

VOLUME 1

FAR PART 161 APPLICATION FOR A PROPOSED CURFEW
Bob Hope Airport

Submitted by
Burbank-Glendale-Pasadena Airport Authority
Burbank, California

Prepared by
Jacobs Consultancy

in association with
Conklin & de Decker Aviation Information
Finegold & So
Jon P. Nelson, PhD
The SGM Group

February 2009



**APPLICATION FOR FEDERAL AVIATION ADMINISTRATION APPROVAL OF A
MANDATORY CURFEW AT BOB HOPE AIRPORT, BURBANK, CALIFORNIA**

The Burbank-Glendale-Pasadena Airport Authority (the Airport Authority) does hereby submit to the Federal Aviation Administration an application for approval of a mandatory curfew on flights to and from Bob Hope Airport between the hours of 10:00 p.m. and 6:59 a.m.

Attached hereto is the analysis specified in 14 CFR Part 161, Section 161.305 (FAR Part 161) demonstrating the Airport Authority's compliance with the provisions of FAR Part 161.

The Airport Authority warrants that it is the entity legally empowered to implement the proposed curfew.

Submitted this _____ day of _____, 2009.

Signed

Attest

PROPOSED RESTRICTION

This section includes the draft resolution of the Burbank-Glendale-Pasadena Airport Authority approving the proposed restriction – a mandatory curfew on operations at Bob Hope Airport from 10:00 p.m. through 6:59 a.m., subject to certain exceptions. It also includes the text of the proposed curfew, which would be adopted as a new noise rule.

RESOLUTION NO. ____

**A RESOLUTION OF THE BURBANK-GLENDALE-PASADENA
AIRPORT AUTHORITY COMMISSION
ESTABLISHING A MANDATORY NIGHTTIME CURFEW AND
AMENDING THE NOISE RULES FOR THE BOB HOPE AIRPORT**

WHEREAS, the Burbank-Glendale-Pasadena Airport Authority (“Authority”) has a long-standing commitment to the reduction of adverse noise impacts of flight operations at Bob Hope Airport (“Airport”) on residential areas in the Cities of Burbank and Los Angeles; and

WHEREAS, the Authority has adopted a Noise Impact Area Reduction Plan identifying various mitigation measures and abatement measures, including Noise Rules, as a means to further reduce adverse noise impacts of the Airport on surrounding communities; and

WHEREAS, the Authority has completed the analysis specified in 14 Code of Federal Regulations Part 161 (“F.A.R. Part 161 Study”) to support the establishment of a mandatory nighttime curfew on flights to and from the Airport; and

WHEREAS, the Authority has submitted the F.A.R. Part 161 Study to the Federal Aviation Administration for approval of a mandatory nighttime curfew on flights to and from the Airport; and

WHEREAS, the Federal Aviation Administration has approved a mandatory nighttime curfew on flights to and from the Airport.

NOW, THEREFORE, THE AIRPORT AUTHORITY COMMISSION RESOLVES AS FOLLOWS:

Section 1. Establishment of Mandatory Nighttime Curfew. The Noise Rules are amended by adding a new Rule 13 establishing a mandatory nighttime curfew to read as set forth in Exhibit “A” attached hereto.

Section 2. Preservation of Noise Rules. Except as expressly supplemented by this Resolution and the attached Exhibit “A,” all of the provisions of the Noise Rules shall remain unaltered and in full force and effect.

Adopted this ____ day of _____.

President
BURBANK-GLENDALE-PASADENA
AIRPORT AUTHORITY

[DRAFT]

[DRAFT]

Attest:

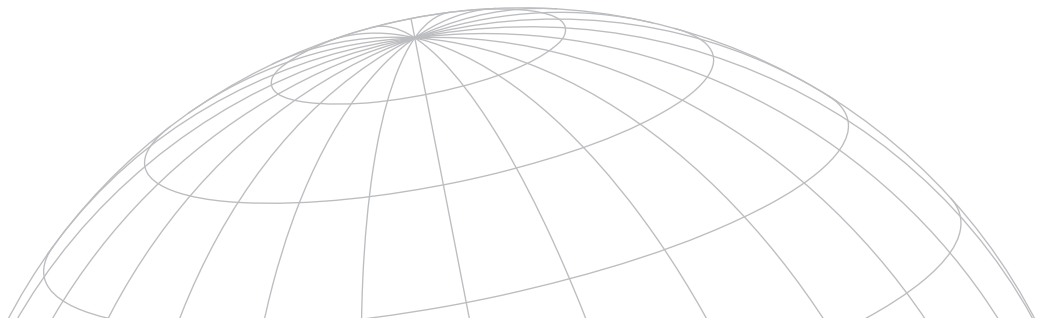
Secretary
BURBANK-GLENDALE-PASADENA
AIRPORT AUTHORITY

EXHIBIT "A"
Mandatory Nighttime Curfew

RULE 13

- A. Except as provided in Paragraphs (B) and (C), between the hours of 10:00 p.m. and 6:59 a.m.:
 - 1. No landings at Bob Hope Airport shall be permitted.
 - 2. No takeoffs from Bob Hope Airport shall be permitted.
- B. The following aircraft shall be permitted to land at or takeoff from Bob Hope Airport between the hours of 10:00 p.m. and 6:59 a.m.:
 - 1. Law enforcement aircraft, firefighting aircraft, disaster relief aircraft and military aircraft.
 - 2. Medical flight aircraft engaged in active emergency operations for the transportation of patients or human organs.
- C. Aircraft other than those specified in Paragraph (B) shall be permitted to land at or takeoff from Bob Hope Airport between the hours of 10:00 p.m. and 6:59 a.m. only under the following circumstances:
 - 1. In the event such landing or takeoff results from the existence of a declared emergency.
 - 2. In the event such landing or takeoff results from the use of Bob Hope Airport as a weather alternate.
 - 3. In the event such landing or takeoff results from a weather, mechanical, or air traffic control delay; provided, however, this exception shall not authorize any landing or takeoff between the hours of 11:00 p.m. and 6:59 a.m.
- D. Upon request of the Authority, the aircraft operator shall document or demonstrate: (i) the precise emergency condition(s) resulting in a landing or takeoff between the hours of 10:00 p.m. and 6:59 a.m.; or (ii) the precise weather, mechanical, or air traffic control condition(s) resulting in a landing or takeoff between the hours of 10:00 p.m. and 11:00 p.m.
- E. Any aircraft operator violating the provisions of this Rule shall, in addition to any other available remedies (including injunctive remedies), be subject to civil penalties for each unauthorized landing and unauthorized takeoff as follows:

1. For the first violation within a 12-month period – Three Thousand Six Hundred Seventy-One Dollars (\$3,671)
2. For the second violation within a 12-month period – Seven Thousand Three Hundred Forty-Two Dollars (\$7,342)
3. For the third violation within a 12-month period – Eleven Thousand Thirteen Dollars (\$11,013)
4. For the fourth violation within a 12-month period – Fourteen Thousand Six Hundred Eighty-Four Dollars (\$14,684) and mandatory action to ban the aircraft operator’s flight operations at Bob Hope Airport for a twelve (12) month period.



EXECUTIVE SUMMARY

FAR PART 161 APPLICATION FOR A PROPOSED CURFEW
Bob Hope Airport

Submitted by
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Burbank, California

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BOB HOPE AIRPORT, FAR PART 161 APPLICATION
EXECUTIVE SUMMARY

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Bob Hope Airport FAR Part 161 Application

Executive Summary

PURPOSE OF STUDY

The Burbank-Glendale-Pasadena Airport Authority (the Airport Authority), the owner and operator of the Bob Hope Airport, has adopted by resolution the goal to “eliminate or significantly reduce nighttime noise at [Bob Hope] Airport now and in the future.”

This Part 161 Study, as required by applicable federal law, studies the likely impacts, including costs and benefits, of adopting a full nighttime curfew to achieve the stated goal. Under federal law, specifically Federal Aviation Regulation (FAR) Part 161, Subpart D (Part 161), Federal Aviation Administration (FAA) approval must be obtained by the Airport Authority prior to the implementation of a curfew on flights. Part 161 requires that a proposed restriction satisfy six statutory conditions, explained in greater detail below, in order to be approved by FAA. In accordance with Part 161 requirements, two less restrictive alternatives, a departure curfew and noise-based curfew, were also analyzed and are described below.

A central tenet of the six statutory conditions is that a restriction on aircraft operations to reduce noise (often referred to as an abatement measure) must be more cost-effective than a measure that lessens the impact of noise (often referred to as a mitigation measure). The primary mitigation measure currently employed by the Airport Authority is its ongoing residential acoustical treatment program. Therefore, a focus of this study was to quantify the marginal savings to that mitigation program versus the marginal cost to aircraft operations of implementing a curfew as an abatement measure.*

FINAL APPLICATION

This final Application (“Application”) seeks federal approval of a proposed mandatory nighttime curfew at the Bob Hope Airport. This Application follows the preparation and circulation for comment of an Official Draft Application (“draft Application”), dated March 2008, to the public and interested stakeholders, including the FAA. This Application tracks the draft Application with the following substantive modifications.

The Application includes a summary of comments received on the draft Application. The summary is included in Appendix F.

*The benefit-cost analysis undertaken for this study analyzed the projected cost and benefits through 2015.

The Application includes responses, although responses are not required by federal law, to a number of comments which were raised by multiple stakeholders. These common comments and response are included in Appendix F, at F.2.4.

