

## Chapter 6

CONDITION 2—PROPOSED RESTRICTION DOES NOT CREATE UNDUE  
BURDEN ON INTERSTATE AND FOREIGN COMMERCE

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## Chapter 6

### CONDITION 2—PROPOSED RESTRICTION DOES NOT CREATE UNDUE BURDEN ON INTERSTATE AND FOREIGN COMMERCE

#### 6.1 GENERAL FINDINGS OF CONDITION 2

Under Condition 2 of Part 161, the Airport Authority must demonstrate that the proposed restriction would not create an undue burden on interstate and foreign commerce. Evidence must be provided that:

- Based on a cost-benefit analysis, the potential benefits of the restriction would exceed the potential costs
- Affected carriers would have a reasonable chance to continue service
- Comparable facilities and services are available at another airport in the market area

##### 6.1.1 Potential Benefits Exceed Potential Costs

The benefits of all three curfews would exceed the costs of each. The departure curfew has the largest ratio of benefits to costs, at 3.15 (meaning that benefits would be more than 2 ½ times greater than costs). The noise-based curfew and the full curfew are virtually tied, with ratios of 1.47 and 1.40, respectively.

The costs and benefits of the full curfew and the noise-based curfew are similar, varying primarily due to the relative impacts on all-cargo carrier operations. The full curfew would require the elimination of all night cargo flights, while the noise-based curfew would prevent operations only by the large cargo carriers, FedEx and UPS, enabling Ameriflight to continue to operate, with adjustments to their fleet. Noise reduction benefits would be less for the noise-based curfew than the full curfew because of the operations that would be permitted to continue at night.

The costs of the departure curfew would be less than one-half of the costs of the other two alternatives. By allowing operators to continue nighttime landings, the departure curfew enables many to continue using the Airport, substantially lessening the impact of the curfew. The number of passenger carrier flight cancellations, and the related costs to both airlines and passengers, would be substantially reduced under the departure curfew. The departure curfew also enables FedEx and UPS to continue their early morning arrivals, eliminating the costs to those carriers that would be incurred with the other two curfews.

##### 6.1.2 Carriers Can Continue Service

All passenger carriers clearly have a reasonable chance to continue serving the Airport with either of the three curfews. Few passenger flights would be directly

affected by the curfews. No carriers would be either prevented from continuing service or from providing new service at the Airport.

Currently, three carriers 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 or a noise-based curfew, which would have the same effects on carriers as the full curfew, 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 forecasted to be scheduled in the future, would also be eliminated because routine delays earlier in the evening would too often push its takeoff time into the curfew hours.

The two large cargo carriers, UPS and FedEx, each have one arrival currently scheduled during curfew hours, four days per week. At the time of the analysis, FedEx had two flights and UPS one flight during non-curfew hours.\* Without a curfew, the frequency of these flights is projected to increase to five per week by 2015. With the full curfew or the noise-based curfew, both carriers would continue serving the Airport, but they would shift the early morning flights to Los Angeles International Airport.

A departure curfew would have less effect on the passenger carriers than the full curfew. Fewer cancellations would be required since late flights would still be able to land at the Airport. The two departures that would be eliminated with a full curfew, however, would also be eliminated with a departure curfew. Despite the elimination of these flights, the affected carriers would continue serving the Airport with flights at other times of the day.

The departure curfew would have no effect on UPS and FedEx as they only have landings during curfew hours and are not projected through 2015 to have any departures during those hours.

### **6.1.3 Comparable Facilities are 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 would be used by carriers and aircraft operators affected by the alternative curfews are listed below.

- Los Angeles International – for passenger carriers, large all-cargo carriers, and general aviation
- LA/Ontario International – for passenger carriers and Ameriflight

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\*FedEx and UPS frequently adjust their schedules to meet seasonal demands and to effectively maximize the use of their aircraft fleets. As of March 2008, both carriers continued to have the early morning arrivals. Both carriers had one other flight during non-curfew hours.

- Camarillo – for general aviation
- Long Beach – for relatively quiet general aviation aircraft. Nighttime air carrier operations are prohibited.
- Van Nuys – for all but the loudest general aviation aircraft.
- Whiteman – for general aviation propeller and small jet aircraft.

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

## 6.2 REGULATORY REQUIREMENTS

FAR Part 161 Section 161.305(e)(2)(ii) requires that the applicant show that the proposed restriction would not create an undue burden on interstate or foreign commerce. Essential information needed to demonstrate compliance with this condition includes:

Evidence, based on a cost-benefit analysis, that the estimated potential benefits of the restriction have a reasonable chance to exceed the potential costs of the adverse effects on interstate and foreign commerce...

The sponsor of the proposed restriction may also submit the following supporting information:

Evidence that affected carriers have a reasonable chance to continue service...

Evidence that other carriers are able to provide adequate service ... without diminishing competition.

Evidence that comparable facilities and services are available at another airport controlled by the airport operator in the market area, including services available at other airports.

Evidence that alternative transportation service can be attained through other means of transportation.

Information on the absence of adverse evidence or adverse comments with respect to undue burden...

## 6.3 BENEFIT-COST ANALYSIS SUMMARY

Chapter 4 of this application documents the findings of the benefit-cost analysis evaluating the proposed alternative curfews. The analysis found that all three

curfews pass the benefit-cost test, with expected benefits exceeding expected costs. The results are summarized in Table 6-1. 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 6-1  
**COSTS AND BENEFITS OF CURFEW ALTERNATIVES**  
Bob Hope Airport FAR Part 161 Study

	Full Curfew	Departure Curfew	Noise-Based Curfew
<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
<b>Total Costs</b>	<b>\$47,889</b>	<b>\$17,665</b>	<b>\$41,131</b>
<i>Monetary Benefits</i>			
Property Value Increase	\$7,881	\$6,368	\$5,740
Reduced Acoustical Treatment	\$59,320	\$49,281	\$54,550
<b>Total Monetary Benefits</b>	<b>\$67,201</b>	<b>\$55,649</b>	<b>\$60,290</b>
<b>Net Benefits</b>	<b>\$19,312</b>	<b>\$37,984</b>	<b>\$19,159</b>
<b>Ratio of Benefits to Costs</b>	<b>1.40</b>	<b>3.15</b>	<b>1.47</b>

Note: Costs and monetized benefits in thousands of dollars, expressed in net present value, 2006 dollars.

Source: Jacobs Consultancy analysis, 2008. See Chapter 4, Benefit-Cost Analysis.

As explained in detail in Chapter 4, sensitivity tests were undertaken to determine whether the benefit-cost relationships would change substantially based on changes in the cost and benefit parameters most subject to variability. The relationships among all alternatives remained the same, and the benefit-cost ratios changed only by small amounts. (See Section 4.9 in Chapter Four, Benefit-Cost Analysis.) The benefit-cost ratios of the full curfew and the noise-based curfew remained above 1.0 with all of the sensitivity tests and the ratio for the departure curfew remained well above 2.0 with all of the tests.

Thus, the benefits of the proposed curfew are likely to outweigh its costs.

## 6.4 AFFECTED CARRIERS HAVE REASONABLE CHANCE TO CONTINUE SERVICE

Table 6-2 summarizes the effects of the full curfew and the noise-based curfew on air carrier operations. In 2008, 1,789 operations would be affected, averaging about 5 per day. This is 2.6% of the 69,813 air carrier operations forecasts for 2008. This includes 296 flights projected to be cancelled or diverted to other airports. Thirty-three operations, all by charter operators, are projected to be shifted to another airport (LAX). One daily flight by US Airways is projected to be eliminated from the schedule, resulting in a loss of 730 operations, because it cannot be rescheduled within permitted hours without missing important connections at the airline's Phoenix hub. One daily United Airlines flight would be affected by substituting a smaller RJ for the B-737 currently assigned to the 6:45 a.m. departure for San Francisco. United Airlines' officials indicated that they would reschedule the flight to comply with the curfew, but that a later departure time would cause the flight to miss numerous connections, reducing passenger demand for the flight.

In 2015, the same kinds of effects are projected, although they would be somewhat greater due to the forecast increase in activity at the Airport. A total of 2,919 annual operations would be affected by the full curfew and the noise-based curfew in 2015 – 3.7% of the 78,592 air carrier operations projected without a curfew. Affected flights would average about 8 per day. One JetBlue flight that would have been added to the schedule by 2015 in the absence of a curfew (a red-eye departure to the East Coast) would not be added with a curfew. (This is treated as an “eliminated” flight in Table 6-2.)

Table 6-3 shows the number of forecast air carrier operations that would be affected by a departure curfew. Fewer operations would be cancelled or diverted to other airports with the departure curfew than with the full curfew. Only 68 annual operations are projected to be cancelled in 2008 and 80 annual operations in 2015, about 0.2 operations a day. The number of flights shifted to LAX and the number of eliminated flights would be the same with the departure curfew as with the full curfew. A total of 1,561 flights would be affected by the departure curfew in 2008 (2.2% of projected air carrier operations without new restrictions) and 2,616 in 2015 (3.3%). On an average daily basis, this would involve 4.3 operations in 2008 and 7.2 operations in 2015.

Table 6-4 shows the number of affected all-cargo operations with each alternative curfew. With either the full curfew or the departure curfew, Ameriflight would need to move its nighttime cargo charter service to another airport, most likely Ontario, to continue offering this service. The noise-based curfew would have negligible effect on Ameriflight since most, if not all, of its turboprops comply with the noise-based curfew.

Table 6-2  
**EFFECT OF FULL CURFEW AND NOISE-BASED CURFEW  
 ON ANNUAL AIR CARRIER OPERATIONS (a)**  
 Bob Hope Airport FAR Part 161 Study

Carrier	Cancelled	Diverted	Shifted	Eliminated	Substitute Smaller Aircraft	Total Affected
<i>Operations Affected in 2008</i>						
Alaska/Horizon	36	2	0	0	0	38
American	16	0	0	0	0	16
Delta/Skywest	12	0	0	0	0	12
Hawaiian	n/a	n/a	n/a	n/a	n/a	0
JetBlue	12	4	0	0	0	16
Skybus	n/a	n/a	n/a	n/a	n/a	0
Southwest	110	0	0	0	0	110
United & Skywest	52	0	0	0	730	782
US Airways & Mesa	12	0	0	730	0	742
Virgin America	40	0	0	0	0	40
Charter Carriers	0	0	33	0	0	33
<b>Total</b>	<b>290</b>	<b>6</b>	<b>33</b>	<b>730</b>	<b>730</b>	<b>1,789</b>
<i>Operations Affected in 2015</i>						
Alaska/Horizon	36	2	0	0	0	38
American	22	0	0	0	0	22
Delta/Skywest	12	0	0	0	0	12
Hawaiian	0	0	0	0	0	0
JetBlue	8	4	0	730	0	742
Skybus	0	3	0	0	0	3
Southwest	154	0	0	0	0	154
United & Skywest	52	0	0	0	730	782
US Airways & Mesa	20	0	0	730	0	750
Virgin America	70	0	0	0	0	70
Charter Carriers	0	0	346	0	0	346
<b>Total</b>	<b>374</b>	<b>9</b>	<b>346</b>	<b>1,460</b>	<b>730</b>	<b>2,919</b>

(a) The effects of the departure curfew are summarized in Table 6-3, below.

n/a - Not Applicable. Air carrier was not anticipated to be providing service to the Airport until after 2008.

Source: Jacobs Consultancy analysis, 2007. See Technical Report 1, Aviation Demand Forecasts, Appendix BB.

Table 6-3  
**EFFECT OF DEPARTURE CURFEW ON AIR CARRIER OPERATIONS**  
 Bob Hope Airport FAR Part 161 Study

Carrier	Cancelled	Diverted	Shifted	Eliminated	Substitute Smaller Aircraft	Total Affected
<i>Operations Affected in 2008</i>						
Alaska/Horizon	0	0	0	0	0	0
American	0	0	0	0	0	0
Delta/Skywest	0	0	0	0	0	0
Hawaiian	n/a	n/a	n/a	n/a	n/a	0
JetBlue	8	0	0	0	0	8
Skybus	n/a	n/a	n/a	n/a	n/a	0
Southwest	40	0	0	0	0	40
United & Skywest	4	0	0	0	730	734
US Airways & Mesa	12	0	0	730	0	742
Virgin America	4	0	0	0	0	4
Charter Carriers	0	0	33	0	0	33
<b>Total</b>	<b>68</b>	<b>0</b>	<b>33</b>	<b>730</b>	<b>730</b>	<b>1,561</b>
<i>Operations Affected in 2015</i>						
Alaska/Horizon	0	0	0	0	0	0
American	0	0	0	0	0	0
Delta/Skywest	0	0	0	0	0	0
Hawaiian	0	0	0	0	0	0
JetBlue	8	0	0	730	0	738
Skybus	0	0	0	0	0	0
Southwest	44	0	0	0	0	44
United & Skywest	4	0	0	0	730	734
US Airways & Mesa	20	0	0	730	0	750
Virgin America	4	0	0	0	0	4
Charter Carriers	0	0	346	0	0	346
<b>Total</b>	<b>80</b>	<b>0</b>	<b>346</b>	<b>1,460</b>	<b>730</b>	<b>2,616</b>

n/a - Not Applicable. Air carrier was not anticipated to be providing service to the Airport until after 2008.

Source: Jacobs Consultancy analysis, 2007. See Technical Report 1, Aviation Demand Forecasts, Appendix BB.



Table 6-4  
**CARGO CARRIER OPERATIONS AFFECTED BY ALTERNATIVE CURFEWS**  
 Bob Hope Airport FAR Part 161 Study

Carrier/Alternative	2008	2015
<i>Full Curfew</i>		
Ameriflight	8,830	8,830
FedEx	416	520
UPS	416	520
Totals	9,662	9,870
<i>Departure Curfew</i>		
Ameriflight	8,830	8,830
FedEx	0	0
UPS	0	0
Totals	8,830	8,830
<i>Noise-Based Curfew</i>		
Ameriflight	0	0
FedEx	416	520
UPS	416	520
Totals	832	1,040

Note: All affected flights are expected to shift to other airports – Ameriflight to Ontario and FedEx and UPS to Los Angeles International.

Source: Jacobs Consultancy analysis. See Technical Report 1, Aviation Demand Forecasts, Appendix CC.

Fedex and UPS each would need to eliminate one early morning arrival and the subsequent departure at Bob Hope Airport, shifting the flights to Los Angeles International. These flights are currently scheduled four days per week, resulting in a loss of 416 annual operations for each carrier. By 2015, it is projected that the frequency of those flights would increase to 5 per week (without a curfew), resulting in the loss of 520 operations for each carrier in 2015. The two carriers would sustain these impacts under the full curfew and the noise-based curfew. The departure curfew would have no effect on either carrier since they are projected to have no nighttime departures during curfew hours.

While nearly all commercial passenger and all-cargo carriers would be affected by the three curfew alternatives, none would be prevented from operating at Bob Hope Airport. While Ameriflight's nighttime cargo service to banks would have to move to another airport, the curfews would not bar Ameriflight's other operations, which include aircraft maintenance and daytime and evening cargo services.

The Airport will remain open for all operations 15 hours a day. All carriers, other than Ameriflight, that currently use the Airport schedule the large proportion of their operations during the daytime and evening hours when the curfew alternatives would not be in effect. In interviews with the passenger and cargo carriers serving the Airport, none indicated they would discontinue service if a curfew was adopted.

In conclusion, all affected air carriers would have a reasonable chance to continue service to Bob Hope Airport.

## **6.5 OTHER CARRIERS CAN PROVIDE ADEQUATE SERVICE**

The proposed restriction would apply to all carriers uniformly, including carriers not currently operating at the Airport. The Airport Authority does not anticipate, nor has any carrier indicated, that they would discontinue their service at the Airport as a result of the imposition of any of the curfews. Further, the curfews would present no barriers to entry of new carriers to the Burbank market. In fact, the evaluation of the effects of the curfew alternatives, presented in Appendix BB of Technical Report 1, Aviation Demand Forecasts, anticipates that new entrants would serve Bob Hope Airport in the future, regardless of implementation of any of the curfew alternatives. Thus, none of the alternative curfews would adversely affect competition at the Airport.

## **6.6 COMPARABLE FACILITIES AVAILABLE AT OTHER AIRPORTS IN MARKET AREA**

Comparable facilities are available at several airports in the Los Angeles Region for nighttime use by operators affected by the proposed departure curfew. This is discussed at length in Technical Report 1, Aviation Demand Forecasts, Appendices AA, BB, and CC. It is also summarized in Chapters 4, 7, and 10.

Airports in the market area that are expected to be used by carriers and aircraft operators affected by the alternative curfews are described in Table 6-5. These airports have a full range of services and can be used at night, subject to some constraints that are either less restrictive or similar to the nighttime operating restrictions currently in effect at Bob Hope Airport.

The numbers of operations shifted from Bob Hope Airport to these other airports are summarized in Table 6-6. Ontario and Van Nuys would receive most of the shifted operations.

Most of the activity moving to Ontario is represented by Ameriflight's nighttime cargo operation. Ameriflight has a base of operations at Ontario. JetBlue would occasionally divert to Ontario, where it currently operates.

Operations moving to Van Nuys would be primarily general aviation jet aircraft and would range from about 18 in 2008 to 33 operations per day in 2015 with a full curfew at Bob Hope Airport. Just over half of those shifted operations are projected

to occur at night. Van Nuys has the space to accommodate more based aircraft and has the capacity to handle additional operations.

Table 6-5  
**ALTERNATE AIRPORTS SERVING BOB HOPE AIRPORT MARKET AREA**  
Bob Hope Airport FAR Part 161 Study

Airport	Airport Class	Distance from Burbank (miles)	Nighttime Operation Constraints
Camarillo	General aviation	50	Prior permission req'd for takeoffs from 00:00 to 05:00
Long Beach	Commercial	36	Curfew on air carrier and commuter operations, 22:00 to 07:00; maximum nighttime noise limits; noise budget
Los Angeles	Commercial	29	Contra-flow over ocean, 00:00 to 06:30
Ontario	Commercial	53	Contra-flow to and from east, 22:00 to 07:00
Van Nuys	General aviation	8	Maximum nighttime noise limits, 22:00 to 07:00
Whiteman	General aviation	4	None

Sources: Airport websites; *Airports: AOPA's Airport Directory*, 2007-2008 Edition, Aircraft Owners and Pilots Association, Frederick, MD.

Los Angeles International would receive additional operations with curfews at Bob Hope Airport, primarily diversions and shifted charter and cargo flights. FedEx and UPS currently use LAX and have facilities there. Other airlines would divert to LAX on occasion, most likely long-haul flights, such as Alaska Airlines' evening flight from Seattle. JetBlue, which announced that it would begin service at LAX in May of 2008, may also use LAX as a diversion airport on occasion instead of Ontario International. The number of flights shifted to LAX would be low, ranging from 3 to 5 per day in 2008 and 2015.

Whiteman has the operational capacity and facilities to handle additional operations by light piston aircraft and very light jets. Whiteman would receive an average of 3 to 6 flights per day average if a curfew is adopted at Bob Hope Airport. The aircraft that would use Whiteman are light and very light business jets. These aircraft would be permitted to remain using Bob Hope Airport with the noise-based curfew.

Camarillo and Long Beach are forecasted to receive an average of approximately one additional operation or less per day with a curfew at Bob Hope Airport. Both airports clearly have the capacity to handle one more flight a day. The nighttime

restrictions in effect at these airports would not bar general aviation flights shifted from Bob Hope Airport.\*

Table 6-6  
**ANNUAL OPERATIONS SHIFTED FROM BOB HOPE AIRPORT  
 TO ALTERNATE AIRPORTS**  
 Bob Hope Airport FAR Part 161 Study

Airport	Full Curfew		Departure Curfew		Noise-Based Curfew	
	2008	2015	2008	2015	2008	2015
Camarillo	139	241	117	183	113	175
Long Beach	277	482	234	372	226	350
Los Angeles	1,146	1,876	270	715	1,095	1,745
Ontario	6,336	5,942	5,314	5,103	7	7
Van Nuys	6,789	12,111	5,723	9,454	3,957	6,132
Whiteman	964	2,278	810	1,883	0	0

Source: Jacobs Consultancy analysis, 2007.

Whiteman has the operational capacity and facilities to handle additional operations by light piston aircraft and very light jets. Whiteman would receive an average of 3 to 6 flights per day average if a curfew is adopted at Bob Hope Airport. The aircraft that would use Whiteman are light and very light business jets. These aircraft would be permitted to remain using Bob Hope Airport with the noise-based curfew.

Camarillo and Long Beach are forecasted to receive an average of approximately one additional operation or less per day with a curfew at Bob Hope Airport. Both airports clearly have the capacity to handle one more flight a day. The nighttime restrictions in effect at these airports would not bar general aviation flights shifted from Bob Hope Airport.\*

The effects of the alternative curfews on the points of service from Bob Hope Airport are summarized in Table 6-7. In either 2008 or 2015, the full curfew and the noise-based curfew are anticipated to impact direct service to or from 15 airports. With the departure curfew, service to and from 11 airports is anticipated to be affected. From 1 to 23 flights per year for any point of service would be affected. Three destinations, Washington-Dulles, Phoenix, and San Francisco, would see the elimination or substitution with smaller aircraft of one flight per day.

\*The noise restrictions in effect at other airports in the region are summarized in Table 8-1 in Chapter 8.

Table 6-7  
**POINTS OF SERVICE AFFECTED BY ALTERNATIVE CURFEWS**  
 Bob Hope Airport FAR Part 161 Study

Point of Service	Flights Affected Per Year			
	Full Curfew and Noise-Based Curfew		Departure Curfew	
	2008	2015	2008	2015
Columbus, OH	0	3	0	0
Dallas –Love	0	11	0	1
Denver	12	23	0	1
Dallas-Fort Worth	8	11	0	0
Washington-Dulles	2	367	0	365
JFK, New York	6	6	4	4
Las Vegas	17	17	12	12
Oakland	12	12	2	2
Portland, OR	18	18	0	0
Philadelphia	0	4	0	4
Phoenix	376	376	371	371
Sacramento	15	15	5	5
San Francisco	399	414	369	369
San Jose	12	12	1	1
Seattle-Tacoma	2	2	0	0
<b>Total</b>	<b>879</b>	<b>1,291</b>	<b>764</b>	<b>1,135</b>

Note: Affected flights include those that are cancelled, diverted, eliminated, or which have smaller aircraft substituted for larger.

Source: Jacobs Consultancy analysis, 2007. See Technical Report 1, Aviation Demand Forecasts, Appendix BB.

Table 6-8 shows the direct service to and from two alternate Los Angeles area airports that would be available for passengers inconvenienced by the effects of the alternative curfews at Bob Hope Airport. The table shows the number of arrivals at Los Angeles International and Ontario after 9:00 p.m. Several options are available from the larger markets. The only airport without direct service is Columbus, Ohio. Of course, numerous options using connecting flights are available from Los Angeles and, to a lesser extent, Ontario.

Table 6-8 also shows the time of the last departure from Los Angeles or Ontario to each destination. When overnight, red-eye flights are available, the table notes the number of those flights. Overnight service is available from LAX to Washington-Dulles, JFK, and Philadelphia. Flights after 10:00 p.m. (22:00) are available to Las Vegas, Phoenix, Sacramento, and San Francisco.

One overnight flight to JFK is scheduled from Ontario and one other flight to Sacramento is scheduled for 10:00 p.m. (22:00).

Table 6-8  
**FLIGHTS BETWEEN ALTERNATE LOS ANGELES AREA AIRPORTS AND  
POINTS OF SERVICE AFFECTED BY CURFEW ALTERNATIVES**  
Bob Hope Airport FAR Part 161 Study

Origin or Destination Airport	Daily Direct Flights			
	Arrivals after 9:00 p.m.		Departures	
	To LAX	To ONT	From LAX	From ONT
Columbus, OH	0	0	0	0
Dallas –Love	1	1	Last at 17:10	last at 16:25
Denver	16	6	Last at 20:10	last at 14:45
Dallas-Fort Worth	15	1	Last at 19:35	last at 15:35
Washington-Dulles	8	0	10 after 22:00	last at 13:00
JFK, New York	14	1	12 after 21:30	1 after 22:00
Las Vegas	9	2	2 after 22:00	last at 21:00
Oakland	2	2	Last at 21:44	last at 21:35
Portland, OR	6	3	Last at 20:40	last at 19:26
Philadelphia	11	3	6 after 22:00	last at 06:50
Phoenix	14	1	Last at 22:25	last at 21:15
Sacramento	4	2	Last at 22:34	last at 22:00
San Francisco	14	1	Last at 22:30	last at 21:35
San Jose	4	1	Last at 21:50	last at 21:20
Seattle-Tacoma	11	3	Last at 21:15	last at 21:37

Sources: Flight schedules for January 2008 accessed from websites:

<http://www.lawa.org/ont/welcomeONT.cfm>; <http://www.lawa.org/lax/welcomeLAX.cfm>.

Table 6-8 shows that there is considerable service available to the points of service that are likely to be affected by the curfew alternatives at Bob Hope Airport.

In summary, facilities comparable to those at Bob Hope Airport are available for all classes of airport users at several airports serving the Los Angeles region.

## 6.7 ALTERNATE TRANSPORTATION SERVICES ATTAINABLE

Clearly, the most likely alternative transportation service which is attainable during the proposed curfew hours would be air transportation to and from other Los Angeles area airports. Numerous other transportation services are available in the Los Angeles area. These include inter-city rail and bus service and a system of interstate highways.

The Los Angeles metropolitan area is served by two north-south and two east-west Interstate Highways. Interstate 5 runs from the Mexican border north to the Canadian border. Interstate 15 runs from San Diego through Las Vegas and Salt Lake City and then north to Canada through Idaho and Montana. Interstate 10 runs

from Los Angeles east to Florida. Interstate 40 which is accessed from Los Angeles via Interstate 15, runs from Barstow east to North Carolina.

Intercity bus service is available by Greyhound and regional bus companies.

Amtrak has three national routes serving Los Angeles. The Coast Starlight runs north to Oakland, Portland, and Seattle. The Southwest Chief runs northeast through Flagstaff, Albuquerque, and Kansas City to Chicago. The Sunset Limited runs to New Orleans via Tucson, San Antonio, and Houston. A fourth route serves Southern California. The Pacific Surfliner runs from San Luis Obispo south through Los Angeles to San Diego.

These ground transportation services are not directly comparable to air service, particularly to destinations over 200 miles. As discussed in the preceding section, however, commercial and noncommercial air transportation is available from several other airports in the region.

Clearly, alternative transportation services are attainable through various ground transportation means and through other commercial and general aviation airports.

## **6.8 ABSENCE OF ADVERSE EVIDENCE OR COMMENTS REGARDING UNDUE BURDEN**

The Airport Authority accepted comments on the Official Draft FAR Part 161 Application during a 75-day period from March 31 to June 13, 2008. A total of 309 individuals and organizations submitted comments on the proposal. Sixty commenters argued that the proposed curfew would create an undue burden on interstate or foreign commerce.

The comments are summarized in Appendix F, Documentation of Public Comment Opportunities. While most of the comments were unaccompanied by any specific data, some commenters did cite data relating to costs that they alleged the Part 161 Application understated or ignored. One commenter, representing the National Business Aviation Association, submitted an analysis of the results of a survey of general aviation jet operators that they administered. This material is available for public review at the offices of the Airport Authority and has been submitted to the Federal Aviation Administration.

## Chapter 7

CONDITION 3—PROPOSED RESTRICTION MAINTAINS SAFE AND EFFICIENT  
USE OF NAVIGABLE AIRSPACE

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## Chapter 7

### CONDITION 3—PROPOSED RESTRICTION MAINTAINS SAFE AND EFFICIENT USE OF NAVIGABLE AIRSPACE

#### 7.1 GENERAL FINDINGS FOR CONDITION 3

The proposed full mandatory curfew would preserve the safe and efficient use of navigable airspace. The alternative curfews studied also fulfill this condition.

None of the curfew alternatives would involve changes in air traffic control procedures, flight routes or airspace structure, nor would they create shifts in traffic throughout the Los Angeles Region that would compromise the safe and efficient use of navigable airspace.

#### 7.2 REGULATORY REQUIREMENTS

The purpose of this document is to satisfy the requirements set forth by section 161.305(e)(2)(iii) of the federal aviation regulations (notice and approval of airport noise and access restrictions). That is statutory condition 3, which reads as follows:

**Condition 3: The proposed restriction maintains safe and efficient use of the navigable airspace.** Essential information needed to demonstrate this statutory condition includes evidence that the proposed restriction maintains safe and efficient use of the navigable airspace based upon:

Identification of airspace and obstacles to navigation in the vicinity of the airport; and

An analysis of the effects of the proposed restriction with respect to use of airspace in the vicinity of the airport, substantiating that the restriction maintains or enhances safe and efficient use of the navigable airspace. The analysis shall include a description of the methods and data used.

