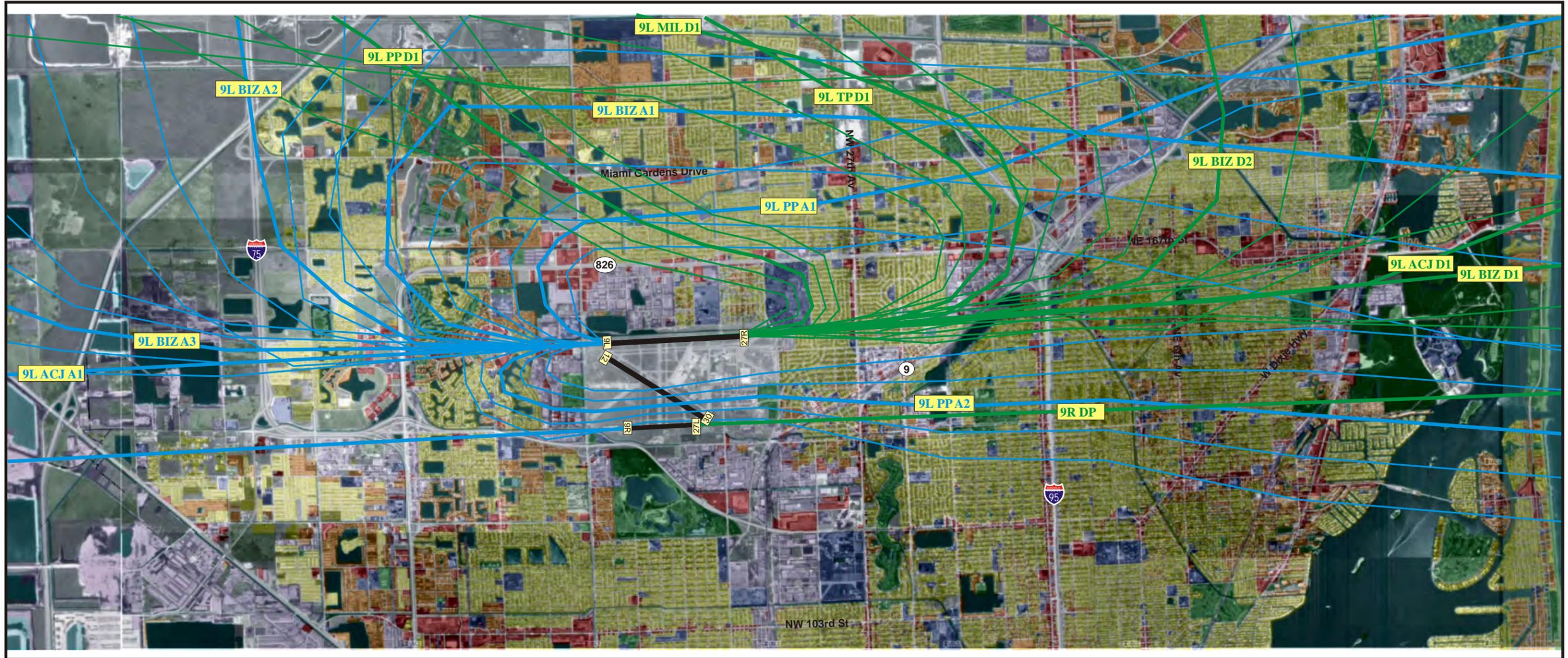
Each of the centerline flight tracks on Exhibits 3-1 through 3-5 have been assigned a descriptor and the percentage of use during the daytime and nighttime for each track is listed in Table 3-8.

Baseline Year 2000 Noise Impacts

The 65, 70 and 75 DNL noise contours associated with the baseline (2000 No Action) condition are shown on Exhibit 3-6. The noise contour analysis shows that approximately 2,448 people reside within the 65 DNL contour limits of which approximately 59 live within the 70 DNL contour. In addition approximately, 1,990 of the 2,448 people within the 65 DNL contour are minorities and about 34 of the 59 persons within the 70 DNL contour are minorities. It is estimated that approximately 174 low-income households occur within the 65 DNL contour of which approximately four are located within the 70 DNL.

The DNL values at noise sensitive sites for the 2000 baseline condition are presented in Table 3-9.

Runways 9L-27R and 9R-27L East Flow INM Flight Tracks - Opa Locka Airport

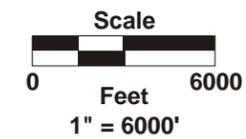


Basemap Source: Miami-Dade County and USGS



- | | | |
|-----------------|---------------|---------------------------|
| Agriculture | Commercial | Single Family Residential |
| Park / Cemetery | Industrial | Multi Family Residential |
| Water | Institutional | |

- | |
|-------------------------|
| INM Departure Track |
| INM Departure Sub-Track |
| INM Arrival Track |
| INM Arrival Sub-Track |



Miami Dade Aviation Department

Exhibit 3-1

Runway 12-30 East Flow INM Flight Tracks - Opa Locka Airport

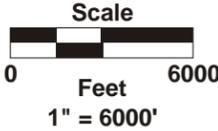


Basemap Source: Miami-Dade County and USGS



- Agriculture
- Commercial
- Single Family Residential
- Park / Cemetery
- Industrial
- Multi Family Residential
- Water
- Institutional

- INM Departure Track
- INM Departure Sub-Track
- INM Arrival Track
- INM Arrival Sub-Track



Miami Dade Aviation Department

Exhibit 3-3

Runway 12-30 West Flow INM Flight Tracks - Opa Locka Airport

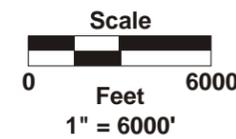


Basemap Source: Miami-Dade County and USGS



- | | | |
|-----------------|---------------|---------------------------|
| Agriculture | Commercial | Single Family Residential |
| Park / Cemetery | Industrial | Multi Family Residential |
| Water | Institutional | |

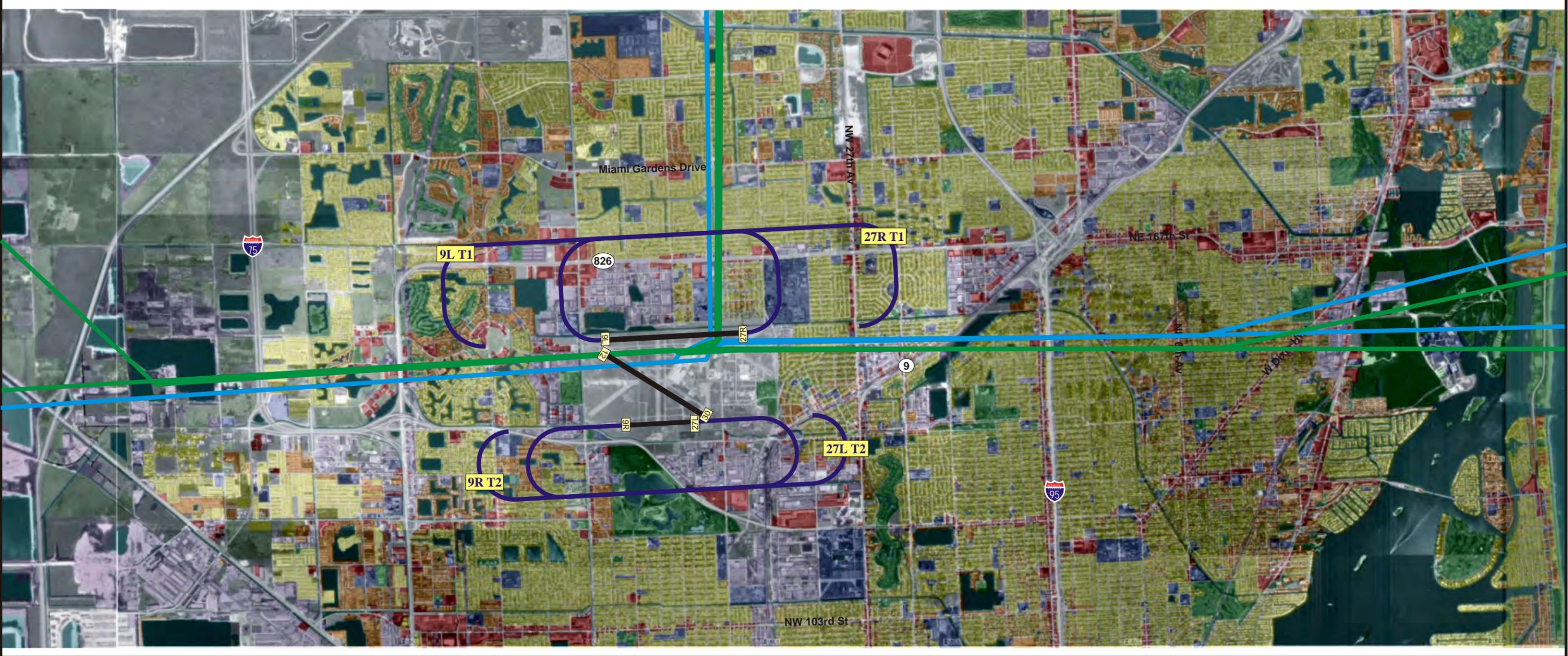
- INM Departure Track
- INM Departure Sub-Track
- INM Arrival Track
- INM Arrival Sub-Track



Miami Dade Aviation Department

Exhibit 3-4

Touch & Go Training and Helicopter INM Flight Tracks - Opa Locka Airport

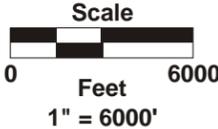


Basemap Source: Miami-Dade County and USGS



- | | | |
|-----------------|---------------|---------------------------|
| Agriculture | Commercial | Single Family Residential |
| Park / Cemetery | Industrial | Multi Family Residential |
| Water | Institutional | |

- INM Touch & Go Track
- INM Helicopter Departure Track
- INM Helicopter Arrival Track



Miami Dade Aviation Department

Exhibit 3-5

**TABLE 3-8
YEAR 2000 FLIGHT TRACK USE**

FLIGHT TRACK	DEPARTURES		ARRIVALS		OPERATIONS	
	Day %	Night %	Day %	Night %	Day	Night
Commercial Jets						
West Flow						
27R ACJ D1	30	0			0.071	0
27R ACJ D2	25	0			0.059	0
27R ACJ D3	30	0			0.071	0
27R ACJ D4	15	0			0.036	0
27R ACJ A1			50	0	0.119	0
27R ACJ A2			50	0	0.119	0
East Flow						
9L ACJ D1	100	0			0.461	0
9L ACJ A1			100	0	0.451	0
12 TP A1			100	0	0.009	0
Sub-Total Operations					1.396	0
Regional/GA Jets						
West Flow						
27R ACJ D2	10	10			0.406	0.102
27R BIZ D1	40	40			1.623	0.409
27R BIZ D2	25	25			1.014	0.256
27R BIZ D3	25	25			1.014	0.256
30 PP D1	50	50			0.676	0.171
30 TP D1	50	50			0.676	0.171
27R TP A1			30	30	1.217	0.307
27R BIZ A1			70	70	2.840	0.716
30 BIZ A1			40	40	0.541	0.136
30 BIZ A2			20	20	0.270	0.068
30 BIZ A3			20	20	0.270	0.068
30 BIZ A4			20	20	0.270	0.068
East Flow						
9L BIZ D1	50	50			4.200	1.060
9L BIZ D2	50	50			4.200	1.060
12 BIZ D1	100	100			2.100	0.530
9L BIZ A1			15	15	1.260	0.318
9L BIZ A2			15	15	1.260	0.318
9L BIZ A3			15	15	1.260	0.318
9L ACJ A1			55	55	4.620	1.166
12 TP A1			100	100	2.100	0.530
Sub-Total Operations					31.818	8.028

**TABLE 3-8 (Continued)
YEAR 2000 FLIGHT TRACK USE**

FLIGHT TRACK	DEPARTURES		ARRIVALS		OPERATIONS	
	Day %	Night %	Day %	Night %	Day	Night
Turbo Props						
West Flow						
27R TP D1	40	0			2.453	0
27R TP D2	40	0			2.453	0
27R BIZ D2	20	0			1.226	0
30 TP D1	100	0			2.044	0
27R TP A1			70	0	4.292	0
27R ACJ A1			30	0	1.840	0
30 BIZ A1			100	0	2.044	0
East Flow						
9L BIZ D1	33	0			4.191	0
9L BIZ D2	34	0			4.318	0
9L TP D1	33	0			4.191	0
12 BIZ D1	100	0			3.170	0
9L BIZ A1			35	0	4.445	0
9L BIZ A3			15	0	1.905	0
9L ACJ A1			50	0	6.350	0
12 TP A1			100	0	3.170	0
Sub-Total Operations					48.094	0
Military						
West Flow						
27R BIZ D1	100	0			1.973	0
30 MIL D1	100	0			0.020	0
27R MIL A1			100	0	1.973	0
30 MIL A1			100	0	0.020	0
East Flow						
9L MIL D1	100	0			3.830	0
12 MIL D1	100	0			0.039	0
9L ACJ A1			100	0	3.830	0
12 MIL A1			100	0	0.039	0
Sub-Total Operations					11.724	0

**TABLE 3-8 (Continued)
YEAR 2000 FLIGHT TRACK USE**

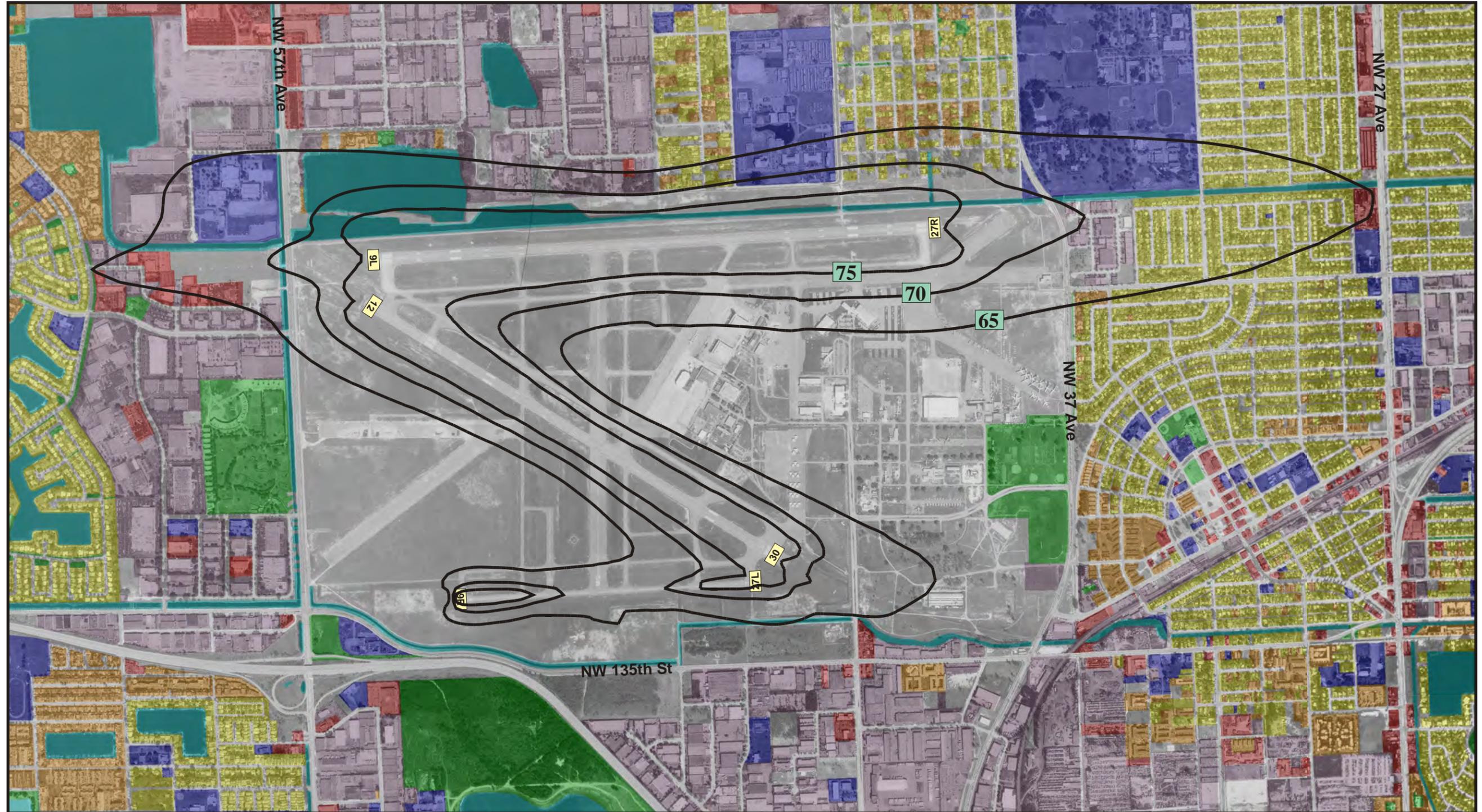
FLIGHT TRACK	DEPARTURES		ARRIVALS		OPERATIONS	
	Day %	Night %	Day %	Night %	Day	Night
General Aviation						
West Flow						
27R BIZ D3	25	25			3.617	0.621
27R BIZ D2	20	20			2.893	0.497
27R TP D2	25	25			3.617	0.621
27R PP D1	30	30			4.340	0.745
30 PP D1	100	100			5.993	1.029
27L DP	100	100			0.207	0.035
27R PP A1			50	50	7.233	1.242
27R PP A2			40	40	5.786	0.994
27R ACJ A2			10	10	1.447	0.248
27L PP A1			100	100	0.207	0.035
30 PP A1			35	35	2.098	0.360
30 PP A2			35	35	2.098	0.360
30 BIZ A3			10	10	0.599	0.103
30 BIZ A2			10	10	0.599	0.103
30 BIZ A1			10	10	0.599	0.103
East Flow						
9L BIZ D1	25	25			7.020	1.205
9L BIZ D2	25	25			7.020	1.205
9L TP D1	25	25			7.020	1.205
9L PP D1	25	25			7.020	1.205
12 BIZ D1	100	100			12.035	2.066
9L ACJ A1			30	30	8.424	1.446
9L BIZ A3			15	15	4.212	0.723
9L BIZ A2			15	15	4.212	0.723
9L BIZ A1			15	15	4.212	0.723
9L PP A1			15	15	4.212	0.723
9L PPA2			10	10	2.808	0.482
12 TPA1			100	100	12.035	2.066
Sub-Total Operations					121.562	20.872
Helicopters						
To and From North	33	33	33	33	7.125	1.070
To and From East	33	33	33	33	7.125	1.070
To and from West	33	33	33	33	7.125	1.070
Sub-Total Operations					21.376	3.210

**TABLE 3-8 (Continued)
YEAR 2000 FLIGHT TRACK USE**

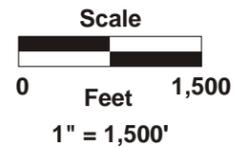
FLIGHT TRACK	PATTERN		OPERATIONS	
	Day %	Night %	Day	Night
Single & Twin Patterns				
West Flow				
27L T2	100	0	39.622	0.0
East Flow				
9R T2	100	0	76.912	0.0
Sub-Total Operations				
Military Patterns				
West Flow				
27R T1	100	0	6.712	0.0
East Flow				
9L T1	100	0	13.028	0.0
Sub-Total Operations			136.274	0.0

Note: Aircraft on military patterns include Lear25 (0.439 per day and 0.00 night) and helicopters (HH65 9.377 per day and 0.00 at night). Aircraft on general aviation patterns include (GASEPV - 23.307 day 0.00 night; GASEPF - 23.307 day and 0.00 night; CNA-441- 5.827 day and 0.00 night; and, helicopters (S-76 5.286 day and 0.0 night).

2000 No Action DNL Contours



- | | | | |
|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



Miami Dade Aviation Department

Exhibit 3-6

**TABLE 3-9
2000 BASELINE DNL NOISE LEVELS AT REPRESENTATIVE SENSITIVE SITES**

SITE	DESCRIPTION	2000 BASELINE DNL
Churches		
2	Miami Lakes Baptist Church	61.2
4	St. Margaret's Episcopal Church	61.7
5	Our Lady of The Lakes Catholic Church	59.3
7	Voice of Jesus Family Center	60.4
9	Christian Faith Fellowship Church	59.2
15	Iglesia Christiana Berea	61.1
35	St. Andrew Missionary Baptist Church	62.2
38	First Baptist Church of Bunche Park	61.4
40	Church of the Kingdom of God	62.4
41	House of Prayer	62.7
42	Faith Truth & Deliverance Ministries, Inc.	62.0
54	Church of The Transfiguration	60.4
55	Croom Temple Church of God and Christ	60.0
56	Mt. Zion AME Church	61.4
57	Magnolia Park Church of Christ	60.3
63	Free Will Baptist Church	60.1
64	Iglesia Betesda	59.8
65	St. Kevin's Episcopal Church	59.3
87	Mt. Hope Fellowship Baptist Church	60.3
Schools		
3	Miami Lakes Technological Center	67.1
6	Miami Lakes Middle School	60.5
19	Florida Memorial College	66.9
30	St. Thomas University	66.2
43	North Dade Center for Modern Language	60.4
44	North Dade Middle School	60.4
46	Rainbow Park Elementary School	60.5
Day Care		
37	Bunche Park Headstart	60.3
72	Kid's Choice Learning Center	65.6
73	Montessori Children's House	61.1
74	Little Tigers Day Care	60.1
75	Little Dividends Child Development Center	59.2
80	Love Thy Kids Academy	62.0
81	Wanza and Braxton Pink and Blue	59.8
82	Harvey (Residence/Day Care)	59.8
84	Earlene L Dorsett (Day Care)	58.8
85	Vankara: A Learning Exchange (Day Care)	57.9
86	Angelee Day Care Center	59.9
Parks		
88	Vista Memorial Gardens Cemetery	60.7
89	Miami Lakes Park	60.5
93	Bunche Park & Pool	62.0

SECTION 4 - DESCRIPTION OF POSSIBLE OPERATIONAL PROCEDURES

A wide range of procedures were developed for initial review. The procedures reviewed included those associated with runway use, local and itinerant flight tracks, departure profiles, runway extensions, noise barriers and the evaluation of use-restrictions. A total of twenty-one (21) procedures were established for analysis. Certain procedures that would involve use restrictions were included in the analysis, however, if recommended for implementation, these would be subject to further FAA requirements (analysis related to FAR Part 161 or Part 150).

The following summarizes the 21 noise abatement Procedures being considered. For each Procedure, a description is provided followed by a brief summary of the purpose of the Procedure.

RUNWAY USE PROCEDURES

Procedure 1 – Maximize the Use of Runway 12-30 (Day and Night)

This procedure would establish Runway 12-30 as the Preferred Runway at the Airport. With Procedure 1, departures on Runway 12 would turn to the east prior to 103rd Street in order to avoid conflicts with Miami International Airport airspace. The percentage of time that Runway 12-30 would be used was based on wind rose data for the Airport area. Separate consideration was given to daytime and nighttime runway use as the ability to assign aircraft to Runway 12-30 at night would be expected to be greater than during the day as wind velocities at night are typically lower.

The purpose of Procedure 1 is to reduce the noise exposure from “close-in” flyovers of aircraft over residential areas to the east and west of the airport. A review of the existing land use mapping shows that “close-in” arrival and departure corridors along the Runway 12-30 centerline would occur over more compatible land uses than would approaches and departures on the parallel Runways 9L-27R and 9R-27L.

Procedure 2 – Maximize the Use of Runway 12-30 (Night Only)

This procedure would establish Runway 12-30 as the Preferred Runway at the Airport during nighttime hours (10:00pm to 7:00am). In effect, with Procedure 2, the Airport would operate the same as it does today during the daytime hours (7:00am to 10:00pm) but would operate the same as Procedure 1 at night.

The purpose of Procedure 2 is to allow the maximum use of the parallel Runway 9-27 system during the day while still incorporating the noise benefits of the use of Runway 12-30 at night.

Procedure 3 – Maximize the Use of Runway 12-30 for Local Flight Training Activity (Day and Night)

This procedure would relocate local flight training patterns at the Airport to Runway 12-30 (to the greatest extent possible considering winds and air traffic conditions). Local flight training (touch and go) patterns now primarily occur off both Runways 9L-27R and 9R-27L with Runway 9R-27L being used most of the time. A review of the land use mapping indicates that if the local training pattern were maximized to operate as a right-hand pattern off Runway 12 and a left-hand pattern off Runway 30, the training operations would occur substantially over compatible land use. Due to potential airspace conflicts, it is likely that Procedure 3 may only be applicable in conjunction with Procedure 1.

