APPENDIX F
NOISE

This Appendix contains background material, which supplements the noise-related material contained in **Chapter 4, Affected Environment** and **Chapter 5, Environmental Consequences.** This appendix consists of the following sections:

- F.1 Noise Measurement and Effects on People
- F.2 Aircraft Noise Assessment
- F.3 Grid Analysis at Noise Sensitive Facilities
- F.4 Supplemental Noise Assessments
- F.5 Existing O'Hare Noise Abatement and Mitigation Programs
- **Attachments F-1** through **F-8**
  - **Attachment F-1: Grid Point Analysis Exhibits (Exhibits 1 through 100)**, page F-266
  - **Attachment F-2: Modeled Flight Track Exhibits (Exhibits 1 through 29),** page F-327
  - **Attachment F-3: O'Hare Modernization EIS Aircraft Ground Noise Analysis Report**, page F-357
  - **Attachment F-4: O'Hare Modernization EIS Highway Noise Technical Report**, page F-452
  - **Attachment F-5: O'Hare Modernization EIS Railroad Noise and Vibration Technical Report**, page F-485
  - **Attachment F-6: O'Hare Modernization EIS Composite Noise Analysis Report,** page F-505
  - **Attachment F-7: O'Hare Modernization EIS Airspace Noise Analysis Report,** page 556
  - **Attachment F-8: O'Hare Fly Quiet Program Brochure and Fly Quiet Adherence Report (1st Quarter 2005)**, page F-627

F.1 NOISE MEASUREMENT AND EFFECTS ON PEOPLE

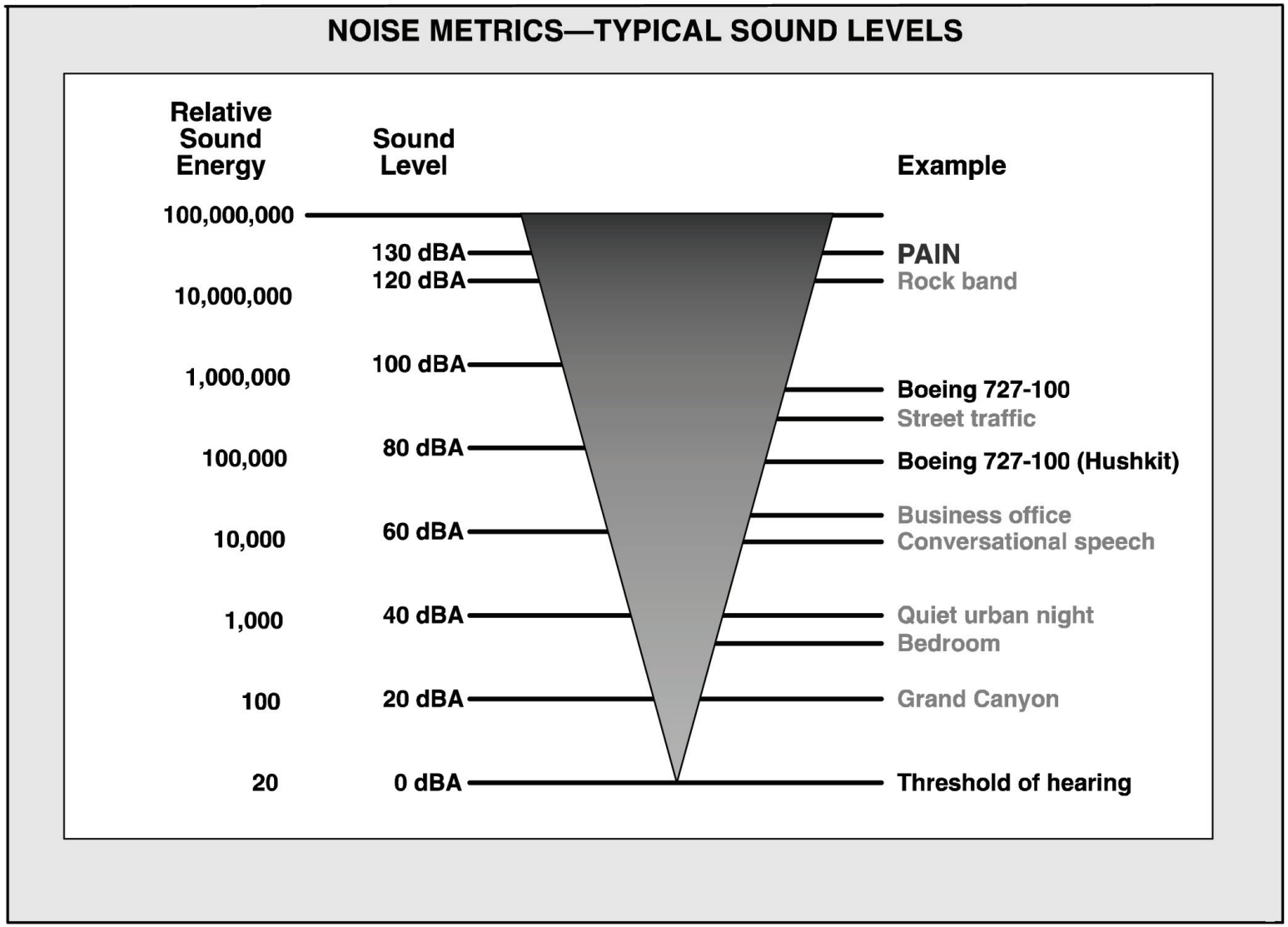
F.1.1 Noise Measurement

Noise is defined as unwanted sound. In other words, noise is sound that disturbs routine activities or quiet, and/or causes feelings of annoyance. Whether sound is interpreted as pleasant (e.g., music), or unpleasant (e.g., jackhammer) depends largely on the listener's current activity, past experience, and attitude toward the source.

F.1.1.1 Characteristics of Sound

Sound is transmitted by alternating compression and decompression in air pressure. These relatively small changes in atmospheric pressure are called sound waves. The measurement and human perception of sound involves two physical characteristics—intensity and frequency. Intensity is a measure of the strength or magnitude of the sound vibrations, and is expressed in terms of the sound pressure level (SPL). The higher the SPL, the more intense is the perception of that sound. The other characteristic is sound frequency or "pitch"—the speed of vibration. Frequencies are expressed in terms of cycles per second or hertz (Hz). Low frequency sounds might be characterized as a rumble or roar, while high frequency sounds are typified by sirens or screeches. Noise analysis accounts for both of these characteristics in the units used to measure sound.

Decibel (dB). The human ear is sensitive to an extremely wide range of sound intensity, which covers a relative scale of 1 to 100,000,000. Representation of sound intensity using a *linear* index becomes difficult because of this wide range. As a result, the decibel—a logarithmic measure of the magnitude of sound—is typically used. Sound intensity is measured in terms of sound levels ranging from 0 dB, which is approximately the threshold of hearing, to 130 dB, which is the threshold of pain. **Exhibit F-1** shows the sound pressure levels of typical events.



Source: Leigh Fisher Associates [TPC] 2004.

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Noise Metrics
Typical Sound Levels

▶ **Exhibit F-1**

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Because of the logarithmic unit of measurement, decibels cannot be added or subtracted linearly (see **Exhibit F-2**); however, the following apply:

- If two sounds of the same level are added, the sound level increases by approximately 3 dB. For example: 60 dB + 60 dB = 63 dB.
- The sum of two sounds of a different level is only slightly higher than the louder level. For example: 60 dB + 70 dB = 70.4 dB.
- Sound from a "point source," such as an aircraft, decreases approximately 6 dB for each doubling of distance.
- Although the human ear can detect a sound as faint as 1 dB, the typical person does not perceive changes of less than approximately 3 dB.
- A 10 dB change in sound level is perceived by the average person as a doubling, or halving, of the sound's loudness.

A-Weighted Decibel. Humans are most sensitive to frequencies near the normal range of speech communications. "A-weighting" reflects this sensitivity by emphasizing midrange frequencies and de-emphasizing high and low frequencies (see **Exhibit F-3**). Since the A-weighted decibel (dB) provides a better prediction of human reaction to environmental noise than the unweighted decibel, it is the metric most frequently used in noise compatibility planning.[1] Further, per FAA Order 5050.4A, noise exposure assessments are to be based on various A-weighted metrics that are described in subsequent sections of this appendix.

C-Weighted Decibel. Another metric that is some times used in the assessment of aircraft noise is the C-weighted decibel. As illustrated in **Exhibit F-3**, the C-weighting is nearly flat throughout the audible frequency range with limited de-emphasis of the low frequency components of the total noise event. C-weighting may occasionally be preferable in evaluating sounds whose lower frequency components are responsible for secondary effects such as shaking buildings, rattling windows or perceptible vibration. For aircraft activity, the C-weighted metric has been used to assess the effects of low frequency noise generated during take off role or when reverse thrust is applied during landing operations.

[1] Chantlett, E. T., Environmental Protection, McGraw-Hill Book Co., New York, 1973.

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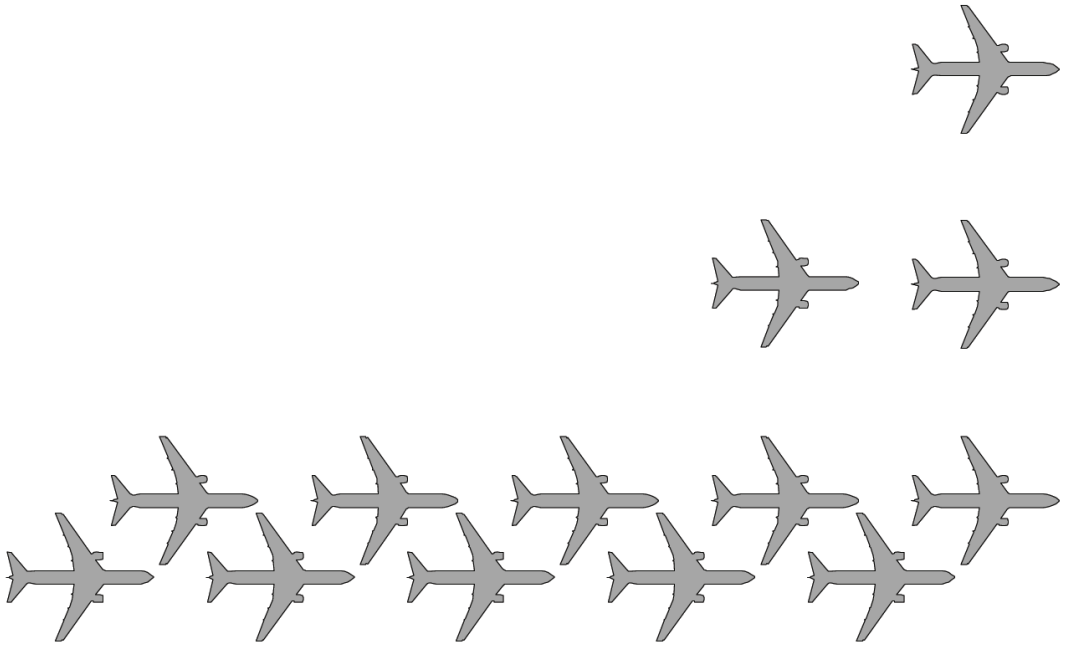
NOISE METRICS—DECIBEL (dB) ADDITION



= 90 dB

= 93 dB

= 100 dB

10 dB change = Perceived doubling or halving of noise

*Based on the logarithmic scale.

Source: Leigh Fisher Associates [TPC] 2004.

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Noise Metrics
Decibel (dB) Addition

▶ **Exhibit F-2**

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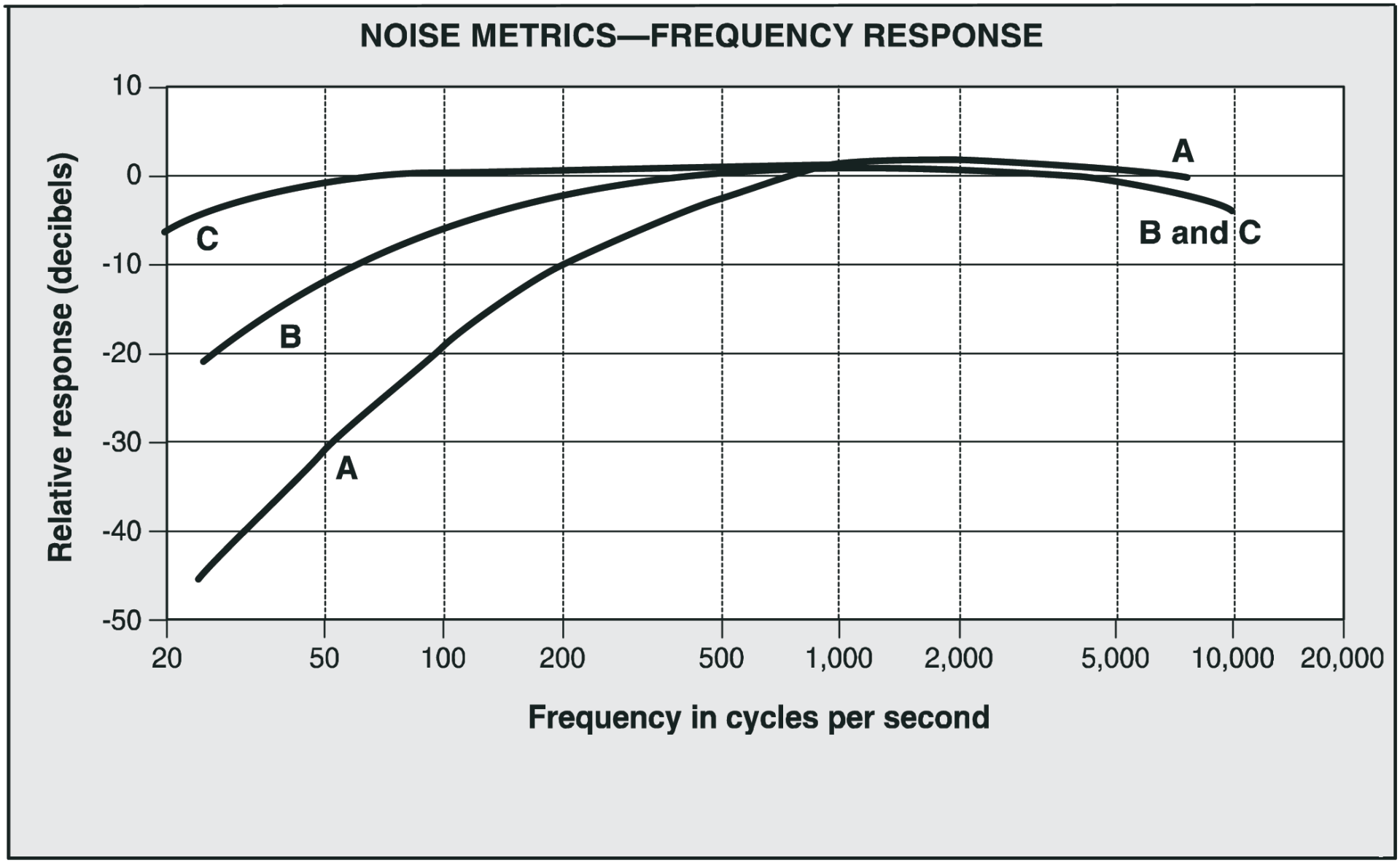

Source: A. Peterson and E. Gross, Handbook of Noise Control, West Concord: General Radio Company, 1967.

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Noise Metrics Frequency Response

▶ **Exhibit F-3**

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F.1.1.2 Supplemental Noise Metrics

The measurement of sound is not a simple task. Consider typical sounds in a suburban neighborhood on a normal or "quiet" afternoon. If a short time in the history of those sounds is plotted on a graph, it would look very much like **Exhibit F-4**.

On **Exhibit F-4**, the background, or residential sound level in the absence of any identifiable noise sources, is approximately 45 dB. About three-quarters of the time, the sound level is 50 dB or less. The highest sound level, caused by a nearby sports car, is approximately 70 dB, while an aircraft generates a maximum sound level of about 68 dB. The following subsections provide a discussion of how variable community noise is measured.

Maximum Sound Level (Lmax). One obvious way of describing noise is to measure the maximum sound level—in the case of the sounds shown on **Exhibit F-4**, the nearby sports car at 70 dB. The maximum sound level measurement does not account for the duration of the sound. Studies have shown that human response to noise involves both the maximum level and its duration. For example, the aircraft in this case is not as loud as the sports car, but the aircraft sound lasts longer. For most people, the aircraft overflight would be more annoying than the sports car event. Thus, the maximum sound level alone is not sufficient to predict human reaction to environmental noise.

Sound Exposure Level (SEL). Clearly, the longer a noise lasts the more it disrupts activity and the more annoying it is likely to be. Laboratory tests indicate that the acceptability of noise decreases at a rate of roughly 3 dB per doubling of duration.[2] In other words, two sounds would be judged equally acceptable if one had an intensity of 3 dB more than the other, but half the duration of the other. Accordingly, a second manner of describing noise is to measure the sound exposure level (SEL), which is the total sound energy of a single sound event. By accounting for both intensity and duration, the SEL allows us to compare the "annoyance" of different events. One way to understand SEL is to think of it as the sound level you would experience if all of the sound energy of a sound event occurred in one second (see **Exhibit F-5**). This normalization to a duration of one second allows the direct comparison of sounds of different duration. In the sample time history on **Exhibit F-4**, the sports car generated an SEL of about 77 dB, while the aircraft generates an SEL of about 81 dB.

Equivalent Sound Level (Leq). The maximum sound level and SEL are used to measure individual events. But the number of events can also be an important consideration in estimating the effect of noise. One way to describe this factor might be to count the number of events exceeding SEL 80 dB, plus the number that exceed SEL 75 dB, plus the number that exceed SEL 70 dB, etc. A more efficient way to describe both the number of such events, and the sound exposure level of each is the time-average of the total sound energy over a specified period (see **Exhibit F-6**), referred to as the equivalent sound level (L_{eq}). Research indicates that

[2] Galloway, William J., "Predicting Community Response to Noise from Laboratory Data," in Transportation Noises: A Symposium on Acceptability Criteria, Ann Arbor Science Publishers, Ann Arbor, Michigan, 1970.

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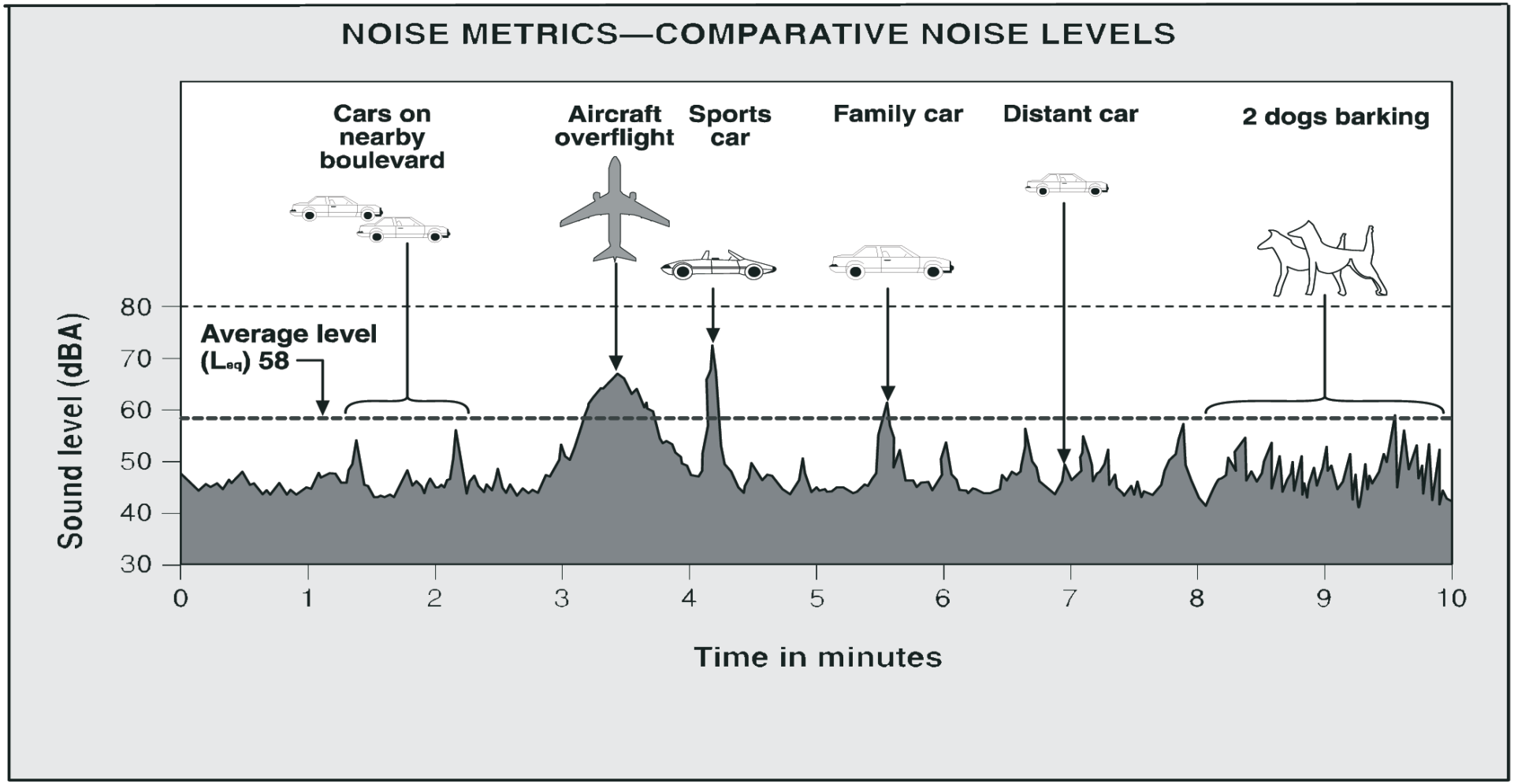

Source: United States Environmental Protection Agency, Protective Noise Levels, Condensed Version of EPA Levels Document, November 1978.

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Noise Metrics
Comparative Noise Levels

▶ **Exhibit F-4**

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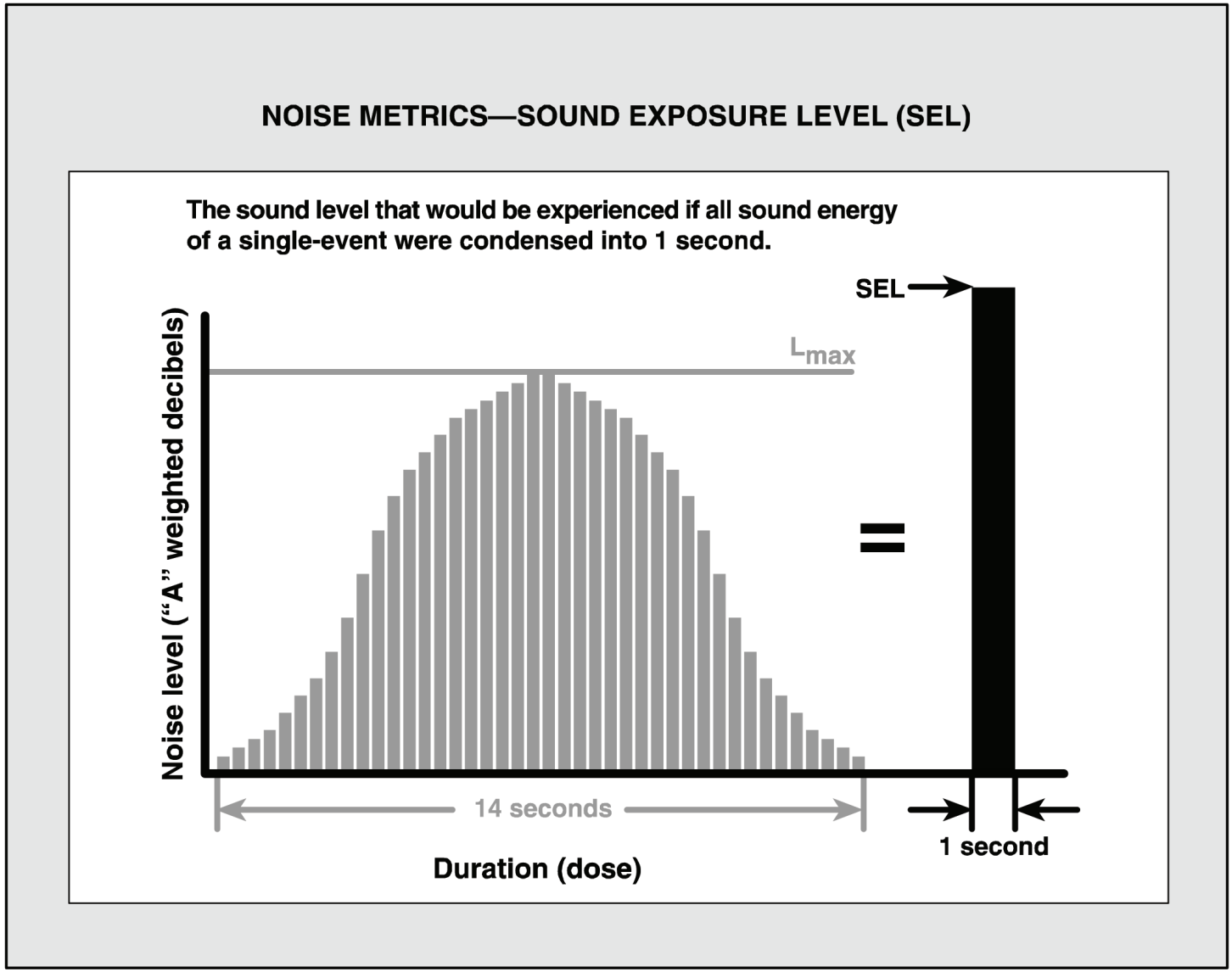

Source: Leigh Fisher Associates [TPC] 2004.

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Noise Metrics
Sound Exposure Level (SEL)

▶ **Exhibit F-5**

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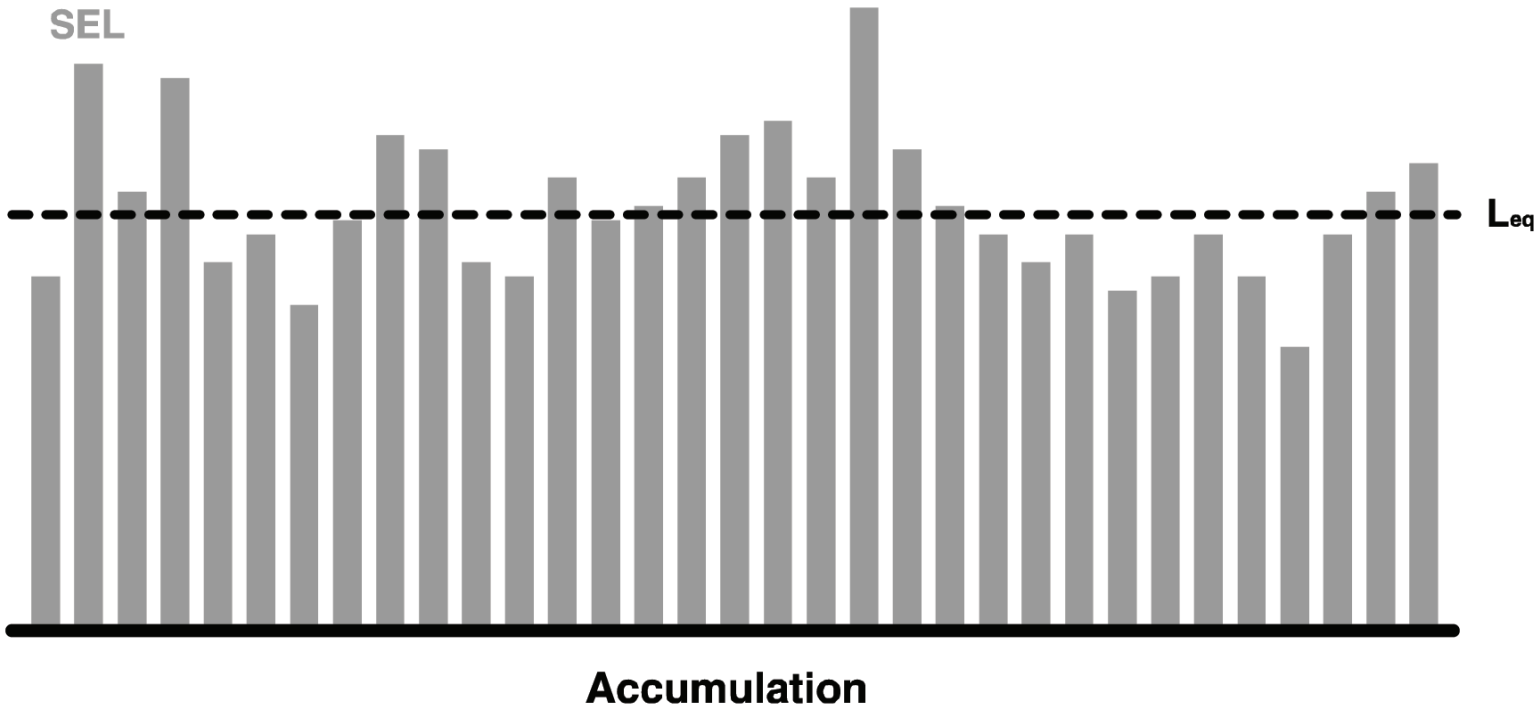
NOISE METRICS—EQUIVALENT SOUND LEVEL (L_{eq})

The average of all SELs that occur during a given period.



Source: Leigh Fisher Associates [TPC] 2004.

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Noise Metrics
Equivalent Sound Level (Leq)

▶ **Exhibit F-6**

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community reaction to noise corresponds to the total acoustic energy that is represented by the L_{eq}. In the example shown on **Exhibit F-4**, the L_{eq} is roughly 58 dB. This measurement accounts for all of the sound energy during the sample period and provides a single-number descriptor.