This document provides the information required by Condition 3. It is divided into four major sections:

- Discussion of airspace in the Los Angeles Region
- A review of airspace, obstructions, and procedures in the Bob Hope Airport area
- The effects of the curfew alternatives on operations at other airports in the region
- Findings with respect to Condition 3

## 7.3 AIRSPACE CLASSIFICATION

Airspace is categorized as controlled, uncontrolled, or special use airspace (SUA). Within controlled airspace, the FAA provides air traffic control (ATC) services. Within uncontrolled airspace, ATC has no authority or responsibility to exercise control. SUA is airspace that has been set aside, in most instances, for the military services to accomplish training.

Controlled airspace includes multiple classes of airspace with each class having specific pilot certification and aircraft equipment requirements.\*

### 7.3.1 Class A Airspace

Class A airspace generally extends from 18,000 feet above mean sea level (MSL) up to and including FL600 (approximately 60,000 feet MSL). Unless otherwise authorized, all operations in Class A airspace must be conducted in accordance with instrument flight rules (IFR) and an appropriate ATC clearance. All aircraft operating within Class A airspace are provided positive radar separation.

### 7.3.2 Class B Airspace

Class B airspace is designated around the nation's busiest airports and generally extends from the surface to 10,000 feet MSL. Several airports may be contained in the Class B airspace. The primary airport which is at the center of the Class B airspace is typically an air carrier airport or military airport with extensive turbojet operations. The configuration of Class B airspace is tailored to the needs of the primary airport. The classic configuration resembles an upside-down wedding cake, consisting of a surface area and two or more layers, although many variations exist. Irregularities in the shape of Class B airspace are often required to accommodate other airports, terrain features or unique arrival and departure corridors.

Within the Los Angeles basin, Class B Airspace has been established at LAX.

### 7.3.3 Class C Airspace

Class C airspace is designated around airports that have an airport traffic control tower, are serviced by a radar approach control, and have a minimum number of enplaned passengers and aircraft operations. Class C airspace is tailored to the location, and generally extends from the surface to 4,000 feet above airport elevation, with a radius of 5 nautical miles (NM). It typically includes a shelf with a radius of 10 NM that begins at 1,200 feet above airport elevation, extending to 4,000 feet above airport elevation.

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\*The discussion of airspace classification is based on information in the following publication: FAA, Aeronautical Information Manual, Chapter 3, Airspace, February 14, 2008. ([http://www2.faa.gov/airports\\_airtraffic/air\\_traffic/publications/ATpubs/AIM/](http://www2.faa.gov/airports_airtraffic/air_traffic/publications/ATpubs/AIM/)).

Within the Los Angeles basin Class C airspace has been established at Bob Hope Airport (BUR), John Wayne-Orange County Airport (SNA), and Ontario International Airport (ONT).

#### **7.3.4 Class D Airspace**

Class D airspace extends from the surface to 2,500 feet above the airport elevation at airports with an operational control tower. Class D airspace is established to contain the published instrument approach and departure procedures for the airport and is tailored to meet the operational needs of the area.

#### **7.3.5 Class E Airspace**

Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. Class E airspace is established at non-towered airports to contain all instrument approach and departure procedures. Class E airspace not associated with an airport begins at either 700 feet or 1,200 feet above ground level (AGL). Class E transition airspace encompasses most of the Los Angeles basin beginning at 700 feet AGL.

### **7.4 REGIONAL AIRSPACE ENVIRONMENT**

The southern California airspace, particularly in the Los Angeles Basin, is extremely complex with mountain ranges, predominant winds that vary throughout the region, many airports, and high volumes of air traffic.

#### **7.4.1 Los Angeles Basin Airports**

Within the Los Angeles Region (including Ventura County), six airports currently provide scheduled commercial air carrier service, including Bob Hope, Long Beach, Los Angeles International (LAX), Ontario, John Wayne-Orange County, and Oxnard airports.\* There are 25 other public use airports in the Los Angeles area serving general aviation and three military airports. Figure 7-1 shows the Region's airports. Table 7-1 lists the airports in Los Angeles basin and their 2005 annual operations.

#### **7.4.2 Regional Airspace Structure**

LAX is the dominant airport in the region. It is located near the coast in the southern portion of the Los Angeles basin, south of the San Gabriel and Verdugo Mountains and west of the San Bernardino Mountains. This location has created a natural corridor for aircraft arriving from origins east of Los Angeles.

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\*Palmdale Airport in northern Los Angeles County also has had air carrier service from time to time.

**LEGEND**

- Commercial Service Airport
- Military Airport
- Other Public Use Airport

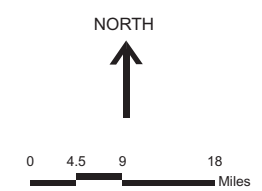


Figure 7-1  
**AIRPORTS WITHIN LOS ANGELES REGION**  
FAR Part 161 Study for Bob Hope Airport  
January 2009

Table 7-1  
**AIRPORTS WITHIN THE LOS ANGELES BASIN**  
 Bob Hope Airport

Airport Name	Airport Code	Annual Operations 2005
<b>Commercial Service Airports</b>		
Bob Hope	BUR	174,741
John Wayne-Orange County	SNA	376,399
Los Angeles International	LAX	653,534
Long Beach	LGB	350,103
Ontario International	ONT	145,897
Oxnard	OXR	<u>98,728</u>
Subtotal		1,799,402
<b>General Aviation Airports</b>		
Agua Dulce <sup>1</sup>	L70	2,880
Banning	BNG	10,500
Brackett/La Verne	POC	171,665
Cable	CCB	92,189
Camarillo	CMA	153,542
Chino	CNO	183,436
Compton/Woodley	CPM	60,000
Corona	AJO	68,000
El Monte	EMT	148,585
Flabob <sup>2</sup>	RIR	40,000
French Valley	F70	130,000
Fullerton	FUL	74,607
Hawthorne	HHR	74,515
Hemet/Ryan	HMT	80,000
Palmdale	PMD	34,263
Perris Valley <sup>2</sup>	L65	34,200
Redlands <sup>2</sup>	REI	44,000
Rialto <sup>2</sup>	L67	30,000
Riverside Municipal	RAL	100,187
Santa Monica	SMO	133,270
San Bernardino International	SBD	7,013
Santa Paula <sup>3</sup>	SZP	97,000
Zamperini/Torrance	TOA	153,189
Van Nuys	VNY	420,984
Whiteman	WHP	<u>102,382</u>
Subtotal		2,446,407
<b>Military Airports</b>		
Los Alamitos Army Airfield	SLI	n.a.
March Air Reserve Base	RIV	n.a.
Point Mugu Naval Air Station	NTD	<u>n.a.</u>
Total		<u>4,245,809</u>

Notes: n.a. -- not available.

<sup>1</sup>Operations for 12 months ending 5/15/2006;

<sup>2</sup>Operations for calendar year 2004;

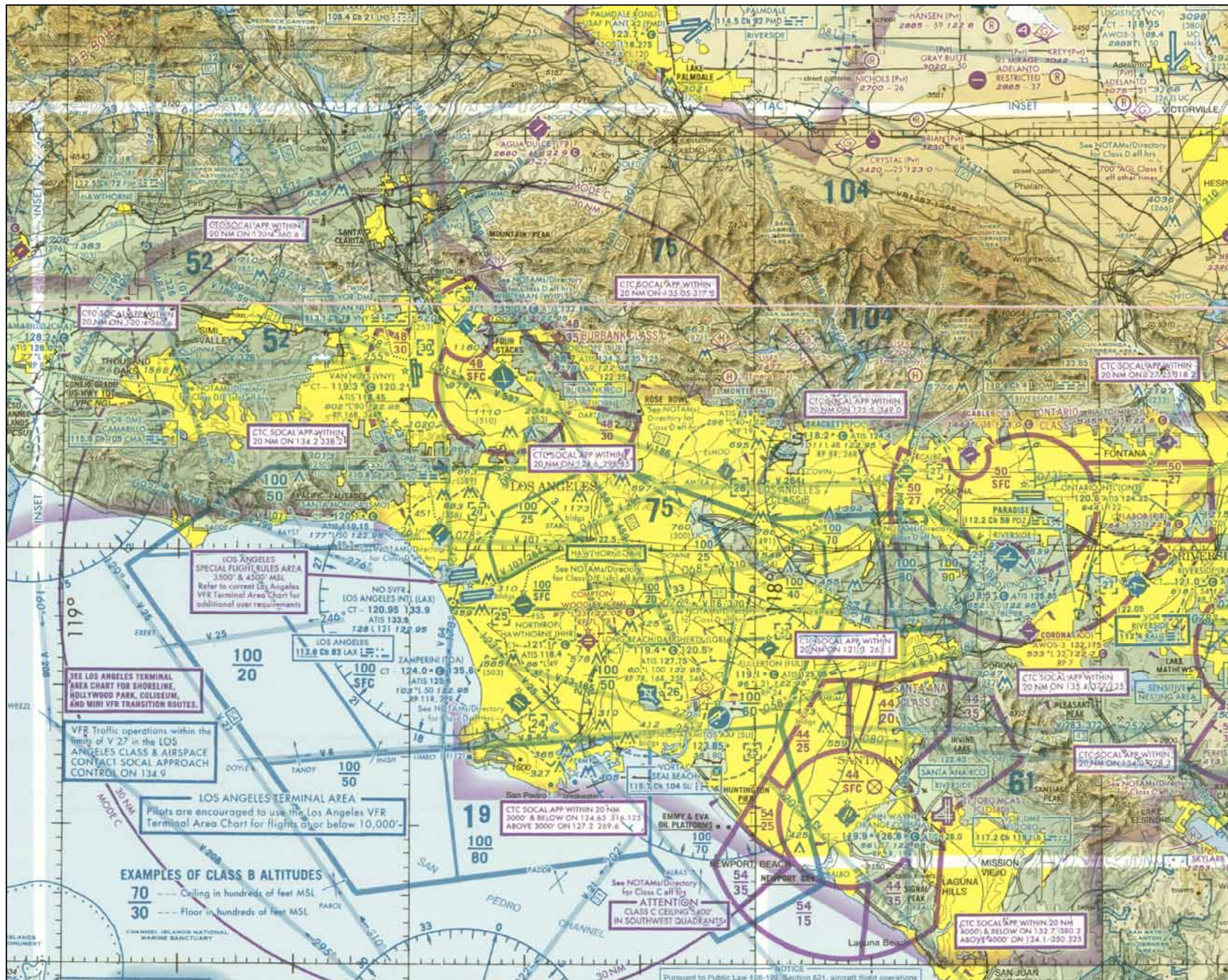
<sup>3</sup>Operations for 12 months ending 10/11/2006

Sources: FAA Terminal Area Forecasts, 2006; Airport Master Records, available on line at: <http://www.gcr1.com/5010Web/>

Largely because of its coastal location, LAX operates primarily in a westerly flow configuration. This configuration provides long straight-in approaches for aircraft arriving from the east, and a convenient departure route over the ocean, providing sufficient airspace for aircraft to climb without imposing undue delay on LAX or other regional airports. It also provides significant noise relief to all but the closest communities bordering the airport. Flights destined for LAX from the Pacific Northwest and Asian Pacific regions are routed south over the ocean before turning east to initially parallel and ultimately join with the arrivals from the east.

The topography of the Los Angeles Basin and the status of LAX as the dominant air carrier airport have combined to create a complex airspace system. Regulatory airspace in the form of Class B at LAX, and Class C at Bob Hope, Ontario, and John Wayne-Orange County, adds to the complexity, particularly for the pilot operating under visual flight rules (VFR). Over the past several decades, as demand continued to grow, and particularly as regulatory airspace began to proliferate, operations at all airports have been tailored to conform to those at LAX. This site-specific tailoring effect is evident in the shape of the Class C Airspace areas at Bob Hope, Ontario, and John Wayne-Orange County where cutouts have been provided to allow access to other airports. Figure 7-2 shows the configuration of regulatory airspace in the Los Angeles Basin.

Some tailoring is the direct result of the Los Angeles basin topography. The Bob Hope Class C airspace is truncated to the northeast and north due to rising terrain and the Ontario Class C Airspace is truncated north of the airport due to the rapidly rising terrain of the San Gabriel Mountains.



**LEGEND**

**AIRPORT TRAFFIC SERVICE AND AIRSPACE INFORMATION**  
 Only the controlled and reserved airspace effective below 18000 ft. MSL are shown on this chart. All times are local.

- Class D Airspace
- Class C Airspace (Mode C See F.A.R. 91.215(a)(4))
- Class E Airspace
- Class E Airspace with floor 700 ft. above surface
- Class E Airspace with floor 1000 ft. or greater above surface that affects Class G Airspace
- Class E Airspace with floor 1200 ft. or greater above surface that affects Class G Airspace
- Class E Airspace over altitude Federal Airways are indicated by center line intersection - Arrow 20 degrees towards facilities which establish intersection
- Class E Airspace over altitude Federal Airways are indicated by center line intersection - Arrow 20 degrees towards facilities which establish intersection

**OBSTRUCTIONS**

- 1000 ft. and higher AGL
- 1000 ft. AGL
- Obstruction with high-intensity lights May operate part-time
- Elevation of the top above mean sea level
- Height above ground
- Light construction or structure position and elevation unverified

**MISCELLANEOUS**

- Integer Law (DME VALUE)
- Utility Light
- Flashing Light
- Hang Glider Activity
- Glider Operations
- Parachute Jumping Area (See Airport Facility Directory)
- VFR Only (See Airport Facility Directory for details)
- IFR Obstacle
- IFR Arrival Routes

Source:  
 Federal Aviation Administration (FAA)  
 National Aeronautical Charting Office,  
 Los Angeles Sectional Chart  
 03/15/07



Figure 7-2  
**AIRSPACE STRUCTURE IN LOS ANGELES BASIN**  
 FAR Part 161 Study for Bob Hope Airport  
 January 2009





### 7.4.3 Enroute Navigational Aids (NAVAIDS)

Enroute NAVAIDS are ground-based transmission facilities established to support accurate navigation to airports and through the airspace. They include the facilities listed in the table below.

Within the immediate Los Angeles basin, there are five VORTACs, located at Los Angeles, Paradise, Palmdale, Seal Beach and Pomona. Two others that support navigation in the area, but lie slightly outside the immediate Los Angeles basin, are located at Fillmore and Lake Hughes. There are three VOR/DME sites located at Van Nuys, Santa Monica and the former Marine Corps Air Station El Toro. A single stand-alone VOR is located at Riverside. This network of NAVAIDS defines the low-altitude (Victor) and high-altitude (Jet) airways used for navigation in and through the Los Angeles basin. Low-altitude airways extend to 17,000 feet MSL and high-altitude airways begin at 18,000 feet MSL.\*

There are four Victor Airways in close proximity to Bob Hope Airport. Victor 459 (V-459), runs in a northwest/southeast direction and is the primary airway used by turbo-prop aircraft destined to LAX and airports in the southern portion of the Los Angeles basin. Victor 201 (V-201) runs in a northeast/southwest direction, approximately 3 miles east of the Airport and is used by aircraft entering the Los Angeles basin from Palmdale and points northeast. Victor 165 (V-165) runs in a north/south direction, approximately 4 miles west of the Airport. Its principal use is to transition aircraft from the Los Angeles basin to points north via Palmdale. Victor 186 (V-186) runs in an east/west direction and lies one mile south of the airport. It is the primary airway for single-engine and light twin-engine aircraft enroute from points northwest of the Los Angeles basin to San Diego. This route takes the aircraft north and east of the LAX Class B airspace. Figure 7-3 shows the Victor Airways in close proximity to Bob Hope Airport.

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\*The FAA, in its June 2008 comment on the draft Part 161 Application, indicated that a NAVAID measure could prove helpful to the Bob Hope Airport in addressing noise issues. While a NAVAID measure would shift noise by effectively tightening or narrowing the land over which aircraft fly (*i.e.*, less homes would be subject to more flights), the Airport Authority is open to considering a NAVAID measure at the Airport following the FAA's approval or rejection of the pending Part 161 Application.

Table 7-2

**DESCRIPTION OF ENROUTE NAVAID**

Bob Hope Airport

<u>Abbreviation</u>	<u>Name of NAVAID</u>	<u>Service Provided</u>
DME	Distance Measuring Equipment	Provides line of sight distance. Typically collocated with VOR or with localizer antenna as part of instrument landing system (ILS).
NDB	Nondirectional Radio Beacon	Similar to VOR, however, where a VOR transmits 360 radials aligned with magnetic north, a NDB radiates a signal capable of producing an infinite number of bearings and is of a much lower power output. A NDB is also much more susceptible to static and having its transmitted signal deflected by objects such as tall buildings and higher terrain.
TACAN	Tactical Air Navigation	Similar to VOR, but also provides distance measurement from facility to aircraft. Used primarily by military aircraft.
VOR	Very High Frequency Omnidirectional Range	Provides directional azimuth bearings between facility and aircraft.
VORTAC	Very High Frequency Omnidirectional Range & Tactical Air Navigation	Facility with co-located VOR and TACAN equipment.

Source: FAA, *Aeronautical Information Manual*, Chapter 1, Air Navigation, Section 1, Navigation Aids, February 14, 2008.  
[http://www2.faa.gov/airports\\_airtraffic/air\\_traffic/publications/ATpubs/AIM/C hap1/aim0101.html](http://www2.faa.gov/airports_airtraffic/air_traffic/publications/ATpubs/AIM/C hap1/aim0101.html).



**LEGEND**

- Class B Airspace
- Class C Airspace (Mode C See F.A.R. 91.215(AIM))
- - - Class D Airspace
- 40 Ceiling of Class D Airspace in hundreds of feet (A minus ceiling value indicates surface up to but not including that value)
- - - Class E (sf) Airspace
- 100 Class E Airspace with floor 700 ft. above surface
- 100 Class E Airspace with floor 1200 ft. or greater above surface that abuts Class G Airspace

- Intersection - Arrows are directed towards facilities which establish intersection.
- 132 → V 68
- Total mileage between NAVAIDS on direct airways.
- - - IFR Departure Routes
- - - IFR Arrival Routes

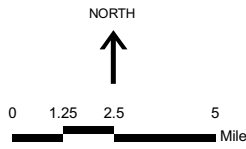


Figure 7-3  
**AIRSPACE IN BOB HOPE AIRPORT VICINITY**  
 F.A.R. Part 161 Study  
 Bob Hope Airport  
 January 2009

Source:  
 Federal Aviation Administration (FAA)  
 National Aeronautical Charting Office,  
 Los Angeles Terminal Area Chart  
 03/15/07



### 7.3.4 Regional Air Traffic Flows

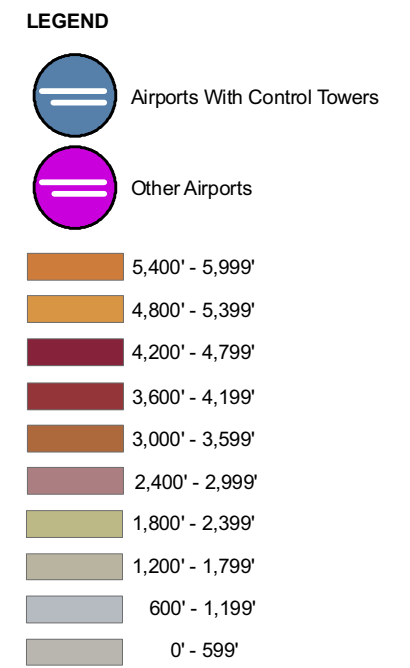
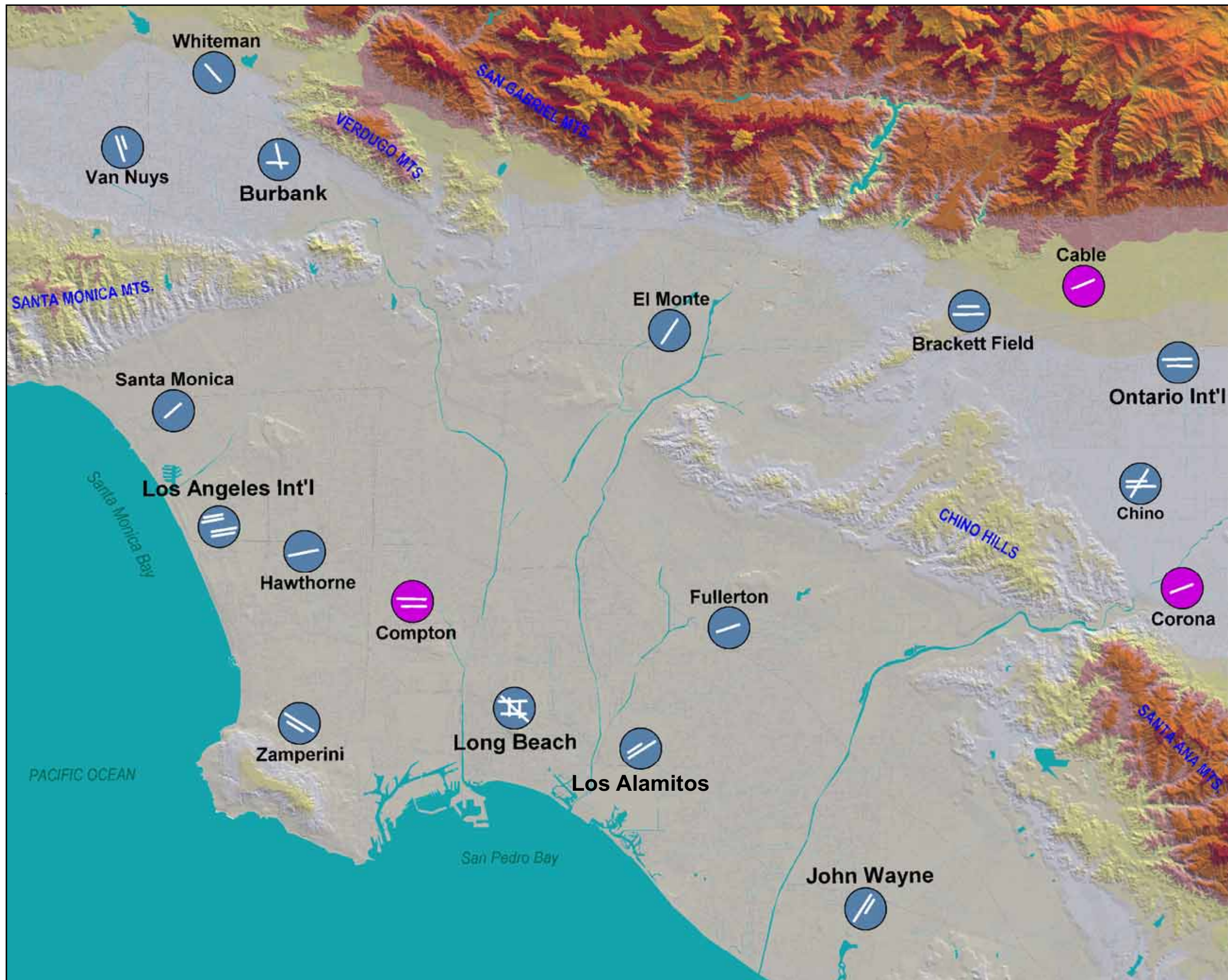
The flows of air traffic to and from the airports in the Los Angeles region are managed to ensure orderly flow while maintaining safe separation of aircraft from each other and from terrain and other obstructions.

The topography of the Los Angeles basin has a major impact on the traffic flows into and through the area. Special use airspace north and east of the Los Angeles basin also affects the general flow of traffic into and out of the central basin. Within the central basin, the flow of air traffic south of the Verdugo and Santa Monica Mountains is predominantly west, while the air traffic flow west of the Verdugo Mountains and north of the Santa Monica Mountains in the San Fernando Valley is predominantly south. The factors affecting the traffic flow through the greater basin area are the prevailing winds, which are predominantly from the west, and the configuration of Class B and Class C airspace. Figure 7-4 depicts the central Los Angeles basin with the San Gabriel, Verdugo and Santa Monica Mountains and the runway layouts for the airports in the area.

LAX and Ontario operate predominantly in a west traffic flow. This is also true of most of the general aviation airports south of the Verdugo and Santa Monica Mountains. (Two exceptions are Santa Monica and Fullerton, with runways oriented southwest-northeast. Further to the south, Long Beach Airport has two sets of parallel runways, one oriented east-west, and the other north-south. The airport is also served by an air carrier runway that is oriented northwest-southeast. Long Beach operates predominantly on the west runways, with larger air carrier aircraft using the northwest-southeast runway. On the very southern edge of the basin area John Wayne Orange County Airport has runways oriented north-south.

Bob Hope, Van Nuys, and Whiteman airports, located to the west of the Verdugo Mountains, and north of the Santa Monica Mountains are influenced by prevailing winds from the south and southwest. Van Nuys' runways are oriented north-south while Bob Hope and Whiteman airports have runways aligned southeast-northwest. Bob Hope also has an east-west runway. Air traffic in the San Fernando Valley area is predominantly north-south, in contrast to the predominantly east-west flow elsewhere in the Los Angeles Region.

Figure 7-5 shows the predominant traffic flows to and from the commercial airports in the northern half of the Los Angeles Basin. The traffic flows are managed as a complete system by the Southern California Terminal Radar Approach Control (SOCAL TRACON), and changes at any one of the larger airports can have an impact on the rest of the system.



Source:  
 Federal Aviation Administration (FAA)  
 Southern California TRACON  
 03/15/07

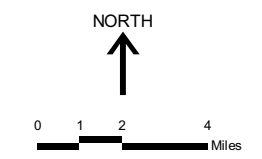
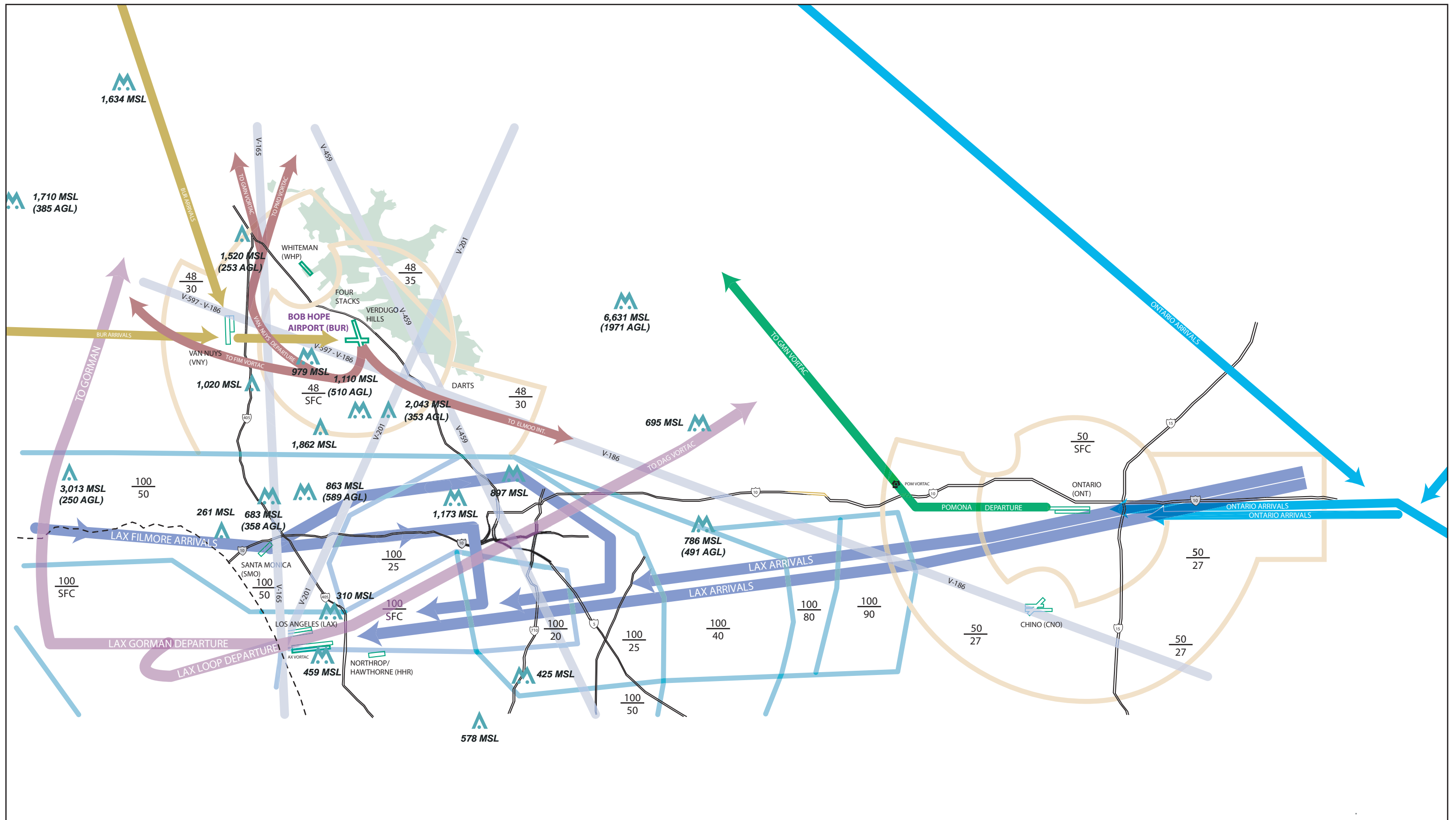


Figure 7-4  
**TOPOGRAPHY AND AIRPORTS IN  
 LOS ANGELES BASIN**  
 FAR Part 161 Study for Bob Hope Airport  
 January 2009





**LEGEND**

- |  |                  |  |                |  |           |  |                   |
|--|------------------|--|----------------|--|-----------|--|-------------------|
|  | Victor Airways   |  | LAX Departures |  | Airport   |  | Obstruction       |
|  | Class B Airspace |  | LAX Arrivals   |  | Freeway   |  | Group Obstruction |
|  | Class C Airspace |  | ONT Departures |  | Shoreline |  |                   |
|  | BUR Departures   |  | ONT Arrivals   |  |           |  |                   |
|  | BUR Arrivals     |  |                |  |           |  |                   |



## **7.4 AIRSPACE AND PROCEDURES IN BOB HOPE AIRPORT AREA**

### **7.4.1 Airspace Structure**

The Class C airspace around Bob Hope Airport has an irregular shape. The 10-NM radius area is truncated to the south where it abuts the LAX Class B airspace and to the east due to high terrain. The surface area has a cut-out to accommodate the operations at Whiteman Airport, 4 miles northwest of Bob Hope. The Class C Airspace extends from the surface to 4,800 feet MSL except for a portion to the northeast that extends from 3,500 feet MSL to 4,800 feet MSL due to high terrain. The airspace below the 3,500 feet MSL floor is Class D airspace. The 10-NM radius area extends from 3,000 feet MSL to 4,800 feet MSL. Below the floor of the Class C airspace and seven miles to the west is Van Nuys Airport. LAX lies 15 miles to the south and beyond the Santa Monica Mountains that rise to approximately 2,100 feet MSL.

