

CITY OF BURBANK

OFFICE OF THE CITY COUNCIL

June 13, 2008

Part 161 Study Comment Docket
Burbank-Glendale-Pasadena Airport Authority
Bob Hope Airport
2627 Hollywood Way
Burbank, CA 91505

The City of Burbank ("City") appreciates this opportunity to comment on the Burbank-Glendale-Pasadena Airport Authority's ("Authority") draft application ("Application") for a curfew at the Bob Hope Airport ("Airport"). The City applauds the thorough and convincing job that the Authority has done in developing the case for a curfew at the Airport.

The proposed full curfew ("Full Curfew") addresses a longstanding need to solve the unique and serious nighttime noise problem at the Airport. Nighttime noise causes thousands of awakenings in the vicinity of the Airport, diminishes property values, and impairs quality of life for residents. Nighttime noise has also caused or contributed to decades of avoidable – yet expensive and acrimonious – disputes relating to the Airport. The Full Curfew, and only the Full Curfew, provides an historic opportunity to resolve this longstanding problem.

The City has a direct interest in seeing the Full Curfew approved by the FAA. Because of the importance of nighttime quiet in the largely residential areas of Burbank near the Airport, obtaining a curfew has been a centerpiece of City policy for over almost 40 years. Moreover, the City has an interest in protecting the property values (and property tax revenues) of houses negatively affected by aircraft noise, as well as protecting City interests in quiet at parks, City buildings and other City property in the vicinity of the Airport. The presence or absence of nighttime noise also affects how the City regulates land uses and other activities in the areas of the City near the Airport. The City therefore joins the Authority in supporting the Full Curfew and presents these comments in further support of it.

The City has carefully reviewed the Application. Based on this review, the City has determined that (1) the Authority has done a commendable job in laying out the compelling case for the Full Curfew at the Airport and (2) the Authority has demonstrated compliance with the requirements for imposing a curfew on Stage 3 aircraft under the Airport Noise and Capacity Act of 1990 ("ANCA") and ANCA's implementing regulations, 14 C.F.R. Part 161 ("Part 161").

The City recognizes that the Part 161 regulations provide a detailed, technical roadmap for completing a Part 161 application and that the Authority has followed those regulations. However, as Part 161 itself recognizes, those regulations are not intended to limit the information an applicant may submit in support of its application. The City believes that the unique conditions at the Airport and in the surrounding community make it advisable that the Authority's Application include additional information beyond the minimum material mandated by Part 161.

Because the Authority's Application is expected to be the first Part 161 application for a Stage 3 restriction the FAA will act upon, there is much uncertainty regarding the actual Part 161 review

and approval process. For example, it is unclear what standards the FAA will actually apply to many technical and policy issues and what specific information will turn out to be important to the agency. Accordingly, the City believes it would be prudent for the Authority to provide more information and more detail than might be expressly required by Part 161. The City's objective in presenting these comments is to provide additional information and detail to further strengthen the Authority's Application, including information that is within the City's particular expertise, and to suggest areas where additional information from the Authority would further support the Application. In this letter, I would like to summarize the City's primary suggestions.

History of Efforts to Obtain a Curfew at the Airport. As the Authority knows, the City has sought a curfew at the Airport for almost 40 years. The history of those efforts, and the community support for a curfew, provides compelling evidence of the existence of a nighttime noise problem and the need for a curfew. The complete historical and factual context of the nighttime noise problem shows that the circumstances at the Airport and surrounding areas are unique, further demonstrating the need for a curfew. The history of the nighttime noise issue at the Airport highlights the likely benefits of the Full Curfew, including improved Authority-City relations, improved quality of life and other difficult-to-quantify benefits that supplement the monetary benefits the Authority has identified in the Application. Expanding the description of the noise problem to include this history would provide a broader factual context for the Application that more fully demonstrates the need for the Full Curfew.

Assumptions and Methodology for the Benefit-Cost Analysis. The City considers it especially important in the Part 161 process that the benefit-cost analysis shows that the benefits to society from the curfew outweigh its costs. Even though Part 161 requires that a benefit-cost analysis show only a "reasonable likelihood" that the benefits would outweigh the costs, the Application's demonstration of net societal benefits makes it clear that the Application meets the regulatory standard.

As discussed in the Detailed Comments, the City believes that the Authority's methodology provides the lower range of likely benefits and the upper range of likely costs. This inherently conservative approach is one of the strongest features of the Application, because it shows that the curfew would produce benefits to society under even a worst-case kind of analysis. The Authority's benefit-cost analysis is likely to receive a great deal of scrutiny from the FAA and other commenters. The City believes it would help answer many questions that might be raised, and deflect possible criticisms, if the Authority were to provide a more detailed explanation of the assumptions underlying its analysis and of the methodologies used. That explanation would make explicit the inherently conservative nature of the assumptions and analyses, and highlight that a benefit-cost analysis using reasonable alternative assumptions likely would result in an even higher cost-benefit ratio. Indeed, sensitivity analyses performed by the City show a probable cost-benefit ratio for the Full Curfew in the range of 2.14, as opposed to the reported value of 1.21. *This means that the curfew would have twice the benefits to society as it would have costs.*

Intangible and Hard-to-Quantify Benefits. In addition to the monetary benefits the Authority has identified, implementation of the Full Curfew would result in several hard-to-quantify or unquantifiable benefits, including (1) the removal of one of the most contentious issues that has contributed to more than four decades of litigation and community dispute and (2) quality of life and health benefits for local residents, visitors and businesses. Part 161 and other FAA guidance stress the importance of such hard-to-quantify benefits in decision-making. In the context of the

Authority's Application, identifying such hard-to-quantify or unquantifiable benefits is important for two reasons. First, many of those benefits are among the more important benefits of the curfew. Even though a monetary value cannot be placed on those benefits, they justify adoption of the curfew in addition to quantifiable benefits. Accordingly, the Application would be strengthened by identifying those benefits. Second, because the Part 161 standard for the benefit-cost Application is that the analysis must show a reasonable likelihood of providing net benefits to society, identifying *all* of the benefits of the Full Curfew, even if not all can be monetized, provides additional proof that the Full Curfew meets these regulatory standards and should be approved.

The Airport in the Regional Aviation System. Given concerns about congestion and noise throughout the Los Angeles region, implementation of restrictions at one airport is likely to raise concerns that other airports would be adversely affected in some way. The Application does a good job of explaining that only a small number of operations are expected to relocate from the Airport to other airports in the region, and that such relocations are within expected traffic growth rates at those airports even without a curfew at the Airport.


Given the potential for confusion and misunderstanding on this issue, however, the City recommends that the Authority expand its discussion to emphasize that the Authority is not mandating that any operation relocate to any specific airport; such decisions would be made by aircraft operators based on their particular needs. The application should make clear that the Authority would prefer operations to remain at the Airport and operate in non-curfew hours.

The City also asks the Authority to note that the City stands prepared to use any influence it may have to convince Airport users -- many of whom are City taxpayers -- to keep their operations at the Airport within curfew hours rather than diverting them to other airports. Finally, the City recommends that the discussion be placed in a regional context, by discussing the role of the Airport in regional aviation planning and the steps other airports are taking to address noise problems, including specifically that fact that Los Angeles World Airports is undertaking a Part 161 study itself for Van Nuys that may include a curfew. This regional context discussion should include the critical fact that this study is expressly included in the Southern California Association of Government's 2008 regional transportation plan.

In closing, I would like to add that after years of conflict with the Authority, the City is pleased that the Authority is following through on its commitment to seek and obtain a curfew. A curfew would be an historic achievement that would do much to ease relations between the Authority and the community. Accordingly, the City wholeheartedly supports the Authority's effort to secure a Full Curfew at the Airport and commends the Authority for the quality of the Application. The City thanks the Authority for the opportunity to comment on the Application and stands ready to assist the Authority to obtain FAA approval of the Full Curfew.

Documents referenced in the detailed comments are included in the enclosed CD-ROM.

Sincerely,



Mayor Dave Golonski
City of Burbank

**DETAILED COMMENTS OF THE CITY OF BURBANK REGARDING THE DRAFT
PART 161 APPLICATION FOR A PROPOSED CURFEW AT BOB HOPE AIRPORT**

JUNE 13, 2008

TABLE OF CONTENTS

	PAGE
1) Context for the Nighttime Noise Problem (Chapter 2; Setting and Constraints for Noise) ..	1
2) The Full Curfew Is the Only Alternative that Solves the Nighttime Noise Problem (Chapter 3; Proposed Restriction and Alternatives)	6
3) Hard-To-Quantify and Non-Quantifiable Benefits (Chapter 4; Benefit-Cost Analysis)	8
4) Standards for Benefit-Cost Analysis (Chapter 4; Benefit-Cost Analysis)	11
5) Benefits of a Curfew Outside of the CNEL 65 Contour (Chapter 4; Benefit-Cost Analysis)	12
6) Definition of Sound Insulation Program Boundaries (Chapter 4; Benefit-Cost Analysis) ..	15
7) Quantification of Curfew Benefits (Chapter 4; Benefit-Cost Analysis)	16
8) Quantification of the Costs of a Curfew (Chapter 4; Benefit-Cost Analysis)	22
9) Calculation of the Incidence of Sleep Disturbance (Chapter 5.1.1; Condition 1 Proposed Restriction Is Reasonable, Nonarbitrary, Nondiscriminatory)	25
10) Definition of the Need for a Curfew (Chapter 5.1.1; Proposed Restriction Is Reasonable, Nonarbitrary, Nondiscriminatory -- The Chapter Should Provide More Detail Regarding the Historical Context for the Nighttime Noise Problem and Need for a Curfew)	26
11) Detail Regarding Compliance with Federal Law (Chapter 8; Overview of Legal Issues) ..	27
12) The Curfew Would Not Create Exclusive Rights (Section 8.3; Exclusive Rights)	27
13) The Curfew Will Not Affect Control over Aircraft Operations (Section 8.4; Control of Aircraft Operations)	28
14) The Curfew Would Not Violate the Authority's Grant Assurances (Section 8.5; Existing Grant Assurances)	29
15) The Curfew Would Not Violate Federal Law (Section 8.6; Reasonable Noise Regulations Do Not Violate Federal Law)	31
16) Effects on Other Airports (Section 10.3.2.2; Effects of Shifted Operations on Alternate Airports)	34

DETAILED COMMENTS

1) Context for the Nighttime Noise Problem (Chapter 2; Setting and Constraints for Noise)

SUMMARY OF COMMENT: Moving the description of the need for a curfew to Chapter 2 would strengthen the Application by providing a factual and historical basis to inform the discussions in Chapters 3 and 4. In addition, the discussion of the need for the curfew would be stronger if it included historical context regarding nighttime noise and curfews at the Airport.

ACTION PROPOSED: The Authority should amend Chapter 2 of the Application to include the detailed description of the nighttime noise problem that requires a curfew currently located in Chapter 5. This should include detailed history of the unique importance of the nighttime noise problem and unique importance of a curfew at the Airport.

The Application's thorough, technical description of the nighttime noise problem in the areas near the Airport in the current Chapter 5 would be enhanced by adding a description of the unique historical context surrounding the nighttime noise problem in the communities near the Airport. The severity of the nighttime noise problem has motivated many thousands of citizens to take direct and indirect action to make the noise go away. Indeed, obtaining a mandatory curfew has been a centerpiece of City policy, and public outcry, for almost 40 years. The fact that those efforts have continued for almost 40 years, despite all of the changes at the Airport, is powerful evidence of the nighttime noise problem and the need for a Full Curfew.

Moreover, the history of efforts to obtain a curfew provides a human dimension to the nighttime noise problem that is not fully captured in the statistics of DNL contours, incompatible dwellings and survey results. Thus, in order to fully describe the nighttime noise problem the Airport Authority's proposed curfew is intended to address, the City recommends that the Authority supplement its discussion of the noise problem with a brief history of efforts by Burbank, its residents and others to obtain a curfew. In addition, the City recommends that the Authority further supplement this discussion with similar evidence that it may have in its own records, including complaints about nighttime noise, letters and statements made in Authority meetings.

Because the City is particularly well suited to provide a description of the historical context for the nighttime noise problem, the City sets out a proposed insert below, and recommends that the Authority adopt and supplement it with information from its files and experience.

* * *

The problem of nighttime noise at the Airport began to reach serious levels in the late 1960s as commercial jet service established itself at what was then called the Lockheed Air Terminal. In response to community outcry, the City of Burbank attempted to impose a curfew on nighttime jet departures between 11:00 p.m. and 7:00 a.m. See City of Burbank Ordinance No 2216 (March 31, 1970). That ordinance was subsequently struck down by the Supreme Court in *City of Burbank v. Lockheed Air Terminal, Inc.*, 411 U.S. 624 (1973). Importantly, the Court did not hold or imply that the City's goal of eliminating nighttime noise did not meet a legitimate need

of the City. See *id.* at 642-43 (noting that the City had a legitimate goal in seeking to reduce nighttime noise) (Rehnquist, J., dissenting).