The purpose of Procedure 3 is to reduce aircraft flight training noise in residential areas south of Runway 9R-27L and areas north of Runway 9L-27R and relocate it to areas that are predominately industrial and commercial.

Procedure 4 – Voluntary Relocation of Flight Training Activity to Opa Locka West Airport (Day and Night).

This procedure would relocate all local flight training operations to Opa Locka West Airport. Under this procedure, the based aircraft used for training would depart Opa Locka Airport, conduct their training activities at Opa Locka West Airport and then return to Opa Locka Airport.

The purpose of this procedure would be to eliminate the impacts of aircraft training noise and overflight of residentially developed areas around Opa Locka Airport to predominately undeveloped areas around Opa Locka West Airport.

Procedure 5 – Maximize Use of East Flow

Procedure 5 would maximize east flow at the Airport.

The purpose of this Procedure would be to determine if an east flow condition would reduce noise exposure in residential areas.

Procedure 6 – Maximize the Use of West Flow

Procedure 6 would maximize west flow at the Airport.

The purpose of this Procedure would be to determine if a west flow condition would reduce noise exposure in residential areas.

Procedure 7 – Close Runway 9L to Arrivals (24 Hours a Day)

This procedure would close Runway 9L to arrivals during both daytime and nighttime hours. Exceptions to this procedure would be only during unique operational or emergency situations.

The purpose of the procedure would be to virtually eliminate overflights of arriving aircraft on Runway 9L over residential areas west of the Airport.

Procedure 8 – Restrict the Use of Heavy Aircraft to Daytime Hours Only and Runway 12-30 Only

Procedure 8 would involve a voluntary restriction of heavy aircraft use at the Airport to daytime (7:00am to 10:00pm) hours only. In addition this voluntary restriction would limit the arrivals and departures of heavy aircraft to Runway 12-30 only, unless prior arrangements were made.

The purpose of Procedure 8 would be to reduce the noise exposure caused by nighttime operations of heavy aircraft and would direct operations, during daytime hours, to a less noise sensitive Runway 12-30.

FLIGHT TRACK AND PROFILE PROCEDURES

Procedure 9 - Maximize Use of Route 9/I-95 Corridors for Easterly Departures (Day and Night)

This procedure would direct Runway 9 aircraft departures (those destined for northerly departure track turns) to turn over Route 9/I-95 corridors.

The purpose of Procedure 9 is to place departing aircraft, to the greatest extent, over areas of compatible land use and relatively high noise background levels.

Procedure 10 – Raise Approach Slope to Runways 9L, 27R and 12 (Day and Night)

Currently, aircraft on ILS approaches to Runways 9L, 27R and 12 use a three (3) degree approach. This procedure would raise these approach slopes to 3.5 or 4 degrees.

The purpose of this procedure would be to increase the height of arriving aircraft over areas west of the Runway 9L threshold, northwest of the Runway 12 threshold and east of the Runway 27R threshold.

Procedure 11– Removal of the 2,000 Foot Altitude “Hold Down” (or Increase in the “Hold-Down” Altitude) for Easterly Departures (Day and Night)

Currently aircraft departing to the east climb to an altitude of 2,000 feet and then are required to maintain that altitude until cleared to continue their climb. This procedure has been established to maintain separation with Miami International Airport’s approaching/departing aircraft. The evaluation of this procedure identifies the specific reasons for the “hold down” altitude and determines if there is an opportunity to increase the 2,000-foot limit. If it is determined that an increase in altitude can occur (to 2,500 or 3,000 feet, for example), then the analysis would be prepared using the increased altitude.

The purpose of Procedure 11 is to increase the departure altitude over residential areas near the Airport.

Procedure 12 – Direct West Flow Small Propeller Aircraft Departures Over Red Road

This procedure would direct small propeller aircraft to fly north or south over Red Road after departing to the west.

The purpose of this procedure would be to place small propeller aircraft over areas with a higher noise background and reduce the flyovers of residential areas.

Procedure 13- Evaluate the Advantages of “Close-in” versus “Distant” Departure Profiles

The FAA has identified two departure profile procedures for jet aircraft called “Close-in” and “Distant.” These two procedures result in different levels of noise exposure during departure.

The purpose of Procedure 13 is to determine which would be best in terms of reduction in off-Airport noise exposure in residential areas around Opa Locka Airport.

CONSTRUCTION – RUNWAY AND NOISE BARRIER PROCEDURES

Procedure 14 – Maximize the Use of Runway 12-30 With the Extension of Runway 12-30 to the Southeast

This procedure would increase the length of Runway 12-30 by 1,400 feet (from the existing 6,800 to 8,200 feet) to equal the Airport’s longest existing runway (Runway 9L-27R). Due to physical constraints to the northwest, the extension was assumed to occur at the Runway 30 end.

If the 1,400 foot increase cannot be reasonably accommodated (due to physical constraints southeast of the existing Runway 30 threshold), then an increase by a lesser length would be considered (a sufficient length such that all aircraft using the facility could operate on Runway

12-30). The specific length of the runway extension (if less than 1,400 feet) would be determined prior to conducting the noise analysis.

The analysis associated with the increased length would involve a comparison of Procedure 1 both with and without the extension. Thus, the only differences between Procedure 1 and Procedure 14 would be the Runway 30 threshold location and the change in aircraft fleet mix (if any) due to the increase in length of Runway 12-30.

The purpose of the Runway 30 extension (Procedure 14) would be to enable all aircraft that currently use the Airport (and need greater than 6,800 feet to operate) to be able to use Runway 12-30. Thus, with Procedure 14, the 6,800 foot length would no longer be a limitation to the use of Runway 12-30.

Procedure 15 – Noise Barriers

This procedure would identify the location of potential noise barriers. When barriers are constructed they usually take the form of a concrete wall or an earth berm (mound). These barriers would be in locations close to receivers (residential communities for example) and/or close to the source (aircraft run-up areas, taxiways, beginning of takeoff roll areas for example).

The purpose of Procedure 15 is to determine, through a preliminary review, where the location of a barrier (or barriers) would appear to be beneficial. Detailed barrier analysis would not be accomplished at this time. However, if preliminary analyses indicate sufficient benefits could occur, then further analysis would be performed as a subsequent study.

NAVIGATION AID PROCEDURES

Procedure 16 – Locate a “Buoy in the Lake” West of the Airport

This Procedure would place a buoy in the lake west of the Airport as an additional navigation facility.

The purpose of the buoy would be to direct air carrier aircraft on arrival from the west to pass over the lake rather than over residential areas west of the Airport.

Cumulative Procedure

Following the completion of the noise analysis of Procedures 1 through 16, those Procedures that are shown to be viable will be combined and the noise benefits of the cumulative noise abatement actions would be identified. This will be completed following discussions with the Noise Abatement Task Force, the FAA Tower and Airport management.

USE RESTRICTION PROCEDURES

Procedures 17, 17A, 18, 18A and 19 involve “Use Restrictions” (denying access in full or part of the Airport). Such restrictions cannot be established at the discretion of the MDAD but must involve approval by the FAA through the FAR Part 161 process and possible environmental documentation (EA or EIS) as required by the National Environmental Policy Act. The purpose for considering these “Use Restriction” Procedures at this time is to identify the magnitude of the noise benefits that would be projected to occur should one or more of the restrictions be implemented. Then a decision can be reached as to whether to further pursue such restrictions.

Procedure 17-Ban Stage 2 General Aviation Aircraft Operations (Day and Night)

Procedure 17 would not allow General Aviation aircraft that generate Stage 2 noise levels to operate at the Airport at any time. This would involve certain aircraft below 75,000 pounds in weight (since those above this weight are now required, by law, to meet Stage 3 standards). Typically, this restricts older model general aviation jet aircraft operations.

The purpose of this Procedure 17 restriction is to not allow those aircraft that are the “noisiest” in the fleet to operate at Opa Locka Airport.

As an example, if there were 10 aircraft operations per day at OPF that were Stage 2 jets, then under Procedure 17 these would be removed and there would be 10 less operations per day at the Airport.

Procedure 17A

Procedure 17A is a variation of Procedure 17. The previously described Procedure 17 assumes that operations of any General Aviation aircraft in the fleet mix generating Stage 2 noise levels would be removed from the fleet mix. Procedure 17A also removes the Stage 2 aircraft but replaces them with an equal number of Stage 3 aircraft.

For example, under Procedure 17A if there were 10 operations per day that were Stage 2 jets, they would be replaced with 10 Stage 3 jets and the total number of operations at the Airport would remain the same as the operations with the No-Action condition.

Procedure 18- Ban Stage 2 General Aviation Aircraft Operations (Night Only)

Procedure 18 would limit the ban, described in Procedure 17, for enforcement only during nighttime hours (10:00pm to 7:00am).

The purpose of this Procedure 18 restriction is to not allow those aircraft that are significantly noisier in the fleet to operate at Opa Locka Airport during the hours when noise impacts are most sensitive.

As an example, if there were 5 aircraft operations per night at OPF that were Stage 2 jets, then under Procedure 18 these would be removed and there would be 5 less operations per day at the Airport.

Procedure 18A

Procedure 18A is a variation of Procedure 18. The previously described Procedure 18 assumes that operations of any General Aviation aircraft in the fleet mix generating Stage 2 noise levels would not be allowed to operate at the airport at night and would be removed from the fleet mix. Procedure 18A also removes the Stage 2 aircraft at night but assumes that those occurring at night would now occur during the day.

Under Procedure 18A, if there were 5 aircraft operations at night at OPF that were Stage 2 jets, then these would not occur at night but would operate during the day and the total number of operations at the Airport would remain the same as the operations with the No-Action condition.

Procedure 19 – Establish a Nighttime Curfew (10:00pm to 7:00am)

This procedure would close the airport at night.

The purpose of this Procedure 19 restriction would be to eliminate aircraft activity during the hours when noise impacts are most sensitive.

SECTION 5: NOISE IMPACT EVALUATION

INTRODUCTION

This section presents the results of the evaluation of the 2000 base case condition and each of the 21 noise abatement procedures described in the previous section. The noise analysis of these procedures involved modifying the 2000 Baseline Condition by incorporating the one change proposed by each procedure. Then, the impacts of the procedures were determined by comparing the noise exposure with each procedure to the 2000 Baseline Condition.

For the base case and each procedure, the 65, 70 and 75 DNL noise exposure contours were prepared and placed over a combined aerial photo/land use base sheet. To describe the benefits of each procedure, noise contours with the procedure were prepared and compared with the baseline No Action condition. The resulting noise contour exhibits show the base case condition 65 DNL contour as a dotted line and the procedure in a solid line to visibly indicate the change in noise exposure area.

In addition, tables were prepared that indicate the change in population exposed for each procedure (as compared to the base case condition) and the change in DNL noise exposure at noise sensitive sites resulting from each procedure.

PROCEDURES ANALYSIS

Baseline 2000 Noise Exposure

The baseline 2000 noise exposure represents the condition where conditions at OPF remain the same as it currently is. It assumes that none of the operational procedures, navigation aids, runway lengths or other mitigation measures under evaluation would be implemented. In effect this represents the actual condition that occurred in the year 2000 at OPF.

The baseline noise contours, presented previously on Exhibit 3-6, show that the greatest noise impacts occur to the east and northeast of the Airport where large areas of residential development and two schools (the Florida Memorial College and the Saint Thomas University) are affected. To the northwest, the noise contour extends over mostly industrial and commercial property but within the limits of the Miami Lakes Technological Center. To the south and southwest, the 2000 baseline 65 DNL contour is located on Airport property.

A total of 2,448 persons are located within the 65 DNL of which 59 people, located northeast of the Airport are situated in the 70 DNL contour limits under the baseline condition. This information, together with the total population, minority population, low-income population and households affected are shown on Tables 5-1 through 5-4.

**TABLE 5-1
TOTAL POPULATION WITHIN THE 65 DNL**

	Total Pop Within 65 DNL	Change in Pop Within 65 DNL vs. No Action	Percent Change in Pop Within 65 DNL vs. No Action	Total Pop Within 70 DNL	Change in Pop Within 70 DNL vs. No Action	Percent Change in Pop Within 70 DNL vs. No Action
2000 No Action	2,448	-	-	59	-	-
Procedure 1 - Maximize Use of Runway 12/30 (Day and Night)	812	-1,636	-66.8%	162	+103	+174.6%
Procedure 2 - Maximize Use of Runway 12/30 (Night Only)	570	-1,878	-76.7%	0	-59	-100.0%
Procedure 3 - Maximize Use of Runway 12/30 for Local Flight Training (Day and Night)	2,448	-	-	59	-	-
Procedure 4 – Voluntary Relocation of Training to Opa Locka West Airport (Day and Night)	2,448	-	-	59	-	-
Procedure 5 – Maximize the Use of East Flow	2,661	+213	+8.7%	59	-	-
Procedure 6 – Maximize the Use of West Flow	1,655	-793	-32.4%	59	-	-
Procedure 7 – Close RWY 9L to Arrivals (Day and Night)	2,448	-	-	59	-	-
Procedure 8 – Restrict Use Of Heavy Aircraft to Daytime Hours Only and Runway 12/30 Only	2,348	-100	-4.1%	59	-	-
Procedure 9 – Maximize the Use of Route 9/I-95 Corridors for Easterly Departures (Day and Night)	2,448	-	-	59	-	-
Procedure 10 – Raise Approach Slope to Runways 9L, 27R and 12 (Day and Night)	2,356	-92	-3.8%	59	-	-
Procedure 11 – Increase “Hold Down” Altitude for Easterly Departures (Day and Night)	2,448	-	-	59	-	-
Procedure 12 – Direct West Flow Small Propeller Aircraft Departures Over Red Road	2,448	-	-	59	-	-
Procedure 13c - Close In Noise Abatement Departure Procedure	1,506	-942	-38.5%	59	-	-
Procedure 13d – Distant Noise Abatement Departure Procedure	2,144	-304	-12.4%	59	-	-
Procedure 14 - Maximize Use of Runway 12/30 With Extension of 12/30 to the Southeast	778	-1,670	-68.2%	176	+117	+198.3%
Procedure 16 – Locate a “Buoy in the Lake” to the West of the Airport (9L Arrivals)	2,448	-	-	59	-	-
Procedure 17 – Ban Stage 2 Aircraft (Day and Night)	25	-2,423	-99.0%	0	-59	-100.0%
Procedure 17a – Converted Stage 2 to Similar Size Stage 3 Aircraft (Total Ops Remain the Same)	49	-2,399	-98.0%	0	-59	-100.0%
Procedure 18 – Remove Stage 2 Operations at Night	281	-2,167	-88.5%	0	-59	-100.0%
Procedure 18a – Moved Stage 2 Night Operations to Daytime (Total Ops Remain the Same)	380	-2,068	-84.5%	0	-59	-100.0%
Procedure 19 – Close Airport at Night	151	-2,297	-93.8%	0	-59	-100.0%

**TABLE 5-2
HOUSEHOLDS WITHIN THE 65 DNL**

	Total Households Within 65 DNL	Change in Households Within 65 DNL vs. No Action	Percent Change in Households Within 65 DNL vs. No Action	Total Households Within 70 DNL	Change in Households Within 70 DNL vs. No Action	Percent Change in Households Within 70 DNL vs. No Action
2000 No Action	625	-	-	19	-	-
Procedure 1	275	-350	-56.0%	54	+35	+184.2%
Procedure 2	171	-454	-72.6%	0	-19	-100.0%
Procedure 3	625	-	-	19	-	-
Procedure 4	625	-	-	19	-	-
Procedure 5	675	+50	+8.0%	27	+8	+42.1%
Procedure 6	437	-188	-30.1%	19	-	-
Procedure 7	625	-	-	19	-	-
Procedure 8	599	-26	-4.2%	19	-	-
Procedure 9	625	-	-	19	-	-
Procedure 10	604	-21	-3.4%	19	-	-
Procedure 11	625	-	-	19	-	-
Procedure 12	625	-	-	19	-	-
Procedure 13c	383	-242	-38.7%	19	-	-
Procedure 13d	547	-78	-12.5%	19	-	-
Procedure 14	259	-366	-58.6%	63	+44	+231.6%
Procedure 15	-	-	-	--	-	-
Procedure 16	625	-	-	19	-	-
Procedure 17	7	-618	-98.9%	0	-19	-100.0%
Procedure 17a	11	-614	-98.2%	0	-19	-100.0%
Procedure 18	63	-562	-89.9%	0	-19	-100.0%
Procedure 18a	88	-537	-85.9%	0	-19	-100.0%
Procedure 19	29	-596	-95.4%	0	-19	-100.0%

**TABLE 5-3
MINORITY POPULATION WITHIN THE 65 DNL**

	Total Population Within 65 DNL	Total Minority Population Within 65 DNL	Percent Minority Population within 65 DNL	Total Population Within 70 DNL	Total Minority Population Within 70 DNL	Percent Minority Population within 70 DNL
2000 No Action	2,448	1,990	81.3%	59	34	57.6%
Procedure 1	812	486	59.9%	162	59	36.4%
Procedure 2	570	251	44.0%	0	0	-
Procedure 3	2,448	1,990	81.3%	59	34	57.6%
Procedure 4	2,448	1,990	81.3%	59	34	57.6%
Procedure 5	2,661	2,188	82.2%	86	44	51.2%
Procedure 6	1,655	1,257	76.0%	59	34	57.6%
Procedure 7	2,448	1,990	81.3%	59	34	57.6%
Procedure 8	2,348	1,911	81.4%	59	34	57.6%
Procedure 9	2,448	1,990	81.3%	59	34	57.6%
Procedure 10	2,356	1,914	81.2%	59	34	57.6%
Procedure 11	2,448	1,990	81.3%	59	34	57.6%
Procedure 12	2,448	1,990	81.3%	59	34	57.6%
Procedure 13c	1,506	1,179	78.3%	59	34	57.6%
Procedure 13d	2,144	1,719	80.2%	59	34	57.6%
Procedure 14	778	479	61.5%	176	65	36.9%
Procedure 15	-	-	-	-	-	-
Procedure 16	2,448	1,980	81.5%	59	34	57.6%
Procedure 17	25	13	52.0%	0	0	-
Procedure 17a	49	35	71.4%	0	0	-
Procedure 18	281	178	63.3%	0	0	-
Procedure 18a	380	251	66.1%	0	0	-
Procedure 19	151	99	65.6%	0	0	-

**TABLE 5-4
LOW INCOME HOUSING WITHIN THE 65 DNL**

	Total Households Within 65 DNL	Total Low Income Households Within 65 DNL	Percent Low Income Households Within 65 DNL	Total Households Within 70 DNL	Total Low Income Households Within 70 DNL	Percent Low Income Households Within 70 DNL
2000 No Action	625	174	27.8%	19	4	21.1%
Procedure 1	275	87	31.6%	54	18	33.3%
Procedure 2	171	52	30.3%	0	0	-
Procedure 3	625	174	27.8%	19	4	21.1%
Procedure 4	625	174	27.8%	19	4	21.1%
Procedure 5	675	189	28.0%	19	4	21.1%
Procedure 6	437	118	27.0%	19	4	21.1%
Procedure 7	625	174	27.8%	19	4	21.1%
Procedure 8	599	167	27.8%	19	4	21.1%
Procedure 9	625	174	27.8%	19	4	21.1%
Procedure 10	604	168	27.8%	19	4	21.1%
Procedure 11	625	174	27.8%	19	4	21.1%
Procedure 12	625	174	27.8%	19	4	21.1%
Procedure 13c	383	103	27.0 %	19	4	21.1%
Procedure 13d	547	152	27.8%	19	4	21.1%
Procedure 14	259	88	33.9%	63	21	33.3%
Procedure 15	-	-	-	-	-	-
Procedure 16	625	174	27.8%	19	4	21.1%
Procedure 17	7	2	23.5%	0	0	-
Procedure 17a	11	3	23.5%	0	0	-
Procedure 18	63	15	24.4%	0	0	-
Procedure 18a	88	22	25.5%	0	0	-
Procedure 19	29	7	23.5%	0	0	-

Procedure 1 – Maximize the Use of Runway 12-30 (Day and Night)

This procedure would increase the use of Runway 12-30 at OPF with it being the Airport's preferred runway both during daytime and nighttime hours. This increased use of Runway 12-30 represents the maximum use of the Runway based on wind rose data for the Airport area.

The noise contour results for Procedure 1 are presented on Exhibit 5-1. Noise contours to the east and northeast of the Airport have reduced in size and are within the limits of the Airport property. To the northwest, the 65 DNL noise contour extends into a multi-family residential area west of NW 57th Avenue with the 70 DNL contour extending into the southeast limits of the Miami Lakes Technological Center property. To the southeast the 65 DNL noise contour has extended off the OPF property and covers predominately industrial land but within some multifamily residential locations. In addition, the 70 DNL extends partially over a multi-family residential complex located immediately south of NW 135th Street.

Due primarily to the reduction of the 65 DNL north and east of OPF, the total population within the 65 DNL has reduced from the baseline condition by 67 percent (from 2,884 people to 812) with corresponding reductions to minority and low-income population and households. However, due to the extension of the DNL 70 noise contour to the southeast, an increase of approximately 100 people occur within the 70 DNL contour. As presented in Table 5-5, Procedure 1 would result in an average reduction of approximately 7 dB at 26 noise sensitive sites and an average increase of approximately 2 dB at 14 sites when compared to the No-Action condition. It should be noted that Table 5-5 includes only those Procedures where an increase or decrease of greater than 1 dB at any noise sensitive would occur compared to the No-Action condition.

Procedure 2 – Maximize the Use of Runway 12-30 (Night Only)

This procedure would establish Runway 12-30 as the preferred Runway at the Airport during nighttime hours (10:00pm to 7:00am). In effect, with Procedure 2, the Airport would operate the same as the baseline conditions during the daytime hours (7:00am to 10:00pm) but would operate the same as Procedure 1 at night.

The purpose of Procedure 2 is to allow the maximum use of the parallel Runway 9-27 system during the day while still incorporating the noise benefits of the use of Runway 12-30 at night.