A central premise of the Authority's responses to comments is that because the FAA has allowed significant restrictions at Southern California airports since the enactment of Part 161, the proposed restriction, as structured, cannot violate Federal law. Specifically, in 2003, the FAA allowed elements of an amended settlement agreement in connection with the John Wayne Airport in Orange County and, in 2005, the FAA allowed elements of a settlement agreement involving, in part, a reduction in the number of gates at Los Angeles International Airport in Los Angeles County in connection with the LAX Master Plan. These restrictions, coupled with other curfews already in place at Southern California Airports, render untenable any claim that a nighttime restriction at the Bob Hope Airport violates Federal law. The Airport Authority only seeks protections similar to protections already in place at other Southern California airports.

It should be noted that comments by the FAA, and others, raised questions concerning the environmental review necessary for the proposed curfew. Specifically, the FAA indicated in its comments that the Application might not be subject to the National Environmental Policy Act of 1969 ("NEPA") categorical exclusion identified in the FAA Handbook because there might be air and noise impacts at other airports caused by shifting flights and because of the possibility of public controversy. The FAA, in its comments, further offered to meet with the Airport Authority. The Airport Authority staff subsequently met with the FAA to obtain guidance as to what further environmental documentation might be necessary to have the Application deemed complete. Following discussion and the sharing by the Airport Authority of a draft scope of work with the FAA for the Authority's consultant to prepare additional environmental analysis, the consultant has prepared an analysis of air quality impacts associated with the shift in flights and related ground transportation at the airports most likely to be impacted by shifting flights in the Los Angeles region. This analysis, employing FAA's Emissions and Dispersion Modeling System, shows impacts falling below the *de minimis* thresholds (under the standards endorsed by the FAA) on air quality both for the Los Angeles South Coast Air Basin and for Ventura County. The consultant also prepared analyses of the potential noise impact of flights likely to be shifted from the Bob Hope Airport to the Van Nuys or Ontario airports and included it in the supplemental documentation. That analysis, employing FAA's Integrated Noise Model, shows a CNEL dB change of less than 1.5 dB (the criteria for "significant impact" endorsed by the FAA) at both the Van Nuys and Ontario airports.

In short, the documentation demonstrates that no significant noise impacts are expected at either the Van Nuys Airport or the LA/Ontario International Airport nor are significant air quality impacts in the South Coast Air Quality Management District expected as a result of the proposed mandatory nighttime curfew at the Bob Hope Airport. The Application therefore is accompanied by the necessary

documentation for a categorical exclusion under NEPA, 42 U.S.C. § 4321 et seq., as required by FAR Part 161, Subpart D, Section 161.305(c) and FAA Orders 1050.1E and 5050.4B.

Finally, various typographical and numerical errors have been corrected and clarifications have been added to the draft Application. A selected list of these corrected errors and added clarifications is set forth in a Table 1-1, Summary of Substantive Changes in Chapter 1, Introduction.

PROPOSED CURFEW

The Airport Authority proposes to adopt a mandatory curfew prohibiting all takeoffs and landings between 10:00 p.m. and 6:59 a.m., with limited exceptions, as the best measure to achieve its announced goal of eliminating or significantly reducing nighttime noise at the Airport.* This measure should also satisfy the six statutory conditions required for FAA approval. In particular, the projected benefits of this proposed restriction outweigh the projected costs, with a benefit-cost ratio of 1.40.

The full curfew would produce \$67.20 million in monetized benefits and \$47.92 million in monetized costs. The benefits of the proposed curfew would include savings to the acoustical treatment program, increased residential property values, and a decrease in disturbance to residents near the airport. This decrease in nighttime disturbance would be comparable in type to the benefits currently enjoyed by residents in the vicinity of those Southern California airports which already have mandatory nighttime restrictions in place. Those airports include John Wayne-Orange County (curfew on commercial arrivals and on all departures), Long Beach (cap and nighttime curfew on air carrier operations), San Diego International (departure curfew), and Santa Monica (departure curfew).

Cargo carriers and couriers would experience the largest share of the costs.

LESS RESTRICTIVE CURFEWS STUDIED

The two less restrictive curfews studied, while not satisfying the Airport Authority's goal as completely as the full curfew, would achieve part of the goal in significantly reducing nighttime noise and should also satisfy the six statutory conditions set forth in Part 161 for FAA approval.

The departure curfew would produce \$55.65 million in monetized benefits and \$17.69 million in costs. This restriction has significantly less benefits in noise reduction than the full curfew. By permitting nighttime arrivals, this alternative is the least disruptive to regional and national air service of the three alternatives considered. It also has significantly less costs than a full curfew. In particular, the

*Law enforcement, military, and emergency flight operations would be exempted from the curfew. In addition, aircraft that are delayed for weather, mechanical, or air traffic control reasons would be allowed to land or takeoff during a one-hour "grace period" from 10:00 p.m. to 11:00 p.m.

two express cargo carriers currently using the airport would be permitted to continue operating as they are today (FedEx and UPS).

The noise-based curfew is projected to produce \$60.29 million in monetized benefits and \$41.13 million in costs. This alternative would reduce noise the least of the three curfews, while it has costs higher than the departure curfew. This alternative would enable the continued operation of relatively quiet aircraft (mostly propeller driven) that, taken individually, contribute less to nighttime noise than most turbojet aircraft, allowing the continued operation of the existing regional courier service (Ameriflight).

PROPOSED ENFORCEMENT

Assuming FAA approval of the proposed curfew, the Airport Authority would adopt a binding resolution implementing the curfew, including the following schedule of fines and penalties.

1st Violation – fine of \$3,671, which is based on the existing Airport Noise Rule 9

2nd Violation in a 12-month period – 200% of the fine for 1st violation (\$7,342)

3rd Violation in a 12-month period – 300% of the fine for 1st violation (\$11,013)

4th Violation in a 12-month period – 400% of the fine for 1st violation (\$14,684) and action to ban access or terminate lease for a 12-month period

In keeping with Airport Authority policy, the fines would be adjusted annually on April 1, based on the January Consumer Price Index for the “Los Angeles-Riverside County Area -- All Urban Consumers.”

FACTUAL BACKGROUND OF THIS PART 161 STUDY

In preparing this Part 161 Study, the Airport Authority staff and its consultants originally considered a variety of possible restrictive measures that had either been suggested in the Airport Authority’s Noise Compatibility Program Update or by interested members of the public. The Airport Authority sponsored five listening sessions in the communities around the Airport. The purpose of the sessions was to explain the process that the Airport Authority intended to follow in the FAR Part 161 Study and to allow interested people to express the concerns and issues they wanted to see addressed in the Study.

Technical work accomplished included: (1) the preparation of baseline forecasts of aviation activity for 2005, 2008 and 2015 (i.e. without restrictions); and (2) the preparation of baseline noise exposure maps and an analysis of noise impacts.

In October 2003 the Airport Authority’s consultant submitted to the FAA a request for comment and guidance in the form of a preliminary evaluation of a full nighttime curfew on arrivals and departures which was then being studied. The preliminary

evaluation presented the Airport Authority's then-proposed approach to the benefit-cost analysis required by Part 161. (That earlier approach used different assumptions and methodologies for measuring costs and benefits than the current analysis.)

In May 2004 the FAA provided comments on the draft "Evaluation" document. FAA declared that the initial approach to the draft analysis of the benefits of the curfew was unacceptable to the FAA in several respects, including the consideration of benefits outside the 65 CNEL contour and the quantification and monetization of nighttime awakenings in any benefit-cost analysis of the restriction. The FAA also noted that the Airport Authority's current voluntary nighttime curfew appeared to have a compliance rate of nearly 97%, apparently questioning whether any further restriction at night could be warranted. Finally, the FAA noted that the proposed full curfew, to the extent it impacted so-called "quieter aircraft," might be unjustly discriminatory.

Following receipt of the FAA comments, the Airport Authority reexamined its approach to the Part 161 Study. Based on FAA guidance, the following changes were made to the approach:

1. To limit the use of the statistical property value model* to the area within the 65 CNEL contour in estimating the increase in property values.
2. To estimate future savings in the ongoing acoustical treatment program by the reduction in the size of the projected 65 CNEL contour in 2015, attributable to implementation of a curfew.
3. To develop a basis for quantifying and monetizing the value of the alternative curfews to residents within the 65 CNEL contour through a contingent valuation survey of residents near Bob Hope Airport and the nearby Van Nuys Airport.
4. To study a modified noise-based curfew which would allow the continued operation of so-called "quieter aircraft," but prohibit nighttime operations by those with a higher potential for causing nighttime noise, including regional jets, which could disturb nearby residents.
5. To update the forecast of operations with and without the three curfews.
6. To conduct interviews of Airport tenants (e.g., airlines, fixed base operators, and cargo carriers) concerning the potential costs of the three curfews.

Based on the additional inquiries and analysis, the Airport Authority's consultants shared preliminary conclusions in August 2007 with the Airport Authority which

*The model is designed to reflect the implicit price set by the market for aspects of a property that resemble public goods and from which a property owner derives enjoyment or a sense of well-being (such as environmental amenities, including low noise levels.) Among economists, these are known as hedonic property value models.

indicated that if no benefits outside the projected 65 CNEL contour were included, the only restriction which appeared to have a “reasonable chance that expected benefits ... will equal or exceed expected costs” was the departure curfew. The consultant also informed the Airport Authority that the benefit-cost ratio of the full curfew, while less than 1.0, was higher than for the noise-based limit.