Day-Night Average Sound Level. One additional factor is also important in measuring a sound/sound events that occur during nighttime hours. People are normally more sensitive to intrusive sound events at night, and the background sound levels are normally lower at night because of decreased human activity. Therefore, noise events during the nighttime hours are likely to be more annoying than noise events at other times. To account for these factors, the DNL adds a 10 dB penalty to sound levels occurring between 10:00 PM and 6:59:59 AM (see **Exhibit F-7**). In essence, the DNL is the 24-hour equivalent sound level (or L_{eq} 24), including this 10 dB penalty. This 10 dB penalty means that one nighttime sound event is equivalent to 10 daytime events of the same level. The DNL has been identified by the U.S. Environmental Protection Agency (USEPA) as the principal metric for airport noise analysis.[3]

DNL is expressed as an average noise level on the basis of annual aircraft operations for a calendar year. To calculate the DNL at a specific location, SELs for that particular location are determined for each aircraft operation (landing or takeoff). The SEL for each operation is then adjusted to reflect the duration of the operation and arrive at a "partial" DNL for the operation. The partial DNLs are then added logarithmically—with the appropriate penalty for those operations occurring during the nighttime hours—to determine total noise exposure levels for the average day of the year.

DNL is used to describe the existing and predicted cumulative noise exposure for communities in airport environs in most of the United States, and to estimate the effects of airport operations on land use compatibility. DNL has been widely accepted as the best available method to describe aircraft noise exposure and is the noise descriptor required by the FAA for use in aircraft noise exposure analyses and noise compatibility planning.[4]

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[3] U.S. Environmental Protection Agency, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, U.S. EPA Report No. 550/9-74-004, 1974.

[4] Federal Aviation Administration, Federal Aviation Regulations Part 150, Airport Noise Compatibility Planning, Appendix A, 1984.

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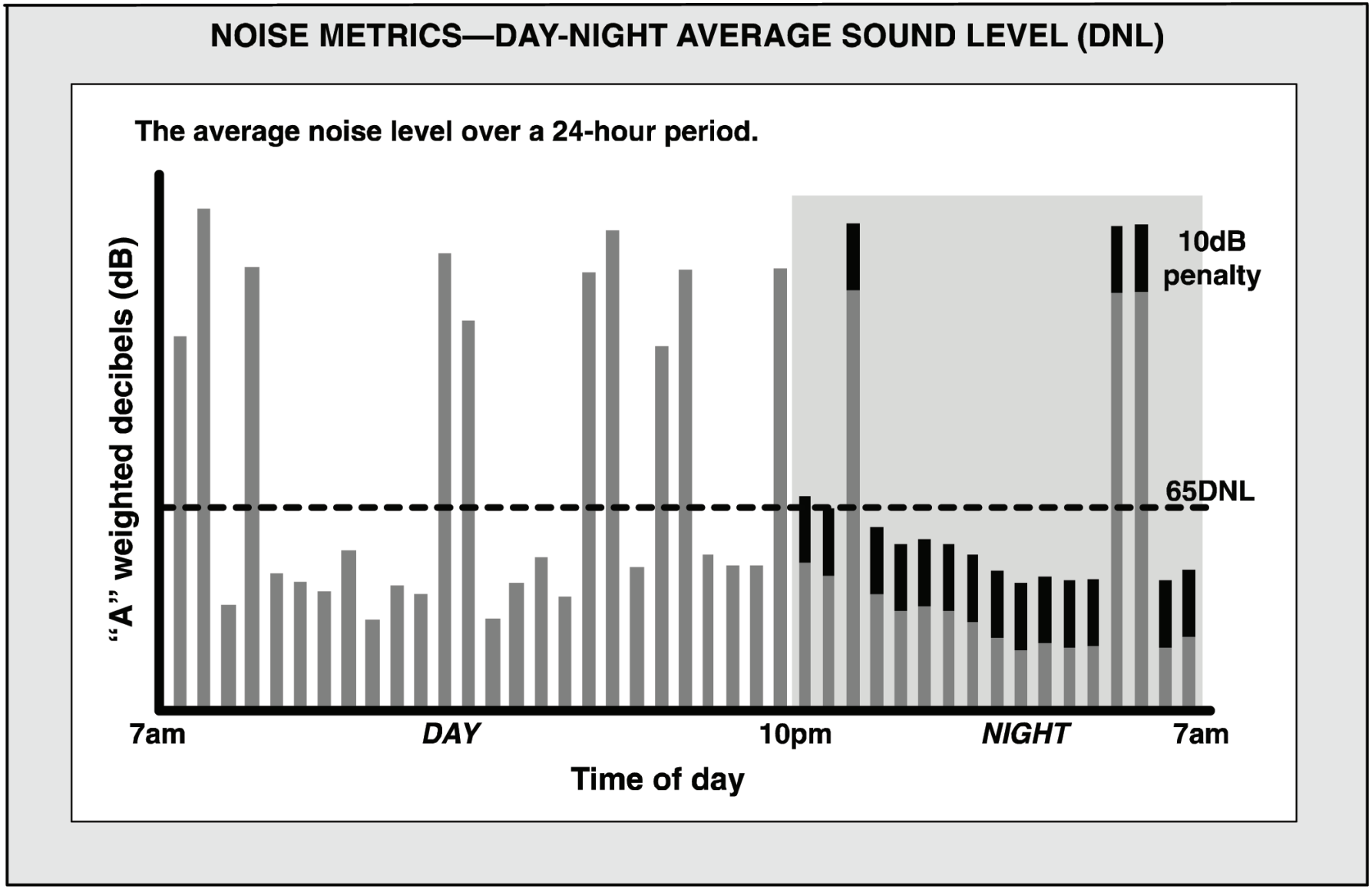

Source: Leigh Fisher Associates [TPC] 2004.

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Noise Metrics
Day Night Average Sound Level (DNL)

▶ **Exhibit F-7**

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F.1.1.3 Noise Compatibility Guidelines

In most cases, the aircraft noise levels encountered in communities surrounding airports are below the levels associated with risk of hearing loss[5] (see **Section F.1.3.3**, **Effects on Hearing**, for further discussion of the potential health effects of noise). At the levels typically encountered in the airport environs, the major effect of aircraft noise is the annoyance caused by noise exposure. As directed by the U.S. Congress in the Aviation Safety and Noise Abatement Act (ASNA) of 1979, the FAA and other branches of the federal government have established guidelines for noise compatibility based on annoyance.

Community Annoyance. While individual responses to environmental noise vary widely, extensive survey data demonstrate that community reaction to noise relates closely to cumulative noise exposure expressed in terms of DNL.[6] This relationship between DNL and community reaction has been used to establish federal guidelines for noise compatibility planning. FAA Order 1050.1E, Environmental Impacts: Policies and Procedures, Appendix A, paragraph 14.3, page A-61, defines the threshold of significance as follows:

> 14.3 SIGNIFICANT IMPACT THRESHOLDS. A significant noise impact would occur if analysis shows that the proposed action will cause noise sensitive areas to experience an increase in noise of DNL 1.5 dB or more at or above DNL 65 dB noise exposure when compared to the no action alternative for the same timeframe.

Exhibit F-8 shows the relationship between DNL and community response.

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[5] U.S. Environmental Protection Agency, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, U.S. EPA Report No. 550/9-74-004, 1974.

[6] Schultz, T. J., "Synthesis of Social Surveys on Noise Annoyance," Journal of the Acoustical Society of America, Vol. 64, No. 2, August 1978.

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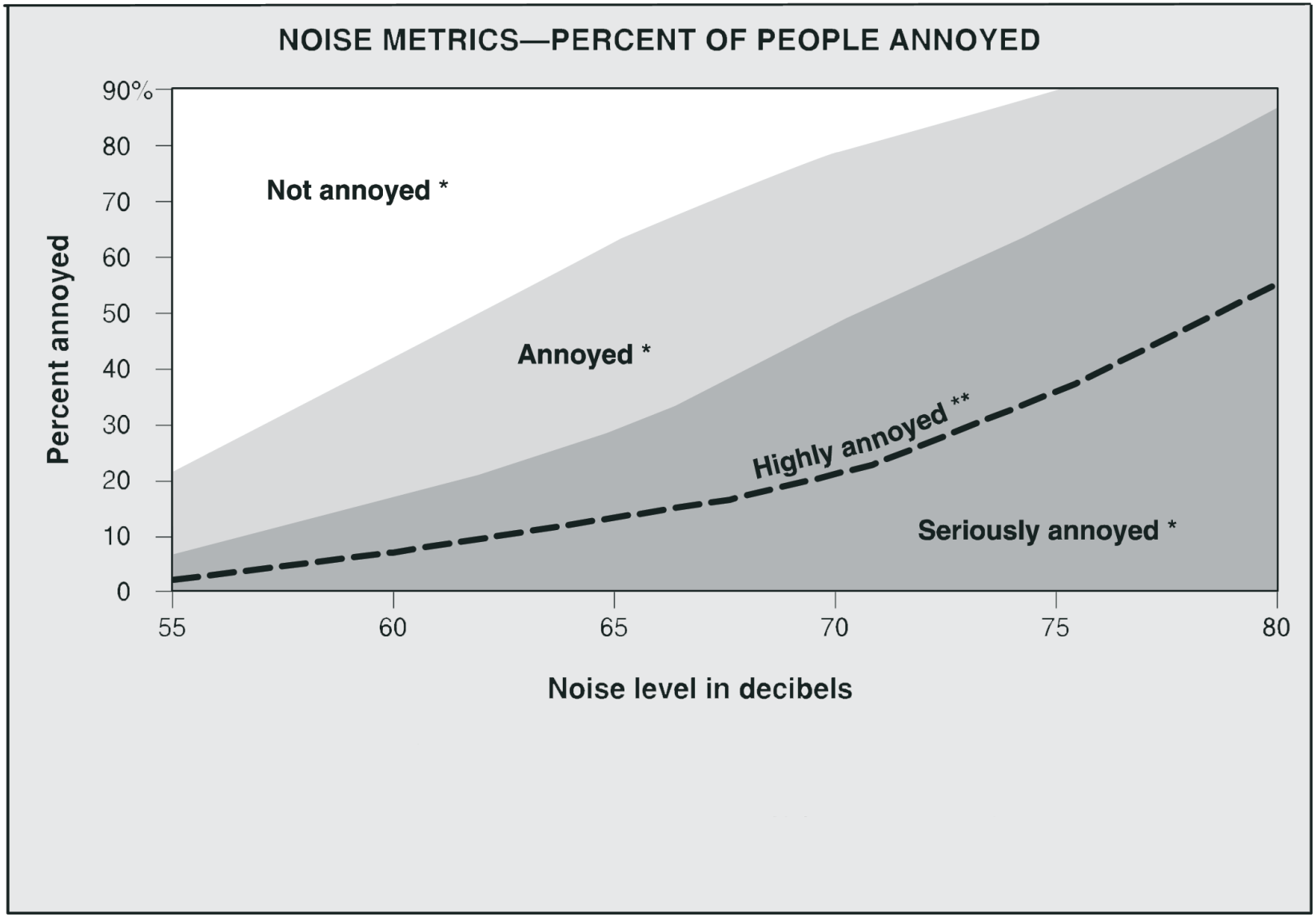

Sources: *Richard, E.J. And J.B. Ollerhead; reproduced in "Aviation Noise Effects," FAA Offices of Environment and Energy, March 1985. **Shultz, T.J. "Synthesis of Social Surveys on Noise Annoyance," Journal of Acoustical Society of America, 1978.

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Noise Metrics
Percent of People Annoyed

▶ **Exhibit F-8**

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The FICON also recommended that supplemental noise analyses be considered to provide additional information in considering the effects of aircraft noise. For example, in considering the noise impacts of a proposed action, a DNL 1.5 dB increase in noise at or above DNL 65 at a "noise sensitive land use" (see the following subsection) is considered to be "significant." In the event of a "significant" noise increase, the FICON recommended that changes of DNL 3 dB between DNL 60 and DNL 65 also be identified because such changes produce similar changes in community annoyance.

Experience in assessing the effects of airspace changes indicates that an increase of DNL 5 dB above ambient noise levels can lead to community reaction even below the threshold of significance. As a result of this experience, the FAA has established screening procedures to determine if air traffic control actions taken at altitudes above 3,000 feet above ground level (AGL) would likely generate a change of DNL 5 dB or more above ambient noise levels.[7] In considering the effects of noise below DNL 65, it is important to consider the reduced reliability of noise modeling at lower noise levels.

Land Use Compatibility Guidelines. In accordance with ASNA, the principal purpose of noise compatibility planning under FAR Part 150 is to reduce non-compatible land use. The 1981 FICUN report identified noise compatibility guidelines for land use categories defined in the S*tandard Land Use Coding Manual* (SLUCM). A simplified version of these guidelines is incorporated in FAR Part 150[8] (see **Table F-1**).

[7] Federal Aviation Administration, Air Traffic Noise Screening (ATNS) Model 2.0 User Manual, January 1999.
[8] Federal Aviation Regulations Part 150, Airport Noise Compatibility Planning, Code of Federal Regulations, Title 14, Chapter I, Subchapter I, Part 150, Table 1, January 1985.

TABLE F-1
FAR PART 150 NOISE / LAND USE COMPATIBILITY GUIDELINES(a)

Land Use	DNL 65-70(b)	DNL 70-75(b)	DNL 75+(b)
Residential			
Residential other than mobile homes and transient lodgings	NLR required (c)	NLR required (c)	Incompatible
Mobile homes	Incompatible	Incompatible	Incompatible
Transient lodgings	NLR required (c)	NLR required (c)	NLR required (d)
Public use			
Schools	NLR required (c)	NLR required (c)	Incompatible
Hospitals and nursing homes	NLR required	NLR required	Incompatible
Churches, auditoriums, and concert halls	NLR required	NLR required	Incompatible
Governmental services	Compatible	NLR required	NLR required (d)
Transportation	Compatible	Compatible (e)	Compatible (e)
Parking	Compatible	Compatible (e)	Compatible (e)(f)
Commercial use			
Offices, business, and professional	Compatible	NLR required	NLR required (d)
Wholesale and retail—building materials, hardware, and farm equipment	Compatible	Compatible (e)	Compatible (e)(f)
Retail trade—general	Compatible	NLR required	NLR required (e)
Utilities	Compatible	Compatible (e)	Compatible (e) (f)
Communication	Compatible	NLR required	NLR required (d)
Manufacturing and production			
Manufacturing—general	Compatible	Compatible (e)	Compatible (e)(f)
Photographic and optical	Compatible	NLR required	NLR required (d)
Agriculture (except livestock) and forestry	Compatible (e)	Compatible (e)	Compatible (g)
Livestock farming and breeding	Compatible (e)	Compatible (e)	Incompatible
Mining and fishing resources production and extraction	Compatible	Compatible	Compatible
Recreational			
Outdoor sports arenas and spectator sports	Compatible (h)	Compatible (h)	Incompatible
Outdoor music shells, amphitheaters	Incompatible	Incompatible	Incompatible
Nature exhibits and zoos	Compatible	Incompatible	Incompatible
Amusements, parks, resorts, and camps	Compatible	Compatible	Incompatible
Golf courses, riding stables, and water recreation	Compatible	NLR required	NLR required (d)

Notes: (a) The designations in this table do not constitute a Federal determination that any use of land is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities.

(b) DNL = Annual day-night average sound level, in A-weighted decibels.
Compatible = Generally, no special noise attenuating materials are required to achieve an interior noise level of DNL 45 in habitable spaces, or the activity (whether indoors or outdoors) would not be subject to a significant adverse effect by the outdoor noise level.
Incompatible = Generally, the land use, whether in a structure or an outdoor activity, is considered to be incompatible with the outdoor noise level even if special attenuating materials were to be used in the construction of the building.
NLR = Noise Level Reduction. NLR is used to denote the total amount of noise transmission loss in decibels required to reduce an exterior noise level in habitable interior spaces to DNL 45. In most places, typical building construction automatically provides an NLR of 20 decibels. Therefore, if a structure is located in an area exposed to aircraft noise of DNL 65, the interior noise level would be about DNL 45. If the structure is located in an area exposed to aircraft noise of DNL 70, the interior noise level would be about DNL 50, so an additional NLR of 5 decibels would be required if not afforded by the normal construction. This NLR can be achieved through the use of noise attenuating materials in the construction of the structure.

(c) The land use is generally incompatible with aircraft noise and should only be permitted in areas of infill in existing neighborhoods.

(d) NLR required between DNL 75 and 80; incompatible with aircraft noise of DNL 80 and higher.

(e) NLR required in offices or other areas with noise-sensitive activities.

(f) Incompatible with aircraft noise of DNL 85 and higher.

(g) Residential buildings incompatible with aircraft noise of DNL 75 and higher.

(h) This land use is considered compatible provided that special sound attenuation systems are installed.

Source: Leigh Fisher Associates, October 2004, as derived from the U.S. Department of Transportation, Federal Aviation Administration, Federal Aviation Regulations Part 150, *Airport Noise Compatibility Planning*, Code of Federal Regulations, Title 14, Chapter I, Subchapter I, Part 150, Table 1, January 18, 1985, as amended.

Although this table indicates that all land uses are considered to be compatible with noise levels below DNL 65, it should be noted that the Federal government does not control local land use, and that units of local government exercising land use control may elect to establish more rigorous standards.

F.1.2 Aircraft Noise Modeling

Aircraft noise compatibility planning emphasizes the identification of community annoyance and noncompatible land use using day-night average sound level (DNL) noise contours produced by the FAA's Integrated Noise Model (INM). INM is a computer model used to develop aircraft noise exposure maps. INM is the industry standard for calculating the level of aircraft noise at and around airports. INM uses a database of aircraft noise characteristics to predict DNL based on user input on the types and number of aircraft operations, annual average airport operating conditions, average aircraft performance, and aircraft flight patterns. Consistent with the DNL metric, the primary use of INM is to produce estimates of annual average noise conditions in the airport environs.

Farther from airport environs, where changes in airspace or air traffic control procedures may affect noise levels in more distant communities, noise exposure is also assessed using day-night average sound levels, but the calculations are accomplished using a variation of the INM referred to as the Noise Impact Routing System (NIRS). Developed by and commercially available through the FAA, NIRS requires operational inputs similar to those for the INM, but the model is specifically designed to address sound propagation from higher altitudes and over longer distances than those accommodated in the INM. NIRS is particularly useful as a tool for analyzing how changes in assigned altitudes affect aircraft performance and, hence, noise. Because of the expansive areas over which NIRS can compute exposure, output from the model consists of DNL values at specific points (usually the U.S. Census Bureau's population centroids) rather than noise contours

F.1.2.1 INM and NIRS Databases

The INM and NIRS aircraft databases include information for commercial, general aviation, and military aircraft powered by turbojet, turbofan, or propeller-driven engines. For each aircraft in the databases, the following information is provided: (1) a set of departure profiles for each applicable trip length, (2) a set of approach parameters, and (3) SEL versus distance curves for several thrust settings. As described above, SEL is essentially an A-weighted sound level corrected for time-duration effects. Thus, the SEL represents the total noise exposure for each individual aircraft event.

F.1.2.2 Noise Contours

Noise contours, or lines of equal noise exposure expressed in terms of DNL, are typically used to illustrate noise exposure. These noise contours are analogous to topographic contour maps, in that a set of concentric contours representing successively lower DNLs extend outward from

the airport's runways. Each contour interval represents a DNL 5 dB decrease in annual average noise levels.

F.1.2.3 Grid Points

The INM provides another method of showing noise levels in the airport environs. DNL or other metrics supported by the INM can be calculated for any "grid point" and presented in a number of formats. The grid point analysis is especially helpful in determining changes in noise levels resulting from some action. For example, significant noise changes, defined as a DNL 1.5 dB increase at or above DNL 65 in a noise sensitive area, can be more easily presented by calculating the difference of grid points than through comparison of noise contours. Accordingly, a "differences map" showing the changes in noise levels calculated by subtracting noise exposure levels for one alternative from the noise exposure levels for a second alternative may provide a more useful picture of the effects of noise abatement alternatives. Several differences are of interest:

- Changes of DNL 1.5 dB at or above DNL 65
- Changes of DNL 3 dB between DNL 60 and 65
- Changes of DNL 5 dB between DNL 45 and 60 and within the limits of acceptable modeling accuracy

F.1.2.4 Supplemental Metrics

In addition to DNL, grid points can be used to report all of the alternative metrics supported by the INM. Typical grid point reports include the maximum noise level (L_{max}), peak SELs, and the Time Above (TA) a specified noise level. The INM can also produce a "detailed" grid point report that identifies the most significant aircraft operations in terms of contribution to total noise exposure at any designated point. Such reports are especially helpful in focusing on the most significant noise problems during identification of potential noise abatement techniques.

F.1.2.5 Limitations of Noise Modeling

The validity and accuracy of noise modeling depend on the basic information used in the calculations. For future airport activities, the reliability of calculations is affected by a number of uncertainties:

- Aviation activity levels—e.g., the forecast number of aircraft operations, the types of aircraft serving the airport, the times of operation (daytime, evening, and nighttime), and aircraft flight tracks—are estimates. The achievement of the estimated levels of activity cannot be assured.
- Aircraft acoustical and performance characteristics are also estimates. When new aircraft designs are involved, aircraft noise data and flight characteristics must be estimated.

- The DNL and related metrics represent typical human response to aircraft noise. Because people vary in their responses to noise, the DNL scale can show only an average response to aircraft noise that might be expected from a community, but cannot predict an individual's reaction.
- Single flight tracks are used, as required, in computer modeling to represent a wider band of actual flight tracks.

The above considerations result in more reliable noise contours for existing conditions than those projected for future conditions. Also, noise contours are generally more reliable closer to the airport. As the distance from the airport increases, the potential for aircraft to deviate significantly from the assumed profiles and flight tracks also increases. Accordingly, noise exposure mapping is best used for comparative purposes rather than for providing absolute values. That is, calculations provide valid comparisons between different projected conditions as long as consistent assumptions are used for all calculations. Thus, sets of DNL calculations can show (1) which of a series of potential situations would be better, and generally how much better, from the standpoint of noise exposure, or (2) anticipated changes in aircraft noise exposure over time.

Importantly, a line drawn on a map does not imply that a particular noise condition exists on one side of that line and not on the other. DNL calculations are merely a means for comparing noise effects, not for precisely defining them relative to specific parcels of land. Nevertheless, DNL contours can be used to (1) highlight an existing or potential aircraft noise problem that requires attention, (2) assist in the preparation of noise compatibility programs, and (3) provide guidance in the development of land use controls, such as zoning ordinances, subdivision regulations, and building codes. DNL is considered to be the best methodology available for depicting aircraft noise exposure.

F.1.3 Effect of Noise on People

Over the past 45 years, researchers have identified many of the factors contributing to human reaction to noise.[9] These effects include annoyance due to speech interference, potential hearing loss, and non-auditory health effects. Research indicates that the psychological effect of aircraft noise may be a more serious concern than direct physical effects. Studies conducted in the late 1960s and early 1970s found that the interruption of communication, rest, relaxation, and sleep are important causes for complaints about aircraft noise. Disturbance of television viewing, radio listening, and telephone conversations are also sources of serious annoyance. A review of these effects follows.

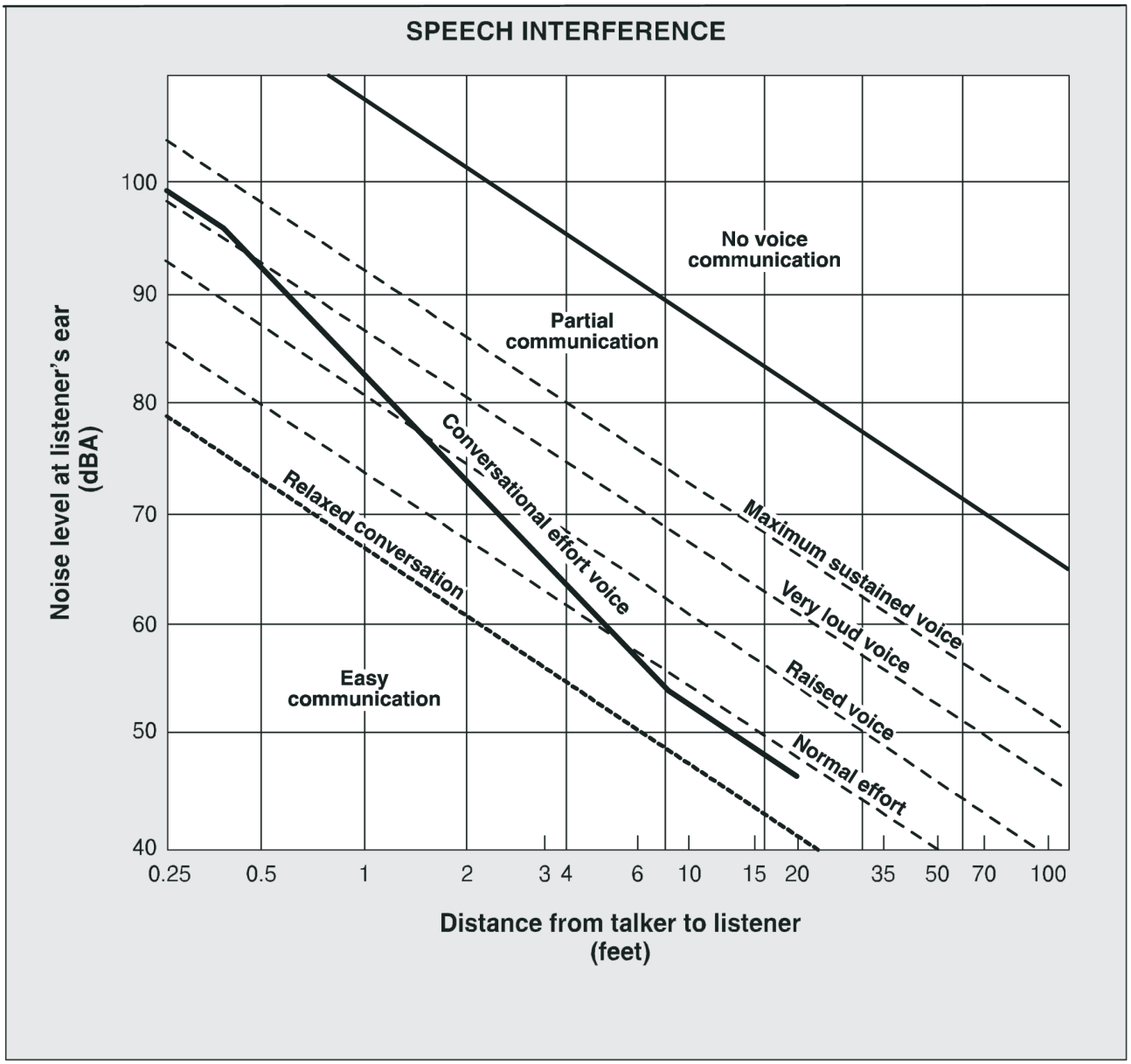
F.1.3.1 Effects on Communications

Interference with speech communications, television and radio listening, and classroom teaching are among the most frequently cited problems associated with aircraft noise. To a

[9] Newman, Stephen J. and Beattie, Kristy R., Aviation Noise Effects, Federal Aviation Administration, Report FAA-EE-85-2, March 1985.

large extent, these factors are responsible for community annoyance. **Exhibit F-9** summarizes the results of research into speech interference associated with various noise intensities and communications distances. A 1992 FICON report[10] indicates that whenever noise levels exceed approximately 60 dB, there will be interference with speech communications. Assuming that typical residential construction provides 15 to 25 dB of sound attenuation (windows open or closed, respectively), the FICON report concluded that some degree of interior speech interference would occur when exterior noise levels exceed 75 to 85 dB.

[10] Federal Interagency Committee on Noise, Federal Agency Review of Selected Airport Noise Analysis Issues, August 1992.



Source: U.S. Department of Transportation, Federal Aviation Administration, Aviation Noise Effects, March 1985.

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Noise Metrics
Speech Interference

▶ **Exhibit F-9**

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The noise levels described above represent continuous sources. Accordingly, cumulative metrics such as L_{eq} and DNL do not directly measure the potential effect of noise with respect to speech interference. Cumulative metrics do not provide information on the number, duration, and intensity of the individual noise events having the potential to disrupt communications. If speech interference is an especially critical issue, the FICON report suggests that the Time Above (TA) metric, which indicates the total time that noise exposure exceeds a specified threshold, can provide a useful "single number" indication of the potential for speech interference.

F.1.3.2 Sleep Disturbance

Sleep disturbance is recognized to be a major consideration in community annoyance. To some extent, the 10 dB penalty for nighttime noise events incorporated in the DNL metric reflects this concern.

Much of the available information on sleep disturbance has been developed through laboratory studies. In the laboratory setting, research indicates that sleepers do not adjust to noise disruption over time. Although they may awaken less often and have fewer conscious memories of disturbance, noise-induced shifts in sleep levels continue to occur. On the other hand, field studies indicate that noise-induced awakenings in the home are much less prevalent than in the laboratory, and that considerable caution must be exercised in interpreting any reports of sleep disturbance, especially in noisy areas.

Laboratory Studies: Laboratory research on sleep disturbance indicates that the level of noise that can cause awakenings or interfere with sleep ranges from 35 to 80 dB, depending on the sleep stage and variability among individuals.[11] **Exhibit F-10** illustrates initial results from laboratories and also shows more conservative results from field studies as described below. FICAN has adopted the field result curve as an interim means of evaluating effects of noise on sleep, pending completion of further research.

Prior Studies: Although studies indicate that awakenings decrease as subjects become accustomed to noise, electroencephalograms show little adaptation to noise. A study conducted by K. D. Kryter suggested that noise-induced changes in sleep stage may simply be reflexive responses, reflecting normal physiological functions that are probably not a cause of stress to the individual.[12] The USEPA has identified L_{max} 35 dB as a threshold of sleep disruption in the presence of steady noise, with a 5 percent probability of awakening at an L_{max} of 40 dB.[13]

As people react differently in a laboratory environment, these studies provide limited insight into the potential for sleep disturbance in the home. Assessing the effect of noise on sleep disturbance is further complicated by the wide range of noise required to cause disturbance and the prevalence of sleep disruption in the absence of any noise.

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[11] Newman, Stephen J. and Beattie, Kristy R., Aviation Noise Effects, Federal Aviation Administration, Report FAA-EE-85-2, March 1985.

[12] Kryter, K. D., Physiological, Psychological, and Social Effects of Noise, NASA Reference Publication 1115, 1984.