The noise contour results for Procedure 2 are presented on Exhibit 5-2. Noise contours to the east and northeast of the Airport have reduced in size and are predominately within the limits of the Airport property or over compatible land use. There remains, however, approximately 40 homes located immediately north of the Airport within the 65 DNL noise contour. To the northwest, the 65 DNL noise contour extends slightly into a multi-family residential area west of NW 57th Avenue. To the southeast the 65 DNL noise contour extends off the OPF property and covers predominately industrial land but affects

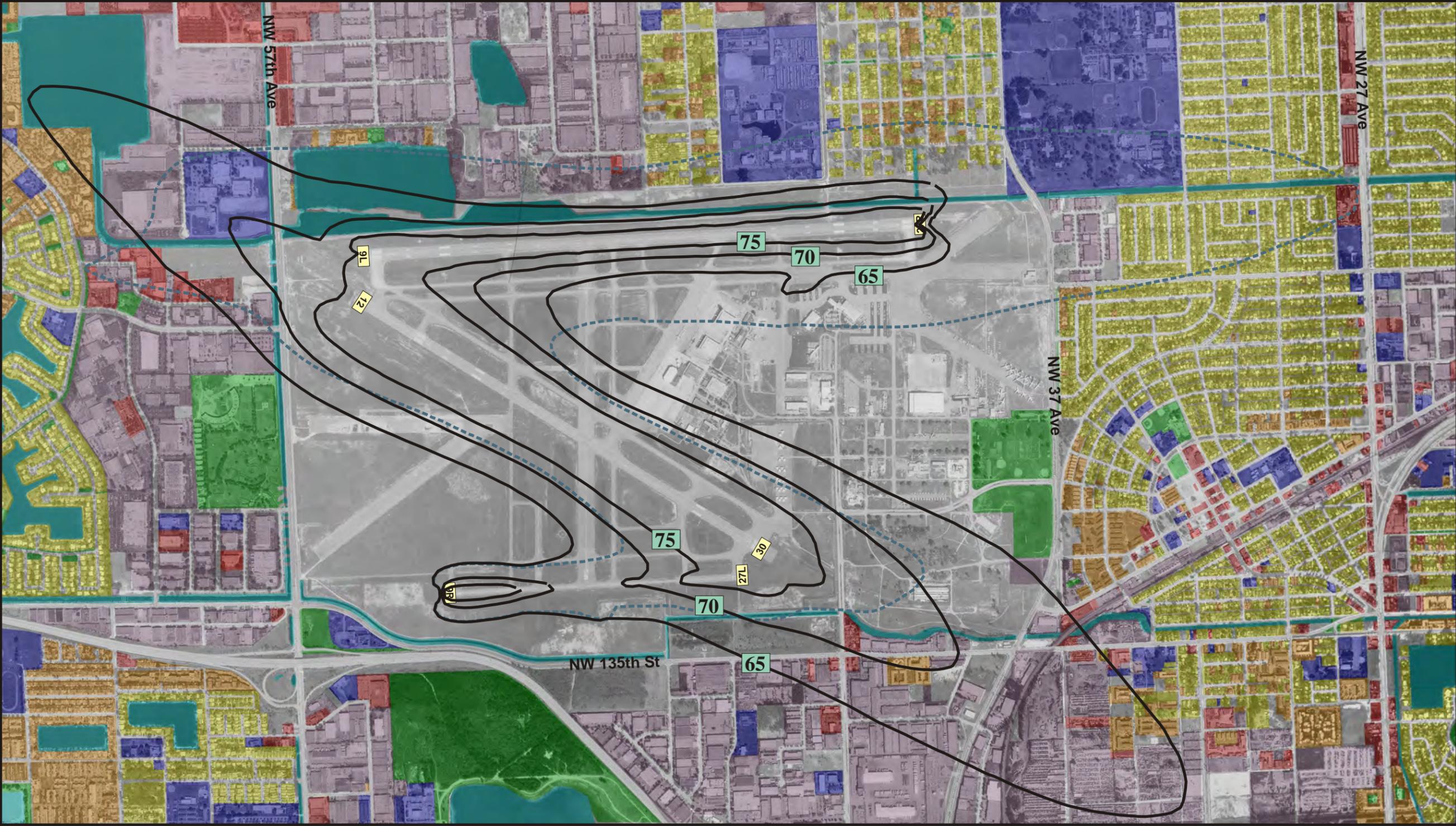
**TABLE 5-5
DNL VALUES AT REPRESENTATIVE NOISE SENSITIVE SITES**

Sensitive Site ID	No Action	Procedure 1	Change vs. No Action	Procedure 2	Change vs. No Action	Procedure 6	Change vs. No Action	Procedure 7	Change vs. No Action	Procedure 13C	Change vs. No Action	Procedure 13D	Change vs. No Action
3	67.1	68.2	1.1	67.8	0.7	68.5	1.4	67.4	0.3	66.8	-0.3	67.1	<0.2
19	66.9	58.5	-8.4	63.0	-3.9	66.7	<0.2	66.9	<0.2	66.9	<0.2	66.9	<0.2
30	66.2	55.9	-10.3	61.8	-4.4	65.1	-1.1	66.2	<0.2	64.9	-1.3	66.3	<0.2
72	65.6	62.2	-3.4	63.9	-1.7	66.1	0.5	62.9	-2.7	65.0	-0.6	65.8	<0.2
41	62.7	54.1	-8.6	58.6	-4.1	61.9	-0.8	62.7	<0.2	62.2	-0.5	60.5	-2.2
40	62.4	54.1	-8.3	58.4	-4.0	61.5	-0.9	62.4	<0.2	61.9	-0.5	60.2	-2.2
35	62.2	54.3	-7.9	58.2	-4.0	61.1	-1.1	62.2	<0.2	61.2	-1.0	59.8	-2.4
42	62.0	53.3	-8.7	58.1	-3.9	61.3	-0.7	62.0	<0.2	62.0	<0.2	60.5	-1.5
80	62.0	53.8	-8.2	58.1	-3.9	61.2	-0.8	62.0	<0.2	61.8	<0.2	60.1	-1.9
93	62.0	52.7	-9.3	57.9	-4.1	61.2	-0.8	62.0	<0.2	61.9	<0.2	60.3	-1.7
4	61.7	62.2	0.5	62.0	0.3	63.1	1.4	61.7	<0.2	60.5	-1.2	61.5	-0.2
38	61.4	52.1	-9.3	57.4	-4.0	60.6	-0.8	61.4	<0.2	61.5	<0.2	59.8	-1.6
56	61.4	53.5	-7.9	57.6	-3.8	60.6	-0.8	61.4	<0.2	61.5	<0.2	59.8	-1.6
2	61.2	57.6	-3.6	59.2	-2.0	62.4	1.2	60.4	-0.8	60.1	-1.1	61.2	<0.2
15	61.1	53.4	-7.7	57.6	-3.5	60.9	-0.2	61.0	<0.2	61.1	<0.2	61.1	<0.2
73	61.1	63.5	2.4	62.8	1.7	62.6	1.5	62.0	0.9	60.0	-1.1	60.5	-0.6
88	60.7	62.8	2.1	62.3	1.6	61.4	0.7	60.7	<0.2	60.7	<0.2	60.8	0.1
46	60.5	52.5	-8.0	56.8	-3.7	59.8	-0.7	60.5	<0.2	60.9	0.4	59.4	-1.1
6	60.5	63.1	2.6	62.4	1.9	62.0	1.5	61.6	1.1	59.5	-1.0	59.4	-1.1
89	60.5	64.1	3.6	63.1	2.6	61.8	1.3	62.4	1.9	59.6	-0.9	59.4	-1.1
43	60.4	51.7	-8.7	56.5	-3.9	59.6	-0.8	60.4	<0.2	60.8	0.4	59.2	-1.2
44	60.4	51.6	-8.8	56.5	-3.9	59.6	-0.8	60.4	<0.2	60.8	0.4	59.2	-1.2
54	60.4	52.9	-7.5	56.7	-3.7	59.7	-0.7	60.4	<0.2	60.8	0.4	59.2	-1.2
7	60.4	56.8	-3.6	58.3	-2.1	61.1	0.7	60.4	<0.2	60.4	<0.2	60.4	<0.2
37	60.3	51.1	-9.2	56.3	-4.0	59.4	-0.9	60.3	<0.2	60.5	<0.2	58.8	-1.5
57	60.3	53.2	-7.1	56.7	-3.6	59.5	-0.8	60.3	<0.2	60.6	0.3	59.0	-1.3
87	60.3	51.1	-9.2	56.3	-4.0	59.4	-0.9	60.3	<0.2	60.5	<0.2	58.8	-1.5
63	60.1	62.7	2.6	62.3	2.2	59.0	-1.1	60.1	<0.2	58.9	-1.2	60.3	<0.2
74	60.1	58.5	-1.6	59.1	-1.0	61.4	1.3	60.2	<0.2	59.8	-0.3	60.2	<0.2
55	60.0	53.4	-6.6	56.5	-3.5	59.1	-0.9	60.0	<0.2	60.2	<0.2	58.4	-1.6
86	59.9	62.5	2.6	62.1	2.2	58.7	-1.2	59.9	<0.2	58.7	-1.2	60.0	<0.2
64	59.8	63.7	3.9	63.0	3.2	58.7	-1.1	59.8	<0.2	58.5	-1.3	59.9	<0.2
81	59.8	52.8	-7.0	56.3	-3.5	59.1	-0.7	59.8	<0.2	60.3	0.5	58.7	-1.1
82	59.8	51.9	-7.9	56.1	-3.7	59.2	-0.6	59.8	<0.2	60.3	0.5	58.9	-0.9
5	59.3	60.1	0.8	59.8	0.5	60.8	1.5	59.5	<0.2	58.3	-1.0	57.5	-1.8
65	59.3	62.8	3.5	62.2	2.9	58.2	-1.1	59.3	<0.2	58.2	-1.1	59.4	<0.2
75	59.2	59.2	<0.2	59.1	<0.2	60.8	1.6	59.3	<0.2	57.9	-1.3	59.1	<0.2
9	59.2	57.7	-1.5	58.2	-1.0	60.5	1.3	59.2	<0.2	58.7	-0.5	59.2	<0.2
84	58.8	61.7	2.9	61.2	2.4	57.6	-1.2	58.8	<0.2	57.7	-1.1	57.8	-1.0
85	57.9	65.1	7.2	63.9	6.0	57.2	-0.7	57.9	<0.2	56.8	-1.1	57.8	<0.2

**TABLE 5-5 (cont.)
DNL VALUES AT REPRESENTATIVE NOISE SENSITIVE SITES**

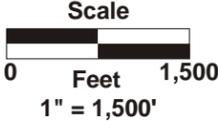
Sensitive Site ID	Procedure 14	Change vs. No Action	Procedure 17	Change vs. No Action	Procedure 17A	Change vs. No Action	Procedure 18	Change vs. No Action	Procedure 18A	Change vs. No Action	Procedure 19	Change vs. No Action
3	66.8	-0.3	59.9	-7.2	60.6	-6.5	63.6	-3.5	64.1	-3.0	62.4	-4.7
19	58.5	-8.4	60.9	-6.0	61.6	-5.3	63.8	-3.1	64.2	-2.7	62.4	-4.5
30	55.9	-10.3	59.4	-6.8	60.1	-6.1	62.9	-3.3	63.3	-2.9	61.7	-4.5
72	61.9	-3.7	60.9	-4.7	61.3	-4.3	63.3	-2.3	63.6	-2.0	61.7	-3.9
41	54.1	-8.6	56.6	-6.1	57.1	-5.6	59.6	-3.1	60.1	-2.6	58.1	-4.6
40	54.1	-8.3	56.4	-6.0	56.9	-5.5	59.4	-3.0	59.8	-2.6	57.8	-4.6
35	54.3	-7.9	56.0	-6.2	56.6	-5.6	59	-3.2	59.4	-2.8	57.4	-4.8
42	53.3	-8.7	56.5	-5.5	56.9	-5.1	59.2	-2.8	59.6	-2.4	57.7	-4.3
80	53.9	-8.1	56.3	-5.7	56.7	-5.3	59.1	-2.9	59.5	-2.5	57.5	-4.5
93	52.7	-9.3	56.2	-5.8	56.7	-5.3	59.1	-2.9	59.5	-2.5	57.7	-4.3
4	61.5	-0.2	55.1	-6.6	55.8	-5.9	58.4	-3.3	58.9	-2.8	57.1	-4.6
38	52.2	-9.2	55.7	-5.7	56.1	-5.3	58.6	-2.8	58.9	-2.5	57.1	-4.3
56	53.6	-7.8	56.0	-5.4	56.4	-5.0	58.6	-2.8	59	-2.4	56.9	-4.5
2	57.7	-3.5	55.8	-5.4	56.3	-4.9	58.3	-2.9	58.7	-2.5	56.7	-4.5
15	53.5	-7.6	56.2	-4.9	56.8	-4.3	58.3	-2.8	58.7	-2.4	56.9	-4.2
73	62.7	1.6	54.7	-6.4	55.3	-5.8	57.9	-3.2	58.4	-2.7	56.6	-4.5
88	63.1	2.4	55.4	-5.3	56	-4.7	57.8	-2.9	58.2	-2.5	56.1	-4.6
46	52.6	-7.9	55.4	-5.1	55.8	-4.7	57.9	-2.6	58.2	-2.3	56.2	-4.3
6	62.3	1.8	54.2	-6.3	54.8	-5.7	57.4	-3.1	57.8	-2.7	56.1	-4.4
89	63.4	2.9	54.6	-5.9	55.2	-5.3	57.6	-2.9	58	-2.5	56.1	-4.4
43	51.8	-8.6	55.1	-5.3	55.5	-4.9	57.7	-2.7	58.1	-2.3	56.1	-4.3
44	51.7	-8.7	55.1	-5.3	55.5	-4.9	57.7	-2.7	58	-2.4	56.1	-4.3
54	52.9	-7.5	55.3	-5.1	55.7	-4.7	57.8	-2.6	58.1	-2.3	56.1	-4.3
7	57.1	-3.3	55.1	-5.3	55.7	-4.7	57.5	-2.9	57.9	-2.5	56	-4.4
37	51.2	-9.1	54.6	-5.7	55.1	-5.2	57.5	-2.8	57.9	-2.4	56	-4.3
57	53.3	-7.0	55.3	-5.0	55.6	-4.7	57.6	-2.7	58	-2.3	55.8	-4.5
87	51.2	-9.1	54.6	-5.7	55.1	-5.2	57.5	-2.8	57.9	-2.4	56	-4.3
63	62.7	2.6	53.6	-6.5	54.2	-5.9	56.7	-3.4	57.2	-2.9	55.3	-4.8
74	58.5	-1.6	54.1	-6.0	54.8	-5.3	57	-3.1	57.4	-2.7	55.6	-4.5
55	53.4	-6.6	55.0	-5.0	55.4	-4.6	57.3	-2.7	57.7	-2.3	55.4	-4.6
86	62.5	2.6	53.3	-6.6	53.9	-6.0	56.5	-3.4	57	-2.9	55.1	-4.8
64	63.7	3.9	53.4	-6.4	54	-5.8	56.4	-3.4	56.9	-2.9	55.1	-4.7
81	52.9	-6.9	54.9	-4.9	55.3	-4.5	57.3	-2.5	57.6	-2.2	55.4	-4.4
82	51.9	-7.9	54.8	-5.0	55.2	-4.6	57.2	-2.6	57.6	-2.2	55.5	-4.3
5	59.4	<0.2	52.9	-6.4	53.5	-5.8	56.1	-3.2	56.6	-2.7	54.8	-4.5
65	62.8	3.5	52.9	-6.4	53.5	-5.8	56	-3.3	56.4	-2.9	54.6	-4.7
75	58.7	-0.5	52.8	-6.4	53.4	-5.8	55.9	-3.3	56.4	-2.8	54.6	-4.6
9	57.7	-1.5	53.4	-5.8	54	-5.2	56.1	-3.1	56.5	-2.7	54.8	-4.4
84	61.7	2.9	52.3	-6.5	52.9	-5.9	55.4	-3.4	55.9	-2.9	53.9	-4.9
85	65.1	7.2	52.6	-5.3	53	-4.9	55	-2.9	55.4	-2.5	53.7	-4.2

Procedure 1 - Maximize Use of Runway 12/30 (Day and Night)

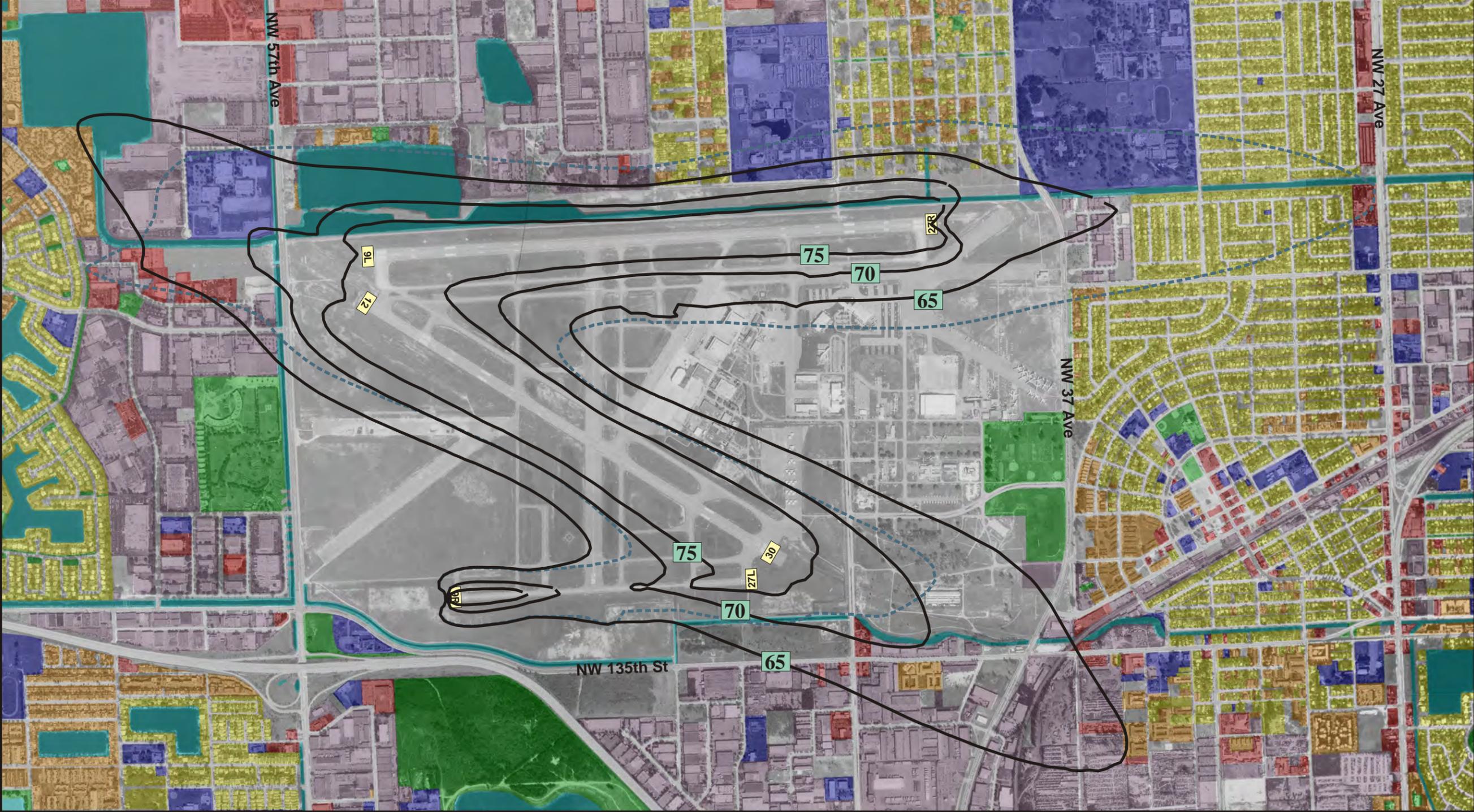


- Agriculture
- Commercial
- Single Family Residential
- Park / Cemetery
- Industrial
- Multi Family Residential
- Water
- Institutional

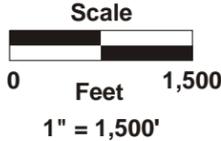
- DNL Noise Contours
- No Action 65 DNL Noise Contour



Procedure 2 - Maximize the Use of Runway 12/30 (Night Only)



- Agriculture
- Commercial
- Single Family Residential
- DNL Noise Contours
- Park / Cemetery
- Industrial
- Multi Family Residential
- No Action 65 DNL Noise Contour
- Water
- Institutional



some multifamily residential locations. With Procedure 2, the 70 DNL is maintained totally within the Airport property limits or over compatible land uses.

Due primarily to the reduction of the 65 DNL north and east of OPF, the total population within the 65 DNL has reduced from the baseline condition by 77 percent (from 2884 people to 570) with corresponding reductions to minority and low-income population and households. In addition, with Procedure 2, the population within the DNL 70 noise contour has reduced to zero (from 59 to 0).

As presented in Table 5-5, Procedure 2 would result in an average reduction of approximately 4 dB at 26 noise sensitive sites and an average increase of approximately 2 dB at 14 sites when compared to the No-Action condition.

Procedure 3 – Maximize the Use of Runway 12-30 for Local Flight Training Activity (Day and Night)

This procedure would relocate local flight training patterns at the Airport to Runway 12-30 (to the greatest extent possible considering winds and air traffic conditions).

The results of the analysis for Procedure 3 indicate that the noise contours result in virtually no change in the 65 DNL or greater noise contours off airport property when compared with the baseline condition. See Exhibit 5-3. This is primarily due to the substantially lower noise levels of individual training aircraft (mostly single and twin engine piston aircraft) when compared to the itinerant jet and heavier prop operations at the Airport.

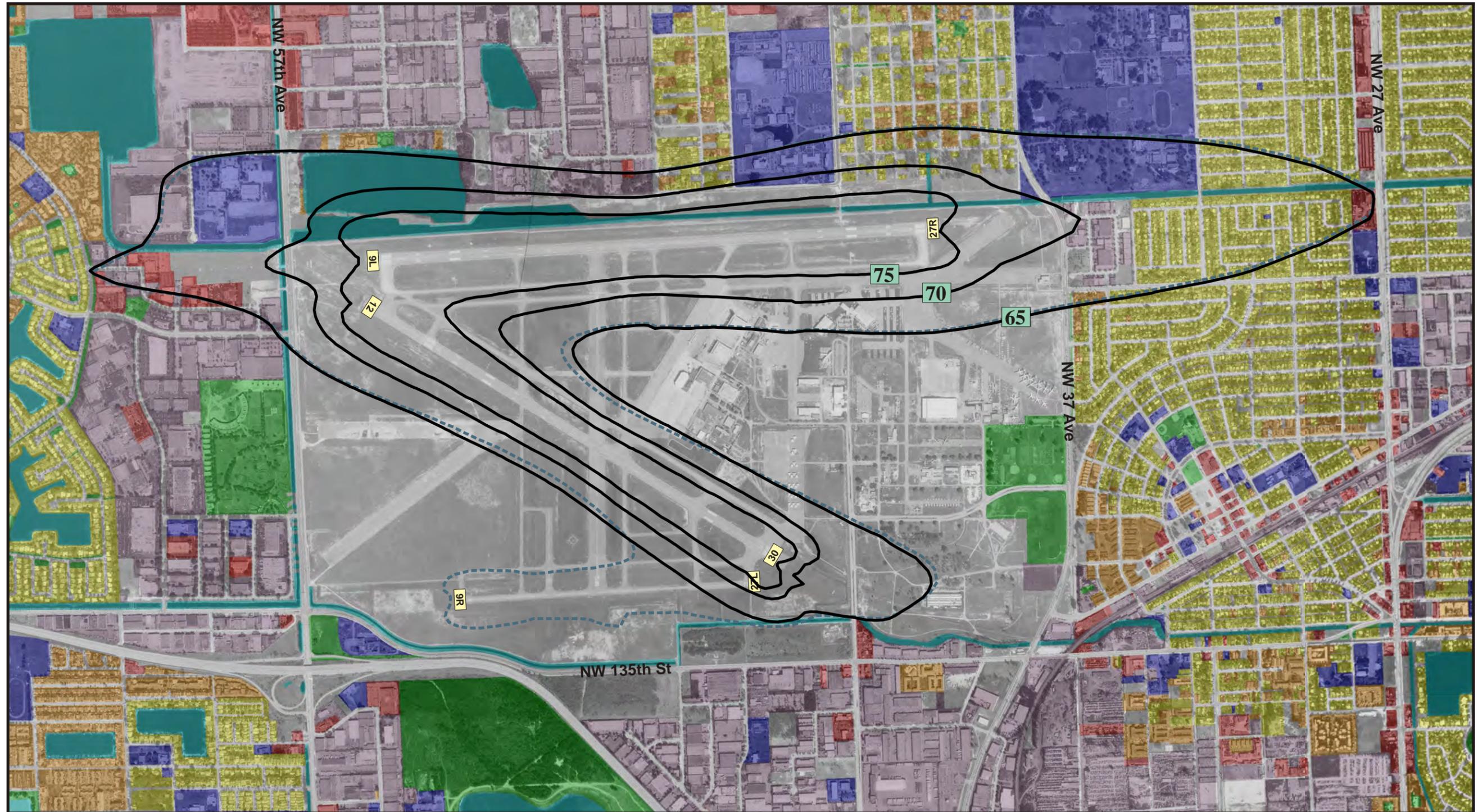
Although there would be virtually no change in the DNL values, this procedure would reduce the single event noise in most residential areas by locating flight patterns over predominately compatible land uses.

It should be noted however, from an air space perspective, Procedure 3 would likely only be able to be implemented when Runway 12-30 is used as the predominate runway during training hours (daytime hours). This limitation is due to the aircraft crossings that would occur if Runway 9L-27R was used for itinerant operations at the same time Runway 12-30 is used for local training activity.

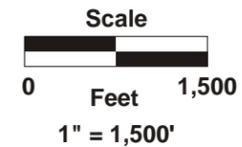
Procedure 4 – Voluntary Relocation of Flight Training Activity to Opa Locka West Airport (Day and Night).

This procedure would relocate all local flight training to Opa Locka West Airport. Under this procedure, the based aircraft used for training would depart Opa Locka Airport, conduct their training activities at Opa Locka West Airport and then return to Opa Locka Airport.