### **7.4.2 Topography and Obstructions**

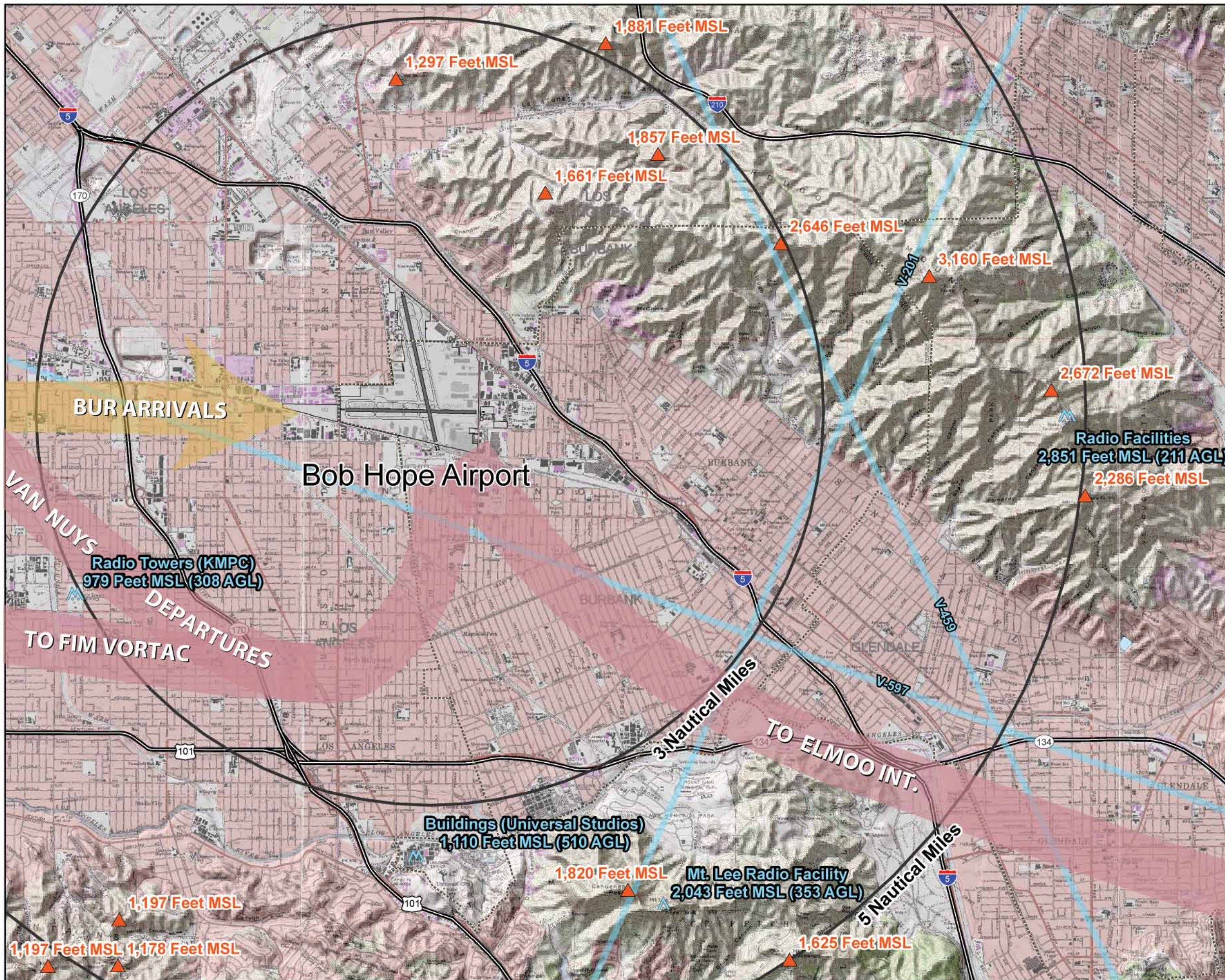
Bob Hope Airport is in the eastern San Fernando Valley at the western edge of the San Gabriel Mountains. The airport elevation is 778 feet MSL with rapidly rising terrain to the north and the east. The terrain rises to 2,297 feet MSL in the Verdugo Mountains within three NM to the east, to over 4,000 feet MSL in the San Gabriel Mountains within 12 miles to the north and to 1,500 MSL at the eastern edge of the Santa Monica Mountains five miles south of the airport . Figure 7-6 shows the topography and obstructions in the Bob Hope Airport area.

While the mountains are the most important obstructions in the Airport area, several tall structures are within 5 NM of the Airport to the south and southwest. They rise to elevations ranging from 979 feet MSL to 2,043 feet MSL.

### **7.4.3 Approach and Departure Procedures at Bob Hope Airport**

#### **7.4.3.1 Precision Approach**

The primary precision approach in use today is the instrument landing system (ILS). An ILS provides an approach path for exact alignment to the landing runway, accompanied by descent guidance to accurately position the aircraft at the designated touchdown point on the runway. The system includes marker beacons or DME to indicate key points along the approach path. The system is supplemented by approach lighting systems and runway lights.



- LEGEND**
- Victor Airways
  - High point of obstruction, elevation in feet above sea level (MSL) and above ground level (AGL)
  - ▲ Obstruction Below 1000 Ft. AGL
  - ▲ Group Obstruction Below 1000 Ft. AGL
  - ▲ Terrain Elevation

Sources:  
 Obstruction Elevation - Federal Aviation Administration (FAA)  
 Los Angeles Terminal Area Chart 03/15/07  
 Topographic Map - United States Geologic Survey (USGS)  
 7.5 Minute Digital Raster Graphics

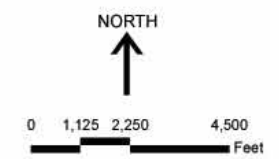


Figure 7-6  
 TRAFFIC FLOW AND OBSTRUCTIONS IN THE  
 BOB HOPE AIRPORT VICINITY  
 FAR Part 161 Study for Bob Hope Airport  
 January 2009





Bob Hope Airport has one precision approach, a Category I ILS to Runway 8. Approaches to Runway 8 may be conducted when cloud heights are 977 feet MSL (200 feet above the ground – AGL) or greater and the runway visual range (RVR) is 5,000 ft or more. The final approach course for Runway 8 crosses Van Nuys Airport (at the BUDDE intersection) at an altitude not less than 3,000 feet MSL. Because of rising terrain east of the Airport, the missed approach procedure requires a climbing right turn, at a minimum rate of climb, south of the Airport and a return to the VNY VOR. (Aircraft unable to comply with the specified rate of climb are required to execute the non-precision localizer approach to Runway 8, discussed below. It has higher weather minimums, and the missed approach procedure begins 300 feet higher than the ILS missed approach, assuring clearance of the terrain east of the Airport.)

### 7.4.3.2 Non-Precision Approaches

Non-precision approaches provide course guidance to the runway using electronic NAVAIDs. Unlike precision approaches, however, they do not provide a glide slope.

Bob Hope Airport has several non-precision approaches. They are briefly described in Table 7-3.

Table 7-3  
**NON-PRECISION INSTRUMENT APPROACHES**  
Bob Hope Airport

Approach	Runway	Minimum Ceiling	Minimum RVR (statute miles)
Localizer	Rwy 8	800 feet AGL	1.0
VOR	Rwy 8	900 feet AGL	1.25
RNAV (GPS)	Rwy 8	800 feet AGL	1.0
GPS-A	Airport (no specific runway)	900 feet AGL	1.25

Source: FAA approach plates, effective 25 October 2007 through 22 November 2007. Downloaded from AirNav website:  
<http://www.airnav.com/airport/KBUR>.

The localizer, VOR, and NDB approaches are all supported by ground-based NAVAIDS. The RNAV and the GPS-A approaches are supported by the global positioning satellite system. GPS coordinates are used to define waypoints for course guidance to the Airport.

### 7.4.3.3 Charted Visual Approaches

Bob Hope Airport has one charted visual approach, the Four Stacks Visual, used when landings are being made on Runway 15. This approach follows the base of the San Gabriel Mountains at a recommended altitude of 5,000 feet MSL. It proceeds north of the San Fernando Reservoir and turns south to intercept the Runway 15 extended final approach course east of Whiteman Airport and the four stacks, for which it is named. The turn to final is made at or above, 3,000 feet MSL. In order to conduct this approach the ceiling must be at or above 5,500 feet and the visibility must 5 statute miles or more.

### 7.4.3.4 STARs

A Standard Terminal Arrival Routing (STAR) provides ATC a means of issuing complex clearances in concise language. A STAR is a published instrument flight rule (IFR) ATC procedure that provides transition instruction from the enroute structure to an instrument approach fix or waypoint in the terminal area. Each STAR may provide one or several transition routes along with vertical planning information, e.g., points along the transition route where pilots should expect clearance to a lower altitude. Two STARs are published for BUR. Aircraft arriving from the Pacific Northwest, the San Francisco Bay area, and the Santa Barbara area are assigned the FERNANDO FIVE Arrival. Aircraft from the northeast are assigned the LYNNX EIGHT Arrival.

### 7.4.3.5 Instrument Departure Procedures

An Instrument Departure Procedure (DP) is a published procedure with relatively complex instructions to provide course guidance while also providing clearance from obstructions, such as terrain and buildings. ATC can refer to the procedure using concise language, with the assurance that an instrument-rated crew will understand how to execute the procedure.

Two DP's are published for Bob Hope Airport—the ELMOO Five Departure and the Van Nuys Seven Departure. Aircraft headed east or southeast are assigned the ELMOO Five DP, while aircraft headed southwest through northeast are assigned the Van Nuys Seven DP. Both procedures have minimum climb rate requirements. The ELMOO Five DP requires a minimum ceiling of 2,100 AGL and a visibility of 2 statute miles or more (to ensure that flight crews can see to avoid the mountains east of the Airport). The Van Nuys Seven DP requires a visibility of 3 statute miles or more.

## 7.5 FINDINGS REGARDING CONDITION 3 – 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.”

### 7.5.1 No Direct Impact on Navigable Airspace

The Airport Authority's proposed restriction, a full nighttime curfew, as well as the two restrictive 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 itself would have no direct effect on the navigable airspace.

### 7.5.2 No Indirect Impact on Navigable Airspace

As discussed in Chapter 10, Condition 6, the proposed restriction would shift traffic from Bob Hope Airport to other airports in the Los Angeles Region. Most of the shift is expected to involve nighttime operations that are distributed through the nighttime hours, and are not clustered during peak periods at the other airports. An analysis of the hourly nighttime traffic distribution at Bob Hope Airport for the 2005 calendar year, described in Chapter 10, Figure 10-1, found that 20% of all nighttime operations occurred in the peak hour. The analysis in Chapter 10 found that, in addition to avoiding any adverse impacts on airport congestion or capacity, the projected shift in traffic would have no adverse impacts on airspace use or congestion.

As shown in Table 7-4, traffic shifted from Bob Hope Airport because of the full curfew would use six airports. The amount of traffic, shifting to Camarillo and Long Beach, all of which would be general aviation, is negligible – less than one operation per day in 2008 and less than two per day in 2015. The amount of traffic that would shift to Whiteman and LAX is only slightly greater, with 2.64 and 3.14 operations per day, respectively, in 2008, increasing to 5.14 and 6.24 per day in 2015.

Table 7-4  
**OPERATIONS SHIFTED FROM BOB HOPE AIRPORT WITH FULL CURFEW**

Airport	Shift in Operations from Bob Hope Airport – Average Day			
	2008		2015	
	Night*	24 hours	Night*	24 hours
Camarillo	0.24	0.38	0.32	0.66
Long Beach	0.47	0.76	0.64	1.32
Los Angeles International	1.72	3.14	3.02	5.14
Ontario	15.74	17.36	13.25	16.28
Van Nuys	13.04	18.60	16.38	33.18
Whiteman	2.28	2.64	2.20	6.24

\*From 10:00 p.m. to 6:59 p.m.

Source: Jacobs Consultancy, 2007-2008.

Most of the traffic shifted because of the curfew would use either Van Nuys or Ontario. As shown in Table 7-4, Van Nuys would receive an additional 18.60 operations per day in 2008 and 33.18 per day in 2015. About 70% of the 2008 operations are expected to occur at night, between 10:00 p.m. and 7:00 a.m. decreasing to 50% in 2015. Based on 20% of the total nighttime operations occurring in the peak hour, a peak-hour average of 6.6 operations would be shifted to Van Nuys. This hourly volume would not increase controller workload or compromise use of the navigable airspace.

Ontario would receive an additional 17.36 operations per day in 2008, decreasing slightly to 16.28 in 2015. About 80% to 90% of these would occur at night, and most would be Ameriflight operations. Ameriflight's operations are distributed throughout the night, with an average of 3 operations in four of the nighttime hours and 2 operations in another four of the nighttime hours.\* This low level of hourly activity can be accommodated at Ontario without creating problems for air traffic control or other airspace users.

The amount of traffic shifted to other airports, especially given its dispersion throughout the night, would cause no adverse effect on the safe and efficient use of the navigable airspace, nor would it impose burdens on air traffic control workload in the Los Angeles Region.

### **7.5.3 Conclusion**

The proposed restriction would maintain the safe and efficient use of the navigable airspace, and therefore the proposed restriction meets Condition 3 of Part 161 Subpart D.

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\* Ameriflight's nighttime operational pattern is discussed in Technical Report 1, Aviation Demand Forecasts, Appendix CC, page CC-4.

## Chapter 8

CONDITION 4—PROPOSED RESTRICTION DOES NOT  
CONFLICT WITH FEDERAL LAW

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## Chapter 8

### CONDITION 4—PROPOSED RESTRICTION DOES NOT CONFLICT WITH FEDERAL LAW

#### 8.1 GENERAL FINDINGS FOR CONDITION 3

The implementation of the full mandatory curfew, following FAA approval, would not conflict with applicable Federal law. The issue is discussed in further detail in Appendix F, response to Comment 4. Briefly, the proposed curfew does not conflict with either the Equal Protection Clause or the Commerce Clause of the Constitution. Furthermore, since the enactment of ANCA, the FAA has allowed elements of settlement agreements involving significant restrictions at Southern California airports in connection with improvements at those airports, and so clearly the imposition of restrictions connected with preserving future capacity at airports in Southern California do not violate Federal law. Neither will a curfew at the Bob Hope Airport.

In particular, the evidentiary basis set forth in this study establishes that the full curfew is a reasonable measure to nearly eliminate nighttime noise (as existing abatement and mitigation measures cannot eliminate the nighttime noise problem as quickly and cost-effectively as the curfew). The full mandatory curfew is not arbitrary (it, in fact, would significantly reduce nighttime noise), is not discriminatory (as it treats all aircraft creating nighttime noise equally), and grants no exclusive rights (as all aircraft are treated the same). Indeed, nighttime restrictions similar to the full curfew are already in effect at a number of Southern California airports without violating Federal law.

As with the full mandatory curfew, implementation of the departure curfew would not conflict with applicable Federal law. In particular, the evidentiary basis establishing the departure curfew is also a reasonable (but somewhat less effective) measure to significantly reduce the nighttime noise described above, is not arbitrary (it, in fact, would significantly reduce nighttime noise), is not discriminatory (as it treats all departing aircraft creating nighttime noise equally), and grants no exclusive rights (as all departing aircraft are treated the same). Again, nighttime restrictions similar to the departure curfew are already in effect at a number of Southern California airports without violating Federal law.

The noise-based curfew, which was included in the Part 161 Study following receipt of, and in response to, FAA guidance issued in 2004 (see Appendix H, FAA Response to “Draft Evaluation of a Curfew at Burbank-Glendale-Pasadena Airport”) would not conflict with applicable Federal law. The evidentiary basis establishing the noise-based curfew is also a reasonable measure to significantly reduce the nighttime noise at Bob Hope Airport (though it is somewhat less effective than the full curfew), is not arbitrary (it, too, would significantly reduce nighttime noise), is

not discriminatory (as it treats all aircraft creating nighttime noise equally), and grants no exclusive rights (as all aircraft are treated the same.) As with the other two curfews, nighttime restrictions similar to the noise-based curfew are already in effect at a number of Southern California airports without violating Federal law.

Aircraft operators affected by the three curfew are identified in Technical Report 1, Aviation Demand Forecasts, Appendix AA (general aviation and air taxi), Appendix BB (air carrier), and Appendix CC (all-cargo airlines).

## 8.2 REGULATORY REQUIREMENTS

The language from Part 161 setting forth the need for a review of Federal law is quoted below. See Sec. 161.305(e)(2)(iv).

**Condition 4: The proposed restriction for does not conflict with any existing Federal statute or regulation.** Essential information needed to demonstrate this condition includes evidence demonstrating 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.

## 8.3 EXCLUSIVE RIGHTS

In accordance with the FAA Airport and Airways Improvement Act of 1982, 49 U.S.C. § 47101, et seq., 49 U.S.C. § 40103(e), and the Airport Improvement Program (AIP) grant assurance, the owner or operator of an airport that has been developed or improved with federal grant assistance cannot grant an exclusive right for the use of the airport to any person providing, or intending to provide, aeronautical services or commodities to the public and will not, either directly or indirectly, grant or permit any person, firm, or corporation, the exclusive right to conduct aeronautical activities. See FAA Advisory Circular 150/1590-6\*. The proposed curfew does not purport to grant any exclusive rights at the airport. It allows competition, as no single operator is excepted from the curfew. Moreover, neither the departure curfew nor the noise-based curfew grants exclusive rights.

## 8.4 CONTROL OF AIRCRAFT OPERATIONS

The FAA and the pilot in command of the aircraft exercise control of aircraft operations in flight. The proposed curfew does not purport to restrict said flight operations. Rather, the curfew purports to limit the times that aircraft may land and

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\*Certain safety, efficiency and proprietary exclusion rights are excepted from the general prohibition.

take off from the airport. Such curfews exist at other commercial airports in Southern California and do not contravene federal laws as to the control of aircraft flight operations. Likewise, neither the departure curfew nor the noise-based curfew interfere with aircraft in flight. See *National Helicopter Corp. v. The City of New York*, 137 F.3d 81, 89 (2nd Cir. 1997) (noting that the proprietor exemption does not extend to the regulation of flight routes).

#### **8.4.1 Noise Restrictions at Other California Airports**

Curfews similar to the three alternatives under consideration in this FAR Part 161 Study are in force at other airports in California and elsewhere around the country. They are briefly summarized in Table 8-1, 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. All of these airports receive Federal 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.

### **8.5 EXISTING GRANT ASSURANCES**

Certain assurances must be complied with in the performance of federal grant agreements for airport development, airport planning, and noise compatibility program grants for airport sponsors.

See [http://www.faa.gov/airports\\_airtraffic/airports/aip/grant\\_assurances/media/airport\\_sponsor\\_assurances.pdf](http://www.faa.gov/airports_airtraffic/airports/aip/grant_assurances/media/airport_sponsor_assurances.pdf). Upon acceptance of a grant offer, most assurances are incorporated in and become part of the grant agreement and stay in effect up to 20 years from the date of the acceptance of a federal grant. It should be noted that there is no time limit on assurances regarding exclusive rights so long as the airport is used as an airport.



Table 8-1

**NIGHTTIME NOISE RESTRICTIONS AT U.S. AIRPORTS**

Bob Hope Airport FAR Part 161 Study

Airport	Nighttime Restriction
<b>CALIFORNIA</b>	
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 and commuter 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.
<b>OTHER STATES</b>	
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).

### 8.5.1 Specific Assurances

1. **General Federal Requirements.** The sponsor will comply with all applicable federal laws, ranging from Fair Labor Standards to the *National Historic Preservation Act* to the *Flood Disaster Protection Act* to the *Drug Free Workplace Act*.

The proposed curfew does not contravene this assurance, as the Airport Authority is seeking FAA approval of the curfew consistent with FAR Part 161 and the curfew, is a reasonable, nonarbitrary and nondiscriminatory, as explained in detail in Chapter 5.

2. **Responsibility and Authority of Sponsor.** The sponsor has the legal authority to apply for the grant.

This assurance is not applicable as there is no grant request at issue.

3. **Sponsor Funds Available.** The sponsor has sufficient funds available for the portion of the project cost not to be paid by the United States.

This assurance is not applicable here as there is no grant request at issue.

4. **Good Title.** The sponsor has good title to the landing area of the airport.

The Airport has good title to the landing area of the airport.

5. **Preserving Rights and Powers.** The sponsor will preserve its rights and powers to perform the grant agreement.

Again, there is no grant agreement at issue with the proposed curfew.

6. **Consistency with Local Plans.** The project is reasonably consistent with local plans.

The proposed curfew does not contravene any local plans.

7. **Consideration of Local Interests.** The sponsor has given fair consideration to the interests of communities where the project will locate.

There is strong support among local residents for the proposed curfew as evidenced by the response to the public outreach documented in Appendix F.

8. **Consultation with Users.** The sponsor has undertaken reasonable consultation with effected parties in undertaking this airport development project.

There is no development project at issue here. Nonetheless, the airport has consulted with its tenants and the local community and has held and will hold public outreach on the proposed curfew.

9. **Public Hearings.** The sponsor has afforded an opportunity for public hearing as to any project involving an airport runway or runway extension.

The curfew does not involve any such a capital project. Nonetheless, the airport has afforded an opportunity for public hearing on the curfew.

10. **Air and Water Quality Standards.** The sponsor will provide assurance that a runway project meets applicable state air and water quality standards.

The curfew is not a runway project.

11. **Pavement Maintenance Practices.** The sponsor will implement effective pavement maintenance-management program for pavement project at the airport.

The curfew is not a pavement project.

12. **Terminal Development Prerequisites.** The sponsor has obtained all necessary safety equipment for a terminal development project.

The curfew is not a terminal development project.

13. **Auditing Systems, Audit and Recordkeeping Requests.** The sponsor shall keep all project accounts and records to disclose the disposition of the proceeds of the grant.

The proposed curfew is not a grant project.

14. **Minimum Wage Rates.** The sponsor shall include, in all contracts of \$2,000 for work as the project, the minimum rate of wages under the Davis-Bacon Act.

The proposed curfew is not a development project funded by grants.

15. **Veteran's Preferences.** The system shall include in all contracts for work on any project funded under a grant agreement a preference for veterans who are available and qualified to perform the work.

The proposed curfew does not impact any such contract.

16. **Conformity to Plans and Specifications.** The sponsor will execute the project subject to plans, specifications and schedule approval by the secretary.

The airport is seeking FAA approval of the curfew consistent with FAR Part 161.

17. **Construction Inspection and Approval.** The sponsor will provide and maintain competent, technical supervision of the construction site.

There is no construction site at issue.

18. **Planning Project.** The sponsor, in carrying out planning project, will execute the project in accordance with the progress application.

The sponsor is seeking FAA approval of the curfew consistent with FAR Part 161.

19. **Operation and Maintenance.** The sponsor shall operate facilities in a safe and efficient condition.

The sponsor is seeking FAA approval of the proposed curfew consistent with FAR Part 161.

20. **Hazard Removal and Mitigation.** The sponsor will take action to adequately clear and protect airspace by airport hazards.

The proposed curfew does not create an airport hazard, as detailed in Chapter 7.

21. **Compatible Land Use.** The sponsor will take appropriate action to promote compatible land use near the airport.

The airport does this through its existing Noise Impact Area Reduction Plan.

22. **Economic Nondiscrimination.** The sponsor will not unjustly discriminate as to the type, category or classes of aeronautical activities.

The curfew is not discriminatory as it treats all similarly situated operators and operations alike.

23. **Exclusive Rights.** The sponsor will not grant exclusive rights to the airport to any person providing or intending to provide aeronautical services to the public.

No exclusive rights would be granted by the requested curfew.

24. **Fee and Rental Structure.** The sponsor will maintain a fee and rental structure for the facilities to make the airport as self-sustaining as possible.

The curfew does not impact the fee and rental structure of facilities.

25. **Airport Revenues.** The sponsor will not direct airport revenue off airport.

The curfew does not impact revenue or divert it off airport.

26. **Reports and Inspections.** The sponsor will submit annual financial reports of the airport budget.

The requested curfew does not impact this assurance.

27. **Use by Government Aircraft.** The sponsor will make available the facilities of the airport for use by government aircraft.

The exceptions to the proposed curfew allow for compliance with this assurance.

28. **Land for Federal Facilities.** The sponsor will furnish to the government land for air traffic control activities.

The proposed curfew does not impact this assurance.

29. **Airport Layout Plan.** The sponsor will keep up to date airport layout plan.

The proposed curfew does not impact this assurance.

30. **Civil Rights.** The sponsor will comply with such rules as are promulgated to assure no person excluded on grounds of race, creed, color, national origin, sex age, or handicap.

The proposed curfew does not impact this assurance.

31. **Disposal of Land.** The sponsor will dispose of land, when no longer rendered for a noise compatibility purpose, at fair market value at the earlier practical time.

The proposed curfew does not impact this assurance.

32. **Engineering and Design Services.** The sponsor will award contract relating to the project in the same manner of Title IX of the *Federal Property and Administration Service Act of 1949*.

The proposed curfew does not impact this assurance.

33. **Foreign Market Restrictions.** The sponsor will not allow funds provided under a grant to use any product or service of a foreign country listed by the USTR as denying fair and equitable market opportunities.

The curfew does not impact this assurance.

34. **Policies, Standards and Specifications.** The sponsor will carry out the project in accordance with the policies, standards and specifications approved by the Secretary.

The airport is seeking FAA approval of the proposed curfew consistent with FAR Part 161.

35. **Relocation and Real Property Acquisition.** The sponsor will be guided in acquiring real property to the greatest extent practical under State law, by the land acquisition policies of 49 C.F.R. 24.

The proposed curfew does not change any land acquisition policy at the airport.

36. **Access By Intercity Buses.** The sponsor will permit, to the maximum extent practical, intercity buses to have access to the airport.

