APPENDIX F
1997 NOISE COMPATIBILITY PROGRAM

This appendix presents the Lambert Airport’s approved 1997 Noise Compatibility Program (NCP) and shows the transition to the NCP measures that are recommended for this 2010 NCP Update.

F.1 STATUS OF 1997 NOISE COMPATIBILITY PROGRAM

The Lambert Airport’s 1997 Part 150 Study Update was submitted to the Federal Aviation Administration (FAA) in 1996 for review and approval; the FAA issued its Record of Approval (ROA) in January 1997. The 1997 Part 150 Study Update NCP recommended 21 measures: 11 noise abatement, 7 land use management, and 3 program management. Each measure is listed below as it is documented and numbered in the January 1997 ROA. The measure and the FAA action (“approved,” “approved in part,” or “no action required at this time”) are provided verbatim from the ROA. The status of each measure is provided in *italics*.

The measures from the 1997 NCP have been renumbered using a simplified numbering system organized in three categories. In addition to the numbering system, each measure has been given a short descriptive title. This numbering and titling system is used throughout this document. The numbering system was developed to group like measures together for future organization, so the measures listed below are not necessarily numbered in sequence. The measures are numbered as follows:

- Noise Abatement Measures: NA-1 through NA-11
- Land Use Management Measures: LU-1 through LU-14
- Program Management Measures: PM-1 through PM-3

The alternatives analysis for these measures and other alternative measures is provided in this document in Appendix G, *Noise Abatement Alternatives*, Appendix H, *Land Use Alternatives*, and Appendix I, *Program Management Alternatives*. The noise abatement, land use, and program management measures recommended for inclusion in this Part 150 update are presented in Chapter Four, *Recommended Noise Compatibility Program Measures*.

APPROVED OPERATIONAL STRATEGY MEASURES AND CURRENT STATUS

5.1.1 Revise Tower Order. The informal noise abatement program, as referenced in Appendix 9 of local FAA ATCT Order, should be revised. Previously approved measures that should be continued should be clarified in the Tower Order to adequately describe these procedures, and additional enhanced measures should be added to the Tower Order.
I. Continue Noise Control Procedures Previously Approved

- Between the hours of 6:00 a.m. and 11:00 p.m., Runway 6-24 is to be used primarily for commuter and general aviation (GA) operations and as a reliever runway for air carrier and Missouri Air National Guard (MOANG) operations as needed to prevent air traffic delays.

**APPROVED.** Note: air carrier and MOANG aircraft may be assigned to Runway 6-24 at the air traffic supervisors' discretion to minimize either arrival or departure delays. Nothing in this measure precludes local control (ATC) from retaining a missed approach aircraft in the Airport Traffic Area and assigning the aircraft to Runway 6-24 in order to expedite the movement of air traffic.

*Status: Implemented – this measure is included in the Tower Order. [NOTE: The 131st Fighter Wing of the MOANG relocated from Lambert in June 2009.]*

**RENUMBERED AS MEASURE NA-1 – RUNWAY 6-24 DAYTIME RUNWAY USE RESTRICTIONS**

- Between the hours of 11:00 p.m. and 6:00 a.m., Runway 6-24 will not be used for air carrier or military jet operations unless wind, weather, runway/taxiway closures, runway conditions, or navigational aid (NAVAID) outages dictate otherwise.

**APPROVED**

*Status: Implemented – this measure is included in the Tower Order.*

**RENUMBERED AS MEASURE NA-4 – RUNWAY 6-24 NIGHTTIME RUNWAY USE RESTRICTIONS**

II. Implement Additional/Enhanced Noise Control Procedures:

Establish nighttime (11:00 p.m. to 6:00 a.m.) departure corridors. Commercial and military jet departures on Runways 12L, 12R, and 30R should be cleared to maintain runway heading and those departing on Runway 30L should be cleared to maintain a heading that aligns with 305 degrees with turns at 4,000-feet Mean Sea Level (MSL) or three nautical miles (NM) from the end of the runway.

**APPROVED.** This procedure may not be strictly adhered to at all times. Weather or conflicting traffic may require variations in the procedure for safety reasons. Pilot technique may also be a factor in explaining variations that may be observed in the procedure from time to time.