Procedure 3 - Maximize Use of Runway 12/30 for Local Flight Training (Day and Night)



- | | | | |
|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



Miami Dade Aviation Department

Exhibit 5-3

The results of the analysis for Procedure 4 shown on Exhibit 5-4 indicate that the noise contours result in virtually no change in the 65 DNL or greater noise contours off airport property when compared with the baseline condition. This is primarily due to the substantially lower noise levels of individual training aircraft (mostly single and twin engine piston aircraft) and when relocated to Opa Locka West these aircraft would not reduce the overall noise exposure at OPF.

It should be noted that although the cumulative noise levels would not be reduced, the removal of overflights of mainly single and twin engine aircraft would reduce the impact of overflight training activity and associated noise levels along the aircraft training patterns.

Procedure 5 – Maximize Use of East Flow

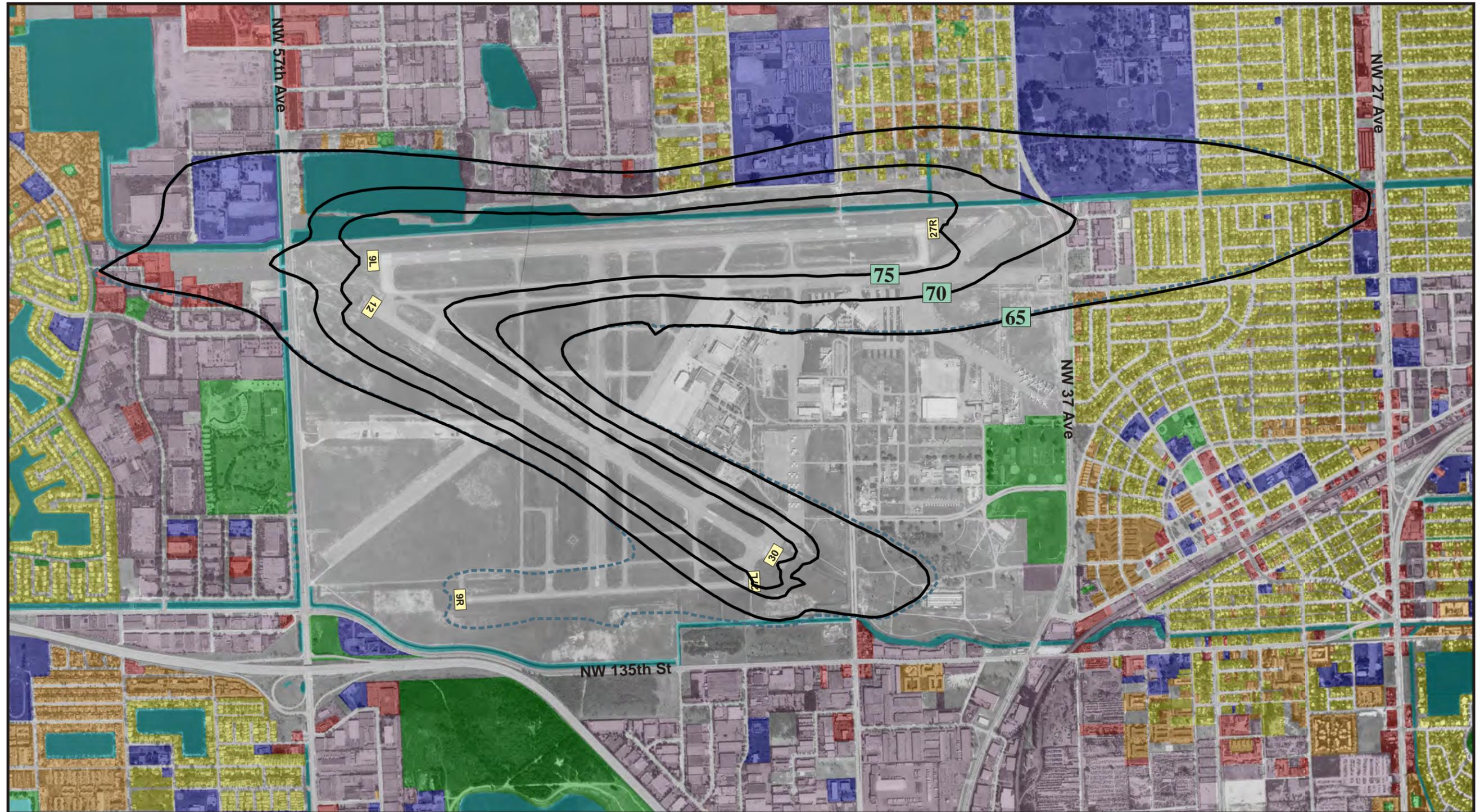
Procedures 5 and 6 involve maximizing the aircraft flow either to the west or to the east at the Airport. The extent to which a direction of flow can be maximized is directly related to the direction and speed of the winds. A wind rose, which is a historical presentation of the distribution of wind speeds and directions at the Airport, is used for the analysis. From the wind rose, the percentage of time aircraft must be in east flow (due to winds occurring from the east) or west flow (due to winds occurring from the west) is determined. Also there are times when the winds are considered calm meaning that from a wind standpoint aircraft flow could be in either direction. Thus, the percentage of time in east flow with Procedure 5 would be the time that east flow must occur due to winds plus the calm time when aircraft could operate in any direction. For Procedure 6 it would be the percentage of time that west flow must occur due to winds plus the calm time.

Procedure 5 would maximize east flow at the Airport and was analyzed to determine if an east flow condition would reduce noise exposure in residential areas. Exhibit 5-5 shows that with Procedure 5, the 65 DNL noise contour would expand to the east due to the increase in departure activity. This increase would occur over densely populated areas and as a result would increase the number of people located in the 65 DNL contour. Table 5-1 indicates that this increase would be about 213 persons or an increase of about nine (9) percent when compared to the baseline condition.

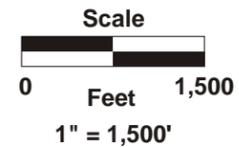
Procedure 6 – Maximize the Use of West Flow

Procedure 6 would maximize west flow at the Airport and was analyzed to determine if a west flow condition would reduce noise exposure in residential areas. Exhibit 5-6 shows that with Procedure 6, the 65 DNL noise contour would increase noise exposure to the west and reduce it to the east due to the increase in westerly departure activity. This increase would occur over a combination of compatible and incompatible land uses and would result in a reduction in the number of people located in the 65 DNL contour.

Procedure 4 - Voluntary Relocation of Flight Training Activity to Opa Locka West Airport (Day and Night)



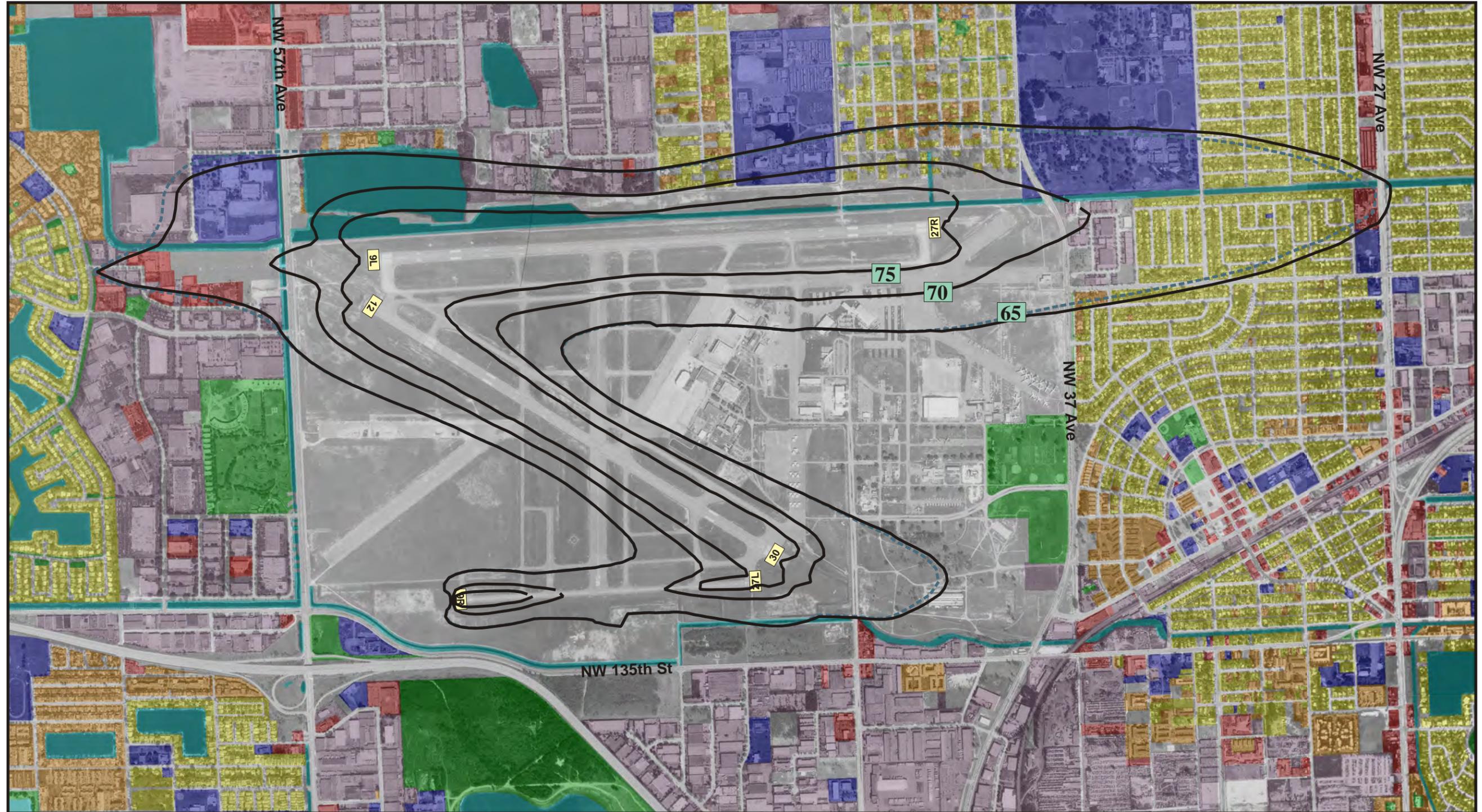
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|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



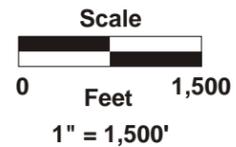
Miami Dade Aviation Department

Exhibit 5-4

Procedure 5 - Maximize the Use of East Flow



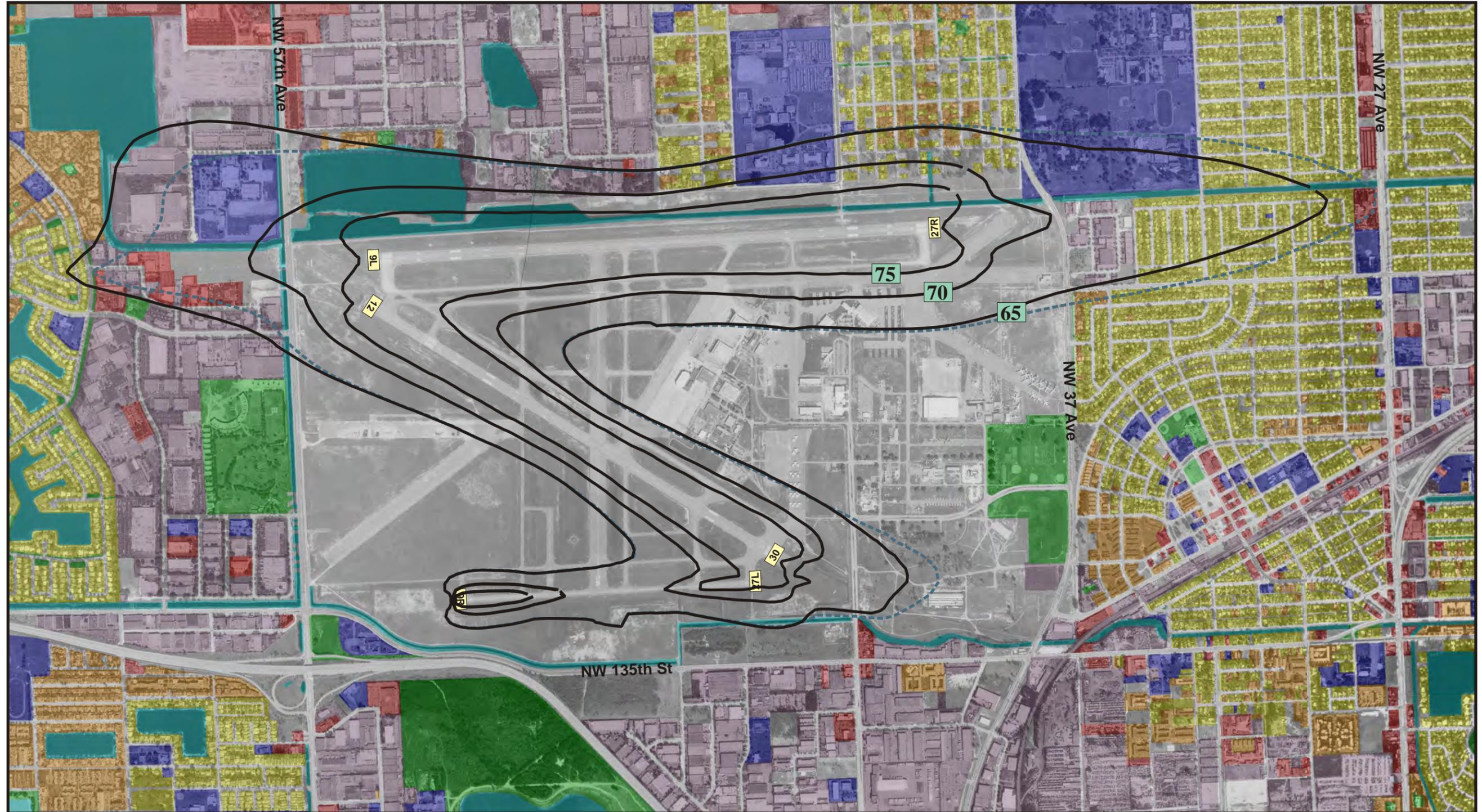
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|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



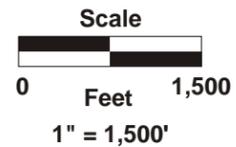
Miami Dade Aviation Department

Exhibit 5-5

Procedure 6 - Maximize the Use of West Flow



- | | | | |
|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



Miami Dade Aviation Department

Exhibit 5-6

Table 5-1 indicates that this reduction would be almost 800 persons or a decrease of about 32 percent when compared to the baseline condition.

Although there would be a decrease in total population exposed, it should be recognized that the shifting of east flow to west flow would substantially result in a shifting of noise from one noise sensitive area to another. The effect on noise sensitive sites is presented in Table 5-5. The change in noise exposure is typically 1 dB or less at virtually all sites

Procedure 7 – Close Runway 9L to Arrivals (24 Hours a Day)

This procedure would close Runway 9L to arrivals during both daytime and nighttime hours except for emergency conditions. This procedure would virtually eliminate arrivals west of the Airport and thus avoid overflights of arriving aircraft over residential areas west of the Airport.

With this procedure arrivals to Runway 9L would be relocated to Runway 12. The evaluation of noise contours indicates that this change would not change the current number of people located within the 65 DNL contour. See Exhibit 5-7. It would however, virtually eliminate arrivals over residential areas due west of the Airport.

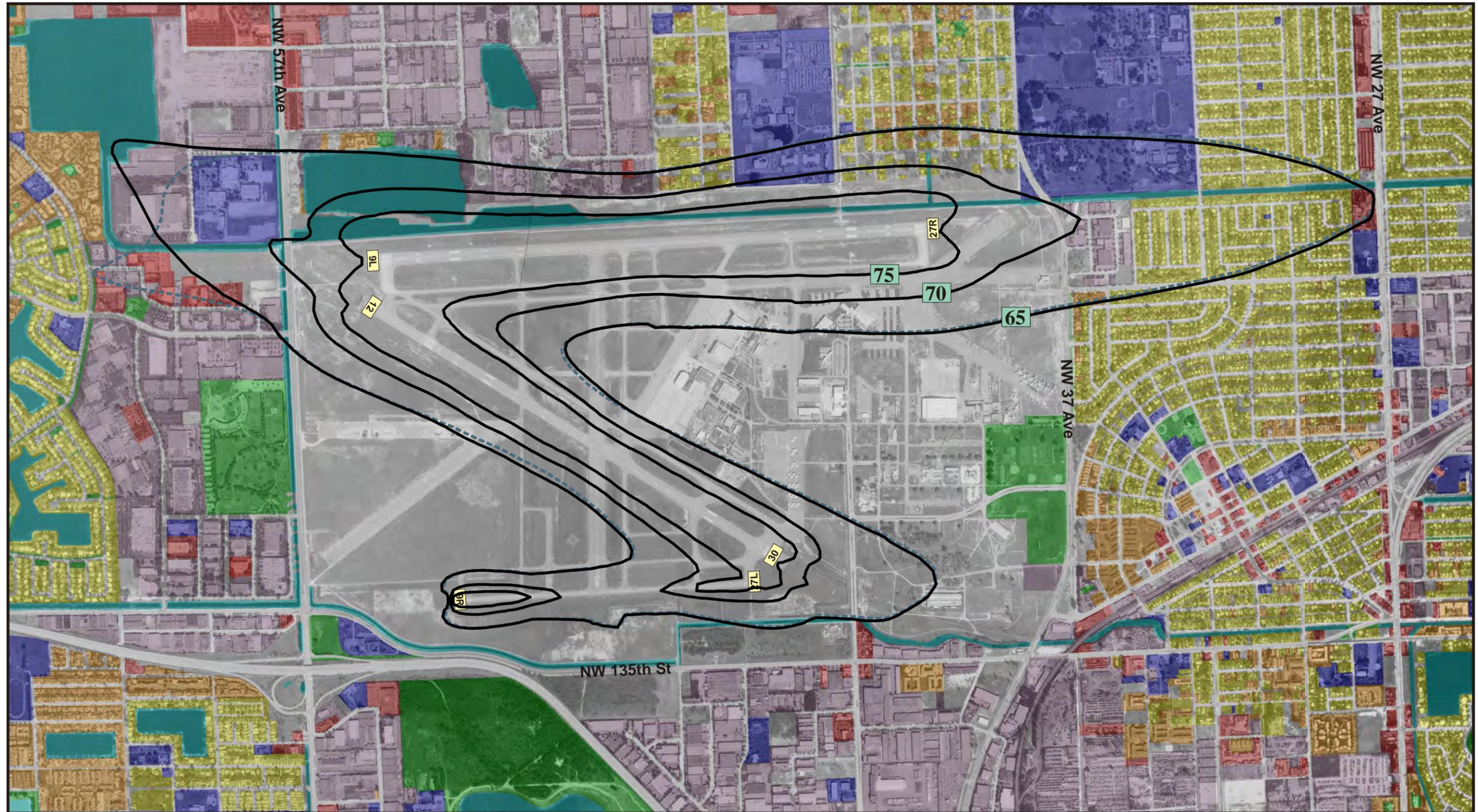
Procedure 8 – Restrict the Use of Heavy Aircraft to Daytime Hours Only and Only on Runway 12-30

Procedure 8 would involve a voluntary restriction of heavy aircraft use at the Airport to daytime (7:00am to 10:00pm) hours only. In addition this voluntary procedure would limit the arrivals and departures of heavy aircraft to Runway 12-30 only.

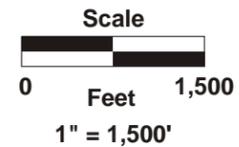
As presented in Exhibit 5-8, this procedure would provide a slight reduction in noise exposure east of the Airport with the population within the 65 DNL contour reducing by about 100 people (2,448 to 2,348). The 65 DNL contour off Runway 12-30 with this procedure increases slightly but does not extend to residential or other noise sensitive areas. To the west, the 65 DNL contour remains in virtually the same location as with the No-Action as the effect of the arrival on Runway 12-30 would be virtually the same west of and close-in to the airport.

This procedure is considered a use restriction and would need to be approved through a FAR Part 161 process. In addition, if pursued through the use of a Part 161 study, this option would need to establish a noise level maximum rather than a weight limitation for limiting the use of certain aircraft from the Airport for noise purposes.

Procedure 7 - Close Runway 9L to Arrivals (24 Hours a Day)



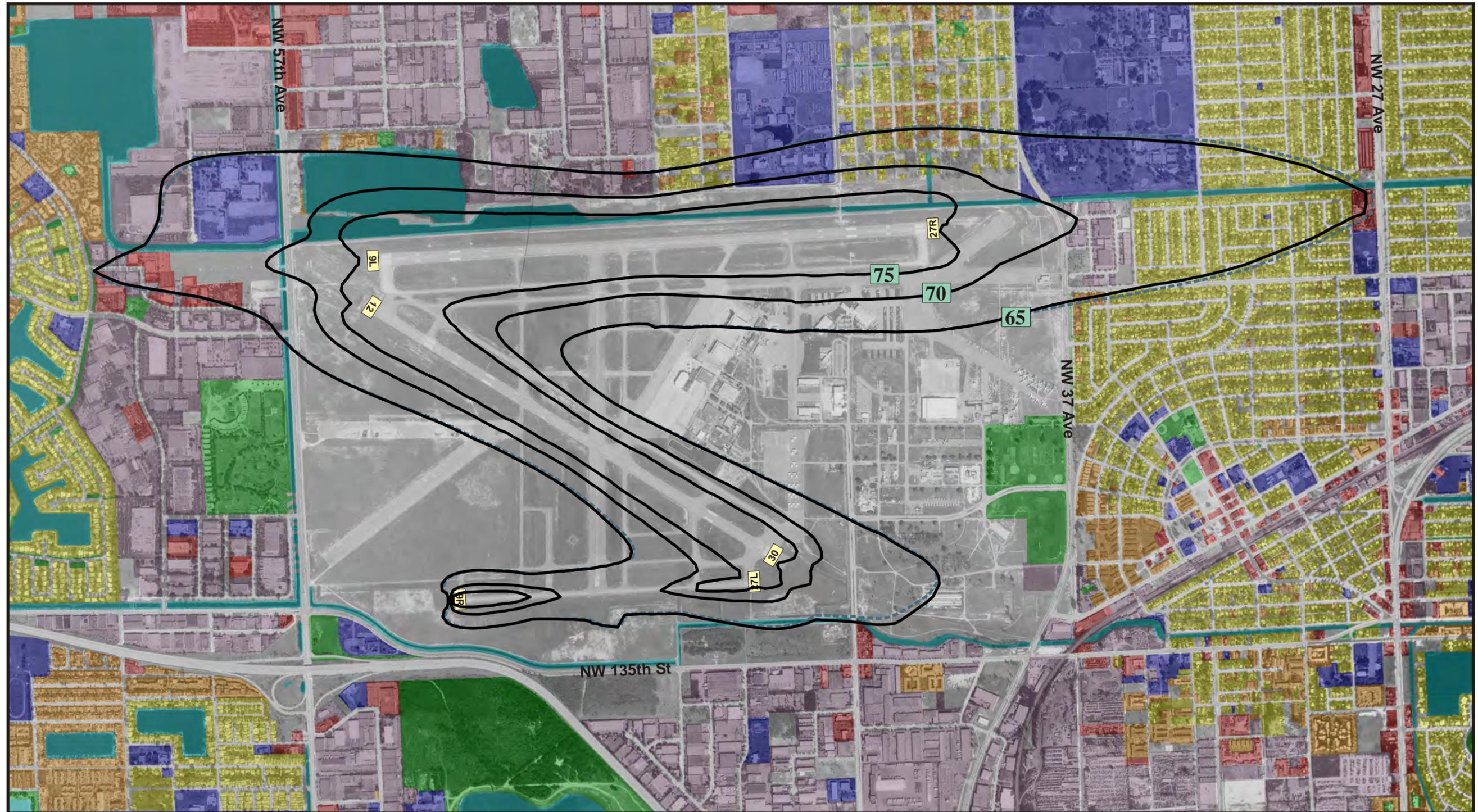
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|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



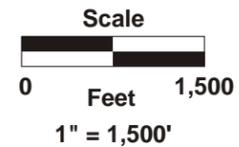
Miami Dade Aviation Department

Exhibit 5-7

Procedure 8 - Restrict the Use of Heavy Aircraft to Daytime Hours Only and Only on Runway 12/30



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|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



Miami Dade Aviation Department

Exhibit 5-8

Procedure 9 - Maximize Use of Route 9/I-95 Corridors for Easterly Departures (Day and Night)

This procedure would direct Runway 9 aircraft departures (those destined for northerly departure track turns) to turn over Route 9/I-95 corridors. Since this procedure occurs beyond the limits of the 65 DNL contour, no changes in population would occur within this contour. See Exhibit 5-9. However, Procedure 9 would place departing aircraft, to the greatest extent, over areas of compatible land use and relatively high noise background levels (resulting from the highway corridor) which would be a benefit to those living east of the Airport.