Although the City was unsuccessful in achieving by itself a solution to the nighttime noise problem, it redirected its efforts to urging the Airport and others with that authority to address the problem. In 1974, the City sought legislation from Congress that would allow cities like Burbank to impose curfews on airports within their boundaries. City of Burbank Resolution No. 16,875 (Aug. 20, 1974). In addition, over the next several years, the City adopted a number of resolutions and took other action intended to reduce noise from flight operations at the Airport in general. E.g., Resolution No. 16,526 (Aug. 21, 1973) (urging adoption of a preferential runway program to limit overflights of homes); Resolution No. 20,124 (March 30, 1982) (supporting strict enforcement of Airport Noise Rule requiring the use of quieter aircraft); Resolution No. 21,140 (Dec. 11, 1984) (supporting accelerated phase-out of noisiest jets from the Airport).

In the late 1970s, the Lockheed Corporation, then owner and operator of the Airport, announced it would sell or close the Airport. In order to protect this important community asset, the Cities of Burbank, Glendale and Pasadena formed the joint powers authority that became the Burbank-Glendale-Pasadena Airport Authority to own and operate the Airport. Even in the context of preserving the Airport, however, community concerns regarding noise were of paramount concern. The organic statute authorizing the creation of the Authority includes prohibitions on the lengthening of runways and mandates that the size of the then-existing noise impact area not increase. Cal. Gov't Code § 6546.1. Additional provisions designed to limit increases in noise were included in the original Joint Powers Agreement between the three cities and in the Authority's noise rules. Eventually, the Authority adopted a voluntary curfew on air carrier operations in an effort to address community concerns regarding nighttime noise from at least some Airport users.

The problem of nighttime noise and the need for a curfew remained, however, an important topic of public discussion and debate, with frequent calls by citizens for the Authority to establish a mandatory curfew and frequent objections to proposed operations that would occur during nighttime hours. In addition, citizens frequently filed complaints with the Authority regarding nighttime operations. Operations by air carriers who chose not to comply with the voluntary curfew, as well as nighttime operations by other operators, continued to create a serious noise problem in Burbank and other areas surrounding the Airport.

The specific need for a curfew resurfaced as a major City issue in the mid-1990s in the context of the Authority's proposal to build a larger terminal. The view of the City and its residents was summarized in City of Burbank Resolution No. 24,578 (Sept. 19, 1995):

The Airport Authority should aggressively pursue an FAA Part 161 process to establish a *mandatory* curfew on all flights into and from the Airport between 10 p.m. and 7:00 a.m. The current voluntary curfew is being routinely, and increasingly, ignored and has not proven to be a viable mechanism.

Acknowledging that the FAA 161 process is time-consuming and fraught with potential obstacles, the Airport Authority should also pursue any and all other means to gain respect for the current 10 p.m. to 7 a.m. curfew. It is the explicit intention of the Burbank City Council not to support the commencement of construction of a new terminal unless and until a satisfactory mandatory curfew is established. (emphasis in original).

The lack of a mandatory curfew was a major motivating factor in the extensive, and expensive, litigation and battles between the City and Authority. Between 1995 and 2000, the City and Authority were involved, directly and indirectly, in approximately 13 lawsuits in state and federal courts and before administrative agencies. Several of the lawsuits involved appeals. These lawsuits covered a wide range of environmental, land use, noise and allocation of powers issues. Obviously, all of this litigation was enormously expensive and distracting. Throughout this period, the City reiterated its position that a curfew was a necessary, although not sufficient, condition for resolution of these various issues. The City also enlisted the support of members of Congress, FAA officials and others to encourage the Airport Authority to seek a mandatory curfew.

A particular focal point of the City's efforts to obtain a curfew was the contested hearing process regarding the Authority's applications to renew its Noise Variance pursuant to the California Airport Noise Regulations. Under those regulations, the Authority has a legal duty to reduce and ultimately eliminate the "noise impact area," which is defined as homes, schools, churches and similar land uses exposed to noise levels of CNEL 65 dB or more. Until the noise impact area is eliminated, the Authority must seek a noise variance from CalTrans as a way to ensure that adequate steps are being taken to eliminate the noise impact area.

The Authority contended, in general, that its existing noise rules, voluntary curfew and acoustic insulation program were adequate measures to eliminate the noise impact area. In three successive administrative hearings, the City argued that further steps were necessary, including a curfew. In all three variances, the focus of the City's efforts was to require the Authority to start or complete a Part 161 Study in order to obtain a curfew. As CalTrans concluded in the 2002 Variance, "[the Authority] has also undertaken a Part 161 Study [for a curfew], a process that may hold the best hope of developing new noise abatement measures." *In the Matter of Statement of Issues by the Burbank-Glendale-Pasadena Airport Authority*, Decision at 16 (Cal. Dep't Trans. Nov. 20, 2002). See also, *In the Matter of the Noise Variance Application of Burbank-Glendale-Pasadena Airport Authority*, Decision (Cal. Dep't Trans. Feb. 28, 2008).

In late 1999, following the 1998 Variance decision and as the City and Airport Authority began implementing a series of agreements to resolve many of the land use and other issues relating to the Airport, the Authority retained a consultant and began to prepare the study required by Part 161 for a mandatory curfew. Of course, by itself, preparing a study does not solve a long-standing and continuing noise problem. Accordingly, citizens and the City continued to call attention to the nighttime noise problem and attempt to expedite completion of the Part 161 Study.

For example, in October 2001, 58 percent of the voters in a special City election approved an initiative measure known as Measure A. Among other provisions, Measure A would have prohibited the City from approving virtually any aspect of any new Airport use unless and until the Authority had implemented a mandatory curfew on all operations between 10:00 p.m. and 7:00 a.m. What is particularly striking about Measure A is that it was approved by a large majority of voters despite the blunt warnings of the Burbank City Attorney and others that Measure A was illegal. And in fact, Measure A was ultimately struck down by the courts. This kind of direct public demand for a curfew underscores the depth of the problem of nighttime noise and the need for the Full Curfew on all operations to address it.

Similarly, in 2002, the City convened an unusual public committee, called the Plan Evaluation and Review Committee (PERC), to take a comprehensive look at a number of issues relating to the Airport. PERC consisted of 16 individuals drawn from a broad cross-section of Burbank, including long-time citizen activists, residents who lived near the Airport and citizens with only limited prior political involvement from all parts of the City. PERC heard extensive testimony from Burbank and Los Angeles residents, City officials and representatives, Authority officials and representatives and other stakeholders. After many weeks of fact gathering and careful deliberation, PERC issued a lengthy report distilling its findings.

With respect to nighttime noise, PERC concluded that:

While many have focused on a demand for curfews or noise budgets or other remedies, PERC's analysis found that the fundamental building blocks of the complaints could be identified as three elements: noise; pollution; and traffic. . . .

Limiting daytime disturbances from noise, and eliminating nighttime noise disturbances, should be primary goals of City policy.

Throughout the PERC meetings, residents of all parts of Burbank and some of Los Angeles spoke passionately about their suffering. It became clear that Airport-generated noise, specifically planes taking off and landing, is the single most intrusive and distressing element for having an airport in our city. Those suffering most from airport noise are obviously those directly under and close to the flight paths most often used – airplanes departing to the south from the north/south runway and planes landing from the west towards the east/west runway. However, it would probably be difficult to find any resident in the whole of the city, no matter how far from these flight paths, who has not been annoyed by noise from aircraft flying to or from BGPA.

And the most annoying of all is the aircraft take-offs and landings that happen at night when there is no background noise to offset the growl of aircraft jet engines.

The FAA and the Airport Authority have responded to noise issues by implementing measures under the Community Noise Equivalent Level (CNEL) that have had little meaningful application to real-life experience with airport noise.¹

The PERC Report went on to detail the extent and nature of the noise problem, consistently noting that nighttime noise presented a unique problem. *E.g., Id.* at 28-29. Accordingly, PERC recommended that the Authority obtain FAA approval of a curfew. PERC described a curfew as “the most desirable, effective and achievable restriction.” *Id.* at 7. PERC defined “desirable” as meaning “wanted by a significant portion of Burbank citizens.” *Id.* at 7 n.1.

In addition to the relatively unfiltered views of Burbank residents regarding the need for a curfew expressed in the PERC process and through Measure A, the public's need for a curfew continued to be reflected in the public positions of the City, as well as elected officials. As discussed above, the adequacy of the Authority's efforts to complete the Part 161 Application

¹ *Plan Evaluation and Review Committee Report* at 27 (Oct. 1, 2002) (emphasis added).

was the focus of the City's arguments in the 2002 and 2008 noise variance hearings. Similarly, members of Congress representing the area expressed their support for a curfew, also reflecting the strongly expressed desires of their constituents in Burbank and Los Angeles. See, e.g., Letter from the Honorable Adam Schiff, Brad Sherman, Howard Berman and Henry Waxman to the Honorable Marion Blakey, Administrator, FAA (Dec. 4, 2002).

* * *

These comments have focused on public statements of the City and its residents reflecting the need for a curfew primarily because those statements are summarized and easily referred to. But reference to those documents and positions must be understood to represent the tip of the iceberg. They represent the distillation of thousands of complaints, whether to the Authority, the City, other elected officials, neighbors or family members. The disruptive quality of noise from nighttime flights ultimately manifests itself in thousands of incidents and disruptions in the quality of life by residents living near the Airport that eventually come to be expressed by statements and actions of public officials.

As this history demonstrates, a technical discussion of noise contours, sleep disruption surveys and property values captures only part of the full nature and extent of the problem. Furthermore, this history highlights the unique circumstances that justify the Full Curfew at the Airport. The City is not aware of any other airport at which:

- There has been a sustained 40-year effort to secure a curfew.
- There has been a lengthy history of contentious, litigious and disruptive relationships between the airport and the community.
- The airport's organic statute and governing documents embody the need to limit noise.
- State administrative adjudicators have specifically directed an airport to pursue a Part 161 process in order to adopt meaningful noise abatement measures.
- State administrative adjudicators have repeatedly directed the airport to expedite and complete its Part 161 application for a curfew because of the demonstrated need for the curfew.
- Regional transportation plans already presume that a curfew will be in place. Southern California Association of Governments, *2008 Regional Transportation Plan Aviation and Airport Ground Access Report* at 14.
- Voluntary curfews, less restrictive noise abatement measures, land use measures and non-restrictive noise mitigation measures have failed to resolve the problem.

The intertwined relationship between the Airport and the community, the almost 40-year effort to obtain a full mandatory curfew and the level of conflict between the community and the Authority demonstrate the unique and compelling need for the Full Curfew at the Airport. This history also highlights that achieving the hard-to-quantify benefits of the Full Curfew provides important and unique reasons for adopting the Full Curfew at the Airport. As discussed in greater detail below, consideration of those hard-to-quantify benefits in the context of a benefit-cost analysis is expressly encouraged by FAA and other guidance, and such benefits may provide an independent basis for approval of the Full Curfew.

Accordingly, the City urges the Authority to supplement its quantitative analysis of the nighttime noise problem with specific reference to this history. In addition to the evidence of that problem summarized above, the City urges the Authority further to refer to the qualitative expressions of the disruptive quality of nighttime noise from Airport operations that the Authority has received and collected over the years.

Also, in order to provide a factual and historic context for the discussion of the Full Curfew and potential alternatives in Chapter 3 and of the Benefit-Cost Analysis in Chapter 4, the City recommends moving all or much of the information currently contained in Chapter 5 of the Application regarding the need for a nighttime curfew to Chapter 2, along with the history of the need for the nighttime curfew. Providing this information early in the Application will help explain the purpose and need for the Full Curfew and, therefore, provide the necessary factual context for discussing the proposed restriction and alternatives in Chapter 3 or discussing the Benefit-Cost Analysis in Chapter 4.

2) The Full Curfew Is the Only Alternative that Solves the Nighttime Noise Problem (Chapter 3; Proposed Restriction and Alternatives)

SUMMARY OF COMMENT: Only the proposed Full Curfew measure would meet the need to address the nighttime noise problem.

ACTION PROPOSED: The Application should reflect the City's and community's position that the Full Curfew is the only measure that addresses the nighttime noise problem.

The City understands that the Authority must identify and consider less restrictive alternatives to the Full Curfew as part of its analysis pursuant to Part 161. However, the City wants to make clear that only the Full Curfew meets the technical and historical need to eliminate nighttime noise at the Airport (other than the occasional delayed or emergency flight allowed as exceptions under the proposed curfew). Further, as discussed in detail in both the Application and the comments below, the Full Curfew meets the requirements of ANCA and Part 161. Accordingly, the Application should be clear that the Authority seeks approval of the Full Curfew when it submits the Application to FAA.

As discussed at length in Comment 1 above, a full curfew has long been identified as necessary by the City, as an element of agreements between the City and the Airport and in the noise variance process under Title 21, Division 2.5, Chapter 6, of the California Code of Regulations. Further, only the Full Curfew would allow the Authority to make maximum progress towards eliminating the Airport's noise impact area, as required by State law, and avoiding the expense of noise insulation to achieve the same end. Title 21, California Code of Regulations, §§ 5000, *et seq.* "[The Authority] has also undertaken a Part 161 Study [for a curfew], a process that may hold the best hope of developing new noise abatement measures.' *In the Matter of Statement of Issues by the Burbank-Glendale-Pasadena Airport Authority*, Decision at 16 (Cal. Dep't Trans. Nov. 20, 2002).