The proposed curfew has no impact on this assurance.

37. **Disadvantaged Business Enterprise.** The sponsor shall not discriminate on the basis of race, color, national origin or sex in the award and the performance of any DOT-assisted contract or in the administration of its DBE programs or the requirements of 49 C.F.R. Part 26.

The proposed curfew will not impact the assurance.

38. **Hangar Construction.** The Sponsor may grant a long-term hangar lease to an aircraft owner who agrees to pay for the construction of the hangar.

The proposed curfew will not impact this assurance.

39. **Competitive Access.** If a sponsor has not been able to accommodate one or more requests by an air carrier for access to a gate, the sponsor shall transmit a report to the Security explaining why it cannot accommodate the request.

The requested curfew does not deny gate access to any air carrier. Moreover, the Airport Authority is seeking FAA approval of the proposed curfew consistent with FAR Part 161.

## **8.6 REASONABLE NOISE REGULATIONS DO NOT VIOLATE FEDERAL LAW**

Airport proprietors are not preempted from adopting noise regulations, provided such regulations are reasonable, non-arbitrary and non-discriminatory. *National Helicopter Corp. v. The City of New York*, 137 F.3d 81, 89 (2nd Cir. 1997) ("As a proprietor, the City, as noted, has the power to promulgate reasonable, nonarbitrary and non-discriminatory regulations."); *Santa Monica Airport Assn. v. City of Santa Monica*, 659 F.2d 100 (9th Cir. 1981); *British Airways Board v. The Port Authority of*

*New York and New Jersey*, 558 F.2d 75 (2nd Cir. 1977) ("Concorde I") ("The Port Authority is vested only with the power to promulgate reasonable, nonarbitrary and nondiscriminatory regulations that establish acceptable noise levels for the airport and its immediate environs.").

In *National Helicopter Corp. v. The City of New York*, 137 F.3d 81 (2nd Cir. 1997) the court upheld a range of operating restrictions on a heliport, including various curfews. Specifically, the City of New York enacted the following: (1) the restriction of weekday operations to between 8 a.m. and 8 p.m.; (2) the restriction of weekend operations to between 10:00 a.m. and 6 p.m.; (3) the phasing out of weekend operations entirely; (4) the reduction of operations by minimum of 47 percent overall; (5) the barring of Sikorsky S-58Ts, or helicopters of a similar size, from use of the Heliport for sightseeing operations; (6) the prohibition of sightseeing flights over Second Avenue and the requirement that such flights heading north and south fly only over the East and Hudson Rivers; and (7) the requirement that helicopters using the Heliport be marked for identification from the ground. *Id.* at 86. The district court invalidated all of the restrictions except #1 and #2 on the grounds that they exceeded the proprietor exception. The Second Circuit upheld restrictions #1 and #2, specifically noting that "protection of the local residential community from undesirable heliport noise during sleeping hours is primarily a matter of local concern." Additionally, the court rejected the argument that the curfews were invalid because they did not attack the noisiest aircraft or the noisiest times of operation. Under similar logic, the Second Circuit reversed with respect to restriction #3 (elimination of weekend use). The Second Circuit also found the 47% reduction in operations reasonable. While there was no study that tied a 47% reduction in operations to any particular noise goal, the court nevertheless found that the restriction was reasonable, because it would result in noise reduction. The court cited *Western Air Lines, Inc. v. Port Auth. of N. Y. and N.J.*, 658 F. Supp. 952 (S.D.N.Y. 1986) for the proposition that "this court will not second guess the actions of the Port Authority as long as they are reasonable." With respect to condition # 5 (prohibition of the Sikorsky S-58Ts and other helicopters based on size), the Second Circuit affirmed, and found the restriction to be unreasoned discrimination because size does not directly correlate to noise. Conditions 6 and 7 regarding marking and routes were also struck as the proprietor exemption does not extend to the regulation of flight routes.

Here, given that the Airport Authority is seeking FAA approval of a mandatory full curfew consistent with FAR Part 161 and that similar curfews are in place elsewhere, the proposed full mandatory curfew would comply with Federal law, as would the departure curfew and noise-based curfew.

Chapter 9

CONDITION 5—ADEQUATE OPPORTUNITY FOR PUBLIC COMMENT

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## Chapter 9

### CONDITION 5—ADEQUATE OPPORTUNITY FOR PUBLIC COMMENT

#### 9.1 GENERAL FINDINGS FOR CONDITION 5

The Airport Authority has exceeded the statutory requirements related to public notice and opportunity for comment set forth in FAR Part 161. The Authority has not only contacted all affected tenants and aircraft operators who either use the airport or are forecasted to use the airport through 2015, it also has had a number of outreach sessions covering the nature of the noise problem at the airport, the existing noise mitigation and abatement measures, potential new, alternate restrictions, and the proposed mandatory curfew.

The Authority not only sought public comment, but also sought FAA comment on its preliminary benefit-cost analysis. Upon receipt of the FAA guidance, the Authority shared that guidance with the public.

In August 2007, the consultant provided the Airport Authority, in a public meeting, an update of its analysis in response to the FAA guidance. On March 5, 2008, the Airport Authority made available the Executive Summary to the public. The Airport Authority released the Draft FAR Part 161 Application to the public on March 31, 2008. The document was available for download from the Airport Authority's website. Hard copies were available for public review at 18 locations, including local government offices and public libraries. The public comment period was held open for 75 days, closing on June 13, 2008 – 30 days longer than the 45-day period required under FAR Part 161 (Sec. 161.303(b)(7)).

The Airport Authority held a public information workshop April 14, 2008 (which is not required by FAR Part 161) to afford interested people an opportunity to ask questions about and to testify on the Draft Application. The Authority also held a public hearing at a special nighttime meeting of the Authority on May 12, 2008. Full documentation of the public outreach and comment process is in Appendix F.

#### 9.2 REGULATORY REQUIREMENTS

Section 161.305 (e)(2)(v) of FAR Part 161 (Condition 5) requires that the applicant must have provided "adequate opportunity for public comment on the proposed restriction." The requirements for satisfying this condition are found in Section 161.303. (Alternative procedures are described in Section 161.321, which apply when the comment period is conducted according to the requirements of 14 C.F.R. Part 150.)

Section 161.303 requires publication of notice and the transmittal of written notice to specified parties. It also specifies the information to be provided in the Notice, and

describes the information that must be made available for those who wish to comment.

### **9.2.1 Public Notice**

Section 161.303(b) requires that public notice of the proposed restriction be given by way of publication in an area-wide newspaper or newspapers with circulation throughout the airport noise study area. Notice must also be posted in the airport, in a “prominent location accessible to airport users and the public.”

In addition to publication in newspapers and at the airport, written notification must be given to several enumerated parties;

- (1) Aircraft operators providing scheduled passenger or cargo service at the airport; operators of aircraft based at the airport; potential new entrants that are known to be routinely providing nonscheduled service that may be affected by the proposed restriction;
- (2) The Federal Aviation Administration;
- (3) Each Federal, state, and local agency with land-use control jurisdiction within the airport noise study area;
- (4) Fixed-based operators and other airport tenants whose operations may be affected by the proposed restriction; and
- (5) Community groups and business organizations that are known to be interested in the proposed restriction. (Sec. 161.303(b)(1)-(5)).

### **9.2.2 Information in the Notice**

The notice that is given to the groups listed above must be a clear and concise description of the proposed restriction, as well as alternatives in order of preference. The notice must specifically state that the proposal is for a mandatory Stage 3 restriction, and explain where the complete text of the proposed restriction is available for public review. The complete text must include the sanctions for non-compliance, and also a discussion of the need for, and goal of, the restriction.

Other information that the notice must contain includes the name of the airport and the associated cities and states, identification of the operators and types of aircraft expected to be affected, the proposed effective date for the restriction, the methods of implementation, and information on how to request a copy of the complete text of the restriction, including sanctions and analysis if not already contained in the notice itself.

### **9.2.3 Opportunity for Comments**

The notice must contain an invitation to comment and have a comment period of at least 45 days. The notice must also include an address for submitting comments to the airport operator. A contact person must also be identified.

### **9.3 PUBLIC INVOLVEMENT EFFORTS PRIOR TO RELEASE OF DRAFT FAR PART 161 APPLICATION**

The Part 161 process has included use of a public website and numerous public meetings and listening sessions. 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.

The Authority conducted a series of public meetings from late summer 2000 through mid-summer 2002. Three series of public meetings were held during Phase I of the process including: (1) kickoff listening sessions in August 2000, (2) Forecast Briefings in June 2001, and (3) Public Meetings in May 2002. All told, there were thirteen public meetings held at a variety of locations during this period.

#### **9.3.1 Listening Sessions**

The Airport Authority sponsored a number of listening sessions in the communities around the Airport on August 21, 22, 23, and 24, 2000. The purpose of the listening sessions was to explain the process that the Airport Authority intended to follow in undertaking the F.A.R. Part 161 Study. The purpose of the study was also explained during the meeting, with the stated goal of trying *“to eliminate or significantly reduce nighttime flight noise at Burbank Airport now and in the future.”*

Five listening sessions were conducted, and 278 oral comments were received. Most of the comments were from local residents, several representing local and neighborhood associations. Of the comments, 89 directly supported the curfew as proposed, and all were generally supportive.

For further detail, see Appendix F, Documentation of Public Comment Opportunities.

#### **9.3.2 Forecast Briefings**

During the week of June 18, 2001, the Airport Authority sponsored a series of four public briefings to disclose draft forecasts of aviation activity for the period between 2003 and 2015. Each session consisted of a consultant briefing on the purpose of the Part 161 study and a review of the draft forecasts, followed by a public comment period open to any participant.

A total of 99 comments were received at the Forecast briefings. Of the comments, 10 supported the full nighttime curfew, 15 suggested additional or alternative restrictions, 21 were in regard to the forecast and its accuracy, 12 related to the quality of life present in the airport environ, and 41 others dealt with a variety of topics. There were no comments in opposition to the curfew.

### 9.3.3 Public Meetings

During the week of May 6, 2002, the Airport Authority sponsored a series of 4 public briefings to present revised forecasts of aviation activity for the period between 2003 and 2015 and the consultant's recommendations for alternatives to be evaluated to meet the statutory requirements of Part 161. Each session consisted of a consultant briefing on the purpose of the Part 161 study, a review of the revised forecasts based on the downturn in the economy after the terrorist attacks of 9/11, and the recommended alternatives. The presentation was followed by a public comment period open to any participant. Where practicable, Authority members, Authority staff or consultants responded to public comments or requests for additional information.

A letter of invitation was mailed to over 147,000 residents surrounding the airport within the zip codes that were the source of the greatest number of complaints about the airport. A total of 556 individuals registered their attendance, but many others who attended did not sign in. Of the attendants, 79 orally presented their comments, resulting in 227 separate recorded comments. The comments addressed a wide variety of topics, although many focused on concerns about terminal development and expansion and economic issues.

## 9.4 OFFICIAL PUBLIC REVIEW AND COMMENT PERIOD

The official public review and comment period on the Official Draft Part 161 Application opened on March 31, 2008 and closed June 13, 2008. As required by FAR Part 161, Section 161.307, the Airport Authority established a public docket for receiving and considering comments on the Draft Application. Those comments are summarized in Appendix F.

### 9.4.1 Public Notices

The official comment period was opened on March 31, 2008. In accordance with the requirements of Part 161.303, the Authority placed notices of the proposed restriction and the opening of the comment period in newspapers of general circulation in the area -- the Los Angeles Times (Valley Edition), the East Valley Times, and the Los Angeles Daily News. In addition, poster notices were placed in the Airport terminal and in each of the fixed-base operators' facilities.

Formal notices of the Authority's intent to implement the restriction were sent to the parties identified in Part 161.303.b. They are listed in Table 9-1, below.

The original announcements called for the comment period to remain open through May 14, 2008. The Airport Authority extended the comment period for an additional 30 days, through June 13, 2008. The extension was announced through news releases and notices mailed to all stakeholders listed in Table 9-1.

### 9.4.2 Document Repositories

Copies of the Airport Authority's Official Draft FAR Part 161 Application, including all supporting analysis, were placed at the following locations for public access and review:

- Airport Authority office, Bob Hope Airport
- Office of the City Manager, City of Burbank
- Office of the City Manager, City of Glendale
- Office of the City Manager, City of Pasadena
- City of Los Angeles, City Hall
- Public libraries in Burbank, Glendale, Pasadena, Pacoima, Panorama City, and the North Hollywood, Sherman Oaks, Studio City, Sun Valley, and Van Nuys, neighborhoods in Los Angeles

PDF versions of the application and supporting analyses were posted on the Airport website. In addition, PDF versions of the material on CD were made available to those requesting copies of the document.

### 9.4.3 Public Workshop and Hearing

A public information workshop was held on April 14, 2008 to afford interested people an opportunity to review and comment on the Official Draft FAR Part 161 Application.

The Airport Authority held a public hearing on the Official Draft Part 161 Application on May 12, 2008, at the Burbank Marriott Hotel.

Table 9-1

**PARTIES RECEIVING WRITTEN NOTICE OF OFFICIAL DRAFT FAR PART 161  
APPLICATION AND OPPORTUNITY FOR COMMENT**

Bob Hope Airport FAR Part 161 Study

<u>Incumbent Airlines</u>	<u>Charter Airlines</u>	<u>Based Corporate Aircraft</u>
Alaska Airlines	Allegiant Air	AvJet Corporation
American Airlines	American Trans Air	Casden Aircraft Leasing, LLC
Ameriflight, Inc.	Champion Air	Chartwell Aviation Services
Delta Airlines	EOS Airlines	Dreamworks Aviation
Federal Express, Inc.	Primaris Airlines	Earth Star, Inc. / Disney
Horizon Air / Alaska Air	Ryan International Airlines	Fleet Unlimited, Inc.
JetBlue Airways Corp.	Sky King	Garmin AT, Inc.
Mesa Airlines/Freedom Airlines	Sky West Ground/ Ryan International	GE Capital Corp
Skybus	Team Jet/Sports Jet	Group 3 Aviation, Inc.
SkyWest Airlines	Vulcan Flight Management/ Vulcan, Inc.	Helinet Aviation Services
Southwest Airlines		J. G. Boswell Company
United Airlines		Malpaso Productions, Ltd.
United Parcel Service		Mike Post Productions
US Airways		Millenium Holdings
	<b>Non-Scheduled On-Demand Carriers</b>	Occidental Petroleum
<b>National Airlines Not Currently Serving the Airport</b>	Aero Jet Services, LLC	Sierra Land Group Inc.
AirTran	Air Cal	Talon International
Aloha Airlines	Cessna Aircraft Co.	The Apogee Companies Inc.
Continental Airlines	Executive Flight, Inc.	TWC Aviation
Express Jet	Marcare Aviation	Urban Holdings
Frontier Airlines	NetJets	Warner Bros / GTC
Hawaiian Airlines, Inc.	Yecny Enterprises, Inc.	
Midwest Airlines, Inc.		<b>T-Hangar Tenants</b>
North American Airlines	<b>Fixed Base Operators</b>	Richard Bradley
Northwest Airlines	Mercury Air Center	Mark Brown
Spirit Airlines, Inc.	Million Air, Burbank	Cris Cretaire
Virgin America		Digicam Co.
World Airways		Stephen Dorris
		Serge Genitempo
<b>Cargo Airlines Not Currently Serving the Airport</b>		John Hales
ASTAR Air Cargo		Joe Henry
Atlas Air, Inc.		Huw Holwill
Evergreen International Airlines		Charles Phelan
Katlitta Air		Rec Management
Lynden Air Cargo		Ray Smart
Northern Air Cargo		Stacy Medical
Polar Air Cargo Worldwide, Inc.		Wright Flight Aviation, c/o Panoply Pictures

Table 9-1 (continued)

**PARTIES RECEIVING WRITTEN NOTICE OF OFFICIAL DRAFT FAR PART 161  
APPLICATION AND OPPORTUNITY FOR COMMENT**  
Bob Hope Airport FAR Part 161 Study

<u>Other Airport Tenants</u>	<u>Rental Car Companies</u>	<u>Governmental Officials</u>
Aircraft Service Int'l Group	Advantage Rent-A-Car	California Division of Aeronautics
Airnet Communications	All Rite Rent-A-Car	City of Burbank, City Manager and City Attorney
Alliance Airport Advertising	ANC Rental Corporation	City of Glendale, City Manager
AON Risk Services, Inc.	Avis Rent-A-Car System	City of Los Angeles, Mayor and City Attorney
Bank of America	Budget Rent-A-Car	City of Pasadena, City Manager
Burbank Sanitary Supply, dba Airport Barbershop	Discovery Rent-A-Car	County of Los Angeles, County Counsel & Department of Public Works
Central Parking System	Enterprise Rent-A-Car	FAA, BUR Air Traffic Control Manager
Certified Folder Display	Hertz Rent-A-Car	FAA Office of Airport Planning and Programming
Conceptual Perceptions, Inc.	National Car Rental System	Transportation Security Administration, BUR Federal Security Director
Cushman & Wakefield	Rent4Less Car Rental	Office of Administrative Hearings
Datawave Services		
Desmond's Studio Production Services	<u>Taxicab and Shuttle Services</u>	<u>Aviation Trade Groups</u>
G & S Mechanical USA	City Cab	Air Carrier Association of America
Lockheed Federal Credit Union	Express Shuttle	Air Transport Association
Metropolitan Culinary Services	Five Star Transportation	Aircraft Owners and Pilots Association
The Paradies Shops	Glendale Airport Van	Cargo Airline Association
Pro-Tec Fire Services, Ltd.	Karmel Shuttle Service	National Business Aviation Association
S & A Enterprises	Prime Time Shuttle	Regional Airlines Association
SBC Public Communications	Roadrunner Shuttle	
Serviceair & Shell Fuel Services	Super Shuttle	<u>Local Business Associations</u>
Smart Carte, Inc.	Yellow Cab/Checker Cab	Burbank Chamber of Commerce
Sunrise Ford		Glendale Chamber of Commerce
TBI Airport Management, Inc.	<u>Hotels</u>	Greater San Fernando Valley Chamber of Commerce
T-Mobile	The Garciela Burbank Hotel	Pasadena Chamber of Commerce
24 Hour Flowers	Hilton L.A. North/Glendale	Sherman Oaks Chamber of Commerce
24/7 Studio Equipment	Holiday Inn, Burbank	Studio City Chamber of Commerce
United Auto and Truck	Marriott Burbank Airport	Sun Valley Area Chamber of Commerce
Verizon Wireless	Ramada Inn Burbank	Universal City/North Hollywood Chamber of Commerce
VSP Parking		Valley Industry & Commerce Association
World Service West		
Wurzel Landscape		

#### **9.4.4 Comments Received**

During the formal comment period on the draft Application, 309 letters and emails (collectively, messages) were filed from 46 organizations and 263 individuals. Sixty-one percent of the messages supported a curfew and one-third were in opposition. (The remainder were general comments, questions, or requests for information.) Each message was reviewed to identify specific comments related to the draft Application, and while some messages contained a single comment, others included numerous comments. A total of 593 separate comments challenging some aspect of the draft application were identified in these messages. Appendix F, Documentation of Public Comment Opportunities, includes a report entitled "Summary of Written Comments Received during Official Comment Period."



## Chapter 10

CONDITION 6—PROPOSED RESTRICTION DOES NOT CREATE BURDEN  
ON NATIONAL AVIATION SYSTEM

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## Chapter 10

### CONDITION 6—PROPOSED RESTRICTION DOES NOT CREATE BURDEN ON NATIONAL AVIATION SYSTEM

#### 10.1 GENERAL FINDINGS FOR CONDITION 6

Just as the imposition of a full mandatory nighttime curfew will not create an undue burden on the use of airspace in the Southern California region, the curfew would not create a burden on the National Aviation System. The small number of operations that will be impacted will not burden either existing or planned airport system capacity.

The only non-aircraft alternatives that could remedy the nighttime noise issue are either not available to the Airport Authority under current law (property acquisition) or are less cost-effective and less immediate (residential acoustical treatment).

#### 10.2 REGULATORY REQUIREMENTS

The purpose of this chapter is to satisfy the requirements of FAR Section 161.305(e)(2)(vi). This is statutory condition 6, which reads as follows:

**Condition 6: The proposed restriction does not create an undue burden on the national aviation system.** Essential information needed to demonstrate this condition includes evidence that the proposed restriction does not create an undue burden on the national aviation system such as:

- (A) An analysis demonstrating that the proposed restriction does not have 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;
- (B) An analysis demonstrating that nonaircraft alternative measures to achieve the same goals as the proposed subject restrictions are inappropriate;
- (C) The absence of comments with respect to imposition of an undue burden on the national aviation system in response to the notice required in §161.303 or §161.321.

#### 10.3 NO EFFECT ON AIRPORT SYSTEM CAPACITY, CONGESTION, OR DELAY

One consequence of implementing a curfew at Bob Hope Airport would be that aircraft operators would shift some flights to other airports in the Los Angeles region. The shift is not a mandated feature of the proposed curfew. In fact, some

aircraft operators are likely to adjust to the curfew and keep all operations at Bob Hope Airport. For some operators, however, nighttime flights are an imperative part of their business. They will have to shift their nighttime operations to other airports.

Appendices AA, BB, and CC in Technical Report 1 analyze this issue and discuss the airports most likely to receive operations shifted from Bob Hope Airport. The capacity of airports to receive shifted operations is largely a function of the number of aircraft that can land on the available runways during a given time span.

An important measure of airspace capacity is the volume of traffic that can be accommodated through the various arrival and departure fixes established throughout the regional airspace system. The fixes are points in the airspace, established through the use of ground-based electronic navigational aids or the GPS satellite system, over which aircraft are directed by air traffic controllers as they transition to and from the regional airspace. Because traffic must flow through a small number of fixes, and be widely separated from one another for safety purposes, they are the choke points for air traffic in the regional airspace.

### **10.3.1 Approach and Methodology**

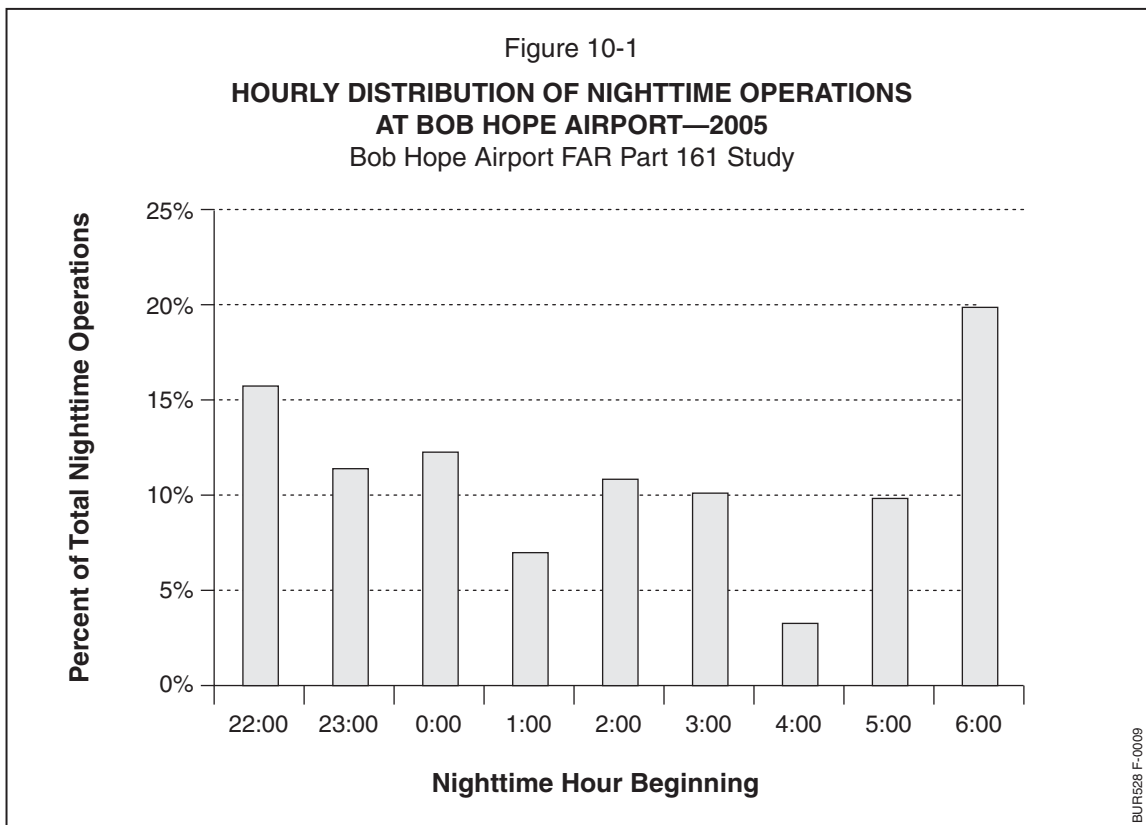
The analysis begins with an assessment of the distribution of traffic shifted from Bob Hope Airport to other airports in the Los Angeles region. For purposes of comparing these shifted operations with hourly runway and airspace fix capacities, the daytime and evening operations are combined into a single “daytime” category (7:00 a.m. to 10:00 p.m.). Nighttime operations (10:00 p.m. to 7:00 a.m.) are considered without any adjustment.

The numbers of shifted day and night operations are compared with the hourly capacities of each receiving airport at its associated arrival fixes. The capacity estimates for the runways and airspace fixes are made using very conservative operating parameters to ensure that any potential impact on capacity is identified.

For all airports except LAX, runway capacity estimates were obtained from FAA Advisory Circular AC 150/5060-5, *Airport Capacity and Delay*. For LAX, hourly runway capacities were taken from the FAA 2004 *Airport Benchmark Capacity Report*. The number of operations shifted to each receiving airport is compared with the hourly runway capacity in terms of total operations (landings and takeoffs). In addition, because many of these shifted operations would occur in early-morning and late-evening hours when instrument flight rule (IFR) conditions may be more common, the number of shifted operations is compared only with the IFR hourly capacity of each airport. This is a conservative parameter that tends to overstate the potential capacity impact of the shifted operations, because IFR capacity at most airports is substantially lower than visual flight rule (VFR) capacity.

Airspace fix capacities were calculated by using an in-trail separation at the airspace fix of 7 nautical miles and aircraft speed of 250 knots. A separation of 7 nautical miles provides for minimum radar traffic spacing plus a safety buffer, while the speed of 250 knots represents the maximum speed limit for aircraft below 10,000 feet. These parameters yield a conservative capacity estimate of 36 arrivals or departures per hour. In comparing shifted operations with airspace fix capacity, either the number of shifted arrivals or departures, whichever is larger, is compared with the fix capacity because airspace fixes nearly always handle either arrivals or departures, but not both. This analysis is based on all shifted traffic being directed to a single fix. This is a conservative approach because multiple fixes are often available at airports to expedite the flow of traffic. Controllers also have the flexibility to separate traffic by altitude to effectively increase the capacity of a fix. Thus, the analysis that follows shows a worst case assessment of the impact of shifted traffic on airspace capacity.

The flights shifted at night would be spread over the 9 nighttime hours. Similarly, the flights shifted in the daytime would be spread over the 15 daytime hours. Figure 10-1 shows the hourly distribution of nighttime flights at Bob Hope Airport during the 2005 calendar year. Note that the peak nighttime hour (6:00 to 6:59) had about 20 percent of the total nighttime operations.



**10.3.2 Distribution of Traffic to Other Airports Based on Alternative Curfews**

Bob Hope Airport serves commercial airlines, cargo airlines and the general aviation community. It is conveniently located for numerous businesses in the San Fernando Valley, Pasadena, downtown Los Angeles, Beverly Hills and Westwood. For many years it has been the airport of choice for the entertainment industry.

The adoption of any nighttime curfew at Bob Hope Airport would cause some operators based at the Airport to move at least a portion of their operations to other airports. Two of the three curfew alternatives would force the major cargo carriers, UPS and FedEx, to move one of their daily flights to another airport in the Los Angeles region. In addition, commercial flights that are forced to divert would divert to other airports in the region.

Airports in the Los Angeles region that are plausible alternates for traffic shifted from Bob Hope Airport by a curfew are listed in Table 10-1. With one exception, all of these airports are expected to see some increase in operations if a curfew is adopted at Bob Hope Airport. While Santa Monica (SMO) is conveniently located with respect to the entertainment industry, a major source of general aviation demand at BUR, that airport has numerous operating restrictions. These include a prohibition on Stage 2 aircraft, a maximum noise limit, a mandatory departure curfew (from 11:00 p.m. to 7:00 a.m. weekdays and to 8:00 a.m. weekends) and a voluntary arrival curfew. Thus, it is assumed that few or no flights would be shifted to SMO if a curfew is adopted at Bob Hope Airport.