Procedure 10 – Raise Approach Slope to Runways 9L, 27R and 12 (Day and Night)

With this procedure, the current three (3) degree ILS approaches to Runways 9L, 27R and 12 would be increased to four (4) degrees.

The analysis indicates that this Procedure would reduce the population within the 65 DNL contour by about 92 people. As presented on Exhibit 5-10, these individuals would be located east of the Airport but the procedure would raise the altitude of aircraft over all areas affected by approaches to these runways.

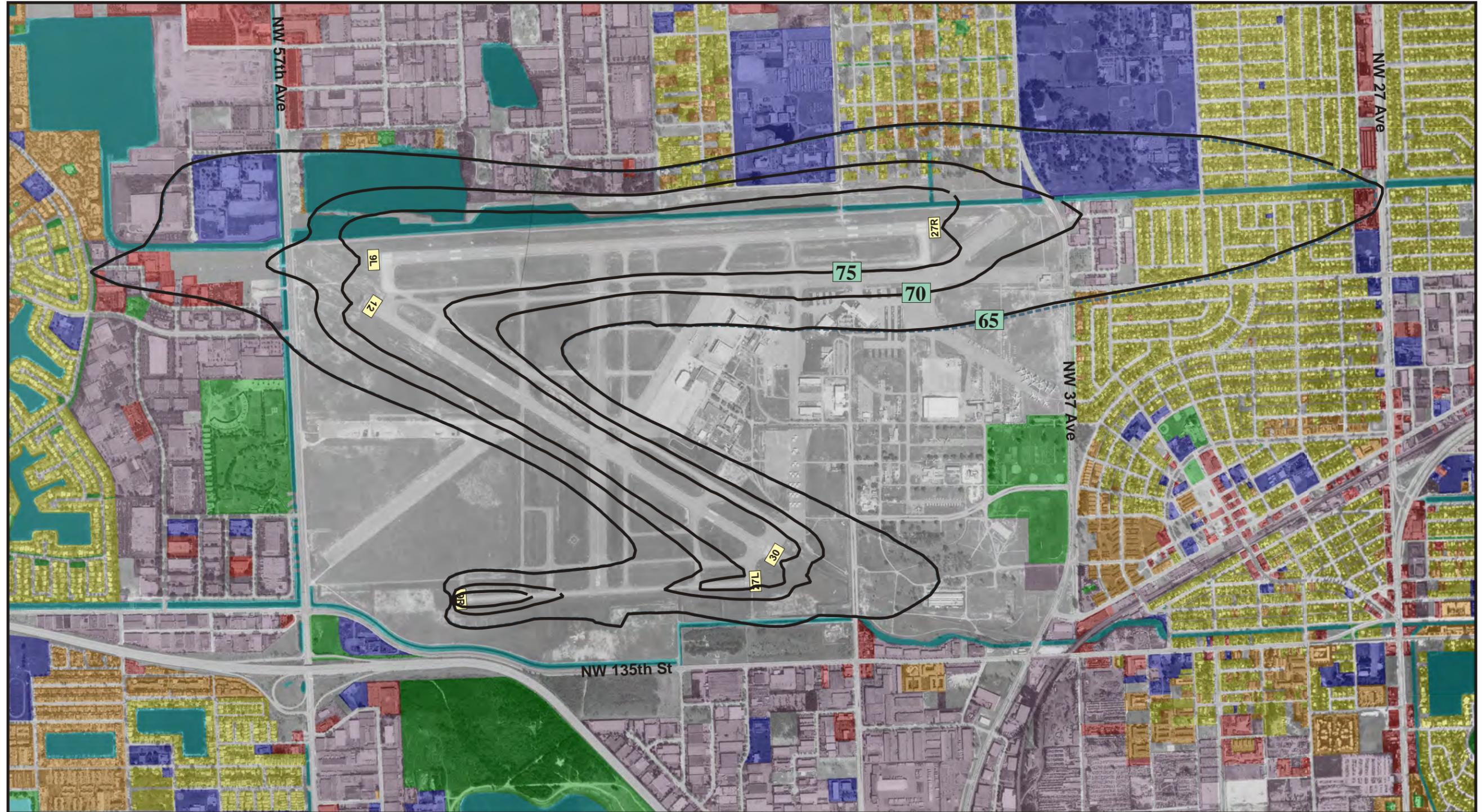
Procedure 11– Removal of the 2,000 Foot Altitude “Hold Down” (or Increase in the “Hold-Down” Altitude) for Easterly Departures (Day and Night)

Currently aircraft departing to the east climb to an altitude of 2,000 feet and then are required to maintain that altitude until cleared to continue their climb. If this “hold down” procedure could be modified to continue aircraft climbs to 2,500 or 3,000 feet, it would increase the departure altitude over residential areas near the Airport. Since most aircraft are below the 2,000 foot altitude within the extent of the 65 DNL contour, no change in population would result. See Exhibit 5-11. However, the change would benefit those located beyond the limits of the contour if the separation requirements with Miami International Airport’s traffic can be modified.

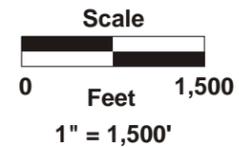
Procedure 12 – Direct West Flow Small Propeller Aircraft Departures Red Road

This procedure would be similar to Procedure 9 in that the benefit of the procedure would occur beyond the limits of the 65 DNL contour and no reduction in population within this limit would occur. See Exhibit 5-12. However, by directing small propeller aircraft to fly north or south over Red Road after departing to the west would place small propeller aircraft over an area with a higher noise background and reduce the flyovers of residential property.

Procedure 9 - Maximize the Use of Route 9/I-95 Corridors for Eastetly Departures (Day and Night)



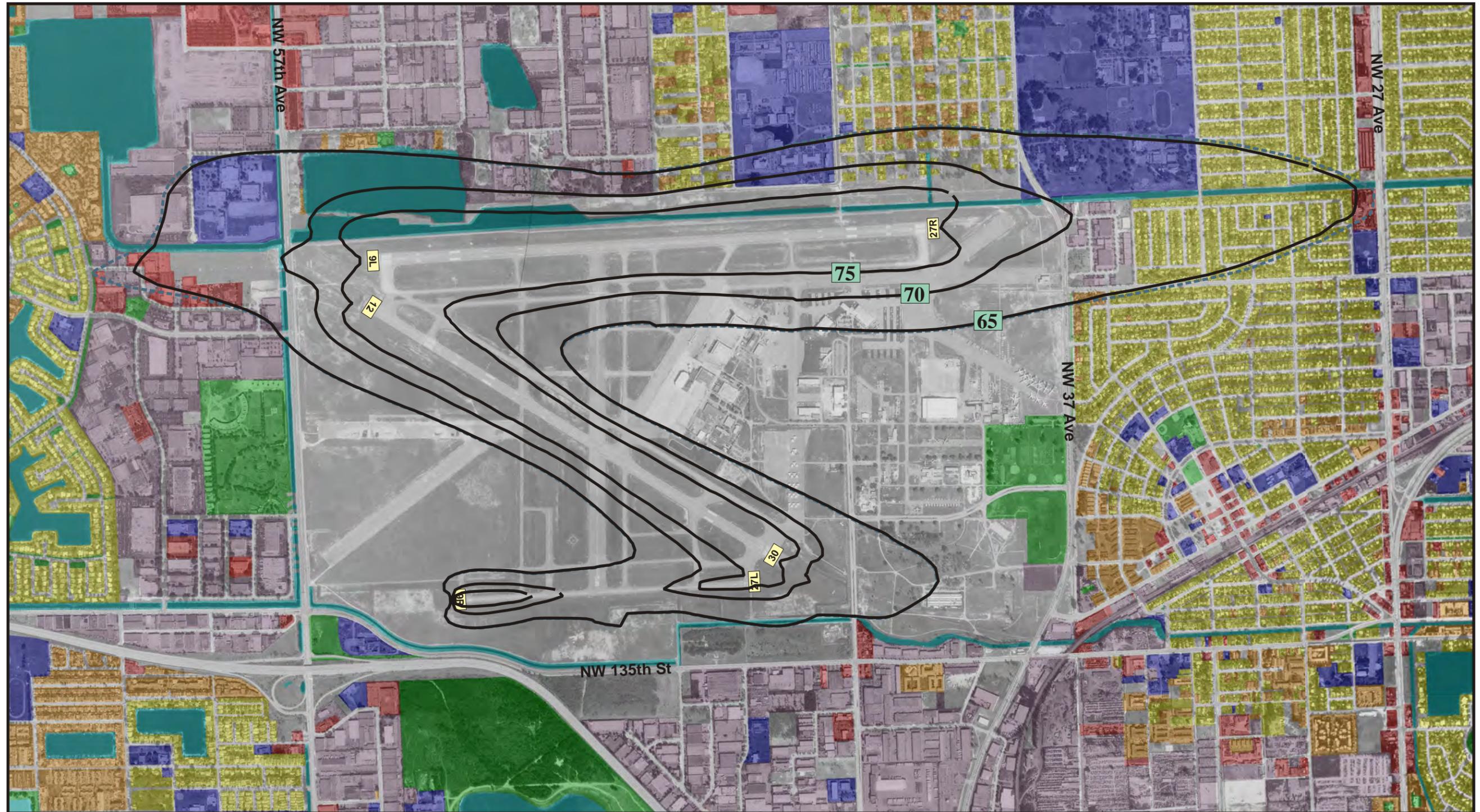
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|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



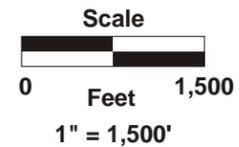
Miami Dade Aviation Department

Exhibit 5-9

Procedure 10 - Raise Approach Slope to Runways 9L, 27R and 12 (Day and Night)



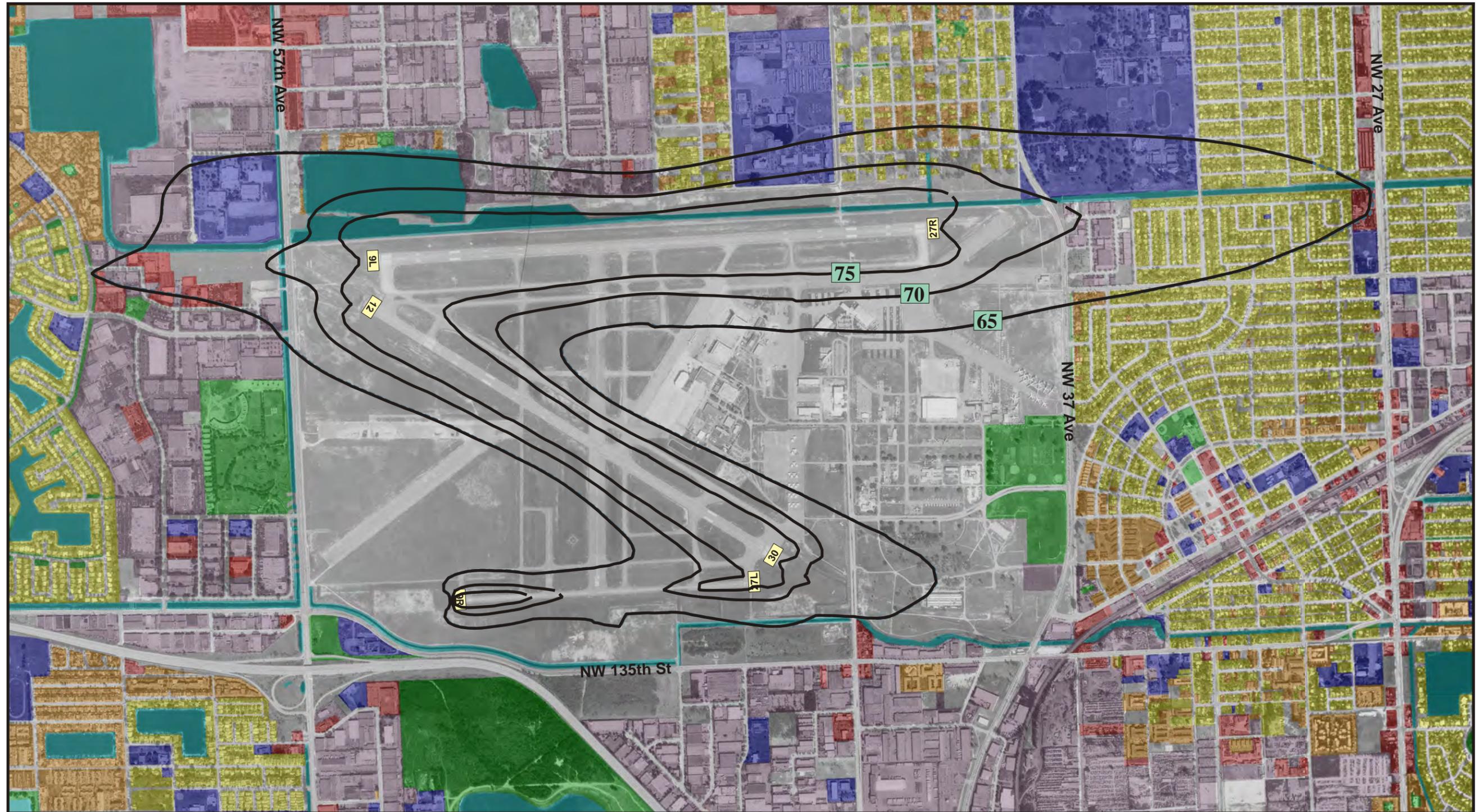
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|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



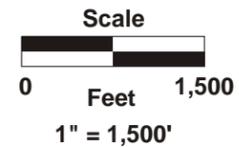
Miami Dade Aviation Department

Exhibit 5-10

Procedure 11 - Increase "Hold Down" Altitude for Easterly Departures (Day and Night)



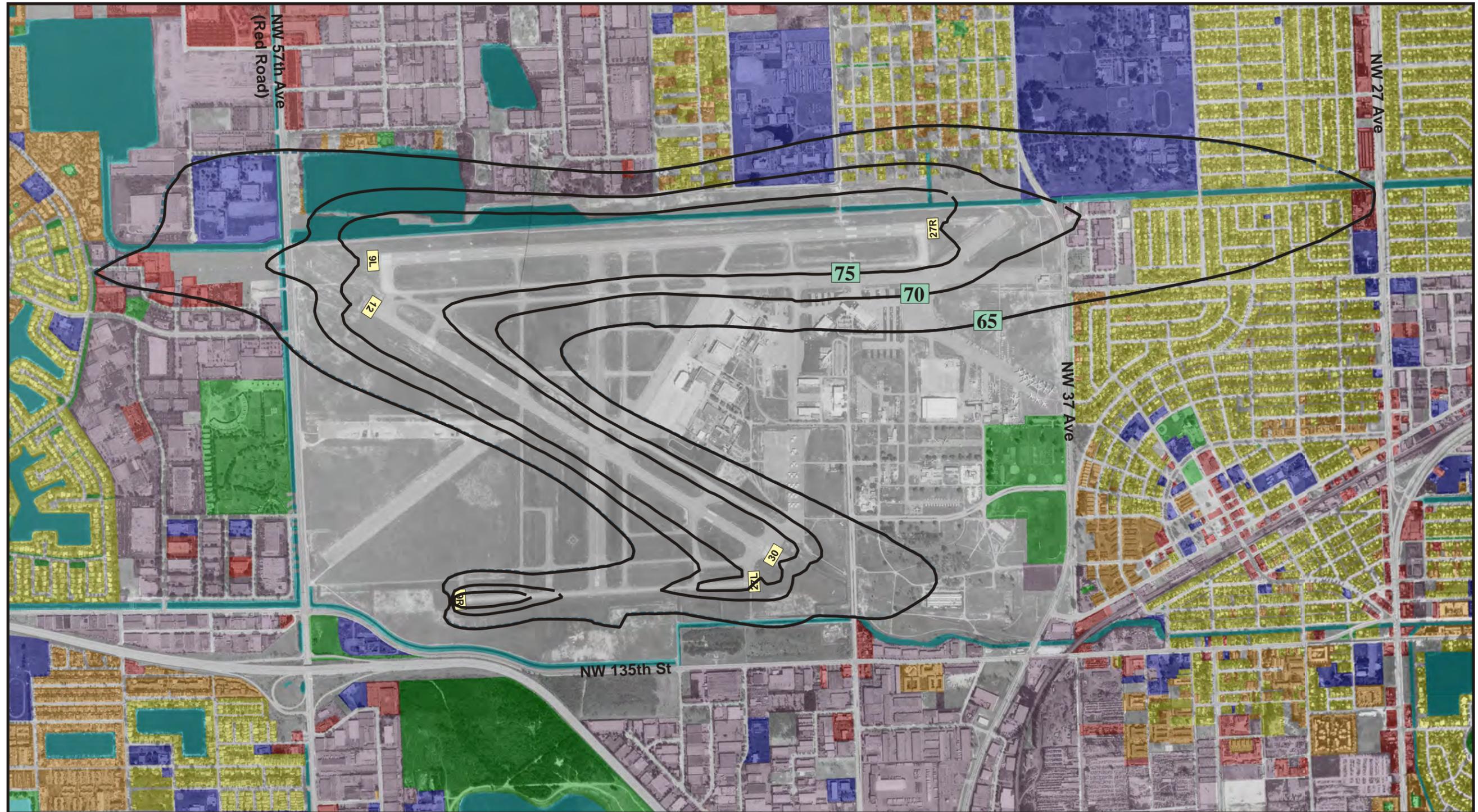
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|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



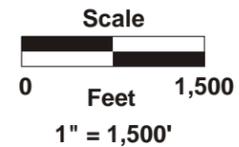
Miami Dade Aviation Department

Exhibit 5-11

Procedure 12 - Direct West Flow Small Propeller Aircraft Departures Over Red Road



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|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



Miami Dade Aviation Department

Exhibit 5-12

Procedure 13c - Evaluate the Advantages of “Close-in” Departure Profiles

The FAA has identified two noise abatement departure profile procedures called “Close-in” and “Distant.” One of these two procedures would be recommended depending on the relative location of residential areas to the engine cut-back procedures. Procedure 13c evaluated the Close-in departure procedure and the following Procedure 13d discusses the results of the distant procedure. The purpose of the evaluation of Procedures 13c and 13d is to determine which procedure would be best in terms of reduction in off-Airport noise exposure around OPF.

The noise contours for Procedure 13c are presented on Exhibit 5-13. As seen on the Exhibit, the 65 DNL contour reduces in size both east and west of the Airport. With this Procedure, the population within the 65 DNL contour reduces from 2,448 to 1,506 (approximately 942 people). As presented in Table 5-5, a slight reduction in noise exposure would result at the large majority of noise sensitive sites.

Procedure 13d - Evaluate the Advantages of “Distant” Departure Profiles

The noise contours with Procedure 13d are presented on Exhibit 5-14. A slight reduction in the limits of the 65 DNL contour occurs with this procedure resulting in an approximate reduction of 304 people. Although there is a reduction in population, when compared to Procedure 13c (the “Close-in” procedure) the benefits in terms of reduced population are not as great.

Procedure 14 – Maximize the Use of Runway 12-30 With the Extension of Runway 12-30 to the Southeast

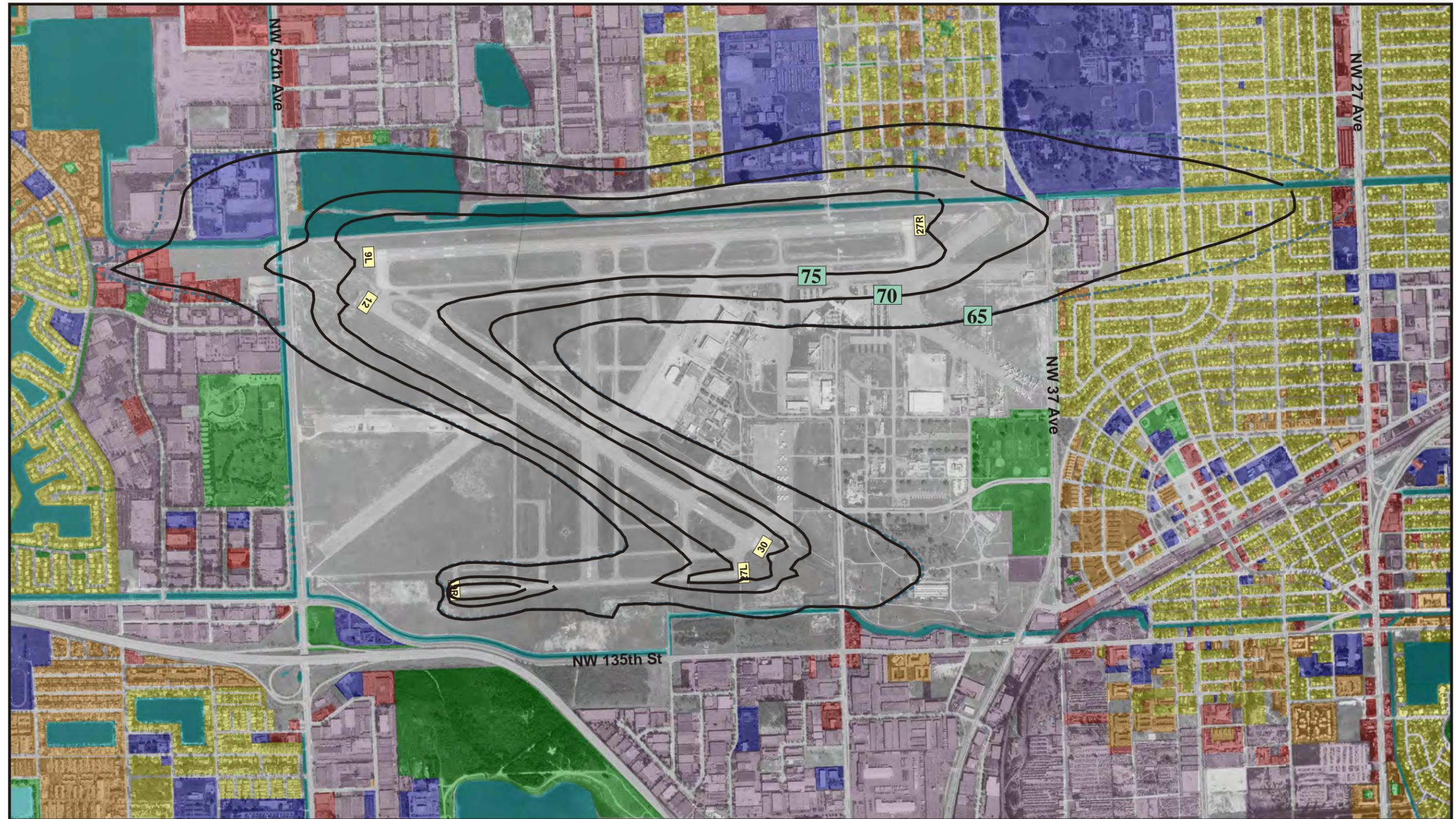
This procedure would increase the length of Runway 12-30 by 1,400 feet (from the existing 6,800 to 8,200 feet) to equal the Airport’s longest existing runway (Runway 9L-27R). Due to physical constraints to the northwest, the extension was assumed to occur at the southeastern end of Runway 30.

Exhibit 5-15 shows that with the increased length of Runway 12-30, the overall noise exposure and population affected would be virtually the same as Procedure 1. The only difference between Procedures 14 and 1 is that with Procedure 14, aircraft requiring the additional length would be able to use Runway 12-30 rather than having to use Runway 9L-27R.