The Full Curfew is the only alternative that would secure the critical unquantifiable benefit of resolving a decades-long source of community disruption and conflict. Even if this benefit is

unquantifiable, it remains a key benefit of the Full Curfew.² Further, the Application clearly demonstrates that there is no other feasible alternative that would address the nighttime noise problem at the Airport.

While it is true that a Departure Curfew "would achieve part of the Airport Authority's noise reduction goal," Application at 3-2, it would fall well short of what is necessary to secure the unquantifiable benefits of community goodwill and cooperation. The Departure Curfew would still leave many arrival operations over the neighborhoods surrounding the Airport at night. The awakenings analysis, DNL reduction analysis and benefit estimation analyses all point to the inadequate benefits of the Departure Curfew.

The Noise-Based Curfew suffers from the same shortcomings as the Departure Curfew, but provides even fewer benefits. The measure fails to meet the need of eliminating nighttime aircraft noise surrounding the Airport, as seen by the greater total benefits provided by the Full Curfew. See Application at 4-12, Table 4-4. Even under the assumptions used in the benefits analysis that tend to underestimate benefits, the Application demonstrates that the "quieter" planes that would be excepted from the curfew under the Noise-Based Curfew contribute significantly to community impacts and Authority costs for insulation. The nighttime noise problem would remain under the Noise-Based Curfew, even if it is reduced.

Further, the City is concerned about the defensibility of the Noise Based Curfew. It is difficult to defend any particular threshold that may be chosen from the perspective of compliance with the Authority's duty to avoid unjust discrimination under its Grant Assurances. See Comment 14, below. The fact that the 253 EPNdB threshold chosen for the Noise-Based Curfew was expressly chosen to be "just below the quietest regional jet currently certified" will make this challenge especially difficult. The Application does not provide any noise-related impact

² It is critical to note that continuation of the voluntary curfew would be particularly inadequate. In comments to the Authority contained in Appendix H, the FAA indicated in 2004 that the Authority would need to make a greater showing to demonstrate the need for a mandatory curfew in light of the voluntary curfew. The letter's suggestion of some higher burden is without support under Part 161 or ANCA. Even if such a heightened burden had any regulatory or other support, however, the Authority has met this burden. It has identified considerable nighttime awakenings and a sizeable Noise Impact Area, even with the voluntary curfew in place. The historical context discussed in Comment 1 above also shows that the voluntary curfew has been inadequate to address the nighttime noise problem and avoid the decades of expensive conflict and litigation over noise issues at the Airport. The Application's benefit-cost analysis also shows that all of the examined curfew options would result in significant net societal benefits, as compared to the voluntary curfew. All of the benefits discussed in the curfew are in excess of the existing voluntary curfew, which is contained within the baseline scenario. As a result, FAA's claimed "heightened burden" provides no reason on which FAA could legitimately deny the Application.

justification for this threshold. Further, the continuing existence of a noise problem after reducing the “noisiest” aircraft shows that any discrimination would be hard to justify.³

The Authority should pursue the Full Curfew to maximize quantifiable and non-quantifiable benefits.

3) Hard-To-Quantify and Non-Quantifiable Benefits (Chapter 4; Benefit-Cost Analysis)

SUMMARY OF COMMENT: The Application quantifies only two benefits from the proposed curfew. However, there are a number of important hard-to-quantify benefits from the curfew that are not addressed, including elimination of one of the most contentious local issues and improvements in the quality-of-life of residents.

ACTION PROPOSED: The Application would be enhanced by identifying and explaining the importance of the hard-to-quantify or non-quantifiable benefits of the curfew.

The Authority has calculated only two benefits of the curfew: increased residential property values and reduced acoustic insulation expenses. The reduced acoustic insulation expenses is a purely financial benefit to the Authority (and FAA). Thus, increased property value is the only benefit to the residents and communities affected by nighttime noise identified by the Application. The Authority also recognizes, however, that “non-monetized benefits in the form of noise reduction are realized by local residents.” Application at 4-1. For purposes of the cost-benefit analysis as it stands now, this conservative approach is appropriate because it most clearly demonstrates that the full curfew is likely to have a net societal benefits.

The City recommends, however, that that analysis be supplemented by identifying and discussing the hard-to-quantify and unquantifiable benefits of a curfew. Both Part 161 and the FAA’s Airport Benefit-Cost Analysis Guidance make clear that such benefits can and should be included in the assessment. 14 CFR Sec. 161.305(e)(2)(ii); FAA, Airport Benefit-Cost Analysis Guidance at 58, 90 (Dec. 15, 1999) (“*FAA BCA Guidance*”). The consideration of non-monetizable or hard-to-quantify benefits is also endorsed by the Office of Management and Budget. *OMB Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, Circular No. A-94 (1992), Sec. 5(a)(1) (calling for “a comprehensive enumeration of the different types of benefits and costs, monetized or not”). Indeed, the FAA’s Benefit-Cost Guidance makes it clear that a decisionmaker may select an alternative even when it has a lower benefit-cost ratio if securing the hard-to-quantify benefits tips the balance in favor of that

³ As a result, the suggestion in the 2004 comments from FAA to the Authority contained in Appendix H – that there would somehow be unjust discrimination against quieter aircraft by including them in the curfew – is untenable as a matter of logic and regulation. There is no reasonable basis on which to exclude aircraft from the curfew, because they all contribute to the nighttime noise problem. Furthermore, neither the ban against unjust discrimination in the grant assurances nor any FAA guidance would support the novel and arbitrary suggestion that the Authority would need to discriminate to avoid discrimination.

alternative. *FAA BCA Guidance* at 90 ("The recommendation of the appropriate alternative will depend on measured benefits and costs, consideration of hard-to-quantify benefits and costs, and sensitivity of results to uncertainty"). Accordingly, hard-to-quantify benefits can be important, and even decisive, in decisionmaking.

Many of the benefits of a curfew are difficult to quantify or cannot be monetized at all. The City believes that many of those benefits are among the most important and valuable benefits of the curfew and are therefore critical to a complete consideration of the curfew.

First, as noted above, Part 161 does not require that an application demonstrate a benefit-cost ratio greater than one. It is sufficient if "the estimated potential benefits of the restriction have a reasonable chance to exceed the estimated potential cost of the adverse effects on interstate and foreign commerce," including consideration of hard-to-quantify benefits. Although the Application clearly demonstrates net societal benefits, identifying additional, hard-to-quantify benefits further supports the proposition that it is probable that the benefits of the curfew outweigh its costs.

Second, these hard-to-quantify benefits establish the fundamental reasonableness of the curfew, because taking action to achieve those benefits would be a reasonable exercise of governmental authority even in the absence of the quantifiable benefits. Third, these hard-to-quantify benefits can only be achieved with the Full Curfew. Thus, a discussion of these benefits provides further support for the Full Curfew as the only alternative that can meet the community's needs.

Accordingly, the City recommends that the Application include a discussion of the hard-to-quantify benefits of the curfew. The City's comments below identify several such benefits, and the City recommends that the Authority add others that may not be apparent to the City.

Benefits from Removal of Major Source of Community Tension and Conflict

As discussed in Comment 2, nighttime noise and the question of a curfew have been at the center of the frequently contentious, often litigious relationship between the City and the Authority. Those conflicts have cost the City and the Authority tens of millions of dollars in legal fees and other expenses, have occupied the time and attention of City and Authority leadership and have added to the cost, in time, money and resources, of operating the Airport and governing the City. Implementation of a Full Curfew would remove one of the critical points of contention relating to the Airport. This provides the opportunity to improve relations between the City and the Authority, permitting more efficient resolution of the many issues on which the City and Authority must coordinate. It also has the potential to reduce or eliminate the millions of dollars each side has expended on litigation. While it is impossible to place a dollar figure on this real effect, it is a critical benefit of the Full Curfew. As discussed above in Comment 2, neither of the other alternatives would have a similar effect.

The Inherent Value of Quiet at Night

As the Authority notes, there is an intangible but real value to the elimination of nighttime noise that is not fully captured by increased property values. Application at 4-1. These hard-to-

quantify benefits include the elimination of nightly disruptions, the assurance of quiet, the ability to take advantage of warm weather to stay outside late at night, for children to camp in backyards without aircraft overflights, and the collective benefit of quiet neighborhoods, sidewalks and streets. In short, there is day-to-day benefit to a quieter neighborhood that is not fully captured by the increase in property values. In part, this is because property values are not realized by homeowners or renters on a daily basis, and partly because the value of quiet is so inherently intangible (and indeed presumed by most people) that property values simply do not reflect the full value of a curfew. The City recommends that the Authority expand its discussion of the inherent value of quiet at night as part of its discussion of hard-to-quantify benefits by identifying those benefits and acknowledging them to be additional benefits of the Full Curfew.

In addition, residents would benefit both psychologically and financially from being able to use natural ventilation at night. A Full Curfew would allow residents to open their windows from 10 p.m. to 7 a.m. and avoid almost all aircraft noise. This would reduce air conditioning and mechanical ventilation costs.

Improved Health and Well-Being

Exposure to aircraft noise in general and aircraft noise at nighttime in particular has been linked to a number of potential health and behavioral problems, including elevated stress levels, difficulty concentrating, and general well being.⁴ These consequences have been recognized as serious public health concerns that merit further research and attention. Although difficult to quantify, the adverse health consequences of exposure to nighttime noise from aircraft operations impose a range of costs on society in the form of lower productivity, increased medical costs and a reduction in well-being. Conversely, eliminating nighttime noise would reduce or eliminate those costs and improve the health and well-being of area residents. The effects are not captured in the hedonic property value methodology used in the Application. Accordingly, the Application should acknowledge that one hard-to-quantify benefit of the Full Curfew would be the improved health and well-being of people living and working near the Airport.

Benefits to Non-Homeowners and Businesses

By limiting the benefits analysis to property values, the Application does not discuss benefits to non-homeowners who are impacted by nighttime noise. For example, because of different market conditions, rental rates may not fully reflect the impact of nighttime noise. Moreover, there are non-residential properties whose users would benefit from quiet at night. For example, there are hotels near the Airport whose guests and employees would benefit from the elimination of nighttime noise. There are also a number of other businesses with late-night and/or early-morning hours whose employees and customers would benefit from the elimination of nighttime noise. In addition, there are visitors to the area who would benefit from nighttime quiet.

⁴ See Technical Meeting on Aircraft Noise and Health: Review of Existing Evidence and Needs for Research (World Health Organization 2001); Noise From Civilian Aircraft in the Vicinity of Airports - Implications for Human Health - Noise, Stress and Cardiovascular Disease (Health Canada 2001).

These individuals would benefit from the curfew in the same basic ways that homeowners would; but the focus on residential property values does not account for the benefits to these individuals. The City recognizes that it may not be possible to quantify these benefits (although the City urges the Authority to explore that possibility), but feels strongly that the benefits to those non-homeowners should be acknowledged and accounted for in the Application.

4) Standards for Benefit-Cost Analysis (Chapter 4; Benefit-Cost Analysis)

SUMMARY OF COMMENT: The FAA does not clearly identify the standards by which it must evaluate the benefit-cost analysis of the Application. Nonetheless, because the Authority relies on assumptions and analyses that understate benefits and overstate costs, the Authority's benefit-cost analysis far exceeds any possible interpretation of the regulatory standard. Highlighting this approach in the context of FAA and other benefit-cost guidance would further demonstrate the Application's compliance with Part 161 requirements.

ACTION PROPOSED: In order to assist future review, it would be useful for the Application to clarify early in the document the standards by which FAA must review the Application's forecasts, noise impacts, benefits and costs. Further, the Application should identify the conservative approach it is using and identify how the approach is justified based on the context of Part 161 and the facts of this case, as discussed below.

Part 161 requires that the applicant provide evidence that the benefits of the Full Curfew "have a reasonable chance to exceed" its costs. 14 C.F.R. § 161.305(e)(2)(ii)(A)(i). The Application's consistent use (discussed in detail in comments elsewhere) of assumptions that tend to overestimate costs and underestimate benefits – but still show a benefit-cost ratio in excess of one – demonstrates that the curfew far surpasses that regulatory requirement. The Authority could enhance the Application by referring to FAA and federal guidance on benefit-cost analyses to emphasize that its analysis exceeds regulatory requirements.

FAA guidance on the conduct of benefit-cost analyses indicates that identifying the benefits and costs of a proposed action involves uncertainty, but that the goal is to identify "realistic" scenarios and bracket the range of reasonable uncertainty. See *FAA BCA Guidance* at 6, 85. Similarly, the Office of Management and Budget has identified benefit-cost guidance applicable to all federal programs not explicitly exempted. See OMB, Circular No. A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs* (Oct. 29, 1992); OMB, *Economic Analysis of Federal Regulations Under Executive Order 12866* (Jan. 11, 1996). These guidelines make clear that the goal of a benefit-cost analysis is to identify an "expected" net benefit or cost to learn whether a proposed action is likely to lead to net benefits to society. Circular A-94 at §§ 5(a), 9. "The expected values of the distributions of benefits, costs and net benefits can be obtained by weighting each outcome by its probability of occurrence, and then summing across all potential outcomes. If estimated benefits, costs and net benefits are characterized by point estimates rather than as probability distributions, the expected value (an unbiased estimate) is the appropriate estimate for use." *Id.* at § 9(b). OMB recognizes that use of worst-case estimates or

other forms of analysis may be appropriate in some circumstances when the rationale for such estimates is clearly presented. Circular A-94 at § 9(b).⁵

The use of such a worst-case analysis is appropriate in this case. As discussed in detail elsewhere, the Authority's approach uses assumptions and includes statistical and methodological approaches that necessarily lead to the understatement of benefits and the overstatement of costs. Nonetheless, even with these understated benefits and overstated costs, the Application still shows that the Full Curfew would provide net societal benefits. This means by definition that any "expected" or "likely" scenario would have net societal benefits. Therefore, under any conceivable reading of the regulation, the benefits of the Full Curfew "have a reasonable chance to exceed" the costs. 14 C.F.R. § 161.305(e)(2)(ii)(A)(1).