Table 10-1

**AIRPORTS THAT MAY SERVE AS ALTERNATES TO BOB HOPE AIRPORT**  
Bob Hope Airport FAR Part 161 Study

Airport	Distance/Direction from BUR
Whiteman (WHP)	4 miles/NW
Van Nuys (VNY)	8 miles/W
Santa Monica (SMO)	15 miles/SW
Los Angeles (LAX)	30 miles/S
Long Beach (LGB)	36 miles/S
Camarillo (CMA)	50 miles/W
Ontario (ONT)	53 miles/SE



### **10.3.2.1 Flights Shifted From Bob Hope Airport by Aircraft Class**

The percentage of flights in an aircraft class that would shift to each alternate airport depends on the proximity of the alternate airport to the geographical area that the shifted flight is intended to serve and on the capability of the alternate airport to offer the services needed by the aircraft operator. This section briefly describes how aircraft operators affected by the proposed curfew at Bob Hope Airport are likely to shift operations to other airports in the Los Angeles region. This is a recap of the detailed analysis described in Appendices AA, BB, and CC of Technical Report 1, Aviation Demand Forecasts.

#### **10.3.2.1.1 Large Passenger Carriers**

With the exception of JetBlue and Skybus\*, all late passenger carrier flights that are forced to divert to other airports would use LAX. All of the affected airlines have operations at LAX and would be able to accommodate the diverted aircraft and crews.

While Jet Blue has a presence at both Long Beach and Ontario, it would divert late operations to Ontario because of the curfew on air carriers operations at Long Beach between 10:00 p.m. and 6:59 a.m.

Bob Hope Airport is the only airport in the region currently used by Skybus. Skybus would tend to use Ontario as a diversion airport since it has lower costs than LAX.

Operators of nighttime charter flights would shift all of those operations from Bob Hope Airport to LAX, since LAX is the airport nearest to the San Fernando Valley market area served by Bob Hope.

#### **10.3.2.1.2 Large Cargo Carriers**

Both FedEx and UPS have flights four times per week that arrive at BUR early in the morning during the proposed curfew hours. If either the full curfew or the noise-based curfew is adopted, these carriers would shift these flights to another airport. (Neither carrier would be affected by a departure curfew.) Since the carriers using Bob Hope Airport primarily to serve their customers in the San Fernando Valley area, they would move to the alternate airport nearest those customers if they are forced to move. That airport is LAX.

#### **10.3.2.1.3 Business Jets**

The business jet operations at Bob Hope Airport are divided into two roughly equal groups – those by aircraft based at the Airport and those by transients.

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\*At the time of this analysis, Skybus Airlines was operating at Bob Hope Airport. It has since ceased operations.

Based on the consultant's interviews with operators of business jets based at Bob Hope Airport, most of them who are affected by the proposed curfew alternatives would use Van Nuys because of its proximity to Burbank and the level of services provided at that airport. The remaining locally based operators who are projected to move operations with adoption of a curfew would go to Camarillo, Long Beach, or LAX.

Van Nuys has a noise-based curfew that effectively applies to Stage 2 aircraft. This is essentially the same as the current nighttime noise limit in force at Bob Hope Airport (Noise Rule 9). Thus, any Bob Hope-based operators of Stage 2 aircraft have presumably made adjustments to the Bob Hope noise limit and avoid departures and arrivals during the nighttime hours. Any more stringent nighttime curfews imposed at Bob Hope Airport would have no effect on these aircraft operators.

The City of Los Angeles is currently considering a new noise rule at Van Nuys Airport. It has prepared a Draft Environmental Impact Report on the proposal, which it believes would be grandfathered under the Aviation Noise and Capacity Act and, thus, not subject to FAR Part 161 requirements. Aircraft with takeoff noise levels, as published in FAA Advisory Circular 36-3, exceeding the maximum limit would be prohibited from operating at the airport. The maximum permissible level would be reduced gradually from 85 dBA on January 1, 2009 to 77 dBA effective January 1, 2016. The FAA's letter in response to this report is included in Appendix H.

If this rule is adopted, it would have little or no effect on the potential shift in traffic to Van Nuys caused by adoption of a curfew at Bob Hope Airport. The ultimate maximum noise limit proposed for Van Nuys, 77 dBA in 2016, is met by virtually all business jet aircraft that are currently permitted to operate at night at Bob Hope Airport under the existing noise rules.

Based on the consultant's interviews of NetJets officials (the largest fractional operator), which is broadly representative of transient business jets using Bob Hope Airport, transient operators who are forced by a curfew to use airports other than Bob Hope Airport would primarily use Van Nuys, Long Beach and LAX.

Table 10-2 shows the estimated percentage distribution to other airports of business jet operations shifted from the Airport because of a curfew.

Table 10-2  
**DISTRIBUTION OF BUSINESS JET OPERATIONS SHIFTED TO  
 OTHER AIRPORTS UNDER ALTERNATIVE CURFEWS**  
 Bob Hope Airport FAR Part 161 Study

Airport	Percent Shifted	
	BUR-Based	Transient
Whiteman (WHP)	0%	0%
Van Nuys (VNY)	85%	90%
Los Angeles (LAX)	5%	5%
Long Beach (LGB)	5%	5%
Camarillo (CMA)	5%	0%
Ontario (ONT)	0%	0%

Source: Appendix AA, Technical Report 1, Aviation Demand Forecasts.

**10.3.2.1.4 Very Light Jets (VLJ)**

Half of future VLJ tenants and transients at Bob Hope Airport would move to or use Van Nuys. The other half would use Whiteman Airport. Whiteman is a good alternative for VLJ owners and operators because it is close to Burbank (4 miles) and has a 4,000-foot runway. It does not have an instrument landing system (ILS), but it does have a GPS (global positioning system) approach. There is a waiting list for new tenants. It is expected that VLJ owners based at Bob Hope Airport who decide to move would put themselves on the waiting list and use Whiteman for nighttime departures and arrivals until they can move permanently to Whiteman. The percentage distribution of for this group of operators is shown in Table 10-3.

Table 10-3

**DISTRIBUTION OF VLJ OPERATIONS SHIFTED TO OTHER AIRPORTS UNDER ALTERNATIVE CURFEWS**  
 Bob Hope Airport FAR Part 161 Study

Airport	Percent Shifted	
	BUR-Based	Transient
Whiteman (WHP)	50%	50%
Van Nuys (VNY)	50%	50%
Los Angeles (LAX)	0%	0%
Long Beach (LGB)	0%	0%
Camarillo (CMA)	0%	0%
Ontario (ONT)	0%	0%

Source: Appendix AA, Technical Report 1, Aviation Demand Forecasts.

**10.3.2.1.5 Multi-Engine Turboprops**

Ameriflight is the major operator of this class of aircraft at Bob Hope Airport. Other corporate/business owners and operators of turboprops, either transient or based at the Airport, are limited. It is estimated that locally based aircraft represent 80% of the operations of this class of aircraft, which primarily reflects Ameriflight. Approximately 20% of multi-engine turboprop operations are by transient aircraft.

Turboprops would be affected only by the full curfew and the departure curfew. The noise-based curfew would have negligible effect on turboprop operators.

Ameriflight management has indicated that they would move their express courier service to Ontario, where they already have a major base, if a full curfew or departure curfew is adopted.

Most other locally based turboprop operators who relocate because of adoption of a full curfew or departure curfew, most of whom use their aircraft for business purposes, would move to Van Nuys because of its proximity to Burbank and the range of services available at that airport. A few operators who do not need the levels of service offered at Van Nuys would move to Whiteman. Similarly, transient turboprop traffic would primarily move to Van Nuys, and a small percentage would move to Whiteman. The percentage distribution for this group of operators is shown in Table 10-4.

Table 10-4  
**DISTRIBUTION OF TURBOPROP OPERATIONS SHIFTED TO  
 OTHER AIRPORTS UNDER FULL CURFEW OR DEPARTURE CURFEW**  
 Bob Hope Airport FAR Part 161 Study

Airport	Percent Shifted	
	BUR-Based	Transient
Whiteman (WHP)	10%	10%
Van Nuys (VNY)	10%	90%
Los Angeles (LAX)	0%	0%
Long Beach (LGB)	0%	0%
Camarillo (CMA)	0%	0%
Ontario (ONT)	80%	0%

Source: Appendices AA and CC, Technical Report 1,  
 Aviation Demand Forecasts.

#### 10.3.2.1.6 Multi-Engine Piston

Ameriflight is a major user of this class of aircraft at Bob Hope Airport. The other corporate, business and private owners and operators of this class of aircraft at Bob Hope Airport (either locally based or transient) are limited. Some would move to Whiteman and others may decide to stay at Bob Hope Airport.\*

Locally based aircraft (primarily Ameriflight) represent approximately 80% of the operations of this class of aircraft, and transients represent 20%. As noted in the previous section, Ameriflight would move its express courier service to Ontario where it already has a major base if a full curfew or departure curfew is adopted. (The noise-based curfew would have negligible effect on multi-engine piston aircraft operators.) Some transient operators would continue to use Bob Hope Airport, although those who need to operate during curfew hours would be likely to use Whiteman, since it is so close to Burbank and is fully able to accommodate the needs of most piston aircraft operators. The percentage distribution for this group of operators is summarized in Table 10-5.

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\*It is likely that some Bob Hope Airport tenants operating multi-engine piston aircraft will decide to relocate to Whiteman in the future. This would occur not because of any curfew but because Whiteman would better suit their needs. See Technical Report 1, Aviation Demand Forecasts, pp. 49-50, for more information on this trend.

Table 10-5

**DISTRIBUTION OF MULTI-ENGINE PISTON OPERATIONS SHIFTED TO OTHER AIRPORTS UNDER FULL CURFEW OR DEPARTURE CURFEW**

Bob Hope Airport FAR Part 161 Study

Airport	Percent Shifted	
	BUR-Based	Transient
Whiteman (WHP)	10%	100%
Van Nuys (VNY)	0%	0%
Los Angeles (LAX)	0%	0%
Long Beach (LGB)	0%	0%
Camarillo (CMA)	0%	0%
Ontario (ONT)	90%	0%

Source: Appendices AA and CC, Technical Report 1, Aviation Demand Forecasts.

**10.3.2.1.7 Single-Engine Turboprops and Piston**

The locally based single-engine aircraft owner tenants would continue to use Bob Hope Airport because they rarely operate during curfew hours. Most of these operators have the flexibility to adjust their flight times to work around a curfew restriction.

The forecast projects that the number of operations at BUR by single-engine aircraft will drop dramatically through the future. This is due to a combination of market forces. The alternative curfews would not influence this projected decline in activity. While some of these operators will be simply selling their aircraft, many of them will move from Bob Hope Airport to neighboring airports. Whiteman is a prime candidate to receive many of these relocated aircraft. Again, this trend is anticipated whether or not a curfew is adopted at Bob Hope Airport.

The alternative curfews would have no effect on use of Bob Hope Airport by transient single-engine traffic because they rarely operate during curfew hours.

**10.3.3 Effects of Shifted Operations on Alternate Airports**

The impact that the flights shifted from Bob Hope Airport would have on the alternate airports would depend upon the mix and the number of flights shifted to each airport. This analysis examines the impact that the shifted flights would have on the total operations levels at the alternate airports.

In order to determine the number of BUR flights that may potentially shift to other airports, the nighttime operations for each curfew case were subtracted from the nighttime operations in the baseline case (without a curfew) for both 2008 and 2015 forecast conditions. These shifted flights were then distributed to the alternate airports based on the assumptions discussed in Section 10.3.2, above.

The flights shifted from BUR were then compared with the 2008 and 2015 forecast operations at the receiving airports. The 2008 and 2015 forecasts for the alternate airports were derived from the FAA Terminal Area Forecasts (TAF), obtained from the FAA Operations and Performance database. Time-of-day distributions were derived from FAA's Air Traffic Activity System (ATADS) data for 2006, and were projected to remain constant through the forecast period. For selected airports, time-of-day distributions were available from Master Plans and Part 150 Studies.

### **10.3.3.1 Whiteman Airport (WHP)**

Whiteman (WHP) is located just 4 miles northwest of BUR and is home to over 650 mostly single-engine piston aircraft. Only one jet is currently based at the airport. There are no restrictions on transient traffic, and the airport does not have a curfew for fixed-wing aircraft. The runway is only 4,000 feet long, but that is adequate to accommodate all piston aircraft, small turboprops, and VLJs.

This airport is a good alternate for BUR-based piston, small turboprop and VLJ operators as well as transients. Table 10-6 below shows the operations projected to be shifted to WHP and the percentage increase over baseline operations.

Table 10-6  
**AVERAGE DAILY OPERATIONS SHIFTED TO  
 WHITEMAN AIRPORT WITH ALTERNATIVE CURFEWS AT BOB HOPE AIRPORT**  
 Bob Hope Airport FAR Part 161 Study

Scenario	Day		Evening		Night		Total		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	
<b><i>2008 Baseline Operations</i></b>	<b>121</b>	<b>121</b>	<b>20</b>	<b>20</b>	<b>1</b>	<b>1</b>	<b>143</b>	<b>143</b>	
Full Curfew	Shifted Ops	0.14	0.09	0.11	0.01	1.06	1.22	1.32	1.32
	% Increase	0.1%	0.1%	0.6%	0.1%	71.9%	82.6%	0.9%	0.9%
Departure Curfew	Shifted Ops	0.29	0.05	0.34	0.01	0.47	1.05	1.11	1.11
	% Increase	0.2%	0.0%	1.7%	0.1%	32.1%	71.0%	0.8%	0.8%
Noise-Based Curfew	Shifted Ops	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	% Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b><i>2015 Baseline Operations</i></b>	<b>130</b>	<b>130</b>	<b>22</b>	<b>22</b>	<b>2</b>	<b>2</b>	<b>153</b>	<b>153</b>	
Full Curfew	Shifted Ops	1.56	1.70	0.46	0.31	1.10	1.10	3.12	3.12
	% Increase	1.2%	1.3%	2.1%	1.5%	69.5%	69.5%	2.0%	2.0%
Departure Curfew	Shifted Ops	1.54	1.29	0.57	0.26	0.47	1.03	2.58	2.58
	% Increase	1.2%	1.0%	2.6%	1.2%	29.7%	64.9%	1.7%	1.7%
Noise-Based Curfew	Shifted Ops	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	% Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Sources: Baseline operations forecasts taken from FAA TAF. Time-of-day splits derived from FAA's Air Traffic Activity Data System (ATADS) system.

Table 10-7 shows the projected daily average number of nighttime and daytime operations at Whiteman Airport in 2008 and 2015 and the average daily number of shifted operations for the three curfew alternatives. The columns in the right half of the table present capacity comparisons, which are based on hourly capacity. Because 20% of the nighttime operations at Bob Hope Airport in 2005 occurred in the peak nighttime hour (see Figure 10-1), shifted operations were computed as having the same peak hour proportion. As a conservative estimate, the peak hour for daytime operations was computed based on 20% of all shifted daytime operations.

The hourly IFR runway capacity at Whiteman Airport is 60 operations per hour. This compares with 0.5 nighttime peak hour operations shifted to Whiteman with a full curfew at Bob Hope Airport in 2008. With a departure curfew at Bob Hope Airport, 0.3 nighttime peak hour would be shifted to Whiteman. (No operations would be shifted with the noise-based curfew.) Based on the 2008 forecasts, these shifted operations would have only a small impact on runway capacity, amounting to 0.8% and 0.5% of nighttime hourly capacity for the full curfew and the departure curfew,



respectively. The projected effects in 2015 are nearly identical to the 2008 forecast. These small increases in activity are too little to have an adverse impact on capacity.

As shown in Table 10-7, the capacity of a single airspace fix is estimated at 36 arrivals or departures per hour. During the peak nighttime hour, approximately 0.2 arrivals or departures would be shifted to Whiteman on an average day with either the full curfew or departure curfew at BUR. This would account for only 0.7% (with the full curfew) or 0.6% (with the departure curfew) of the capacity of a single airspace fix. Again, the projected effects in 2015 are only slightly different than the 2008 forecast. No adverse impacts on capacity would occur with such small changes in activity.

Average Daily Operations			Hourly Capacity Compared with Shifted Peak Hour Operations				
Scenario	Day/ Night			Runway (IFR)		Airspace Fix	
	Night	Eve		Night	Day/ Eve	Night	Day/ Eve
<b>2008 Forecast</b>							
<b>Baseline Forecast Operations at Whiteman</b>	3	282	<b>Capacity – Ops per Hour</b>	60		36	
Full Curfew -- Shifted Ops	2.3	0.4	Pk. Hr. Shifted Ops Percent of Capacity	0.5 0.8%	0.1 0.1%	0.2 0.7%	0.1 0.1%
Departure Curfew -- Shifted Ops	1.5	0.7	Pk. Hr. Shifted Ops Percent of Capacity	0.3 0.5%	0.1 0.2%	0.2 0.6%	0.1 0.4%
Noise-Based Curfew – Shifted Ops	0.00	0.00	Pk. Hr. Shifted Ops Percent of Capacity	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%
<b>2015 Forecasts</b>							
<b>Baseline Forecast Operations at Whiteman</b>	3	303	<b>Capacity – Ops per Hour</b>	60		36	
Full Curfew -- Shifted Ops	2.2	4.0	Pk. Hr. Shifted Ops Percent of Capacity	0.4 0.7%	0.8 1.3%	0.2 0.6%	0.4 1.1%
Departure Curfew -- Shifted Ops	1.5	3.7	Pk. Hr. Shifted Ops Percent of Capacity	0.3 0.5%	0.7 1.2%	0.2 0.6%	0.4 1.2%
Noise-Based Curfew -- Shifted Ops	0.00	0.00	Pk. Hr. Shifted Ops Percent of Capacity	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%
*Peak hour activity is computed as 20% of shifted daytime and 20% of shifted nighttime operations.							

### 10.3.3.1.1 Effect of Additional Operations on Noise at Whiteman

Table 10-8 presents data shedding light on whether the shift in operations to Whiteman may cause a significant increase in noise levels at that airport.\* The table shows that less than three operations per day would shift to Whiteman in 2008 and just over 6 would shift in 2015. It is necessary to convert the raw operations numbers to “equivalent operations,” however, to enable a better understanding of the potential effect on cumulative noise exposure. This is done by weighting the evening and nighttime operations in the same way as evening and nighttime noise events are weighted by the CNEL metric. Evening operations are multiplied by 3, and nighttime operations are multiplied by 10. (Daytime operations are not adjusted.) The results are then summed to obtain the total equivalent operations on an average day.

Table 10-8  
**INCREASE IN OPERATIONS AT WHITEMAN AIRPORT  
 WITH FULL CURFEW AT BOB HOPE AIRPORT**  
 Bob Hope Airport FAR Part 161 Study

	Actual Operations		Time-of-Day Weighted Equivalent Operations (a)	
	2008	2015	2008	2015
Operations per Average Day without Curfew	285	306	393	421
Operations Shifted from BUR with Curfew	2.6	6.2	23.4	27.6
Total	288	312	416	448
Percent Increase with Curfew (b)	0.9%	2.0%	6.0%	6.6%

(a) Equivalent operations are computed by applying the evening and nighttime weights from the CNEL metric to evening and nighttime operations. Thus, evening operations (between 7:00 p.m. and 10:00 p.m.) are multiplied by 3, and nighttime operations (between 10:00 p.m. and 7:00 a.m.) are multiplied by 10.

(b) As a general rule-of-thumb, an increase in equivalent operations of ~15% indicates a possibility of a 1.5 dBA increase in cumulative noise exposure at the 65 CNEL (or DNL) level.

Source: Jacobs Consultancy analysis, 2008.

Table 10-8 shows that equivalent operations at Whiteman would increase by about 6% in 2008 and 6.6% in 2015 with a full curfew at Bob Hope Airport. Based on the standard industry rule-of-thumb, an increase in equivalent operations of roughly

\*According to FAA Order 1050.1E, the FAA considers an increase of noise of 1.5 dBA or more at or above 65 DNL (or CNEL) a significant increase. See Section 14.3 of the Order.

15% indicates the possibility of a significant increase in noise – 1.5 dBA increase at the 65 CNEL level. The projected increase at Whiteman is well below this level. Thus, it is highly unlikely that noise would increase significantly in the Whiteman environs due to the shift in operations caused by a curfew at Bob Hope Airport.

With either of the less restrictive curfews (the departure curfew and the noise-based curfew), the shift in traffic to Whiteman would be even less, so they would not create a significant increase in noise either.

### 10.3.3.2 Van Nuys Airport

Van Nuys is only 8 miles from Bob Hope Airport. Use of Van Nuys as an alternate to Bob Hope would have minimal impact on the passengers and employees of the operators currently based at Bob Hope. Table 10-9 below shows the operations projected to be shifted from Bob Hope Airport to Van Nuys and the corresponding percentage increase compared to baseline operations at VNY.

Table 10-9  
**AVERAGE DAILY OPERATIONS SHIFTED TO VAN NUYS AIRPORT  
WITH ALTERNATIVE CURFEWS AT BOB HOPE AIRPORT**  
Bob Hope Airport FAR Part 161 Study

Scenario		Day		Evening		Night		Total	
		Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
<b>2008 Baseline Operations</b>		<b>402</b>	<b>425</b>	<b>49</b>	<b>31</b>	<b>23</b>	<b>19</b>	<b>474</b>	<b>475</b>
Full Curfew	Shifted Ops	1.85	2.43	0.79	0.48	6.65	6.39	9.30	9.30
	% Increase	0.5%	0.6%	1.6%	1.5%	28.9%	33.6%	2.0%	2.0%
Departure Curfew	Shifted Ops	4.06	1.56	1.73	0.19	2.05	6.09	7.84	7.84
	% Increase	1.0%	0.4%	3.5%	0.6%	8.9%	32.1%	1.7%	1.7%
Noise-Based Curfew	Shifted Ops	1.25	1.40	0.38	0.26	4.07	3.48	5.70	5.14
	% Increase	0.3%	0.3%	0.8%	0.8%	17.7%	18.3%	1.2%	1.1%
<b>2015 Baseline Operations</b>		<b>425</b>	<b>449</b>	<b>52</b>	<b>32</b>	<b>24</b>	<b>20</b>	<b>501</b>	<b>501</b>
Full Curfew	Shifted Ops	6.08	7.23	2.08	1.40	8.43	7.95	16.59	16.59
	% Increase	1.4%	1.6%	4.0%	4.4%	35.1%	39.8%	3.3%	3.3%
Departure Curfew	Shifted Ops	7.52	4.51	2.82	0.78	2.62	7.66	12.95	12.95
	% Increase	1.8%	1.0%	5.4%	2.4%	10.9%	38.3%	2.6%	2.6%
Noise-Based Curfew	Shifted Ops	2.55	2.87	0.81	0.55	5.38	4.64	8.74	8.06
	% Increase	0.6%	0.6%	1.6%	1.7%	22.4%	23.2%	1.7%	1.6%

Sources: Baseline operations forecasts taken from FAA TAF. Time-of-day splits derived from VNY Integrated Noise Model data file for 2006 provided by Los Angeles World Airports.

Table 10-10 shows the average daytime and nighttime operations projected for 2008 and 2015 for Van Nuys Airport . It also shows the number of daytime and nighttime operations projected to be shifted from Bob Hope Airport with the three alternative curfews. The hourly IFR runway capacity is computed as 60 operations per hour. Nighttime peak hour operations shifted to Van Nuys in 2008 would range from 1.5 (with the noise-based curfew) to 1.6 (with the departure curfew), and 2.6 (with the full curfew). This shifted activity would account for 2.5%, 2.7%, and 4.3% of runway capacity, respectively. In 2015, the numbers of shifted operations per peak nighttime hour are projected to increase by about 0.5 with each curfew alternative. As shown in the table, this would, in turn, lead to a small increase in the percent of runway capacity used by the shifted operations.

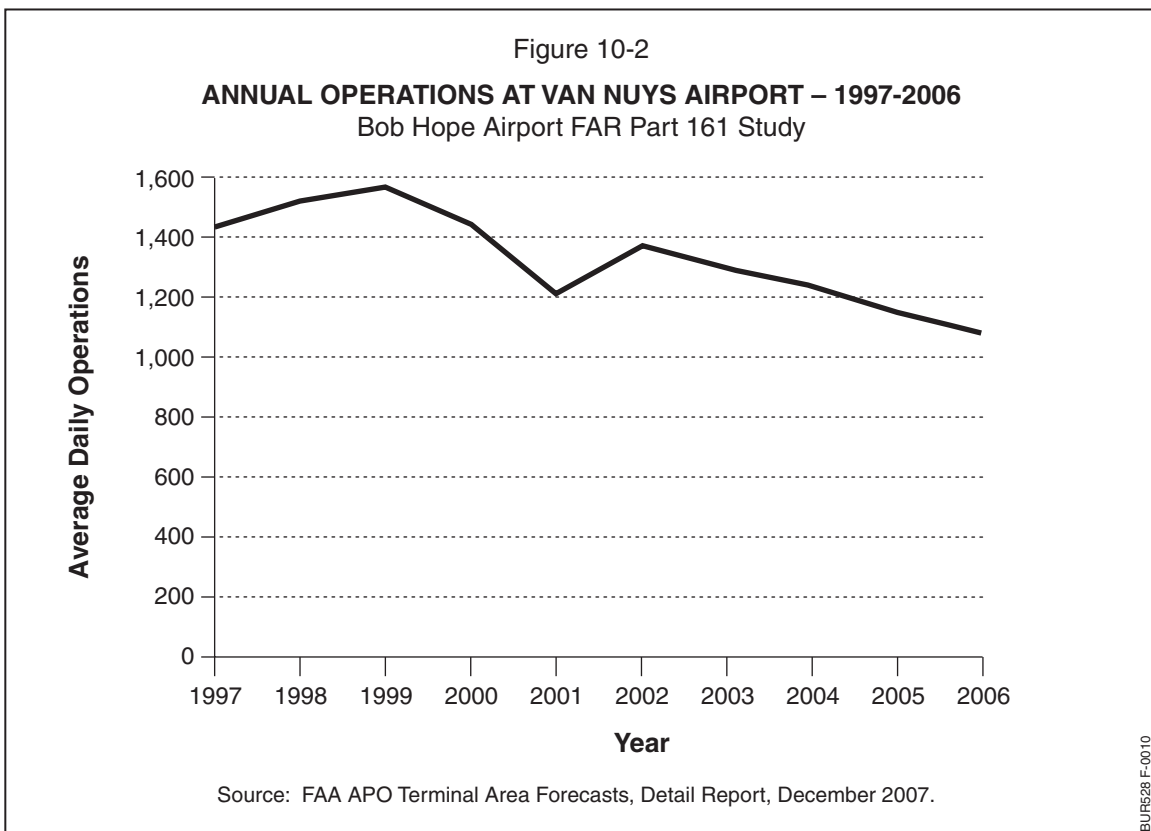
Average Daily Operations			Hourly Capacity Compared with Shifted Peak Hour Operations				
			Runway (IFR)		Airspace Fix		
Scenario	Night	Day/ Eve	Night	Day/ Eve	Night	Day/ Eve	
<b>2008 Forecast</b>							
<b>Baseline Forecast Operations at Van Nuys</b>	42	907	<b>Capacity -- Ops per Hour</b>	60		36	
Full Curfew -- Shifted Ops	13.0	5.6	Pk. Hr. Shifted Ops	2.6	1.1	1.3	0.6
			Percent of Capacity	4.3%	1.9%	3.7%	1.6%
Departure Curfew -- Shifted Ops	8.1	7.5	Pk. Hr. Shifted Ops	1.6	1.5	1.2	1.2
			Percent of Capacity	2.7%	2.5%	3.4%	3.2%
Noise-Based Curfew -- Shifted Ops	7.5	3.3	Pk. Hr. Shifted Ops	1.5	0.7	0.8	0.3
			Percent of Capacity	2.5%	1.1%	2.3%	0.9%
<b>2015 Forecast</b>							
<b>Baseline Forecast Operations at Van Nuys</b>	44	958	<b>Capacity -- Ops per Hour</b>	60		36	
Full Curfew -- Shifted Ops	16.4	16.8	Pk. Hr. Shifted Ops	3.3	3.4	1.7	1.7
			Percent of Capacity	5.5%	5.6%	4.7%	4.8%
Departure Curfew -- Shifted Ops	10.3	15.6	Pk. Hr. Shifted Ops	2.1	3.1	1.5	2.1
			Percent of Capacity	3.4%	5.2%	4.3%	5.7%
Noise-Based Curfew -- Shifted Ops	10.0	6.8	Pk. Hr. Shifted Ops	2.0	1.4	1.1	0.7
			Percent of Capacity	3.3%	2.3%	3.0%	1.9%
*Peak hour activity is assumed to be equal to 20% of shifted daytime and 20% of shifted nighttime operations.							