[13] Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, EPA/ONAC 550/9-74-004, March 1974.

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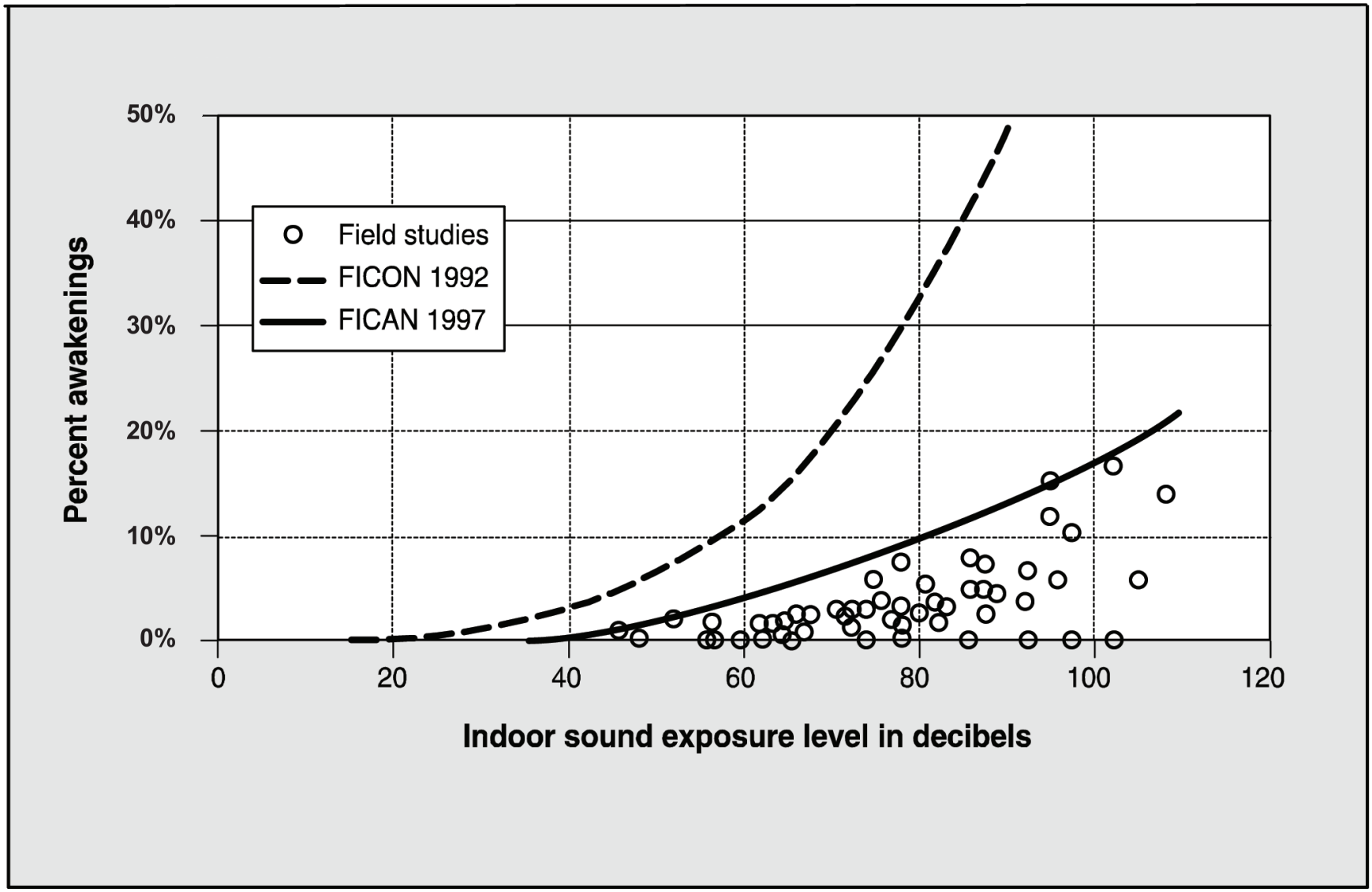

Source: Federal Interagency Committee on Aviation Noise, Annual Report 1997, February 1998.

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Noise Metrics
Sleep Disturbance - Response Relationship

Exhibit F-10

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Field Studies: A 1986 FAA report summarizes the results of eight studies conducted in homes.[14] In all studies, sleep disturbance was correlated with cumulative noise exposure metrics such as L_{eq} and L_{10} (the level of sound exceeded 10 percent of the time). All studies showed increased sleep disturbance as cumulative noise exposure increased. The report also indicated that sleep disturbance was very common, even without noise events.

A 1990 review of laboratory and field studies found that noise-induced awakenings in the home were much less prevalent than in the laboratory.[15] The review also found that much higher noise levels were required to induce awakenings in the home.

FICON 1992

Recommendations: In 1992, the Federal Interagency Committee on Noise, a group of Federal agencies with an interest in noise issues, recommended an interim dose/response curve to predict the percent of the exposed population expected to be awakened as a function of exposure to single event noise levels expressed as SEL. The report recommended continued research into community reactions to aircraft noise including sleep disturbance.[16] Since 1992, several research projects concerning sleep disturbance have been undertaken.

The UK Study (also known as the Ollerhead study after its author): The British Civil Aviation Authority (CAA) conducted an in-depth survey of 4,400 residents near London's Heathrow and Gatwick airports over a 4-month period in 1979.[17] This study indicated that the best correlations were found using the L_{eq} metric because some respondents could not accurately recall the time of a specific noise event with an awakening. This finding also suggests that the noise from successive overflights might increase the general state of arousal from sleep. The CAA concluded that: (1) a significant increase in reports of sleep arousal will occur at or above L_{eq} 65 ; and (2) a significant increase in the number of people reporting difficulty in getting to sleep will occur at or above L_{eq} 70.

These conclusions indicate that the DNL 65 contour would provide a conservative planning guideline for sleep disturbance because the DNL 65 contour reflecting total aircraft activity must be larger than the L_{eq} 65 for nighttime activity only. If only nighttime activity were considered, the DNL 65 contour would be the same as the L_{eq} 55 contour because of the effect of the 10 dB penalty in the DNL metric. Thus, the DNL 65 contour defines a noise impact envelope that encompasses the area within which significant sleep disturbance may be expected based on the CAA findings.[18]

The Los Angeles Study: In 1992, the USAF conducted a study, which evaluated the effects of nighttime noise exposure on the in-home sleep of residents near Castle Air Force Base and Los

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[14] Fields, J.M., Cumulative Airport Noise Exposure Metrics: An Assessment of Evidence for Time-of-Day Weightings, Report No. DOT/FAA/EE-86/10, FAA, Washington, D.C., 1986.

[15] Pearsons, K.S., et al., Analyses of the Predictability of Noise-induced Sleep Disturbance, Department of Safety, Environment and Engineer, Civil Aviation Authority (United Kingdom), 1990.

[16] Federal Interagency Committee on Noise (FICON). 1992. Federal Agency Review of Selected Airport Noise Analysis Issues. Washington, D.C.: FICON.

[17] Directorate of Operational Research and Analysis (DORA), Aircraft Noise and Sleep Disturbance: Final Report, DORA Report 8008, Civil Aviation Authority, London, 1980, cited in Kryter, 1984, p. 434.

[18] Kryter, K. D., Physiological, Psychological, and Social Effects of Noise, NASA Reference Publication 1115, 1984.

Angeles International Airport (LAX) in California. Additionally, several suburban households not subject to high levels of aircraft noise were evaluated as controls. A total of 1,887 subject-nights of data were collected from 38 men and 47 women living in 45 different households.[19] Length of residence for the test subjects ranged from two to more than 40 years. The major findings of the study were as follows:

- A statistically reliable relationship was observed between sound exposure levels of noise intrusions in sleeping quarters and behaviorally confirmed awakenings within five minutes of occurrence of noise intrusions.
- Although outdoor noise exposure level at the test sites varied over the range of levels of principal interest for environmental analysis purposes (3), the prevalence for awakening among test participants did not increase greatly with sound exposure levels of noise intrusions in sleeping quarters.
- Of a total of 4,452 awakening responses, only 326 could be associated with noise events.
- The average spontaneous rate of behaviorally confirmed awakenings among test participants at all sites was approximately two per night. This figure did not differ significantly across sites with varying levels of nighttime noise exposure [Fidell et al., 1994].
- The authors cautioned that the test subjects may not be representative of all residential situations, and that generalizations of the data obtained in the study should be limited to long term residents of areas with stable nighttime noise exposure.

The Denver Study: A large scale field study was conducted in the Denver area in anticipation of the closure of Stapleton Airport (DEN) and the opening of the new Denver International Airport (DIA). Both indoor and outdoor measurements of aircraft and other noises were made during four data collection periods. Measurements were made in 57 homes over a total of 2,717 subject-nights of observation. Multiple methods of measuring sleep disturbance were used.[20] The major findings of the Denver study were as follows:

- The current findings closely resemble those of prior field studies of noise-induced sleep disturbance.
- Outdoor nighttime Leq decreased about 12 dB on average at DEN upon closure of the airport, but increased only about 3 dB at DIA after opening of the airport. Indoor nighttime Leq varied little at either location with the transfer of flight operations from DEN to DIA.

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[19] Fidell, S., K. Pearsons, R. Howe, B. Tabachnick, L. Silvati, and D.S. Barber, Noise Induced Sleep Disturbance in Residential Settings (AL/OE-TR-1994-0131). Wright Patterson Air Force Base, OH: Armstrong Laboratory, Occupational & Environmental Health Division (AL/OEBN), 1994.

[20] Fidell, S., R. Howe, B. Tabachnick, K. Pearsons, and M. Sheddon. Noise Induced Speel Disturbance in Residences Near Two Covil Airports (Contract NAS1-20101), NASA Langley Research Center. 1995.

- The average number of behavioral awakenings per night was 1.8 at DEN and 1.5 at DIA. The number of spontaneous awakening responses (unassociated with noise events) was 1.5 per night at DEN and 1.3 at DIA.
- Statistically reliable relationships were observed between sound exposure levels of individual noise intrusions as measured inside sleeping quarters and several measures of sleep disturbance. [Fidell et al., 1995]

FICAN 1997

In June 1997, the Federal Interagency Committee on Aircraft Noise (FICAN), a permanent standing committee of Federal agencies with an interest in aircraft noise issues (note: it replaced the FICON discussed above) published a report entitled *Effects of Aviation Noise on Sleep Disturbance*. This report, which included the results of the studies described above as well as data from six previous studies, included a revised recommended sleep disturbance curve (as previously shown in **Exhibit F-10**). This curve predicts a conservative dose response relationship for the combined field data subject to a number of specific limitations described therein.

The FICAN 97 curve is also represented by the following equation:[21]

$$\%\text{awakenings} = .0087 \times (\text{SEL}-30)^{1.79}$$

There are continuing efforts to identify other dose-response relationships being undertaken by standards setting organizations such as the American National Standards Institute (ANSI) FICAN (and the FAA) will evaluate additional research as it is published. Until further research has been completed however, FICAN recommends the use of the curve and equation described above for assessing potential sleep disturbance caused by aircraft noise.

F.1.3.3 Effects on Hearing

Hearing loss is the most significant health danger posed by noise. A 1974 study published by the USEPA found that continuous and prolonged exposure to L_{eq} 70 or higher may result in a very small but permanent loss of hearing (i.e., a noise-induced permanent threshold shift). Other studies have examined hearing loss among people living near airports, and found that under normal circumstances, people in the community near an airport are at no risk of suffering hearing damage from aircraft noise.[22]

The Occupational Safety and Health Administration (OSHA) has established standards for noise exposure in the workplace to guard against the risk of hearing loss (see **Table F-2**). OSHA standards require hearing protection when noise levels exceed 90 dB for 8 hours per day. These regulations also require hearing conservation programs where noise levels exceed L_{eq} 85 for the 8-hour workday.

[21] FICAN Annual Report: 1997, Federal Interagency Committee on Aviation Noise, February 1998.
[22] Newman, Stephen J. and Beattie, Kristy R., Aviation Noise Effects, Federal Aviation Administration, Report FAA-EE-85-2, March 1985.

TABLE F-2
PERMISSIBLE NOISE EXPOSURES, OSHA STANDARDS

Allowable Duration (hours/day)	Sound Level (dB response)
8	90
6	92
4	95
3	97
2	100
1 ½	102
1	105
½	110
¼ or less	115

Source: 29 Code of Federal Regulations (CFR) Chapter XVII, Section 1910.95 (b)

Based on noise exposure studies conducted at airports in the United States, at sites with cumulative noise exposure near DNL 75, the total time noise levels exceed 80 dB typically ranges from 10 to 20 minutes, far below the critical hearing damage thresholds established by OSHA. This finding supports the conclusion that aircraft noise in the airport environs is typically too low to be considered potentially damaging to hearing.

F.1.3.4 Nonauditory Health Effects

It is sometimes claimed that aircraft noise can adversely affect the physical and mental health of people living near airports. Numerous studies have examined potential effects on the cardiovascular system, mortality rates, birth weights, achievement scores, and psychiatric admissions.

Results of these studies have not been conclusive. In 1992, FICON concluded the following:

> …the current state of technical knowledge cannot support inference of a causal or consistent relationship, or a quantitative dose-response model, between residential aircraft noise exposure and health consequences. Thus, no technical means are available for predicting extra-auditory health effects of noise exposure. This conclusion cannot be construed as evidence of no effect of residential aircraft noise exposure on nonauditory health."[23]

[23] Federal Interagency Committee on Noise, Technical Report, page 3-25, August 1992.

F.2 AIRCRAFT NOISE ASSESSMENTS

The aircraft noise exposure contours and grid analyses presented in **Section 5.1, Noise,** and **Section 5.2, Compatible Land Use,** were prepared through the use of the latest version of the FAA approved INM (Version 6.1) and NIRS in accordance FAA Order 1050.1E, *Policies and Procedures for Considering Environmental Impacts*, FAA Order 5050.4A, *Airport Environmental Handbook,* and Noise Protocol documentation developed for this EIS. The Noise Protocol documentation is attached at the end of this appendix. This section provides additional information on development of the input data for the noise model runs followed by a summary of the input data for each case.

F.2.1 Basic Input Data Development

The primary data elements input to the noise modeling for the Baseline 2002, future No Action and future Build Alternatives are:

- Aircraft Operations

Defines the existing or forecast number of aircraft operations by time of day (daytime or nighttime) and by aircraft type

- Aircraft Fleet Mix

Aircraft operations are further subdivided by model and engine type and stage length (nonstop departure distance from the airport) with each combination assigned a set of noise characteristics within the noise model database.

- Runway Use

The use of the existing and/or proposed runways at the Airport are important in determining how much traffic has or would depart or land on each runway and in turn, where aircraft are flying. Key factors that affect runway use include wind and weather conditions, air traffic volume, the origin and destination of a flight and airspace constraints.

- Flight Track Location and Use

A flight track is a projection on the ground of an aircraft's path in the sky. Because of meteorological conditions, aircraft types, destinations, and pilot judgment, no two flight tracks are the same. However, because it is not possible to input all of the flight tracks followed by individual aircraft, the FAA suggests that the tracks be consolidated to represent average generalized flight tracks.

- Flight Profiles and Trip Stage Length

As part of the process of calculating noise exposure, the INM will assign a climb-out or descent flight profile to each operation based on the performance characteristics of the respective aircraft type. Departure profiles in the model database vary as a function of

distance or stage length between the origin and destination city. Typically, an aircraft flying the longer stage lengths carry more fuel, are therefore heavier, and hence have lower takeoff profiles and generate more noise at ground level. As will be described, the stage lengths for some aircraft types were adjusted based on climb-out performance indicated in radar data for O'Hare operations.

- Nighttime Noise Abatement Procedures

As noted in **Section 5.1**, **Noise**, the Fly program implemented at O'Hare consists of a series of noise abatement flight and operating procedures designed to reduce the impact of aircraft noise during the nighttime hours (10 PM to 6:59:59 AM). The three main elements of the Fly Quiet Program are 1.) preferential runway use, 2.) arrival and departure flight procedures and 3.) ground run-up procedures. Each model case includes a separate set of flight tracks to account for periods when the Fly Quiet procedures are observed or assumed to be followed.

The balance of this section reviews how each of these input elements were developed for the 2002 Baseline, Alternative A (No Action Alternative), Alternative C (With Project), Alternative D (TAAM Alternative X) and Alternative G (TAAM Alternative Y) noise model cases.

F.2.1.1 2002 Baseline Case

The inputs for the 2002 Baseline case were based primarily on radar data provided by FAA to City of Chicago Department of Aviation (DOA). Three months of radar data (February, June and October, 2002) recorded by the City of Chicago's Airport Noise and Operations Monitoring System (ANMS) were used. For each operation, the radar data provides a record of the operator and type of aircraft, the time of the operation, the runway used, the origin or destination city, the flight path flown and the altitude profile for departure and arrival operations. A second data source was the count of actual O'Hare operations for all of 2002.

Aircraft Operations

FAA tower counts were used to determine the total O'Hare operations for all of 2002.[24] The total operational count was then used to determine the Average Annual Day (AAD) level of operations as required for INM noise modeling. Of the 2,528 AAD operations, narrow body jets accounted for 89.4 percent, wide body jets accounted for 7.4 percent, and propeller-driven aircraft accounted for the remaining 3.1 percent.

Aircraft Fleet Mix

The radar data was also used to define the fleet mix for operations. Using the given information in the radar data and industry publications such as JP Fleets, aircraft model series and engine types were assigned accordingly. As noted, the INM database contains noise data for a series of unique aircraft model and engine type combinations that in turn are used in estimating noise exposure for a given operation. So each airline and aircraft type in the AAD fleet mix was

[24] www.apo.data.faa.gov/atads/towers/t.asp

matched with a specific airframe/engine combination in the INM database accordingly. For cases where a particular aircraft type was not in the INM database, a look-up table was created to determine appropriate substitute aircraft. Once the look-up table was completed, every aircraft in the study was assigned an INM type.

During input development, aircraft were grouped as listed below. These categories were used to assist in identifying traffic flows that may be used primarily by unique aircraft types.

1) W – Widebody Jet aircraft (aircraft weighing over 355,000 lbs.)

2) J – Jet aircraft, including medium, regional, and stage 2 and 3 light jets

3) P – Propeller aircraft, including turbo and piston propellers

4) H – Helicopter aircraft

Runway Use

In 2002, O'Hare had seven runways (14R/32L, 14L/32R, 9L/27R, 9R/27L, 4L/22R, 4R/22L, and 18/36) and fourteen runway ends. All runways, with the exception of Runway 18/36, are arranged in three parallel groups. A special condition at O'Hare allows for aircraft departing Runway 32L to be cleared for departure at the Tango 10 intersection (T-10). For modeling purposes, departures from Runway 32L that occurred at T-10 were labeled Runway 33L. Airfield modeling assumptions for the baseline case were used to determine which operations depart Runway 32L full-length and which depart from Runway 32L T-10 (renamed 33L).

The Existing Conditions runway utilization was calculated based on the three months of actual operations data from 2002 collected from the ANMS. Subsequent analysis confirmed that these three months were representative of observed annual runway use for 2002 at O'Hare.[25]

Flight Track Location and Use

Flight tracks for existing conditions were developed using the same three months of ANMS data. This data included a review of more than 200,000 individual flight tracks to and from the Airport. This three-month sample included one month from the winter, summer, and fall to capture difference in aircraft performance during hot and cold weather, as well as variations in prevailing winds throughout the year. Flight tracks for purposes of this analysis were defined as radar tracks within the terminal area of the airport (usually 40 miles from the airport center). The data was further refined via the following seven-step process.

Step 1 - ANMS data was imported by each runway end and operation mode (arrival/departure). See **Exhibit F-11**.

Step 2 - Major traffic flows to and from the Airport were identified and separated. See **Exhibit F-12.**

[25] TPC memo "ORD 2002 Noise Analysis; Runway Use Assumptions (Revised)" dated August 6, 2003.

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Step 1: Importing Flight Track Radar Data
Flight track data was initially parsed based on operation type (arr/dep), runway, and day/night/fly quiet. This sample shows the starting point for identifying unique traffic departure flows during the daytime hours for Runway 9L. Initially, numerous flows can be identified based on direction or final headings at a distance from the Airport. The first step was to place each unique flow into its own layer.

Source: Leigh Fisher Associates [TPC]. 2004

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Step 1: Importing Flight Track Radar Data

Exhibit F-11

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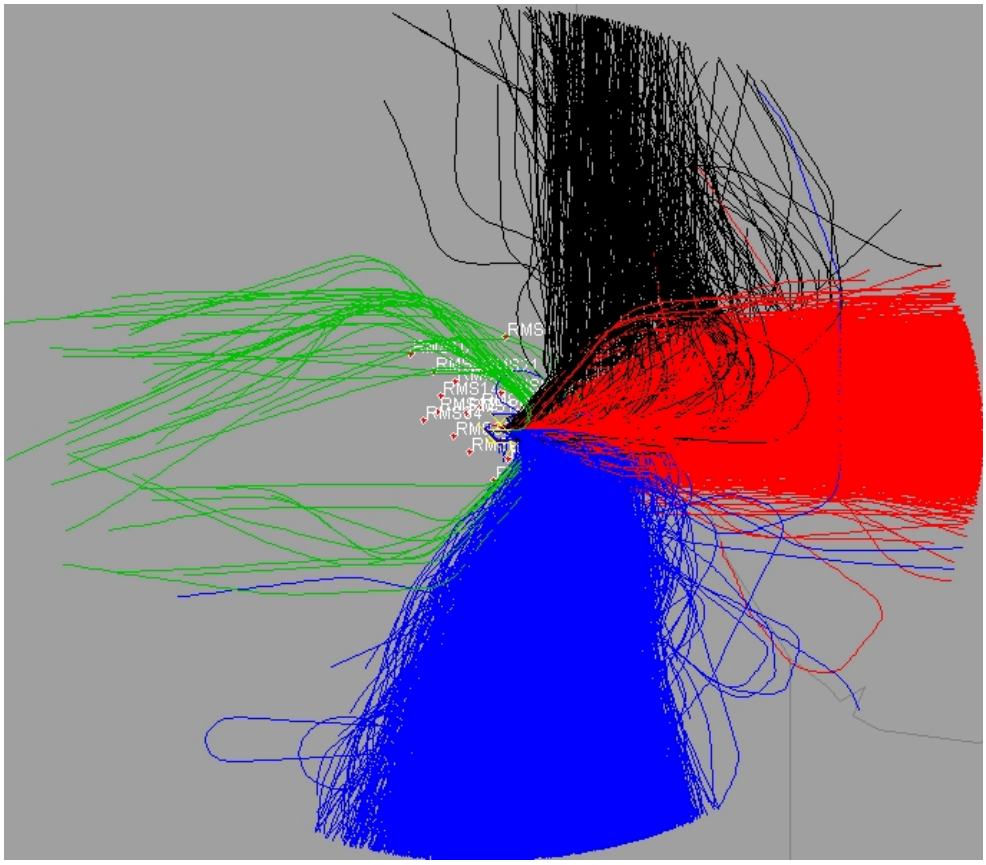

Step 2: General Identification
Each general flow was bundled in separate layers that are then reviewed separately for further unique characteristics such as departure headings, departure intersections, and aircraft category and altitude.

Source: Leigh Fisher Associates [TPC]. 2004

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Step 2: General Identification

Exhibit F-12

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Step 3 - Further separation of flows based on air traffic procedures that were provided via published Standard Terminal Arrival Procedures (STARS) and Standard Instrument Departure Procedures (SIDS); key arrival and departure fixes were also used to identify unique traffic flows. See **Exhibit F-13**.

Step 4 - Unique route characteristics near each runway were identified within the Airport environment. See **Exhibit F-14.**

Step 5 - Once the traffic flows were identified, a statistical center track (backbone) was calculated for each based on the average mean of track density within each flow. Along with the center track (backbone), sub-tracks were used to represent the entire flow. See **Exhibit F-15**.

Step 6 – A set of sub-tracks associated with each center track was then defined based on the 2002 radar data to depict the observed lateral dispersion of operations within a flight corridor. This dispersion occurs due to a variety of operational factors, such as vector turns, variations in piloting, wind direction and speed, and ceiling and visibility conditions. The number of dispersed tracks within a corridor was determined based on width and density of flow and tracks were split evenly on both sides of the center or mean track (i.e., five sub-tracks: two on the left, two on the right, and one representative center track).

Step 7 - The percentage use of each sub-track was then computed based on the distribution of radar tracks within a corridor. See **Exhibit F-16.**

CCT completed the seven step analysis in coordination with the FAA and TPC. The results were subsequently concurred with by the TPC and FAA.

Flight Profiles

For departing aircraft, the takeoff roll requirements and rate of climb are determined by aircraft weight (determined using stage length), elevation, and temperature.

As noted, as part of the process of calculating noise exposure, INM will assign a flight profile to each departure operation according to the distance of flight indicated in the input data. Customarily, a departure operation is assigned to the stage length range that corresponds to the planned trip length between the origin and destination cities. To refine profile assignments for the 2002 Baseline case, INM flight profiles were compared to radar profiles for each aircraft operation-destination city combination and the INM stage length profile that most closely matched the radar profile was assigned to that operation. As a result of this process, a range of stage lengths were assigned to some aircraft types and city destination pairs. In other cases, all departures for a particular aircraft type were assigned to a single stage length regardless of trip length.

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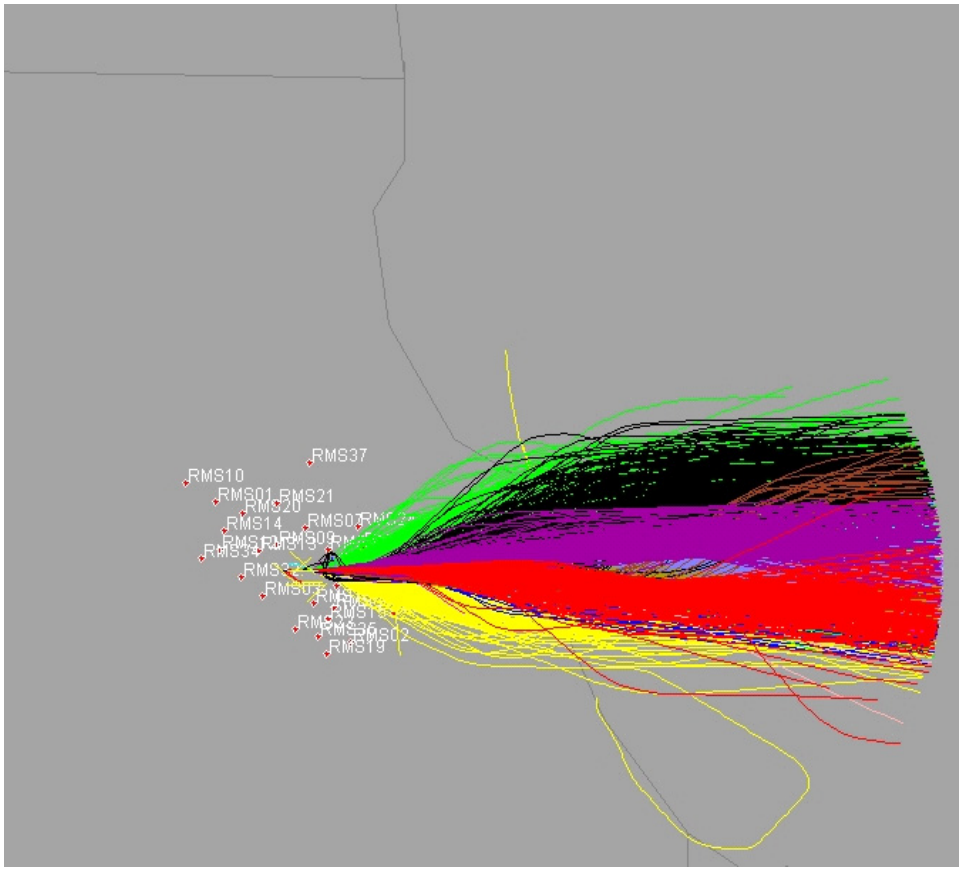

Step 3: Departure Route Refinement
This example singles out the East departure flow identified from the previous step. Numerous unique flows were identified based on the routes identified via departure fixes. In this case, there were two separate departure fixes. At this point, unique aircraft categories are identified and separated into a unique layer. This example shows jet aircraft departing from Runway 9L to either KEELER or GIPER departure intersection.

Source: Leigh Fisher Associates [TPC]. 2004

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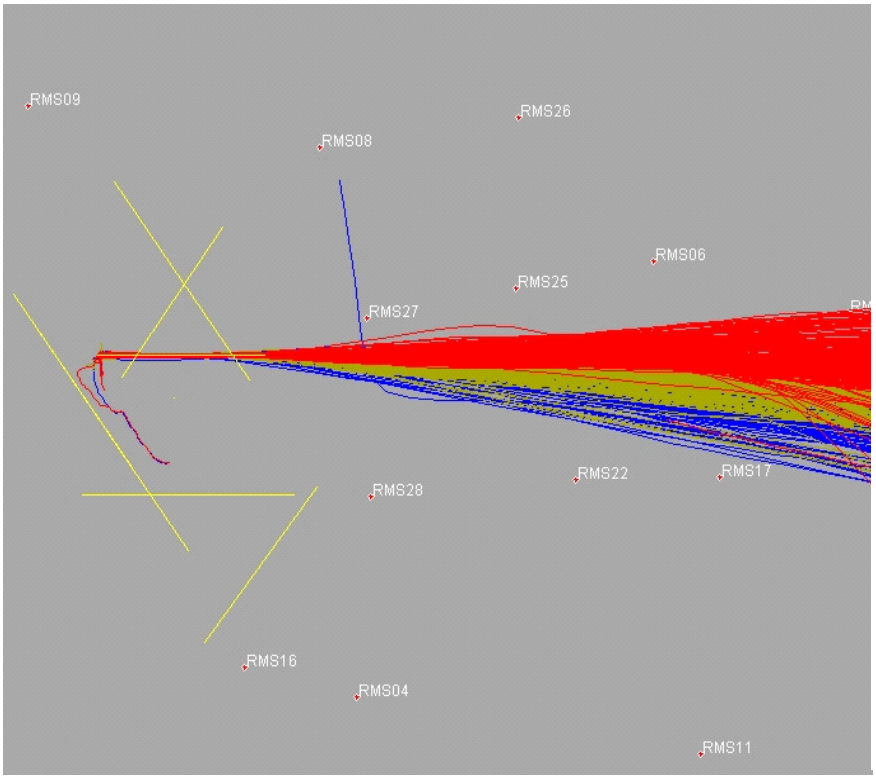

Step 4: Runway Heading Identification

This example singles out the Runway 9L East Giper Intersection Jet Daytime Departure flow from the previous step. Three unique flows were identified based on the different heading issued from Runway 9L. The next example provides a closer view of the differences. The red, green and blue flows show actual use of different radar vectors used for departures from runway 9L as described on the O'Hare SID.