By clearly identifying the standards for benefit-cost analysis, highlighting the conservative assumptions and elements of the analysis of the curfew, and presenting sensitivity analyses and other data to indicate the effect of those assumptions, the Authority would further strengthen the case that the benefit-cost analysis meets the Part 161 standard.

5) Benefits of a Curfew Outside of the CNEL 65 Contour (Chapter 4; Benefit-Cost Analysis)

SUMMARY OF COMMENT: The Benefit-Cost Analysis understates the benefits of the curfew by not accounting for the benefits of the curfew to homes outside the CNEL 65 dB contour.

ACTION PROPOSED: The Application should explicitly state that the benefit-cost analysis excludes benefits of the curfew that exist outside of the CNEL 65 contours and note the potential extent of those benefits, including hard-to-quantify benefits. The City is not recommending that the Authority redo its primary benefit calculations as long as it maintains the worst-case benefit-cost approach in the draft Application.

The Application does not account for the benefits of the curfew beyond the CNEL 65 dB contour, *see* Application at 4-2, even though because people living and working beyond the CNEL 65 dB contour will clearly benefit from the Full Curfew.

For example, the hedonic property value analysis in the Application shows that noise affects property values outside of the CNEL 65 contour, as well as inside it. Indeed, the analysis shows that there is a larger effect on property values per decibel of noise outside of the CNEL 65 contour than inside it. *E.g.*, Application, Technical Report 2 at 31. Similarly, the literature review presented in Technical Report 2 of the Application (see Table 1 at pages 5-6) shows that the majority of the studies using DNL-equivalent measures used thresholds of property value impact of DNL 55-60 decibels rather than DNL 65. The European Union recently determined

⁵ In that case, however, "the analysis should identify the nature and magnitude of any [statistical] bias." *Id.*

that it would use DNL 55 decibels as a general noise threshold for assessing property value impacts and DNL 50 for aviation.

Perhaps most importantly, the FAA has also included noise effects, costs and benefits beyond the DNL 65 dB contour (indeed to the DNL 55 contour) for the purposes of its assessment of noise stringency in the ICAO Committee on Aviation Environmental Protection ("CAEP"), airspace and continuous descent arrival programs.⁶ See e.g., CAEP, *ENVIRONMENTAL DESIGN SPACE (EDS) PROGRESS* at A-12 (Feb. 2007) (presented by U.S. and Canada representatives). FAA is using DNL 55 as the threshold for the calculation of the benefits of noise reductions in its hedonic property model intended to be used as part of its Aviation Portfolio Management Tool ("AMPT") that will be used for CAEP, airspace design and other purposes. Indeed, FAA's recent and extensive promotion of the noise benefits of continuous descent arrivals ("CDA") can only be justified based on noise reductions below DNL 65 contours, because CDA has only minor effects on noise above DNL 65. It is important to note that the calculation of benefits outside of the CNEI DNL 65 contours as part of a benefit-cost analysis is not the same as redesignating thresholds for significant impact for National Environmental Policy Act purposes or federal thresholds for land use compatibility under Part 150.⁷

Many awakenings and other sleep-related impacts occur outside of the CNEI 65 contour. Aircraft noise-induced sleep disturbance is closely linked to individual overflights, rather than to 24-hour cumulative noise exposure. The Federal Interagency Committee on Noise (1992), for example, recognized that noise-induced awakenings must be predicted from the sound exposure levels of individual noise events, rather than from long term, time-weighted average sound levels. Indeed, the Authority's records reflect that a large proportion of the nighttime noise complaints come from addresses outside of the CNEI 65 contour. Application, Technical Report 2 at 10.

Because flights from the Airport generate Sound Exposure Levels ("SELs") capable of awakening people at points beyond the CNEI 65 dB contour, restricting the scope of the Application's analysis of awakening to the area within the CNEI 65 dB contour understates the benefits of and need for a nighttime curfew. Figure 1 illustrates the consequences of restricting analyses of reduced sleep disturbance of a curfew to the area within the Airport's 65 dB CNEI contour. The CNEI 65 dB contours for 2008 and 2015 shown in Figure C-2 of the Application

⁶ This is a separate issue from the one identified by the FAA in its 2004 letter to the Authority contained in Appendix H of the Application. See Appendix H at 5-6. In that letter, the FAA identified concerns with the use of supplemental metrics outside of the CNEI 65 contour to derive sleep awakenings and therefore benefits. Use of homes outside CNEI 65 contours in the hedonic analysis would still rely on the cumulative CNEI metric (or annoyance metrics based on CNEI) and be consistent with the academic literature, industry practice and FAA's own practice in cost-benefit analyses. Thus, the FAA's comments did not foreclose the use of CNEI contours beyond 65 for the purposes of estimating potential benefits.

⁷ Of course, Part 150 has always allowed local entities to identify thresholds of compatibility below DNL 65. On this basis, the City of Burbank's zoning ordinances require the provision of sound insulation for new development within the CNEI 60 contour.

[illegible]

Indeed, indoor single-event noise levels may be higher for some homes just outside of the CNEL 65 dB contour than those within it that have received noise insulation and have their windows closed.

14

Further, there are no legal reasons for stopping the analysis at the CNEL 65 contour. *Compare* Application at 4-2. The Vision 100 legislation cited in the Application only barred the use of Airport Improvement Program funds for noise insulation outside of the DNL 65 contour – it did not forbid the use of Passenger Facility Charges or airport revenue for insulation outside of the DNL 65 contour. In addition, that provision of Vision 100 was applicable only until the end of federal Fiscal Year 2007 and is no longer in force.⁹

The FAA has approved the use of airport funds for noise insulation between DNL 60 and DNL 65 at other airports as recently as November 2007. *See e.g.*, Letter from D. Fuller, FAA, to T. Anderson, Metropolitan Airports Commission (Nov. 30, 2007). Finally, federal courts have upheld the consideration of noise benefits beyond the DNL 65 contour in the Part 161 context and otherwise if the airport can show particular local circumstances that justify doing so. *City of Naples Airport Auth. v. FAA*, 409 F.3d 431, 435-36 (D.C. Cir. 2005); *National Business Aviation Ass'n, Inc. v. City of Naples Airport Authority*, 162 F. Supp.2d 1343 (M.D. Fl. 2001). As noted above, the Authority has ample evidence to make this justification. Also, as noted above, the FAA is already considering evaluating noise impacts above DNL 55 decibels.

The City recognizes that the Authority excluded from the Application any discussion of the benefits of the curfew outside the CNEL 65 dB contour based on the FAA's expressed reluctance to acknowledge such benefits. As discussed above, however, such reluctance by FAA is unwarranted and unsupportable in this situation. Accordingly, it would be appropriate for the Authority to provide, through a sensitivity analysis or otherwise, an indication of the likely benefits to areas beyond the CNEL 65 dB contour that are not included in the benefit-cost analysis.

Inclusion of the very real impacts of noise on homes outside of the 2008 CNEL 65 contour would have a significant effect on the benefit cost ratio. As a test of the sensitivity of the analysis to this effect, including the effects of noise in property value from CNEL 55-65 would easily triple the number of affected homes subject to the BCA and increase the noise discount index from -0.73 percent per decibel to -0.92 percent per decibel. *See* Application, Technical Report 2 at 20 (identifying effects inside and outside of CNEL 65 contour). Assuming the same costs assumed in the Application and that the decibel reduction with the curfews would be the same in and outside of the contour, inclusion of the effects on homes within the CNEL 55 contour would increase the benefit-cost ratio from 1.21 to 1.57.

Because the Full Curfew has a positive benefit-cost ratio even without accounting for these sizeable benefits, *id.* at 4-30, the Authority has made an overwhelming case that the Full Curfew meets the benefit-cost test under Part 161 and should be approved.

6) Definition of Sound Insulation Program Boundaries (Chapter 4; Benefit-Cost Analysis)

⁹ Public Law 108-176, Section 189 ("The Secretary shall not approve in fiscal years 2004 through 2007 a program submitted under subsection (a) if the program requires the expenditure of funds made available under section 48103 for mitigation of aircraft noise less than 65 DNL.").

SUMMARY OF COMMENT: The Application's identification of sound insulation program boundaries is supported by good planning and federal guidance regarding noise insulation programs.

ACTION PROPOSED: The Application should acknowledge the City's planning assessment and confirmation of the appropriateness of the Application's identified sound insulation program boundaries.

The Application appropriately considers the benefit of avoided sound insulation costs associated with the 2015 CNEL 65 dB contour using (1) whole blocks where the contour intersects the block and (2) natural boundaries. Application at 4-2 to 4-3. The Authority correctly notes that the use of whole blocks and natural boundaries is permitted by FAA Order 5100.38C. *Id.* at 4-5.

The City's planners have evaluated the specific projected 2015 treatment boundaries surrounding the Airport, and have concluded that the Airport Authority appropriately established treatment boundaries beyond the CNEL 65 contour to maintain consistency and equity within neighborhoods in which the CNEL contour cuts through neighborhoods and through individual parcels.

In addition, FAA has approved the use of natural boundaries and whole-block treatment at other airports, such as the Minneapolis-St. Paul International Airport. The Authority has the further flexibility to treat these homes outside of the CNEL 65 and within the CNEL 60 contours, because FAA guidance and practice allows airports to insulate to the DNL 60 contour if it can make a demonstration of noise impact between the DNL 60 to 65 contours. *See* Comment 5. The Application contains extensive data that would allow the Authority to make this finding.

The Authority's delineation of whole blocks and natural neighborhood boundaries shown in Figure 4-1 is warranted under FAA guidance and policy, equity and sound planning principles.

7) Quantification of Curfew Benefits (Chapter 4; Benefit-Cost Analysis)

SUMMARY OF COMMENT: The use of the hedonic property value methodology as the only means of quantifying benefits for homeowners does not capture the full extent of the benefits of a curfew for homeowners. In addition, some of the methods used in the hedonic property value analysis have the effect of suppressing the quantified value of a curfew to homeowners.

ACTION PROPOSED: The Application should explicitly acknowledge the inherent limitations of the hedonic property value methodology as the measure of the benefit of a curfew to homeowners and identify the other benefits of the curfew, whether quantifiable or not.

In addition to the avoided noise insulation costs, the Application also estimates the increase in property values as a result of a curfew. The Application estimates the monetary effect of the proposed curfew on residential property values by developing a statistical prediction model that includes an Airport-specific "noise discount coefficient" (a percentage decrease in historical

property values per decibel of noise exposure in excess of a threshold value), and applying it to recent Airport-area residential sales.

However, as described below, the methodology, market-specific assumptions and procedures used to estimate the value of this coefficient tend to understate the value of a curfew to homeowners. See A. Baranzini and J. Ramirez, *Paying for Quietness: The Impact of Noise on Geneva Rents*, Urban Studies, Vol. 42 at 634 (Apr. 2005) ("The full consequences of noise on the environment and on human health are often indirect, subtle and difficult to perceive and thus they may be underestimated.").

The Hedonic Pricing Approach Identifies the Minimum Value of the Benefits of a Curfew

Hedonic pricing provides one of the few ways to quantify the effects of noise on residents, but it does so in a way that understates the true value of quiet to residents. The City recommends that the Application explicitly recognize some of the limitations associated with hedonic pricing in order to illustrate how the Application understates the likely benefits of the curfew. The City does not recommend that the Authority drop the Application's use of the hedonic property methodology; it recommends only that the Authority carefully explain why the quantified impacts are likely the floor to the curfew's benefits, not the full value.

As noted in Comment 3, the hedonic pricing method identifies only some of the costs associated with noise or the benefits of a curfew for a homeowner. It has long been recognized in the academic literature that the use of a hedonic property value analysis – even if conducted perfectly – does not fully capture residents' economic losses associated with noise. E.g., E. Feitelson, et al., *The Impact of Airport Noise on Willingness to Pay for Residences*, Transp. Res. D., Vol. 1, No. 1 at 1, 12 (1996) (citing references) ("airport authorities should not rely solely on [hedonic] studies to identify loss of property value.") The hedonic property value analysis only captures the real estate market premium associated with noise (or lack of noise) at a property; it does not capture economic effects associated with the day-to-day impacts of noise on inhabitants of the home or the economic costs associated with moving to a location with less noise. E.g., id. at 12; B. van Praag and B. Baarsma, *Using Happiness Surveys to Value Intangibles: The Case of Airport Noise*, The Economic Journal, Vol 115 at 224 (2005).

