

APPENDIX A

Noise Modeling Technical Report

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APPENDIX A:

Noise Modeling Technical Report

The FAA has been undertaking an evaluation of flight and ground procedures for potential implementation as part of the BLANS since 2005. Phase 1 of the study, the Boston Overflight Noise Study (BONS), evaluated a series of RNAV SID procedures that resulted in a Categorical Exclusion/Record of Decision, issued in October 2007. Phase 2 began in 2008 and is called the Boston Logan Airport Noise Study (BLANS) and resulted in seven noise abatement measures. Logan Airport currently operates with RNAV SID procedures to all major runways with the exception of Runway 33L. An RNAV SID departure for Runway 33L was first considered in 2008 and several measures were extensively analyzed and vetted as part of the BLANS.

This technical appendix documents the input parameters of the 2009 existing conditions, 2015 No Action, and 2015 Proposed Action noise contours. **Section A.1** reviews the methodology used to conduct the noise analysis. **Section A.2** documents the input data development and sources for the 2009 existing conditions. **Sections A.3** and **A.4** document the input data for the 2015 No Action and 2015 Proposed Action alternatives, respectively.

For this EA, FAA modeled the Proposed Action using the BLANS INM input as the baseline. This method provides consistency between both studies, which is believed to be critical during the public coordination process. The method will also expedite the EA process by requiring only minor adjustments to the baseline model,

including use of the U.S. Census 2010 population data. Additional input data is derived from the *Environmental Review of Proposed RNAV STARs at KBOS and Selected Satellite Airports Technical Memorandum*, for which the FAA issued a categorical exclusion in 2011.

A.1 Methodology

The methodology to conduct the noise analysis of the proposed Runway 33L RNAV SID followed the previously established protocol for the ongoing BLANS. Since the noise analysis process established for the BLANS has been thoroughly vetted, this same process was used for the analysis of the proposed RNAV SID for Runway 33L. The FAA Office of the Environment and Energy (AEE) approved the noise model input data provided in this report.

The *Noise Analysis Protocol*¹ developed under the BLANS and used in subsequent analyses governed the collection of aircraft operational and trajectory data, the development of input data, the use of FAA-approved models, and the format of the output. The following paragraphs highlight relevant elements of the Protocol.

The noise analysis was conducted using the Integrated Noise Model (INM) Version 7.0a to calculate noise exposure levels within the Study Area, roughly a 20-nautical mile lateral radius centered at Logan Airport up to an altitude of 14,000 feet MSL. Noise exposure levels were calculated for existing conditions, and for future conditions with

and without the Proposed Action. All alternatives from the BLANS project that were implemented after 2009 are included in both the 2015 No Action and Proposed Action.

A.2 2009 Noise Model Input

Input data included in the development of the 2009 existing conditions include aircraft operations, runway use, flight tracks and profiles, flight track use, weather conditions, terrain, and runway geometry. The terrain data was obtained from the MicroPath Corporation and the runway geometry data including end coordinates was obtained through the BLANS. For the 2009 Existing Conditions, the weather input from the BLANS analysis (51.8° Fahrenheit, 30.06 inches Mercury, 65.2% relative humidity) was used.

A.2.1 2009 Aircraft Operations

For noise modeling, aircraft operations are input into INM in terms of an average annual day (AAD). The total annual operations at an airport are divided by the number of days in the year to determine the AAD. Data from Massport's AirScene Noise and Operations Monitoring System (NOMS) and Massport's Draft 2009 Environmental Data Report (EDR) was used to develop operations data for Logan Airport. In accordance with the Protocol, only Instrument Flight Rules (IFR) itinerant operations were included in this study. **Table A.1** shows IFR itinerant operations for Logan Airport in 2009 by aircraft category and time of day. **Table A.2** provides the AAD operations by INM aircraft type.