Source: Leigh Fisher Associates. [TPC] 2004

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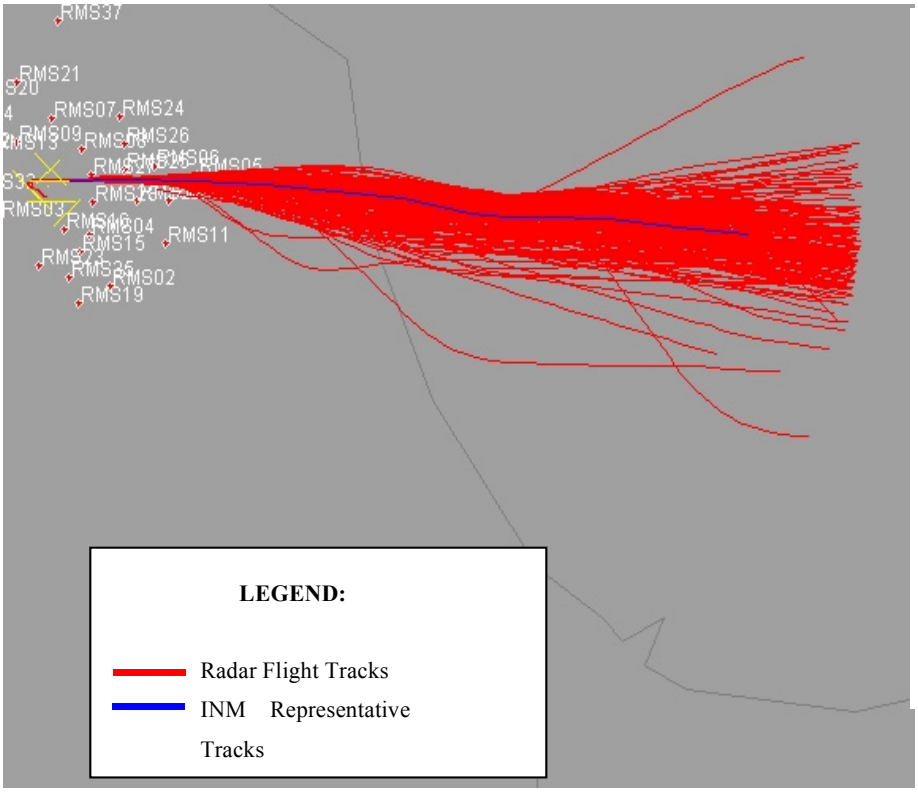

Step 5: Sample Flight Tracks in INM

Using the red flow from the previous example, a representative center track was created. Location of the track was determined by using the weight of the events used to create the track.

Source: Leigh Fisher Associates [TPC]. 2004

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Step 5: Runway Heading Identification

▶ Exhibit F-15

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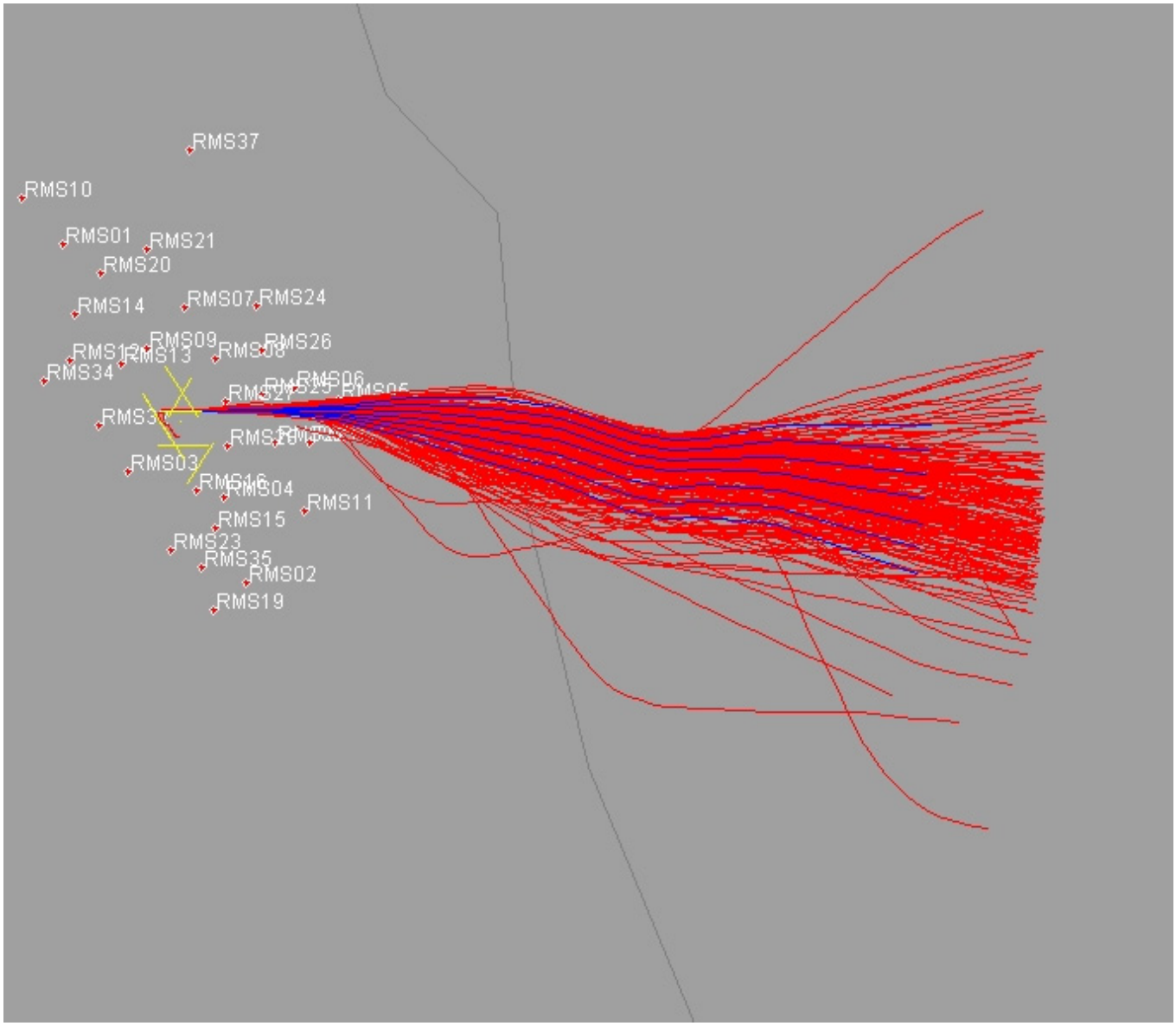

Source: Leigh Fisher Associates [TPC]. 2004

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Step 7: INM Track Dispersion

▶ Exhibit F-16

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Nighttime Noise Abatement Procedures

Based on records maintained by the City of Chicago's Aviation Department, standard nighttime operations were distinguished from activity that was operating in accordance with Fly Quiet procedures. In turn, runway use and flight tracks were assigned to these operations accordingly.

F.2.1.2 Future No Action Alternatives

This subsection describes the data sources and procedures that were followed in developing the noise modeling input data for all future Alternative A (No Action Alternative) cases. The primary data source was the output from a series of airfield simulations prepared for corresponding cases and years using the Total Airspace and Airport Modeler (TAAM). See **Appendix D**, **Simulation Modeling**, for a description of the TAAM simulations. Annual Average Day Operation level inputs were based on the "constrained" activity forecasts used for the corresponding Alternative A (No Action Alternative) airfield simulations, and are described in **Appendix B, Aviation Demand Forecast**. Finally, the Baseline 2002 flight path data was used for all of the future Alternative A cases. Since the Alternative A cases assume that the existing runway layout would remain unchanged in the future, it is also assumed that the landing and take off flight paths and airspace structure would remain unchanged.

The development process for the future no action cases basically involved the following steps:

1. Develop an operations schedule from output for each TAAM configuration experiment
2. Annualize Aircraft to Operations
3. Fleet Mix: Assign INM Aircraft Fleet Type to each operation
4. Flight Profile: Assign an INM stage length to each operation
5. Development of flight track structure
6. Assign operations to runways and the flight track structure
7. Compile INM operations and track files

The development process for each step is reviewed in the following subsections.

Aircraft Operation Schedules from TAAM

For the future no action cases, the process began by creating an operations schedule for each of the five configurations modeled in TAAM (Plan X, Plan B, Plan W, IFR 14s and IFR 27s) for each of the forecast years. Much like the use of radar data for the 2002 Baseline case, the TAAM output files provide the following information for each aircraft operation: airline, aircraft type, type of operation, time of operation (day, night or fly quiet), runway used and fix use.

A separate schedule was also developed from the TAAM output for Fly Quiet noise abatement operations so that an adjustment could be made to the runway use pattern assigned to these operations. The TAAM modeling assignments assumed that the Fly Quiet runway use priorities would be strictly adhered to in the future no action cases. However, after subsequent

analysis,[26] it was determined that it would be more likely these operations would follow the 2002 runway use patterns rather than the use patterns assumed in the TAAM modeling during Fly Quiet in the future no action cases. Hence, the Fly Quiet operations indicated in the TAAM data were extracted from each of the modeled configurations and weighted and reassigned accordingly.

Finally, a seventh separate configuration schedule referred to as "other" was developed to account for certain runway use activity not modeled in TAAM. Activity during the "other" category was established based on an analysis of the 2002 radar data.[27] This analysis revealed that the runway use patterns during some limited periods did not match any of the individual runway configurations modeled in TAAM but rather operated more like a combination of configurations Plans X, B, W, and IFR 27s. Per the 2002 radar data, the annual utilization of the "other" configuration was estimated to be about 2.0 percent, while Plan X, Plan B, Plan W, and IFR 27s annualized configuration usage decreased based on their contribution to the "other".

Day/night split for "other" was determined by taking a weighted average of the known day/night split for Plans X, B, W, and IFR 27s. This was accomplished by first computing the day/night split for each of the four configurations. Then, the weighted average of the day/night split for each of the four configurations was used to determine the day/night split for the "other" configuration. **Table F-3** shows the day/night split for No Action Alternative (Alternative A) analysis for the Build Out + 5 year. The flights that moved into the nighttime hours were determined by analyzing flight schedule data beginning at 21:59:59 (9:59:59 PM) and working backward into the daytime hours. (INM defines nighttime hours as 10:00 PM to 6:59:59 AM and daytime hours as 7:00 AM to 9:59:59 PM.) This process continues until the appropriate number of flights is moved.

In addition, because the "other" configuration was not modeled in TAAM, it was also not determined when noise abatement procedures were in use during the "other" configuration. To that end, noise abatement procedures were not modeled in the "other" configuration.

[26] TPC memo "OMP EIS Noise Discipline Meeting #4 – February 26, 2004" dated March 10, 2004, discussion item 7.
[27] TPC memo "OMP EIS Noise Discipline Meeting #4 – February 26, 2004" dated March 10, 2004, discussion item 10.

TABLE F-3
TAAM CONFIGURATION DAY/NIGHT SPLIT – BUILD OUT + 5 NO ACTION ALTERNATIVE ANALYSIS

Configuration	Ann. Percentage Weight	Count			Percentage			Annualized Day/Night Split		
		Day	Night	Total	Day	Night	Total	Day	Night	Total
PMAD Operations Schedule		2,566	184	2,750	93.3%	6.7%	100.0%	n/a	n/a	n/a
Plan X	26.30%	2,588	162	2,750	94.1%	5.9%	100.0%	681	43	723
Plan B	16.80%	2,436	314	2,750	88.6%	11.4%	100.0%	409	53	462
Plan W	45.75%	2,584	166	2,750	94.0%	6.0%	100.0%	1,182	76	1,258
IFR 27s	5.85%	2,220	530	2,750	80.7%	19.3%	100.0%	130	31	161
Other(a)	2.00%	2,536	214	2,750	92.2%	7.8%	100.0%	51	4	55
IFR 14s	3.30%	1,980	770	2,750	72.0%	28.0%	100.0%	65	25	91
Total	100.00%	2,518	232	2,750	91.6%	8.4%	100.0%	2,518	232	2,750

Notes: n/a - Not applicable due to schedule already being representative of an annualized (PMAD) condition without delay.
(a) Other day/night split is determined by computing the weighted average of Plan X, Plan B, Plan W, and IFR 27s day/night splits

Aircraft Operations

Annual Average Day (AAD) operations is the standard level of activity used for airport noise modeling. For each future No Action Alternative case, the AAD was computed from the TAAM input schedules as follows. First, per the constrained forecast described in **Appendix B**, **Aviation Demand Forecast**, annual activity for each future year Alternative A (No Action Alternative) case is projected to be 974,000 aircraft operations. Total projected level of annual operations translates to an AAD value of 2,668 operations. Since the input schedules from TAAM reflect the peak month, average day, or the average day in the peak month (PMAD or ADPM), the PMAD must be converted to AAD. In this case, the PMAD value for each of the future No Action Alternative cases was calculated to be 2,750 operations. Thus, each operation from the TAAM schedules was reduced by a factor of about 0.97 (2,668/2,750).

The operations for each TAAM experiment schedule were then annualized based on the estimated frequency of occurrence indicated in **Table F-3** above. When combined together, this step yields an overall AAD level for all of the TAAM activity schedules.

Aircraft Fleet Mix

The aircraft fleet mixes for the future no action cases were derived based on the same fleet schedule used as input to the TAAM model process (See **Appendix B**). Two factors taken into account in the development of these activity forecast schedules were the seat capacity of the aircraft fleet needed to accommodate the projected level of passengers at O'Hare and projected changes in each airlines' respective fleet mix as newer generation aircraft types are introduced and older models are phased out of service. Hence, while the number of AAD operations remained constant for all of the future no action cases, the fleet mix of operations were projected to change over time.

Again, much like the radar data for the 2002 Baseline case, the TAAM output schedules indicates both the airline and aircraft type for each operation. To facilitate correlating the airline/aircraft type combinations in the schedule with aircraft types in the INM database, a look-up table was developed for each forecast year. As noted, the INM database contains noise data for a series of unique aircraft model and engine type combinations that in turn are used in estimating noise exposure for a given operation. So the function of the lookup table is to identify the best match between an aircraft type in the activity schedules and an aircraft type in the INM database.

The INM Type lookup tables were developed by first matching airline and aircraft types in the forecast schedule to the previous INM type assignments in the 2002 Baseline case. New airline and aircraft not in the 2002 lookup table were matched to INM aircraft types by referencing industry publications on airline fleets. In addition, the lookup tables for each future year also accounted for the projected phase out of older versions of certain model series such as the case with 747-200s which are projected to be replaced by newer model 747-400s over time. Finally, given that the INM database does not contain every aircraft type operating at the Airport, the look-up table also indicated appropriate aircraft substitutions for INM types as needed.

Once the look-up table was completed, every aircraft operation in the study schedule was assigned an INM type. To ensure consistency, the same INM aircraft type look-up table was used for the no action and development alternative cases for a given model year.

INM aircraft type lookup tables for each year of analysis are shown in **Table F-4** through **Table F-7.**

Flight Profiles and Stage Lengths

The 2002 Baseline analysis of departure stage lengths was used as a starting point to determine stage lengths for each aircraft type and destination in the future no action and development alternative cases. While the radar-based technique provides more realistic results than could be obtained using the default stage length assumptions, it would difficult to recreate this type of adjustment without radar data for future cases. Therefore, the radar-based stage length assignments were simplified as follows:

a) For cases where a specific aircraft and stage length combination was subdivided into multiple stage lengths, the weighted average of the stage lengths available for each aircraft-destination pair was used instead.

b) For aircraft types for which a single stage length was assigned in 2002 regardless of trip length, that same stage length was assigned in the future cases as well.

c) For new aircraft-destination pairs that were not present in the 2002 Baseline analysis, a stage length was assigned according to the planned trip length between O'Hare and the destination city.

A stage length look-up was developed accordingly for each of the four future years of analysis, and was used for the No Action and Build Alternative scenarios.

TABLE F-4
INM AIRCRAFT TYPE LOOKUP – CONSTRUCTION PHASE I

Airline Code	Aircraft Type (per PMAD Schedule)	INM Type	Lookup Assignments
AAL	738	737800	100.0%
AAL	739	737800	100.0%
AAL	763	767300	100.0%
AAL	772	777300	100.0%
AAL	CR7	CL601	100.0%
AAL	ER4	EMB145	100.0%
AAL	ERD	EMB145	100.0%
AAL	M80	MD82	75.0%
AAL	M80	MD83	25.0%
ABX	D8F	DC86BT	100.0%
ACA	319	A320	100.0%
ACA	320	A320	100.0%
ACA	CRJ	CL601	100.0%
AFL	763	767400	100.0%
AFR	343	A340	100.0%
AFR	74F	747R21	100.0%
AJM	320	A320	100.0%
AMX	M87	MD83	100.0%
ANA	773	777300	100.0%
ASA	737	737700	100.0%
AUA	343	A340	100.0%
AWE	319	A319	100.0%
AWE	320	A320	100.0%
AWI	CR7	CL601	100.0%
AWI	CR9	CL601	100.0%
AWI	CRJ	CL601	100.0%
AZA	763	767300	100.0%
BAW	772	777200	60.0%
BAW	772	777300	40.0%
BLR	CR7	CL601	100.0%
BLR	CR9	CL601	100.0%
BLR	CRJ	CL601	100.0%
BMA	332	A33034	100.0%
CAA	CR7	CL601	100.0%
CAL	74F	7472G2	75.0%
CAL	74F	747400	25.0%
CCA	74F	747400	100.0%
CHP	737	7373B2	100.0%
CHY	M1F	MD11GE	100.0%
CKK	M1F	MD11PW	100.0%
COA	733	737300	100.0%
COA	735	737500	100.0%
COA	738	737800	100.0%
COA	739	737800	100.0%
COA	CR7	CL601	100.0%
COA	M80	MD82	100.0%
GIA	BE30	GASEPF	100.0%
GIA	BE40	MU3001	100.0%
GIA	BE58	CNA441	100.0%
GIA	C210	GASEPV	100.0%
GIA	C550	CNA500	100.0%
GIA	C560	CNA500	100.0%
GIA	C650	CIT3	100.0%
GIA	C750	CNA750	100.0%
GIA	CL60	CL600	100.0%
GIA	F900	CL600	100.0%
GIA	FA20	LEAR35	100.0%
GIA	FA50	CL600	100.0%
GIA	G2	GIIB	100.0%
GIA	G4	GIV	100.0%
GIA	G5	GIV	100.0%
GIA	LJ30	LEAR35	100.0%
GIA	LJ35	LEAR35	100.0%
GIA	LJ45	LEAR35	100.0%
GIA	LJ55	LEAR35	100.0%
GIA	LJ60	LEAR35	100.0%
GLC	74F	74720B	75.0%
GLC	74F	747400	25.0%
GWY	320	A320	100.0%
IBE	343	A340	100.0%
JAL	744	747R21	100.0%
JAL	74F	74720B	100.0%
JAL	772	777200	100.0%
JAL	773	777300	100.0%
JDC	C650	CIT3	100.0%
KAC	343	A340	100.0%
KAL	744	747400	100.0%
KAL	74F	74720B	25.0%
KAL	74F	747400	75.0%
KLM	74M	747R21	100.0%
LOT	763	767300	100.0%
LRC	320	A32023	100.0%
MXA	319	A320	100.0%
MXA	320	A32023	100.0%
MXA	752	757PW	100.0%
NCA	74F	747R21	100.0%
NKS	M80	MD81	25.0%
NKS	M80	MD82	50.0%
NKS	M80	MD83	25.0%
NWA	319	A320	100.0%
NWA	320	A320	100.0%
NWA	74F	74720B	75.0%

TABLE F-4
INM AIRCRAFT TYPE LOOKUP – CONSTRUCTION PHASE I

Airline Code	Aircraft Type (per PMAD Schedule)	INM Type	Lookup Assignments	Airline Code	Aircraft Type (per PMAD Schedule)	INM Type	Lookup Assignments
COM	CR7	CL601	100.0%	NWA	74F	747400	25.0%
CPA	74F	747R21	100.0%	NWA	D95	DC95HW	100.0%
CRX	332	A330	100.0%	NWA	D9S	DC93LW	100.0%
DAL	732	737N17	100.0%	PAC	74F	74720B	75.0%
DAL	752	757PW	100.0%	PAC	74F	747400	25.0%
DAL	763	767300	100.0%	RJA	342	A340	100.0%
DAL	M80	MD88	100.0%	RYN	A3F	A300	100.0%
DAL	M90	MD9025	100.0%	SAB	333	A330	100.0%
DHL	72F	727EM2	50.0%	SAB	773	777300	100.0%
DHL	72F	727Q9	50.0%	SAS	333	A33034	100.0%
DHL	A3F	A300	100.0%	SAS	343	A340	100.0%
DLH	320	A320	100.0%	SIA	773	777300	100.0%
DLH	343	A340	100.0%	SWR	332	A330	100.0%
DLH	744	747R21	100.0%	UAL	319	A319	100.0%
DLH	74F	747R21	100.0%	UAL	320	A32023	100.0%
EGF	CR7	CL601	100.0%	UAL	733	737300	100.0%
EGF	ER4	EMB145	100.0%	UAL	744	747400	100.0%
EGF	ERD	EMB145	100.0%	UAL	752	757PW	100.0%
EIA	LJ35	LEAR35	100.0%	UAL	763	767300	100.0%
EIN	332	A330	100.0%	UAL	772	777200	100.0%
EJA	C560	CNA560	100.0%	UAL	CR7	CL601	100.0%
EJA	C56X	MU3001	100.0%	UAL	CR9	CL601	100.0%
EJA	C650	CIT3	100.0%	UAL	CRJ	CL601	100.0%
EJA	C750	CNA750	100.0%	UPS	74F	74720B	75.0%
EJA	F2TH	CL600	100.0%	UPS	74F	747400	25.0%
EJA	H25C	HS125	100.0%	UPS	76F	767300	100.0%
EWW	A3F	A300	100.0%	UPS	D8F	DC870	100.0%
FDX	31F	A310	100.0%	USA	733	737300	40.0%
FDX	72F	727EM1	25.0%	USA	733	7373B2	60.0%
FDX	72F	727EM2	75.0%	USA	734	737400	100.0%
FDX	A3F	A300	100.0%	VIR	744	747400	100.0%
FDX	D1F	DC1010	100.0%				
FDX	M1F	MD11GE	100.0%				
GEC	74F	747R21	100.0%				

Sources: Base data prepared by Landrum and Brown, Inc. [CCT] with concurrence by Leigh Fisher Associates [TPC], *Review of INM Fleet Mix Assumptions for OMP EIS 2002 Baseline Case*, dated 17 June 2003. Adjustments to future years done by Leigh Fisher Associates [TPC].

TABLE F-5
INM AIRCRAFT TYPE LOOKUP – CONSTRUCTION PHASE II

Airline Code	Aircraft Type (per PMAD Schedule)	INM Type	Lookup Assignments
AAL	738	737800	100%
AAL	739	737800	100%
AAL	763	767300	100%
AAL	772	777300	100%
AAL	M80	MD82	75%
AAL	M80	MD83	25%
ABX	D8F	DC86BT	100%
ACA	319	A320	100%
ACA	320	A320	100%
ACA	CRJ	CL601	100%
AFL	763	767400	100%
AFR	343	A340	100%
AFR	74F	747R21	100%
AJM	320	A320	100%
AMX	M87	MD83	100%
ANA	773	777300	100%
ASA	737	737700	100%
AUA	343	A340	100%
AWE	319	A319	100%
AWE	320	A320	100%
AWI	CR7	CL601	100%
AWI	CR9	CL601	100%
AWI	CRJ	CL601	100%
AZA	763	767300	100%
BAW	772	777200	60%
BAW	772	777300	40%
BLR	CR7	CL601	100%
BLR	CR9	CL601	100%
BLR	CRJ	CL601	100%
BMA	332	A33034	100%
CAA	CR7	CL601	100%
CAL	74F	7472G2	50%
CAL	74F	747400	50%
CCA	74F	747400	100%
CHP	737	7373B2	100%
CHY	M1F	MD11GE	100%
COA	737	737700	100%
COA	738	737800	100%
COA	739	737800	100%
COA	CR7	CL601	100%
COM	CR7	CL601	100%
CPA	74F	747R21	100%
CRX	332	A330	100%
DAL	738	737800	100%
DAL	739	737800	100%
DAL	752	757PW	100%
DHL	72F	727EM2	50%
GEC	74F	747R21	100%
GIA	BE30	GASEPF	100%
GIA	BE40	MU3001	100%
GIA	BE58	CNA441	100%
GIA	C210	GASEPV	100%
GIA	C550	CNA500	100%
GIA	C560	CNA500	100%
GIA	C650	CIT3	100%
GIA	C750	CNA750	100%
GIA	CL60	CL600	100%
GIA	F900	CL600	100%
GIA	FA20	LEAR35	100%
GIA	FA50	CL600	100%
GIA	G2	GIIB	100%
GIA	G4	GIV	100%
GIA	G5	GIV	100%
GIA	LJ30	LEAR35	100%
GIA	LJ35	LEAR35	100%
GIA	LJ45	LEAR35	100%
GIA	LJ55	LEAR35	100%
GIA	LJ60	LEAR35	100%
GWY	320	A320	100%
IBE	346	A340	100%
JAL	744	747R21	100%
JAL	74F	74720B	100%
JAL	773	777300	100%
JDC	C650	CIT3	100%
KAC	343	A340	100%
KAL	744	747400	100%
KAL	74F	74720B	50%
KAL	74F	747400	50%
KLM	74M	747R21	100%
LAN	763	767300	100%
LOT	763	767300	100%
LRC	320	A32023	100%
MXA	319	A320	100%
MXA	320	A32023	100%
MXA	752	757PW	100%
NCA	74F	747R21	100%
NKS	M80	MD81	25%
NKS	M80	MD82	50%
NKS	M80	MD83	25%
NWA	319	A320	100%
NWA	320	A320	100%
NWA	74F	74720B	50%
NWA	74F	747400	50%
PAC	74F	74720B	50%

TABLE F-5
INM AIRCRAFT TYPE LOOKUP – CONSTRUCTION PHASE II

Airline Code	Aircraft Type (per PMAD Schedule)	INM Type	Lookup Assignments	Airline Code	Aircraft Type (per PMAD Schedule)	INM Type	Lookup Assignments
DHL	72F	727Q9	50%	PAC	74F	747400	50%
DHL	A3F	A300	100%	RJA	342	A340	100%
DLH	320	A320	100%	SAB	333	A330	100%
DLH	343	A340	100%	SAS	333	A33034	100%
DLH	380[2]	A380	100%	SAS	343	A340	100%
EGF	CR7	CL601	100%	SIA	773	777300	100%
EGF	ER4	EMB145	100%	THY	343	A340	100%
EGF	ERD	EMB145	100%	UAL	319	A319	100%
EIA	LJ35	LEAR35	100%	UAL	320	A32023	100%
EIN	332	A330	100%	UAL	321	A32123	100%
EJA	C560	CNA560	100%	UAL	733	737300	100%
EJA	C56X	MU3001	100%	UAL	744	747400	100%
EJA	C650	CIT3	100%	UAL	763	767300	100%
EJA	C750	CNA750	100%	UAL	772	777200	100%
EJA	F2TH	CL600	100%	UPS	74F	74720B	50%
EJA	H25C	HS125	100%	UPS	74F	747400	50%
EWW	A3F	A300	100%	UPS	75F	757PW	50%
FDX	31F	A310	100%	UPS	75F	757RR	50%
FDX	72F	727EM1	25%	UPS	76F	767300	100%
FDX	72F	727EM2	75%	UPS	D8F	DC870	100%
FDX	A3F	A300	100%	USA	319	A320	100%
FDX	D1F	DC1010	100%	USA	320	A320	100%
FDX	M1F	MD11GE	100%	VIR	744	747400	100%

Sources: Base data prepared by Landrum and Brown, Inc. [CCT] with concurrence by Leigh Fisher Associates [TPC], *Review of INM Fleet Mix Assumptions for OMP EIS 2002 Baseline Case*, dated 17 June 2003. Adjustments to future years done by Leigh Fisher Associates [TPC].