Further, the use of a hedonic pricing methodology inherently involves the use of assumptions that serve to underestimate the quantified benefit. As noted in Technical Report 2, the underlying theory of the hedonic model assumes that the housing market is in equilibrium. Application, Technical Report 2 at 8. See also, I. Waitz, et al., *Requirements Document for the Aviation Environmental Management Tool* at 21 (June 2006) ("Additional limitations [on the use of hedonic price analysis] include the assumption that the market in question is in equilibrium.") There are sound reasons to believe that the real estate market in the San Fernando Valley did not operate in equilibrium during the relevant time periods. First, the market is highly dynamic and variable now, as it was also during the 1998-99 time period. In a rapidly changing market with tight supplies and high demand, the effects of noise are unlikely to be fully reflected in price. This effect is exaggerated by the Application's use of 1998-99 property value and noise data to develop a noise discount index that was then used to represent conditions nearly a decade later. Noise discount indices are generally understood to be difficult to transfer from one time to

another, much like local conditions make them difficult to transfer from one location to another. E.g., A. Lazik and R. Golaszewski, *A Technical Note on Aircraft Noise and Its Cost to Society* at 5-6 (Apr. 19, 2006).

Second, market valuation of an aspect of property – like nighttime noise – assumes perfect information in the hands of both buyers and sellers. See e.g., D. McLean and B. Mundy, “*The Addition of Contingent Valuation and Conjoint Analysis to the Required Body of Knowledge for the Estimation of Environmental Damages to Real Property*,” *Journal of Real Estate Practice and Education*, Vol. 1 at 3 (1998) (proper pricing assumes that “[b]oth parties are well informed or well advised, and acting in what they both consider their own best interests”). However, this assumption is clearly untenable for the case of airport noise. Sellers have perfect information regarding the extent and nature of noise generally, and nighttime noise in particular. Buyers, on the other hand, will have far less information about noise conditions and often their own susceptibility to nighttime noise. Few purchasers are likely to have stayed even one night at a prospective property to understand and consider the nighttime noise environment and the acoustically-relevant aspects of a home (e.g., degree of attenuation, ventilation or air conditioning systems, or directions that bedrooms face relative to flight tracks). This imbalance in information results in an undervaluation of noise by purchasers.

Third, perfect markets (and, therefore, perfect prices) depend on an assumption that there are no transaction costs associated with purchase or sale. See e.g., E.g., B. van Praag and B. Baarsma, *Using Happiness Surveys to Value Intangibles: The Case of Airport Noise*, *The Economic Journal*, Vol. 115 at 224 (2005) (the applicability of the hedonic model “is [] questionable if residents face significant switching costs, especially if their ability to make unbiased long-term predictions of their circumstances and preferences is doubtful.”); European Commission Environment Directorate General, *Highlights of the Workshop on the “State of the Art in Noise Valuation”* at 3 (July 2002) (“If the housing markets are distorted (e.g., due to ... high transaction costs/taxation) the value of noise may not be reflected in the price of houses or apartments.”); J. Barreiro, et al, *How Much Are People Willing To Pay for Silence? A Contingent Valuation Study*, *Applied Economics* Vol. 37 at 1234 (2005) (“hedonic price studies are very sensitive to housing market conditions” and markets are not efficient when most homes are owned and mobility is low). In the context of owned or rental residential property, it cannot be assumed that there are no transaction costs. The purchase or sale of property involves substantial transaction costs (both tangible and intangible) that make sales more difficult and less frequent than they might be. A buyer that finds a home noisier than expected or desirable cannot easily or quickly resell the property to seek a less impacted home.

The Authority should explicitly acknowledge the inherent limitations of the hedonic property value analysis. In this case, such a discussion should indicate that noise likely impacts property values and residents negatively in ways that the hedonic property value analysis did not fully assess.

The Hedonic Property Value Analysis Underestimates the Benefits of the Curfew by Limiting the Quantification of Benefits to Those Homes within the CNEL 65 dB Contour in 2008, while Excluding the Almost 1,000 Homes that Will Be Added to the CNEL 65 dB Contour by 2015 without the Curfew

The Application's hedonic property value analysis limits its scope to homes within the 2008 CNEL 65 dB contour. Application, Appendix D at D-1. However, the Application's forecasts and noise contour projections show that 948 additional homes will be added to the CNEL 65 dB contour between 2008 and 2015. *Id.*, Appendix B at Figure B-12. Because the Application analyzes the impact on property values of noise exposure levels above CNEL 65 dB, the Application should include these additional homes in the analysis. This is particularly important because the Application includes in its analysis costs from the years 2008 to 2015.

Assuming that the per-home benefit is the same as those within the 2008 CNEL 65 dB contour and that the contour grows evenly between 2008 and 2015, the addition of these homes would add \$5.9 million of benefit to the total benefits of the Full Curfew and, by itself, raise the benefit-cost ratio to 1.28. Inclusion of these homes along with affected homes within the CNEL 55 dB contour (as discussed in Comment 5) would raise the benefit cost ratio to 1.64.

Similarly, even for those homes within the 2008 CNEL 65 dB contour, the hedonic property value assessment does not consider the benefits associated with the avoidance of the increase in noise levels at each home between 2008 and 2015. Given the growth in noise levels predicted between 2008 and 2015, this benefit should have been captured.

The Use of the 1998 INM Noise Model Runs for Properties Well Outside of the CNEL 65 dB Contour Tends to Understate the Relationship Between Noise and Price

The manner in which the hedonic pricing study was conducted also tends to understate the probable noise benefits of a curfew. Low levels of aircraft noise exposure, freeway and arterial street traffic noise, as well as the heterogeneity of residential conditions throughout much of the study area, are likely to have masked the effects of aircraft noise on residential sale prices, and hence led to lower estimates of an aircraft noise depreciation index. Due to a lack of a statistically significant number of sales within the immediate vicinity of the Airport, the study analyzed residential sales in areas with aircraft noise exposure considerably lower than those in the immediate vicinity of the Airport. See Technical Report 2, Figure 2. Accordingly, the statistical basis of the "noise discount coefficient" relies on property values in areas with much lower noise exposure levels than those closer to the Airport.

Moreover, aircraft noise exposure estimates assigned to each of the parcels were derived from the 1998 Noise Exposure Map. This map was intended to identify the location of the airport's 65 dB CNEL contour, not determine noise levels at parcels well outside of that contour. Thus, it cannot be assumed that it accurately reflects these noise levels well outside of the CNEL 65 contours.

Section 6.6.2 of Technical Report 2 explains that the 1998 INM model's predictions corresponded closely with noise measurements made by the Airport's permanently installed noise monitors. However, because the Airport's permanently installed noise monitors are all located relatively close to the airport's runways, agreement between predicted and observed noise levels at these locations does not constitute compelling evidence of the accuracy of assignment of aircraft noise exposure levels at locations well beyond the CNEL 65 dB contour.

Thus, it is almost certain that predicted noise levels at the many parcels well outside of the CNEL 65 dB contour vary considerably from predicted noise levels within the CNEL 65 dB contour, thereby masking the identified relationship between noise and property price. Similarly, because the hedonic analysis does not account for the fact that homes do not all attenuate outside noise to the same degree, it further masks the statistical relationship between noise and price. See E. Feitelson, *et al.*, *The Impact of Airport Noise on Willingness to Pay for Residences*, Transp. Res. D., Vol. 1, No. 1 at 6 (1996) ("the disregard [of noise insulation] may bias hedonic estimates").

It is a well established statistical principle that errors of measurement in regression analyses reduce correlations between predictor and outcome variables and slopes of relationships between them. The Authority should acknowledge the uncertain correlation between predicted noise values and property price and provide some indication of how that affects the hedonic pricing analysis.

Relationship to the Contingent Valuation Study

The Application presents the contingent valuation study contained at Appendix E as a way to validate the hedonic property analysis. Application at 4-35, 4-36, and E-26. However, the contingent valuation study identifies unique economic impacts of noise, or benefits of a curfew, that are not captured in the hedonic price analysis. Accordingly, the economic benefits identified in the contingent valuation are additional benefits of the curfew. If the Application appropriately added the values identified in the contingent valuation study to the avoided noise insulation costs and the hedonic property value analysis, the benefit-cost ratios would increase.

The Contingent Valuation Study Also Tends To Underestimate the Benefits of a Curfew

The contingent valuation study itself was structured in a fashion that tends to underestimate the benefits of noise reduction. The contingent valuation study seeks to assess the value of noise to residents by asking them how much they would be willing to pay to eliminate nighttime noise. The wording of the key items in the contingent valuation study (*i.e.*, "how much *more* would you ... be willing to pay to buy your home" (emphasis added)) minimizes the identified economic impact by inquiring about an increment in monthly mortgage or rental costs that respondents would be willing to pay in return for a curfew at the Airport. About a third of homeowners and half of renters answered that they would be unwilling to make *any* greater monthly payment in return for a mandatory curfew.

Although reported as support for the absolute economic value of the curfew, many of these "zero" responses likely reflect the well-recognized principled refusal of people to agree to pay to remove a disamenity caused by someone else. Those "zero" responses cannot be interpreted as an indication that a curfew has no monetary value. Suppose, for example, that a next-door neighbor routinely throws his trash over the fence separating his property from yours. Most people would view your neighbor as the party responsible for paying to pick up the trash thrown onto your property. Just as it is unreasonable to expect you to pay anything at all to remove your neighbor's trash from your property, many respondents in the Airport's contingent valuation

survey may have reasoned that they should not personally pay anything at all to halt the nighttime noises created by Airport users which awaken them.

The technical literature supports the critical distinction between the willingness to pay and the willingness to accept pollution for a certain price. "Use of [willingness to accept] in the case of a homeowner whose property has been contaminated makes practical sense as well. Asking a homeowner what s/he would be willing to pay to clean up his/her homesite contaminated by a third party would present a logical inconsistency to the owner." D. McLean and B. Mundy, *The Addition of Contingent Valuation and Conjoint Analysis to the Required Body of Knowledge for the Estimation of Environmental Damages to Real Property*, Journal of Real Estate Practice and Education, Vol. 1 at 5 (1998).

Researchers have found differences between willingness-to-pay and willingness-to-accept amounts for the same public good, with the willingness-to-accept amount sometimes being substantially larger. Willingness-to-accept is likely to be higher for those goods that do not have close substitutes...; Furthermore, uncertainty and aversion to risk may lower responses of willingness-to-pay. ... The choice between willingness-to-pay and willingness-to-accept depends essentially on who has the right to the good in question. Since those rights are often not clearly established statutorily, the choice may not be obvious or indisputable.

Congressional Research Service, Report for Congress *Natural Resources: Assessing Nonmarket Values through Contingent Valuation* at CRS-8 (1999).

It is common practice to warn against, and account for, the potential existence of the "zero" answers that may reflect a protest against having to pay to stop rather than an actual assessment of the value of stopping the noise. See e.g., European Commission Environment Directorate General, *Highlights of the Workshop on the "State of the Art in Noise Valuation"* at 3 (July 2002) ("[o]n the other hand, if the respondents fundamentally believe that it would be unjust to ask them to pay for noise reduction, they would give a response that would be too low (or even zero) It is important to identify such 'protest zero' answers as well."). However, the contingent valuation study in the Application does not account for, or protect against, this phenomenon.

A very different response pattern and a clearer indication of the monetary value of a curfew would have emerged if the valuation items had been asked in the opposite way; i.e., "What is the smallest monthly payment that would you accept from Burbank Airport if it does not adopt a curfew?" At the very least, half of the respondents should have been asked the question as worded in the Airport's questionnaire, while the other half should have been asked the alternative form of the question.

The academic literature makes clear that using willingness to pay measures like the contingent valuation measure represents the lower bound of economic impact to homeowners. E.g., E. Feitelson, et al., *The Impact of Airport Noise on Willingness to Pay for Residences*, Transp. Res. D., Vol. 1, No. 1 at 5 (1996). Thus, the value imputed to a curfew on the basis of responses to questions worded as in the Airport's questionnaire should be viewed as reflecting a *minimum*

value on the monetary value of the curfew, rather than as an estimate of its most *likely* monetary value.

In addition to noting that the contingent valuation study identifies benefits in excess of that identified through the hedonic method, the Authority should note that the contingent valuation study identifies only a lower bound to the measured noise benefits.

8) Quantification of the Costs of a Curfew (Chapter 4; Benefit-Cost Analysis)

SUMMARY OF COMMENT: The Application tends to overstate the likely costs of the curfew.

ACTION PROPOSED: The Authority should (1) acknowledge that many of the assumptions and methodologies used to estimate the costs of the curfew provide an upper-limit to likely costs and (2) identify through sensitivity analyses or otherwise the likely effect of these assumptions and methodologies on the cost analysis.

Just as the Application conservatively understates the benefits of a curfew, the Application also conservatively overstates the likely costs of a curfew. Even small changes to some of the Application's cost assumptions can result in significant increases in the benefit-cost ratio for the curfews. For example, making a few modest changes in these assumptions -- as discussed below -- moves the benefit-cost ratio from 1.21 for the Full Curfew to 1.59 even without making and changes to the likely benefits of the curfew. Once again, this confirms that the Full Curfew far exceeds the benefit-cost showing required by Part 161.