*Status: Implemented – this measure is included in the Tower Order. As noted, weather or pilot technique may cause variations from heading.*

**RENUMBERED AS MEASURE NA-5 – NIGHTTIME DEPARTURE CORRIDORS**
• Continue to maximize west flow. Current use is about 60 percent west bound and 40 percent eastbound. By maximizing west flow, departures, which are typically louder than arrivals, will be concentrated over areas of lower population density.

**APPROVED.** This procedure may not be strictly adhered to at all times. Weather or conflicting traffic may require variations in the procedure for safety reasons. Pilot technique may also be a factor in explaining variations that may be observed in the procedure from time to time.

*Status:* A review of radar data from January through December 2008 shows west flow operations occurred approximately 52 percent of the time and east flow operations occurred approximately 48 percent of the time.

**RENUMBERED AS MEASURE NA-10 – MAXIMIZE WEST FLOW**

• Commercial jet aircraft to intercept the final approach course no closer than four NMs from the arrival runway end. Use of this procedure would enhance consistency along the arrival flight tracks and minimize "short turn ins".

**APPROVED.** This procedure may not be strictly adhered to at all times. Weather or conflicting traffic may require variations in the procedure for safety reasons. Pilot technique may also be a factor in explaining variations that may be observed in the procedure from time to time.

*Status:* Implemented – this measure is included in the Tower Order. As implemented in the Tower Order, commercial jet aircraft must intercept the final approach course no closer than five NMs from the runway end.

**RENUMBERED AS MEASURE NA-8 – COMMERCIAL JET AIRCRAFT INTERCEPT FINAL APPROACH NO CLOSER THAN FOUR NAUTICAL MILES FROM ARRIVAL RUNWAY END**

**III. Implement Two-Phased Daytime Departure Corridors**

• Phase I: Between the hours of 6:00 a.m. and 11:00 p.m., commercial airline and military jet aircraft departing from Runway 30L and 30R are cleared to fly headings of either 305 degrees or 335 degrees with turns on course at 2,500-feet MSL or five miles from the runway end whichever is sooner. Aircraft departing from runways 12L and 12R will be cleared to fly headings of 100 degrees or 120 degrees, with turns at 2,500-feet MSL or five NMs from the end of the runway (whichever is sooner). This is a continuing measure from the 1987 NCP. In addition, use of the Very High Frequency Omnidirectional Range (VOR)/Distance Measuring Equipment (DME) is programmed for...
installation in late 1996 or early 1997 to enhance the definition of noise abatement flight corridors to the extent possible.

**APPROVED**

*Status: Implemented – this measure is included in the Tower Order.*

- Phase II: Upon environmental approval, implement headings that align with corridors of 105, 120, 170, 285, 305, and 345 degrees, after reaching the middle marker with turns at 4,000-feet MSL or three NM (Alternative C). During preparation of the NCP, community groups to both the east and west of the Airport expressed an interest in having departing aircraft maintain their initial departure track for a greater distance prior to turning on course. This concept was discussed with representatives of the ATCT, and it was determined that in order to accomplish this goal without reducing the safety and efficiency of the Airport, a third departure heading would be necessary. Three alternatives were studied, with Alternative C as described above selected by the Airport as its preferred alternative. Implementation of Alternative C will reduce housing units within the DNL 65 dB and greater contour from 7,158 to 6,606. Population exposed to noise exposure levels of greater than DNL 65 dB would be reduced from 15,204 under the current (baseline) condition to 14,505 under Alternative C.

**NO ACTION REQUIRED AT THIS TIME:** This measure relates to flight procedures which are not required to be approved or disapproved within 180 days under Section 1 04(b) of the Aviation Safety and Noise Abatement Act of 1979, as amended, 49 United States Code (USC) 47S04(b). An FAA determination on this measure is anticipated within 30 days.

*Status: Not implemented – the FAA chose not to implement this measure since the 1997 EIS for the third parallel runway was being conducted, which would address the runway headings for three parallel runways. Alternative C from the 1997 NCP was not implemented.*

**RENUMBERED AS MEASURE NA-2 – DAYTIME DEPARTURE CORRIDORS**

5.1.2 Additional noise abatement measures

- **Airline notification.** The Airport will provide air carriers with scheduled service at Lambert information concerning the existing practices for full power maintenance runups and terminal pushbacks. The Airport will also encourage the use of the distant noise abatement departure procedure.

**APPROVED.** This measure is within the authority of the Airport Authority.
Status: The STLAA sent notification letters to air carriers to make them aware of the noise abatement recommendations.