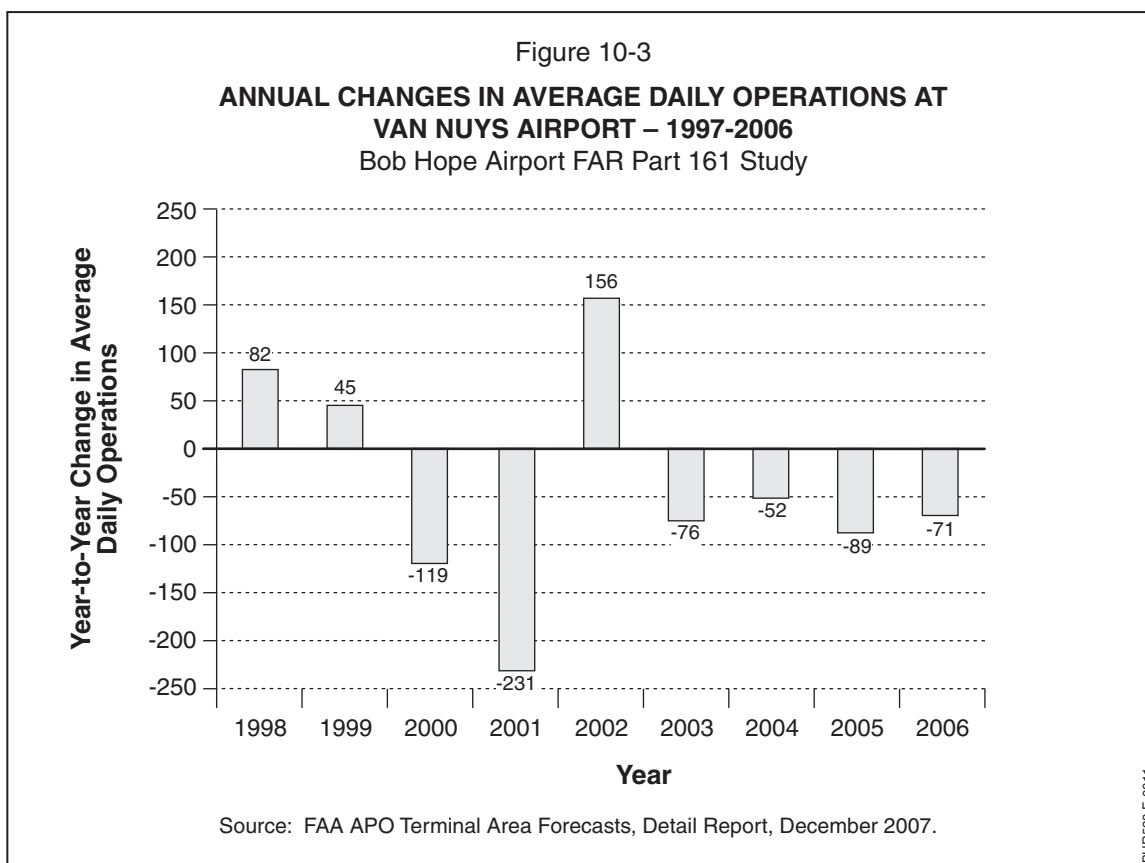
Table 10-10 also shows the number of shifted peak hour arrivals or departures compared with the capacity of a single airspace fix. The shifted nighttime operations would account for 2.3% to 3.7% of capacity at the fix in 2008 and between 3.0% to 4.7% in 2015.

The numbers of daytime operations forecast to be shifted to Van Nuys if a curfew is adopted at Bob Hope Airport are similar to the number of shifted nighttime operations. The estimated effects on IFR runway capacity and airspace fix capacity during the peak daytime hour would be similar to the effects projected for the nighttime peak hour.

Although the analysis summarized in Table 10-10 indicates little risk of adverse capacity impacts at Van Nuys with adoption of a curfew at Bob Hope Airport, additional analysis was undertaken to further explore the matter.

Figure 10-2 shows the trend in average daily operations at Van Nuys from 1997 through 2006. The trend has generally been downward, with operations peaking in 1999. In 2006, average daily operations were just below 1,100, compared to the peak of about 1,560 in 1999. Figure 10-3 shows the year to year changes in average daily operations at Van Nuys.





In view of the recent changes in activity levels at Van Nuys, the relatively small number of operations that would be shifted from Bob Hope Airport could be accommodated with negligible impact. The average annual decline in operations from 1997 to 2006 amounted to about 35 operations per day. Since 2002, the decline has averaged about 72 operations per day. The historical data also indicate that in some years, Van Nuys was able to absorb increases in average daily operations ranging from 45 to 156. Taken together, this information indicates that VNY can accommodate the operations shifted from BUR with the alternative curfews, ranging from a total of 10.8 to 33.2 operations per day (depending on the curfew alternative and the forecast year) without suffering adverse effects on capacity.

#### 10.3.3.2.1 Effect of Additional Operations on Noise at Van Nuys

Table 10-11 summarizes the increase in operations and time-of-day weighted equivalent operations at Van Nuys with a full curfew at Bob Hope Airport.

Table 10-11  
**INCREASE IN OPERATIONS AT VAN NUYS AIRPORT  
 WITH FULL CURFEW AT BOB HOPE AIRPORT**  
 Bob Hope Airport FAR Part 161 Study

	Actual Operations		Time-of-Day Weighted Equivalent Operations (a)	
	2008	2015	2008	2015
Operations per Average Day without Curfew	1,061	1,118	2,118	2,231
Operations Shifted from BUR with Curfew	18.6	33.2	138.5	187.6
Total	1,080	1,151	2,256	2,418
Percent Increase with Curfew (b)	1.8%	3.0%	6.5%	8.4%

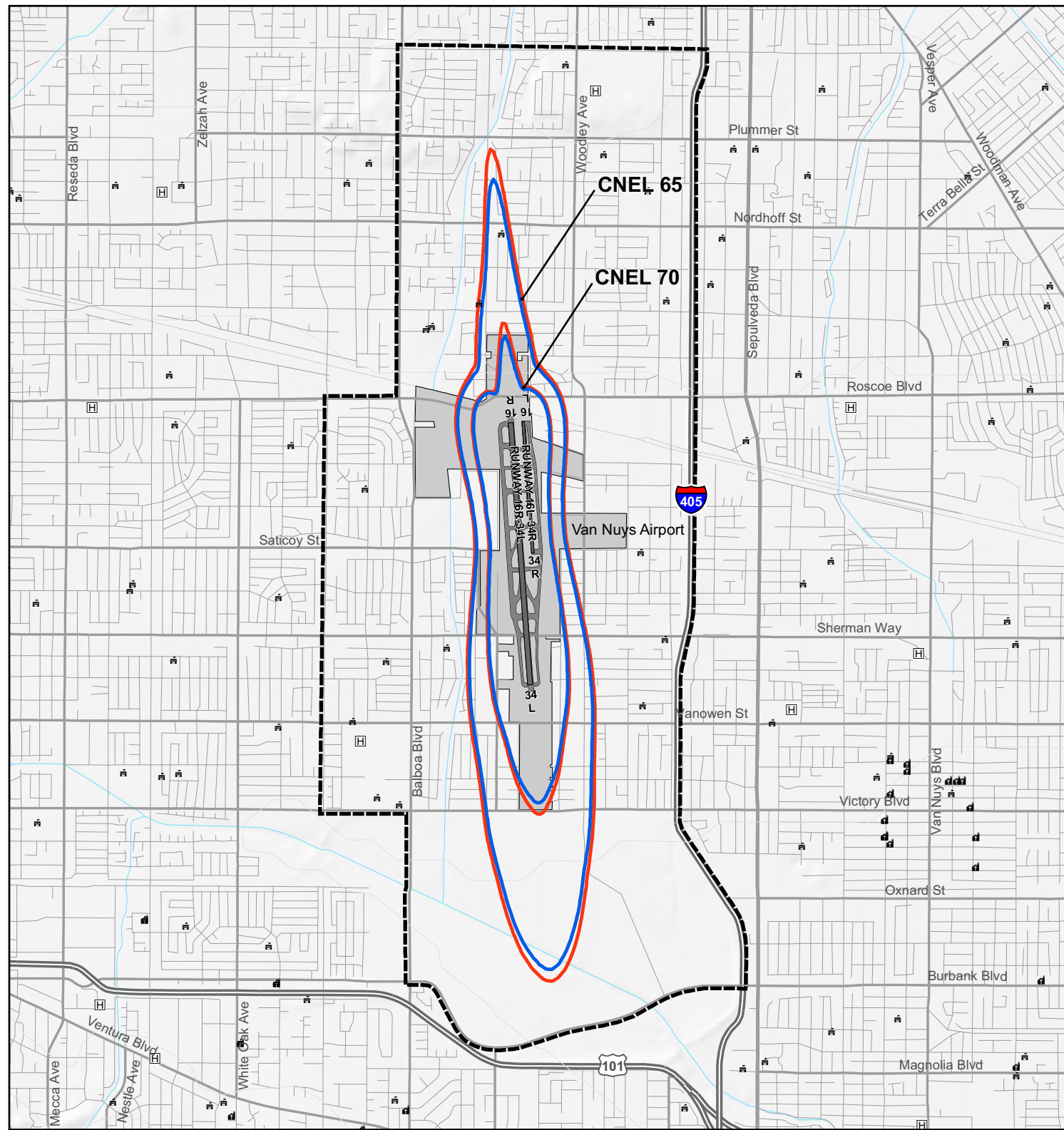
- (a) Equivalent operations are computed by applying the evening and nighttime weights from the CNEL metric to evening and nighttime operations. Thus, evening operations (between 7:00 p.m. and 10:00 p.m.) are multiplied by 3, and nighttime operations (between 10:00 p.m. and 7:00 a.m.) are multiplied by 10.
- (b) As a general rule-of-thumb, an increase in equivalent operations of ~15% indicates a possibility of a 1.5 dBA increase in cumulative noise exposure at the 65 CNEL (or DNL) level.

Source: Jacobs Consultancy analysis, 2008.

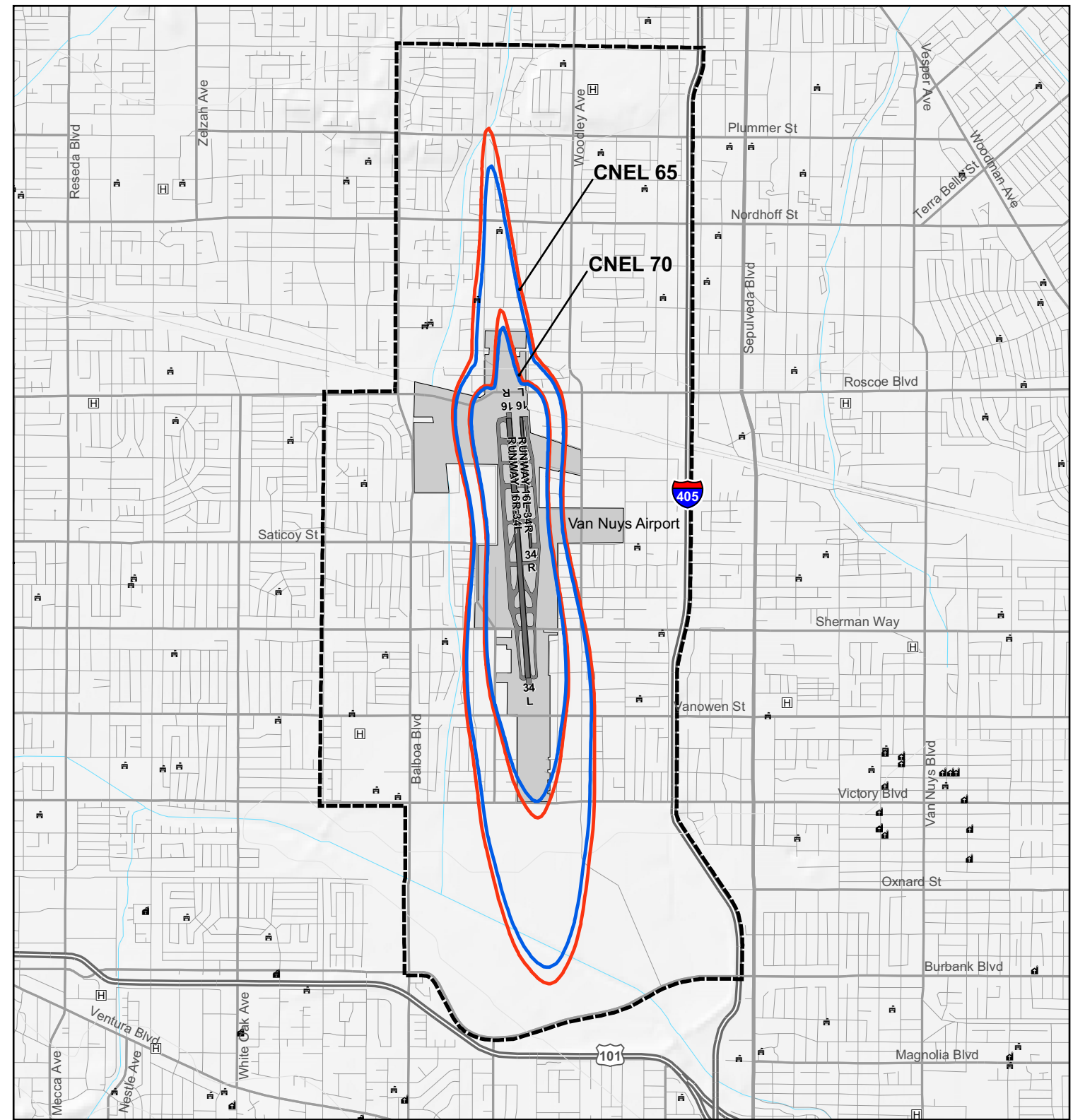
The traffic that operators may shift from Bob Hope Airport would increase equivalent operations by 6.5% in 2008 and 8.4% in 2015. These increases are below the rule-of-thumb threshold of 15%, indicating that any increase in noise is likely to be less than 1.5 dBA at the 65 CNEL level.

As part of the environmental documentation supporting this FAR Part 161 Application, the FAA requested that noise modeling be undertaken for Van Nuys to verify the magnitude of increased noise that would be experienced in the environs based on the projected shift in operations from Bob Hope Airport. Figure 10-4 shows the results of that analysis. The 65 CNEL contours in both study years increase slightly. The increase is most apparent north and south of the airport along the extended centerline of the primary runway.

Figure 10-5 presents the results of a grid analysis, showing the magnitude of increased noise at a grid of points throughout the area within the 65 CNEL contour. The values in each circle show the increased noise level with the addition of the shifted flights. Based on the projections for 2008, the noise levels would range from 0.3 to 0.7 dBA higher with a full curfew at Bob Hope Airport. In 2015, the increase is forecast to range from 0.5 to 0.9 dBA. These increases are below the FAA's threshold of significant impact – 1.5 dBA at the 65 CNEL level.



**Forecast 2008**



**Forecast 2015**

**LEGEND**

- Baseline CNEL contour
- CNEL contour with full curfew at BUR
- Land Use Study Area
- Freeways
- Roads
- Schools, Preschools
- Places of Worship
- Hospital
- Library
- Airport Boundary

Source:  
Noise analysis by Jacobs Consultancy, 2008.  
Land use data from Los Angeles County Assessor, 2008.

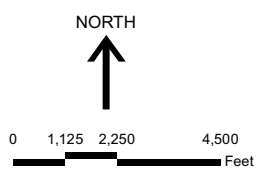
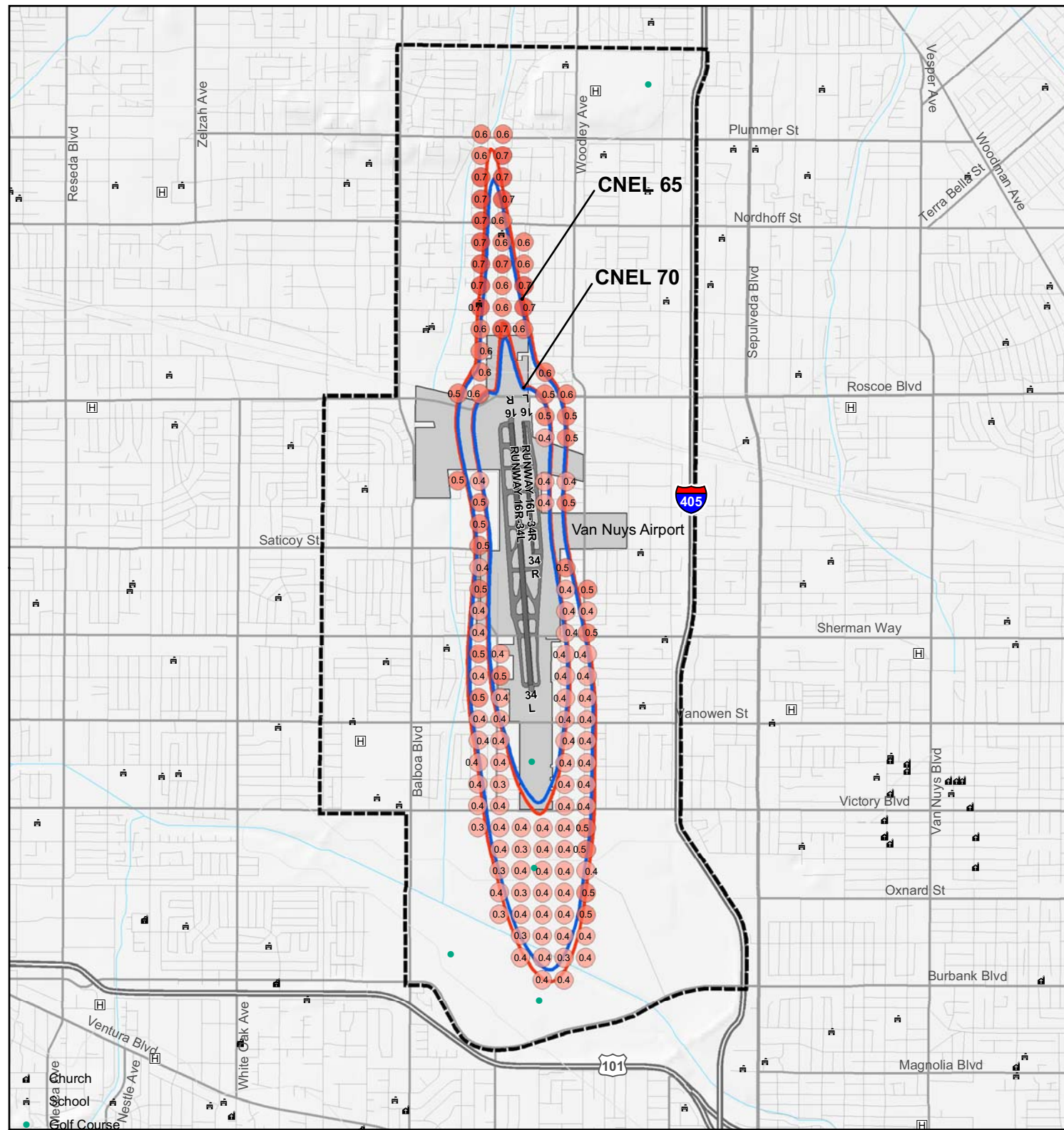


Figure 10-4  
**CHANGE IN NOISE EXPOSURE AT VAN NUYS  
WITH FULL CURFEW AT BOB HOPE AIRPORT**  
FAR Part 161 Study for Bob Hope Airport  
January 2009

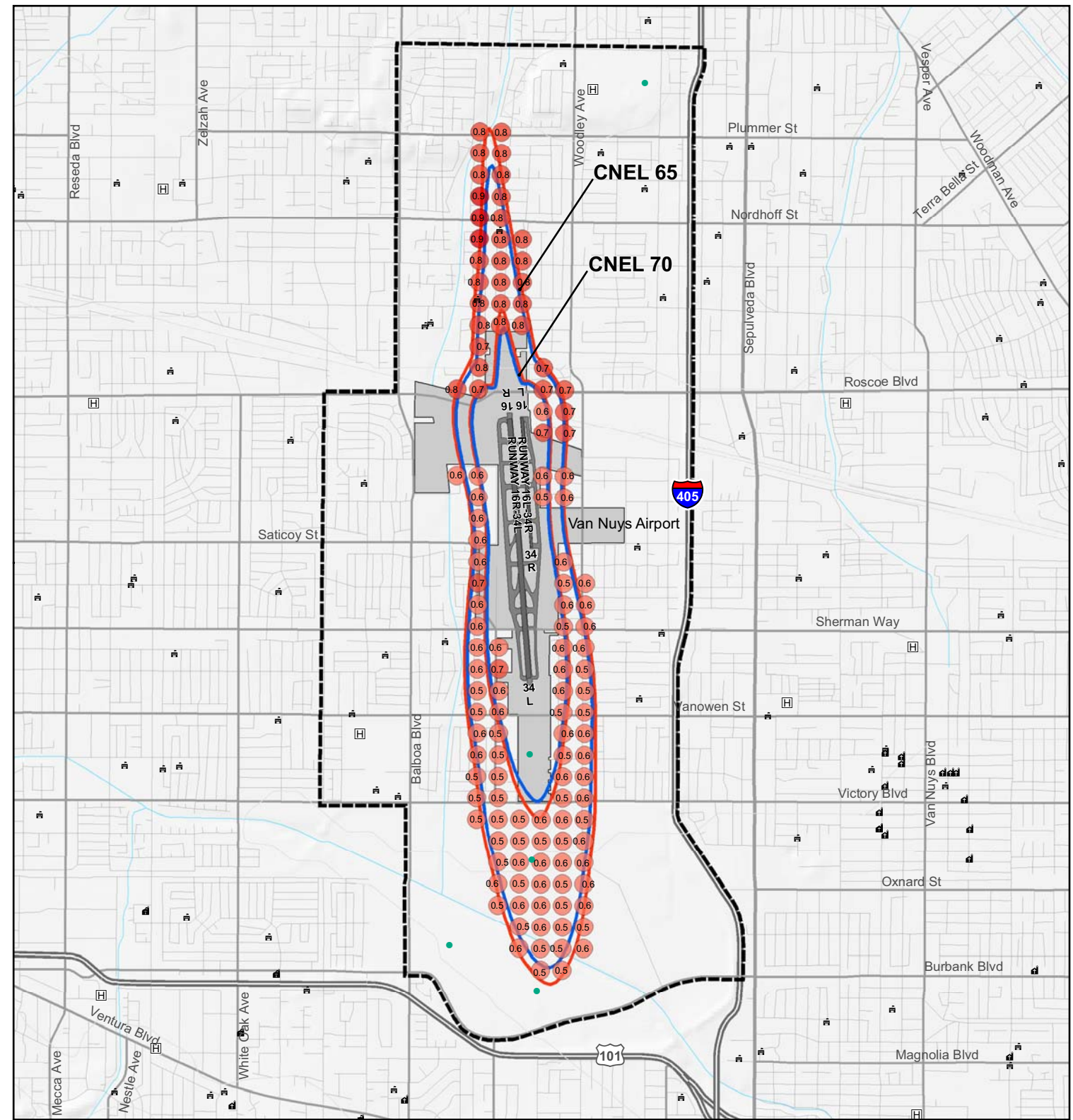




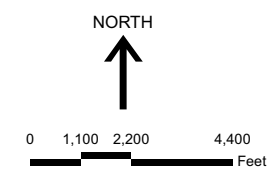


**Forecast 2008**

- Legend in CNEL**
- 0.0 to 0.2 dBA
  - 0.3 to 0.4 dBA
  - 0.5 to 0.6 dBA
  - 0.7 to 0.8 dBA
  - 0.9 dBA and More
- Hospital
  - Cemetery
  - Church
  - School
  - Golf Course
  - Schools, Preschools
  - Places of Worship
  - Hospital
  - Library
  - Airport Boundary
- Baseline CNEL contour
  - CNEL contour with full curfew at BUR
  - Land Use Study Area
  - Freeways
  - Roads



**Forecast 2015**



Source:  
Noise analysis by Jacobs Consultancy, 2008.  
Land use data from Los Angeles County Assessor, 2008.



Figure 10-5  
**INCREASE IN CNEL AT VAN NUYS  
WITH FULL CURFEW AT BOB HOPE AIRPORT**  
FAR Part 161 Study for Bob Hope Airport  
January 2009



### 10.3.3.3 Los Angeles International Airport (LAX)

Under any of the three curfew alternatives, the charter carriers that would have operated nighttime flights from Bob Hope Airport would shift to LAX. It is also expected that airlines would use LAX as the diversion airport for late, long-haul arrivals under the full curfew or the noise-based curfew at Bob Hope Airport. Under either of those curfews, UPS and FedEx are each expected to shift one flight from Bob Hope to LAX.

LAX is also expected to accommodate some general aviation operations shifted from Bob Hope Airport. LAX has a number of fixed base operators and 24-hour customs service. A number of operators based at Bob Hope Airport already use LAX as a staging place for late or early arrivals and departures and for ultra long range flights. It is a good alternate for people in the downtown Los Angeles, Beverly Hills and Westwood areas.

Table 10-12 shows the diverted operations and the corresponding percentage increase in baseline operations at LAX. Existing operations, obtained from the runway utilization reports at LAX, were extrapolated to 2008 and 2015 base operations based on the Terminal Area Forecasts (TAF) from the FAA Operations and Performance database.

Table 10-12

**AVERAGE DAILY OPERATIONS SHIFTED TO LOS ANGELES INTERNATIONAL AIRPORT  
WITH ALTERNATIVE CURFEWS AT BOB HOPE AIRPORT**

Bob Hope Airport FAR Part 161 Study

Scenario		Day		Evening		Night		Total	
		Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
<b>2008 Baseline Operations</b>		<b>655</b>	<b>730</b>	<b>185</b>	<b>136</b>	<b>132</b>	<b>223</b>	<b>973</b>	<b>1,089</b>
Full Curfew	Shifted Ops	0.09	1.28	0.03	0.03	1.45	0.27	1.57	1.57
	% Increase	0.0%	0.2%	0.0%	0.0%	1.1%	0.1%	0.2%	0.1%
Departure Curfew	Shifted Ops	0.20	0.09	0.06	0.01	0.12	0.28	0.37	0.37
	% Increase	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%
Noise-Based Curfew	Shifted Ops	0.07	1.23	0.02	0.01	1.42	0.24	1.52	1.48
	% Increase	0.0%	0.2%	0.0%	0.0%	1.1%	0.1%	0.2%	0.1%
<b>2015 Baseline Operations</b>		<b>819</b>	<b>912</b>	<b>232</b>	<b>170</b>	<b>165</b>	<b>278</b>	<b>1,216</b>	<b>1,361</b>
Full Curfew	Shifted Ops	0.24	1.74	0.08	0.06	2.25	0.77	2.57	2.57
	% Increase	0.0%	0.2%	0.0%	0.0%	1.4%	0.3%	0.2%	0.2%
Departure Curfew	Shifted Ops	0.32	0.18	0.10	0.03	0.56	0.77	0.98	0.98
	% Increase	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%	0.1%	0.1%
Noise-Based Curfew	Shifted Ops	0.15	1.60	0.05	0.03	2.22	0.74	2.41	2.37
	% Increase	0.0%	0.2%	0.0%	0.0%	1.3%	0.3%	0.2%	0.2%

Sources: Los Angeles World Airways runway utilization reports were used to estimate current operations and time-of-day splits. These were extrapolated to 2008 and 2015 by applying the growth rates in the FAA's TAF for LAX.

Table 10-13 shows average daily operations forecasts for LAX in 2008 and 2015 and the number of operations projected to be shifted from Bob Hope Airport under the three curfew alternatives. The hourly IFR runway capacity at LAX was conservatively calculated as 120 operations per hour. This compares with an estimated shift in nighttime peak hour operations ranging from 0.1 to 0.6 per night, depending on the forecast year and the curfew alternative. These increases are far too small to have an effect on runway capacity at LAX.