Table A.1
2009 Annual Operations (IFR Itinerant)

Operation	Category	Day & Evening (7:00 am - 10:00 pm)	Night Shoulder (10:00 pm - 12:00 am & 6:00 am - 7:00 am)	Late-Night (12:00 am - 6:00 am)
Arrival	HEAVY ¹	7,017	691	825
	LARGE ²	113,540	15,120	4,835
	PROP ³	26,246	1,052	206
	SMALL ⁴	2,773	197	118
Departure	HEAVY ¹	6,162	2,226	144
	LARGE ²	119,441	11,532	2,518
	PROP ³	26,466	653	386
	SMALL ⁴	2,820	175	87
Total Annual Operations⁵		304,464	31,646	9,118

Notes:

¹ Jet aircraft weighing 255,000 pounds or more and Boeing 757s

² Jet aircraft weighing between 41,000 and 255,000 pounds

³ Propeller airplanes

⁴ Jet aircraft weigh less than 41,000 pounds

⁵ Differences may exist due to rounding

Source: Massport 2010 (Draft 2009 EDR)

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Table A.2

2009 Annual Average Day Operations (IFR Itinerant)

Aircraft Type	Category	Day (7am-10pm)		Night (10pm-7am)	
		Arrivals	Departures	Arrivals	Departures
1900D	PROP	0.96	0.1	0.97	0.08
717200	LARGE	13.88	1.95	14.13	1.7
727EM1	LARGE	0.01	0	0	0
727EM2	LARGE	0.5	0.48	0.62	0.36
737300	LARGE	1.28	0.19	1.23	0.24
7373B2	LARGE	1.14	0.29	1.25	0.17
737400	LARGE	3.28	0.03	3.1	0.21
737500	LARGE	5.33	0.32	4.99	0.66
737700	LARGE	9.11	2.22	9.19	2.14
737800	LARGE	13.99	3.36	15.18	2.17
737N17	LARGE	0.04	0	0.04	0
737N9	LARGE	0.03	0	0.02	0
74720B	HEAVY	0	0	0	0
747400	HEAVY	3.11	0.01	3	0.12
757300	LARGE	0.04	0.1	0.14	0.01
757PW	LARGE	18.19	6.86	20.82	4.24
757RR	LARGE	13.48	3.98	15.85	1.61
767300	HEAVY	3.48	0.35	3.34	0.49
767CF6	HEAVY	0.14	0.26	0.07	0.34
767JT9	HEAVY	0	0.03	0	0.04
777200	HEAVY	1.58	0.18	1.72	0.04
777300	HEAVY	0.01	0	0.01	0
A300-622R	HEAVY	0.68	1.84	1.07	1.46
A300B4-203	HEAVY	0.08	0.13	0	0.2
A310-304	HEAVY	0.46	0.07	0.02	0.51
A319-131	LARGE	37.84	6.57	39.17	5.24
A320-211	LARGE	5.28	1.9	6.39	0.79
A320-232	LARGE	29.17	10.41	34.83	4.75
A321-232	LARGE	0.34	0.34	0.28	0.4
A330-301	HEAVY	3.61	0.01	3.41	0.21
A330-343	HEAVY	0.61	0	0.44	0.17
A340-211	HEAVY	2.75	0.03	2.13	0.65
A340-642	HEAVY	0.76	0	0.73	0.02
BEC58P	PROP	49.68	1.79	50.32	1.15
C130	PROP	0	0	0	0

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Table A.2

2009 Annual Average Day Operations (IFR Itinerant)

Aircraft Type	Category	Day (7am-10pm)		Night (10pm-7am)	
		Arrivals	Departures	Arrivals	Departures
CIT3	SMALL	0.12	0.01	0.12	0.01
CL600	SMALL	1.17	0.12	1.19	0.08
CL601	LARGE	39.71	1.69	39.58	1.83
CNA172	PROP	0.02	0	0.02	0
CNA206	PROP	0.23	0.01	0.24	0
CNA208	PROP	0.67	0.04	0.68	0.02
CNA20T	PROP	0.03	0	0.02	0
CNA441	PROP	0.22	0.03	0.22	0.03
CNA500	SMALL	0.35	0.03	0.37	0.01
CNA510	SMALL	0.03	0	0.03	0
CNA55B	LARGE	1.2	0.09	1.18	0.11
CNA750	SMALL	0.69	0.12	0.74	0.06
CRJ9-ER	LARGE	4.72	0.76	4.42	1.05
CRJ9-LR	LARGE	0.02	0	0.02	0
DC1010	HEAVY	1.09	0.73	0.64	1.19
DC1030	HEAVY	0.47	0.36	0.26	0.57
DC3	PROP	0	0	0	0
DC86HK	HEAVY	0	0	0	0
DC870	HEAVY	0.4	0.11	0.03	0.48
DC93LW	LARGE	0.24	0.02	0.22	0.04
DC95HW	LARGE	1.93	0.34	1.79	0.48
DHC6	PROP	0.6	0.07	0.62	0.06
DHC8	PROP	4.9	0.06	4.93	0.03
DHC830	PROP	2.1	0.56	2.16	0.5
DO328	PROP	0	0	0	0
ECLIPSE500	SMALL	0.01	0	0.01	0
EMB120	PROP	0	0	0	0
EMB145	LARGE	29.67	1.99	28.64	3.02
EMB14L	LARGE	5.16	0.05	4.86	0.36
EMB17D	LARGE	14.54	2.6	14.48	2.66
EMB19D	LARGE	29.05	3.51	31.05	1.48
F10062	LARGE	0.01	0	0.02	0
FAL20	SMALL	0	0	0	0
FAL50	SMALL	0.26	0.02	0.26	0.02
FAL900	SMALL	0.28	0.02	0.28	0.03