RENUMBERED AS MEASURE NA-9 – AIRLINE NOTIFICATION

- Continue to prohibit nighttime (between 11:00 p.m. and 6:00 a.m.) full-power aircraft engine test runups without prior authorization from the airport Operations/Communications Center. When authorized, runups are to be conducted on the mid-field run up pad adjacent to taxiway B. Aircraft are to be aligned on a heading of 135 degrees, or into the current wind direction. Runups are to be limited to a duration of two minutes at maximum power.

APPROVED. Note: This run up restriction has been in effect since 1987.

Status: Implemented

RENUMBERED AS MEASURE NA-3 – PROHIBIT NIGHTTIME FULL-POWER AIRCRAFT ENGINE RUNUPS

- Implement Distant Noise Abatement Departure Procedure for Commercial Jet Aircraft as outlined in FAA Advisory Circular 91-53A. Note: This procedure is already in use by TWA\(^1\) and SWA, the dominant air carriers at the airport.

APPROVED

Status: Implemented – notifications were sent to air carriers providing notification of this recommended noise abatement measure.

RENUMBERED AS MEASURE NA-6 – DISTANT NOISE ABATEMENT DEPARTURE PROCEDURES

- Continue to encourage air carriers to use quiet push-back procedures between 6:00 a.m. and 11:00 p.m. and to discourage powerbacks between 11:00 p.m. and 6:00 a.m. from terminal gate positions.

APPROVED

Status: Implemented – all air carriers use push back procedures when departing.

RENUMBERED AS MEASURE NA-7 – QUIET PUSH BACK PROCEDURES

- Install additional navigational equipment. Installation of a precision approach for 30L and I2L LDA is recommended. The current LDA procedure requires the use of a step-down arrival (which is perceived by residents as noisier than a smooth descent) and has minima which do not allow the use of these procedures during many periods of

\(^1\) TWA was acquired by American Airlines in 2001.
adverse weather. Installation of the precision approach aids for 30L and 12L would provide arriving aircraft with electronic glide slope guidance and minimize the need for power adjustments on final approach.

**APPROVED**

*Status: Implemented – a CAT-I ILS has been installed on the approach to 30L and an LDA/DME is installed on the approach to 12L.*

RENUMBERED AS **MEASURE NA-11 – PRECISION APPROACH NAVIGATIONAL EQUIPMENT**

**APPROVED REMEDIAL STRATEGY MEASURES AND CURRENT STATUS**

### 5.2.1 Complete Land Acquisition Program.

STLAA will continue the ongoing acquisition program with the additional areas outlined in Chapter 3 page 3-29 and Table 3.5-1 [see Chapter 3 of the *1997 Part 150 Study Update*]. Priority will be given to the critical areas that are no longer viable and cannot provide service to residents.

Specific recommendations are as follows:

- Complete ongoing programs in Kinloch, East Kinloch, Southeast and Southwest Berkley, Ramona Hills, Bridgeton, Bridgeton Terrace, McNulty Manor, and Robertson.
- Acquire four mobile home parks that fall within the DNL 65 dB or greater contour (Airline, PEK, Luxury Living, and Colonial Manor). Note: the mobile home parks are being acquired at lower noise exposure levels than other residential units because they cannot effectively be sound proofed.
- Acquire apartment complexes that fall within the previous acquisition areas (Kinloch public housing, Tiffany Towne, Cricklewood duplexes, and Bridgeton Terrace apartments).
- Acquire vacant properties zoned for residential use within the DNL 70 dB noise contour or within the ongoing acquisition areas.
- Acquire the 88 properties in Ferguson pursuant to the Ferguson/Cool Valley court settlement and airport implementation plan.

The acquisition plan, when completed, will eliminate incompatible land uses from the DNL 70 or greater contour.

**APPROVED.** Note: Acquisition of vacant land is approved for noise purposes when it is necessary to prevent new, incompatible development. In this case, that incompatible development is highly likely because the land is near an urban area and is zoned for residential development. As a result of the zoning, local land use controls will not prevent residential development.
Status: Land acquisition projects are complete in Kinloch Southeast and Southwest Berkley, Ramona Hills, Bridgeton, Bridgeton Terrace, McNulty Manor, and Robertson. There are still parcels eligible for purchase in East Kinloch but the owners have not expressed an interest in selling and the STLAA has not actively pursued acquisition. There are also eligible parcels in Bridgeton, but either the owners have not expressed an interest in selling or an agreement has not been reached as to purchase price.