Similarly, a comparison of the airspace fix capacity with the peak hour shift in arrivals or departures shows negligible effect from the shifted operations. The share of airspace fix capacity accounted for by the shifted peak hour operations ranges from only 0.4% to 1.2%.

No adverse impacts on runway or airspace capacity at LAX would occur with any of the curfew alternatives under consideration at Bob Hope Airport.

Table 10-13  
**EFFECT OF OPERATIONS SHIFTED TO LOS ANGELES INTERNATIONAL AIRPORT**  
 Bob Hope Airport FAR Part 161 Study

Average Daily Operations			Hourly Capacity Compared with Shifted Peak Hour Operations				
			Runway (IFR)		Airspace Fix		
Scenario	Night	Day		Night	Day	Night	Day
<b>2008 Forecast</b>	355	1,707	<b>Capacity – Ops per Hour</b>	120		36	
Full Curfew -- Shifted Ops	1.7	1.4	Pk. Hr. Shifted Ops	0.3	0.3	0.3	0.3
			Percent of Capacity	0.3%	0.2%	0.8%	0.7%
Departure Curfew -- Shifted Ops	0.4	0.4	Pk. Hr. Shifted Ops	0.1	0.1	0.1	0.1
			Percent of Capacity	0.1%	0.1%	0.2%	0.1%
Noise-Based Curfew -- Shifted Ops	1.7	1.3	Pk. Hr. Shifted Ops	0.3	0.3	0.3	0.2
			Percent of Capacity	0.3%	0.2%	0.8%	0.7%
<b>2015 Forecast</b>							
<b>Baseline Forecast Operations at LAX</b>							
<b>2015 -- Forecast Operations</b>	443	2,133	<b>Capacity -- Ops per Hour</b>	120		36	
Full Curfew -- Shifted Ops	3.0	2.1	Pk. Hr. Shifted Ops	0.6	0.4	0.4	0.4
			Percent of Capacity	0.5%	0.4%	1.2%	1.0%
Departure Curfew -- Shifted Ops	1.3	0.6	Pk. Hr. Shifted Ops	0.3	0.1	0.2	0.1
			Percent of Capacity	0.2%	0.1%	0.4%	0.2%
Noise-Based Curfew -- Shifted Ops	3.0	1.8	Pk. Hr. Shifted Ops	0.6	0.4	0.4	0.3
			Percent of Capacity	0.5%	0.3%	1.2%	0.9%

\*Peak hour activity is assumed to be equal to 20% of shifted daytime and 20% of shifted nighttime operations.

### 10.3.3.3.1 Effect of Additional Operations on Noise at LAX

Table 10-14 summarizes the increase in operations and time-of-day weighted equivalent operations at Los Angeles International Airport with a full curfew at Bob Hope Airport. Only an average of 3 operations per day in 2008 and 5 per day in 2015 would likely be shifted by operators to LAX with a full curfew at Bob Hope Airport. The small shift represents an increase in time-of-day weighted equivalent operations of only 0.3% in 2008 and 0.4% in 2015. This would have a negligible effect on cumulative noise exposure in the LAX environs.

Table 10-14

**INCREASE IN OPERATIONS AT LOS ANGELES INTERNATIONAL AIRPORT  
WITH FULL CURFEW AT BOB HOPE AIRPORT**

Bob Hope Airport FAR Part 161 Study

	Actual Operations		Time-of-Day Weighted Equivalent Operations (a)	
	2008	2015	2008	2015
Operations per Average Day without Curfew	2,062	2,576	5,900	7,371
Operations Shifted from BUR with Curfew	3.1	5.1	18.7	32.6
<b>Total</b>	<b>2,065</b>	<b>2,582</b>	<b>5,918</b>	<b>7,404</b>
Percent Increase with Curfew (b)	0.2%	0.2%	0.3%	0.4%

(a) Equivalent operations are computed by applying the evening and nighttime weights from the CNEL metric to evening and nighttime operations. Thus, evening operations (between 7:00 p.m. and 10:00 p.m.) are multiplied by 3, and nighttime operations (between 10:00 p.m. and 7:00 a.m.) are multiplied by 10.

(b) As a general rule-of-thumb, an increase in equivalent operations of ~15% indicates a possibility of a 1.5 dBA increase in cumulative noise exposure at the 65 CNEL (or DNL) level.

Source: Jacobs Consultancy analysis, 2008.

### 10.3.3.4 Long Beach Airport

Long Beach Airport is likely to be used by at least some general aviation operators as an alternate to Bob Hope Airport if a curfew is adopted. Long Beach is a realistic choice for people in the Pasadena and the downtown Los Angeles area. The airport has good facilities and is underutilized since the closure of the former McDonnell Douglas facility. On the other hand, Long Beach has a mandatory nighttime curfew on air carrier and commuter operations from 10:00 p.m. to 7:00 a.m. The airport also has a maximum nighttime noise limit on noncommercial operations, but those limits are similar to the existing nighttime restrictions at Bob Hope Airport and would not affect any aircraft using Long Beach as a nighttime alternate to Bob Hope Airport.

Table 10-15 shows the number of operations projected to be shifted to Long Beach and the corresponding percentage increase in baseline operations.

Scenario		Day		Evening		Night		Total	
		Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
<b>2008 Baseline Operations</b>		<b>416</b>	<b>470</b>	<b>102</b>	<b>90</b>	<b>15</b>	<b>19</b>	<b>534</b>	<b>578</b>
Full Curfew	Shifted Ops	0.09	0.13	0.03	0.03	0.25	0.22	0.38	0.38
	% Increase	0.0%	0.0%	0.0%	0.0%	1.6%	1.2%	0.1%	0.1%
Departure Curfew	Shifted Ops	0.20	0.09	0.06	0.01	0.06	0.22	0.32	0.32
	% Increase	0.0%	0.0%	0.1%	0.0%	0.4%	1.2%	0.1%	0.1%
Noise-Based Curfew	Shifted Ops	0.07	0.08	0.02	0.01	0.23	0.20	0.33	0.29
	% Increase	0.0%	0.0%	0.0%	0.0%	1.5%	1.1%	0.1%	0.1%
<b>2015 Baseline Operations</b>		<b>461</b>	<b>521</b>	<b>114</b>	<b>100</b>	<b>17</b>	<b>21</b>	<b>592</b>	<b>642</b>
Full Curfew	Shifted Ops	0.24	0.31	0.08	0.06	0.34	0.30	0.66	0.66
	% Increase	0.1%	0.1%	0.1%	0.1%	2.0%	1.4%	0.1%	0.1%
Departure Curfew	Shifted Ops	0.32	0.18	0.10	0.03	0.09	0.30	0.51	0.51
	% Increase	0.1%	0.0%	0.1%	0.0%	0.5%	1.4%	0.1%	0.1%
Noise-Based Curfew	Shifted Ops	0.15	0.16	0.05	0.03	0.31	0.27	0.50	0.46
	% Increase	0.0%	0.0%	0.0%	0.0%	1.8%	1.3%	0.1%	0.1%

Sources: Forecast operations data taken from FAA TAF. Time-of-day splits derived from FAA's Air Traffic Activity Data System (ATADS) system.

Table 10-16 shows the forecast hourly operations at Long Beach Airport in 2008 and 2015 compared with the number of flights shifted from Bob Hope Airport under the three curfew alternatives. The number of shifted operations averages less than one per day. The peak hour capacity analysis, summarized in the right columns of Table 10-16, shows that peak hour operations would increase by only 0.1 operation or less. These increases would have only a tiny effect on the IFR runway and airspace fix capacity at Long Beach – on the order of 0.1% to 0.2%. These increases are too small to cause any adverse impact on capacity.

Table 10-16  
**EFFECT OF OPERATIONS SHIFTED TO LONG BEACH AIRPORT**  
 Bob Hope Airport FAR Part 161 Study

Average Daily Operations		Hourly Capacity Compared with Shifted Peak Hour Operations					
		Scenario		Runway (IFR)		Airspace Fix	
	Night	Day		Night	Day	Night	Day
<b>2008 Forecast</b>							
<b>Baseline Forecast Operations at Long Beach</b>	34	1,078	<b>Capacity -- Ops per Hour</b>	60		36	
Full Curfew -- Shifted Ops	0.5	0.3	Pk. Hr. Shifted Ops	0.1	0.1	0.1	0.03
			Percent of Capacity	0.2%	0.1%	0.1%	0.1%
Departure Curfew -- Shifted Ops	0.3	0.4	Pk. Hr. Shifted Ops	0.1	0.1	0.04	0.1
			Percent of Capacity	0.1%	0.1%	0.1%	0.1%
Noise-Based Curfew -- Shifted Ops	0.4	0.2	Pk. Hr. Shifted Ops	0.1	0.04	0.05	0.02
			Percent of Capacity	0.1%	0.1%	0.1%	0.1%
<b>2015 Forecast</b>							
<b>Baseline Forecast Operations at Long Beach</b>	38	1,196	<b>Capacity -- Ops per Hour</b>	60		36	
Full Curfew -- Shifted Ops	0.6	0.7	Pk. Hr. Shifted Ops	0.1	0.1	0.1	0.1
			Percent of Capacity	0.2%	0.2%	0.2%	0.2%
Departure Curfew -- Shifted Ops	0.4	0.6	Pk. Hr. Shifted Ops	0.1	0.1	0.1	0.1
			Percent of Capacity	0.1%	0.2%	0.2%	0.2%
Noise-Based Curfew -- Shifted Ops	0.6	0.4	Pk. Hr. Shifted Ops	0.1	0.1	0.1	0.04
			Percent of Capacity	0.2%	0.1%	0.2%	0.1%
*Peak hour activity is assumed to be equal to 20% of shifted daytime and 20% of shifted nighttime operations.							

#### 10.3.3.4.1 Effect of Additional Operations on Noise at Long Beach

Table 10-17 summarizes the increase in operations and time-of-day weighted equivalent operations at Long Beach Airport with a full curfew at Bob Hope Airport, less than one operation per day would likely be shifted by operators in 2008 and only 1.3 per day in 2015. The increase in time-of-day weighted equivalent operations would be only 0.3% in 2008 and 0.4% in 2015, resulting in a negligible effect on cumulative noise exposure at the airport.

Table 10-17  
**INCREASE IN OPERATIONS AT LONG BEACH AIRPORT  
 WITH FULL CURFEW AT BOB HOPE AIRPORT**  
 Bob Hope Airport FAR Part 161 Study

	Actual Operations		Time-of-Day Weighted Equivalent Operations (a)	
	2008	2015	2008	2015
Operations per Average Day without Curfew	1,112	1,234	1,804	2,000
Operations Shifted from BUR with Curfew	0.77	1.32	5.18	7.28
<b>Total</b>	<b>1,113</b>	<b>1,235</b>	<b>1,809</b>	<b>2,008</b>
Percent Increase with Curfew (b)	0.1%	0.1%	0.3%	0.4%

(a) Equivalent operations are computed by applying the evening and nighttime weights from the CNEL metric to evening and nighttime operations. Thus, evening operations (between 7:00 p.m. and 10:00 p.m.) are multiplied by 3, and nighttime operations (between 10:00 p.m. and 7:00 a.m.) are multiplied by 10.

(b) As a general rule-of-thumb, an increase in equivalent operations of ~15% indicates a possibility of a 1.5 dBA increase in cumulative noise exposure at the 65 CNEL (or DNL) level.

Source: Jacobs Consultancy analysis, 2008.

### 10.3.3.5 Camarillo Airport

Given its location, Camarillo is a good alternative for general aviation operators located in the western San Fernando Valley. The airport does have a departure curfew from midnight to 5:00 a.m., but it is substantially less restrictive than the alternative curfews under consideration at Bob Hope Airport. They would be acceptable to some of the business aircraft operators who were interviewed by the Part 161 Study consultant team.



Table 10-18 shows the operations projected to be shifted to Camarillo and the corresponding percentage increase in operations at Camarillo.

Scenario		Day		Evening		Night		Total	
		Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
<b><i>2008 Baseline Operations</i></b>		<b>172</b>	<b>172</b>	<b>26</b>	<b>26</b>	<b>8</b>	<b>8</b>	<b>206</b>	<b>206</b>
Full Curfew	Shifted Ops	0.05	0.07	0.02	0.01	0.13	0.11	0.19	0.19
	% Increase	0.0%	0.0%	0.1%	0.1%	1.6%	1.4%	0.1%	0.1%
Departure Curfew	Shifted Ops	0.10	0.04	0.03	0.00	0.03	0.11	0.16	0.16
	% Increase	0.1%	0.0%	0.1%	0.0%	0.4%	1.4%	0.1%	0.1%
Noise-Based Curfew	Shifted Ops	0.04	0.04	0.01	0.01	0.12	0.10	0.16	0.15
	% Increase	0.0%	0.0%	0.0%	0.0%	1.4%	1.2%	0.1%	0.1%
<b><i>2015 Baseline Operations</i></b>		<b>182</b>	<b>182</b>	<b>27</b>	<b>27</b>	<b>9</b>	<b>9</b>	<b>218</b>	<b>218</b>
Full Curfew	Shifted Ops	0.12	0.15	0.04	0.03	0.17	0.15	0.33	0.33
	% Increase	0.1%	0.1%	0.1%	0.1%	2.0%	1.7%	0.2%	0.2%
Departure Curfew	Shifted Ops	0.16	0.09	0.05	0.01	0.04	0.15	0.25	0.25
	% Increase	0.1%	0.1%	0.2%	0.0%	0.5%	1.7%	0.1%	0.1%
Noise-Based Curfew	Shifted Ops	0.07	0.08	0.02	0.02	0.15	0.13	0.25	0.23
	% Increase	0.0%	0.0%	0.1%	0.1%	1.8%	1.5%	0.1%	0.1%

Sources: Time-of-day splits were derived from the Airport's Part 150 Study. Forecast operations were taken from the FAA's TAF.

Table 10-19 shows the effect of the shift in operations to Camarillo. The hourly IFR runway capacity is calculated as 60 operations per hour. This compares with a projected shift in nightly operations from BUR of 0.1 to 0.2 in 2008 and 0.2 to 0.3 in 2015, depending on the specific curfew alternative. These nighttime numbers of shifted flights are quite small compared with the hourly runway capacity and the hourly airspace fix capacity of about 36 arrivals or departures per hour.

Table 10-19  
**EFFECT OF OPERATIONS SHIFTED TO CAMARILLO AIRPORT**  
 Bob Hope Airport FAR Part 161 Study

Average Daily Operations			Hourly Capacity Compared with Shifted Peak Hour Operations				
			Runway (IFR)		Airspace Fix		
Scenario	Night	Day		Night	Day	Night	Day
<b>2008 Forecast</b>							
<b>Baseline Forecast Operations at Camarillo</b>	16	395	<b>Capacity -- Ops per Hour</b>	60		36	
Full Curfew -- Shifted Ops	0.2	0.1	Pk. Hr. Shifted Ops	0.05	0.03	0.03	0.02
			Percent of Capacity	0.1%	0.0%	0.1%	0.0%
Departure Curfew -- Shifted Ops	0.1	0.2	Pk. Hr. Shifted Ops	0.03	0.04	0.02	0.03
			Percent of Capacity	0.0%	0.1%	0.1%	0.1%
Noise-Based Curfew -- Shifted Ops	0.2	0.1	Pk. Hr. Shifted Ops	0.04	0.02	0.02	0.01
			Percent of Capacity	0.1%	0.0%	0.1%	0.0%
<b>2015 Forecast</b>							
<b>Baseline Forecast Operations at Camarillo</b>	17	419	<b>Capacity -- Ops per Hour</b>	60		36	
Full Curfew -- Shifted Ops	0.3	0.3	Pk. Hr. Shifted Ops	0.1	0.1	0.03	0.04
			Percent of Capacity	0.1%	0.1%	0.1%	0.1%
Departure Curfew -- Shifted Ops	0.2	0.3	Pk. Hr. Shifted Ops	0.04	0.1	0.03	0.04
			Percent of Capacity	0.1%	0.1%	0.1%	0.1%
Noise-Based Curfew -- Shifted Ops	0.3	0.2	Pk. Hr. Shifted Ops	0.1	0.04	0.03	0.02
			Percent of Capacity	0.1%	0.1%	0.1%	0.1%
*Peak hour activity is assumed to be equal to 20% of shifted daytime and 20% of shifted nighttime operations.							

Similarly, the numbers of operations shifted in the daytime, which range from 0.1 to 0.3 depending on the forecast year and curfew alternative, are small relative to the IFR runway capacity and the airspace fix capacity. There would be no adverse capacity effect at Camarillo caused by the projected shift in operations.

#### 10.3.3.5.1 Effect of Additional Operations on Noise at Camarillo

Table 10-20 shows shift in average daily operations from Bob Hope Airport to Camarillo compared with the baseline forecast activity at Camarillo. The shift by operators would involve an average of 0.4 operations per day in 2008 and 0.7 per day in 2015. When expressed as time-of-day weighted equivalent operations, this amount to an increase of 0.4% in 2008 and 0.5% in 2015, far too little to influence cumulative noise exposure at Camarillo.

Table 10-20  
**INCREASE IN OPERATIONS AT CAMARILLO AIRPORT  
 WITH FULL CURFEW AT BOB HOPE AIRPORT**  
 Bob Hope Airport FAR Part 161 Study

	Actual Operations		Time-of-Day Weighted Equivalent Operations (a)	
	2008	2015	2008	2015
Operations per Average Day without Curfew	411	436	660	699
Operations Shifted from BUR with Curfew	0.4	0.7	2.6	3.6
<b>Total</b>	<b>412</b>	<b>437</b>	<b>662</b>	<b>703</b>
Percent Increase with Curfew (b)	0.1%	0.2%	0.4%	0.5%

(a) Equivalent operations are computed by applying the evening and nighttime weights from the CNEL metric to evening and nighttime operations. Thus, evening operations (between 7:00 p.m. and 10:00 p.m.) are multiplied by 3, and nighttime operations (between 10:00 p.m. and 7:00 a.m.) are multiplied by 10.

(b) As a general rule-of-thumb, an increase in equivalent operations of ~15% indicates a possibility of a 1.5 dBA increase in cumulative noise exposure at the 65 CNEL (or DNL) level.

Source: Jacobs Consultancy analysis, 2008.

### 10.3.3.6 LA/Ontario International Airport

LA/Ontario International Airport is located 53 miles southeast of Bob Hope Airport. If a full curfew or departure curfew is adopted at Bob Hope, Ameriflight would move its courier operation to Ontario, accounting for the large majority of operations shifted from Bob Hope Airport to Ontario.\* It is also expected that Jet Blue and possibly Skybus would divert late arrivals to Ontario on rare occasions if a full curfew or noise-based curfew is adopted at Bob Hope Airport. Given its distance from the San Fernando Valley, Ontario is not expected to be a popular alternate for general aviation operators affected by a curfew at BUR. The noise-based curfew would have very little impact on Ontario because Ameriflight would keep its nighttime courier operation at Bob Hope Airport rather than relocating.

Table 10-21 shows the diverted operations and the corresponding percentage increase in operations at Ontario. Forecast operations for 2008 and 2015 were interpolated from forecasts in the Ontario airport master plan. Time-of-day splits were based on existing time-of-day splits obtained from the ATADS data from the FAA Operations and Performance database.

\*See Appendix BB of Technical Report 1, Aviation Demand Forecasts, for the detailed analysis.

Table 10-21  
**AVERAGE DAILY OPERATIONS SHIFTED TO LA/ONTARIO INTERNATIONAL AIRPORT  
 WITH ALTERNATIVE CURFEWS AT BOB HOPE AIRPORT**  
 Bob Hope Airport FAR Part 161 Study

Scenario	Day		Evening		Night		Total		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	
<b>2008 Baseline Operations</b>		<b>165</b>	<b>173</b>	<b>42</b>	<b>35</b>	<b>48</b>	<b>58</b>	<b>256</b>	<b>267</b>
Full Curfew	Shifted Ops	0.70	0.19	0.72	0.01	7.26	8.48	8.68	8.68
	% Increase	0.4%	0.1%	1.7%	0.0%	15.2%	14.5%	3.4%	3.3%
Departure Curfew	Shifted Ops	1.64	0.00	2.39	0.05	3.25	7.24	7.28	7.28
	% Increase	1.0%	0.0%	5.6%	0.1%	6.8%	12.4%	2.9%	2.7%
Noise-Based Curfew	Shifted Ops	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.01
	% Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>2015 Baseline Operations</b>		<b>255</b>	<b>267</b>	<b>65</b>	<b>54</b>	<b>74</b>	<b>90</b>	<b>394</b>	<b>411</b>
Full Curfew	Shifted Ops	1.01	0.77	1.00	0.25	6.13	7.12	8.14	8.14
	% Increase	0.4%	0.3%	1.5%	0.5%	8.3%	7.9%	2.1%	2.0%
Departure Curfew	Shifted Ops	1.81	0.00	2.44	0.23	2.74	6.76	6.99	6.99
	% Increase	0.7%	0.0%	3.7%	0.4%	3.7%	7.5%	1.8%	1.7%
Noise-Based Curfew	Shifted Ops	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.01
	% Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Sources: Forecasts for 2008 and 2015 were interpolated from forecasts in Ontario Airport Master Plan. Time-of-day splits derived from FAA ATADS data.

Table 10-22 shows the IFR runway capacity and airspace fix capacity at Ontario. The hourly IFR runway capacity is 60 operations per hour and the hourly capacity of a single airspace fix is 36 arrivals or departures per hour. The number of shifted peak hour nighttime operations would range from about 1.9 to 3.1 depending on the curfew alternative and the forecast year. This would account for 3.2% to 5.2% of hourly IFR runway capacity.

The number of nighttime peak hour arrivals would range from 1.4 to 1.7, accounting for 1.4% to 1.7% of the capacity of a single airspace fix. Considering that multiple fixes would typically be used on any given night, this level of activity would not create an adverse impact on airspace capacity.

Average Daily Operations		Hourly Capacity Compared with Shifted Peak Hour Operations					
		Scenario		Runway (IFR)		Airspace Fix	
	Night	Day		Night	Day	Night	Day
<b>2008 Forecast</b>							
<b>Baseline Forecast Operations at Ontario</b>	106	416	<b>Capacity -- Ops per Hour</b>	60		36	
Full Curfew -- Shifted Ops	15.7	1.6	Pk. Hr. Shifted Ops	3.1	0.3	1.7	0.3
			Percent of Capacity	5.2%	0.5%	4.7%	0.8%
Departure Curfew -- Shifted Ops	10.5	4.1	Pk. Hr. Shifted Ops	2.1	0.8	1.4	0.8
			Percent of Capacity	3.5%	1.4%	4.0%	2.2%
Noise-Based Curfew -- Shifted Ops	0.01	0.01	Pk. Hr. Shifted Ops	0.00	0.00	0.00	0.00
			Percent of Capacity	0.0%	0.0%	0.0%	0.0%
<b>2015 Forecast</b>							
<b>Baseline Forecast Operations at Ontario</b>	164	642	<b>Capacity -- Ops per Hour</b>	60		36	
Full Curfew -- Shifted Ops	13.3	3.0	Pk. Hr. Shifted Ops	2.7	0.6	1.4	0.4
			Percent of Capacity	4.4%	1.0%	4.0%	1.1%
Departure Curfew -- Shifted Ops	9.5	4.5	Pk. Hr. Shifted Ops	1.9	0.9	1.4	0.9
			Percent of Capacity	3.2%	1.5%	3.8%	2.4%
Noise-Based Curfew -- Shifted Ops	0.01	0.01	Pk. Hr. Shifted Ops	0.00	0.00	0.00	0.00
			Percent of Capacity	0.0%	0.0%	0.0%	0.0%
*Peak hour activity is assumed to be equal to 20% of shifted daytime and 20% of shifted nighttime operations.							

Similarly, a comparison of the numbers of shifted daytime flights, with peak hour levels of 0.3 to 0.9, with the hourly IFR runway capacity and the airspace fix capacity shows that there would be no adverse effect because these numbers of shifted flights is so small.

Although the analysis summarized in Table 10-17 indicates that no adverse capacity impacts would be experienced at Ontario with adoption of a curfew at Bob Hope Airport, additional analysis was undertaken to further explore the matter. Figure 10-6 shows the trend in average daily operations at ONT from 1997 through 2006. The trend has been generally declining, but at a shallow rate, with average daily operations near 400 throughout the period.

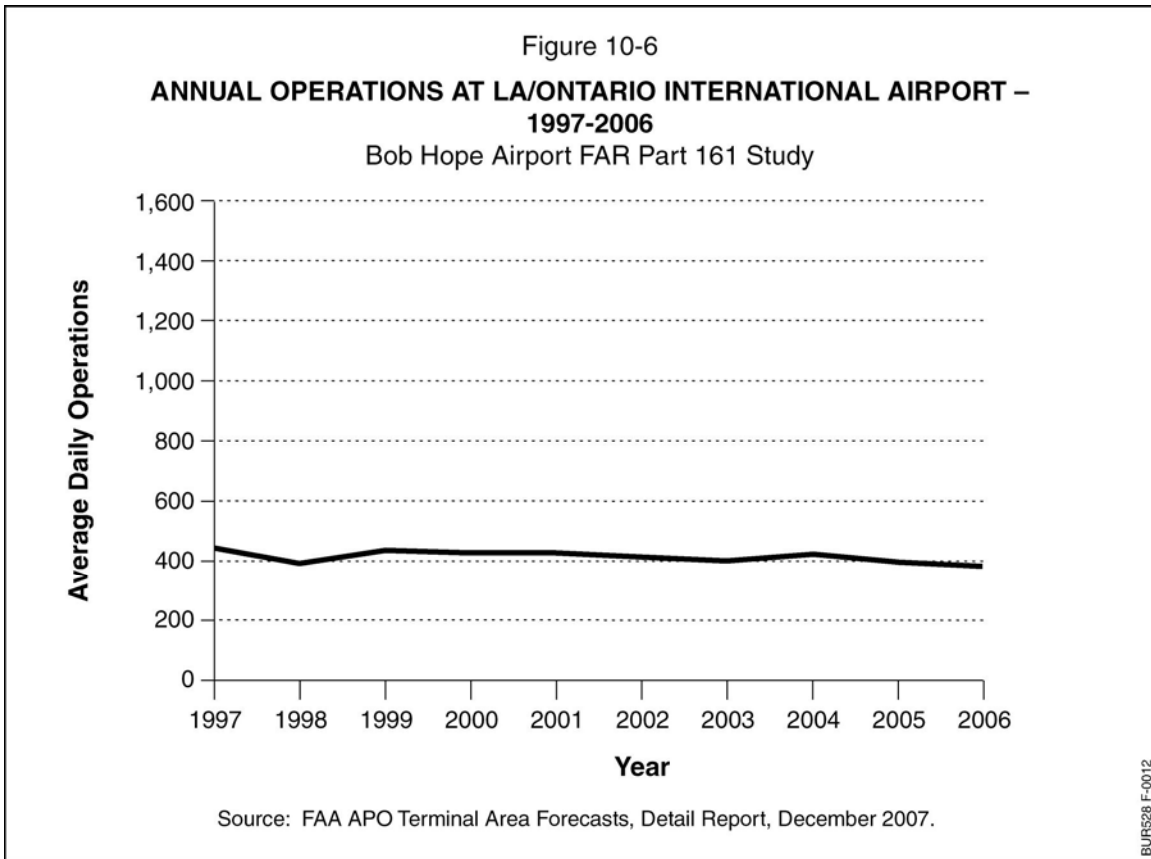
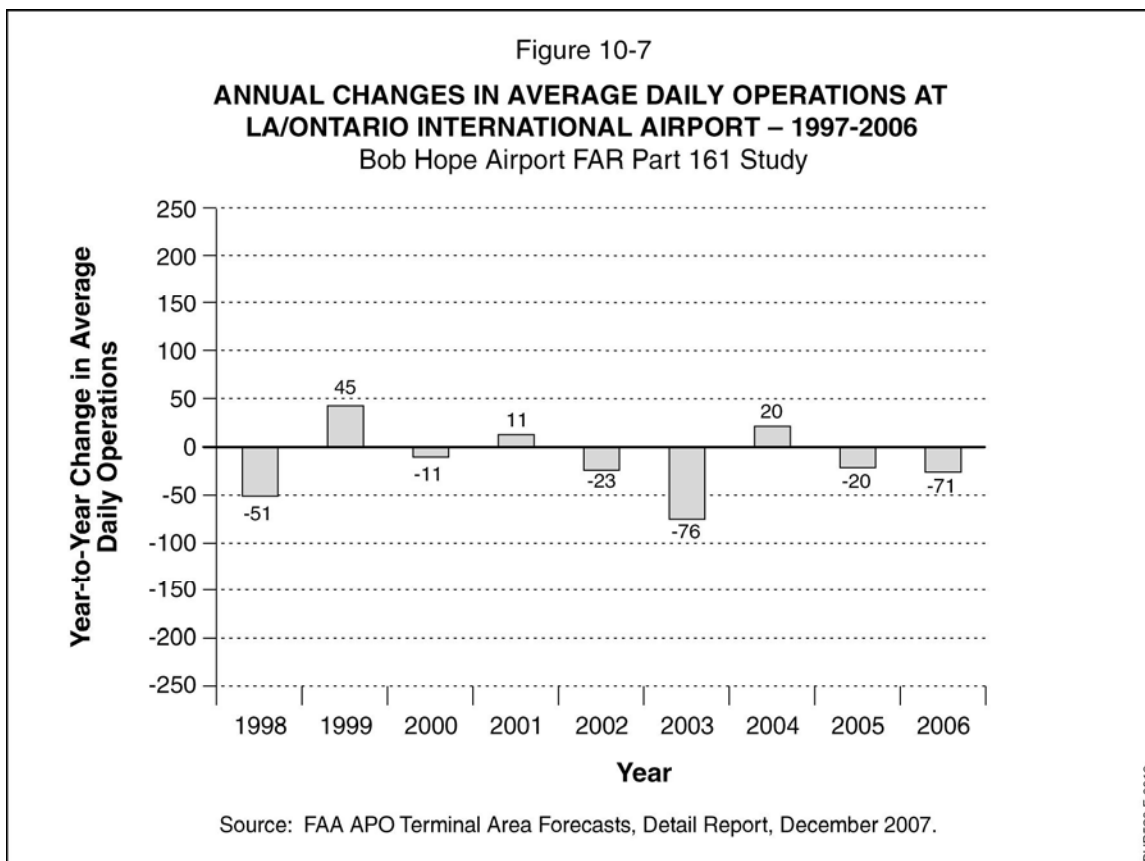


Figure 10-7 shows the year-to-year changes in average daily operations at Ontario. In seven of the ten years, the traffic declined by 9 to 51 operations.