The Airport Authority staff and consultants next reexamined FAA program guidance relative to the residential acoustical treatment program, as the projected savings in this program would be the largest monetized benefit of each of the three curfews. Current FAA guidance (Section 810.b of FAA Order 5100.38C, Airport Improvement Program Handbook) expressly authorizes the use of federal funding to acoustically treat dwellings outside an airport’s 65 CNEL contour if they are “contiguous to the project area, if necessary to achieve equity in the neighborhood. Neighborhood or street boundary lines may help determine what is reasonable...”^{*} The Airport Authority has been using this guidance in administering its ongoing acoustical treatment program.

Consistent with this FAA guidance, the consultant recalculated the projected monetary savings from the forecasted reduction in residences near the Airport which would be eligible for federally funded acoustical treatment through 2015. These savings increased the benefits of all three curfews. The Airport Authority’s consultant reported this information to the Airport Authority and staff and further informed the staff that the full curfew and the two lesser curfews were now likely to satisfy all six statutory conditions for FAA approval.

The projected benefits and costs of the three curfews are presented in Table 1.

	Full Curfew	Departure Curfew	Noise-Based Curfew
Monetary Benefits	\$67,201	\$55,649	\$60,290
Monetary Costs	\$47,918	\$17,694	\$41,131
Net Benefits	\$19,283	\$37,9556	\$19,159
Benefit-Cost Ratio	1.40	3.15	1.47

Note: Cost and benefits expressed in net present value, 2006 dollars. “These numbers differ slightly from the draft due to minor corrections in response to comments and further review. The changes are not material as they do not change the overall positive ratios of the proposed restrictions.”

^{*}FAA Order 5100.38C, Airport Improvement Program Handbook, Section 810.b, June 28, 2005.

THE SIX STATUTORY CONDITIONS FOR FAA APPROVAL

Part 161 requires that the application seeking FAA approval of the full mandatory curfew must include evidence showing that the proposed restriction:

1. Is reasonable, nonarbitrary, and nondiscriminatory
2. Does not create an undue burden on interstate and foreign commerce
3. Maintains safe and efficient use of the navigable airspace
4. Does not conflict with Federal law
5. Was developed through a process that afforded adequate opportunity for public comment
6. Does not create an undue burden on the national aviation system

All three curfews studied meet the above six conditions. The findings with respect to each follow.

Condition 1: Proposed Restriction Is Reasonable, Nonarbitrary, and Nondiscriminatory

The airport sponsor must first demonstrate that the proposed restriction is reasonable, nonarbitrary, and nondiscriminatory. Essential information needed to demonstrate this condition includes:

- Evidence that a current or projected noise problem exists
- Evidence that the proposed action could relieve the problem
- Evidence that other available remedies are infeasible or would be less cost-effective
- Evidence that the noise or access standards are the same for all aviation user classes or that the differences are justified

Evidence of Nighttime Noise Problem

The Airport Authority has adopted a number of measures to abate nighttime noise, including the current voluntary nighttime curfew on air carriers. The Airport Authority's residential acoustical treatment program currently attempts to mitigate the impact of noise on residents inside the Airport's current 65 CNEL noise contour (including contiguous properties outside the 65 CNEL contour eligible for Federal funding assistance). Notwithstanding the Airport Authority's efforts and the historical reduction in the Airport's 65 CNEL noise contour since 1978 (shown in Figure 1), the 65 CNEL contour is now forecasted to grow, consistent with published

forecasts of growth in operations at all commercial service airports in Southern California over the next decade.

At Bob Hope Airport, passenger enplanements (passengers boarding at the Airport) are projected to increase from 2.8 million in 2005 to 3.6 million in 2015 – a 2.8% average annual increase. The annual growth rate in passenger carrier operations (takeoffs and landings), however, is projected to be 2.0%. The difference is accounted for by the projected higher load factors and aircraft with greater seating capacity that will be used in the future.

Total aircraft operations are projected to increase from 136,000 in 2005 to 146,000 in 2015, an annual growth rate of 0.7%. Most of the growth is projected among business jets (4.4% annual growth rate), mainline air carrier jets (1.8% annual growth rate), smaller regional jets (3.4% annual growth rate), and large and medium turboprops (3.7% annual growth rate). These increases will be partially offset by a substantial decline in operations by light propeller aircraft – an annual rate of decline of over 12%.

The growth in the contour will expand the area requiring additional acoustical treatment beyond the existing program through 2015. The projected contours are shown in Figure 2.

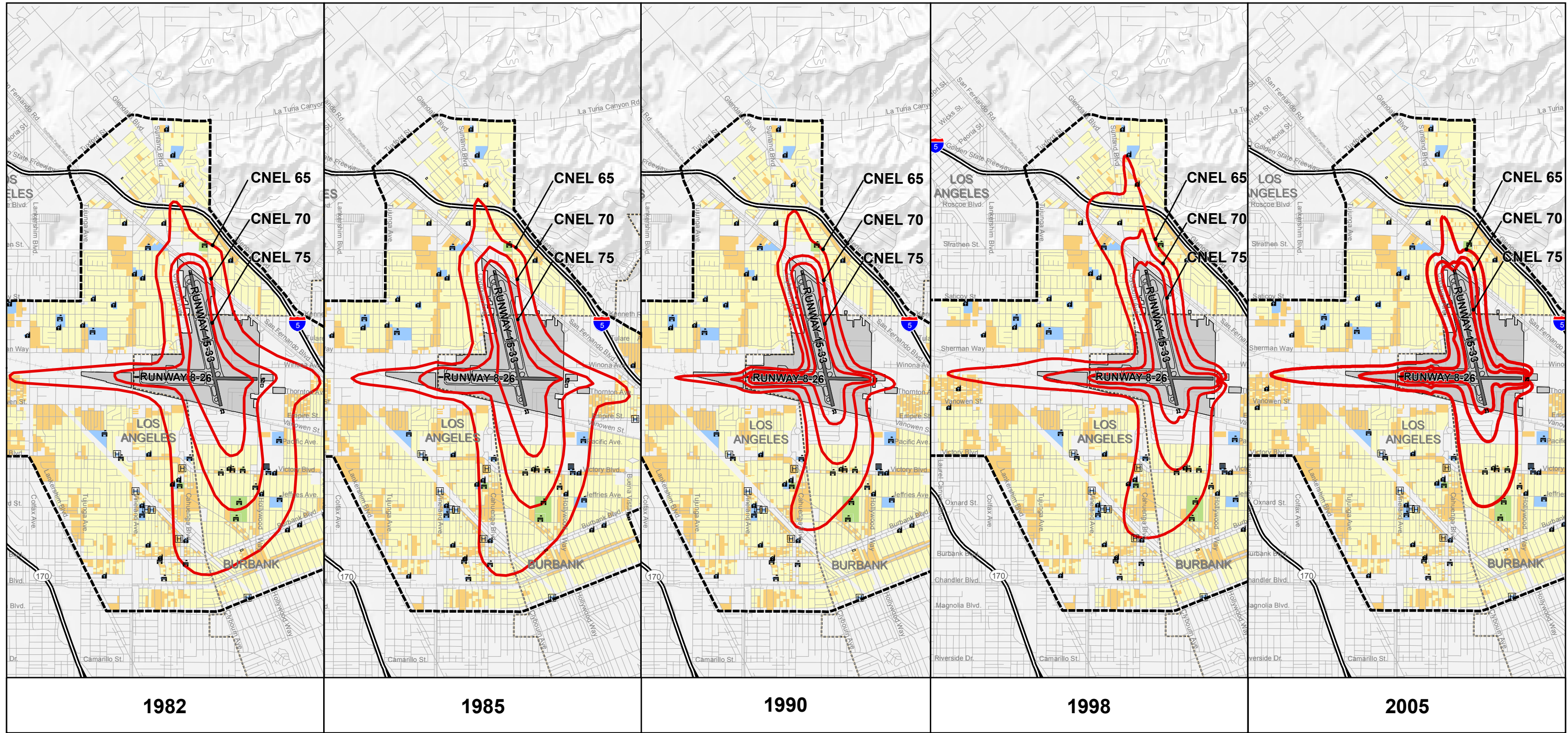
Proposed Curfew Will Relieve Noise Problem

The proposed full curfew would essentially eliminate the nighttime noise problem. The other two curfews studied would substantially reduce the nighttime noise problem. Figure 3 shows the reduction in noise exposure with the curfews projected for 2008 and 2015.

The full curfew produces the greatest reduction in noise, followed by the departure curfew, then the noise-based curfew. The full curfew would reduce the noise-sensitive area inside the 65 CNEL contour by 55%, the departure curfew by 46% and the noise-based curfew by 44%.

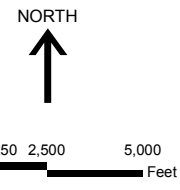
The reduction in the size of the projected 65 CNEL contours with the three curfews would reduce the size of the area requiring future acoustical treatment, producing a potential savings in treatment costs and hastening the provision of noise relief to the affected homeowners.

According to the findings of the contingent valuation survey, residents who are particularly sensitive to being awakened by aircraft noise would be willing to pay a premium for their housing if they could reside in the same home without the intrusion of nighttime noise. These residents would realize a substantial benefit with any of the three curfews.