TABLE F-6
INM AIRCRAFT TYPE LOOKUP – BUILD OUT

Airline Code	Aircraft Type (per PMAD Schedule)	INM Type	Lookup Assignments
AAL	738	737800	100%
AAL	739	737800	100%
AAL	763	767300	100%
AAL	772	777300	100%
ABX	76F	767CF6	100%
ACA	319	A320	100%
ACA	320	A320	100%
ACA	CRJ	CL601	100%
AFL	763	767400	100%
AFR	343	A340	100%
AFR	74F	747R21	100%
AJM	320	A320	100%
AMX	737	737700	100%
ANA	773	777300	100%
ASA	737	737700	100%
AUA	343	A340	100%
AWE	319	A319	100%
AWE	320	A320	100%
AWI	CR7	CL601	100%
AWI	CR9	CL601	100%
AWI	CRJ	CL601	100%
AZA	763	767300	100%
BAW	772	777200	60%
BAW	772	777300	40%
BLR	CR7	CL601	100%
BLR	CR9	CL601	100%
BLR	CRJ	CL601	100%
BMA	332	A33034	100%
CAA	CR7	CL601	100%
CAL	744	747400	100%
CAL	74F	7472G2	25%
CAL	74F	747400	75%
CCA	74F	747400	100%
CHP	737	7373B2	100%
CHY	M1F	MD11GE	100%
COA	737	737700	100%
COA	738	737800	100%
COA	739	737800	100%
COA	CR7	CL601	100%
COM	CR7	CL601	100%
CPA	744	747400	100%
CPA	74F	747R21	100%
CRX	332	A330	100%
CSN[1]	772	777200	100%
DAL	738	737800	100%
DAL	739	737800	100%
DHL	A3F	A300	100%
GIA	BE40	MU3001	100%
GIA	BE58	CNA441	100%
GIA	C210	GASEPV	100%
GIA	C550	CNA500	100%
GIA	C560	CNA500	100%
GIA	C650	CIT3	100%
GIA	C750	CNA750	100%
GIA	CL60	CL600	100%
GIA	F900	CL600	100%
GIA	FA20	LEAR35	100%
GIA	FA50	CL600	100%
GIA	G4	GIV	100%
GIA	G5	GIV	100%
GIA	LJ30	LEAR35	100%
GIA	LJ35	LEAR35	100%
GIA	LJ45	LEAR35	100%
GIA	LJ55	LEAR35	100%
GIA	LJ60	LEAR35	100%
GWY	320	A320	100%
IBE	346	A340	100%
JAL	744	747R21	100%
JAL	74F	74720B	100%
JAL	773	777300	100%
JBU	320	A32023	100%
JDC	C650	CIT3	100%
KAC	343	A340	100%
KAL	744	747400	100%
KAL	74F	74720B	25%
KAL	74F	747400	75%
KLM	74M	747R21	100%
LAN	763	767300	100%
LOT	763	767300	100%
LRC	320	A32023	100%
MXA	319	A320	100%
MXA	320	A32023	100%
MXA	321	A32123	100%
NCA	74F	747R21	100%
NKS	M80	MD81	25%
NKS	M80	MD82	50%
NKS	M80	MD83	25%
NWA	319	A320	100%
NWA	320	A320	100%
NWA	74F	74720B	25%
NWA	74F	747400	75%
OAL	343	A340	100%
OTH	319	A319	100%
OTH	717	717200	100%

TABLE F-6
INM AIRCRAFT TYPE LOOKUP – BUILD OUT

Airline Code	Aircraft Type (per PMAD Schedule)	INM Type	Lookup Assignments	Airline Code	Aircraft Type (per PMAD Schedule)	INM Type	Lookup Assignments
DLH	320	A320	100%	PAC	74F	74720B	25%
DLH	343	A340	100%	PAC	74F	747400	75%
DLH	346	A340	100%	RJA	342	A340	100%
DLH	380	A380	100%	SAB	333	A330	100%
EGF	CR7	CL601	100%	SAS	333	A33034	100%
EGF	CR9	CL601	100%	SAS	343	A340	100%
EGF	ER4	EMB145	100%	SIA	773	777300	100%
EIA	LJ35	LEAR35	100%	TAP	343	A340	100%
EIN	332	A330	100%	THY	343	A340	100%
EJA	C560	CNA560	100%	UAL	319	A319	100%
EJA	C56X	MU3001	100%	UAL	320	A32023	100%
EJA	C650	CIT3	100%	UAL	321	A32123	100%
EJA	C750	CNA750	100%	UAL	744	747400	100%
EJA	F2TH	CL600	100%	UAL	763	767300	100%
EJA	H25C	HS125	100%	UAL	772	777200	100%
ELY	772	777200	100%	UPS	74F	74720B	25%
EWW	A3F	A300	100%	UPS	74F	747400	75%
FDX	31F	A310	100%	UPS	75F	757PW	50%
FDX	A3F	A300	100%	UPS	75F	757RR	50%
FDX	M1F	MD11GE	100%	UPS	76F	767300	100%
FIN[1]	343	A340	100%	USA	319	A320	100%
GEC	74F	747R21	100%	USA	321	A320	100%
GIA	BE30	GASEPF	100%	VIR	380	A380	100%

Sources: Base data prepared by Landrum and Brown, Inc. [CCT] with concurrence by Leigh Fisher Associates [TPC], *Review of INM Fleet Mix Assumptions for OMP EIS 2002 Baseline Case,* dated 17 June 2003. Adjustments to future years done by Leigh Fisher Associates [TPC].

TABLE F-7
INM AIRCRAFT TYPE LOOKUP – BUILD OUT + 5

Airline Code	Aircraft Type (per PMAD Schedule)	INM Type	Lookup Assignments
AAL	738	737800	100%
AAL	739	737800	100%
AAL	763	767300	100%
AAL	772	777300	100%
AAR[1]	772	777200	100%
ABX	76F	767CF6	100%
ACA	319	A320	100%
ACA	320	A320	100%
ACA	CRJ	CL601	100%
AFL	763	767400	100%
AFR	343	A340	100%
AFR	380	A380	100%
AFR	74F	747R21	100%
AJM	320	A320	100%
AMX	737	737700	100%
ANA	773	777300	100%
ASA	737	737700	100%
AUA	343	A340	100%
AWE	319	A319	100%
AWE	320	A320	100%
AWI	CR7	CL601	100%
AWI	CR9	CL601	100%
AWI	CRJ	CL601	100%
AZA	763	767300	100%
BAW	772	777200	60%
BAW	772	777300	40%
BLR	CR7	CL601	100%
BLR	CR9	CL601	100%
BLR	CRJ	CL601	100%
BMA	332	A33034	100%
CAA	CR7	CL601	100%
CAL	744	747400	100%
CAL	74F	747400	100%
CCA	343	A340	100%
CCA	74F	747400	100%
CES	346	A340	100%
CHP	737	7373B2	100%
CHY	M1F	MD11GE	100%
COA	737	737700	100%
COA	739	737800	100%
COA	CR9	CL601	100%
COM	CR7	CL601	100%
COM	CR9	CL601	100%
CPA	744	747400	100%
CPA	74F	747R21	100%
CRX	332	A330	100%
CSN	772	777200	100%
FIN	343	A340	100%
GEC	74F	747R21	100%
GIA	BE40	MU3001	100%
GIA	BE58	CNA441	100%
GIA	C210	GASEPV	100%
GIA	C550	CNA500	100%
GIA	C560	CNA500	100%
GIA	C650	CIT3	100%
GIA	C750	CNA750	100%
GIA	CL60	CL600	100%
GIA	F900	CL600	100%
GIA	FA20	LEAR35	100%
GIA	FA50	CL600	100%
GIA	G4	GIV	100%
GIA	G5	GIV	100%
GIA	LJ30	LEAR35	100%
GIA	LJ35	LEAR35	100%
GIA	LJ45	LEAR35	100%
GIA	LJ55	LEAR35	100%
GIA	LJ60	LEAR35	100%
GWY	320	A320	100%
IBE	343	A340	100%
IBE	346	A340	100%
JAL	744	747R21	100%
JAL	74F	74720B	100%
JAL	773	777300	100%
JBU	320	A32023	100%
JDC	C650	CIT3	100%
KAC	343	A340	100%
KAL	744	747400	100%
KAL	74F	747400	100%
KLM	74M	747R21	100%
LAN	763	767300	100%
LOT	763	767300	100%
LRC	320	A32023	100%
MXA	319	A320	100%
MXA	320	A32023	100%
MXA	321	A32123	100%
NCA	74F	747R21	100%
NKS	737	737800	100%
NWA	319	A320	100%
NWA	320	A320	100%
NWA	74F	747400	100%
OAL	343	A340	100%
OTH	319	A319	100%
OTH	717	717200	100%
OTH	737	737800	100%

TABLE F-7
INM AIRCRAFT TYPE LOOKUP – BUILD OUT + 5

Airline Code	Aircraft Type (per PMAD Schedule)	INM Type	Lookup Assignments	Airline Code	Aircraft Type (per PMAD Schedule)	INM Type	Lookup Assignments
DAL	738	737800	100%	PAC	74F	747400	100%
DAL	739	737800	100%	RJA	342	A340	100%
DHL	A3F	A300	100%	SAB	333	A330	100%
DLH	320	A320	100%	SAS	333	A33034	100%
DLH	346	A340	100%	SAS	343	A340	100%
DLH	380	A380	100%	SIA	380	A380	100%
EGF	CR7	CL601	100%	TAP	343	A340	100%
EGF	CR9	CL601	100%	THA	744	747400	100%
EGF	ER4	EMB145	100%	THY	343	A340	100%
EIA	LJ35	LEAR35	100%	UAE	380	A380	100%
EIN	332	A330	100%	UAL	319	A319	100%
EJA	C560	CNA560	100%	UAL	320	A32023	100%
EJA	C56X	MU3001	100%	UAL	321	A32123	100%
EJA	C650	CIT3	100%	UAL	744	747400	100%
EJA	C750	CNA750	100%	UAL	763	767300	100%
EJA	F2TH	CL600	100%	UAL	772	777200	100%
EJA	H25C	HS125	100%	UPS	74F	747400	100%
ELY	772	777200	100%	UPS	75F	757PW	50%
EWW	A3F	A300	100%	UPS	75F	757RR	50%
FDX	31F	A310	100%	UPS	76F	767300	100%
FDX	38F	A380	100%	USA	321	A320	100%
FDX	A3F	A300	100%	VIR	380	A380	100%
FDX	M1F	MD11GE	100%	VRG	763	767300	100%

Sources: Base data prepared by Landrum and Brown, Inc. [CCT] with concurrence by Leigh Fisher Associates [TPC], *Review of INM Fleet Mix Assumptions for OMP EIS 2002 Baseline Case*, dated 17 June 2003. Adjustments to future years done by Leigh Fisher Associates [TPC].

Flight Track Structure (Location)

A single flight track future structure was developed for all future year No Action Alternative cases. The future No Action Alternative structure was based on the same radar tracks as the 2002 Baseline case, but was grouped into seven configuration categories. In this process, the density of the Baseline flight track structure was also simplified due to the following considerations. The 2002 Baseline INM flight track structure was very detailed as it was developed based on a large sample of radar data. By contrast the flight track structure for the future development alternatives were to be based on TAAM tracks. Therefore, in the absence of radar observations, flight tracks for the future development alternatives would be defined on a more general basis which could have resulted in potential inconsistencies between the No Action Alternative and Build Alternatives analyses. These inconsistencies could further have lead to material differences in noise calculations, especially in areas more distant from O'Hare.

As noted, the flight track structure for the future no action conditions was subdivided into seven categories including the existing Plan B, Plan X, Plan W, IFR 14s, and IFR 27s configurations along with a Fly Quiet category and the "Other" configuration which consists of

radar tracks during times of mixed airfield configurations. A subsequent noise analysis was then conducted to verify that the simplified track structure would not result in materially different estimates of noise exposure in the vicinity of O'Hare relative to the 2002 Baseline structure.[28]

The resulting flight tracks that were input to the noise modeling for the Future No Action Alternatives are illustrated in **Attachment F-2** in this Appendix. The exhibits display the projected flight path flows for each of the future No Action Alternative (Alternative A) operating configurations identified in **Appendix D, Simulation Modeling**, **Exhibit D-1**.

Runway and Flight Track Use

One of the final steps in the data development process was to distribute the weighted average annual day flight schedule upon the runway and track structure for each of the above configuration categories. These assignments were based on flight information from the TAAM output schedule, which includes aircraft type and category (W-heavy jets, J-medium and small jets, and P-turboprops and piston props), operations type (Arrival/Departure), time of day (day/night), runway used and fix. One of the key variables in this assignment process is departure fix. O'Hare operation patterns are primarily defined according to the destination or origin of each operation. The second key variable is the aircraft category. In many cases, heavy aircraft use specific runways based on available length. These variables are specifically defined in TAAM via runway and fix rules. Once the scheduled operations were distributed to runway and flight paths, the data was compiled into INM input files (operations, track and track definition).

F.2.1.3 Future Development Alternatives

This subsection describes the data sources and procedures that were followed in developing the noise modeling input data for future development alternatives noise contours. Consistent with future No Action Alternative cases, the primary data source for development alternatives runs was the output from a series of airfield simulations prepared for corresponding cases and years using TAAM. (See **Appendix D** for a description of the TAAM simulations.) Annual Average Day Operation levels were based on the corresponding derivative activity forecasts used for the airfield simulations and are described in **Appendix B, Aviation Demand Forecast**. Finally, the flight track structure was based on a combination of data from the 2002 Baseline case and TAAM output. However, the flight track geometry for all future alternative cases was patterned after the track data from the TAAM output.

Overall, the preparation of input data for the development alternatives followed a similar series of steps as described for the future no action cases. However, since these cases reflect forecasted operating conditions for a series of alternative runway configurations, there were a few notable differences in the development process as follows:

[28] TPC memo "Concurrence on Modified Flight Track Structure from 2002 Base Case" dated March 18, 2004.

a) Runway configurations modeled in TAAM for each development case varied by development alternative while the same set of configurations was used in each future no action case. As a result, a unique set of flight tracks had to be created for the future development cases.

b) With the exception of the future 2007 with project, the runway use assumptions defined in TAAM for Flight Quiet periods for the development alternative cases were carried forward to the noise analysis without adjustment. It was determined that the future airfield development alternatives could provide more operating flexibility thereby creating an opportunity for closer adherence to the flight quiet priorities as assumed in the TAAM analysis.

c) Adjustments were made to runway assignments directly in the Build Alternative cases to cover activity not modeled in TAAM rather than create a separate operating configuration as was done in the future no action cases.

Aircraft Operation Schedules from TAAM

Similar to the future no action cases, the process began by creating an operations schedule for each of the configurations modeled in TAAM for the respective case and year. As noted, the TAAM output files provide the following information for each aircraft operation: airline, aircraft type, type of operation, time of operation (day, night or fly quiet), runway used and fix use. These configuration schedules were then carried forward to the next stages of development process as described in the following.

Aircraft Operations

Total operation counts for each modeled year were derived from the FAA's *2002 Terminal Area Forecast*s (TAF).[29] The total operational count was then used to determine the Average Annual Day (AAD) value. The conversion of operations to AAD is consistent with standard practice as airport noise contours are based on annual average day AAD activity levels. Since the input schedules from TAAM reflect the peak month, average day, or the average day in the peak month (PMAD or ADPM), the PMAD must be converted to AAD. In this step the PMAD to AAD conversion factors shown in **Table F-8** below were applied.

[29] Adjusted by the EIS Team as described in **Appendix D, Aviation Demand Forecast**.

TABLE F-8
PMAD TO AAD CONVERSION – WITH PROJECT ALTERNATIVES

Phase	Forecast Annual Operations	PMAD Operations	AAD Operations	PMAD to AAD conversion factor(a)
Construction Phase I	1,026,300	2,898	2,812	0.9702
Construction Phase II	1,057,200	2,987	2,896	0.9697
Build Out	1,120,600	3,169	3,070	0.9688
Build Out+5	1,194,000	3,374	3,271	0.9695

Note: (a) This factor was obtained dividing PMAD operations by AAD operations.
Sources: Forecast Annual Operations, Terminal Area Forecasts, Federal Aviation Administration, 2003.
PMAD Operations, CCT TAAM data packages.
AAD Operations, Leigh Fisher Associates [TPC], October 2004.

Aircraft Fleet Mix

The aircraft fleet mix for the Build Alternatives (Alternatives C, D, and G) are based on the respective TAAM output data, which indicates the projected airline and aircraft type for each operation. Using the same look-up table described in the previous future no action section, each operation in the TAAM output was then matched with a corresponding aircraft type in the INM database and assignments were made accordingly.

Flight Profiles

The same stage length look-up that was described in the future No Action Alternative cases was used herein to assign stage lengths for the corresponding with Build Alternative cases.

Flight Tracks (Location and Use)

Flight tracks for the future development alternatives were derived based on a combination of the future No Action flight track structure and the flight track geometry depicted in the TAAM output. The No Action tracks were used to the maximum extent practical for existing runways given that these tracks were developed based on observations of actual flight operations and their dispersion characteristics were similarly based on observed flight operations.

Tracks for new proposed runways were based on the track structure defined in TAAM as this output was considered the best available indicator of the future airspace structure for each operating configuration. In these cases, the TAAM track was the backbone of a cluster of tracks and up to 4 sub-tracks were defined for each backbone. In the final stage, all INM track geometry was checked for consistency with the TAAM geometry and adjustments were made accordingly.

A summary of the five-step process track development process follows:

Step 1 – Each aircraft operation receives a 6 digit code based on aircraft category, operation mode, configuration, runway, time of day, and arrival/departure fix.

Step 2 – Operations are matched and distributed among a database of future no action tracks based on their 6 digit code.

Step 3 – Any resulting unmatched operations from Step 2 are manually re-assigned to other existing 2002 Baseline tracks or—as in the case of new runways—to newly created tracks.

Step 4 – New tracks were created with the TAAM track as the backbone and up to 4 sub-tracks were defined to depict dispersion about the mean of the backbone track.

Step 5 – All track geometry is adjusted to match the future TAAM flight track structure.

Exhibits F-17 and **F-18** illustrate how the INM input tracks compared to the TAAM tracks for the Build Out + 5 Alternative C case.

The resulting flight tracks that were input to the noise modeling for each of the Build Alternatives are illustrated in **Attachment F-2** in this Appendix**.** The exhibits display the projected flight path flows for each of the alternative operating configurations identified in **Appendix D, Simulation Modeling**, **Exhibits D-2** to **D-6**.

Runway Use

Runway utilization was derived from TAAM output data using the following four step process:

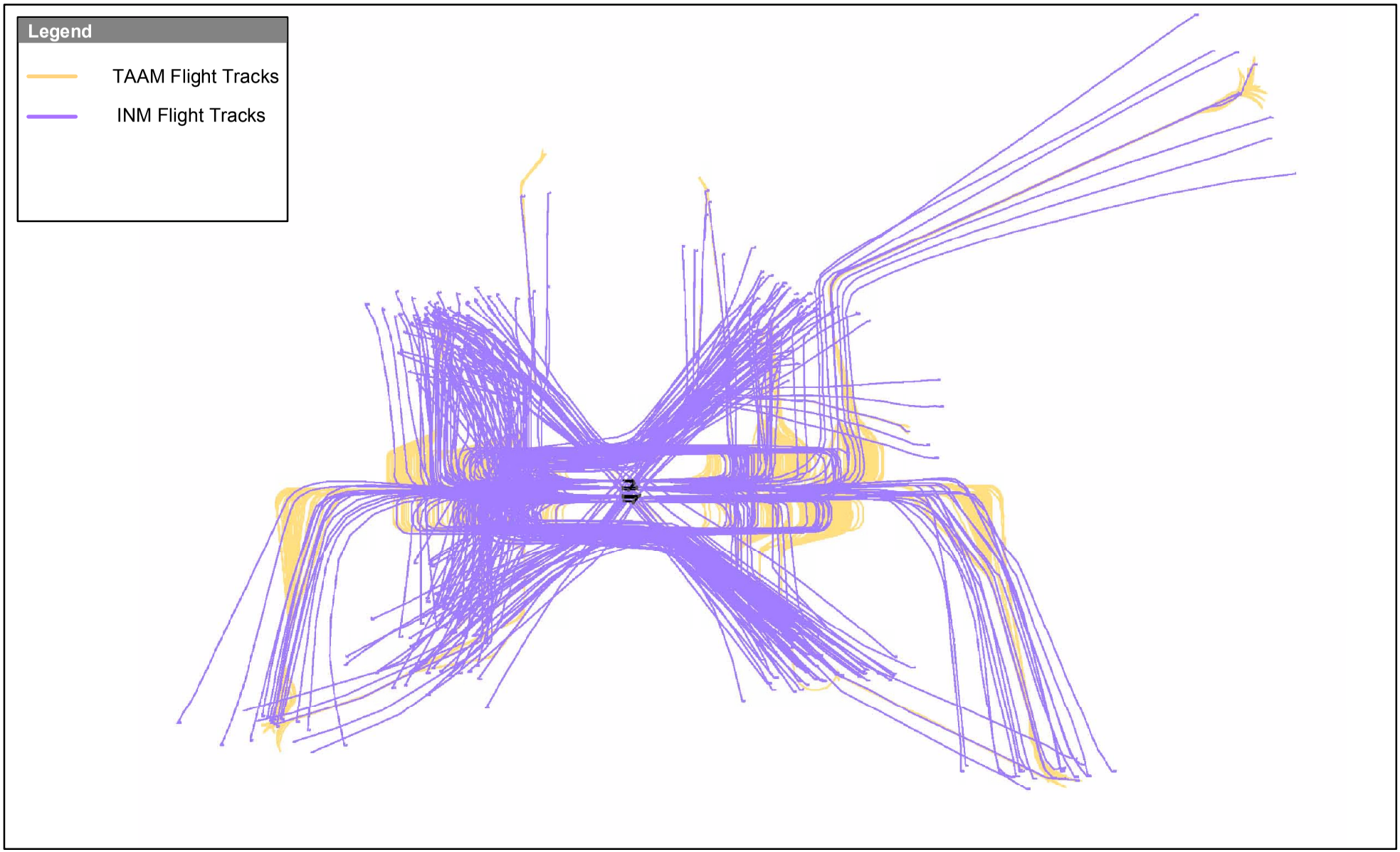
Step 1 - Runway use data for each configuration modeled in TAAM was extracted from TAAM output files.

Step 2 – Runway use data for each configuration modeled in TAAM was annualized according to its annual percent occurrence factor.

Step 3 – Runway use data for each configuration modeled in TAAM was adjusted to account for configuration use during infrequent weather conditions that were not modeled in the airfield analysis (e.g., Parallel 4's, Parallel'22s)

Step 4 – Further adjustments to the runway use data from Step 3 were made to account for non-modeled runway activity that may occur due to unforeseen circumstances such as runway closures for maintenance purposes. This step involved shifting a small percentage—generally 1 percent or less—of the total runway activity from a "Source" runway to a "Receptor" runway.

The annual percent occurrence for each configuration and runway use adjustments for Construction Phase I, Construction Phase II, Build Out, and Build Out + 5 for Alternatives C, D, and G are shown in **Table F-9** through **Table F-18** and were applied accordingly to annualize operations to yield AAD totals.



Source: Leigh Fisher Associates [TPC], 2004

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

Comparison of Arrival Flight Tracks Alternative C Build Out Plus Five Years

▶ **Exhibit F-17**

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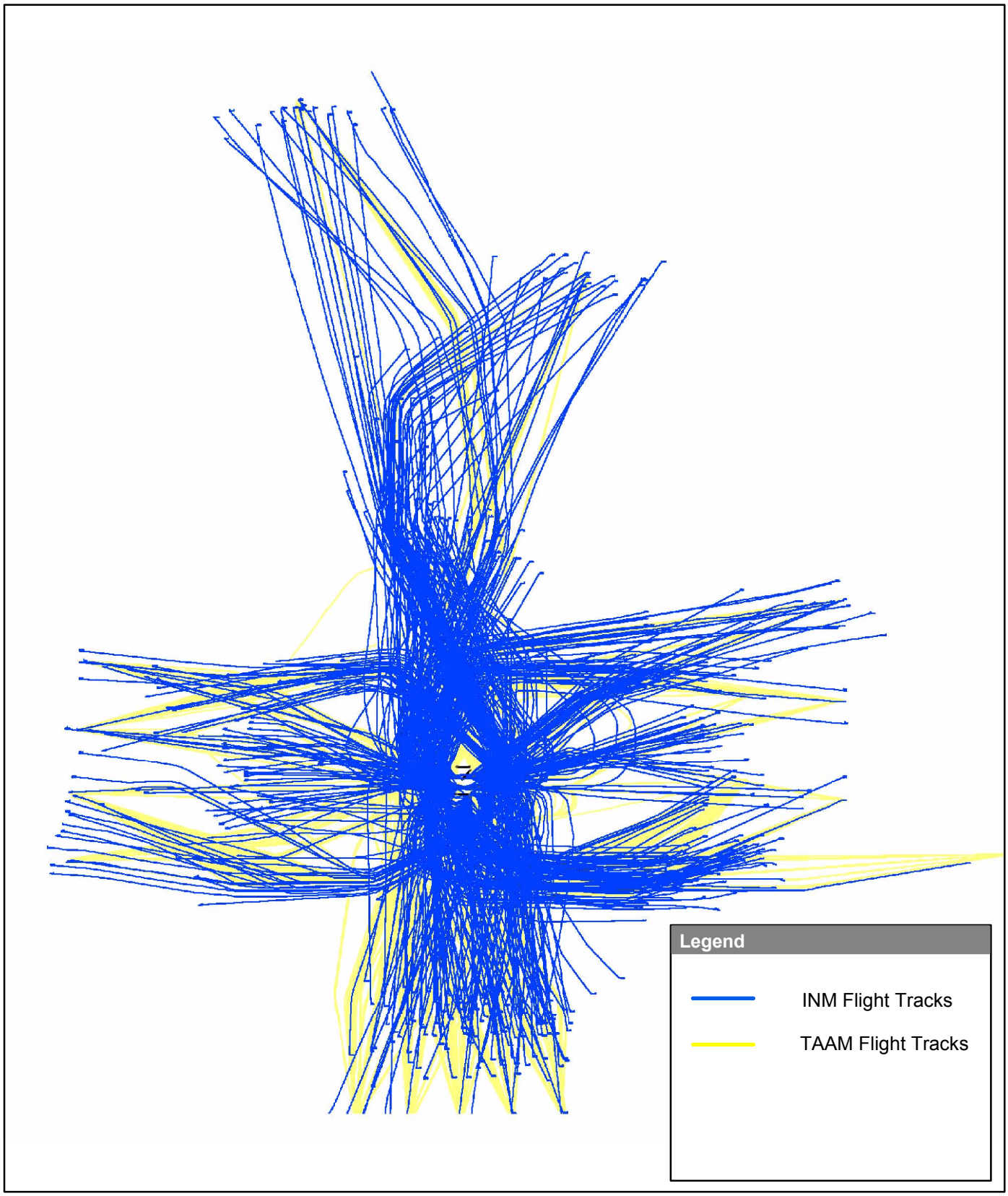

Source: Leigh Fisher Associates [TPC]. 2004.

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

Comparison of Departure Flight Tracks Alternative C Build Out Plus Five Years

Exhibit F-18

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Construction Phase I – Alternatives C, D, and G

The tables below identify the configuration data for Alternatives C, D, and G for Construction Phase I.

TABLE F-9
CONFIGURATION DATA ANNUALIZATION
ALTERNATIVES C, D, AND G – CONSTRUCTION PHASE I

TAAM Experiment	Runway Use Configuration	Weather Condition (a)	TAAM Annual Percent Occurrence	Adjusted Annual Percent Occurrence
32	Plan X	VFR	23.1%	23.1%
50	Parallel 27s	VFR	57.0%	57.0%
34	Plan B	VFR	10.6%	10.6%
35	Parallel 27s	IFR	6.0%	6.0%
37	Parallel 9s	IFR	3.3%	3.3%
Total			100%	100%

Note: (a) VFR conditions occur when the cloud ceiling is at least 1,000 feet above the Airport's elevation and visibility is at least 3 statute miles. IFR conditions occur when the cloud ceiling is less than 1,000 feet above the Airport's elevation or visibility is less than 3 statute miles.

Sources: Leigh Fisher Associates [TPC] analysis of Draft TAAM Simulation Data for Noise and Air Quality Analysis, 2007 With Project, Ricondo & Associates, Inc. [CCT], April 2004.

TABLE F-10
RUNWAY USE ADJUSTMENTS FOR NON-MODELED ACTIVITY
ALTERNATIVES C, D, AND G – CONSTRUCTION PHASE I

Source Runway	Operation Type	Receptor Runway	Activity Shift
04L	Departures	04R	1.0%
09R	Departures	09L	1.0%
33L	Departures	27L	1.0%
32L	Departures	27R	1.0%
09R	Arrivals	09L	1.0%
27L	Arrivals	32L	0.5%
28R	Arrivals	32L	0.5%
27L	Arrivals	32R	0.5%
27R	Arrivals	32R	0.5%

Sources: Leigh Fisher Associates [TPC] analysis, October 2004.

Construction Phase II – Alternatives C, D, and G

The tables below identify the configuration data for Alternatives C, D, and G for Construction Phase II.

TABLE F-11
CONFIGURATION DATA ANNUALIZATION
ALTERNATIVES C, D, AND G – CONSTRUCTION PHASE II

TAAM Experiment	Runway Use Configuration	Weather Condition(a)	TAAM Annual Percent Occurrence	Adjusted Annual Percent Occurrence
38	Parallel 9s	VFR-3	17.8%	17.8%
39	Parallel 9s	VFR-4	5.2%	5.1%
41	Parallel 27s	VFR-3 / VFR-4	67.6%	67.2%
42	Parallel 27s	IFR	4.8%	4.4%
43	Parallel 9s	IFR	4.5%	4.2%
Non-modeled	Parallel 4's	Various	-	0.4%
Non-modeled	Parallel 14's	Various	-	0.1%
Non-modeled	Parallel 22's	Various	-	0.6%
Non-modeled	Parallel 32's	Various	-	0.2%
Total			100%	100%

Note: (a) VFR-3 conditions occur when the cloud ceiling is at least 3,000 feet above the Airport's elevation and visibility is at least 5 statute miles. VFR-4 conditions occur when the cloud ceiling is less than 3,000 feet above the Airport's elevation but is at least 1,000 feet above the Airport's elevation or when visibility is less than 5 statute miles but is at least 3 statute miles. IFR conditions occur when the cloud ceiling is less than 1,000 feet above the Airport's elevation or visibility is less than 3 statute miles.

Sources: Leigh Fisher Associates [TPC] analysis of TAAM Simulation Data for Noise and Air Quality Analysis, 2009 With Project, Ricondo & Associates, Inc. [CCT], April 2004.

TABLE F-12
RUNWAY USE ADJUSTMENTS FOR NON-MODELED ACTIVITY
ALTERNATIVES C, D, AND G – CONSTRUCTION PHASE II

Source Runway	Operation Type	Receptor Runway	Activity Shift
04L	Departures	04R	1.0%
14L	Departures	24R	1.0%
28R	Departures	27L	1.0%
28R	Departures	27R	1.0%
14R	Arrivals	14L	1.0%
22R	Arrivals	22L	1.0%
28C	Arrivals	28R	1.0%
32L	Arrivals	32R	1.0%

Sources: Leigh Fisher Associates [TPC] analysis, October 2004.