Procedure 15 – Noise Barriers

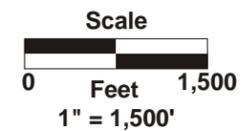
This procedure identifies the potential location of surface noise barriers along the Airport’s property limits. Any barriers to be potentially effective in reducing ground noise would be those that could be placed close to receivers (residential communities for

Procedure 13c - Close-In Noise Abatement Departure Procedure



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|-----------------|---------------|---------------------------|
| Agriculture | Commercial | Single Family Residential |
| Park / Cemetery | Industrial | Multi Family Residential |
| Water | Institutional | |

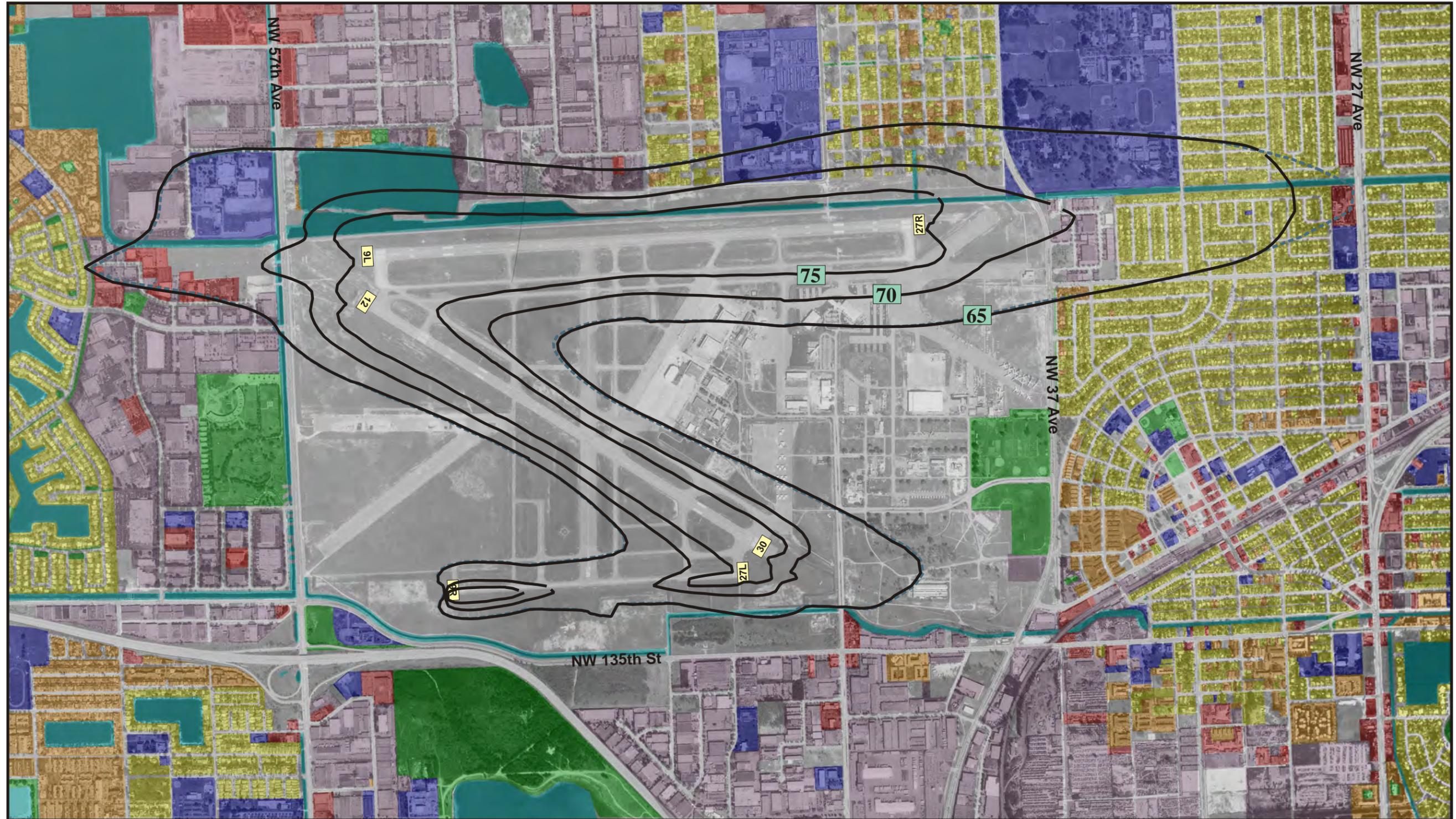
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|--------------------------------|
| DNL Noise Contours |
| No Action 65 DNL Noise Contour |



Miami Dade Aviation Department

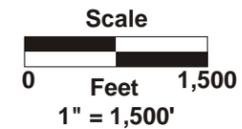
Exhibit 5-13

Procedure 13d - Distant Noise Abatement Departure Procedure

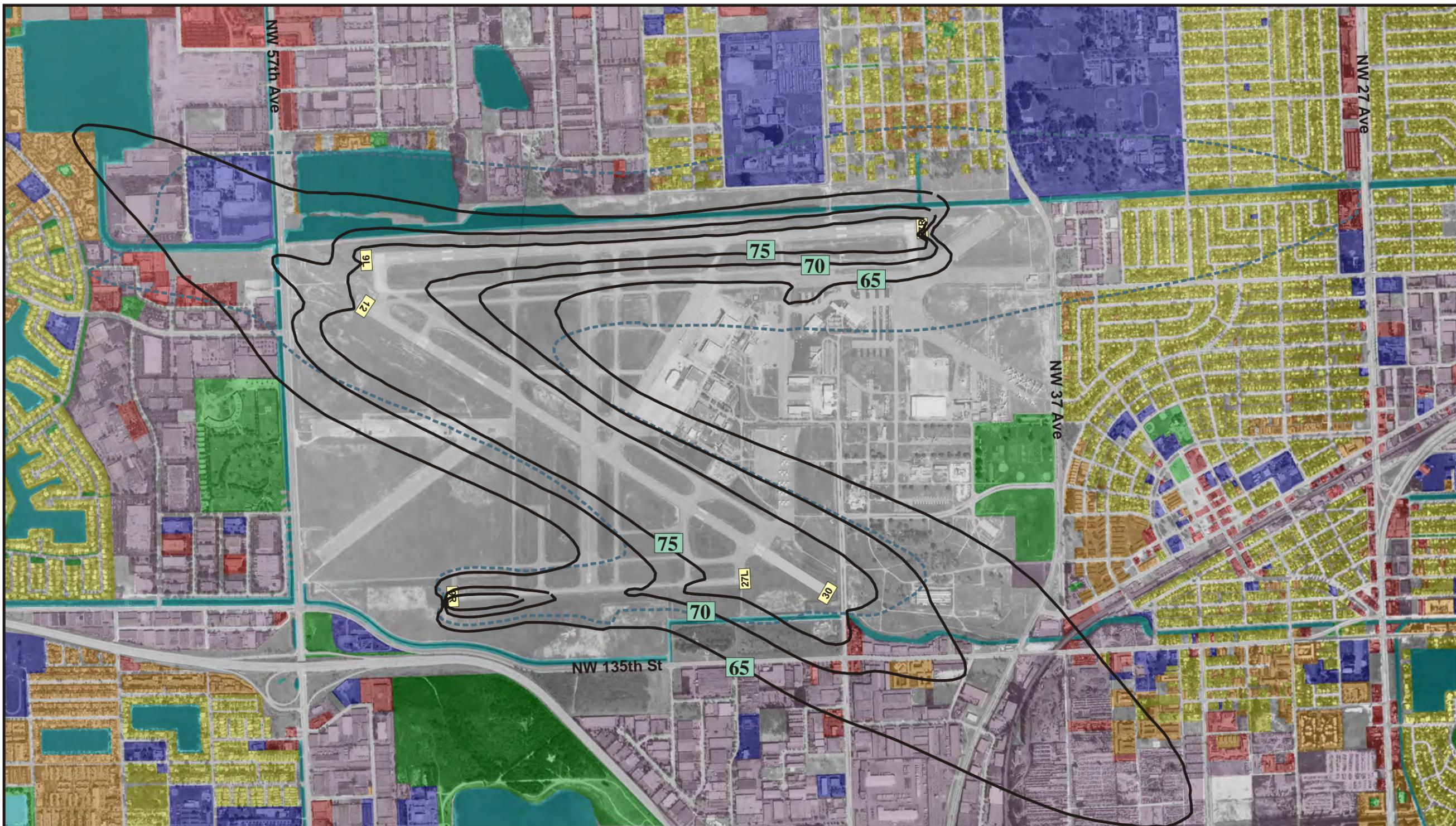


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|---|---|---|
|  Agriculture |  Commercial |  Single Family Residential |
|  Park / Cemetery |  Industrial |  Multi Family Residential |
|  Water |  Institutional | |

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|  DNL Noise Contours |
|  No Action 65 DNL Noise Contour |

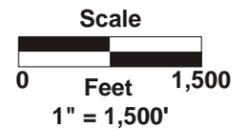


Procedure 14 - Maximize the Use of Runway 12/30 With the Extension of 12/30 to the Southeast



- Agriculture
- Commercial
- Single Family Residential
- Park / Cemetery
- Industrial
- Multi Family Residential
- Water
- Institutional

- DNL Noise Contours
- No Action 65 DNL Noise Contour



Miami Dade Aviation Department

Exhibit 5-15

example) and/or close to the source (aircraft run-up areas, taxiways, beginning of takeoff roll areas for example). The western, northwestern and southern limits of the Airport are adjacent to compatible land uses (mostly industrial and commercial uses) and no barrier would be beneficial. To the east, residential communities occur directly adjacent to the Airport. In this area however, the noise exposure is predominately a result of aircraft in flight and ground barriers would be largely ineffective. The area that would be expected to benefit to the greatest extent from a noise barrier would be the residential communities located immediately to the north of Runway 9L-27R. More detailed barrier analysis would need to be accomplished to determine the extent in the reduction in noise that would result.

Procedure 16 – Locate a “Buoy in the Lake” West of the Airport

This Procedure would place a buoy in the lake west of the Airport as an additional navigation facility. The intent of the buoy would be to direct air carrier aircraft on arrival from the west to pass over the lake rather than over residential areas west of the Airport (shown on Exhibit 5-16). Since this procedure occurs beyond the limits of the 65 DNL, no change in population within the contours would result however, the overflights of residential areas would be reduced.

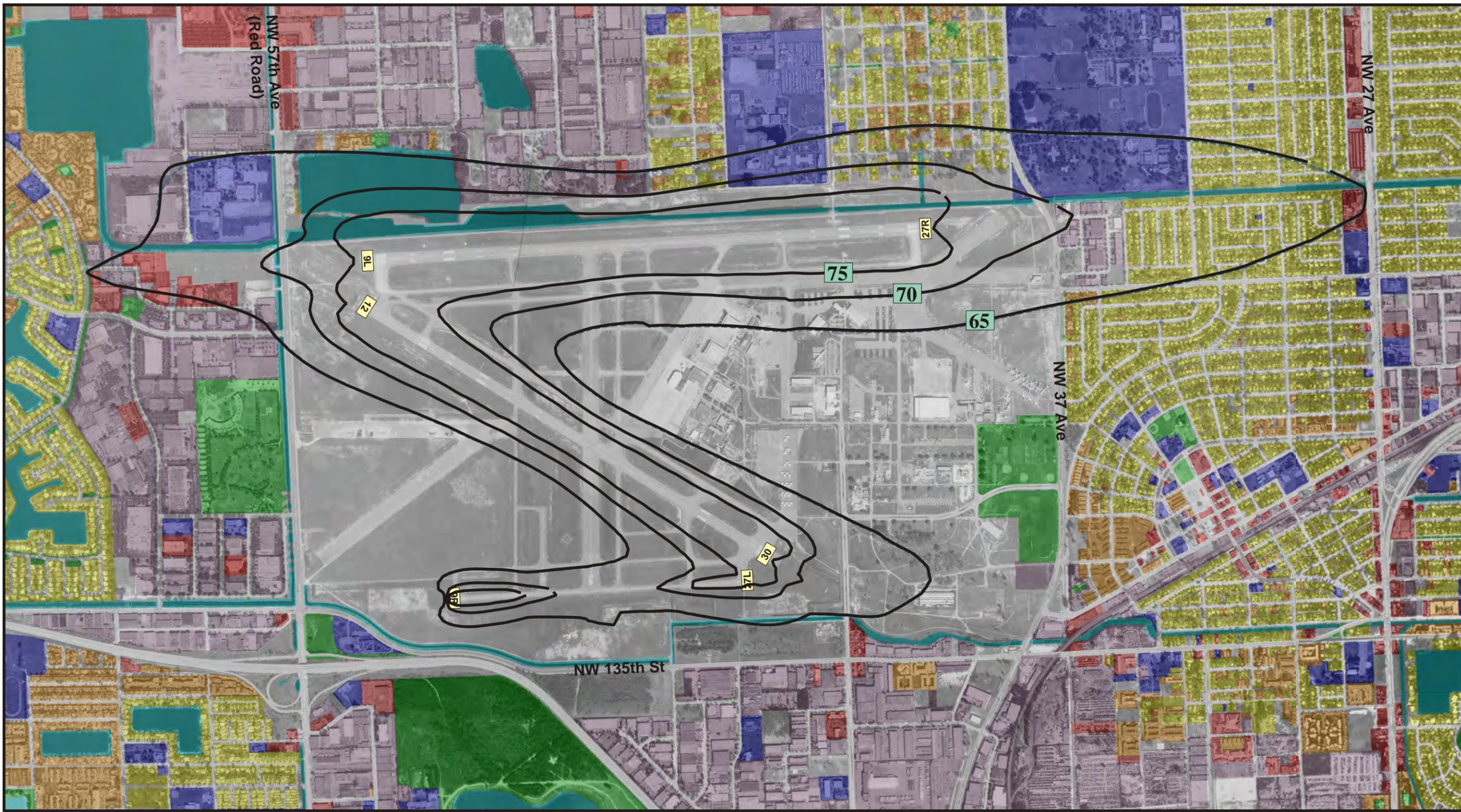
Cumulative Procedure

Following the completion of the noise analysis of Procedures 1 through 16, those Procedures that are shown to be viable will be combined and the noise benefits of the cumulative noise abatement actions would be identified. This will be completed following discussions with the Noise Abatement Task Force, the FAA Tower and Airport management.

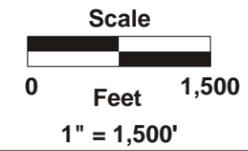
USE RESTRICTION PROCEDURES

As indicated previously, Procedures 17, 17A, 18, 18A and 19 involve “Use Restrictions” (denying access in full or part of the Airport). Such restrictions cannot be established at the discretion of the MDAD but must involve approval by the FAA through the FAR Part 161 process and possible environmental documentation (EA or EIS) as required by the National Environmental Policy Act. The purpose for considering these “Use Restriction” Procedures at this time is to identify the magnitude of the noise benefits that would be projected to occur should one or more of the restrictions be implemented. Then a decision can be reached as to whether to further pursue such restrictions. The results of the “Use Restriction” Procedures, in terms of reduction of population within the 65 DNL and reduction in noise exposure at noise sensitive sites, is presented in Tables 5-1 through 5-5.

Procedure 16 - Locate a "Buoy in the Lake" to the West of the Airport (9L Arrivals)



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|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



Miami Dade Aviation Department

Exhibit 5-16

Procedure 17-Ban Stage 2 General Aviation Aircraft Operations (Day and Night)

Procedure 17 would not allow aircraft that generate Stage 2 noise levels to operate at the Airport at any time. The noise contours presented in Exhibit 5-17 indicate that the 65 DNL noise contour would be virtually on Airport property with the only population affected by the contour being located immediately north of Runway 9L-27R. It is estimated that the population inside the 65 DNL would reduce from 2,448 under the No-Action condition to 25 with Procedure 17.

Procedure 17A

Procedure 17A is similar to Procedure 17 except that it is assumed that the Stage 2 aircraft would be replaced by Stage 3 aircraft. Thus, the difference between Procedure 17 and 17A is that 17A is assumed to have additional aircraft operations. Exhibit 5-18 shows the noise contour also remains virtually on Airport property with the total population within the contours being approximately 49 people.

Procedure 18- Ban Stage 2 General Aviation Aircraft Operations (Night Only)

Procedure 18 would limit the ban, described in Procedure 17, for enforcement only during nighttime hours (10:00pm to 7:00am). Thus, with this procedure, Stage 2 aircraft would still operate during daytime hours. With this condition, the noise contours would reduce substantially when compared to the No-Action condition but would be larger than those generated for use restrictions for Procedures 17 and 17A. See Exhibit 5-19. The total population within the 65 DNL contour would amount to approximately 281 people.

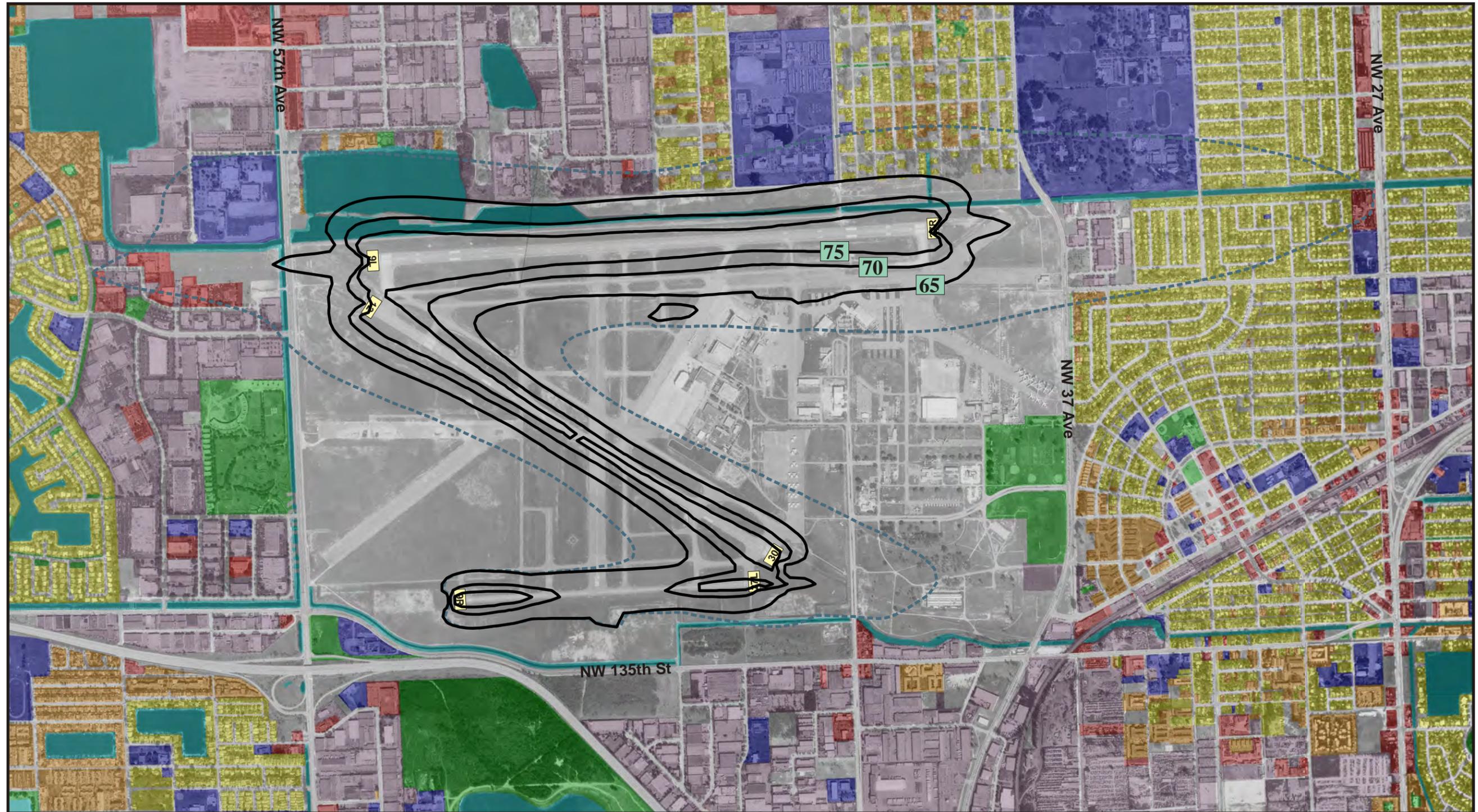
Procedure 18A

Procedure 18A is similar to Procedure 18 with the exception any Stage 2 operations that would be banned at night would still occur at the Airport but during daytime hours. Thus, since slightly more aircraft would operate at the Airport with Procedure 18A when compared to Procedure 18 the DNL 65 contour would be slightly larger. Exhibit 5-20 shows that the resulting contour is still significantly smaller than the No-Action condition. With Procedure 18A, the total population within the noise contour would amount to 380 people.