General Aviation Costs

The annual recurring corporate General Aviation ("GA") costs appear high. It is unlikely that these costs will recur over time without the operators adjusting their business models. GA operators are very unlikely to absorb such costs year after year. Instead, they will find a way to accommodate their customer's needs with lower annual costs. For example, it is unlikely that the GA operators will continue the ground transportation for passengers without considering accommodations such as handling the originating and arriving flight at the same airport or having the passenger dropped off and picked up at the appropriate airports by their own drivers or car services. The airports are close enough together that it is unlikely to lead to significantly increased costs on average. Similarly, it seems unlikely that extra overnight accommodations for pilots would be required for aircraft landing at an airport only 8 miles from the Airport.¹⁰

In addition, the estimates of costs associated with the displacement of GA operations to other airports is based on interviews with the GA operators, who had a strategic interest in overstating the likely impact of the proposed curfew on their operations. While, in the abstract, the use of

¹⁰ While page 4-12 of the Application refers to Appendix AA of Technical Report 1 for the detailed analysis of these costs, the details for this analysis are not in the appendix, in particular the conversion of displaced operations into monetary values. These should be included in the Application.

interviews with those directly affected by the proposed curfew is a reasonable approach, the potential for biased responses to influence the outcome of the regulatory process suggest that the cost assumptions should be treated as being very high in this case. Even though the Application seeks to address this issue by identifying probabilities of potential relocations to other airports, it still adds only a subjective correction to what are likely strategically inflated values.

Thus, the Application presents a worst-case estimate of likely costs to GA users. As noted above, the Authority should acknowledge this and provide an indication of the likely effect of this conservative assumption to further support the conclusion that the Application shows a high probability that the benefits of the curfew exceed its costs. As a sensitivity analysis, if the GA costs were lowered to 80 percent of the present assumption to account for the self-interested bias in the GA operator responses, the benefits of a move for some operators, and the fact that GA operators are likely to adjust to the curfew over time, the benefit-cost ratio for the Full Curfew would rise from 1.21 to 1.30.

Lost Cargo Revenue Overestimates

The Lost Cargo Revenue costs (Application Section 4.6.2.2.1) also appear high (FY08 \$1.8 million for Full Curfew). In particular, the Application assumes that 0.5 percent of cargo is especially sensitive just-in-time delivery type shipments. The Application asserts without any further data or analysis that the "additional trucking time required to process flights arriving at LAX and to truck the cargo to a ground terminal would result in the loss of these [just-in-time] customers to the carriers." Application at 4-18.

To the extent that these shipments represent inputs to a manufacturing operation, it is reasonable to expect the manufacturer to simply adjust to the new situation. Thus, it is unlikely that FedEx or UPS would lose the business. To the extent that these shipments reflect deliveries of express packages to offices, it is difficult to believe that FedEx and UPS do not have adequate sorting facilities near LAX – still very close to the Airport – that could still provide the required level of service for those deliveries.

Even if FedEx and UPS could not adequately serve this demand, many of the just-in-time customers are likely to be able to adjust to the hour or less of increased time that may be involved with routing through LAX, meaning that FedEx and UPS would still keep the business. Alternatively, other carriers or other modes of communication would likely win the business, meaning a transfer of the business from FedEx or UPS to others. This type of transfer of business is not a net societal cost and therefore cannot be included as a cost within benefit-cost analysis. Even if it were the case that some customers were in fact as time sensitive as the analysis implies, the loss of 1 out of 200 shipments seems very high.

The consequences of the Application's assumption about lost cargo are significant. If the All-Cargo Carrier Costs were reduced to 70 percent of the current assumption for the Full Curfew, approximately representing a Lost Cargo Revenue rate of 0.25 percent instead of 0.5 percent, the benefit-cost ratio would increase from 1.21 to 1.34. Even lower rates of diversion are probably most reasonable.

Value of Lost Time For Passengers

The Application tends to overestimate the value of lost time for passengers in two ways. First, the Authority uses a value of \$28.60/hour from the FAA BCA guidance. Costs to Airline Passengers (Application Section 4.6.3). But that value is intended to reflect the value of

passenger *travel time*, rather than the value of "schedule delay" – i.e., changes in the schedule resulting from a cancelled or delayed flight.

While it is reasonable to assume that time spent while traveling has a relatively high opportunity cost because the travelers are stuck on a plane with no opportunity to do anything else, it is not reasonable to assume such a value of time if their flight never departs. Passengers in that circumstance have the opportunity to do other productive things with their time. Moreover, the assumed value of five hours of time if a hotel stay is required is \$143, which is higher than the historical fares at the Airport (\$112.87 in 2005, see Table 6 of Technical Report 1). This suggests an unreasonably high value of time. Further, for passengers with high values of time, it is likely that they would choose to fly to or from another airport if there is a significant likelihood of a flight delay due to the curfew.

Second, the Application also does not distinguish between business and leisure travelers in its primary analysis. This is contrary to the FAA's benefit-cost analysis guidance: "To the extent practical, it is useful to know the percentages of business and non-business passengers using an airport and to apply these percentages to total estimated passenger delay reductions. This distinction can be important, in that different valuations are generally assigned to the travel time of these two categories." *FAA, BCA Guidance* at 43 (1999).

The Authority should acknowledge that these assumptions tend to value passenger value of time at the upper end of likely values. For example, a sensitivity analysis where Airline Passenger costs were lowered to 80 percent of those included in the study for the Full Curfew indicates that the benefit-cost ratio would increase from 1.21 to 1.27.

Overestimate of Lost Ticket Revenues

Under the Lost Ticket Revenues analysis Application Section (4.6.4.1), the assumption that 30-50 percent of passengers would require a refund in the event of a flight cancellation necessitated by the curfew seems very high. First, only a small fraction of passengers are likely to cancel their entire trip due to a flight cancellation caused because a flight could not land or depart before the curfew hours. Only those passengers whose trips are of such short duration that no other flights could allow them to make the trip would cancel their travel plans entirely. Most travel plans can be accommodated by alternative flights to or from the Airport, or at other airports in the region. Second, even for that small subset of passengers, very few would likely demand and receive a full refund as opposed to a travel voucher.

Accordingly, the Authority's analysis represents a worst-case assumption regarding the need to refund fares. The Application should acknowledge that assumption and provide an estimate of the impact of that assumption on the analysis. By way of illustration, if 10 percent of passengers were assumed to require a refund in the event of a flight cancellation, airline costs associated with the curfew would be roughly 60 percent lower. This would increase the benefit-cost ratio for the Full Curfew from 1.21 to 1.27.

Cumulative Effects of the Multiple Conservative Cost Assumptions

To illustrate the cumulative effect of the Applications high cost assumptions, if the Application reflected all of the adjustments to the cost analysis discussed above, the benefit-cost ratios would jump from 1.21 to 1.59, without making any changes to the benefit calculations. Adding the more likely benefit scenarios discussed in Comments 5 and 7 raises the benefit-cost ratio to 2.14.

Again, this sensitivity analysis provides more proof that a Full Curfew easily meets the benefit-cost requirements of Part 161.

Table 1 Benefit/Cost Ratio Sensitivity Analysis

Scenario	Airline Costs	Passenger Costs	All-Cargo Carrier Costs	General Aviation Costs	Full Curfew Benefit-Cost Ratio
Application	100%	100%	100%	100%	1.21
GA Costs	100%	100%	100%	80%	1.30
Lost Cargo Revenue	100%	100%	70%	100%	1.34
Airline Passenger Value of Time	100%	80%	100%	100%	1.27
Lost Ticket Revenues	60%	100%	100%	100%	1.27
Cumulative Effect	60%	80%	70%	75%	1.59

The City recommends that the Application stress the conservative nature of the cost-related assumptions and approach used in the benefit-cost analysis. The Authority should also retain the flexibility to revisit these assumptions if other benefit or cost elements change.

9) Calculation of the Incidence of Sleep Disturbance (Chapter 5.1.1; Condition 1 Proposed Restriction Is Reasonable, Nonarbitrary, Nondiscriminatory)

SUMMARY OF COMMENT: The Application's analysis of the extent of sleep disturbance with and without the proposed curfew makes a number of assumptions and methodological choices that underestimate the extent of sleep disturbance, including: (1) assuming that all homes had all of their windows closed all nights during the year; (2) failing to account for increased sensitivity to noise from 4 a.m. to 7 a.m.; and (3) using the Elias-Finegold curve as one of the algorithms to calculate sleep disturbance rates. It also does not account for any sleep disturbance outside of the CNEL 65 contour.

ACTION PROPOSED: The City recommends that the Application adjust the assumptions and methodologies to more accurately account for the rates of sleep disturbance. Such changes would not affect the benefit-cost analysis as it is currently configured.

As part of its demonstration of the need for a curfew and the existence of the serious nighttime noise problem, Chapter 5 calculates the number of expected sleep awakenings with and without a curfew. As discussed below, the Application understates the likely number of sleep awakenings associated with the Airport operations.

Overestimation of Outdoor-to-Indoor Noise Reduction

The analysis of awakenings overestimates the outdoor-to-indoor noise reduction of acoustically treated and untreated homes (Application, Appendix C, Table C-2) by assuming that all airport neighborhood residents sleep with all household windows fully closed at all times of year. Acoustic insulation is effective only if all doors and windows are closed. Opening even one

window or door can significantly reduce the ability of windows to lower interior noise levels. Given the pleasant nighttime temperatures prevailing in Burbank for much of the year, this assumption leads to unrealistic underestimates of aircraft noise levels in many bedrooms for a considerable part of the year. More realistic assumptions, such as partial openings of one or more windows, would lead to higher single event noise levels in bedrooms and consequently to greater numbers of awakenings.

Recent Sleep Disturbance Research

The analysis of the technical literature on aircraft noise-induced sleep disturbance in the Application does not take into consideration the most recently published comprehensive review on aircraft noise-induced sleep disturbance. Michaud, D., *et al.*, *Review of Field Studies of Aircraft Noise-Induced Sleep Disturbance*, J. Acoust. Soc. Am., 121, 1, pp. 32-41 (2007). Some of the findings in this review that are not reflected in the Application include the findings that:

- predictive equations account for only a small fraction of the variance in the relationship between noise exposure and sleep disturbance;
- aircraft noise-induced sleep disturbance occurs more often during later than earlier parts of the night; and
- predictions of sleep disturbance due to aircraft noise should not be based on oversimplifications of the findings of field studies.

These issues should be identified and discussed in the Application.

For example, the Application does not address the heightened sensitivity to awakening during late night/early morning hours with respect to the dozen-plus operations between 4 AM and 7 AM at the Airport. This would increase the total number of awakenings and provide a better context for understanding the nature of the nighttime noise problem.

Further, the Application implies that the Finegold-Elias noise/awakening curve has credibility in the scientific establishment simply because the "American National Standards Institute is proposing an awakenings dose-response curve that is based on essentially the same data." Application, Appendix C at C-16. In fact, the proposed ANSI standard specifically rejects reliance on the Finegold-Elias curve. As a result, it should not be used as the identified lower bound for sleep disturbance impacts in the Application.

- 10) **Definition of the Need for a Curfew (Chapter 5.1.1; Proposed Restriction Is Reasonable, Nonarbitrary, Nondiscriminatory -- The Chapter Should Provide More Detail Regarding the Historical Context for the Nighttime Noise Problem and Need for a Curfew)**

SUMMARY OF COMMENT AND ACTION PROPOSED: Chapter 5, which discusses the existence of a nighttime noise problem and the need for a curfew, should be

amended to cross-reference the historical context for the noise situation at the Airport discussed in Comment 1 above.

Chapter 5 should cross-reference or include the essential historical context for the nighttime noise problem and need for a curfew identified in Comment 1, discussed above.

11) Detail Regarding Compliance with Federal Law (Chapter 8; Overview of Legal Issues)

The City agrees with the Authority's conclusion that the curfew does not violate federal law and is legal in all respects. Because the Authority's Application is expected to be the first Part 161 Application for a Stage 3 restriction that the FAA will consider and act upon, the City believes that explaining in greater detail why the curfew does not violate federal law would assist the FAA in performing its analysis and would strengthen the Application.

The six statutory conditions of approval effectively codify the pre-ANCA legal bases on which curfews and similar access restrictions were evaluated without adding any new substantive legal standards for approval. Accordingly, demonstrating that the curfew meets the legal criteria that applied prior to ANCA's enactment is conclusive evidence of the conclusion that the curfew meets the six statutory conditions of approval.

12) The Curfew Would Not Create Exclusive Rights (Section 8.3; Exclusive Rights)

SUMMARY OF COMMENT: The Application correctly concludes that the proposed curfew would not grant any exclusive right. However, a fuller discussion of the regulatory requirements and guidance associated with exclusive rights would strengthen this conclusion.

ACTION PROPOSED: The City recommends that the Authority amend the Application to reinforce the fact that no exclusive right would be created.

The City agrees with the Authority's conclusion that neither the proposed curfew nor its alternatives would constitute the prohibited grant of an exclusive right. However, the City believes that a more detailed explanation of why the curfew does not create an exclusive right would provide a stronger basis for FAA approval.