Of the four mobile home parks, Luxury Living and Colonial Manor have been purchased. When last contacted, the owners of Airline Mobile Home Park and PEK Mobile Home Park were not interested in selling.

Tiffany Towne, Cricklewood duplexes, and Bridgeton Terrace Apartments have been acquired. Some public housing remains in Kinloch.

There are some vacant parcels zoned for residential use in East Kinloch zoned for residential use in the East Kinloch area but the owners have not expressed an interest in selling and the STLAA has not actively pursued acquisition of those parcels.

The 88 properties in Ferguson that were to be purchased pursuant to the Ferguson/Cool Valley court settlement have all been acquired.

RENUMBERED AS MEASURE LU-1 – COMPLETE LAND ACQUISITION PROGRAM

5.2.2 Implement a Sound Insulation and Sales (Transaction) Assistance Program. A sound insulation and sales transaction assistance program would be implemented within the boundaries of the area delineated in Exhibit 3.5-2. The boundaries of the mitigation areas would change with the implementation of Alternative C. As described in 5.1.1 above, an FAA determination on Alternative C, a flight procedure, is not being issued at this time.

APPROVED. Note: the sound insulation program will be required to meet the provisions of FAA Order 5100.38.A, paragraph 712, if Federal funding is to be used.

Status: In progress – the sound insulation program was implemented and is still in progress. As of 12/31/2009, 1,091 homes have been sound insulated. Sales (Transaction) Assistance was not offered to or requested by any eligible property owner. NOTE: Alternative C, as described in Measure 5.1.1, was not implemented.

RENUMBERED AS MEASURE LU-2 – SOUND INSULATION AND SALES (TRANSACTION) ASSISTANCE PROGRAM

5.2.3 Develop Sound Insulation and Sales (Transaction) Assistance Procedures Manuals and Conduct a Test Program. Prior to initiating either the sound insulation or sales (transaction) assistance program, a test program will be undertaken by the Airport. Representative housing types will be selected from each community to participate in the test program.
The test will determine the scope of the improvements needed to sound insulate a home to meet the 45 dB interior noise level requirements. The test program for the Sales (Transaction) Assistance program will identify procedures and program administration techniques that are necessary to ensure that property values in the neighborhoods are not adversely impacted by the program. Prior to implementation of the Sound Insulation and Sales (Transaction) assistance programs, a procedures manual should be developed which outlines eligibility requirements.

**APPROVED.** Note: the sound insulation program will be required to meet the provisions of FAA Order 5100.38.A, paragraph 712, if Federal funding is to be used.

**Status:** Implemented – a pilot program and procedures for sound insulation were developed. Following completion of the pilot program the STLAA received approval from the FAA to move forward with the full sound insulation program as described in Measure 5.2.2. No procedures for Sales (Transaction) Assistance were developed because the program was never requested by any eligible property owners.

**RENUMBERED AS MEASURE LU-3 – SOUND INSULATION AND SALES (TRANSACTION) ASSISTANCE TEST PROGRAM**

### 5.2.4 Implement a Limited Easement Program

The airport proposes to purchase avigation easements from a limited number of residents located within the 1999 DNL 65 contour whose homes already meet the standards for noise level reduction (NLR), (a reduction of noise levels of DNL 25 dB from outside to inside) and which are not within the acquisition areas identified above. Note: The boundaries of the mitigation areas would change with the implementation of Alternative C. As described in 5.5.1 above (page 4), an FAA determination on Alternative C, a flight procedure, is not being issued at this time.

**APPROVED**

**Status:** In Process – this program has been implemented and as of 12/31/2009, 291 limited avigation easements have been purchased by the STLAA.

**RENUMBERED AS MEASURE LU-4 – LIMITED EASEMENT PROGRAM**
5.3.1 Implement Policy Measures including Comprehensive Planning and Discretionary Review. The Airport will encourage nearby communities to use these measures to ensure that incompatible uses do not continue to be developed within the areas exposed to significant levels of aircraft noise. The planning, development, and zoning departments of incorporated areas will be notified of development activities of the Airport and the changes in the noise contours so that their planning efforts will take aircraft noise impacts into consideration.

APPROVED. This preventative land use planning measure is within the authority of the local land use planning jurisdictions.

Status: Discretionary review was not implemented through by any of the surrounding jurisdictions. The STLAA would provide any assistance if requested by local jurisdiction.