LEGEND

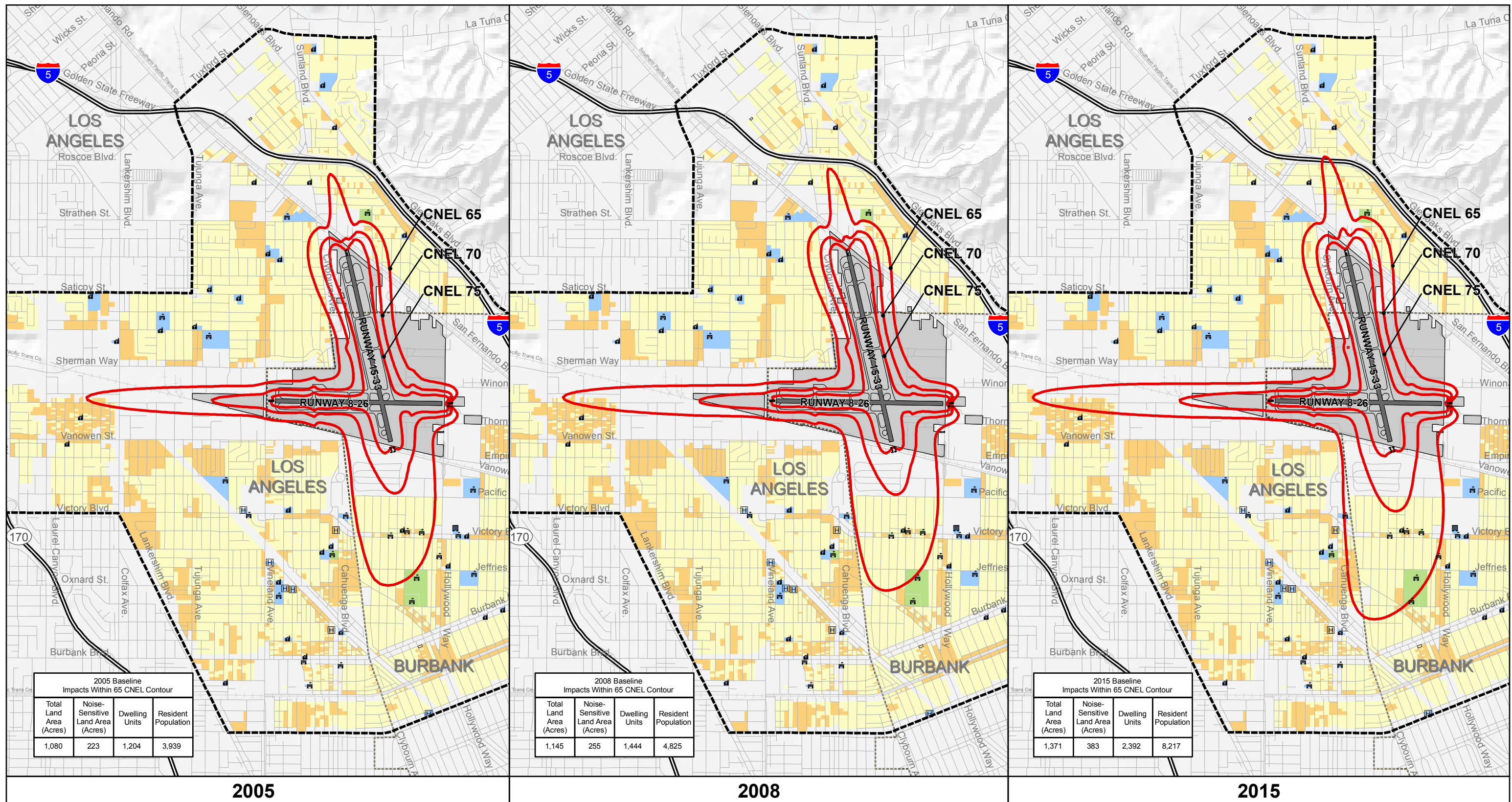
- CNEL Contour
- Detailed Land Use Study Area
- Airport Boundary
- Municipal Boundary
- Freeways
- Roads
- Single-Family Residential
- Multi-Family Residential
- Noise-Sensitive Institutions
- Sound-Insulated School
- Schools, Preschools
- Places of Worship
- Hospital
- Library



Sources:
 1982 - CH2M HILL, Noise Abatement Plan, 1983
 1985 - KMPG Peat Marwick, FAR Part 150 Noise Compatibility Program, Vol. 1: Noise Exposure Maps, 1987.
 1990 - KMPG Peat Marwick, Final EIS, Land Acquisition and Replacement Terminal Project, Vol. 1: Documentation, 1995.
 1998 - Coffman Associates, Burbank-Glendale-Pasadena Airport FAR Part 150 Noise Compatibility Study, Noise Exposure Maps.
 2005 - Jacobs Consultancy, 2007

Figure ES-1
**HISTORICAL CHANGES
 IN NOISE EXPOSURE AT BOB HOPE AIRPORT**
 FAR Part 161 Study for Bob Hope Airport
 Executive Summary
 January 2009





LEGEND

- Baseline CNEL Contour*
- Detailed Land Use Study Area
- Airport Boundary
- Municipal Boundary
- Freeways
- Roads
- Single-Family Residential
- Multi-Family Residential
- Noise-Sensitive Institutions
- Sound-Insulated School
- Schools, Preschools
- Places of Worship
- Hospital
- Library

NORTH



0 850 1,700 3,400 Feet

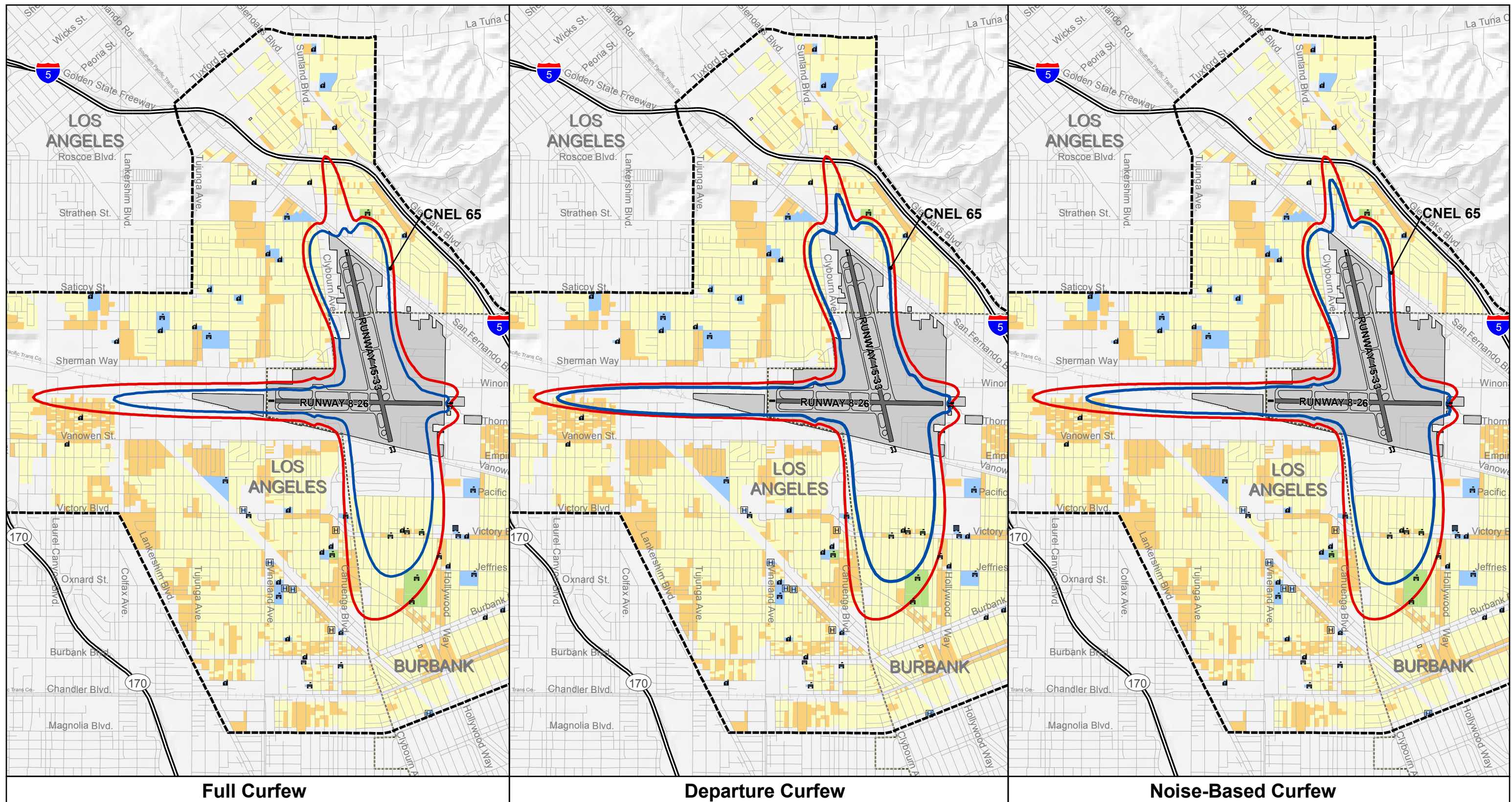


Figure ES-2
NOISE EXPOSURE FOR EXISTING AND FORECAST BASELINE CONDITIONS
 FAR Part 161 Study for Bob Hope Airport
 Executive Summary
 January 2009



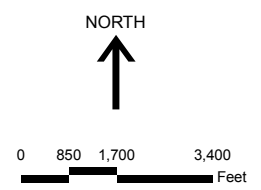
*Conditions assuming no additional aircraft operating restrictions.