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Table A.2

2009 Annual Average Day Operations (IFR Itinerant)

Aircraft Type	Category	Day (7am-10pm)		Night (10pm-7am)	
		Arrivals	Departures	Arrivals	Departures
GASEPF	PROP	0.05	0	0.05	0
GASEPV	PROP	0.46	0.03	0.47	0.02
GII	LARGE	0.01	0	0.01	0
GIIB	LARGE	0.08	0.02	0.09	0.01
GIV	LARGE	0.74	0.07	0.72	0.09
GV	LARGE	0.53	0.07	0.53	0.07
HS748A	LARGE	0.01	0	0.01	0
IA1125	SMALL	0.1	0	0.09	0
J328	SMALL	0	0	0	0
LEAR25	SMALL	0.02	0	0.02	0
LEAR35	SMALL	2.76	0.31	2.81	0.27
MD11GE	HEAVY	0	0	0	0
MD81	LARGE	0	0	0	0
MD82	LARGE	5.34	1	5.92	0.41
MD83	LARGE	24.93	3.45	26.19	2.19
MD9025	LARGE	0.28	0	0.27	0
MU3001	SMALL	1.8	0.22	1.8	0.23
PA28	PROP	0.03	0	0.02	0
PA30	PROP	0	0	0	0
PA31	PROP	0.59	0.74	0.47	0.87
PA42	PROP	0	0	0	0
SD330	PROP	0.01	0	0.01	0
SF340	PROP	11.34	0.02	11.29	0.07
Total (Annual Avg. Day)		409.8	63.13	424.35	48.55
Total (Annual)		149575.96	23043.69	154888.42	17720.29

Note: Differences may exist due to rounding.

Source: Massport 2010 (Draft 2009 EDR)

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A.2.2 2009 Runway Use

To develop the necessary input data for INM, aircraft operations must be assigned to specific runway ends, by determining the average annual runway use.

Logan Airport operates in multiple configurations depending on wind and weather conditions, as well as other Air Traffic Control (ATC) considerations. The BLANS configuration use and the associated runway use served as the starting points to determine the

configuration and runway use for this study. **Table A.3** presents the operating configurations reflected in the noise model.

The BLANS configuration use and the associated runway use were adjusted such that the combined runway use better matched the Massport's Draft 2009 EDR Average Annual Day Runway Use. The resulting configuration use for the Existing Conditions is shown in **Table A.4**, while **Table A.5** presents runway use by aircraft category.

Table A.3

Definition of Runway Operating Configurations

Name	Day/Evening/Shoulder (6:00 am–Midnight)		Late Night (Midnight–6:00 am) ¹	
	Arrival Runway(s)	Departure Runway(s)	Arrival Runway(s)	Departure Runway(s)
Configuration 1 - Visual	4L, 4R	4L, 4R, 9, 15R	Annual average late-night conditions	Annual average late-night conditions
Configuration 2 - Instrument ²	4R	4L, 4R, 9, 15R		
Configuration 3 - Visual	22L, 22R	22L, 22R, 15R		
Configuration 4 - Instrument	22L	22L, 22R, 15R		
Configuration 5 - Visual	33L, 32, 33R	33L, 27		
Configuration 6 - Visual	27, 22L	22L, 22R		
Configuration 7 - Visual	27, 32, 33L ³	33L, 27		

Notes:

1. Late Night operations use different configurations than daytime operations. There is no correlation between a given daytime and late night configuration.
2. Instrument Conditions are defined as less than 3 statute miles visibility or cloud ceiling below 1,000 ft above ground level.
3. Configuration 7 Runway 33L arrivals are infrequent.