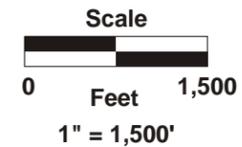
Procedure 19 – Establish a Nighttime Curfew (10:00pm to 7:00am)

Closing the Airport at night would eliminate aircraft from operating between 10:00pm and 7:00am. The Airport would still have some Stage 2 aircraft operating under this condition but all Stage 2 aircraft would occur during daytime conditions. This procedure is similar to Procedure 18 with the exception of banning only Stage 2 aircraft at night (Procedure 18) it would ban all aircraft at night (Procedure 19). Thus, Procedure 19

Procedure 17 - Ban Stage 2 Aircraft (Day and Night)



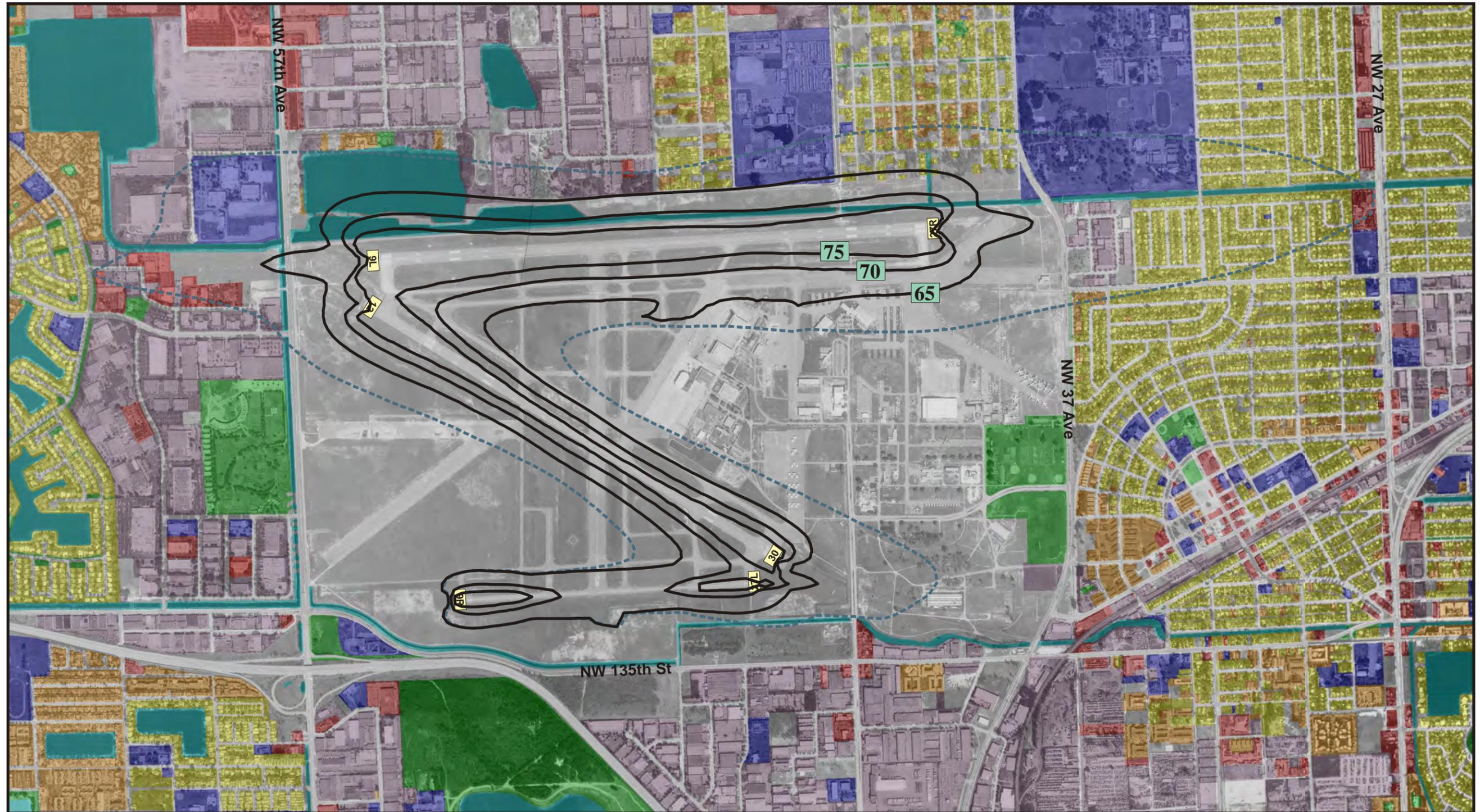
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|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



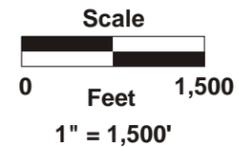
Miami Dade Aviation Department

Exhibit 5-17

Procedure 17a - Converted Stage 2 Aircraft to Similar Size Stage 3 Aircraft (Total Ops Remain the Same)



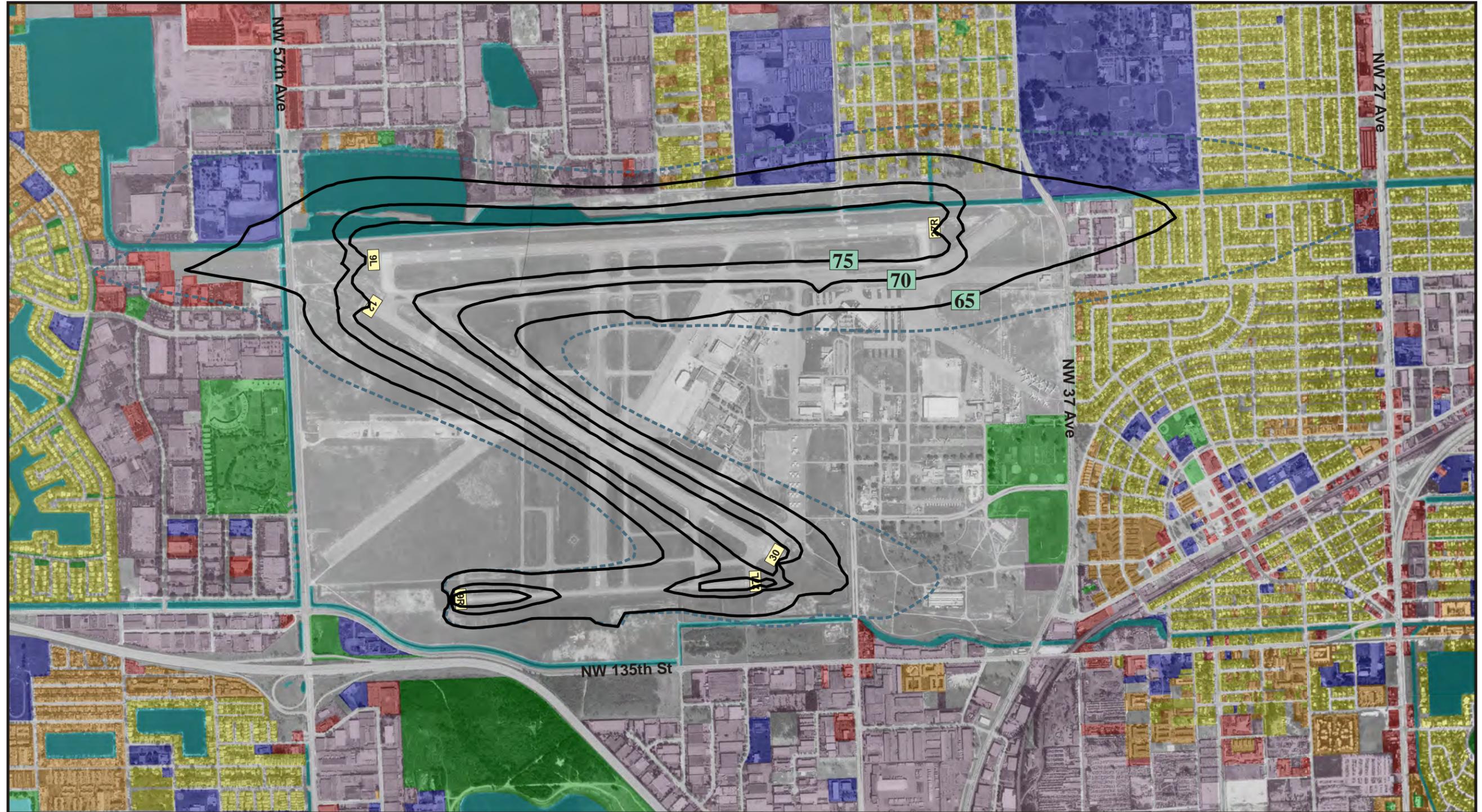
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|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



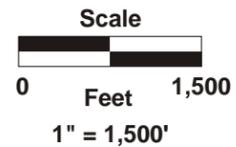
Miami Dade Aviation Department

Exhibit 5-18

Procedure 18 - Remove Stage 2 Operations at Night



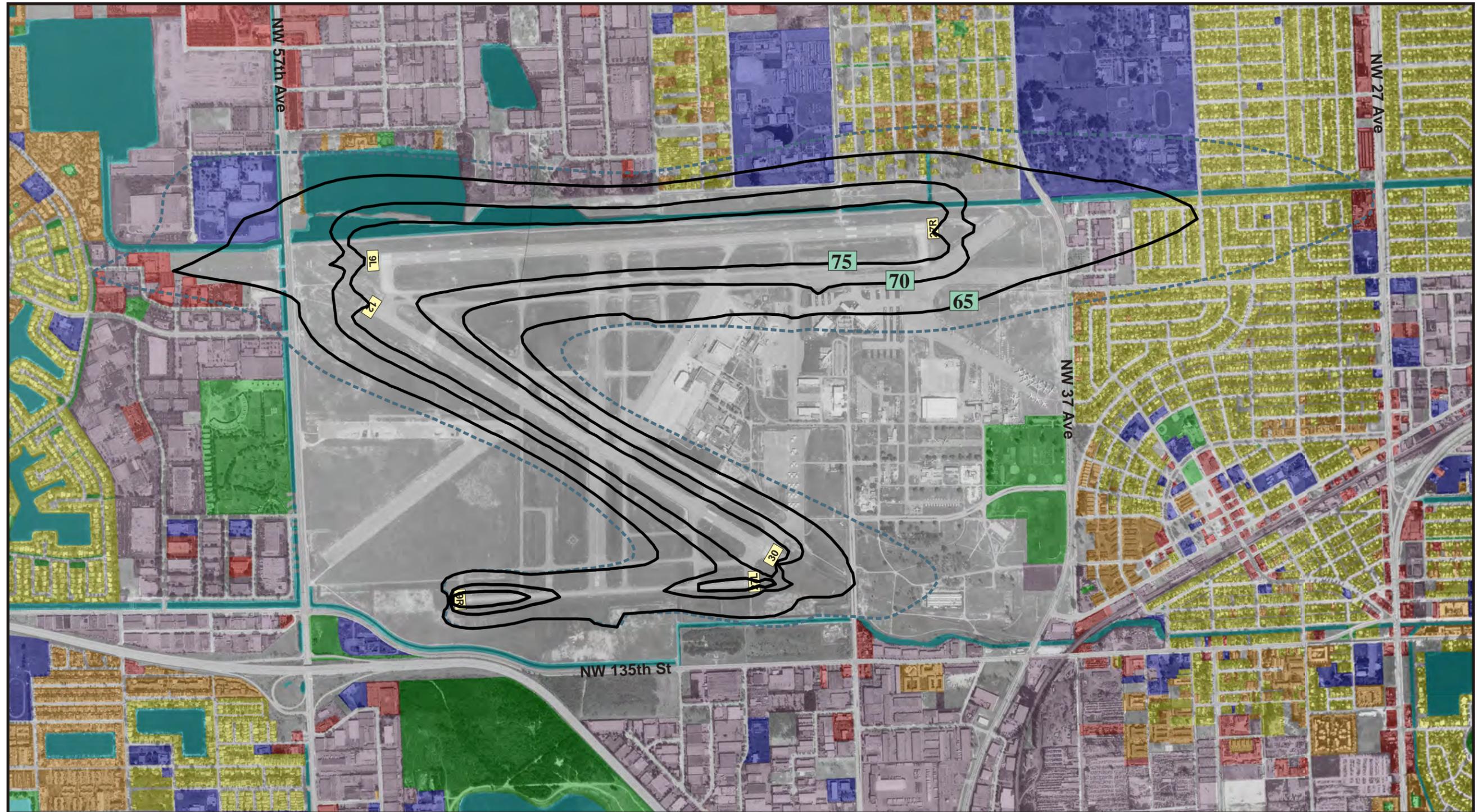
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| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



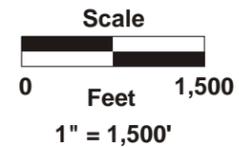
Miami Dade Aviation Department

Exhibit 5-19

Procedure 18a - Moved Stage 2 Night Operations to Daytime (Total Ops Remain the Same)



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|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |

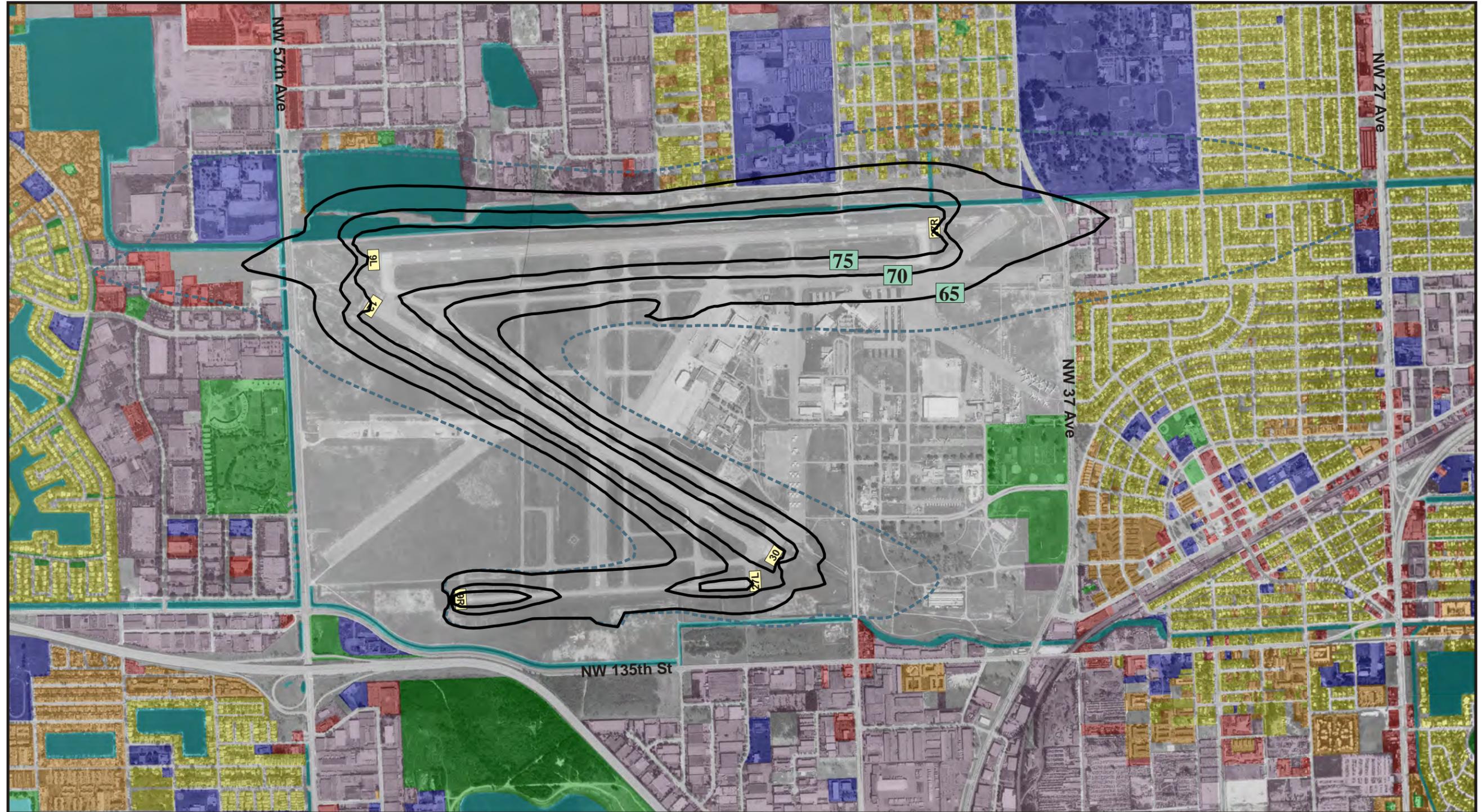


Miami Dade Aviation Department

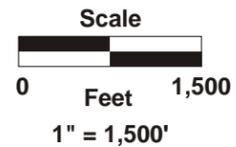
Exhibit 5-20

results in a noise contour slightly smaller than that with Procedure 18. See Exhibit 5-21. The total population inside the 65 DNL contour with Procedure 19 would be approximately 151 persons.

Procedure 19 - Close Airport at Night



- | | | | |
|-----------------|---------------|---------------------------|--------------------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | No Action 65 DNL Noise Contour |
| Water | Institutional | | |



Miami Dade Aviation Department

Exhibit 5-21

SECTION 6 – RECOMMENDED OPERATIONAL NOISE ABATEMENT PLAN

Twenty-one procedures have been evaluated for the purpose of reducing aircraft noise impacts surrounding Opa Locka Airport. A meeting of the Opa Locka Airport Noise Abatement Task Force was held on May 21, 2003 to discuss each of the procedures and to collectively recommend those procedures that would be incorporated into a Comprehensive Fly Neighborly Program at OPF. In attendance were members of the Task Force, MDAD, airport personnel and individuals from the aviation department's acoustical consulting team. The procedures recommended included ones that provided a noticeable reduction in noise exposure on the population surrounding the airport, did not inhibit the safe and efficient operation of the airport, and were able to be implemented by pilots and air traffic control. It should be noted that an environmental justice analysis (the effects of the each of the procedures on minority populations) was also included in this program.

At the conclusion of the meeting, five of the twenty one procedures were recommended for implementation and incorporation into a Comprehensive Fly Neighborly Program at OPF.

Procedures Recommended For Implementation

Procedure 1 – Encourage the Maximum Use of Runway 12-30 (Day and Night)

This procedure encourages the increased use of Runway 12-30 at OPF with it being the airport's preferred runway both during daytime and nighttime hours. The existing runway use at the airport is approximately 52% of operations occurring on Runway 9L-27R, 15% the operations occurring on Runway 12-30, and 33% of operations occurring on Runway 9R-27L. The runway use percentages used to model this procedure were 41% of operations occurring on Runway 9L-27R, 31% of operations occurring on Runway 12-30, and 28% of operations occurring on Runway 9R-27L. The percentages used to model this procedure essentially double the number of operations on Runway 12-30.

Procedure 2 – Continue to Encourage the Maximum Use of Runway 12-30 at Night

The airport currently is encouraging the maximization of the use of Runway 12-30 at night. As part of this study, it is recommended to continue the maximum use of Runway 12-30 at night.

It should be noted that although Procedures 1 and 2 recommend the maximum use of Runway 12-30, aircraft will continue to operate on all runways at the airport.

Procedure 4 – Encourage the Voluntary Relocation of Flight Training Activity to Opa Locka West Airport (Day and Night)

This procedure encourages the voluntary relocation of local flight training to Opa Locka West Airport. Under this procedure, the based aircraft used for training would depart Opa Locka Airport, conduct their training activities at Opa Locka West Airport (where the land surrounding the airport is predominately undeveloped) and then return to Opa Locka

Airport. This is procedure is voluntary and compliance to the greatest extent possible by the operators is encouraged.

Procedure 9 – Encourage the Maximum Use of Route 9/I-95 Corridors for Easterly Departures (Day and Night)

This procedure directs Runway 9 aircraft departures (those destined for northerly departure track turns) to turn over Route 9/I-95 corridors. Procedure 9 places departing aircraft, to the greatest extent, over areas of compatible land use and relatively high noise background levels (resulting from the highway corridor) which benefits to those living east of the airport.

Procedure 13c – Encourage the Use of “Close-in” Departure Profiles

Turbojet Aircraft in Excess of 75,000 Pounds Gross Takeoff Weight

Federal Aviation Advisory Circular 91-53A presents two standardized profiles to reduce aircraft noise on departure for all types of turbo-jet powered airplanes over 75,000 pounds gross takeoff weight. These are referred to as the “Close-in” Community Noise Abatement Departure Profile (NADP) and the “Distant” Community NADP. The “Close-in” NADP, recommended in this study, reduces noise in close proximity to the departure end of an airport runway. The benefits associated with a “Close-in” NADP are generally for areas located between 2-4 miles from beginning of takeoff roll.

The departure profile guidance for the “Close-in” procedure is described in Advisory Circular 91-53A and included in the Appendix of this report. The circular identifies thrust settings (thrust cut-backs) at certain altitudes, climb gradients, and air speeds to accomplish the desired noise reduction while maintaining safe operation of the aircraft. This guidance is provided to each aircraft operator (for example airline, charter or cargo carriers) and each establishes the specific procedures for each aircraft type they operate.

The Advisory Circular indicates that the pilot should use the appropriate NADP when an airport proprietor requests its use. This use of the procedure is voluntary and is solely at the discretion of the pilot of the aircraft.

Turbojet Aircraft Less Than 75,000 Pounds Gross Takeoff Weight

The National Business Aviation Association (NBAA) has recommended standard procedures for reducing aircraft noise where aircraft manufacturers have not recommended specific procedures. For departing aircraft, the NBAA recommends two procedures (a standard departure procedure and a close-in departure procedure). Both of these procedures involve the use of varying speeds and power reductions to 3,000 feet in altitude. The NBAA close-in departure procedure, recommended in this study, is presented in the Appendix of this study.

Consistent with AC 91-53A, it is recommended that turbojet aircraft departing OPF with a gross takeoff weight of over 75,000 pounds utilize the “Close-in” NADP, and turbojet aircraft below 75,000 utilize the NBAA Close-in departure procedure on a voluntary basis.

The 2000 combined noise abatement procedures 65, 70 and 75 DNL contours are shown on Exhibit 6-1. In order to assist in long term noise and land use compatibility planning, DNL contours were prepared for the 2010 condition at the airport. The FAA approved Terminal Area Forecasts (TAF) were used in identifying the total operations projected for 2010. Exhibit 6-2 shows the 2010 No-Action DNL contours. Exhibit 6-3 shows the 2010 combined noise abatement procedures DNL contours.

Table 6-1 indicates the reduction in population within the 65 and 70 DNL contours for the no action and combined procedures. Table 6-2 indicates the reduction in households within the 65 and 70 DNL contours for the no action and combined procedures. Table 6-3 shows that there is a substantial reduction in the percentage of minority population within the combine noise abatement procedures 65 DNL. Tables 6-4 and 6-5 compare the 2000 and 2010 DNL values at noise sensitive sites for the no action and combined procedures. The listing of noise sensitive site names was presented Section 2 (Table 2-1) and graphically on Exhibit 2-1.

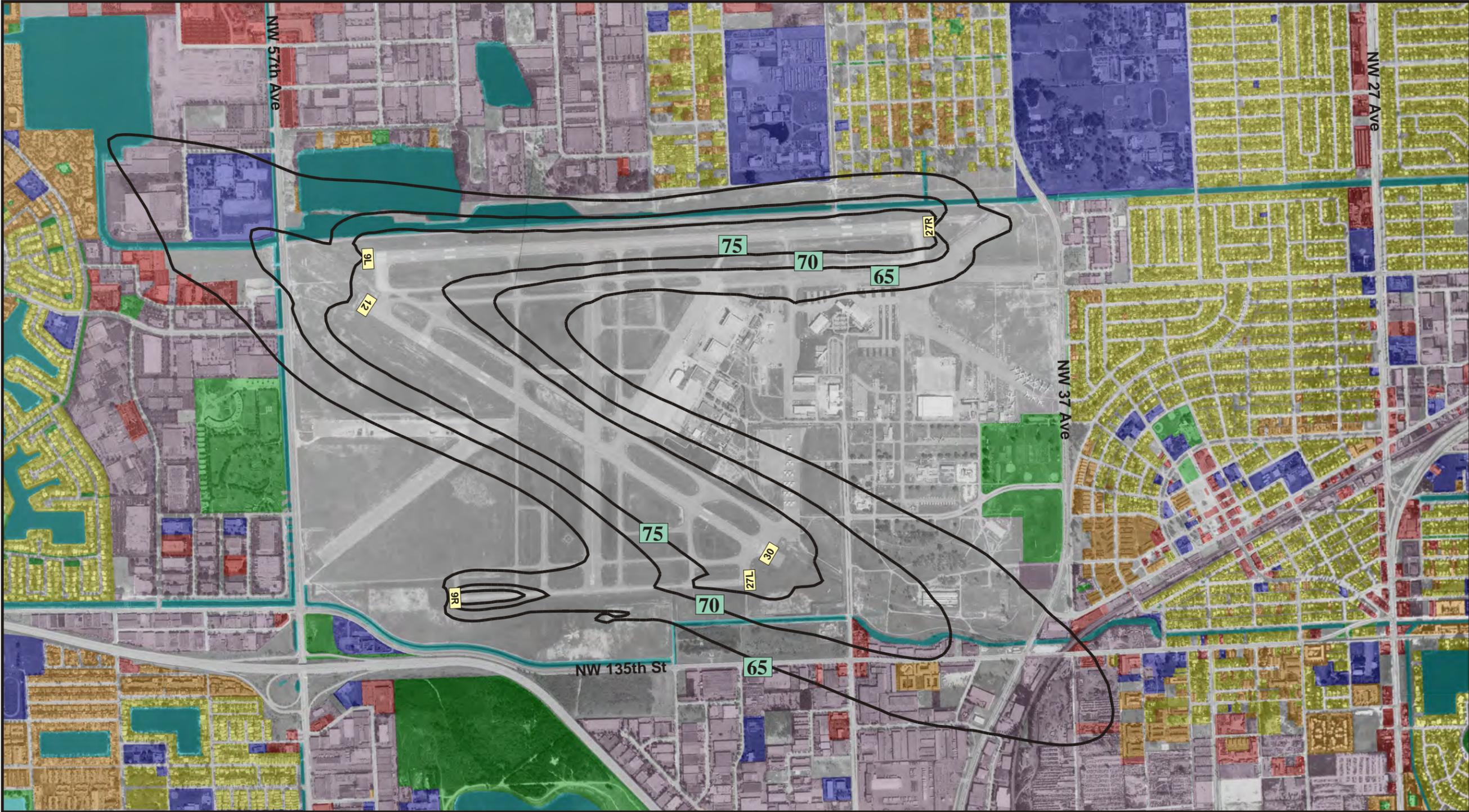
**TABLE 6-1
TOTAL POPULATION WITHIN THE 65 DNL**

	Total Pop Within 65 DNL	Change in Pop Within 65 DNL vs. No Action	Percent Change in Pop Within 65 DNL vs. No Action	Total Pop Within 70 DNL	Change in Pop Within 70 DNL vs. No Action	Percent Change in Pop Within 70 DNL vs. No Action
<i>2000 No Action</i>	2,448	-	-	59	-	-
<i>2000 Combine Procedures</i>	348	-2,100	-85.8%	0	-59	-100.0%
<i>2010 No Action</i>	3,132	-	-	177	-	-
<i>2010 Combine Procedures</i>	1,545	-1,587	-50.7%	0	-177	-100.0%

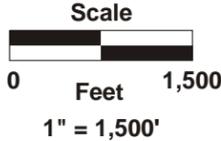
**TABLE 6-2
HOUSEHOLDS WITHIN THE 65 DNL**