Federal law and the Grant Assurances prohibit an airport sponsor from granting an "exclusive right" to conduct aeronautical activities.¹¹ An "exclusive right" is defined as "[a] power, privilege, or other right excluding or debarring another from enjoying or exercising a like power,

¹¹ "Aeronautical activities" are defined to include "[a]ny activity that involves, makes possible, or is required for the operation of aircraft or that contributes to or is required for the safety of such operations." FAA Advisory Circular 150/5190-6, Exclusive Rights at Federally-Obligated Airports App. 1, § 1.1(a). Several of the entities that would be affected by the proposed curfew and its alternatives conduct aeronautical activities within the scope of this prohibition.

privilege, or right.”¹² The FAA has explained that “[t]he purpose of the exclusive rights provision as applied to civil aeronautics is to prevent monopolies and combinations in restraint of trade and to promote competition at federally-obligated airports.”¹³ Thus, courts have described this prohibition as a means to guard against “mini-monopolies” of “the sort noxious to the anti-trust laws.”¹⁴ Allegations of exclusive rights typically are presented by prospective tenants claiming that the airport sponsor has conferred a monopoly by denying the prospective tenant access to the airport.¹⁵ Even in the very few instances in which this doctrine is implicated by an aircraft operating restriction, the FAA’s and courts’ analysis focuses on the effects of the sponsor’s action on competition in the conduct of aeronautical activities.¹⁶

The detailed description of the proposed curfew and its alternatives and, in particular, the description of the effects that a restriction would have on Airport users plainly reveal that the curfew would *not* constitute the prohibited grant of an exclusive right. The curfew would neither exclude any entity conducting an aeronautical activity from operating at the Airport nor confer on any entity at the Airport a monopoly to conduct such activity. Moreover, the curfew applies equally to all airport users, and no class of users would enjoy a right that others were denied. A curfew simply would limit the time of day during which aircraft operations by all users could occur.¹⁷ It would apply evenhandedly to all aircraft operations without distinguishing among any tenant, user, or class of aeronautical activity.

13) The Curfew Will Not Affect Control over Aircraft Operations (Section 8.4; Control of Aircraft Operations)

SUMMARY OF COMMENT: The Application correctly concludes that the proposed curfew would not affect control of aircraft operations. However, FAA may also be interested in a discussion of some of the Constitutional issues associated with aircraft operations.

¹² FAA Advisory Circular 150/5190-6, Exclusive Rights at Federally-Obligated Airports App. 1, § 1.1(f).

¹³ *Id.* at § 1.2

¹⁴ *City of Pompano Beach v. FAA*, 774 F.2d 1529, 1541-42 (11th Cir. 1985) (quotations and citations omitted).

¹⁵ *Lange v. FAA*, 208 F.3d 389 (2d Cir. 2000); *Penobscot Air Services, Ltd. v. FAA*, 164 F.3d 713 (1st Cir. 1999); *City of Pompano Beach*, 774 F.2d 1529.

¹⁶ See e.g., FAA Order No. 1999-1, 1999 WL 499647, *Centennial Express Airlines v. Arapahoe County Public Airport Auth.* (1999) *aff’d*, *Arapahoe County Public Airport Auth. v. FAA*, 242 F.3d 1213 (10th Cir. 2001); *City of Dallas v. Southwest Airlines*, 371 F.Supp. 1015 (N.D. Tex. 1973); *Aircraft Owners and Pilots Ass’n v. Port Auth. of New York*, 305 F.Supp. 93 (E.D.N.Y. 1969).

¹⁷ Similarly, none of the two alternatives would create an exclusive right because those restrictions apply equally to all similarly-situated operators.

ACTION PROPOSED: The City recommends that the Authority address and cross-reference discussions regarding Constitutional issues relating to aviation to support the Application's conclusion that the curfew would not affect control of aircraft operations.

The Authority correctly states that the proposed curfew would not violate any statute or regulation regarding the control of aircraft operations. The control over individual aircraft movements would remain with the FAA and the pilot-in-command. For example, the Authority should note that decisions regarding the applicability of the exceptions to the curfew to an aircraft in-flight will likely be made by the pilot and FAA air traffic controllers.

The City also agrees with the Authority that the phrase "control of aircraft operations" could be understood to refer more broadly to questions regarding federal preemption and other Constitutional protections (e.g., the Equal Protection and Commerce Clauses) and the application of federal law. The City notes, however, that there is considerable overlap between the discussion of these general principles in Section 8.4 and the discussion in Section 8.6. To avoid confusion, and to present a more comprehensive analysis of all of the applicable legal criteria, the City recommends keeping the discussion in Section 8.4 relatively brief and focused on how the curfew would not affect the literal control of aircraft operations as noted above. Section 8.6 should present a consolidated discussion of the broader legal principles, including Supremacy, Equal Protection and Commerce Clause issues as they may apply to curfews. Section 8.4 should note those legal principles may be understood to related to "control of aircraft operations," but will be discussed in Section 8.6 and elsewhere in Chapter 8.

The City's specific comments on those legal requirements are found below in response to Section 8.6.

14) The Curfew Would Not Violate the Authority's Grant Assurances (Section 8.5; Existing Grant Assurances)

SUMMARY OF COMMENT: The Application correctly concludes that the proposed curfew would not be inconsistent with the Authority's grant assurances. However, an additional discussion of the regulatory requirements and guidance associated with the unjust discrimination assurance would strengthen this conclusion.

ACTION PROPOSED: The City recommends that the Authority amend the Application with additional facts and authorities regarding the unjust discrimination grant assurance to more fully demonstrate that the curfew would not violate any of the Airport's Grant Assurances.

The City agrees with the Authority's conclusion that the proposed curfew and its alternatives are fully consistent with the Grant Assurances. Indeed, as the Authority points out in Section 8.5.1 of the Application, most of the Grant Assurances simply do not apply to the proposed curfew and there is no need for any substantive discussion. Certain specific grant assurances warrant more detailed analysis, however, because they potentially apply to a wide range of aeronautical activities. In particular, the FAA has already expressed its concern that the proposed curfew may

raise issues under Grant Assurance 22 (Economic Nondiscrimination).¹⁸ Accordingly, we would recommend adding additional discussion of that issue to address the FAA's apparent concern.

Because there is considerable overlap between the required elements of a noise or access restriction prescribed by ANCA and the requirements under Grant Assurance 22, this discussion need not be lengthy.¹⁹ If anything, the detailed requirements in ANCA and Part 161 Subpart D are more stringent and onerous than any criteria previously required to demonstrate compliance with Assurance 22. Thus, the Authority can summarize and cross-reference the data and analysis provided elsewhere in the Study to demonstrate compliance with Assurance 22.

Assurance 22(a) provides that the airport sponsor "will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport."²⁰ The FAA treats the "reasonableness" and "not unjustly discriminatory" criteria as separate requirements, so it is important to address in this section why the proposed curfew and its alternatives are not unjustly discriminatory. The FAA and reviewing courts focus on the factual basis for any distinctions made as part of an aircraft operating restriction to evaluate whether such distinctions are unjust.²¹

The proposed Full Curfew is not unjustly discriminatory principally because it does *not* distinguish by aircraft type, the nature of the aircraft operation, or noise level. Rather, the proposed curfew would apply equally to all aircraft and bar all nighttime operations.

In the FAA's May 2004 comments on the Authority's draft evaluation of a full mandatory curfew, the FAA raised the prospect that a full mandatory curfew might be discriminatory because not all aircraft contribute equally to the nighttime noise problem. Partly in response, the Authority included in the Application a noise-based curfew that would exclude aircraft based on noise level. The City perceives far greater risk that a noise-based curfew would be arbitrary or

¹⁸ The discussion of Grant Assurance 23 (Exclusive Rights) should cross reference Application Section 8.3, where the exclusive rights issues is addressed in some detail.

¹⁹ Compare 49 U.S.C. 47524(c)(2) with FAA Order 5190.6A, Airport Compliance Requirements § 4-8(f) (1989). See also Director's Determination, *In the Matter of Compliance with Federal Obligations by the Naples Airport Auth.*, Docket No. 16-01-15, 2003 WL 1524501 *46 (FAA) ("The FAA interprets the requirement in 49 U.S.C. § 47107(a)(1) that a federally-funded airport will be 'available for public use on reasonable conditions' as requiring that a regulation restricting airport use for noise purposes: (1) be justified by an existing noncompatible land use problem; (2) be effective in addressing the identified problem; and (3) reflect a balanced approach to addressing the identified problem that fairly considers both local and Federal interests."), *aff'd in part* FAA Order 2003-01, 2003 WL 22257716 (FAA) order vacated by *City of Naples Airport Auth. v. FAA*, 409 F.3d 431 (D.C. Cir. 2005).

²⁰ The additional subparts of Assurance 22 do not apply.

²¹ See e.g., *City and County of San Francisco v. FAA*, 942 F.2d 1391 (9th Cir. 1991); *Santa Monica Airport Ass'n v. City of Santa Monica*, 481 F.Supp. 927 (C.D. Cal. 1979), *aff'd*, 659 F.2d 100 (9th Cir. 1981).

unjustly discriminatory, because of the inherent difficulty in finding the correct dividing line between aircraft subject to and excluded from a restriction. As noted above, all aircraft make noise and have the potential to disturb people beneath their flight paths. Indeed, the FAA and reviewing courts have tended to strike down restrictions at other airports that attempted to distinguish between more-noisy and less-noisy aircraft.²² By contrast, courts considering blanket curfews have upheld them, and have specifically rejected arguments urging a more nuanced distinction based on noise levels and have overruled earlier decisions supporting such fine distinctions.²³ Accordingly, an underinclusive or limited curfew has the potential to raise more legal concerns regarding unjust discrimination than a blanket curfew.

Furthermore, the nighttime noise problem is not defined by noise exposure levels or by particularly noisy aircraft. The problem is inherent in the fact that aircraft overflights at night are inherently disruptive and inconsistent with the residential nature of the areas surrounding the Airport. Accordingly, the Full Curfew is the only way to address the problem of nighttime noise and is in no way unjustly discriminatory.

15) The Curfew Would Not Violate Federal Law (Section 8.6; Reasonable Noise Regulations Do Not Violate Federal Law)

SUMMARY OF COMMENT: The Application correctly concludes that the proposed curfew would not violate federal law. However, additional analysis of the Supremacy, Equal Protection and Commerce Clauses of the United States Constitution would strengthen this conclusion.

ACTION PROPOSED: The City recommends that the Authority amend the Application to further demonstrate that the curfew would be consistent with the Supremacy, Equal Protection and Commerce Clauses of the United States Constitution.

The Authority's discussion of why the proposed curfew does not violate federal law is accurate, but would benefit from providing a more complete explanation of the relevant legal principles and judicial treatment of similar noise and access restrictions. Because of the pioneering nature

²² *City and County of San Francisco v. FAA*, 942 F.2d 1391 (restriction based on aircraft certification level found to be unjustly discriminatory); *Santa Monica Airport Ass'n v. City of Santa Monica*, 659 F.2d 100 (restriction on jet aircraft found to be unjustly discriminatory); *British Airways Bd. v. Port Auth. of New York and New Jersey*, 564 F.2d 1002 (2d Cir. 1977) (ban on supersonic commercial aircraft found to be unjustly discriminatory).

²³ *National Helicopter Corp. of Am. v. The City of New York*, 137 F.3d 81, 90 (2d Cir. 1998) ("To the extent that these decisions have stricken curfews for their failure to target the noisiest aircraft or the noisiest times of operation, they have since been overturned by our opinion in *Global Int'l Airways Corp. v. Port Auth. of N.Y. & N.J.*, 727 F.2d 246, 251 (2d Cir. 1984), which permits proprietors to reduce cumulative noise levels, as opposed to only targeting peak noise levels or the noise level produced by an individual aircraft."). The two earlier cases overruled in *Global International Airways* are *U.S. v. County of Westchester*, 571 F.Supp. 786 (S.D.N.Y. 1983); *U.S. v. State of New York*, 552 F.Supp. 255 (N.D.N.Y. 1982).

of the Application, more detailed analysis would help forestall unnecessary questions about the applicability of basic legal principles. In particular, it would be helpful to address the legal arguments commonly used to challenge curfews and similar access restrictions.

As a general matter, prior to the passage of ANCA, courts recognized that airport operators possessed the inherent proprietary power to adopt curfews and other access restrictions without prior FAA approval and notwithstanding federal power to regulate aviation and aircraft noise. Thus, airport proprietors could impose access restrictions that non-proprietors could not. Curfews were typically challenged by airport users under several legal theories. Primarily, challenges were based on the constitutional theories of preemption, equal protection, Commerce Clause and due process. In addition, it was generally understood that the FAA had the authority to determine whether a curfew or similar restriction violated an airport proprietor's obligations under federal grant assurances. Such statutory challenges could not be brought directly by other parties because there was (and is) no private right of action to enforce those obligations.

ANCA did not change the substance or applicability of those legal principles, however. Instead, ANCA incorporates the legal criteria of prior law into the six statutory conditions of approval, and authorizes the FAA to make the initial determination as to whether an access restriction meets those legal criteria. The Airport Authority has provided the evidence needed to establish that the curfew meets the constitutional standards generally applicable to curfews.