Source: Massport, 2010 (runway operating configuration log 2009)

Table A.4

**Logan Airport Runway Operating Configurations Utilization
(Annual Average Day, 6:00 am–Midnight)**

ID	Runways	Percent
C1	4/9	28.8%
C2	4/9	10.2%
C3/4	22/22	11.5%
C5	33-32/27	8.8%
C6	27/22	26.1%
C7	27-32/33	14.7%
Total		100%

Source: Massport 2010 (Draft 2009 EDR; runway operating configuration log)

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Table A.5

Logan Airport 24-hour Annual Average Day Runway Use (IFR Itinerant)

Operation	Category	Runway	Percent	Operation	Category	Runway	Percent
Arrival	HEAVY	04L	0%	Departure	HEAVY	04R	14%
		04R	38%			09	16%
		15R	3%			14	0%
		22L	19%			15R	14%
		27	25%			22L	7%
		33L	14%			22R	28%
						27	3%
				33L	18%		
Arrival	LARGE	04L	7%	Departure	LARGE	04R	6%
		04R	31%			09	33%
		15R	2.6%			14	0%
		22L	17%			15R	3%
		27	30%			22L	2%
		32	1%			22R	34%
		33L	11%			27	6%
				33L	15%		
Arrival	PROP	04L	24%	Departure	PROP	04L	17%
		04R	14%			04R	5%
		15L	0%			09	11%
		15R	2%			14	0%
		22L	19%			15R	6%
		22R	2%			22L	1%
		27	18%			22R	42%
		32	11%			27	3%
		33L	7%			33L	14%
		33R	1%			33R	0%
Arrival	SMALL	04L	17%	Departure	SMALL	04R	4%
		04R	21%			09	37%
		15R	2%			14	0%
		22L	11%			15R	3%
		27	33%			22L	0%
		32	7%			22R	37%
		33L	9%			27	4%
				33L	14%		

Note: May not add to 100% due to rounding.

Source: Massport 2010 (Draft 2009 EDR Report)

A.2.3 2009 Flight Tracks, Profiles and Flight Track Use

For the purposes of noise modeling, representative flight tracks are modeled with backbone tracks surrounded symmetrically by sub-tracks which account for the dispersion of operations across a corridor. The noise model flight tracks were developed by updating previously modeled BLANS flight tracks to reflect 2009 operating conditions. Radar data from the Massport's NOMS was overlaid with the INM tracks and profiles from the BLANS 2007 INM study. The NOMS data was analyzed in accordance with the Protocol to develop flight track utilization percentages for each modeled backbone track for each aircraft category, operation type and runway. These utilization percentages were applied to the operations (by INM aircraft type) to distribute the operations by modeled flight tracks for each aircraft category. The modeled backbone tracks include corresponding subtracks with the utilization percentages.

INM includes a series of "standard" arrival profiles for use in the model, with variability in the altitude provided by trip length (effectively a surrogate for aircraft weight). The BLANS project also includes a series of INM custom profiles for frequently utilized and louder aircraft. These custom profiles were developed based on radar data analysis of specific operating configurations at Logan Airport, and were included in previous BLANS analyses.

A.3 2015 No Action Noise Model Input

INM input data represents forecast operations in 2015. The key differences between the Existing Conditions (2009) noise model inputs and the No Action Condition (2015) are weather conditions, forecast operations and the projected runway utilization for Logan Airport.

For the 2015 No Action condition, the weather data from the BLANS was averaged with the 2008 and 2009 weather data obtained from the National Oceanic and Atmospheric Administration (NOAA) to compute the annual average daily temperature, barometric pressure and the relative humidity. Weather conditions for the 2015 No Action and Proposed Action was 51.6° Fahrenheit, 30.01 inches Mercury, and 65.6% relative humidity.

A.3.1 2015 Aircraft Operations

Operations and the aircraft fleet mix for Logan Airport in 2015 were determined from the following sources: Boston Logan Airport Noise Study Future Planning Activity Level (FPAL) Design Day Flight Schedule (May 17, 2010) and FAA Terminal Area Forecast (TAF) downloaded July 2010. 2015 annual operations are summarized in **Table A.6**, and detailed AAD operations are provided in **Table A.7**.