	Total Households Within 65 DNL	Change in Households Within 65 DNL vs. No Action	Percent Change in Households Within 65 DNL vs. No Action	Total Households Within 70 DNL	Change in Households Within 70 DNL vs. No Action	Percent Change in Households Within 70 DNL vs. No Action
<i>2000 No Action</i>	625	-	-	19	-	-
<i>2000 Combine Procedures</i>	115	-510	-81.6%	0	-19	-100.0%
<i>2010 No Action</i>	807	-	-	40	-	-
<i>2010 Combine Procedures</i>	507	-300	-37.1%	0	-40	-100.0%

2000 Combined Noise Abatement Procedures DNL Contours



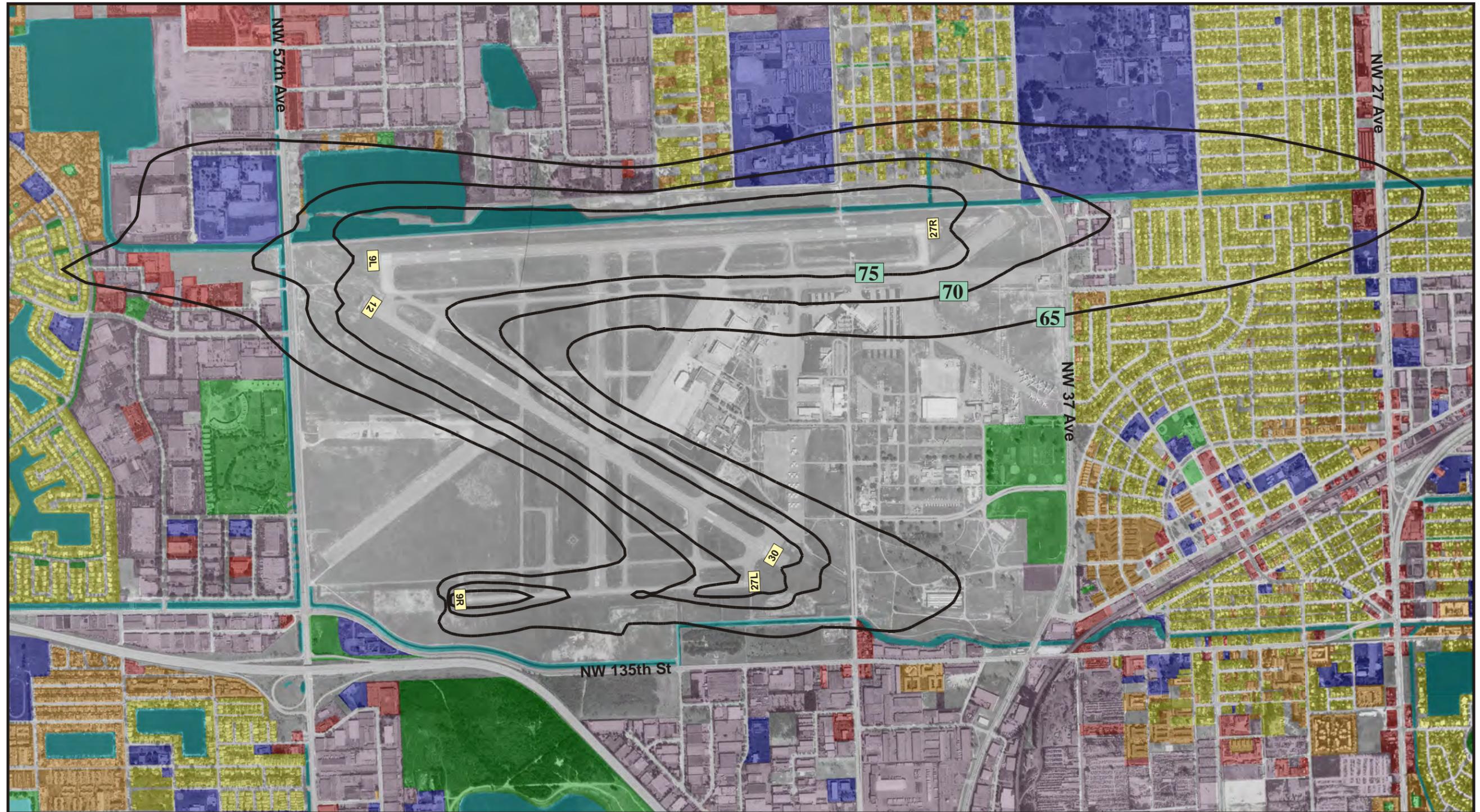
- Agriculture
- Commercial
- Single Family Residential
- DNL Noise Contours
- Park / Cemetery
- Industrial
- Multi Family Residential
- Water
- Institutional
- No Action 65 DNL Noise Contour



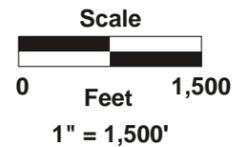
Miami Dade Aviation Department

Exhibit 6-1

2010 No Action DNL Contours



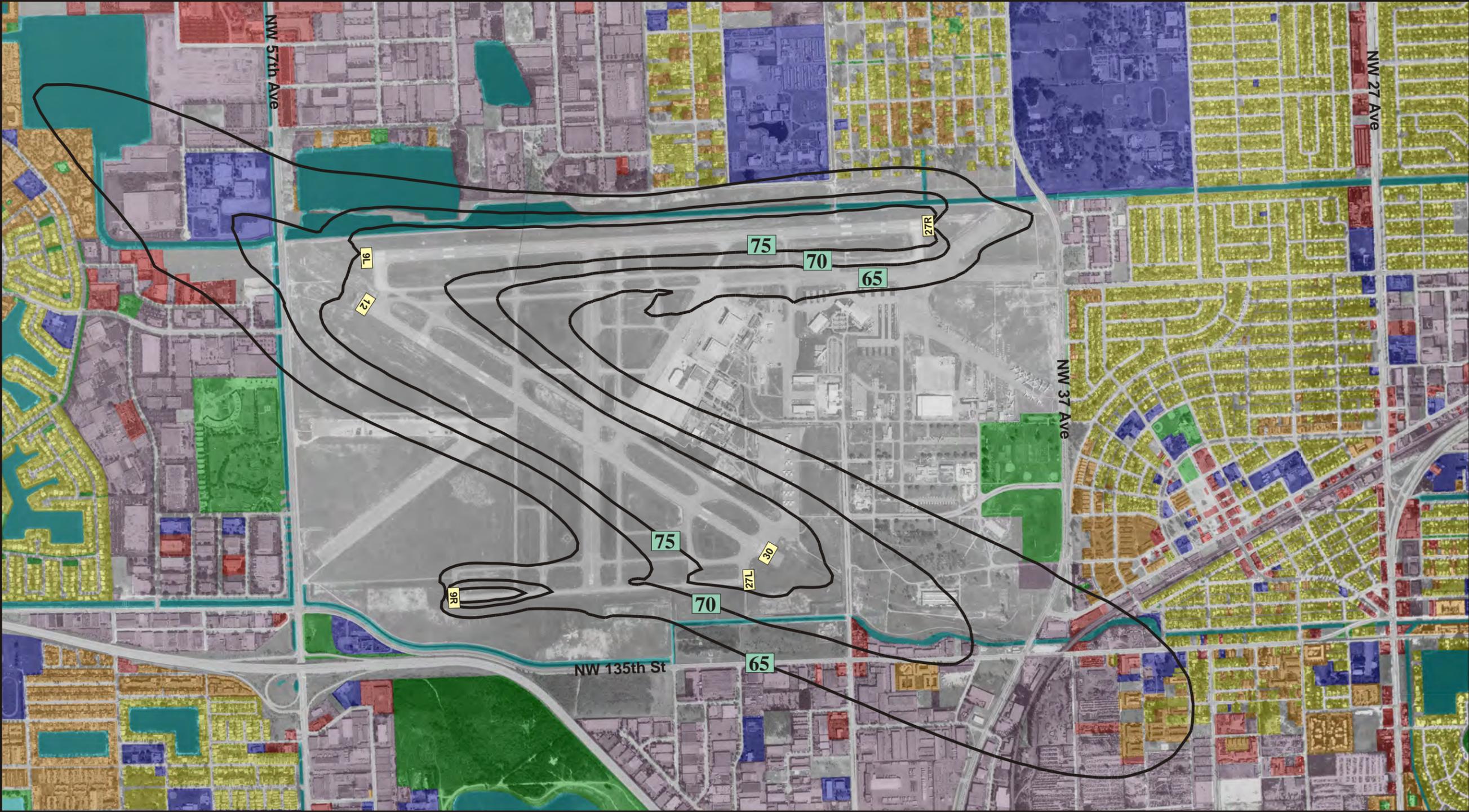
- | | | | |
|-----------------|---------------|---------------------------|--------------------|
| Agriculture | Commercial | Single Family Residential | DNL Noise Contours |
| Park / Cemetery | Industrial | Multi Family Residential | |
| Water | Institutional | | |



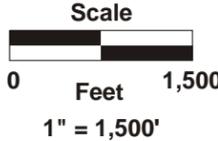
Miami Dade Aviation Department

Exhibit 6-2

2010 Combined Noise Abatement Procedures DNL Contours



- Agriculture
- Commercial
- Single Family Residential
- DNL Noise Contours
- Park / Cemetery
- Industrial
- Multi Family Residential
- Water
- Institutional



**TABLE 6-3
MINORITY POPULATION WITHIN THE 65 DNL**

	Total Population Within 65 DNL	Total Minority Population Within 65 DNL	Percent Minority Population within 65 DNL	Total Population Within 70 DNL	Total Minority Population Within 70 DNL	Percent Minority Population within 70 DNL
<i>2000 No Action</i>	2,448	1,990	81.3%	59	34	57.6%
<i>2000 Combine Procedures</i>	348	127	36.5%	0	0	-
<i>2010 No Action</i>	3,132	2,564	81.8%	177	114	64.4%
<i>2010 Combine Procedures</i>	1,545	1,135	73.5%	0	0	-

**TABLE 6-4
2000 DNL VALUES AT REPRESENTATIVE NOISE SENSITIVE SITES**

Sensitive Site ID	2000 No Action	2000 Combined	Change vs. No Action
3	67.1	67.1	0.6
19	66.9	61.2	-5.7
30	66.2	58.8	-7.4
72	65.6	62.3	-3.3
41	62.7	56.7	-6.0
40	62.4	56.6	-5.8
35	62.2	56.0	-6.2
42	62.0	56.5	-5.5
80	62.0	56.5	-5.5
93	62.0	56.2	-5.8
4	61.7	60.7	-1.0
38	61.4	55.8	-5.6
56	61.4	56.2	-5.2
2	61.2	57.3	-3.9
15	61.1	55.8	-5.3
73	61.1	62.1	1.0
88	60.7	62.6	1.9
46	60.5	55.8	-4.7
6	60.5	61.7	1.2
89	60.5	62.9	2.4
43	60.4	55.4	-5.0
44	60.4	55.4	-5.0
54	60.4	55.8	-4.6
7	60.4	57.4	-3.0
37	60.3	54.9	-5.4
57	60.3	55.8	-4.5
87	60.3	54.9	-5.4
63	60.1	62.3	2.2
74	60.1	58.3	-1.8
55	60.0	55.6	-4.4

TABLE 6-4 (continued)
2010 DNL VALUES AT REPRESENTATIVE NOISE SENSITIVE SITES

86	59.9	62.4	2.5
64	59.8	63.7	3.9
81	59.8	55.6	-4.2
82	59.8	55.3	-4.5
5	59.3	58.8	-0.5
65	59.3	63.1	3.8
75	59.2	57.6	-1.6
9	59.2	57.3	-1.9
84	58.8	62.3	3.5
85	57.9	64.3	6.4

TABLE 6-5
2010 DNL VALUES AT REPRESENTATIVE NOISE SENSITIVE SITES

Sensitive Site ID	2010 No Action	2010 Combined	Change vs. No Action
3	67.5	68.3	1.2
19	67.4	61.6	-5.3
30	66.6	60.4	-5.8
72	66.6	63.3	-2.3
41	63.1	57.5	-5.2
40	62.9	57.4	-5.0
35	62.6	57.1	-5.1
42	62.4	56.8	-5.2
80	62.5	57.0	-5.0
93	62.4	56.6	-5.4
4	62.1	62.5	0.8
38	61.9	56.1	-5.3
56	61.9	56.6	-4.8
2	61.6	58.6	-2.6
15	61.5	56.2	-4.9
73	61.6	63.6	2.5
88	61.2	63.0	2.3
46	60.9	55.8	-4.7
6	61.0	63.2	2.7
89	61.0	64.1	3.6
43	60.8	55.4	-5.0
44	60.8	55.3	-5.1
54	60.8	55.9	-4.5
7	60.9	57.9	-2.5
37	60.8	55.1	-5.2
57	60.7	56.0	-4.3
87	60.8	55.1	-5.2
63	60.6	64.2	4.1
74	60.6	58.9	-1.2
55	60.4	55.9	-4.1

TABLE 6-5 (continued)
2010 DNL VALUES AT REPRESENTATIVE NOISE SENSITIVE SITES

86	60.3	64.2	4.3
64	60.2	65.5	5.7
81	60.3	55.7	-4.1
82	60.2	55.3	-4.5
5	59.7	60.3	1.0
65	59.8	64.8	5.5
75	59.7	59.3	0.1
9	59.7	58.1	-1.1
84	59.2	64.0	5.2
85	58.4	65.9	8.0

PROCEDURES NOT RECOMMENDED FOR IMPLEMENTATION AT THIS TIME

Procedure 3 – Maximize the Use of Runway 12-30 for Local Flight Training Activity (Day and Night)

This procedure relocates local flight training patterns at the airport to Runway 12-30 (to the greatest extent possible considering winds and air traffic conditions).

The results of the analysis for Procedure 3 indicate that the noise contours result in virtually no change in the 65 DNL or greater noise contours off airport property when compared with the baseline condition.

Airspace constraints with this procedure would limit the time for this to be followed. This limitation is due to the aircraft crossings that would occur when Runway 9L-27R was being used for itinerant operations at the same time Runway 12-30 is used for local training activity.

Procedure 3 is not recommended for implementation at this time due to the airspace utilization constraints, virtually no change in the DNL, and the fact that the procedure would shift overflights from one community to another.

Procedure 5 – Maximize Use of East Flow
Procedure 6 – Maximize the Use of West Flow

Procedures 5 and 6 involve maximizing the aircraft flow either to the west or to the east at the airport. Although a reduction in the population within the 65 DNL contour can be achieved by utilizing Procedure 6, the procedure is shifting noise from one close in community to another.

Procedures 5 and 6 are not recommended for implementation at this time due the fact that they shift noise from one close in community to another.

Procedure 7 – Close Runway 9L to Arrivals (24 Hours a Day)

This procedure closes Runway 9L to arrivals during both daytime and nighttime hours except for emergency conditions. This procedure virtually eliminates arrivals west of the airport and thus avoiding overflights of arriving aircraft over residential areas west of the airport.

With this procedure arrivals to Runway 9L would be relocated to Runway 12. The evaluation of noise contours indicates that this procedure would not change the current number of people located within the 65 DNL contour.

Closing a runway reduces the operational capacity of the airport. Procedure 7 is not recommended for implementation at this time because it is not the intent of these procedural changes to reduce the efficient use of the airport.

Procedure 8 – Restrict the Use of Heavy Aircraft to Daytime Hours Only and Only on Runway 12-30

Procedure 8 involves a voluntary restriction of heavy aircraft use at the airport to daytime (7:00am to 10:00pm) hours only. In addition this voluntary procedure limits the arrivals and departures of heavy aircraft to Runway 12-30 only. Various factors affect the performance characteristics of an aircraft. Typically, the heavy aircraft operating at OPF would request the longest runway at the airport.

Procedure 8 is not recommended for implementation at this time due to the very minor change in population within the 65 DNL contour and the fact that these aircraft, because of their size and weight, routinely request the longest runway at the airport (9L-27R).

Procedure 10 – Raise Approach Slope to Runways 9L, 27R and 12 (Day and Night)

This procedure increases the current three (3) degree ILS approaches to Runways 9L, 27R and 12 to four (4) degrees.

Although the aircraft would be at slightly higher altitudes on approach, and there is a slight reduction in the population within the 65 DNL, the reduction in noise heard on the ground would be minimal.

Procedure 10 is not recommended for implementation at this time due to the very minor change in noise that would be perceived by individuals on the ground.

Procedure 11– Removal of the 2,000 Foot Altitude “Hold Down” (or Increase in the “Hold-Down” Altitude) for Easterly Departures (Day and Night)

Currently aircraft departing to the east climb to an altitude of 2,000 feet and then are required to maintain that altitude until cleared to continue their climb. If this “hold down” procedure could be modified to continue aircraft climbs to 2,500 or 3,000 feet, it would increase the departure altitude over residential areas near the airport. Since most aircraft are below the 2,000 foot altitude within the extent of the 65 DNL contour, no change in population would result. However, the change would benefit those located beyond the limits of the contour if the separation requirements with Miami International airport’s traffic can be modified.

Although the aircraft would be slightly higher over areas east of the airport, and the noise levels heard on the ground would be minimal. The area that would benefit from this procedure also receives overflights (at higher altitudes) from aircraft departing MIA.

Procedure 11 is not recommended for implementation at this time due to the very minor change in noise that would be perceived by individuals on the ground.

Procedure 12 – Direct West Flow Small Propeller Aircraft Departures Over Red Road

Directing small propeller aircraft to fly north or south over Red Road after departing to the west would place small propeller aircraft over an area with a higher noise background and reduce the flyovers of residential property. Although Procedure 12 is not formally recommended to be included in the fly neighborly program, other efforts are being made to assist the operators at the airport in becoming aware of the noise sensitive areas surrounding the airport and to avoid overflights of these areas to the greatest extent possible.

Procedure 13d - Evaluate the Advantages of “Distant” Departure Profiles

As noted previously, two departure profiles, the close-in and distant can be recommended for aircraft at an airport. Given the close proximity of residential uses surrounding the airport, the close-in departure profile was recommended over the distant departure profile.

Procedure 14 – Maximize the Use of Runway 12-30 With the Extension of Runway 12-30 to the Southeast

This procedure increases the length of Runway 12-30 by 1,400 feet (from the existing 6,800 to 8,200 feet) to equal the airport’s longest existing runway (Runway 9L-27R). Due to major physical constraints to the northwest, the extension was assumed to occur at the southeastern end of Runway 30.

Any runway extension takes a number of years to be built. The process involves environmental studies, design and construction (including any roadway modifications that

will need to be addressed). If at some point in the future the process of extending the runway begins, noise abatement alternatives will be evaluated at that time.

Procedure 15 – Noise Barriers

This procedure identifies noise barriers along the airport's property limits. For barriers to be effective in reducing ground noise they need to be placed close to receivers (residential communities for example) and/or close to the source (aircraft run-up areas, taxiways, beginning of takeoff roll areas for example). The western, northwestern and southern limits of the airport are adjacent to compatible land uses (mostly industrial and commercial uses) and no barrier would be beneficial. To the east, residential communities occur directly adjacent to the airport. In this area however, the noise exposure is predominately a result of aircraft in flight and ground barriers would be largely ineffective. The area that would be expected to benefit to the greatest extent from a noise barrier would be the residential communities located immediately to the north of Runway 9L-27R. A detailed barrier analysis would need to be accomplished to determine the extent noise reduction that could occur.

Procedure 15 is not recommended for implementation until a detailed evaluation of a barrier or berm demonstrates a significant noise reduction could occur for the communities surrounding the airport.

Procedure 16 – Locate a “Buoy in the Lake” West of the Airport

This Procedure would place a buoy in the lake west of the airport as an additional navigation facility. The intent of the buoy would be to direct air carrier aircraft on arrival from the west to pass over the lake rather than over residential areas west of the airport. Since this procedure occurs beyond the limits of the 65 DNL, no change in population within the contours would result however, the overflights of residential areas would be reduced.

This procedure would only slightly modify the approach into the airport. The perceived change in noise heard on the ground as a result of this procedure would be minimal.

Procedure 16 is not recommended for implementation at this time due to the very minor change in perceived noise that would be heard on the ground.

Use Restrictions

Procedures 17, 17A, 18, 18A and 19 involve “Use Restrictions” (denying access in full or part of the airport). Such restrictions cannot be established at the discretion of MDAD. As a result of the Airport Noise and Capacity Act of 1990, no new use-restrictions at airport facilities can be implemented without a thorough demonstration of need, a detailed analysis of the restriction and its consequences, and approval by the FAA. Such restrictions could include partial or full curfews, restrictions in use based on the certified noise level of an aircraft, capacity limits on the number of aircraft that can use the facility or other similar measures.

If any form of use restriction is proposed, a FAR Part 161 process (entitled Notice and Approval of Airport Noise and Access Restrictions) would need to be accomplished. The FAR Part 161 process requires that substantial evidence be presented that supports six statutory conditions. The conditions are that the proposed restriction:

1. is reasonable, not arbitrary and not discriminatory
2. does not create an undue burden on interstate or foreign commerce
3. maintains safe and efficient use of navigable airspace
4. does not conflict with any existing Federal statute or regulation
5. has been adequately provided for public comment
6. does not create an undue burden on the national aviation system.

The level of noise exposure surrounding OPF is being addressed through this voluntary noise mitigation program. As indicated throughout this section, other noise mitigation procedures are being recommended to reduce noise exposure and enhance land use compatibility. It is not recommended that any type of use restriction be implemented at this time.

Section 7 discusses the actions necessary to implement the recommended plan.

SECTION 7 – IMPLEMENTATION ACTIONS

Twenty-one operational noise abatement procedures were evaluated as part of this study. Each procedure, described in Section 4, was analyzed in detail with respect to noise impact reduction, environmental justice, and feasibility for implementation. All were reviewed by the Opa Locka Noise Abatement Task Force, airport staff, MDAD and the aviation department's acoustical consultants. As a result of the review process and the analysis presented in Section 5, five of the procedures evaluated are recommended for implementation and incorporation into the comprehensive fly neighborly program at OPF.

The recommended operational noise abatement procedures, implementation actions, and responsible entities, are described below.

Procedure 1 – Encourage the Maximum Use of Runway 12-30 (Day and Night)

Procedure 2 – Continue to Encourage the Maximum Use of Runway 12-30 at Night

Implementation Actions and Responsible Entities: Airport, MDAD, ATCT and pilots cooperate to maximize the use of these procedures. Existing practices for encouraging the use of 12-30 at night should continue. The maximization of the use of Runway 12-30 would occur when air traffic and airspace safety and weather conditions permit.

Procedure 4 – Encourage the Voluntary Relocation of Flight Training Activity to Opa Locka West Airport (Day and Night).

Implementation Actions and Responsible Entities: A letter would be sent to the operators that are conducting the flight training at OPF requesting their use of this voluntary procedure. The letter would indicate that OPF is a noise sensitive airport and identify the noise sensitive areas surrounding OPF. The letter would also indicate the location, layout and air traffic information for Opa Locka West Airport.

Procedure 9 – Encourage the Maximum Use of Route 9/I-95 Corridors for Easterly Departures (Day and Night)

Implementation Actions and Responsible Entities: Airport, MDAD, ATCT and pilots cooperate to maximize the use of the procedure. Coordination with ATCT and operators at the airport should be undertaken identifying the specific location of the Route 9 / I-95 corridor. The departure turn location should be shown graphically and described in writing to assist ATCT and pilot compliance. This procedure should be followed when air traffic and airspace safety and weather conditions permit.

Procedure 13c – Encourage the Use of “Close-in” Departure Profiles

Implementation Actions and Responsible Entities: MDAD cannot legally require the use of this type of procedure since the pilot is responsible for the operation of the aircraft. MDAD can encourage voluntary compliance. The establishment of “close-in” noise abatement departure profiles for aircraft over 75,000 pounds would occur through MDAD's

contact with the air carrier, cargo and charter jet aircraft operators at OPF. A letter would be sent to the appropriate representative from each of these entities that would refer to the FAA Advisory Circular 91-53A and request that aircraft be operated in the “close-in” noise abatement profile mode when departing from OPF. A second letter would be sent to known general aviation users, light cargo aircraft operators and FBO’s at OPF. This letter would request that the National Business Aviation Association (NBAA) “close-in” noise abatement departure procedure be followed at OPF for turbojet aircraft under 75,000 pounds departing OPF. Copies of each of these letters would be sent to ATCT at OPF for their notification as well.