Build-Out and Build-Out + 5 (Alternative C)

The tables below identify the configuration data for Alternative C for Build Out and Build Out + 5.

TABLE F-13
CONFIGURATION DATA ANNUALIZATION
ALTERNATIVE C – BUILD-OUT AND BUILD-OUT + 5

TAAM Experiment	Runway Use Configuration	Weather Condition(a)	TAAM Annual Percent Occurrence	Adjusted Annual Percent Occurrence
33, 44	Parallel 9s	VFR-1	12.6%	12.4%
51, 45	Parallel 9s	VFR-2	10.6%	10.4%
52, 46	Parallel 27s	VFR-1	41.4%	41.3%
53, 47	Parallel 27s	VFR-2	26.1%	26.0%
54, 48	Parallel 9s	IFR	4.5%	4.1%
55, 49	Parallel 27s	IFR	4.8%	4.7%
Non-modeled	Parallel 4's	Various	-	0.8%
Non-modeled	Parallel 22's	Various	-	0.3%
Total			100%	100%

Notes: (a) VFR-1 conditions occur when the cloud ceiling is at least 5,500 feet above the Airport's elevation and visibility is at least 10 statute miles. VFR-2 conditions occur when the cloud ceiling is less than 5,500 feet above the Airport's elevation but is at least 1,000 feet above the Airport's elevation or when visibility is less than 10 statute miles but is at least 3 statute miles. IFR conditions occur when the cloud ceiling is less than 1,000 feet above the Airport's elevation or visibility is less than 3 statute miles.

Sources: Leigh Fisher Associates [TPC] analysis of Draft TAAM Simulation Data for Noise and Air Quality Analysis, 2013 With Project, Ricondo & Associates [CCT], April 2004.
Leigh Fisher Associates [TPC] analysis of Draft TAAM Simulation Data for Noise and Air Quality Analysis, 2018 With Project, Ricondo & Associates [CCT], April 2004.

TABLE F-14
RUNWAY USE ADJUSTMENTS FOR NON-MODELED ACTIVITY
ALTERNATIVE C – BUILD OUT AND BUILD OUT + 5

Source Runway	Operation Type	Receptor Runway	Activity Shift
04L	Departures	04R	1.0%
09R	Departures	09L	1.0%
27L	Departures	27R	1.0%
09C	Arrivals	09R	1.0%
22R	Arrivals	22L	1.0%
28C	Arrivals	28R	1.0%

Sources: Leigh Fisher Associates [TPC] analysis, October 2004.

Build-Out and Build Out + 5 (Alternative D)

The tables below identify the configuration data for Alternative D for Build Out and Build Out + 5.

TABLE F-15
CONFIGURATION DATA ANNUALIZATION
ALTERNATIVE D – BUILD OUT AND BUILD OUT + 5

TAAM Experiment	Runway Use Configuration	Weather Condition(a)	TAAM Annual Percent Occurrence	Adjusted Annual Percent Occurrence
56, 60	Parallel 9s	VFR	23.2%	22.8%
57, 61	Parallel 27s w / 22L	VFR	67.5%	67.3%
58, 62	Parallel 9s	IFR	4.5%	4.1%
59, 63	Parallel 27s	IFR	4.8%	4.7%
Non-modeled	Parallel 4's	Various	-	0.8%
Non-modeled	Parallel 22's	Various	-	0.3%
Total			100%	100%

Notes: (a) VFR conditions occur when the cloud ceiling is at least 1,000 feet above the Airport's elevation and visibility is at least 3 statute miles. IFR conditions occur when the cloud ceiling is less than 1,000 feet above the Airport's elevation or visibility is less than 3 statute miles.

Sources: Leigh Fisher Associates [TPC] analysis of Draft TAAM Simulation Data for Noise and Air Quality Analysis, 2013 Alternative X, Ricondo & Associates, Inc. [CCT], May 2004.
Leigh Fisher Associates [TPC] analysis of Draft TAAM Simulation Data for Noise and Air Quality Analysis, 2018 Alternative X, Ricondo & Associates, Inc. [CCT], May 2004.

TABLE F-16
RUNWAY USE ADJUSTMENTS FOR NON-MODELED ACTIVITY
ALTERNATIVE D – BUILD OUT AND BUILD OUT + 5

Source Runway	Operation Type	Receptor Runway	Activity Shift
04L	Departures	04R	1.0%
09R	Departures	09L	1.0%
27L	Departures	27R	1.0%
09C	Arrivals	09R	1.0%
22R	Arrivals	22L	1.0%
28C	Arrivals	28R	1.0%

Sources: Leigh Fisher Associates [TPC] analysis, October 2004.

Build-Out and Build Out + 5 (Alternative G)

The tables below identify the configuration data for Alternative G for Build Out and Build Out + 5.

TABLE F-17
CONFIGURATION DATA ANNUALIZATION
ALTERNATIVE G – BUILD OUT AND BUILD OUT + 5

TAAM Experiment	Runway Use Configuration	Weather Condition(a)	TAAM Annual Percent Occurrence	Adjusted Annual Percent Occurrence
64, 69	Parallel 9s w / 12	VFR	23.2%	23.1%
65, 70	Parallel 27s w / 22L	VFR	67.5%	67.3%
66, 71	Parallel 9s w / 12	IFR-1	1.1%	1.0%
67, 72	Parallel 9s w / 12	IFR-2	3.4%	3.2%
68, 73	Parallel 27s w / 22L	IFR	4.8%	4.4%
Non-modeled	Parallel 4's	Various	-	0.4%
Non-modeled	Parallel 22's	Various	-	0.6%
Total			100%	100%

Notes: (a) VFR conditions occur when the cloud ceiling is at least 1,000 feet above the Airport's elevation and visibility is at least 5 statute miles. IFR-1 conditions occur when the cloud ceiling is less than 1,000 feet above the Airport's elevation but is at least 800 feet above the Airport's elevation and when visibility is less than 3 statute miles but is at least 2 statute miles. IFR-2 conditions occur when the cloud ceiling is less than 800 feet above the Airport's elevation or visibility is less than 2 statute miles.

Sources: Leigh Fisher Associates [TPC] analysis of Draft TAAM Simulation Data for Noise and Air Quality Analysis, 2013 Alternative Y, Ricondo & Associates, Inc. [CCT], May 2004.
Leigh Fisher Associates [TPC] analysis of Draft TAAM Simulation Data for Noise and Air Quality Analysis, 2018 Alternative Y, Ricondo & Associates, Inc. [CCT], May 2004.

TABLE F-18
RUNWAY USE ADJUSTMENTS FOR NON-MODELED ACTIVITY
ALTERNATIVE G – BUILD OUT AND BUILD OUT + 5

Source Runway	Operation Type	Receptor Runway	Activity Shift
04L	Departures	04R	1.0%
09R	Departures	09L	1.0%
27L	Departures	27R	1.0%
09C	Arrivals	09R	1.0%
22R	Arrivals	22L	1.0%
28C	Arrivals	28R	1.0%

Sources: Leigh Fisher Associates [TPC] analysis, October 2004.

F.2.2 Summary of INM Input Data

The following section summarizes the data used as input files for the INM simulation models. These data include the AAD aircraft operations by aircraft type, operation type (arrival or departure), and time of day.

F.2.2.1 2002 Baseline Case

Aircraft Operations

Table F-19 shows the number of daily aircraft arrivals and departures for an AAD for 2002 for the categories of aircraft that operate at the Airport.

TABLE F-19
AVERAGE DAILY OPERATIONS—2002 BASELINE

Aircraft Category	Arrivals			Departures			Operations(a)		
	Day	Night(c)	Total	Day	Night(c)	Total	Day	Night(c)	Total
Jet	1,064	84	1,148	1,050	63	1,113	2,114	147	2,261
Wide body jet	75	20	95	69	22	91	144	42	186
Propeller	33	2	35	43	1	44	76	3	79
Helicopter(b)	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1
Total	1,172	106	1,278	1,162	86	1,248	2,334	192	2,528

Notes: (a) Data rounded to the nearest whole operation—arrivals and departures do not equal due to the use of actual operation data from ANMS.
(b) Helicopter operations total less than 1 average daily operation.
(c) Night is defined as 10:00 p.m. to 6:59:59 a.m.
Source: Chicago Airport Noise Monitoring System and O'Hare International Airport 2002 Tower Counts.

Of the 2,528 AAD operations, narrow body jets accounted for 89.4 percent, wide body jets accounted for 7.4 percent, and propeller-driven aircraft accounted for the remaining 3.1 percent.

The time of day in which operations occur is important input into INM due to the nighttime flights being penalized by a factor of 10 with the DNL metric. In 2002, approximately 7.6 percent of the total operations occurred during nighttime hours (10 PM to 6:59:59 AM).

Aircraft Fleet Mix

Table F-20 shows the average daily operations by time of day for each INM type.

TABLE F-20
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
2002 BASELINE

INM Category (b)	Description	Day Arr(a)	Day Dep(a)	Day Total	Night Arr(a)	Night Dep(a)	Night Total	Total Operations
Wide Body Jets								
A300	Airbus 300	0.23	0.23	0.46	1.56	1.23	2.79	3.25
A310	Airbus 310	0.88	0.45	1.33	0.52	0.85	1.37	2.70
A330	Airbus 330	1.44	1.34	2.78	0.00	0.03	0.03	2.81
A340	Airbus 340	3.84	2.96	6.47	0.01	0.63	0.64	7.11
747200	B747-200	0.00	0.00	0.00	0.01	0.00	0.01	0.01
74720A	B747-200	0.59	0.42	1.01	0.39	0.39	0.78	1.79
74720B	B747-200	1.18	0.44	1.62	1.20	1.69	2.89	4.51
7472G2	B747-200	0.26	0.10	0.36	0.85	0.47	1.32	1.68
7473G2	B747-300	0.17	0.22	0.39	0.27	0.32	0.59	0.98
747400	B747-400	5.87	6.01	11.88	1.80	0.99	2.79	14.67
747R21	B747	8.10	6.59	14.69	3.00	3.81	6.81	21.50
767300	B767-300	22.75	21.92	44.67	2.60	2.29	4.89	49.56
767CF6	B767-200	2.83	2.58	5.41	0.01	0.09	0.10	5.51
767JT9	B767-300	0.31	0.35	0.34	0.03	0.03	0.06	0.40
777200	B777-200	15.27	15.23	30.50	1.41	0.40	1.81	32.31
777300	B777-300	6.68	6.42	13.10	0.02	0.14	0.16	13.26
A30062	Airbus A300-622R	0.06	0.03	0.09	1.30	1.33	2.63	2.72
DC1010	DC10-10	1.53	0.85	2.38	1.75	2.36	4.11	6.49
DC1030	DC10-30	0.98	0.41	1.39	0.88	1.24	2.12	3.50
DC86BT	DC8-62/63	0.06	0.02	0.08	1.42	1.28	2.70	2.78
DC870	DC8-70	0.14	0.56	0.70	1.67	1.02	2.69	3.39
DC8QN	DC8-60	0.00	0.01	0.01	0.02	0.00	0.02	0.03
MD11GE	MD-11	0.99	0.89	1.88	0.07	1.09	1.16	3.04
MD11PW	MD-11	0.76	0.72	1.48	0.30	0.18	0.48	1.96
Subtotal		74.91	68.77	143.68	22.11	21.84	43.95	187.63
Jets								
C5	Lockheed Galaxy	0.03	0.07	0.10	0.00	0.00	0.00	0.10
GV	Gulfstream GV	0.17	0.14	0.31	0.02	0.01	0.03	0.34
GIV	Gulfstream GIV-SP	0.76	0.98	1.74	0.07	0.05	0.12	1.85
T37	Cessna T37 or 318	0.00	0.01	0.01	0.00	0.00	0.00	0.01
A319	Airbus 319	49.57	50.68	100.25	8.44	5.20	13.64	113.89
A320	Airbus 320	16.61	16.82	33.43	3.05	2.22	5.27	38.70
CIT3	CIT 3	0.98	1.03	2.01	0.01	0.08	0.09	2.11
GIIB	Gulfstream GIIB	0.30	0.34	0.64	0.01	0.02	0.03	0.67
MD81	MD-81	2.17	2.25	4.42	0.21	0.09	0.30	4.71
MD82	MD-82	119.51	113.96	233.47	6.99	7.60	14.59	248.05
MD83	MD-83	41.72	38.96	80.68	2.23	2.86	5.09	85.77
MD88	MD-88	6.55	6.53	13.08	0.66	0.73	1.39	14.46
727Q9	B727-200	0.01	0.02	0.03	0.06	0.03	0.09	0.13
727QF	UPS 727-100	0.00	0.00	0.00	0.05	0.09	0.14	0.14
737N9	B737 LGW Hushkit	1.45	1.75	3.20	0.00	0.08	0.08	3.29
757PW	B757-200	67.34	67.74	135.08	7.92	4.40	12.31	147.40
757RR	B757-200	14.98	16.91	31.89	3.54	2.16	5.70	37.58

TABLE F-20
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
2002 BASELINE

INM Category (b)	Description	Day Arr(a)	Day Dep(a)	Day Total	Night Arr(a)	Night Dep(a)	Night Total	Total Operations
Jets (Continued)								
CL600	CL600	2.66	3.09	5.75	0.15	0.14	0.29	6.03
CL601	CL601	134.10	127.17	261.27	9.87	8.50	18.37	279.63
FAL10	Falcon 10	0.02	0.03	0.05	0.01	0.00	0.01	0.07
FAL20	Falcon 20	0.00	0.02	0.02	0.00	0.00	0.00	0.02
HS125	Hawker-Siddeley 125	0.13	0.18	0.31	0.00	0.00	0.00	0.31
L1011	L1011	0.01	0.01	0.02	0.00	0.00	0.00	0.02
717200	717-200	0.00	0.45	0.45	0.00	0.06	0.06	0.51
727EM1	FedEx 727-100	0.37	0.13	0.50	0.40	0.55	0.95	1.44
727EM2	FedEx 727-200	3.13	2.74	5.87	1.93	2.02	3.96	9.83
727RR2	727-200	0.05	0.01	0.06	0.16	0.16	0.32	0.38
737300	B737-300	104.92	103.70	208.62	3.63	3.66	7.29	215.91
7373B2	B737-300	7.18	6.97	14.15	0.24	0.73	0.97	15.11
737400	B737-400	6.88	6.15	13.03	0.21	0.62	.083	13.85
737500	B737-500	64.71	62.22	126.93	2.50	2.16	4.66	131.59
737700	B737-700	0.92	3.30	4.22	0.33	0.15	0.48	4.70
737800	B737-800	43.10	45.19	88.29	4.65	2.75	7.40	95.68
737N17	B737-200 LGW Hushkit	2.22	1.89	4.11	0.02	0.00	0.02	4.13
757300	B757-300	0.00	0.32	0.32	0.01	0.01	0.02	0.34
A32023	Airbus A320-232	77.21	77.10	154.31	6.96	3.79	10.75	165.06
A32123	Airbus A321-232	0.54	0.24	0.78	0.48	0.69	1.17	1.95
BAE146	BAE 146-200	19.89	19.49	39.38	1.44	0.15	1.59	40.97
BAE300	BAE 146-300	7.78	7.49	15.27	0.63	0.08	0.71	15.99
CNA500	CIT 2	2.85	3.64	6.49	0.17	0.23	0.40	6.89
CNA525	Cessna Citation Jet	0.01	0.03	0.04	0.00	0.00	0.00	0.05
CNA650	Cessna 650 Citation VIII	0.01	0.00	0.01	0.00	0.00	0.00	0.01
CNA750	Cessna Citation X	0.43	0.48	0.91	0.03	0.06	0.09	1.00
COMJET	1985 Business Jet	0.00	0.02	0.02	0.00	0.00	0.00	0.02
DC93LW	DC9-30	10.30	10.20	20.50	1.31	0.88	2.19	22.70
DC95HW	DC9-50 w ABS Hushkit	5.61	5.39	11.00	0.32	0.25	0.57	11.57
EMB135	Embraer EMB-135	51.16	50.41	101.57	3.88	1.55	5.43	106.99
EMB145	Embraer EMB-145	108.23	108.62	216.85	9.68	4.39	14.07	230.93
F10065	F100	80.88	77.22	158.10	1.84	2.99	4.83	162.93
IA1125	Astra 1125	0.09	0.16	0.25	0.01	0.00	0.01	0.26
LEAR25	Learjet 25	0.26	0.43	0.69	0.08	0.09	0.17	0.87
LEAR35	Learjet 36	2.99	3.96	6.95	0.15	0.33	0.48	7.43
LEAR55	Learjet 55	0.01	0.00	0.01	0.00	0.00	0.00	0.01
LEAR60	Learjet 60	0.02	0.00	0.02	0.01	0.00	0.01	0.03
MD9025	MD-90 Series	1.94	1.81	3.75	0.00	0.00	0.00	3.75
MU3001	MU300-10	1.08	1.23	2.31	0.02	0.06	0.08	2.38
SABR80	NA Sabreliner 80	0.30	0.43	0.73	0.06	0.08	0.14	0.87
Subtotal		1,064.11	1,050.17	2,114.28	84.46	62.70	147.16	2,261.44

TABLE F-20
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
2002 BASELINE

INM Category (b)	Description	Day Arr(a)	Day Dep(a)	Day Total	Night Arr(a)	Night Dep(a)	Night Total	Total Operations
Propeller								
DC3	DC3	0.00	0.02	0.02	0.01	0.00	0.01	0.03
AC50	Commander 500	0.00	0.01	0.01	0.00	0.00	0.00	0.01
AC56	Commander 560	0.02	0.02	0.05	0.00	0.00	0.00	0.05
AC95	Aero Commander 695	0.03	0.15	0.18	0.00	0.00	0.00	0.18
C130	C-130H	0.03	0.03	0.07	0.00	0.00	0.00	0.07
DHC6	DASH 6	1.27	1.51	2.78	0.08	0.09	0.17	2.96
PA44	Piper 44 Seminole	0.00	0.01	0.01	0.00	0.00	0.00	0.01
PA46	Piper PA-46 Malibu	0.00	0.05	0.05	0.00	0.00	0.00	0.05
BEC33	Beech Model 33 Debonair/Bonanza	0.00	0.02	0.02	0.00	0.00	0.00	0.02
BEC9F	Beech F90 Super King Air	0.26	0.53	0.79	0.01	0.01	0.02	0.81
DO328	Dornier-328	18.65	18.46	37.11	0.44	0.13	0.56	37.67
SA226	Swearingen Metro II	0.00	0.01	0.01	0.00	0.00	0.00	0.01
SF340	SF340B	1.01	2.34	2.35	0.00	0.23	0.23	2.58
BEC100	Beech King Air 100	0.01	0.02	0.03	0.00	0.00	0.00	0.03
BEC190	Beech 1900	6.14	9.49	18.63	1.047	0.10	1.17	19.80
BEC200	Beech Super King Air 200	0.00	0.03	0.03	0.00	0.00	0.00	0.03
BEC300	Beech Super King Air 300	0.00	0.01	0.01	0.02	0.01	0.03	0.05
BEC58P	Baron 58P	0.44	1.35	1.79	0.06	0.15	0.21	1.99
CNA172	Cessna 172R	0.08	0.76	0.84	0.01	0.09	0.10	0.94
CNA441	Conquest II	0.54	1.28	1.82	0.05	0.06	0.10	1.92
EMB120	Embraer 120 ER	0.00	0.01	0.01	0.00	0.00	0.00	0.01
GASEPF	1985 1-ENG FP prop	2.19	4.06	6.25	0.10	0.18	0.29	6.53
GASEPV	1985 1-ENG VP prop	0.28	2.61	2.86	0.08	0.06	0.14	3.00
PA32C6	Piper PA-32 Cherokee Six	0.00	0.03	0.03	0.00	0.00	0.00	0.03
Subtotal		32.94	42.82	75.76	1.93	1.11	3.03	78.80
Helicopter								
B212	Bell Helicopter	0.03	0.03	0.01	0.01	0.04	0.04	0.08
S76	Sikorsky 76	0.10	0.10	0.01	0.01	0.11	0.11	0.22
		0.13	0.13	0.02	0.02	0.15	0.15	0.30
Total		1,172.09	1,161.87	2,330.72	108.52	85.79	194.14	2,528.30

Notes (a) Arr = Arrivals; Dep = Departures
(b) For noise modeling purposes, aircraft are assigned INM aircraft codes based on aircraft model and engine type. Several INM codes may apply to the same aircraft model because of different types of engines used. Departure and arrival counts may not equal due to the splitting of general aircraft types, as described in airline schedules, among the more numerous and detailed INM codes.

Source: Chicago O'Hare ANMS Data February, June, and October 2002.

Runway Use

Table F-21 presents the runway utilization percentages for the 2002 contour.

TABLE F-21
RUNWAY END USE PERCENTAGE — 2002 BASELINE

Runway	Arrivals		Departures		Operations	
	Day	Night(a)	Day	Night(a)	Day	Night(a)
4L	0.0%	0.0%	12.3%	2.7%	6.1%	1.2%
4R	16.0	4.8	0.0	0.2	8.0	2.8
9L	4.1	0.4	12.3	12.5	8.2	5.8
9R	20.0	22.7	0.4	5.9	10.3	15.3
14L	0.8	3.6	2.7	1.6	1.7	2.7
14R	8.9	17.1	0.1	0.9	4.5	10.0
22L	0.9	0.2	27.7	29.4	14.2	13.1
22R	19.7	7.3	0.0	0.0	9.9	4.1
27L	20.7	35.7	4.0	10.1	12.4	24.4
27R	8.9	1.4	0.0	0.0	4.5	0.8
32L	0.0	6.7	0.8	3.0	0.4	5.1
32R	0.0	0.0	4.3	2.5	2.2	1.1
33L(b)	0.0	0.0	35.3	31.0	17.6	13.7
18	0.0	0.0	0.0	0.0	0.0	0.0
36	0.0	0.0	0.0	0.0	0.0	0.0
Total(c)	100%	100%	100%	100%	100%	100%

Notes: (a) Night is defined as 10:00 p.m. to 6:59:59 a.m.
(b) Runway 32L departures from the Taxiway Tango-10 intersection
(c) Totals may not add due to rounding
Source: Chicago O'Hare ANMS Data, February, June, and October 2002

As shown in **Table F-21**, Runway 27L is the most active arrival runway, followed by Runway 9R. For departures, Runway 32L with departures from the Tango-10 intersection is the most active runway, followed by Runway 22L. Overall, Runway 14R/32L is most used during the day and Runway 9R/27L is most used at night.

F.2.2.2 Future Alternatives

Aircraft Operations

Table F-22 though **Table F-29** show the number of daily aircraft arrivals and departures for an AAD for the categories of aircraft that operate at the Airport.

TABLE F-22
AVERAGE DAILY OPERATIONS — BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE)

Aircraft Category	Arrivals			Departures			Operations(a)		
	Day	Night(b)	Total	Day	Night(b)	Total	Day	Night(b)	Total
Jet	1,122	80	1,202	1,139	58	1,197	2,261	138	2,399
Wide body jet	96	33	129	98	31	129	194	64	258
Propeller	5	1	6	6	0	6	10	1	12
Total	1,223	114	1,337	1,243	89	1,332	2,466	203	2,669

Notes: (a) Data rounded to the nearest whole operation—arrivals and departures do not equal due to the use of actual operation data from TAAM.
(b) Night is defined as 10:00 p.m. to 6:59:59 a.m.
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-23
AVERAGE DAILY OPERATIONS — BUILD OUT ALTERNATIVE C

Aircraft Category	Arrivals			Departures			Operations(a)		
	Day	Night(b)	Total	Day	Night(b)	Total	Day	Night(b)	Total
Jet	1,333	62	1,394	1,359	36	1,395	2,692	98	2,789
Wide body jet	5	1	6	6	0	6	11	1	12
Propeller	99	36	135	106	29	135	205	65	269
Total	1,436	98	1,535	1,470	65	1,536	2,907	163	3,070

Notes: (a) Data rounded to the nearest whole operation—arrivals and departures do not equal due to the use of actual operation data from TAAM.
(b) Night is defined as 10:00 p.m. to 6:59:59 a.m.
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-24
AVERAGE DAILY OPERATIONS — BUILD OUT ALTERNATIVE D

Aircraft Category	Arrivals			Departures			Operations(a)		
	Day	Night(b)	Total	Day	Night(b)	Total	Day	Night(b)	Total
Jet	1,320	74	1,394	1,345	50	1,395	2,665	124	2,789
Wide body jet	5	1	6	6	0	6	11	1	12
Propeller	99	36	135	104	30	135	203	66	269
Total	1,424	111	1,535	1,455	80	1,536	2,879	191	3,070

Notes: (a) Data rounded to the nearest whole operation—arrivals and departures do not equal due to the use of actual operation data from TAAM.
(b) Night is defined as 10:00 p.m. to 6:59:59 a.m.
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-25
AVERAGE DAILY OPERATIONS — BUILD OUT ALTERNATIVE G

Aircraft Category	Arrivals			Departures			Operations(a)		
	Day	Night(b)	Total	Day	Night(b)	Total	Day	Night(b)	Total
Jet	1,331	64	1,394	1,362	39	1,401	2,692	103	2,795
Wide body jet	5	1	6	6	0	6	11	1	12
Propeller	99	36	135	105	30	135	203	66	269
Total	1,434	100	1,535	1,472	69	1,541	2,906	170	3,076

Notes: (a) Data rounded to the nearest whole operation—arrivals and departures do not equal due to the use of actual operation data from TAAM.
(b) Night is defined as 10:00 p.m. to 6:59:59 a.m.
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-26
AVERAGE DAILY OPERATIONS — BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE)

Aircraft Category	Arrivals			Departures			Operations(a)		
	Day	Night(b)	Total	Day	Night(b)	Total	Day	Night(b)	Total
Jet	1,104	77	1,182	1,123	58	1,181	2,227	135	2,362
Wide body jet	112	38	150	117	33	150	229	72	300
Propeller	2	1	3	3	0	3	5	1	6
Total	1,218	117	1,335	1,243	91	1,334	2,461	208	2,669

Notes: (a) Data rounded to the nearest whole operation—arrivals and departures do not equal due to the use of actual operation data from TAAM.
(b) Night is defined as 10:00 p.m. to 6:59:59 a.m.
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-27
AVERAGE DAILY OPERATIONS—BUILD OUT + 5 ALTERNATIVE C

Aircraft Category	Arrivals			Departures			Operations(a)		
	Day	Night(b)	Total	Day	Night(b)	Total	Day	Night(b)	Total
Jet	1,408	74	1,482	1,438	44	1482	2,847	118	2,965
Wide body jet	113	37	150	118	32	150	231	70	301
Propeller	2	1	3	3	0	3	5	1	6
Total	1,523	112	1,636	1,559	76	1636	3,082	189	3,271

Notes: (a) Data rounded to the nearest whole operation—arrivals and departures do not equal due to the use of actual operation data from TAAM.
(b) Night is defined as 10:00 p.m. to 6:59:59 a.m.
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-28
AVERAGE DAILY OPERATIONS — BUILD OUT + 5 ALTERNATIVE D

Aircraft Category	Arrivals			Departures			Operation(a)s		
	Day	Night(b)	Total	Day	Night(b)	Total	Day	Night(b)	Total
Jet	1,396	92	1,488	1,428	60	1,488	2,825	152	2,976
Wide body jet	113	38	150	118	36	154	231	73	304
Propeller	2	1	3	3	0	3	5	1	6
Total	1,511	130	1,641	1,550	95	1,645	3,061	226	3,287

Notes: (a) Data rounded to the nearest whole operation—arrivals and departures do not equal due to the use of actual operation data from TAAM.
(b) Night is defined as 10:00 p.m. to 6:59:59 a.m.
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-29
AVERAGE DAILY OPERATIONS — BUILD OUT + 5 ALTERNATIVE G

Aircraft Category	Arrivals			Departures			Operations(a)		
	Day	Night(b)	Total	Day	Night(b)	Total	Day	Night(b)	Total
Jet	1,410	78	1,488	1,439	48	1,488	2,850	126	2,976
Wide body jet	113	38	150	118	37	154	230	74	304
Propeller	2	1	3	3	0	3	5	1	6
Total	1,525	117	1,641	1,560	85	1,645	3,085	202	3,286

Notes: (a) Data rounded to the nearest whole operation—arrivals and departures do not equal due to the use of actual operation data from TAAM.
(b) Night is defined as 10:00 p.m. to 6:59:59 a.m.
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

Aircraft Fleet Mix

Table F-30 through **Table F-37** show the average daily operations by time of day for each INM type.