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Table A.6

Logan Airport 2015 Annual Operations

Operation	Category	Day & Evening (7:00 am - 10:00 pm)	Night Shoulder (10:00 pm - 12:00 am & 6:00 am - 7:00 am)	Late-Night (12:00 am - 6:00 am)
Arrival	HEAVY ¹	17,298	2,883	1,602
	LARGE ²	117,142	11,676	4,089
	PROP ³	28,188	1,461	295
	SMALL ⁴	12,462	1,166	576
Departure	HEAVY ¹	16,978	4,805	0
	LARGE ²	119,398	10,985	2,537
	PROP ³	28,483	871	590
	SMALL ⁴	12,167	871	281
Total (Annual)		352,116	34,718	9,970

Notes:

¹ Jet aircraft weighing 255,000 pounds or more and Boeing 757s

² Jet aircraft weighing between 41,000 and 255,000 pounds

³ Propeller airplanes

⁴ Jet aircraft weigh less than 41,000 pounds

Source: FAA TAF 2015, Ricondo FPAL DDFS 2010, Massport 2010 (Draft 2009 EDR)

Table A.7

Logan Airport 2015 Annual Average Day Operations

(IFR Itinerant)

Aircraft Type	Category	Day (7am-10pm)		Night (10pm-7am)	
		Arrivals	Departures	Arrivals	Departures
717200	LARGE	9.65	8.78	0.88	1.76
737400	LARGE	0.88	0.88	0.00	0.00
737700	LARGE	37.74	36.86	5.27	5.27
737800	LARGE	21.06	22.82	4.39	2.63
747400	HEAVY	1.76	1.76	0.00	0.00
757300	LARGE	24.57	24.57	4.39	4.39
757PW	LARGE	6.14	5.27	1.76	2.63
767300	HEAVY	25.45	27.21	6.14	4.39
767CF6	HEAVY	0.00	0.00	0.88	0.88
777200	HEAVY	3.51	3.51	0.00	0.00
A300-622R	HEAVY	0.00	1.76	3.51	1.76
A310-304	HEAVY	1.76	0.88	0.00	0.88
A319-131	LARGE	35.98	36.86	4.39	4.39
A320-232	LARGE	39.49	46.51	13.16	6.14
A321-232	LARGE	8.78	8.78	0.88	0.88
A330-343	HEAVY	3.51	3.51	0.00	0.00
A340-211	HEAVY	8.78	7.02	0.00	1.76

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Table A.7

**Logan Airport 2015 Annual Average Day Operations
(IFR Itinerant)**

Aircraft Type	Category	Day (7am-10pm)		Night (10pm-7am)	
		Arrivals	Departures	Arrivals	Departures
BEC58P	PROP	49.16	50.74	2.43	1.62
CIT3	SMALL	4.00	5.62	0.81	0.00
CL600	SMALL	3.16	4.00	0.81	0.77
CL601	LARGE	39.69	39.69	2.43	2.43
CNA206	PROP	1.62	1.62	0.00	0.00
CNA500	SMALL	1.62	1.62	0.00	0.00
CNA750	SMALL	0.00	0.00	0.77	0.77
CRJ900	LARGE	11.32	9.70	0.00	1.62
DC1030	HEAVY	1.76	0.00	0.00	1.76
DC870	HEAVY	0.88	0.00	0.00	0.88
DHC6	PROP	2.39	3.16	0.00	0.00
DHC8	PROP	6.47	6.47	0.81	0.81
EMB145	LARGE	28.30	28.30	2.43	3.23
FAL900	SMALL	0.77	0.77	0.00	0.00
GASEPF	PROP	0.81	0.81	0.00	0.00
GASEPV	PROP	4.66	3.12	0.77	0.77
GIIB	LARGE	0.81	0.81	0.00	0.00
GIV	LARGE	3.12	2.35	0.00	0.00
GV	LARGE	41.12	43.54	3.23	0.81
LEAR25	SMALL	3.93	3.12	0.00	0.00
LEAR35	SMALL	6.31	5.46	0.77	0.00
MD11GE	HEAVY	0.00	0.88	1.76	0.88
MD83	LARGE	3.51	3.51	0.00	0.00
MD9025	LARGE	8.78	7.90	0.00	0.88
MU3001	SMALL	14.36	12.74	1.62	1.62
PA31	PROP	0.81	0.81	0.81	0.81
SF340	PROP	11.32	11.32	0.00	0.00
Total (Annual Avg. Day)		479.70	485.00	65.06	57.37
Total (Annual)		175090	177026	23748	20941

Note: Differences may exist due to rounding.