Sources: BGPAA Geographic Information System; Noise Analysis by Jacobs Consultancy, 2007.



LEGEND

- Baseline CNEL Contour*
- Alternative Curfew CNEL Contour
- Detailed Land Use Study Area
- Airport Boundary
- Municipal Boundary
- Freeways
- Roads
- Single-Family Residential
- Multi-Family Residential
- Noise-Sensitive Institutions
- Sound-Insulated School
- ✎ Schools, Preschools
- ⛔ Places of Worship
- 🏥 Hospital
- 📖 Library



*Conditions assuming no additional aircraft operating restrictions.

Sources: BGPAA Geographic Information System; Noise Analysis by Jacobs Consultancy, 2007.



Figure ES-3
2015 FORECAST NOISE EXPOSURE WITH ALTERNATIVE CURFEWS
 FAR Part 161 Study for Bob Hope Airport
 Executive Summary
 January 2008



Table 2
**PREDICTED REDUCTION IN NIGHTLY AWAKENINGS WITH ALTERNATIVE CURFEWS IN 2015
 BASED ON FINEGOLD-ELIAS AND BASNER AWAKENINGS CURVES**
 Bob Hope Airport FAR Part 161 Study

Curfew Alternative	Alternative Estimation Method	
	Low Estimate	High Estimate
With Full Curfew	400	625
With Departure Curfew	208	363
With 253 EPNdB Curfew	160	358

Note: These figures represent the reduction in awakenings on an average night among residents inside the 2015 baseline (unrestricted) 65 CNEL contour.

Likewise, the findings of the property value study indicate that residential property owners inside the 65 CNEL contour would realize an increase in the value of their property with each of the three curfews.

Finally, the reduction in nighttime noise with the alternative curfews would reduce the number of awakenings experienced by airport-area residents. Table 2 shows the estimated range of reductions in average nightly awakenings attributable to each curfew in 2015.

Other Remedies Are Infeasible or Less Cost-Effective

The Part 161 Study reviewed 50 potential alternatives to the proposed curfew, including land use management measures and both nonrestrictive and restrictive aircraft noise abatement actions, most of which had been considered in the 1999 Part 150 Noise Compatibility Program update. None would provide a level of nighttime noise reduction comparable to the alternative curfews. All were found to be ineffective, infeasible or not cost-effective. In particular, the Authority's primary applicable abatement measure, the voluntary curfew, does not apply to the categories of airport users responsible for the majority of nighttime noise – cargo carriers, air taxi, and general aviation. Further, the primary mitigation program, residential acoustical treatment, neither provides immediate noise relief to residents, nor does it address all aspects of the nighttime noise problem. The benefit-cost analysis indicates that the full curfew is also more cost-effective than acoustical treatment in addressing the nighttime noise problem.

Restriction Is Not Unjustly Discriminatory

While the FAA's prior 2004 guidance letter suggests that a full curfew may be unjustly discriminatory because it would restrict aircraft which may "not contribute measurably to the noise contour or sleep awakenings," the full curfew and the two less restrictive curfews, and the exceptions to them, would apply uniformly to all airport users and should therefore not be viewed as unjustly discriminatory.

Longstanding restrictions (such as a curfew on air carrier operations and complete ban on all nighttime departures) on aircraft operations are in effect at three other Southern California commercial air carrier airports. These restrictions, which apply to all aircraft, regardless of their size or type, have not been judged to be unjustly discriminatory.

Full Curfew Restriction is the Same for All User Classes

The full curfew restriction clearly has the same standards for all aviation user classes. The departure curfew also applies uniformly to all user classes.

The noise-based curfew only applies to aircraft with FAA-certified noise levels louder than 253 EPNdB. This distinction is justified because it would eliminate the noisier jet aircraft, including regional jets. It should be further noted that this noise-based curfew was originally created in response to the FAA 2004 guidance letter concerning the impact of a full curfew on quieter aircraft, and that other Southern California commercial airports have noise-based nighttime restrictions which have been in effect for many years.

Condition 2: Proposed Restriction Does Not Create Undue Burden on Interstate and Foreign Commerce

FAR Part 161 stipulates that the following information is needed to demonstrate compliance with Condition 2:

- Evidence, based on a cost-benefit analysis, that the estimated potential benefits of the restriction have a reasonable chance to exceed the potential costs
- Evidence that affected carriers have a reasonable chance to continue service
- Evidence that comparable facilities and services are available at another airport in the market area

Benefit-Cost Analysis

All three curfews pass the benefit-cost test, with expected benefits exceeding expected costs. The results are summarized in Table 3. The departure curfew has the largest ratio of benefits to cost, at 3.15. The noise-based curfew is next, with a benefit-cost ratio of 1.47, followed by the full curfew, with a ratio of 1.40.

Table 3
RESULTS OF BENEFIT-COST ANALYSIS
 Bob Hope Airport FAR Part 161 Study

	<u>Full Curfew</u>	<u>Departure Curfew</u>	<u>Noise-Based Curfew</u>
<i>Costs</i>			
Passenger Airlines	\$ 6,707	\$ 1,857	\$ 6,707
Passengers	\$12,219	\$ 4,171	\$12,219
All-Cargo Carriers	\$18,208	\$ 4,947	\$13,262
General Aviation	\$10,755	\$ 6,690	\$ 8,943
Total Costs	\$47,889	\$17,665	\$41,131
<i>Monetary Benefits</i>			
Property Value Increase	\$ 7,881	\$ 6,368	\$ 5,740
Reduced Acoustical Treatment	\$59,320	\$49,281	\$54,550
Total Monetary Benefits	\$67,201	\$55,649	\$60,290
Net Benefits	\$19,312	\$37,984	\$19,159
Ratio of Benefits to Costs	1.40	3.15	1.47

Note: Costs and benefits are expressed in net present value, thousands of 2006 dollars, using a discount rate of 7%, and a curfew start date of 2008.

The categories of costs and benefits include the following:

- Costs to Passenger Carriers – Includes costs of cancelling delayed flights, diverting late flights to other airports, elimination of flights during curfew hours, loss of passenger revenue.
- Cost to Passengers – Includes out-of-pocket expenses and the value of time lost to passengers on cancelled or diverted flights.
- Costs to All-Cargo Carriers – Includes costs to large cargo carriers and Ameriflight. Full and departure curfew would require Ameriflight to move its bank courier operation, most likely to Ontario, involving moving costs, increased ground transportation cost from regional banking centers, increased employee commuting costs. Full and noise-based curfews would require FedEx and UPS each to move one flight to another airport, probably

LAX, resulting in higher airport operating costs, increased ground transportation time, and loss of some high priority overnight cargo.

- Costs to General Aviation – Curfews are likely to force some corporate operators to move to another airport. Others would set up satellite operations at other airports, requiring additional staff and operating costs. Some repositioning of aircraft for nighttime flights is likely for those that remain at Bob Hope Airport.
- Benefits of Reduced Acoustical Treatment – The size of the area within which the Airport Authority would provide acoustical treatment, based on the 65 CNEL contour, would be reduced substantially under each curfew, reducing the potential future outlay for this program. This cost savings would be a benefit of the proposed curfew.*
- Benefits of Increased Property Value – The housing price study found that residential property values inside the 65 CNEL contour are discounted relative to areas not exposed to aircraft noise. The reduction of noise with the curfews would lead to an increase in the value of residential property within the 65 CNEL contour.

Implementation of a curfew at Bob Hope Airport would, as a practical matter, result in nighttime flights shifting to other airports. The estimated number of shifted flights, based on the 2015 forecasts, is shown in Table 4. These shifts will have negligible effect on noise and would be too small to be noticeable, compared to the other traffic already projected at those airports, except at Van Nuys.

A contingent valuation survey was undertaken in the Van Nuys area to estimate how local residents would perceive and value this impact. The results indicated that residents would be willing to pay a certain amount to avoid the additional flights (although this amount is less than Bob Hope Airport area residents would be willing to pay for a curfew at Bob Hope Airport). This was taken as an estimate of the cost of exposing the residents to the additional flights and noise.

A noise modeling analysis was undertaken for Van Nuys Airport to determine the impact of the shift in flights from Bob Hope Airport with implementation a full curfew. Based on 2015 forecast activity, noise would range from 0.6 to 0.9 decibels greater in residential areas within the Van Nuys 65 CNEL contour. These increases would be well below the FAA’s significant impact threshold, which is 1.5 decibels within the 65 CNEL contour. In contrast, the expected decreases in noise impacts on residential areas surrounding Bob Hope Airport from implementation of a full curfew are significant, and range from -1.6 to -6.5 decibels within the 65 CNEL contour.

*The analysis found that even if the future acoustical treatment area followed the 65 CNEL contour precisely and was not extended to include contiguous parts of neighborhoods, the departure curfew would still have a benefit-cost ratio well above 1.0.