Preemption. Pursuant to the Supremacy Clause, it is often argued that pervasive federal control of airspace on aircraft noise regulation preempts any attempt by state and local governments to regulate aircraft operations, including operating restrictions to reduce noise.²⁴ However, the proposed curfew would not be preempted for two reasons. First, it has long been recognized that federal law does not preempt the power of airport proprietors to restrict access to and operations at its airport in order to reduce noise.²⁵ For example, the U.S. Court of Appeals for the Ninth

²⁴ As the Authority notes at page 8-9 of the Application, it is occasionally argued that only reasonable, non-arbitrary and non-discriminatory access restrictions are not preempted. Although it is true that other laws – including grant obligations – mandate that an access restriction be reasonable, non-arbitrary and non-discriminatory, that requirement does not arise from the Supremacy Clause. *National Business Aviation Ass'n, Inc v. City of Naples Airport Auth.*, 162 F. Supp. 2d 1343, 1352 (M.D. Fl. 2001). In any event, Part 161 requires the FAA to determine that the curfew is reasonable, non-arbitrary and non-discriminatory. 14 C.F.R. § 161.305(e)(2)(i). The information the Authority has included in its Application relating to Condition 1 demonstrates that the curfew is reasonable, non-arbitrary and non-discriminatory. That information also establishes that the curfew would not violate the Due Process Clause of the 5th and 14th Amendments because it is clearly reasonably intended to achieve the legitimate public purpose of eliminating harmful nighttime noise.

²⁵ 49 U.S.C. § 41713(b)(3) (federal laws do “not limit a State, political subdivision of a state, . . . from carrying out its proprietary powers.”); *City of Burbank v. Lockheed Air Terminal*, 411 U.S. 624, 635, n.14 (1973). Courts and Congress have long recognized that proprietary powers include the power to impose a curfew and adopt similar access restrictions in order to reduced noise. In addition the cases cited at 8-9 to 8-10 of the Application, see, e.g., *Alaska*

Circuit found, in upholding the departure curfew at the Santa Monica Airport, "the interest being protected, protecting the sleep of the surrounding residential community from the noise of aircraft operations at night, is a matter of peculiar local concern."²⁶ Second, as noted above, ANCA modified federal law to require airport proprietors to follow the ANCA and Part 161 process for approving access restrictions affecting Stage 3 aircraft. Because the Airport Authority is following that process, there is no preemption claim.

Equal Protection Clause. The Equal Protection Clause guards against treatment of similarly situated people in a dissimilar manner. Courts recognize, however, that all virtually all laws draw some distinctions that treat people differently. Thus, the issue is whether a given government law or decision draws a reasonable distinction in light of the purpose of the law or action. Because a curfew does not implicate fundamental rights or an inherently suspect classification such as race, the issue is whether the distinction between day time operations and nighttime operations drawn by the curfew bears a reasonable relationship to a legitimate public purpose.²⁷

As demonstrated throughout the Application, the curfew clearly meets this standard. Nighttime noise is a significant problem for the residents of Burbank and Los Angeles and the curfew would address that problem. The long-standing demands for a curfew, the existence of a Noise Impact Area, and the high nighttime noise exposure levels all demonstrate the existence of a legitimate problem. See Comment 1; Application, Chapters 4-5. The curfew is a reasonable way to address this problem. It would eliminate the cause of the problem directly by banning nighttime operations at the Airport, while still providing reasonable exceptions for various emergencies and compelling needs. Thus, there is clearly a reasonable relationship between the curfew and the legitimate public purpose of eliminating nighttime noise.

Indeed, courts that have evaluated similar access restrictions under the Equal Protection Clause have affirmed the restrictions.²⁸ Moreover, the substance of the Equal Protection analysis is

Airlines, Inc. v. City of Long Beach, 951 F.2d 977 (9th Cir. 1992) (affirming power of proprietor to impose cap on total operations); *Global Int'l Airways Corp. v. Port Auth. of New York & New Jersey*, 727 F.2d 246, 248 (2d Cir. 1984) (finding curfew and ban on noisy jets not preempted); *National Business Aviation Ass'n, Inc. v. City of Naples Airport Auth.*, 162 F. Supp. 2d 1343 (M.D. Fl. 2001) (affirming power of proprietor to ban operations by a category of loud jets); *Western Airlines, Inc. v. Port Auth.*, 658 F. Supp. 952 (S.D.N.Y. 1986), *aff'd*, 817 F.2d 222 (2d Cir. 1987) (affirming reasonableness and legality of airport perimeter rule).

²⁶ 481 F. Supp. at 938-39.

²⁷ See *Nordlinger v. Hahn*, 505 U.S. 1, 10 (1992).

²⁸ E.g. *SeaAir NY, Inc. v. City of New York*, 250 F.3d 183, 187-88 (2d Cir. 2001) (ban on sightseeing seaplane flights upheld as reasonably related to legitimate goal of reducing noise in the community); *Gustafson v. City of Lake Angelus*, 76 F.3d 778, 791-92 (6th Cir. 1996) (affirming ban on sea plane operations upheld against Equal Protection, Due Process and Supremacy Clause challenges); *Santa Monica Airport Ass'n v. City of Santa Monica*, 481 F.Supp. 927 (C.D. Cal. 1979) *aff'd* 659 F.2d 100 (9th Cir. 1981) (affirming curfew against Equal Protection and other challenges); *Western Air Lines, Inc. v. Port Auth. of New York and New*

subsumed in the submission and evaluation of Condition 1 (The restriction is reasonable, nonarbitrary and nondiscriminatory), 14 C.F.R. § 161.305(c)(2)(i).

Commerce Clause. Because the curfew does not discriminate on its face between intra-state and interstate travel, it would only violate the Commerce Clause if "the asserted benefits of the [curfew] are in fact illusory or relate to goals that evidence an impermissible favoritism of in-state industry over out-of-state industry".²⁹ Clearly, the Authority's curfew does not implicate any of those concerns. The curfew would remove a substantial source of long-standing community disturbance. As the cost-benefit analysis and the hard-to-quantify benefits of the curfew demonstrate, the benefits of the curfew are real, and in no way illusory. Similarly, the curfew does not evidence in any way an impermissible favoritism over out-of-state industry, because the curfew applies to all nighttime operations regardless of origin, destination, and ownership of the aircraft or residence of the passengers. The curfew applies equally to all nighttime operations, and the Authority's analysis indicates that many of the current nighttime operations that would be affected are intra-state flights.

As might be expected given such a deferential standard, Courts have rejected Commerce Clause challenges to curfews and similar access restrictions at other airports.³⁰ For the reasons discussed above, and throughout the Application, there is no basis to believe that a court would come to a different conclusion with respect to the Authority's curfew nor that FAA reasonably could do so.

16) Effects on Other Airports (Section 10.3.2.2; Effects of Shifted Operations on Alternate Airports)

SUMMARY OF COMMENT: The curfew would not require that any operations be shifted to the Van Nuys Airport. The Authority and City should work with operators at the Airport to discourage the shift of operations to airports with nighttime noise concerns.

Jersey, 658 F. Supp. 952, 960 (S.D.N.Y. 1986) (affirming rule prohibiting flights of more than 1,500 miles to or from New York's LaGuardia Airport); *National Aviation v. City of Hayward*, 418 F. Supp. 417 (N.D. Cal. 1976) (affirming curfew because distinction between daytime and nighttime operations is reasonable).

²⁹ *Alaska Airlines*, 951 F.2d at 983-84 (If the goal is a valid one, "the ordinance would violate the commerce clause only if the particular means chosen to achieve its goals were irrational, arbitrary or unrelated to those goals.").

³⁰ *Alaska Airlines*, 951 F.2d at 984-85 (rejecting Commerce Clause challenge to ordinances limiting the number of jet flights per day); *Santa Monica Airport Ass'n v. City of Santa Monica*, 481 F. Supp. 927, 942 (C.D. Cal. 1979) *aff'd* 659 F.2d 100 (9th Cir. 1981) (affirming against Commerce Clause challenge to prohibitions on use of the airport by certain classes of noisy aircraft); *National Helicopter Corp.*, 137 F.3d 81 (rejecting Commerce Clause challenge to heliport curfew regulation); *National Bus. Aviation Ass'n*, 162 F. Supp. 2d 1343 (affirming regulation of certain noisy aircraft).

The City is concerned that the Application's assumed modest shift in operations from the Airport to other airports in the region may be misunderstood and misapplied by others in the context of Part 161. In particular, given that the Application is expected to be the first Part 161 Subpart D application in the nation to be submitted to the FAA, the City believes it would be helpful for the Authority to provide more detailed context to explain how the assumed shift in operations should be understood. Thus, the City recommends that the Authority supplement its discussion of the impact of the curfew on other regional airports with additional discussion of those impacts.

For example, there appears to be a misunderstanding that the curfew will somehow mandate that aircraft relocate from the Airport to Van Nuys Airport.³¹ Potential for confusion on this issue is increased by the fact that Los Angeles World Airports is currently preparing a Part 161 Study to evaluate a number of potential noise and access restrictions at Van Nuys, including a potential mandatory curfew.³² The City is concerned that confusion over these points will lead to a "zero-sum" debate between residents living near the Airport and residents living near Van Nuys as to which community should bear the brunt of nighttime noise. Such a debate is not only baseless, but ends up dividing our communities instead of uniting us in an effort to obtain needed noise relief at both airports.

The City agrees that the statistics the Authority has included in the Application make clear that the Authority expects, at most, only a small increase in operations at VNY as a result of the curfew. It might help drive that point home to indicate that those few additional operations are well within the projected increase in operations even without a curfew at the Airport. In addition, to further prevent any further confusion, the City recommends that the Authority make two basic points regarding the potential impact of the curfew on Van Nuys.

First, because the Airport curfew will prohibit non-emergency nighttime operations, including current operations, the Authority should make clear that it made certain assumptions that a percentage of those operations would not be able to shift their operations to non-curfew hours at the Airport, causing those operators to relocate to other airports. For those operations, the Authority made certain assumptions as to which airports those operations would relocate. The Authority should be very clear that it does not and cannot require that any operation relocate to any specific airport.

Nonetheless, the City believes it would be particularly helpful if the Authority could indicate that it will encourage operators who choose to relocate to take into account the impact their operations will have on the surrounding community and choose an airport, such as LAX or Ontario, where nighttime operations have less of an impact on residents than at smaller airports in more residential areas, such as Van Nuys. The City and the Authority should work with the Airport's tenants to minimize the need to divert operations to other airports. The City stands ready to work with the Authority and Airport users to find ways to either encourage users to remain at the Airport and operate within the terms of the curfew or to relocate to airports where the impact of such operations will be smallest.

³¹ <http://www.latimes.com/news/local/la-me-airwars21apr21,1,3866682.story>

³² See <http://www.vnypart161.com/>

Second, with respect to the Van Nuys Part 161 Study, the City believes the Authority's Application should acknowledge that Van Nuys is in process of preparing a Part 161 application itself, but it is not scheduled to be completed or released for public review until mid-2009. Although a curfew is one of the measures being considered, it is impossible to know now whether a curfew will be part of the final Part 161 application or whether any proposed curfew would apply to any of the operations that might end up shifting from the Airport to Van Nuys. The Authority should also make clear, however, that Part 161 and ANCA require the FAA to consider each Part 161 application on its own merits, so that the FAA is not required to "choose" between the Authority's curfew and a potential Van Nuys curfew. The Application should also identify the likely choices for operations that would divert from the Airport, but may be unable to use Van Nuys if a curfew is approved there.

There have been some suggestions that the clear benefits of a curfew to residents near the Airport might be completely offset by impacts on residents at the airports to which operations may be shifted. This notion is without merit, but the Authority should address this issue affirmatively in the Application.

First, because some minor relocation in operations is a necessary consequence of access restrictions at one airport, *see* 14 C.F.R. § 161.5 (defining noise and access restrictions), it would undermine Congressional intent to conclude that an access restriction could not satisfy Part 161 simply because some minor relocations would occur. Accordingly, a shift in operations must be understood to have been expected by Congress when it enacted ANCA. This is not to suggest that the costs and benefits of operational shifts should not be addressed, but that the manner in which those costs and benefits are assessed must be tempered by Congressional intent. Whether there would be a shift in operations cannot be determinative of whether a particular restriction is appropriate or not. For example, having some operations move from small, land-locked airports that have been surrounded by dense residential development for a half-century to other airports that may have more compatible land uses is fully consistent with Congressional intent.

Second, the actual costs of the impacts of a few additional operations scattered among other airports likely would not equate to the benefits of the access restriction the Airport. Because of the logarithmic nature of noise, reducing the nighttime operations at Burbank to near zero will have a much larger noise and economic benefit effect than adding a few operations to airports that have and will continue to have nighttime operations. Differences in land uses, property values and community concerns make such airport-to-airport comparisons difficult.

Third, the few additional operations projected for other regional airports are well within projected increases in operations and capacity at those airports. Those airports have noise abatement and mitigation programs that are already intended to address the impacts of such increases in operations. Those measures may include Part 161 studies, Part 150 studies or other measures.

Fourth, the proposed curfew is consistent with regional airport planning conducted by the Southern California Association of Governments ("SCAG"). The 2008 Regional Transportation Plan explicitly assumes that the Airport and the City would "jointly develop a strategy for

addressing the desire for nighttime airport noise relief." 2008 RTP Aviation and Airport Ground Access Report at 14. The curfew is also consistent with SCAG's "Aviation Guiding Principles" for regional aviation planning that the region should "[r]eflect environmental, environmental justice and local quality of life constraints at existing airports that operate in built-out urban environments." *Id.* at 8. Despite this important recognition, even with the Full Curfew in place, the Airport would be able to fulfill its role under the regional aviation plan to accommodate its share of regional cargo and passenger traffic.