Source: FAA TAF 2015, Ricondo FPAL DDFS 2010

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A.3.2 2015 Runway Use

Forecast runway utilization for Logan Airport was determined from an average of runway operations for 2007, 2008, and 2009. This methodology reflected long-term average runway use as opposed to the runway use

from a single year. The configuration use for the 2015 No Action condition is shown in **Table A.8**, while **Table A.9** presents annual runway use for each year and the 3-year average used for the 2015 No Action condition.

Table A.8

**Logan Airport 2015 Runway Operating Configurations Utilization
(Annual Average Day, 6:00 am–Midnight)**

ID	Runways	Percent
C1	4/9	29.5%
C2	4/9	10.4%
C3/4	22/22	8.0%
C5	33-32/27	6.5%
C6	27/22	29.0%
C7	27-32/33	16.7%
Total		100%

Source: Massport 2010 (Draft 2009 EDR; runway operating configuration log)

Table A.9

Logan Airport Annual Runway Use Comparison

Runway	EDR AAD Rwy Use 2007		EDR AAD Rwy Use 2008		EDR AAD Rwy Use 2009		2015 AAD Rwy Use (3-Year Average)	
	ARR	DEP	ARR	DEP	ARR	DEP	ARR	DEP
04L	7%	2%	8%	3%	9%	3%	8%	2%
04R	29%	4%	28%	4%	28%	6%	28%	5%
9	0%	30%	0%	33%	0%	29%	0%	31%
14	0%	0%	0%	0%	0%	0%	0%	0%
15R	1%	4%	2%	3%	3%	4%	2%	4%
22L	15%	0%	17%	0%	17%	2%	16%	1%
22R	0%	34%	0%	37%	0%	35%	<1%	35%
27	36%	7%	33%	6%	28%	6%	32%	6%
32	2%	0%	2%	0%	3%	0%	2%	0%
33L	11%	19%	11%	16%	11%	15%	11%	17%
33R	0%	0%	0%	0%	0%	0%	<1%	0%
Sum*	101%	100%	101%	102%	100%	100%	100%	101%

Sources: 2007 Environmental Data Report (Massport 2008);
2008 Environmental Data Report (Massport 2009);
2009 Draft Environmental Data Report Database (Massport June 2010).

A.3.3 Flight Tracks, Profiles, and Use

The 2015 No Action includes previously approved measures from the BLANS study, including RNAV SIDs and STARs. The implementation of the RNAV SIDs began in February 2010. The BLANS Phase 1 RNAV SID procedures were environmentally evaluated in a separate analysis culminating in a Documented Categorical Exclusion and ROD dated October 16, 2007. The BLANS RNAV STARs were environmentally evaluated and resulted in a CatEx in 2011.

The No Action profiles from the BLANS study included custom arrival profiles for a subset of the jet aircraft, the frequently utilized and louder aircraft. No changes to the profiles were made under the No Action condition. INM standard arrival profiles, which typically model a continuous descent arrival, were used for the remaining aircraft. In addition to the lateral adjustments to flight tracks due to the implementation of the RNAV STAR procedures, vertical flight profiles were adjusted.

95% of aircraft that are appropriately equipped were assumed to use the RNAV SIDs and STARs off of the runway. Not all aircraft that were appropriately equipped can use the RNAV SID off the runway due to weather, trail separation, and level of traffic. Aircraft not equipped to utilize the RNAV SID remained on the current vector departure procedures. In the 2015 noise model, departures were assigned to a specific RNAV SID based on their destination. The detailed schedules developed for the BLANS included city pair information, which was associated with a departure fix and ultimately an RNAV SID.

Other flight tracks, profiles, and track utilization remained unchanged from Existing Conditions, with some exceptions

related to previous analysis (BONS Arrival Alternatives 6 and 11).

A.4 2015 Proposed Action Noise Model Input

The only change between the 2015 No Action and 2015 Proposed Action is implementation of the Runway 33L RNAV SID for RNAV-capable aircraft departures. All other assumptions modeled in the 2015 No Action Alternative remain valid.

Endnotes

- ¹ For more detailed information related to the Noise Analysis Protocol, see the BLANS project website at http://www.bostonoverflight.com/docs/ExistingConditions_AircraftNoise_2005_Noise%20Modeling%20Protocol%20_071210.pdf.