The projected average daily number of nighttime operations shifted from Bob Hope Airport would range from 10.5 to 15.7 in 2008 and 9.5 to 13.3 in 2015. The expected numbers of shifted daytime operations are 1.6 to 4.1 in 2008 and 3.0 to 4.5 in 2015. Moreover, as discussed above and shown in Table 10-22, the numbers of shifted operations expected in the peak hours are on the order of 1 to 3 operations.

These changes should be viewed in the context of recent changes in demand at Ontario. Figures 10-6 and 10-7 show that traffic has been declining at a small rate over the past 10 years. The average year-to-year change in average daily operations has been 24, mostly negative. The projected numbers of operations shifted from Bob Hope Airport to Ontario, ranging from approximately 10 to 16, is small compared with the annual year-to-year fluctuations in traffic at Ontario. Increases in operations greater than 10 to 15 have been absorbed at Ontario in the past, and the reductions in the past five years are greater than the number of shifted operations expected from Bob Hope Airport. The projected shift in operations would not significantly impact capacity at Ontario.

#### 10.3.3.6.1 Effect of Additional Operations on Noise at LA/Ontario

Table 10-23 summarizes average daily operations at LA/Ontario for baseline forecast conditions and for the projected traffic shifted from Bob Hope Airport with a full curfew. An estimated 17.4 operations in 2008 and 16.3 in 2015 are projected to be

shifted by operators to LA/Ontario. Nearly all of these are associated with Ameriflight's nighttime courier service.

When expressed as time-of-day weighted equivalent operations, the shifted operations represent a 9.8% increase in 2008 operations and a 5.5% increase in 2015. These increases are well below the rule-of-thumb increase of 15% that indicates the possibility of a 1.5 dBA increase in noise at the 65 CNEL level. In this situation, the shifted traffic is overwhelmingly relatively quiet turboprop and twin-engine piston aircraft. The aircraft fleet at LA/Ontario is dominated by a variety of louder air carrier jet aircraft. Based on the 2008 forecast, 75% of all operations and 78% of nighttime operations at LA/Ontario are by air carrier jets.\* Thus, the shift in relatively quiet aircraft from Bob Hope Airport would have a smaller effect on cumulative noise exposure at LA/Ontario than the percentage increase in operations would indicate.

Table 10-23

**INCREASE IN OPERATIONS AT LA/ONTARIO INTERNATIONAL AIRPORT  
WITH FULL CURFEW AT BOB HOPE AIRPORT**

Bob Hope Airport FAR Part 161 Study

	Actual Operations		Time-of-Day Weighted Equivalent Operations (a)	
	2008	2015	2008	2015
Operations per Average Day without Curfew	522	806	1,632	2,517
Operations Shifted from BUR with Curfew	17.4	16.3	160.5	138.1
Total	540	822	1,792	2,655
Percent Increase with Curfew (b)	3.3%	2.0%	9.8%	5.5%

(a) Equivalent operations are computed by applying the evening and nighttime weights from the CNEL metric to evening and nighttime operations. Thus, evening operations (between 7:00 p.m. and 10:00 p.m.) are multiplied by 3, and nighttime operations (between 10:00 p.m. and 7:00 a.m.) are multiplied by 10.

(b) As a general rule-of-thumb, an increase in equivalent operations of ~15% indicates a possibility of a 1.5 dBA increase in cumulative noise exposure at the 65 CNEL (or DNL) level.

Source: Jacobs Consultancy analysis, 2008.

As part of the environmental documentation supporting this FAR Part 161 Application, the FAA requested that noise modeling be undertaken for LA/Ontario to verify the magnitude of increased noise that would be experienced based on the projected shift in operations from Bob Hope Airport. Figure 10-8 shows the results of

\*Based on fleet mix projection developed by Jacobs Consultancy using 2006 INM noise input file provided by Los Angeles World Airways (LAWA) and FAA's 2007 Terminal Area Forecast for LA/Ontario for 2008.

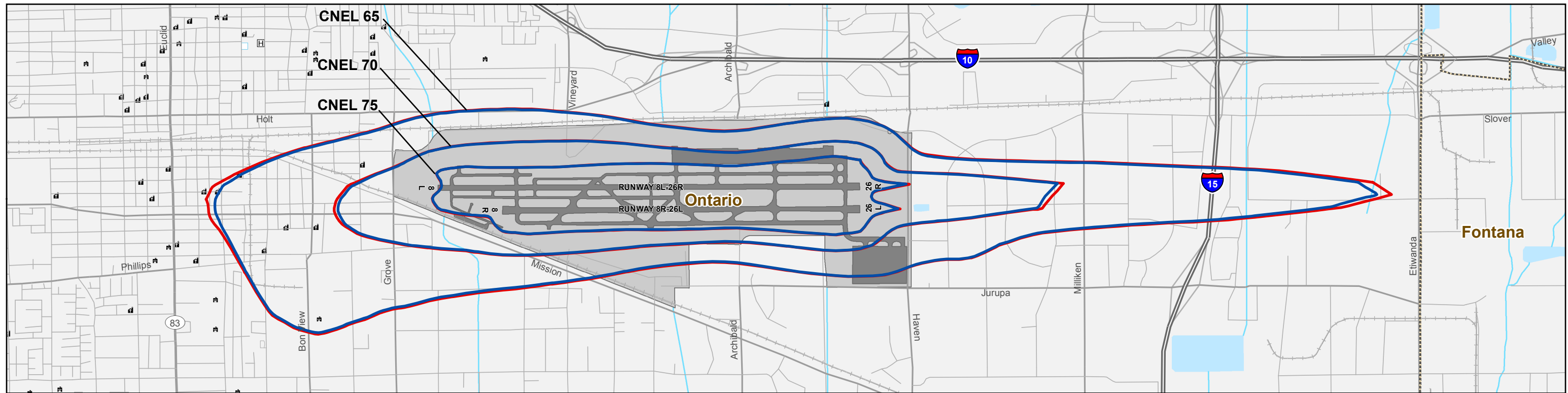


the noise modeling. The top panel of the figure shows 2008 noise exposure and the bottom panel 2015 noise. The figure also shows noise-sensitive land use. The 65 CNEL contours in both study years increase slightly. The increase is most apparent east and west of the airport along the extended centerline of the parallel runways.

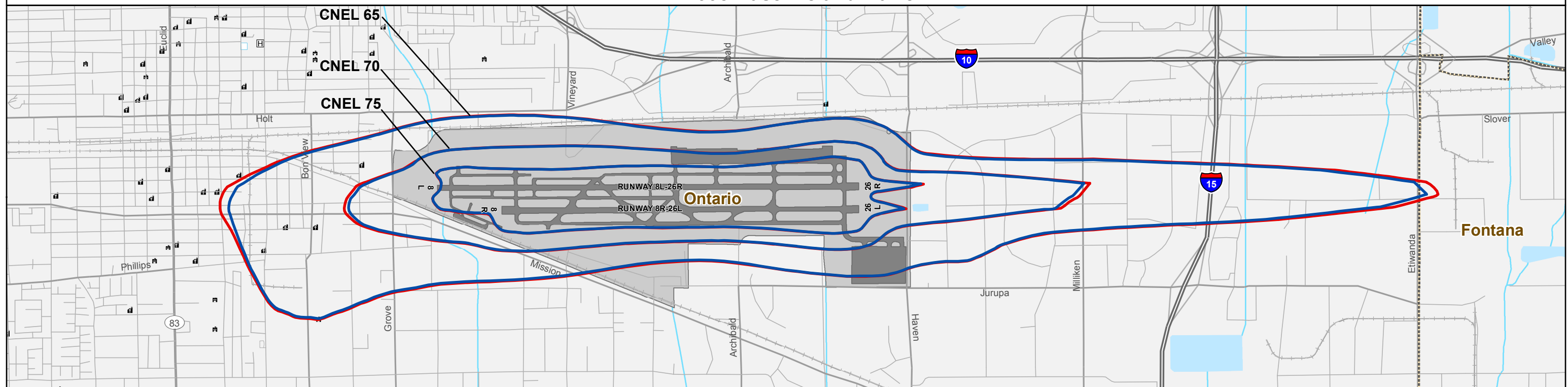
Figure 10-9 shows increases in noise exposure at a network of grid points within the 65 CNEL contour. The values in each circle show the increased noise level with the addition of the shifted flights. Based on the projections for 2008 and 2015, the noise levels would range from 0.1 to 0.3 dBA higher with a full curfew at Bob Hope Airport. These increases are below the FAA's threshold of significant impact – 1.5 dBA at the 65 CNEL level.

### **10.3.3.7 Conclusions**

This analysis has shown that the operations shifted from BUR to other airports in the Los Angeles Region would have no substantial adverse effect on existing or planned airport system capacity or on observed or forecast airport system congestion and aircraft delay. The analysis further shows that noise associated with the shift in operations would not increase significantly at the other airports.



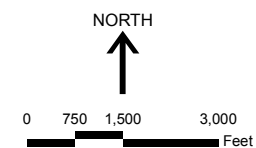
2008 Baseline and Curfew



2015 Baseline and Curfew

LEGEND

- Baseline CNEL Contour
- Curfew CNEL Contour
- Land Use Study Area
- Freeways
- Roads
- Schools, Preschools
- Places of Worship
- Hospital
- Library
- Airport Boundary

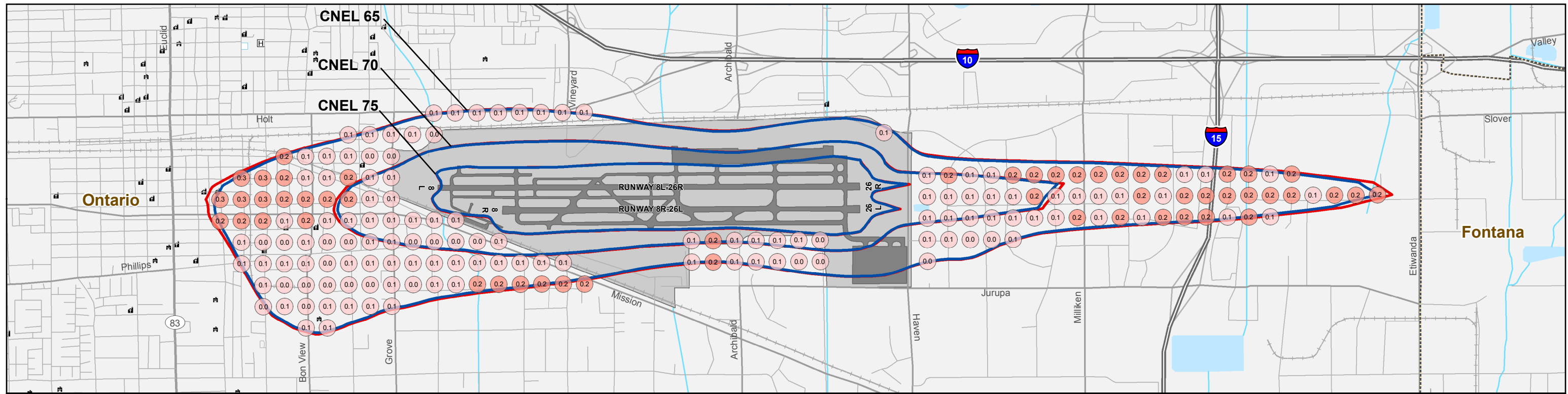


Source:  
 Land use data from San Bernardino County Assessor, 2008  
 Noise analysis by Jacobs Consultancy, 2008

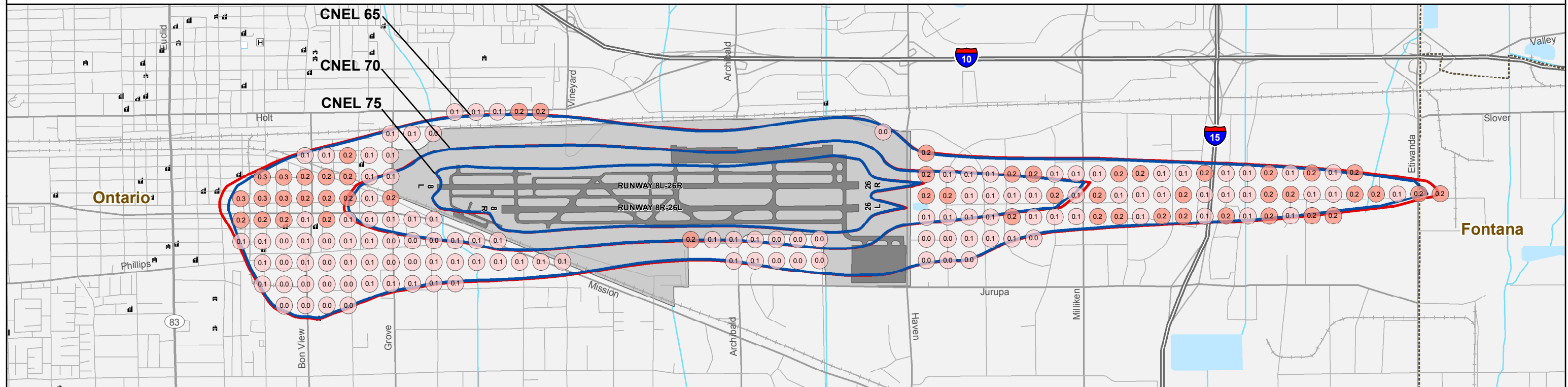


Figure 10-8  
**CHANGE IN NOISE EXPOSURE AT LA/ONTARIO WITH  
 FULL CURFEW AT BOB HOPE AIRPORT**  
 FAR Part 161 Study for Bob Hope Airport  
 January 2009





2008 Baseline and Curfew



2015 Baseline and Curfew

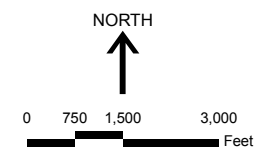
**LEGEND**

**Increase in CNEL**

- 0.0 to 0.2 dBA
- 0.3 to 0.4 dBA
- 0.5 to 0.6 dBA
- 0.7 to 0.8 dBA
- 0.9 dBA and More

- Baseline CNEL Contour
- Curfew CNEL Contour
- - - Land Use Study Area
- == Freeways
- Roads

- ⚓ Schools, Preschools
- ⛔ Places of Worship
- 🏥 Hospital
- 📖 Library
- ▭ Airport Boundary



Source:  
Noise analysis by Jacobs Consultancy, 2008

Figure 10-9  
**INCREASE IN NOISE EXPOSURE AT LA/ONTARIO WITH  
FULL CURFEW AT BOB HOPE AIRPORT**  
FAR Part 161 Study for Bob Hope Airport  
January 2009



## 10.4 NO EFFECT ON AIRSPACE CAPACITY OR WORKLOAD

The analysis in the preceding section described in detail the number of operations that would be shifted from Bob Hope Airport to other airports in the Los Angeles Region. The overall volume of affected traffic is relatively small. Further, the shift in operations would not be great enough to impose capacity constraints on airspace fixes serving these alternate airports.

Before concluding the assessment of airspace capacity and workload impacts, consideration of the early morning departure push at Los Angeles Region airports should be considered. Some commenters have expressed concern that, given the congested airspace and the heavy 7:00 a.m. departure push at the region's air carrier airports, an increase in 7:00 a.m. repositioning flights to Bob Hope Airport could create a substantial workload increase for controllers and cause flight delays.

A review of data developed and presented in Appendices AA and BB of Technical Report 1, Aviation Demand Forecasts, and discussed previously in Chapter 10 dispels any cause for concern. This information is summarized in Table 10-24.

Only 12 early morning repositioning operations in 2008 and 18 in 2015 are projected to be required, since diversions of late air carrier arrivals are anticipated to be very rare. Repositioning operations associated with general aviation flights will be more common, averaging 1.81 per day in 2008 and 2.77 per day in 2015. These repositioning flights will rarely be as time-sensitive as the air carrier flights and will be dispersed throughout the day.

Another set of repositioning flights will be required for some of the scheduled evening arrivals that are cancelled because of delays. It is estimated that approximately 25% of those cancelled flights will require repositioning to meet the next day's requirements. Those flights, of which 0.2 are projected for the average day in 2008 and 0.25 per average day in 2015, will take place outside the Los Angeles region.

Table 10-24  
**REPOSITIONING OPERATIONS FOR FLIGHTS AFFECTED  
 BY FULL CURFEW AT BOB HOPE AIRPORT**  
 Bob Hope Airport FAR Part 161 Study

Nature of Effect	Operations	
	2008	2015
<b>Operations in LA Area Airspace</b>		
Diversions -- Repositioning Required at 7:00 a.m. Next Day		
Air carrier diversions, reposition to BUR next a.m.	12	18
Average per day	0.03	0.05
Positioning Movements Required at Other Times of the Day		
GA diversions, BUR-based aircraft reposition to BUR next day	144	236
GA diversions, transient aircraft reposition to BUR next day for departure	216	352
GA nighttime departures from other airports -- preposition from BUR earlier in day	302	424
Total positioning movements at other times of the day	662	1012
Average per day	1.81	2.77
<b>Operations Elsewhere in U.S. Airspace</b>		
Cancellations -- Repositioning Required at Night or Early Morning		
Average per day	0.20	0.25

Sources: Appendix BB (pp. BB-14 - BB-27), Technical Report 1, Aviation Demand Forecasts; Chapter 4, Section 4.6.1.3, Table 4-7, Section 4.7.4.2, Table 4-15.

It is clear from the small numbers of affected operations that aircraft repositioning caused by the proposed full curfew will have no impact on controller workload, airspace capacity, or airport capacity anywhere in the system.

In view of the above findings, it is concluded that the alternative restrictions would not have substantial adverse effects on airspace system capacity or controller workload.

## 10.5 INAPPROPRIATENESS OF NONAIRCRAFT ALTERNATIVES

Nonaircraft alternatives that could potentially be used to address the nighttime noise issues at Bob Hope Airport include:

- Acquisition, relocation, and removal of housing from high-noise areas
- Acoustical treatment of housing

Chapter 5 presents a complete discussion of potential nonrestrictive alternatives to the proposed curfew. This section summarizes the nonaircraft alternatives discussed in that chapter.

### **10.5.1 Property Acquisition**

The acquisition and removal of housing from noise-impacted areas is a means of providing noise compatibility that has been used around some airports. This is infeasible in the Bob Hope Airport Area for a variety of reasons. California Government Code Section 6546.1 bars airports from acquiring land through condemnation. Further, California Public Utilities Code (PUC) 21661.6 prohibits California airports from acquiring land through negotiated transactions without the approval of the local jurisdiction within which the land is located. Neighboring jurisdictions have already invoked this provision to prevent the Airport Authority from acquiring land.

### **10.5.2 Acoustical Treatment**

As previously explained in this application, acoustical treatment, is a less cost-effective method of combating the nighttime noise projected through 2015 than the full curfew (or the other two curfews studied). Savings in the Authority's acoustical treatment program, which includes the acquisition of aviation easements, is expected to be \$59.3 million through 2015 if the proposed restriction is adopted. These savings outweigh the projected costs of the proposed curfew, \$47.9 million. Furthermore, the curfew would provide noise reduction more quickly than the acoustical treatment program, which can provide mitigation throughout the area only gradually as funding is available.

### **10.5.3 Conclusion**

No nonaircraft alternatives that would achieve the same objectives as the proposed curfew are available or feasible.

## **10.6 COMMENTS WITH RESPECT TO UNDUE BURDEN ON NATIONAL AVIATION SYSTEM**

The public comment period on the Official Draft Part 161 Application was open from March 31 through June 13, 2008. Comments received during the period are categorized and summarized in Appendix F. Seven comments directly expressed concern about the potential burden on the national aviation system that a curfew could cause. Other comments expressed concerns relating indirectly to the national aviation system, including concerns about aviation safety and the need for a regional approach to aviation system issues and concerns. Major points made in the comments are paraphrased below.

- Approval of a curfew at Bob Hope Airport would set a precedent, which could cause a proliferation of Part 161 studies and other airport restrictions.

- “Loss of connectivity to the national aviation system” was not, but should be, considered in the Part 161 Study.
- The proposed curfew conflicts with “established regional aviation policy” supporting a decentralized system for the Los Angeles Region.
- A mandatory curfew would create risks that pilots could, on occasion, rush to beat the curfew deadline, compromising safety.
- Increasing the nighttime arrival load at Van Nuys, when Tower is closed, will compromise safety.
- Forcing an increase in nighttime traffic at two busy and congested airports, Van Nuys and LAX, will compromise safety.

### 10.6.1 Precedent of Approving Curfew at Bob Hope Airport

Fear of a precedent does not constitute evidence of an adverse impact on the national aviation system. FAR Part 161 establishes standards for the process and analysis to be undertaken by airport operators proposing operating restrictions. The standards are rigorous and demanding. Since the adoption of the Airport Noise and Capacity Act of 1990, fewer than 20 such studies have even been started. Only two have been taken to completion, and only one has resulted in implementation of the proposed measure – a restriction on Stage 2 aircraft at Naples Airport.\* Implementation of the Naples restriction has created no apparent rush by other airports to pursue Stage 2 operating restrictions.

The law requires the FAA to evaluate each proposed restriction on its merits, after completion of all procedural and analytical requirements of Part 161.

### 10.6.2 Loss of Connectivity to National System

The point of this comment is that because of the cancellation or diversion of scheduled flights, due to the proposed curfew, an impact is suffered by the national system that was not, but should have been, evaluated in the FAR Part 161 Application. The argument appears to be that the chain of impacts on the system that begin with the diverted or cancelled flights must be run to ground.

The direct impacts associated with the flight cancellations have been thoroughly addressed in Chapter 4, Benefit-Cost Analysis. They include the loss of revenue to airlines caused by passengers receiving ticket refunds, costs of repositioning diverted and cancelled flights, costs of ground transportation and subsistence for passengers on diverted or cancelled flights, the value of time lost by passengers, and

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\*The City of Naples (Florida) Airport Authority implemented a ban on operations by Stage 2 aircraft under 75,000 pounds. The final decision of the U.S. Court of Appeals for the District of Columbia Circuit was issued on June 3, 2005.

the opportunity costs to airlines by having to forego market opportunities at Bob Hope Airport.

The downstream impacts that flow from these first-line impacts can be termed indirect or induced impacts. They are extraordinarily difficult to track and they quickly become difficult to attribute to any single cause.

In determining whether the tracking and measurement of any downstream impacts on the national aviation system deserve consideration, it is helpful to consider the specific effects of the proposed curfew and the nature of the air service afforded by Bob Hope Airport.

- The proposed curfew will not deny connectivity to the national system to any class of aviation users. The Part 161 Application has presented ample evidence that the impact to users can be ameliorated through the use of alternate airports or adjustments in flying times. The most that can be said is that flexibility in connecting to the national system would become more limited if the curfew is implemented.
- The breadth of impact to the national system caused by a curfew at Bob Hope Airport would be limited. As stated in the letter submitted by the Air Transport Association, “BUR’s status as an O&D airport with a relatively small catchment area means that whatever demand exists for early morning or late-night flights is likely to be generated by the local community.”\* Bob Hope Airport is an appropriate airport for consideration of an operating restriction precisely because the impacts of such a restriction would be more localized than similar restrictions proposed at airport with much larger catchment areas or that serve as important connecting hubs in the national system.

### 10.6.3 Regional Aviation Policy

Regional aviation system policy is articulated in the *2008 Regional Transportation Plan* (RTP) prepared and adopted by the Southern California Association of Governments (SCAG). The 2008 RTP clearly recognizes the limited expansion potential of the region’s urban airports (LAX, Long Beach, John Wayne-Orange County, and Bob Hope Airport), and emphasizes the need for developing the facilities at the region’s outlying airports, including Palmdale, March Inland Port, Southern California Logistics Airport, and San Bernardino International. It also puts substantial emphasis on major improvements in ground transportation links to the outlying airports.

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\*Letter from Katherine B. Andrus, Assistant General Counsel, Air Transport Association of America, Inc., to Carl Povilaitis and Dan Feger, Burbank-Glendale-Pasadena Airport Authority, June 12, 2008.



The aviation policies of the 2008 RTP include five “guiding principles.” Three are relevant to this discussion:

- Provide for regional capture of economic development opportunities and job growth created by the prospect of significant regional air traffic growth between now and 2035.
- Distribute maximum opportunity to Southern California airports where population and job growth are expected to be strong and where local communities desire air traffic for economic development.
- Reflect environmental, environmental justice and local quality of life constraints at existing airports that operate in built-out urban environments.\*

The second of the guiding principles addresses the regionalization theme. Significantly, the third acknowledges the constraints faced at the urban airports, including Bob Hope Airport.

Among the ten “aviation action steps” in the plan, four involve actions relating to major development of ground transportation systems providing improved access to outlying airports. One example is quoted here:

Support legislative, marketing and ground access initiatives that promote the decentralization of aviation demand to under-utilized suburban airports where it is desired.\*\*

With respect to Bob Hope Airport, the 2008 RTP acknowledges the efforts of the Airport Authority and the City of Burbank to cooperate in pursuing the FAR Part 161 process. The relevant language is quoted below.

The Airport Authority and City staff will jointly develop a strategy for addressing the desire for nighttime airport noise relief consistent with federal laws and procedures. This joint effort will include consideration of options within the Part 161 Study and options outside that process as well.\*\*\*

In short, the proposed curfew at Bob Hope Airport is not inconsistent with regional aviation policy. Regional aviation policy does not speak directly to the merits of a curfew at Bob Hope Airport, but it clearly acknowledges the environmental and quality of life issues at the urban airports, including Bob Hope Airport. It also directly acknowledges the Airport Authority’s work with the City of Burbank in working toward the provision of nighttime noise relief.

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\*Southern California Association of Governments, 2008 Regional Transportation Plan, Aviation and Ground Access Report, pp. 7 - 8.

\*\*Southern California Association of Governments, 2008, p. 8.

\*\*\*Southern California Association of Governments, 2008, p. 14.

#### **10.6.4 Effect of Curfew on Aviation Safety**

In an indirect way, the concerns about aviation safety that may arise with a curfew at Bob Hope Airport may relate to impacts on the national aviation system. It is difficult to credit this argument with any substantial weight. The FAA has established a web of safety procedures and regulations that apply to all aspects of aviation. Safety procedures are further mandated by aircraft manufacturers, airlines and other air service providers, and aviation insurance providers. Ultimately, the pilot in command bears a heavy responsibility for flight safety.

The proposed curfew at Bob Hope Airport specifically provides an exemption for in-flight emergencies – the one situation where lack of access to the Airport could demonstrably compromise in safety.