RENUMBERED AS MEASURE LU-5 – COMPREHENSIVE PLANNING
RENUMBERED AS MEASURE LU-6 – DISCRETIONARY REVIEW

5.3.2 Implement Regulatory Measures such at compatible use zoning/ rezoning; environmental, height and hazard, and noise overlay zoning, and building codes. The Airport will encourage the various jurisdictions surrounding the airport to explore these measures as to their appropriateness for controlling incompatible land use development in noise-impacted areas.

APPROVED IN PART. The compatible use zoning, noise overlay, and building code provisions of this measure are approved. The height and hazard provision is disapproved for purposes of Part 150 because it is not related to noise compatibility. This disapproval for Part 150 purposes does not constitute an FAA determination under the provisions of 14 CFR Part 77.

Status: Partially implemented – local jurisdictions have the responsibility for implementing compatible use zoning and other land use control. The STLAA continues to recommend appropriate measures for preventing development incompatible for aircraft noise. Chapter Two, Affected Environment discusses the land use controls implemented by the various jurisdictions surrounding STL.

RENUMBERED AS MEASURE LU-7 – GENERAL PURPOSE / COMPATIBLE USE ZONING
RENUMBERED AS MEASURE LU-8 – NOISE OVERLAY ZONING
RENUMBERED AS MEASURE LU-9 – BUILDING CODES

5.3.3 Use Advanced Land Acquisition, Where Necessary. Advanced land acquisition is where an airport acquires land to preclude future incompatible development. This measure is to be implemented by the Airport when there is no other course of action to ensure that incompatible residential uses do not continue to develop within the DNL 65 dB or greater contour.
Acquisition of vacant land is approved for noise purposes when it is necessary to prevent new, incompatible development. In this case, that incompatible development is highly likely because the land is near an urban area and is zoned for residential development. As a result of the zoning, local land use controls will not prevent residential development.

Status: Not implemented – no vacant land was targeted for advanced land acquisition.

RENUMBERED AS MEASURE LU-10 – ADVANCED LAND ACQUISITION

5.4.1 Aircraft Monitoring System. Automated systems that gather, maintain, summarize, and report monitoring results are currently available, and the Airport wishes to upgrade its monitoring program to incorporate these enhancements in monitoring and report production. An integrated monitoring system that combines noise measurements and flight track surveying is recommended to assist the Airport and FAA ATCT personnel in the continued implementation of the operational strategies.

APPROVED. Note: For reasons of aviation safety, this approval does not extend to the use of monitoring equipment for enforcement purposes by in-situ measurement of any pre-set noise thresholds. The FAA notes that the Lambert NCP does not include such thresholds.

Status: Implemented – the Airport operates an eTAMIS Aircraft Monitoring System.

RENUMBERED AS MEASURE PM-1 – AIRCRAFT MONITORING SYSTEM

5.4.2 Community Coordination. The Airport responds to aircraft noise complaints, supervises the aircraft noise monitoring system, and coordinates with surrounding communities. The airport intends to maintain or enhance community coordination via the following programs:

- The Airport will continue to address community aircraft noise concerns as identified by individuals or communities regarding operational mitigation measures and remedial land use measures, provide technical assistance to local jurisdictions for land use management measures that relate to aircraft noise, and provide community outreach through periodic news releases/newsletters.

- Neighborhood committees provide a forum for the Airport and the neighboring communities to exchange information and ideas on noise abatement. The Airport Neighborhood Committee will be established at Lambert to provide such a forum. The committee will work directly with the Airport and provide community input to the office on matters pertaining to on-airport and off-airport environmental mitigation programs and planning.
APPROVED

Status: Implemented – Lambert operates the Airport Noise Management Office to respond to aircraft noise complaints, supervises the aircraft noise monitoring system, and coordinates with surrounding communities. The Airport Neighborhood Committee was established but has not met regularly

RENUMBERED AS MEASURE PM-2 – COMMUNITY COORDINATION

5.4.3 Noise Compatibility Program Update. Airport management will review and update the NCP and consider refinements and revisions when necessary. A complete plan update may be necessary in approximately five years to respond to changing conditions at the Airport, in the local area, and for the aviation industry.

APPROVED

Status: In Process – this Part 150 Noise Compatibility Update represents the continuation of this measure.

RENUMBERED AS MEASURE PM-3 – NOISE COMPATIBILITY PROGRAM UPDATE