Table 4
**EFFECT OF CURFEWS IN SHIFTING TRAFFIC TO OTHER AIRPORTS
 IN REGION – 2015 FORECAST**
 Bob Hope Airport FAR Part 161 Study

Airport	Number of Operations Shifted Per Average Night		
	Full Curfew	Departure Curfew	Noise-Based Curfew
Camarillo	0.3	0.2	0.3
Long Beach	0.6	0.4	0.6
Los Angeles International	3.0	1.3	3.0
Ontario International	13.3	9.5	0
Van Nuys	16.4	10.3	10.0
Whiteman	2.2	1.5	0

Affected Carriers Have Reasonable Chance to Continue Service

All passenger carriers clearly have a reasonable chance to continue serving the Airport with implementation of the full curfew and less restrictive curfews. Three carriers currently each have one departure during the proposed curfew hours. All are early morning departures between 6:45 and 6:59 a.m. Without a restriction, one early morning arrival by a fourth carrier is projected to be added to the schedule by 2015. With a full curfew, it is anticipated that three of these flights would be rescheduled to comply with the curfew, and one would be eliminated. Another flight, a late night departure for the East Coast that is anticipated to be scheduled in the future, would also be eliminated because routine delays would too often push its takeoff time into the curfew hours. Despite the elimination of these flights, both affected carriers are expected to continue serving the Airport with flights at other times of the day.

The two cargo carriers, UPS and FedEx, each have one arrival currently scheduled during curfew hours, four days per week. FedEx has two flights and UPS one flight during non-curfew hours. Without a curfew, it is anticipated that the frequency of these flights would increase to five per week by 2015. With the full curfew, both carriers are anticipated to remain at the Airport, but they would shift the flights affected by the curfew to another airport, most likely LAX.

A departure curfew would have generally less effect on carriers than the full curfew, although the two departures that would be eliminated with a full curfew would also be eliminated with a departure curfew. No carriers would be prevented from continuing serving the Airport. The departure curfew would have no effect on the cargo carriers – UPS and FedEx – as they only have landings during curfew hours and are not projected to have any departures during those hours through 2015.

The noise-based curfew would have the same effect on the passenger and cargo carriers as the full curfew.

Comparable Facilities Available At Other Airports in Market Area

Comparable facilities for nighttime use by operators affected by the three curfews are available at several airports in the market area. Airports that are expected to be used by carriers and aircraft operators affected by the alternative curfews are listed below.

- Los Angeles International
- LA/Ontario International
- Camarillo (while not able to accommodate carrier operations, it could accommodate nighttime general aviation operations)
- Long Beach (while not able to accommodate nighttime carrier operations, it could accommodate nighttime general aviation operations by relatively quiet aircraft)
- Van Nuys (while not able to accommodate carrier operations, it could accommodate nighttime operations by all but the loudest general aviation aircraft)
- Whiteman (while not able to accommodate carrier operations, it could accommodate nighttime general aviation operations)

These airports have a full range of services and can be used at night, subject to some constraints (such as maximum nighttime noise limits), which are either less restrictive or similar to the nighttime operating restrictions currently in effect at Bob Hope Airport.

Condition 3: Proposed Restriction Maintains Safe and Efficient Use of Navigable Airspace

Condition 3 requires that the Airport Sponsor proposing a restriction substantiate “that the restriction maintains or enhances safe and efficient use of the navigable airspace.”

The Airport Authority’s proposed mandatory restriction, a full curfew, as well as the two other alternatives evaluated in this application, would involve no changes to airspace structure, air traffic control procedures, or flight routes at Bob Hope Airport or at any other airports in the area. Thus, the proposed restriction would have no direct effect on the navigable airspace.

The three curfews would cause one to three carrier flights per night to shift from Bob Hope Airport to either LAX or Ontario. Operations by general aviation and air taxi operators also would shift to those airports, in addition to Camarillo, Long Beach,

Van Nuys, and Whiteman Airports, as shown in Table 4, above. The shifted flights would use existing flight routes and air traffic control procedures. Given the small number of affected operations and the relatively low nighttime traffic volumes at those airports, this is not anticipated to have any impact on the safe and efficient use of the airspace associated with those airports.

Condition 4: Proposed Restriction Does Not Conflict With Federal Law

Essential information needed to assess compliance with this condition includes evidence that no conflict is presented between the proposed restriction and any existing Federal statute or regulation, including those governing:

- (A) Exclusive rights;
- (B) Control of aircraft operations;
- (C) Existing Federal grant agreements.

Neither the full curfew nor either of the alternative curfews conveys to any airport user exclusive rights to the use of the Airport. The full curfew would not control the operation of aircraft in any way that conflicts with the Federal government's authority to regulate the national airspace. Due to the proposed exceptions to the full curfew, allowing nighttime operations by public safety operators and for designated emergencies, it would not compromise safety.

Moreover, access and capacity restrictions exist at other airports in Southern California, including gate reductions at LAX and curfew extensions at John Wayne Airport, which have been approved or extended since ANCA was enacted.

Indeed, curfews similar to the three alternatives under consideration in this Part 161 Study are in force at other airports in California and elsewhere around the country. They are briefly summarized in Table 5, below. They include three air carrier airports – John Wayne Orange County, Long Beach, and San Diego – and two general aviation airports – Santa Monica and Van Nuys– in Southern California. John Wayne Orange County has a full curfew on commercial operations, and Long Beach has a cap and nighttime curfew on all air carrier operations and a nighttime noise limit on other aircraft. San Diego and Santa Monica both have departure curfews, and Van Nuys has nighttime noise limits. Two Northern California airports, Mineta San Jose and Lake Tahoe, have nighttime noise limits. Elsewhere in the country, Aspen-Pitkin County Airport has a full curfew and Reagan Washington National and Teterboro have maximum nighttime noise limits.

Taken together, these restrictions are similar to the three curfews studied in the Bob Hope Airport Part 161 Study. They were all imposed before the passage of the Aviation Noise and Capacity Act of 1990. All of these airports receive Federal

Table 5
NIGHTTIME NOISE RESTRICTIONS AT U.S. AIRPORTS
 Bob Hope Airport FAR Part 161 Study

Airport	Nighttime Restriction
CALIFORNIA	
John Wayne-Orange County Airport	Closed to all commercial departures, 2200 to 0700 (to 0800 on Sundays); closed to commercial arrivals 2300 to 0700 (0800 on Sundays). Maximum nighttime noise limits for general aviation operations (2200 to 0700, 0800 on Sundays).
Lake Tahoe	Maximum nighttime noise limit (Lmax) of 77.1 dBA from 2000 to 0800.
Long Beach	Cap on air carrier operations; full curfew on air carrier operations (2200 to 0700); maximum noise limits, based on levels measured at monitoring sites.
Mineta-San Jose International	Maximum nighttime noise limits of 89 EPNdB, 2330 to 0630.
San Diego International	Departures prohibited from 2330 to 0630.
Santa Monica	Departures prohibited, 2300 to 0700 (0800 Saturdays and Sundays).
Van Nuys	Maximum nighttime noise limits of 74 dBA, 2200 to 0700, based on FAA AC 36-3H.
OTHER STATES	
Aspen/Pitkin County Airport	Closed to operations from 2300 to 0700.
Reagan Washington National	Maximum nighttime noise limits (2200 to 0700) based on Part 36.
Teterboro	Maximum nighttime noise limits (2200 to 0700).

Airport Improvement Program grants and none have been found in violation of the grant agreements pertaining to the preservation of public access to the airports and the avoidance of unjust discrimination. Neither have these restrictions been judged by the courts to be unjustly discriminatory or otherwise in conflict with Federal law.

Because these other restrictions have been allowed to stand, there is no reason to believe that the proposed curfew violates any grant assurances or other provisions of law. The proposed enforcement mechanism, a series of escalating fines allowing

three violations in any 12-month period before action is taken to bar an operator from the Airport, is also reasonable and not unjustly severe or discriminatory.

Condition 5: Airport Authority Has Afforded Adequate Opportunity for Public Comment on Proposed Restriction

Condition 5 requires that the applicant must have provided “adequate opportunity for public comment on the proposed restriction.” By the end of the Part 161 Study process, the Airport Authority will have complied with this requirement.

The Part 161 process has included use of a public website and numerous public meetings and listening sessions dating back seven years, giving stakeholders and local residents ample opportunity to comment on the study. The public website (<http://www.burbankairport.com>) provides an overview of the Part 161 process, status of the BUR project, contact information, and project-related details.

A report on the preliminary findings of the Part 161 Study was presented to the Airport Authority at a public meeting in August 2007.

The Airport Authority released the Draft Part 161 Application on March 31, 2008. At that time the required public comment period was opened for 75 day period until June 13, 2008. Formal notices of the Authority’s intent to implement the restriction were sent to all air carriers operating at the Airport, all Airport tenants, and other regular Airport users. Copies of the Airport Authority’s Part 161 Application were placed in 18 locations accessible to the public, including local government offices and public libraries. The Airport Authority also placed a notice of the proposed restriction in the general circulation newspapers serving the area. In addition, poster notices were placed within the Airport terminal and each of the fixed based operators’ facilities.

During the comment period, a special listening session was held on April 18, 2008 to allow stakeholders and the public an opportunity to comment on the proposal. The Airport Authority also held a special meeting and public hearing on the Draft Part 161 Application on May 12, 2008. Further information on this listening session and other outreach efforts is presented in Appendix F.

Condition 6: Proposed Restriction Does Not Create Undue Burden on National Aviation System

Essential information needed under this condition includes evidence that the proposed restriction does not create a substantial adverse effect on existing or planned airport system capacity, on observed or forecast airport system congestion and aircraft delay, and on airspace system capacity or workload. In addition, it must be shown that non-aircraft alternative measures to achieve the same goals as the proposed subject restrictions are inappropriate.

No Effect on Airport System Capacity, Congestion, or Delay

The number of flights shifted from Bob Hope Airport to other airports in the region is quite small relative to the capacity of those airports. Table 4, presented above, shows the number nighttime flights shifted to other airports. Table 6 below shows the shifted operations at each airport as a percentage of total forecast operations.

Table 6 shows that the shifted traffic is quite low in comparison with the total forecast traffic at each airport. These airports have sufficient capacity during the curfew hours to handle the additional traffic without causing congestion or delay. Thus, the proposed restriction would not have a substantial adverse effect on existing or planned airport system capacity or on observed or forecast airport system congestion and aircraft delay.

Airport	Shifted Operations as Percent of Forecast Daily Operations at Receiving Airport		
	Full Curfew	Departure Curfew	Noise-Based Curfew
Camarillo	0.2%	0.1%	0.1%
Long Beach	0.1%	0.1%	0.1%
Los Angeles International	0.2%	0.1%	0.2%
Ontario International	2.1%	1.8%	0.0%
Van Nuys	3.0%	2.3%	1.5%
Whiteman	2.0%	1.7%	0%

No Effect on Airspace Capacity or Workload

As already noted, the overall volume of traffic affected by the curfew is relatively small. Further, the shift in operations would not be great enough to impose capacity constraints on airspace fixes at the alternate airports. Thus, the alternative restrictions would not have substantial adverse effects on airspace system capacity or air traffic controller workload.

Inappropriateness of Nonaircraft Alternatives

The Airport Authority is now pursuing implementation of a mandatory nighttime curfew in recognition of substantial public concern because it has exhausted the range of nonregulatory alternatives for improving the noise situation.

Since its creation in 1977, the Airport Authority has been actively promoting noise abatement and mitigation in the Bob Hope Airport environs. It has adopted 11 noise rules, seven other noise abatement measures, and four mitigation measures. It has completed an acoustical treatment program for schools, and since 1998 it has been steadily implementing its residential acoustical treatment program. Despite these actions, a problem remains.

Non-aircraft alternatives that could even partially achieve the same objectives as the proposed curfew are either not cost-effective or are infeasible. Residential acoustical treatment, for example would be less immediate and less cost-effective in providing relief than the proposed curfew. Residential property acquisition and clearance, even if it were legally possible, would be a far less cost-effective way to achieve the objectives of the curfew.*

ADDITIONAL ACTIONS

The Airport Authority will undertake the following tasks:

- As authorized by Part 161, the Airport Authority's consultant has prepared a draft categorical exclusion in accordance with NEPA, 42 U.S.C. § 4321 et seq., and FAA Orders 1050.1E and 5050.4B, along with supporting documentation, showing the proposed curfews satisfy the requirements of a categorical exclusion.
- Following FAA approval of any restriction, and prior to approving any project, the Airport Authority will comply with all applicable requirements under the California Environmental Quality Act concerning the project.

*Existing legal constraints on the Airport Authority, in addition to the cost of property, renders it infeasible for the Authority to acquire sufficient property to eliminate the identified nighttime noise problem.

Chapter 1

INTRODUCTION

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Chapter 1

INTRODUCTION

The Burbank-Glendale-Pasadena Airport Authority (the Authority), operator of Bob Hope Airport (the Airport) in Burbank, California, hereby submits this application to the Federal Aviation Administration (FAA) for approval of a noise restriction at the Airport in accordance with Federal Aviation Regulations (FAR) Part 161, *Notice and Approval of Airport Noise and Access Restrictions* (14 CFR Part 161).

FAR Part 161, promulgated to implement provisions of the Airport Noise and Capacity Act of 1990 (ANCA)*, requires a detailed evaluation of any proposed action that would restrict access to an airport by aircraft certificated as meeting Stage 2 or Stage 3 noise level requirements in accordance with FAR Part 36, *Noise Standards: Aircraft Type and Airworthiness Certification* (14 CFR Part 36). FAR Part 36 requires evaluation of other restrictive alternatives and non-aircraft alternatives to the proposed restrictive action.

1.1 ABOUT THIS DOCUMENT

This document constitutes the FAR Part 161 application (“Application”) for a full mandatory curfew on nighttime aircraft operations at Bob Hope Airport (formerly Burbank-Glendale-Pasadena Airport). The proposed curfew and two less-restrictive curfews, as well as alternative aircraft restrictions and non-aircraft alternatives considered by the Authority, are described and evaluated herein. The document includes the following sections:

- **Setting and Constraints for Noise Abatement** – provides background on the Airport and describes the purpose for seeking FAA approval of a nighttime noise restriction at the Airport.
- **Proposed Restriction and Alternatives** – describes the proposed restriction, two alternative restrictions, and a range of other aircraft and non-aircraft alternatives previously considered by the Authority.
- **Benefit-Cost Analysis** – describes the analysis of the benefits and costs of the proposed restriction and the two alternative restrictions.
- **Conditions 1 – 6** – demonstrates that the proposed restriction meets the six conditions specified in ANCA and FAR Part 161.

*Public Law 101-508, codified in 49 U.S.C. 47521-47533.

In addition, several appendices that provide further detail on the analysis conducted to support the findings summarized within this application are also provided, as follows:

- **Appendix A** – Current Noise Rules at Bob Hope Airport
- **Appendix B** – Aircraft Noise Analysis
- **Appendix C** – Analysis of Aircraft Noise-Induced Awakenings
- **Appendix D** – Methodology for Estimating Effects of Noise on Residential Property Values
- **Appendix E** – Documentation and Analysis of Contingent Valuation Studies in the Bob Hope and Van Nuys Airport Areas
- **Appendix F** – Documentation of Public Comment Opportunities
- **Appendix G** – Initial Alternatives Evaluation
- **Appendix H** – FAA’s May 2004 letter commenting on “Draft Evaluation of a Curfew at Burbank-Glendale Pasadena Airport”, the FAA’s June 2008 letter commenting on the official draft of the “FAR Part 161 Application for a Proposed Curfew”, and FAA’s December 2008 letter to Los Angeles World Airports regarding Van Nuys.
- **Appendix I** – Summary of Interviews with Aircraft Operators Regarding Potential Impact of Curfew on BUR Operations

In addition, two stand-alone technical reports supplement the information described in this application. Technical Report 1, *Aviation Demand Forecasts*, documents the unrestricted and restricted forecasts of aviation activity used in the FAR Part 161 analysis. Technical Report 2, *The Impact of Aircraft Noise on Residential Property Values in the Bob Hope Airport Environs*, documents the hedonic housing market study undertaken in the Airport area, which provided the basis for estimating increased property values with implementation of a curfew at Bob Hope Airport.

1.2 FAR PART 161 STUDY BACKGROUND

The Authority proposes to implement a full curfew on aircraft operations at the Airport to reduce nighttime noise exposure and noise impacts in communities around the Airport. This Part 161 study was initiated after completion of the 1999 Noise Compatibility Program (NCP) Update, which was approved by the FAA in November 2000.

Two measures included in the NCP Update, Noise Abatement Measures 11 and 12, were disapproved by the FAA pending submission of additional information in compliance with FAR Part 161. Measure 11 sought to: “[p]hase out operations by all Stage 2 jets,” and Measure 12 sought to: “[e]stablish a mandatory curfew on departures by all Stage 2 aircraft between 10 p.m. and 7:00 a.m., departures by all aircraft over 75,000 pounds between 10:30 p.m. and 6:30 a.m., and arrivals by all aircraft over 75,000 pounds between 11:00 p.m. and 6:00 a.m.”

The restriction currently proposed by the Authority through this application—a mandatory nighttime curfew on all aircraft operations—differs from the specific measures proposed in the NCP Update. The Authority refined its objectives with respect to nighttime noise reduction based on public consultation in the early phases of the FAR Part 161 study and the technical evaluations undertaken as part of the FAR Part 161 study. The Authority is now seeking a mandatory full nighttime curfew on all aircraft operations (including operations by Stage 3 aircraft), is no longer proposing any weight-based exceptions, and has extended the applicable hours of the restriction. Exceptions to the restriction would be permitted based on public necessity and operational safety.

This application is based on the requirements of FAR Part 161, Subpart D, which applies after October 1, 1990, to proposed noise or access restrictions of Stage 3 aircraft operations. The application is further based on supplemental guidance provided to the Authority by the FAA during the course of the study.*

Based on the issues raised in that guidance letter and in subsequent discussions with the FAA, the Authority responded to the general concerns of the FAA by ensuring that the application would provide evidence that the six statutory conditions included in ANCA will be satisfied (as required in FAR Part 161). Responding to FAA’s concerns that a full curfew would improperly restrict operations by smaller, quieter aircraft, the Authority evaluated the feasibility of a curfew based on noise thresholds that would permit operations by the quieter aircraft. In recognition of the FAA’s concerns about studying noise outside 65 CNEL (Community Noise Equivalent Level), the Authority has limited claims of noise reduction benefits in the area exposed to 65 CNEL as a result of operations at the Airport. Finally, the Authority monetized the value of nighttime noise reduction for people who are most frequently awakened by noise from aircraft operations at the Airport at night.

The Authority initiated the study in May 2000. In July 2000, the Authority announced its goal to “eliminate or significantly reduce nighttime flight noise at [Bob Hope] Airport now and in the future.” The Authority then conducted five public listening sessions in August 2000, to increase public awareness and solicit public feedback (see Appendix F, Documentation of Public Comment Opportunities).

After receiving FAA guidance, the Authority considered seeking legislative changes to the FAR Part 161 regulation. This strategy was shared with the City of Burbank. The City responded in September 2005, strongly urging the Authority to proceed with the FAR Part 161 study seeking a full mandatory nighttime curfew. The Authority subsequently sought consultant proposals, selected Leigh Fisher Associates (now Jacobs Consultancy) to conduct the study, and authorized resumption of the study in June 2006.

*See Appendix H, letters from FAA dated May 19, 2004 and June 12, 2008.

This Application follows the preparation and circulation for comment of an Official Draft Application (“draft Application”), dated March 2008, to the public and interested stakeholders, including the FAA, as described in Chapter 9. This Application tracks the draft Application with certain substantive modifications. Also, various typographical and numerical errors have been corrected and clarifications have been added to the draft Application. A selected list of these corrected errors and added clarifications is set forth in a Table 1-1, Summary of Substantive Changes.

Table 1-1

**SUMMARY OF SUBSTANTIVE CHANGES TO FAR PART 161 APPLICATION
FOLLOWING RELEASE OF OFFICIAL DRAFT IN MARCH 2008**

Application section	Substantive change made
Executive Summary	<ul style="list-style-type: none"> Added discussion of “Final Application”
Chapter 2: Setting and Constraints for Noise Abatement	<ul style="list-style-type: none"> Elaboration of historical noise issues at the Airport
	<ul style="list-style-type: none"> Elaboration of the Airport’s acoustical treatment program
Chapter 4: Benefit-Cost Analysis	<ul style="list-style-type: none"> Corrected certain costs related to general aviation and all-cargo carrier activity and clarified sources of various unit costs; see Section 4.1.3 for summary description of changes. Benefit/cost ratios remain positive and relative relationship among alternatives is unchanged
	<ul style="list-style-type: none"> Elaboration of “hard to quantify” costs and benefits
Chapter 5: Condition 1: Reasonableness	<ul style="list-style-type: none"> Elaboration of alternatives considered during Phase III of the Part 161 study and alternate remedies to a curfew
	<ul style="list-style-type: none"> Description of impact of curfew on user classes
Chapter 6: Condition 2: Burden on Commerce Chapter 9: Condition 5: Opportunity for Public Comment	<ul style="list-style-type: none"> Elaboration of the absence of undue burden, based on discussion of comments received Updated to describe the official public review and comment period conducted March 31, 2008 to June 13, 2008
Chapter 10: Condition 6: Burden on National Aviation System	<ul style="list-style-type: none"> Added description of proposed noise rule at Van Nuys Airport
	<ul style="list-style-type: none"> Added description of noise impacts for airports forecast to “receive” flights shifted from BUR

Table 1-1 (continued)

**SUMMARY OF SUBSTANTIVE CHANGES TO FAR PART 161 APPLICATION
FOLLOWING RELEASE OF OFFICIAL DRAFT IN MARCH 2008**

Appendix F: Opportunity for Public Comment	<ul style="list-style-type: none"> • Updated to document official public comment period
	<ul style="list-style-type: none"> • Identified and commented on seven most pervasive and significant topics
Appendix I: Summary of Interviews with Aircraft Operators at Bob Hope Airport	<ul style="list-style-type: none"> • Added appendix summarizing 2006 interviews
Technical Report 1: Aviation Demand Forecasts	<ul style="list-style-type: none"> • Elaboration of the rationale behind the nighttime operations forecast
Technical Report 2: Impact of Aircraft Noise on Residential Property Values	<ul style="list-style-type: none"> • Added explanation of how the noise coefficient in the hedonic model should be interpreted
	<ul style="list-style-type: none"> • Elaboration of the initial exploratory statistical analyses

1.3 AVIATION DEMAND FORECASTS AND AIRPORT ACTIVITY

The aviation demand forecasts prepared for this FAR Part 161 Study were completed in May 2007, using actual 2005 activity data as the baseline. Forecasts were prepared for the two future years of Study analysis – 2008 and 2015. Those forecasts are described in detail in Technical Report 1, *Aviation Demand Forecasts*.

To assess the validity of the airline passenger forecasts to date, an analysis was made of actual activity at Bob Hope Airport, as reported for 2006 and 2007. Figure 1-1 shows the historical enplaned passengers (1990-2007) in comparison with the Part 161 forecast (2005-2015). The forecast line for the 2005-2007 period is nearly identical with the actual trend line for that period, corroborating (to date) the continued suitability of the Part 161 Study forecasts for the analyses undertaken in the Study.

Table 1-2 shows a comparison of actual aircraft operations for the 2005-2007 period at Bob Hope Airport with forecast aircraft operations for 2008 and 2015. For air carriers, there is a slight pause of growth in 2007, but the actual activity does not indicate a trend away from the forecast. Commuter/air taxi operations have declined slightly faster than forecast. General aviation operations have declined much faster than forecast; however, evidence indicates that a robust growth in corporate aircraft operations continues, but it is more than offset by a continued rapid decline in operations by small, piston-engine aircraft.

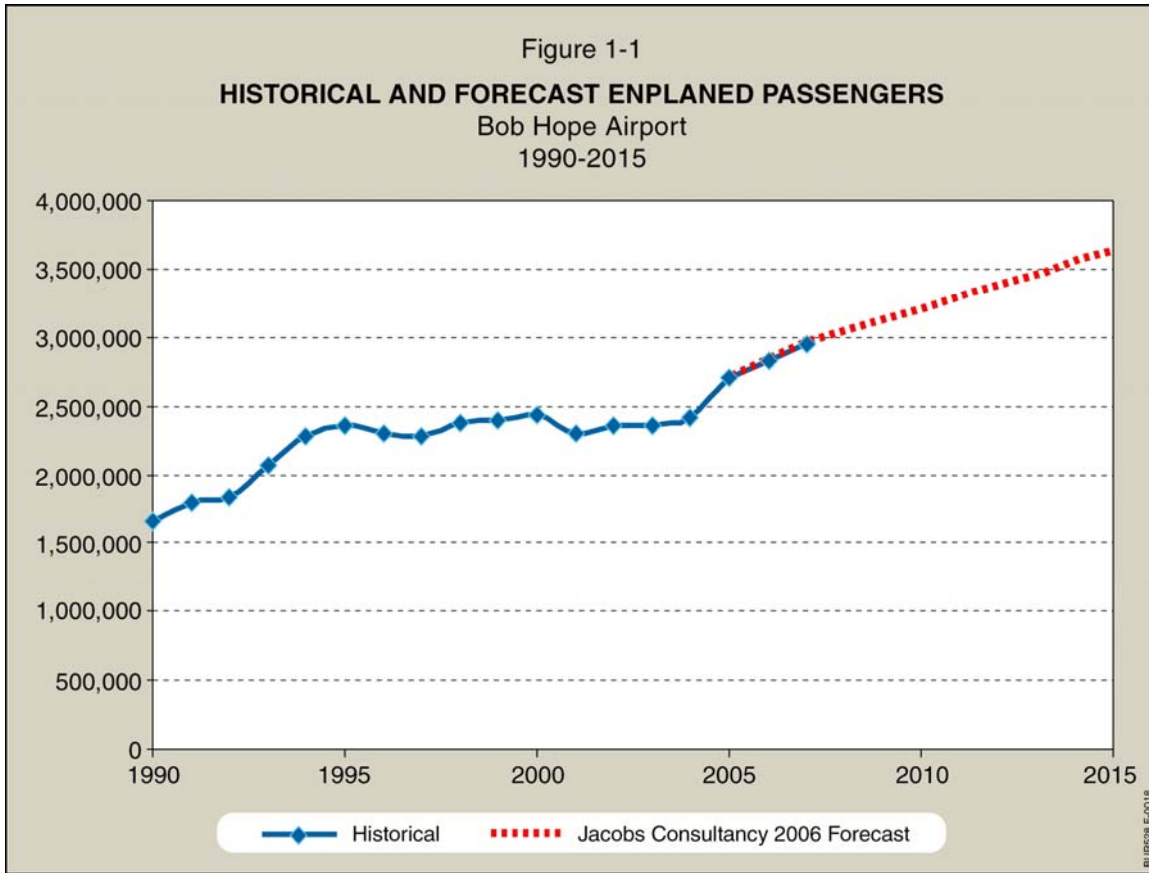


Table 1-2
SUMMARY OF FORECAST AIRCRAFT OPERATIONS
 Bob Hope Airport FAR Part 161 Study

	Annual					Compound annual growth rate 2005 - 2015
	Historical		Forecast			
	2005	2006	2007	2008	2015	
By FAA category						
Air carrier	65,541	68,642	71,949	71,763	81,002	2.1%
Commuter/air taxi	25,846	21,275	17,623	20,935	21,850	(1.7)
Piston	28,974	18,053	n.a.	15,917	6,097	
Other	15,033	22,907	n.a.	24,033	36,743	
General aviation	44,007	40,960	33,678	39,950	42,840	(0.3)
Military	<u>236</u>	<u>337</u>	<u>271</u>	<u>330</u>	<u>330</u>	<u>3.4</u>
Total	135,630	131,214	123,521	132,978	146,022	0.7%

Sources: Historical: Bob Hope Airport, 2008.
 Forecast: Jacobs Consultancy, December 2006.