TABLE F-30
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE)

		Day			Night			Total
INM Category(b)	Description	Arr(a)	Dep(a)	Total	Arr(a)	Dep(a)	Total	Operations
Wide Body Jets								
74720B	B747-200	6.09	4.32	10.41	3.84	4.84	8.68	19.09
747400	B747-400	9.38	9.19	18.56	3.72	3.62	7.34	25.91
767300	B767-300	30.19	36.73	66.92	11.54	5.89	17.44	84.35
767400	B767-400	1.94	1.94	3.88	0.00	0.00	0.00	3.88
767CF6	B767-200	0.00	0.00	0.00	1.94	1.92	3.86	3.86
777200	B777-200	19.02	19.01	38.03	1.17	0.16	1.33	39.36
777300	B777-300	10.87	9.88	20.74	0.00	0.97	0.97	21.71
A300	Airbus 300	1.42	0.00	1.42	5.37	6.75	12.12	13.54
A310	Airbus 310	0.00	0.97	0.97	1.94	0.96	2.90	3.87
A330	Airbus 330	2.91	2.91	5.82	0.00	0.00	0.00	5.82
A33034	Airbus 330-343	2.91	2.91	5.82	0.00	0.00	0.00	5.82
A340	Airbus 340	10.68	8.73	19.41	0.00	1.93	1.93	21.34
MD11GE	MD-11	0.88	0.97	1.85	3.00	3.86	6.86	8.71
747200	B747-200	0.00	0.24	0.24	0.24	0.00	0.24	0.48
Subtotal		96.28	97.78	194.05	32.76	30.91	63.67	257.72
Jets								
7373B2	B737-300	0.97	0.97	1.94	0.00	0.00	0.00	1.94
737700	B737-700	11.16	12.48	23.64	1.46	0.12	1.58	25.22
737800	B737-800	306.44	308.09	614.53	20.78	17.97	38.75	653.28
757PW	B757-200	0.00	0.00	0.00	0.97	0.96	1.93	1.93
757RR	B757-200	0.00	0.00	0.00	0.97	0.96	1.93	1.93
A319	Airbus 319	136.61	135.84	272.45	8.07	5.81	13.87	286.32
A320	Airbus 320	51.19	52.59	103.78	7.06	5.60	12.65	116.43
A32023	Airbus A320-232	103.86	108.35	212.21	7.79	4.18	11.97	224.19
A32123	Airbus A321-232	108.15	115.53	223.68	13.21	5.74	18.95	242.63
CIT3	CIT 3	5.79	5.81	11.60	0.03	0.00	0.03	11.63
CL600	CL600	4.76	5.81	10.57	1.06	0.00	1.06	11.62
CL601	CL601	284.24	286.03	570.27	11.93	11.04	22.97	593.24
CNA500	CIT 2	2.81	2.90	5.72	0.09	0.00	0.09	5.81
CNA750	Cessna Citation X	5.82	6.76	12.58	0.97	0.02	0.99	13.57
EMB145	Embraer EMB-145	71.82	68.54	140.36	1.96	3.25	5.21	145.57
GIV	Gulfstream GIV-SP	4.79	3.87	8.67	0.05	0.00	0.05	8.72
LEAR25	Learjet 25	3.62	2.90	6.52	0.25	0.97	1.22	7.74
LEAR35	Learjet 36	9.45	10.68	20.13	1.22	0.95	2.17	22.30
MU3001	MU300-10	5.81	5.81	11.62	0.00	0.00	0.00	11.62
MD81	MD-81	1.18	1.60	2.78	0.52	0.09	0.60	3.38
MD82	MD-82	2.36	3.21	5.57	1.03	0.18	1.21	6.78
MD83	MD-83	1.18	1.60	2.78	0.52	0.09	0.60	3.38
Subtotal		1,122.01	1,139.37	2,261.38	79.92	57.91	137.84	2,399.22

TABLE F-30
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE)

		Day			Night			Total
INM Category(b)	**Description**	**Arr(a)**	**Dep(a)**	**Total**	**Arr(a)**	**Dep(a)**	**Total**	**Operations**
Propeller								
CNA441	Conquest II	0.00	0.97	0.97	0.97	0.00	0.97	1.94
GASEPV	1985 1-ENG VP prop	1.61	1.94	3.55	0.32	0.00	0.32	3.87
GASEPF	1985 1-ENG FP prop	2.90	2.91	5.81	0.00	0.00	0.00	5.81
Subtotal		4.52	5.81	10.33	1.29	0.00	1.29	11.62
Total		1,222.80	1,242.96	2,465.76	113.97	88.83	202.80	2,668.56

Notes: (a) Arr = Arrivals; Dep = Departures
(b) For noise modeling purposes, aircraft are assigned INM aircraft codes based on aircraft model and engine type. Several INM codes may apply to the same aircraft model because of different types of engines used. Departure and arrival counts may not equal due to the splitting of general aircraft types, as described in airline schedules, among the more numerous and detailed INM codes.

Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-31
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
BUILD OUT ALTERNATIVE C

INM Category(b)	Description	Day			Night			Total Operations
		Arr(a)	Dep(a)	Total	Arr(a)	Dep(a)	Total	
Wide Body Jets								
74720B	B747-200	6.05	4.96	11.01	3.88	4.24	8.12	19.13
747400	B747-400	9.48	9.20	18.69	3.60	3.63	7.23	25.91
767300	B767-300	30.10	38.97	69.07	13.49	4.63	18.12	87.19
767400	B767-400	1.94	1.94	3.88	0.00	0.00	0.00	3.88
767CF6	B767-200	0.00	0.00	0.00	1.94	1.94	3.88	3.88
777200	B777-200	19.18	22.09	41.27	2.91	0.00	2.91	44.18
777300	B777-300	10.85	9.89	20.74	0.00	0.96	0.96	21.70
A300	Airbus 300	1.94	0.00	1.94	4.84	6.78	11.63	13.56
A310	Airbus 310	0.00	0.97	0.97	1.94	0.97	2.91	3.88
A330	Airbus 330	2.91	2.91	5.81	0.00	0.00	0.00	5.81
A33034	Airbus 330-343	2.91	2.91	5.81	0.00	0.00	0.00	5.81
A340	Airbus 340	12.59	10.66	23.25	0.00	1.94	1.94	25.19
MD11GE	MD-11	0.97	0.97	1.94	2.91	3.88	6.78	8.72
747200	B747-200	0.01	0.24	0.25	0.23	0.00	0.23	0.48
Subtotal		98.93	105.69	204.63	35.73	28.97	64.70	269.33
Jets								
7373B2	B737-300	0.97	0.97	1.94	0.00	0.00	0.00	1.94
737700	B737-700	11.63	12.59	24.22	0.97	0.00	0.97	25.19
737800	B737-800	328.05	330.79	658.84	13.94	13.13	27.07	685.91
757PW	B757-200	0.00	0.00	0.00	0.97	0.97	1.94	1.94
757RR	B757-200	0.00	0.00	0.00	0.97	0.97	1.94	1.94
A319	Airbus 319	171.10	175.92	347.02	12.00	4.28	16.28	363.30
A320	Airbus 320	58.18	58.07	116.25	5.76	5.87	11.63	127.88
A32023	Airbus A320-232	151.12	158.68	309.80	8.73	3.11	11.84	321.64
A32123	Airbus A321-232	52.45	56.12	108.57	3.74	0.07	3.81	112.38
CIT3	CIT 3	5.81	5.81	11.63	0.00	0.00	0.00	11.63
CL600	CL600	4.84	5.81	10.66	0.97	0.00	0.97	11.62
CL601	CL601	364.32	369.30	733.62	7.70	3.69	11.39	745.01
CNA500	CIT 2	2.91	2.91	5.81	0.00	0.00	0.00	5.81
CNA750	Cessna Citation X	5.81	6.78	12.59	0.97	0.00	0.97	13.56
EMB145	Embraer EMB-145	134.91	134.54	269.45	1.69	1.10	2.78	272.23
GIV	Gulfstream GIV-SP	4.84	3.88	8.72	0.00	0.00	0.00	8.72
LEAR25	Learjet 25	3.87	2.91	6.78	0.00	0.97	0.97	7.75
LEAR35	Learjet 36	9.69	10.70	20.38	0.97	0.93	1.90	22.28
MU3001	MU300-10	5.81	5.81	11.63	0.00	0.00	0.00	11.63
717200	B717-200	6.78	6.78	13.56	0.97	0.97	1.94	15.50
MD81	MD-81	2.35	2.65	5.01	0.31	0.01	0.32	5.33
MD82	MD-82	4.71	5.30	10.01	0.62	0.02	0.64	10.66
MD83	MD-83	2.35	2.65	5.01	0.31	0.01	0.32	5.33
Subtotal		1,332.51	1,358.99	2,691.50	61.59	36.09	97.68	2,789.19

TABLE F-31
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
BUILD OUT ALTERNATIVE C

INM Category(b)	Description	Day Arr(a)	Day Dep(a)	Day Total	Night Arr(a)	Night Dep(a)	Night Total	Total Operations
Propeller								
CNA441	Conquest II	0.00	0.97	0.97	0.97	0.00	0.97	1.94
GASEPV	1985 1-ENG VP prop	1.94	1.94	3.88	0.00	0.00	0.00	3.88
GASEPF	1985 1-ENG FP prop	2.91	2.91	5.81	0.00	0.00	0.00	5.81
Subtotal		4.84	5.81	10.66	0.97	0.00	0.97	11.63
Total		1,436.29	1,470.50	2,906.79	98.29	65.06	163.35	3,070.14

Notes: (a) Arr = Arrivals; Dep = Departures
(b) For noise modeling purposes, aircraft are assigned INM aircraft codes based on aircraft model and engine type. Several INM codes may apply to the same aircraft model because of different types of engines used. Departure and arrival counts may not equal due to the splitting of general aircraft types, as described in airline schedules, among the more numerous and detailed INM codes.

Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-32
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
BUILD OUT ALTERNATIVE D

INM Category(b)	Description	Day			Night			Total Operations
		Arr(a)	Dep(a)	Total	Arr(a)	Dep(a)	Total	
Wide Body Jets								
74720B	B747-200	6.06	4.87	10.92	3.87	4.34	8.21	19.13
747400	B747-400	9.48	9.20	18.69	3.60	3.63	7.23	25.91
767300	B767-300	30.09	37.99	68.08	13.51	5.61	19.11	87.19
767400	B767-400	1.94	1.94	3.88	0.00	0.00	0.00	3.88
767CF6	B767-200	0.00	0.00	0.00	1.94	1.94	3.88	3.88
777200	B777-200	19.13	21.92	41.05	2.95	0.17	3.12	44.18
777300	B777-300	10.85	9.82	20.67	0.00	1.03	1.03	21.70
A300	Airbus 300	1.84	0.00	1.84	4.94	6.78	11.72	13.56
A310	Airbus 310	0.00	0.97	0.97	1.94	0.97	2.91	3.88
A330	Airbus 330	2.91	2.91	5.81	0.00	0.00	0.00	5.81
A33034	Airbus 330-343	2.91	2.86	5.77	0.00	0.05	0.05	5.81
A340	Airbus 340	12.59	10.61	23.20	0.00	1.98	1.98	25.19
MD11GE	MD-11	0.92	0.97	1.89	2.95	3.88	6.83	8.72
747200	B747-200	0.01	0.24	0.25	0.23	0.00	0.23	0.48
Subtotal		98.73	104.29	203.02	35.93	30.38	66.30	269.33
Jets								
7373B2	B737-300	0.97	0.97	1.94	0.00	0.00	0.00	1.94
737700	B737-700	11.48	12.55	24.03	1.11	0.05	1.16	25.19
737800	B737-800	324.85	327.98	652.83	17.14	15.94	33.08	685.91
757PW	B757-200	0.00	0.00	0.00	0.97	0.97	1.94	1.94
757RR	B757-200	0.00	0.00	0.00	0.97	0.97	1.94	1.94
A319	Airbus 319	169.08	174.03	343.11	14.02	6.17	20.19	363.30
A320	Airbus 320	57.32	57.69	115.01	6.62	6.25	12.87	127.88
A32023	Airbus A320-232	149.60	157.37	306.97	10.25	4.42	14.67	321.64
A32123	Airbus A321-232	52.01	55.61	107.62	4.18	0.58	4.76	112.38
CIT3	CIT 3	5.81	5.81	11.63	0.00	0.00	0.00	11.63
CL600	CL600	4.80	5.81	10.61	1.02	0.00	1.02	11.63
CL601	CL601	362.13	364.62	726.76	9.89	8.37	18.25	745.01
CNA500	CIT 2	2.86	2.91	5.77	0.05	0.00	0.05	5.81
CNA750	Cessna Citation X	5.81	6.51	12.33	0.97	0.27	1.24	13.56
EMB145	Embraer EMB-145	133.19	132.97	266.17	3.41	2.66	6.07	272.23
GIV	Gulfstream GIV-SP	4.80	3.88	8.67	0.05	0.00	0.05	8.72
LEAR25	Learjet 25	3.83	2.91	6.73	0.05	0.97	1.02	7.75
LEAR35	Learjet 36	9.64	10.66	20.30	1.02	0.97	1.98	22.28
MU3001	MU300-10	5.81	5.81	11.63	0.00	0.00	0.00	11.63
717200	B717-200	6.69	6.69	13.37	1.06	1.06	2.13	15.50
MD81	MD-81	2.32	2.62	4.94	0.34	0.05	0.39	5.33
MD82	MD-82	4.64	5.23	9.87	0.69	0.10	0.79	10.66
MD83	MD-83	2.32	2.62	4.94	0.34	0.05	0.39	5.33
Subtotal		1,319.97	1,345.24	2,665.21	74.14	49.83	123.97	2,789.18

TABLE F-32
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
BUILD OUT ALTERNATIVE D

INM Category(b)	Description	Day			Night			Total Operations
		Arr(a)	Dep(a)	Total	Arr(a)	Dep(a)	Total	
Propeller								
CNA441	Conquest II	0.00	0.97	0.97	0.97	0.00	0.97	1.94
GASEPV	1985 1-ENG VP prop	1.94	1.94	3.88	0.00	0.00	0.00	3.88
GASEPF	1985 1-ENG FP prop	2.91	2.91	5.81	0.00	0.00	0.00	5.81
Subtotal		4.84	5.81	10.66	0.97	0.00	0.97	11.63
Total		1,423.55	1,455.35	2,878.90	111.03	80.21	191.24	3,070.14

Notes: (a) Arr = Arrivals; Dep = Departures
(b) For noise modeling purposes, aircraft are assigned INM aircraft codes based on aircraft model and engine type. Several INM codes may apply to the same aircraft model because of different types of engines used. Departure and arrival counts may not equal due to the splitting of general aircraft types, as described in airline schedules, among the more numerous and detailed INM codes.

Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-33
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
BUILD OUT ALTERNATIVE G

INM Category(b)	Description	Day			Night			Total Operations
		Arr(a)	Dep(a)	Total	Arr(a)	Dep(a)	Total	
Wide Body Jets								
74720B	B747-200	6.06	4.82	10.87	3.88	4.39	8.26	19.14
747400	B747-400	9.48	9.20	18.69	3.60	3.63	7.23	25.91
767300	B767-300	30.11	37.98	68.09	13.49	5.61	19.10	87.19
767400	B767-400	1.94	1.94	3.88	0.00	0.00	0.00	3.88
767CF6	B767-200	0.00	0.00	0.00	1.94	1.94	3.88	3.88
777200	B777-200	19.18	22.08	41.27	2.91	0.01	2.91	44.18
777300	B777-300	10.85	9.88	20.73	0.00	0.97	0.97	21.70
A300	Airbus 300	1.87	0.00	1.87	4.91	6.78	11.70	13.56
A310	Airbus 310	0.00	0.97	0.97	1.94	0.97	2.91	3.87
A330	Airbus 330	2.91	2.91	5.81	0.00	0.00	0.00	5.81
A33034	Airbus 330-343	2.91	2.87	5.78	0.00	0.03	0.03	5.81
A340	Airbus 340	12.59	10.66	23.25	0.00	1.94	1.94	25.19
MD11GE	MD-11	0.97	0.97	1.94	2.91	3.88	6.78	8.72
747200	B747-200	0.01	0.24	0.25	0.23	0.00	0.23	0.48
Subtotal		98.87	104.52	203.40	35.79	30.14	65.93	269.33
Jets								
7373B2	B737-300	0.97	0.97	1.94	0.00	0.00	0.00	1.94
737700	B737-700	11.59	12.60	24.19	1.00	0.00	1.00	25.19
737800	B737-800	327.45	329.94	657.38	14.54	13.99	28.53	685.91
757PW	B757-200	0.00	0.00	0.00	0.97	0.97	1.94	1.94
757RR	B757-200	0.00	0.00	0.00	0.97	0.97	1.94	1.94
A319	Airbus 319	170.78	176.23	347.02	12.32	3.97	16.29	363.30
A320	Airbus 320	58.06	58.11	116.18	5.88	5.83	11.71	127.88
A32023	Airbus A320-232	150.86	158.59	309.45	8.99	3.20	12.19	321.64
A32123	Airbus A321-232	52.32	56.10	108.43	3.87	0.09	3.95	112.38
CIT3	CIT 3	5.81	5.81	11.63	0.00	0.00	0.00	11.63
CL600	CL600	4.84	5.81	10.66	0.97	0.00	0.97	11.63
CL601	CL601	364.32	367.43	731.76	7.70	5.56	13.25	745.01
CNA500	CIT 2	2.91	2.91	5.81	0.00	0.00	0.00	5.81
CNA750	Cessna Citation X	5.81	6.55	12.36	0.97	0.23	1.20	13.56
EMB145	Embraer EMB-145	134.47	134.11	268.58	2.13	1.52	3.65	272.23
GIV	Gulfstream GIV-SP	4.84	3.88	8.72	0.00	0.00	0.00	8.72
LEAR25	Learjet 25	3.88	2.91	6.78	0.00	0.97	0.97	7.75
LEAR35	Learjet 36	9.65	10.66	20.31	1.00	0.97	1.97	22.28
MU3001	MU300-10	5.81	11.61	17.42	0.00	0.00	0.00	17.42
717200	B717-200	6.78	6.78	13.56	0.97	0.97	1.94	15.50
MD81	MD-81	2.34	2.63	4.97	0.33	0.03	0.36	5.33
MD82	MD-82	4.68	5.27	9.94	0.65	0.06	0.71	10.66
MD83	MD-83	2.34	2.63	4.97	0.33	0.03	0.36	5.33
Subtotal		1,330.52	1,361.53	2,692.05	63.58	39.35	102.93	2,794.98

TABLE F-33
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
BUILD OUT ALTERNATIVE G

INM Category(b)	Description	Day Arr(a)	Day Dep(a)	Day Total	Night Arr(a)	Night Dep(a)	Night Total	Total Operations
Propeller								
CNA441	Conquest II	0.00	0.97	0.97	0.97	0.00	0.97	1.94
GASEPV	1985 1-ENG VP prop	1.94	1.94	3.88	0.00	0.00	0.00	3.88
GASEPF	1985 1-ENG FP prop	2.91	2.91	5.81	0.00	0.00	0.00	5.81
Subtotal		4.84	5.81	10.66	0.97	0.00	0.97	11.63
Total		1,434.24	1,471.86	2,906.10	100.34	69.49	169.83	3,075.93

Notes: (a) Arr = Arrivals; Dep = Departures
(b) For noise modeling purposes, aircraft are assigned INM aircraft codes based on aircraft model and engine type. Several INM codes may apply to the same aircraft model because of different types of engines used. Departure and arrival counts may not equal due to the splitting of general aircraft types, as described in airline schedules, among the more numerous and detailed INM codes.

Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-34
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE)

INM Category(b)	Description	Day			Night			Total Operations
		Arr(a)	Dep(a)	Total	Arr(a)	Dep(a)	Total	
Wide Body Jets								
74720B	B747-200	7.78	6.00	13.78	3.85	4.60	8.45	22.23
747400	B747-400	11.61	13.55	25.15	4.89	4.83	9.72	34.87
767300	B767-300	32.06	38.01	70.07	12.58	7.48	20.07	90.13
767400	B767-400	0.97	0.97	1.94	0.00	0.00	0.00	1.94
767CF6	B767-200	0.00	0.00	0.00	1.94	1.90	3.84	3.84
777200	B777-200	26.89	26.48	53.38	3.00	0.45	3.44	56.82
777300	B777-300	14.77	16.53	31.30	2.89	1.08	3.97	35.27
A300	Airbus 300	1.42	0.00	1.42	5.37	6.74	12.11	13.53
A310	Airbus 310	0.00	0.97	0.97	1.94	0.97	2.90	3.87
A330	Airbus 330	2.91	2.91	5.82	0.00	0.00	0.00	5.82
A33034	Airbus 330-343	2.91	2.91	5.82	0.00	0.00	0.00	5.82
A340	Airbus 340	9.71	7.43	17.13	0.00	2.25	2.25	19.38
MD11GE	MD-11	0.88	0.97	1.85	2.03	2.90	4.92	6.77
Subtotal		111.90	116.71	228.62	38.47	33.19	71.67	300.28
Jets								
7373B2	B737-300	0.97	0.97	1.94	0.00	0.00	0.00	1.94
737700	B737-700	14.07	16.44	30.51	3.40	1.01	4.41	34.92
737800	B737-800	306.55	309.31	615.86	21.65	17.72	39.37	655.23
757PW	B757-200	0.00	0.00	0.00	0.97	0.95	1.92	1.92
757RR	B757-200	0.00	0.00	0.00	0.97	0.96	1.93	1.93
A319	Airbus 319	124.43	125.27	249.70	7.62	5.72	13.34	263.04
A320	Airbus 320	51.67	52.18	103.86	7.53	6.01	13.54	117.40
A32023	Airbus A320-232	92.23	95.48	187.72	4.86	3.48	8.33	196.05
A32123	Airbus A321-232	129.79	138.16	267.95	12.95	6.39	19.34	287.29
CIT3	CIT 3	5.79	5.81	11.60	0.03	0.00	0.03	11.64
CL600	CL600	5.73	6.78	12.51	1.06	0.00	1.06	13.57
CL601	CL601	287.00	289.94	576.95	12.09	11.00	23.09	600.03
CNA500	CIT 2	2.65	2.90	5.56	0.25	0.00	0.25	5.81
CNA750	Cessna Citation X	5.82	6.73	12.55	0.97	0.05	1.02	13.57
EMB145	Embraer EMB-145	52.59	50.01	102.60	1.77	2.37	4.14	106.74
GIV	Gulfstream GIV-SP	4.79	3.87	8.67	0.05	0.00	0.05	8.72
LEAR25	Learjet 25	3.62	2.91	6.53	0.25	0.94	1.20	7.72
LEAR35	Learjet 36	10.58	10.66	21.24	1.06	0.97	2.02	23.27
MU3001	MU300-10	5.81	5.81	11.62	0.00	0.00	0.00	11.62
Subtotal		1,104.11	1,123.26	2,227.37	77.47	57.57	135.04	2,362.41
Propeller								
CNA441	Conquest II	0.00	0.97	0.97	0.97	0.00	0.97	1.94
GASEPV	1985 1-ENG VP prop	1.94	1.94	3.88	0.00	0.00	0.00	3.88
Subtotal		1.94	2.91	4.85	0.97	0.00	0.97	5.82
Total		1,217.95	1,242.88	2,460.83	116.92	90.76	207.68	2,668.51

Notes: (a) Arr = Arrivals; Dep = Departures
(b) For noise modeling purposes, aircraft are assigned INM aircraft codes based on aircraft model and engine type. Several INM codes may apply to the same aircraft model because of different types of engines used. Departure and arrival counts may not equal due to the splitting of general aircraft types, as described in airline schedules, among the more numerous and detailed INM codes.

Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-35
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
BUILD OUT + 5 ALTERNATIVE C

INM Category(b)	Description	Day			Night			Total Operations
		Arr(a)	Dep(a)	Total	Arr(a)	Dep(a)	Total	
Wide Body Jets								
74720B	B747-200	8.73	6.47	15.20	3.87	5.17	9.04	24.24
747400	B747-400	10.67	10.67	21.33	4.85	5.82	10.66	32.00
767300	B767-300	23.67	29.97	53.64	12.20	5.91	18.11	71.75
767400	B767-400	1.94	1.94	3.88	0.00	0.00	0.00	3.88
767CF6	B767-200	0.00	0.00	0.00	1.94	1.94	3.88	3.88
777200	B777-200	28.89	31.80	60.69	3.88	0.00	3.88	64.57
777300	B777-300	14.74	15.71	30.45	1.94	0.97	2.91	33.35
A300	Airbus 300	1.94	0.00	1.94	4.84	6.79	11.63	13.57
A310	Airbus 310	0.00	1.02	1.02	1.94	0.92	2.86	3.88
A330	Airbus 330	2.91	2.91	5.82	0.00	0.00	0.00	5.82
A33034	Airbus 330-343	2.91	2.91	5.82	0.00	0.00	0.00	5.82
A340	Airbus 340	15.51	13.57	29.09	0.00	1.94	1.94	31.02
MD11GE	MD-11	0.97	0.97	1.94	1.94	2.91	4.85	6.79
Subtotal		112.88	117.93	230.81	37.40	32.35	69.75	300.56
Jets								
7373B2	B737-300	0.97	0.97	1.94	0.00	0.00	0.00	1.94
737700	B737-700	14.55	16.90	31.45	3.88	1.52	5.39	36.84
737800	B737-800	364.55	372.36	736.91	21.33	15.46	36.79	773.70
757PW	B757-200	0.00	0.00	0.00	0.97	0.97	1.94	1.94
757RR	B757-200	0.00	0.00	0.00	0.97	0.97	1.94	1.94
A319	Airbus 319	172.35	176.23	348.58	11.86	5.08	16.94	365.52
A320	Airbus 320	58.90	58.59	117.50	6.06	6.37	12.42	129.92
A32023	Airbus A320-232	159.79	169.01	328.80	10.85	3.57	14.42	343.22
A32123	Airbus A321-232	52.58	55.91	108.49	3.66	0.32	3.98	112.47
CIT3	CIT 3	5.82	5.82	11.64	0.00	0.00	0.00	11.64
CL600	CL600	5.82	6.79	12.60	0.97	0.00	0.97	13.57
CL601	CL601	404.55	409.90	814.45	8.48	4.09	12.57	827.02
CNA500	CIT 2	2.91	2.91	5.82	0.00	0.00	0.00	5.82
CNA750	Cessna Citation X	5.82	6.52	12.34	0.97	0.27	1.24	13.57
EMB145	Embraer EMB-145	121.14	120.29	241.43	1.99	1.87	3.86	245.30
GIV	Gulfstream GIV-SP	4.85	3.88	8.73	0.00	0.00	0.00	8.73
LEAR25	Learjet 25	3.88	2.91	6.79	0.00	0.97	0.97	7.76
LEAR35	Learjet 36	10.67	10.89	21.55	0.97	0.75	1.71	23.27
MU3001	MU300-10	5.82	5.82	11.63	0.00	0.00	0.00	11.63
717200	B717-200	13.53	12.60	26.13	1.02	1.94	2.96	29.09
Subtotal		1,408.47	1,438.31	2,846.77	73.96	44.14	118.10	2,964.87
Propeller								
CNA441	Conquest II	0.00	0.97	0.97	0.97	0.00	0.97	1.94
GASEPV	1985 1-ENG VP prop	1.94	1.94	3.88	0.00	0.00	0.00	3.88
		1.94	2.91	4.85	0.97	0.00	0.97	5.82
Total		1,523.28	1,559.15	3,082.43	112.33	76.50	188.83	3,271.26

Notes: (a) Arr = Arrivals; Dep = Departures
(b) For noise modeling purposes, aircraft are assigned INM aircraft codes based on aircraft model and engine type. Several INM codes may apply to the same aircraft model because of different types of engines used. Departure and arrival counts may not equal due to the splitting of general aircraft types, as described in airline schedules, among the more numerous and detailed INM codes.

Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-36
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
BUILD OUT + 5 ALTERNATIVE D

INM Category(b)	Description	Day			Night			Total Operations
		Arr(a)	Dep(a)	Total	Arr(a)	Dep(a)	Total	
Wide Body Jets								
74720B	B747-200	8.73	6.52	15.25	3.88	5.12	8.99	24.24
747400	B747-400	10.57	10.67	21.24	4.94	5.82	10.76	32.00
767300	B767-300	23.74	29.78	53.52	12.13	6.10	18.23	71.75
767400	B767-400	1.94	1.94	3.88	0.00	0.00	0.00	3.88
767CF6	B767-200	0.00	0.00	0.00	1.94	1.94	3.88	3.88
777200	B777-200	28.75	31.56	60.31	4.02	0.24	4.27	64.57
777300	B777-300	14.74	15.67	30.41	1.94	1.01	2.95	33.35
A300	Airbus 300	1.85	0.00	1.85	4.94	6.79	11.73	13.57
A310	Airbus 310	0.00	1.02	1.02	1.94	0.92	2.86	3.88
A330	Airbus 330	2.91	2.91	5.82	0.00	0.00	0.00	5.82
A33034	Airbus 330-343	2.91	2.91	5.82	0.00	0.00	0.00	5.82
A340	Airbus 340	15.51	13.58	29.09	0.00	1.94	1.94	31.03
MD11GE	MD-11	0.92	1.88	2.80	1.99	5.75	7.74	10.54
Subtotal		112.57	118.42	230.99	37.72	35.62	73.34	304.33
Jets								
7373B2	B737-300	0.97	0.97	1.94	0.00	0.00	0.00	1.94
737700	B737-700	14.36	17.14	31.49	4.07	1.28	5.35	36.84
737800	B737-800	360.14	368.26	728.40	25.74	19.56	45.30	773.70
757PW	B757-200	0.00	0.00	0.00	0.97	0.97	1.94	1.94
757RR	B757-200	0.00	0.00	0.00	0.97	0.97	1.94	1.94
A319	Airbus 319	169.68	173.43	343.11	14.54	7.83	22.37	365.48
A320	Airbus 320	58.00	58.52	116.52	6.96	6.44	13.40	129.92
A32023	Airbus A320-232	157.86	166.75	324.62	12.78	5.83	18.61	343.22
A32123	Airbus A321-232	52.01	55.37	107.38	4.23	0.86	5.09	112.47
CIT3	CIT 3	5.82	5.82	11.63	0.00	0.00	0.00	11.63
CL600	CL600	5.77	6.74	12.51	1.02	0.05	1.06	13.57
CL601	CL601	399.28	405.04	804.32	13.75	8.96	22.71	827.03
CNA500	CIT 2	2.86	2.91	5.77	0.05	0.00	0.05	5.82
CNA750	Cessna Citation X	5.82	6.52	12.34	0.97	0.27	1.24	13.57
EMB145	Embraer EMB-145	119.63	119.44	239.06	3.50	2.73	6.23	245.30
GIV	Gulfstream GIV-SP	4.80	3.88	8.68	0.05	0.00	0.05	8.73
LEAR25	Learjet 25	3.83	2.91	6.74	0.05	0.97	1.02	7.76
LEAR35	Learjet 36	10.62	10.67	21.29	1.02	0.96	1.98	23.27
MU3001	MU300-10	11.64	11.63	23.27	0.00	0.00	0.00	23.27
717200	B717-200	13.38	12.46	25.85	1.16	2.08	3.24	29.09
Subtotal		1,396.46	1,428.46	2,824.92	91.81	59.76	151.57	2,976.49
Propeller								
CNA441	Conquest II	0.00	0.97	0.97	0.97	0.00	0.97	1.94
GASEPV	1985 1-ENG VP prop	1.94	1.94	3.88	0.00	0.00	0.00	3.88
		1.94	2.91	4.85	0.97	0.00	0.97	5.82
Total		1,510.97	1,549.79	3,060.75	130.49	95.39	225.88	3,286.63

Notes: (a) Arr = Arrivals; Dep = Departures
(b) For noise modeling purposes, aircraft are assigned INM aircraft codes based on aircraft model and engine type. Several INM codes may apply to the same aircraft model because of different types of engines used. Departure and arrival counts may not equal due to the splitting of general aircraft types, as described in airline schedules, among the more numerous and detailed INM codes.

Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-37
AVERAGE DAILY OPERATIONS BY AIRCRAFT TYPE AND TIME OF DAY
BUILD OUT + 5 ALTERNATIVE G

INM Category(b)	Description	Day			Night			Total Operations
		Arr(a)	Dep(a)	Total	Arr(a)	Dep(a)	Total	
Wide Body Jets								
74720B	B747-200	8.73	6.47	15.20	3.88	5.16	9.04	24.24
747400	B747-400	10.67	10.67	21.33	4.85	5.82	10.66	32.00
767300	B767-300	23.42	28.93	52.35	12.45	6.95	19.40	71.75
767400	B767-400	1.94	1.94	3.88	0.00	0.00	0.00	3.88
767CF6	B767-200	0.00	0.00	0.00	1.94	1.94	3.88	3.88
777200	B777-200	28.89	31.66	60.55	3.88	0.15	4.02	64.57
777300	B777-300	14.74	15.64	30.38	1.94	1.03	2.97	33.35
A300	Airbus 300	1.88	0.00	1.88	4.91	6.79	11.70	13.57
A310	Airbus 310	0.00	0.98	0.98	1.94	0.96	2.90	3.88
A330	Airbus 330	2.91	2.91	5.82	0.00	0.00	0.00	5.82
A33034	Airbus 330-343	2.91	2.91	5.82	0.00	0.00	0.00	5.82
A340	Airbus 340	15.51	13.54	29.05	0.00	1.97	1.97	31.03
MD11GE	MD-11	0.97	1.94	2.91	1.94	5.82	7.76	10.66
Subtotal		112.56	117.58	230.14	37.72	36.58	74.30	304.44
Jets								
7373B2	B737-300	0.97	0.97	1.94	0.00	0.00	0.00	1.94
737700	B737-700	14.51	17.42	31.93	3.91	1.00	4.92	36.84
737800	B737-800	364.48	371.02	735.50	21.40	16.80	38.20	773.69
757PW	B757-200	0.00	0.00	0.00	0.97	0.97	1.94	1.94
757RR	B757-200	0.00	0.00	0.00	0.97	0.97	1.94	1.94
A319	Airbus 319	171.15	175.12	346.26	13.07	6.19	19.25	365.52
A320	Airbus 320	58.88	58.97	117.85	6.08	5.99	12.07	129.92
A32023	Airbus A320-232	159.24	168.58	327.83	11.39	3.99	15.39	343.22
A32123	Airbus A321-232	52.52	55.94	108.46	3.71	0.29	4.01	112.47
CIT3	CIT 3	5.82	5.82	11.63	0.00	0.00	0.00	11.63
CL600	CL600	5.82	6.79	12.60	0.97	0.00	0.97	13.57
CL601	CL601	402.80	407.87	810.67	10.23	6.12	16.35	827.02
CNA500	CIT 2	2.91	2.91	5.82	0.00	0.00	0.00	5.82
CNA750	Cessna Citation X	5.82	6.74	12.56	0.97	0.04	1.01	13.57
EMB145	Embraer EMB-145	120.75	120.18	240.93	2.38	1.98	4.36	245.30
GIV	Gulfstream GIV-SP	4.85	3.88	8.73	0.00	0.00	0.00	8.73
LEAR25	Learjet 25	3.84	2.91	6.75	0.03	0.97	1.00	7.76
LEAR35	Learjet 36	10.66	10.67	21.34	0.97	0.96	1.93	23.27
MU3001	MU300-10	11.62	11.09	22.71	0.00	0.00	0.00	22.71
717200	B717-200	13.50	12.57	26.07	1.04	1.97	3.01	29.09
Subtotal		1,410.13	1,439.45	2,849.58	78.10	48.26	126.36	2,975.94
Propeller								
CNA441	Conquest II	0.00	0.97	0.97	0.97	0.00	0.97	1.94
GASEPV	1985 1-ENG VP prop	1.94	1.94	3.88	0.00	0.00	0.00	3.88
		1.94	2.91	4.85	0.97	0.00	0.97	5.82
Total		1,524.63	1,559.93	3,084.56	116.79	84.84	201.63	3,286.19

Notes: (a) Arr = Arrivals; Dep = Departures
(b) For noise modeling purposes, aircraft are assigned INM aircraft codes based on aircraft model and engine type. Several INM codes may apply to the same aircraft model because of different types of engines used. Departure and arrival counts may not equal due to the splitting of general aircraft types, as described in airline schedules, among the more numerous and detailed INM codes.

Source: Leigh Fisher Associates [TPC] analysis, October 2004.

Runway Use

Table F-38 through **Table F-45** present the runway utilization percentages for each future alternative.

TABLE F-38
RUNWAY END USE PERCENTAGE — BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE)

Runway	Arrivals		Departures		Operations	
	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)
04L	0.0	0.0	6.7	0.3	3.4	0.1
04R	12.9	1.4	0.0	0.2	6.4	0.9
09L	2.9	0.0	9.7	10.6	6.4	4.6
09R	11.9	12.3	0.2	3.1	6.0	8.4
14L	1.4	5.5	2.0	1.6	1.7	3.8
14R	8.3	24.1	0.4	1.9	4.3	14.5
22L	1.8	1.0	29.7	32.0	15.9	14.4
22R	24.8	9.7	0.0	0.0	12.3	5.5
27L	23.0	30.1	8.3	17.7	15.5	24.7
27R	12.9	7.5	0.0	0.1	6.4	4.3
32L	0.0	8.4	1.8	16.3	0.9	11.8
32R	0.0	0.0	4.4	4.8	2.2	2.1
33L(b)	0.0	0.0	36.1	11.5	18.2	4.9
33R(c)	0.0	0.0	0.7	0.1	0.4	0.0
Total(d)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: (a) Night is defined as 10:00 p.m. to 6:59:59 a.m.
(b) Runway 32L departures from the Tango-10 intersection
(c) Runway 32R departures from the Victor-1 intersection
(d) Totals may not add due to rounding

Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-39
RUNWAY END USE PERCENTAGE — BUILD OUT ALTERNATIVE C

Runway	Arrivals		Departures		Operations	
	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)
04L	0.0	0.0	0.8	1.2	0.4	0.5
04R	0.8	1.0	0.0	0.0	0.4	0.6
09L	8.8	1.0	0.1	0.0	4.4	0.6
09R	0.1	0.0	10.4	4.1	5.3	1.7
22L	0.0	0.0	16.2	10.8	8.2	4.6
22R	0.3	0.3	0.0	0.0	0.1	0.2
27L	0.0	59.8	25.3	12.2	12.8	39.7
27R	22.4	4.0	0.3	0.1	11.2	2.3
09C	8.2	0.6	0.0	0.0	4.1	0.3
10C	8.9	1.3	0.0	0.0	4.4	0.7
10L	0.0	23.8	10.3	20.4	5.2	22.4
10R	0.9	0.0	6.1	1.2	3.5	0.5
27C	22.1	2.9	0.0	0.0	11.0	1.7
28C	23.5	5.3	0.0	0.0	11.7	3.1
28R	0.2	0.1	27.7	50.0	14.1	21.2
28L	3.8	0.0	2.7	0.0	3.3	0.0
Total(b)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: (a) Night is defined as 10:00 p.m. to 6:59:59 a.m.
(b) Totals may not add due to rounding
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-40
RUNWAY END USE PERCENTAGE — BUILD OUT ALTERNATIVE D

Runway	Arrivals		Departures		Operations	
	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)
04L	0.0	0.0	0.6	3.6	0.3	1.6
04R	0.6	2.9	0.0	0.0	0.3	1.6
09L	9.2	6.8	0.1	0.1	4.7	3.8
09R	0.1	0.0	14.0	13.0	7.1	5.8
22L	0.0	0.0	21.4	9.1	10.8	4.1
22R	0.3	0.3	0.0	0.0	0.1	0.1
27L	0.0	52.6	24.5	9.4	12.3	33.3
27R	24.0	4.6	0.2	0.1	12.0	2.6
09C	8.1	2.9	0.0	0.0	4.0	1.6
10C	8.9	4.0	0.0	0.0	4.4	2.2
10L	0.0	20.2	12.1	23.5	6.1	21.7
27C	24.2	3.3	0.0	0.0	12.0	1.8
28C	24.3	2.6	0.0	0.0	12.1	1.4
28R	0.2	0.0	26.8	41.1	13.6	18.4
Total(b)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: (a) Night is defined as 10:00 p.m. to 6:59:59 a.m.
(b) Totals may not add due to rounding
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-41
RUNWAY END USE PERCENTAGE — BUILD OUT ALTERNATIVE G

Runway	Arrivals		Departures		Operations	
	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)
04L	0.0	0.0	0.4	0.9	0.2	0.4
04R	0.4	0.7	0.0	0.0	0.2	0.4
09L	9.3	2.1	0.1	0.1	4.7	1.2
09R	0.1	0.0	9.3	5.7	4.7	2.5
22L	0.0	0.0	21.4	10.9	10.8	4.7
22R	0.6	0.6	0.0	0.0	0.3	0.3
27L	0.0	58.0	24.2	10.8	12.2	37.5
27R	23.7	5.0	0.2	0.1	11.9	2.9
09C	8.5	1.6	0.0	0.0	4.2	0.9
10C	9.2	3.0	0.0	0.0	4.6	1.7
10L	0.0	22.5	10.6	21.8	5.3	22.2
10R	23.9	3.6	0.0	0.0	11.9	2.0
27C	24.0	2.9	0.0	0.0	11.9	1.6
28C	0.2	0.0	26.5	47.8	13.5	20.7
28R	0.0	0.0	7.2	1.8	3.6	0.8
12	0.0	0.0	0.4	0.9	0.2	0.4
Total(b)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: (a) Night is defined as 10:00 p.m. to 6:59:59 a.m.
(b) Totals may not add due to rounding
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-42
RUNWAY END USE PERCENTAGE — BUILD OUT+5 ALTERNATIVE A (NO ACTION ALTERNATIVE)

Runway	Arrivals		Departures		Operations	
	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)
04L	0.0	0.0	7.1	0.4	3.6	0.2
04R	12.9	1.6	0.0	0.1	6.4	0.9
09L	3.0	0.0	9.6	10.4	6.3	4.5
09R	11.8	15.7	0.2	8.6	5.9	12.7
14L	1.4	4.9	2.0	2.4	1.7	3.9
14R	8.3	23.5	0.4	2.2	4.3	14.3
22L	1.8	0.9	29.6	29.0	15.9	12.9
22R	25.2	10.0	0.0	0.0	12.5	5.7
27L	23.5	27.7	8.4	17.3	15.8	23.2
27R	12.0	7.6	0.0	0.1	5.9	4.4
32L	0.0	8.0	1.7	14.6	0.9	10.8
32R	0.0	0.0	4.4	4.8	2.2	2.1
33L(b)	0.0	0.0	36.1	10.2	18.3	4.4
33R(c)	0.0	0.0	0.7	0.1	0.4	0.0
Total(d)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: (a) Night is defined as 10:00 p.m. to 6:59:59 a.m.
(b) Runway 32L departures from the Tango-10 intersection
(c) Runway 32R departures from the Victor-1 intersection
(d) Totals may not add due to rounding

Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-43
RUNWAY END USE PERCENTAGE — BUILD OUT + 5 ALTERNATIVE C

Runway	Arrivals		Departures		Operations	
	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)
04L	0.0	0.0	0.8	1.2	0.4	0.5
04R	0.8	0.9	0.0	0.0	0.4	0.5
09L	8.7	0.8	0.1	0.1	4.4	0.5
09R	0.1	0.0	10.4	6.5	5.3	2.8
22L	0.0	0.0	14.6	8.9	7.4	3.8
22R	0.3	0.4	0.0	0.0	0.1	0.2
27L	0.0	59.7	25.3	6.6	12.8	37.3
27R	22.4	4.6	0.3	0.1	11.2	2.7
09C	8.2	0.9	0.0	0.2	4.1	0.6
10C	8.8	2.1	0.0	0.3	4.4	1.4
10L	0.0	22.4	10.0	19.6	5.0	21.2
10R	1.2	0.0	6.3	1.5	3.8	0.7
27C	22.2	2.2	0.1	0.9	11.0	1.7
28C	23.3	6.0	0.1	0.8	11.6	3.8
28R	0.2	0.1	28.6	53.3	14.6	22.5
28L	3.8	0.0	3.4	0.0	3.6	0.0
Total(b)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: (a) Night is defined as 10:00 p.m. to 6:59:59 a.m.
(b) Totals may not add due to rounding
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-44
RUNWAY END USE PERCENTAGE — BUILD OUT + 5 ALTERNATIVE D

Runway	Arrivals		Departures		Operations	
	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)
04L	0.0	0.0	0.6	3.9	0.3	1.7
04R	0.6	3.0	0.0	0.0	0.3	1.7
09L	9.4	7.4	0.1	0.1	4.7	4.2
09R	0.1	0.0	13.5	13.6	6.9	5.9
22L	0.0	0.0	20.4	7.2	10.3	3.1
22R	0.3	0.3	0.0	0.0	0.1	0.2
27L	0.0	51.6	25.5	6.1	12.9	31.8
27R	23.8	5.5	0.3	0.1	11.9	3.1
09C	7.9	3.3	0.0	0.0	3.9	1.9
10C	8.9	4.9	0.0	0.3	4.4	2.9
10L	0.0	18.7	12.4	24.1	6.3	21.0
10R	24.7	2.8	0.1	0.7	12.3	1.9
27C	24.2	2.4	0.1	0.7	12.0	1.7
28C	0.2	0.0	27.0	43.2	13.7	18.8
28R	0.0	0.0	0.6	3.9	0.3	1.7
28L	0.6	3.0	0.0	0.0	0.3	1.7
Total(b)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: (a) Night is defined as 10:00 p.m. to 6:59:59 a.m.
(b) Totals may not add due to rounding
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

TABLE F-45
RUNWAY END USE PERCENTAGE — BUILD OUT + 5 ALTERNATIVE G

Runway	Arrivals		Departures		Operations	
	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)	Day (%)	Night (%) (a)
04L	0.0	0.0	0.4	1.2	0.2	0.5
04R	0.4	0.8	0.0	0.0	0.2	0.5
09L	9.1	1.8	0.1	0.1	4.5	1.1
09R	0.1	0.0	9.0	5.9	4.6	2.5
22L	0.0	0.0	20.4	8.7	10.3	3.7
22R	0.6	0.7	0.0	0.0	0.3	0.4
27L	0.0	57.2	25.2	7.0	12.7	35.9
27R	23.4	6.0	0.3	0.1	11.7	3.5
09C	8.6	2.3	0.0	0.3	4.3	1.5
10C	9.4	4.0	0.0	0.3	4.7	2.5
10L	0.0	21.2	10.4	23.1	5.3	22.0
10R	24.3	3.1	0.1	0.8	12.1	2.2
27C	23.9	2.7	0.1	0.8	11.9	1.9
28C	0.2	0.0	26.6	50.0	13.6	21.3
28R	0.0	0.0	7.4	1.7	3.7	0.7
12	0.0	0.0	0.4	1.2	0.2	0.5
Total(b)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: (a) Night is defined as 10:00 p.m. to 6:59:59 a.m.
(b) Totals may not add due to rounding
Source: Leigh Fisher Associates [TPC] analysis, October 2004.

F.3 GRID POINT ANALYSIS AT NOISE SENSITIVE FACILITIES

This section presents noise levels that were computed at each of the noise sensitive facilities identified in the project area using the grid point analysis function of the INM. See **Attachment F-1** for all grid point analysis exhibits. The series of tables that follow include:

- An inventory of noise sensitive facilities in the project including learning institutions, places of worship, and healthcare facilities.
- DNL levels at each facility for each of the Build Alternatives (Alternative C, D, and G).
- Noise levels at each facility based on supplemental metrics for Build Out Alternatives A and C, and Build Out + 5 Alternatives A and C.

F.3.1 Inventory of Noise Sensitive Facilities

F.3.1.1 Learning Institutions

A total of 89 learning institutions are located within the project area (see **Table F-46**). Institutions in the School Sound Insulation Program (SSIP) are listed in bold face. These learning centers have either completed insulation programs or are funded for this program. Learning institutions include 79 schools, 4 universities/colleges, and 6 libraries. Of the 89 learning institutions in the project area, sound insulation for 66 has been completed and/or funded by the SSIP.

TABLE F-46
LEARNING INSTITUTIONS(a)

Map ID	City	Name	Address
Universities and Colleges			
U1	Bensenville	Robert Morris College	1000 Tower Lane
U2	Des Plaines	De Paul University	3166 S River Road
U3	Elmhurst	Mac Cormac College Inc	615 N West Avenue
U4	Schiller Park	Westwood College of Technology	4825 Scott Street
Libraries			
L1	Bensenville	Bensenville Community Library	200 S Church Road
L2	Harwood Heights	Eisenhower Library	4652 N Olcott Avenue
L3	Itasca	Itasca Community Library	500 W Irving Park Avenue
L4	Northlake	Northlake Public Library	231 N Wolf Road
L5	Schiller Park	Schiller Park Public Library	4200 Old River Road
L6	Wood Dale	Wood Dale Public Library	520 N Wood Dale Road
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools			
S1	**Bensenville**	**Blackhawk Middle School**	**250 S Church Road**
S2	**Bensenville**	**Chippewa ElementarySchool**	**322 S York Road**
S3	**Bensenville**	**Fenton High School**	**1000 W Green Street**
S4	**Bensenville**	**Mohawk Elementary School**	**917 W Hillside Drive**

TABLE F-46 (CONTINUED)
LEARNING INSTITUTIONS

Map ID	City	Name	Address
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)			
S5	**Bensenville**	**St Charles Borromeo**	**145 E Grand Avenue**
S6	**Bensenville**	**Tioga Elementary School**	**212 W Memorial Road**
S7	**Bensenville**	**Tioga School Special Education**	**212 W Memorial Road**
S8	**Bensenville**	**W A Johnson Elementary School**	**252 S Ridgewood Avenue**
S9	Chicago	Brickton Montessori School	8622 W Catalpa
S10	**Chicago**	**Dirksen Elementary School**	**8601 W Foster Avenue**
S11	**Chicago**	**Edison Elementary Regional Gifted Center**	**6220 N Olcott Avenue**
S12	**Chicago**	**Garvy Elementary School**	**5225 N Oak Park Avenue**
S13	**Chicago**	**Immaculate Conception School**	**7263 W Talcott Avenue**
S14	**Chicago**	**Norwood Park Elementary School**	**5900 N Nina Avenue**
S15	**Chicago**	**Oriole Park Elementary School**	**5424 N Oketo Avenue**
S16	Chicago	Our Savior Lutheran	6035 N Northcott Avenue
S17	**Chicago**	**Resurrection High School**	**7500 W Talcott Avenue**
S18	**Chicago**	**Socrates St. Sava School**	**5701 N Redwood Drive**
S19	**Chicago**	**St Eugene**	**7930 W Foster Avenue**
S20	**Chicago**	**St Paul Lutheran**	**5650 N Canfield Avenue**
S21	**Chicago**	**Taft High School**	**6545 W Hurlbut Street**
S22	**Des Plaines**	**Algonquin Middle School**	**767 E Algonquin Road**
S23	Des Plaines	Angel Town Private School	1920 Touhy Street
S24	**Des Plaines**	**Devonshire School**	**1401 Pennsylvania Avenue**
S25	Des Plaines	Forest Elementary School	1375 S 5th Avenue
S26	**Des Plaines**	**Friendship Junior High School**	**550 Elizabeth Lane**
S27	Des Plaines	Iroquois Community School	1836 E Touhy Avenue
S28	**Des Plaines**	**Maine West High School**	**1755 S Wolf Road**
S29	**Des Plaines**	**Orchard Place Elementary School**	**2727 Maple Street**
S30	**Des Plaines**	**Our Lady Of Destiny Elementary South**	**1880 Ash Street**
S31	**Des Plaines**	**Plainfield Elementary School**	**1850 Plainfield Drive**
S32	Des Plaines	South Elementary School	1535 Everett Avenue
S33	**Des Plaines**	**St Zachary School**	**567 W Algonquin Road**
S34	**Elk Grove Village**	**Clearmont Elementary School**	**280 Clearrmont Drive**
S35	**Elk Grove Village**	**Elk Grove High School**	**500 W Elk Grove Boulevard**
S36	**Elk Grove Village**	**Grove Jr. High School**	**777 W Elk Grove Boulevard**
S37	**Elk Grove Village**	**Lutheran School Of The Holy Spirit**	**150 Lions Drive**
S38	**Elk Grove Village**	**Queen Of The Rosary School**	**690 Elk Grove Boulevard**
S39	**Elk Grove Village**	**Ridge Family Center For Learning**	**650 Ridge Avenue**
S40	**Elk Grove Village**	**Rupley Elementary School**	**305 E Oakton Street**
S41	**Elmhurst**	**Churchville Junior High School**	**155 Victory Parkway**
S42	**Elmhurst**	**Conrad Fischer Elementary School**	**550 Victory Parkway**
S43	Franklin Park	East Leyden High School	3400 Rose Street
S44	**Franklin Park**	**Enger School**	**10401 Grand Avenue**
S45	**Franklin Park**	**North Elementary School**	**9500 Gage Street**
S46	Harwood Heights	Maple Park Academy	6740 W Montrose Avenue
S47	**Harwood Heights**	**Union Ridge Elementary School**	**4600 N Oak Park Avenue**
S48	**Itasca**	**Elmer H. Franzen Elementary School**	**730 N. Catalpa Street**
S49	**Itasca**	**F.E. Peacock Junior High School**	**301 E. North Street**
S50	**Itasca**	**Lutheran School Of St Luke**	**410 S Rush Street**

TABLE F-46 (CONTINUED)
LEARNING INSTITUTIONS

Map ID	City	Name	Address
S51	Itasca	New Morning Childrens House	400 N Walnut
S52	**Itasca**	**St Peter The Apostle School**	**500 N Cherry Street**
S53	**Itasca**	**Washington Elementary School**	**301 E. Washington Street**
S54	**Norridge**	**Divine Savior School**	**7750 W Montrose Avenue**
S55	**Norridge**	**J Giles Elementary School**	**4251 N Oriole Avenue**
S56	Norridge	Jolly Fun House (JFH) Educational Academy, Inc	7642 W Irving Park
S57	**Norridge**	**Leigh Elementary**	**8151 W Lawrence Avenue**
S58	**Norridge**	**Pennoyer Elementary School**	**5200 N Cumberland**
S59	Norridge	Ridgewood Community High School	7500 W Montrose Avenue
S60	**Northlake**	**Parkview Baptist Academy**	**70 Golfview Drive**
S61	**Northlake**	**Roy Elementary School**	**533 N Roy Avenue**
S62	**Northlake**	**St John Vianney School**	**27 N Lavergne Avenue**
S63	**Northlake**	**West Leyden High School**	**1000 N Wolf Road**
S64	**Northlake**	**Westdale Elementary School**	**99 W Diversey Avenue**
S65	Park Ridge	Alternative Resource Center Arc	1111 South Dee Road
S66	Park Ridge	George Washington Elementary School	1500 Stewart Avenue
S67	**Park Ridge**	**Maine South High School**	**1111 S Dee Road**
S68	**Park Ridge**	**Mary Seat Of Wisdom**	**1352 S Cumberland**
S69	**Rosemont**	**Rosemont Elementary School**	**6101 Ruby Street**
S70	**Schiller Park**	**John F Kennedy Elementary School**	**3945 Wehrman Avenue**
S71	**Schiller Park**	**Lincoln Middle School**	**4050 Wagner Avenue**
S72	**Schiller Park**	**St Beatrice School**	**4141 Atlantic Street**
S73	**Schiller Park**	**St Maria Goretti School**	**10050 Ivanhoe Avenue**
S74	**Schiller Park**	**Washington Elementary School**	**4835 Michigan Avenue**
S75	**Wood Dale**	**Early Childhood Education Center**	**543 N Wood Dale Road**
S76	**Wood Dale**	**Holy Ghost School**	**260 N Wood Dale Road**
S77	**Wood Dale**	**Oakbrook Elementary School**	**170 S Wood Dale Road**
S78	**Wood Dale**	**Westview Elementary School**	**200 N Addison Road**
S79	**Wood Dale**	**Wood Dale Junior High School**	**655 N Wood Dale Road**

Notes: (a) **Bold** indicates schools that have been sound insulated or funded for sound insulation through the 2004 School Sound Insulation Program (SSIP).

Sources: SSIP: City of Chicago Department of Aviation Noise Office, SSIP Information, June 2005.
Learning institutions:
1. 2002 Non-public School Database, Illinois State Board of Education
2. 2001 Public School Database, Illinois State Board of Education
3. Searches on www.smartpages.com for "university," "college," "library," "preschool," "Montessori," "junior high," "middle school," "high school," "school," "learning center," and "academy" for the communities of Bensenville, Chicago, Des Plaines, Elk Grove Village, Franklin Park, Harwood Heights, Itasca, Norridge, Northlake, Park Ridge, Rosemont, Schiller Park, and Wood Dale. Only non-profit entities were included in results.
4. National Center for Educational Statistics (NCES), on-line at http://nces.ed.gov/globallocator/

F.3.1.2 Health Care Facilities

Health care facilities include hospitals and nursing homes. A total of 2 hospitals and 6 nursing homes are located in the project area (see **Table F-47**).

TABLE F-47
HEALTH CARE FACILITIES

Map ID	City	Name	Address
Hospitals			
H1	Chicago	Resurrection Medical Center	7435 W Talcott Avenue
H2	Northlake	Vencor Hospital	365 E North Avenue
Nursing Homes			
N1	Bensenville	Bridgeway Of Bensenville	303 E. Washington Street
N2	Elmhurst	York Convalescent Center Lt	127 W Diversey Avenue
N3	Franklin Park	Scallabrini Life Center	10500 Grand Avenue
N4	Itasca	Arbor Of Itasca Inc	535 S Elm Street
N5	Norridge	Norridge Nursing Center	7001 W Cullom Avenue
N6	Northlake	Concord Plaza Assisted Living Center	401 W Lake Street

Source: Searches on www.smartpages.com for "hospital," "nursing home," "convalescent home," "clinic," and "emergency" for the communities of Bensenville, Chicago, Des Plaines, Elk Grove Village, Franklin Park, Harwood Heights, Itasca, Norridge, Northlake, Park Ridge, Rosemont, Schiller Park, and Wood Dale. Only in-patient facilities were included in results.

F.3.1.3 Places of Worship

This table includes any place of worship by various religions including churches, synagogues, temples, and other religious places. A combined total of 368 places of worship are located in the project area (see **Table F-48**).

TABLE F-48
PLACES OF WORSHIP

Map ID	City	Name	Address
W1	Addison	Sunnyplace Church Of God	901 E Oak Street
W2	Arlington Heights	Baptist General Conference	2002 S Arlington Heights
W3	Bensenville	Bensenville Bible Church	280 S York Road
W4	Bensenville	Bensenville United Methodist Church	328 S Church Road
W5	Bensenville	Calvary Baptist Church	306 Park Street
W6	Bensenville	Cornerstone Christian Assemably	644 John Street
W7	Bensenville	First Spanish Baptist Church	1215 Foster Avenue
W8	Bensenville	Grace Gospel Center	4N220 IL Route 83
W9	Bensenville	Grace Lutheran Church	950 S York Road
W10	Bensenville	Immanuel United Church-Christ	1009 S Church Road
W11	Bensenville	Jesus Alive Church	219 Pine Lane
W12	Bensenville	Manav Seva Mandir	101 S Church Road
W13	Bensenville	Peace Church United Church-Christ	192 S Center Street
W14	Bensenville	Sam Mool United Methodist Church / St. John's United Church	601 IL Route 83
W15	Bensenville	St. Alexis	400 W Wood Street
W16	Bensenville	St. Bede's Episcopal Church	5N047 IL Route 83
W17	Bensenville	St. Charles Borromeo	1135 Daniel Drive
W18	Bensenville	True Jesus Church	4N550 Church Road
W19	Bensenville	Ukranian Pentecostal Church	4N421 John Street
W20	Bensenville	Zion Evangelical Lutheran Church	865 S Church Road
W21	Chicago	All Saints Polish National Catholic Church	9201 W Higgins Road
W22	Chicago	Bethel Community Church	7601 W Foster Avenue
W23	Chicago	Church Of The Full Gospel Inc	6120 N Harlem Avenue
W24	Chicago	First Korean Presbyterian Church	5406 N Newland Avenue
W25	Chicago	Holy Resurrection Church	5701 N Redwood Drive
W26	Chicago	Norwood Park Evangelical Lutheran Church	5917 N Nina Avenue
W27	Chicago	Our Lady Mother Of Church	8747 W Lawrence Avenue
W28	Chicago	Our Savior Lutheran Church Of Norwood	6099 N Northcott Avenue
W29	Chicago	Our Saviors English Lutheran Church	6035 N Northcott Avenue
W30	Chicago	Sisters of Charity BVM	7920 W Foster Avenue
W31	Chicago	Sisters of the Living Word	8311 W Berwyn Avenue
W32	Chicago	St Albans Episcopal Church	6240 N Avondale Avenue
W33	Chicago	St Andrew Presbyterian Church	7534 W Berwyn Avenue
W34	Chicago	St James Lutheran Church	7400 W Foster Avenue
W35	Chicago	St Josephs Ukrainian Church	5000 N Cumberland Avenue
W36	Chicago	St Paul Evangelical Ltheran Church	5650 N Canfield Avenue
W37	Chicago	St Sophia Ukrainian Church	6655 W Higgins Avenue
W38	Des Plaines	Brentwood Baptist Church	609 w Dempster Street
W39	Des Plaines	Calvary Korean Baptist Church	1575 S Wolf Road
W40	Des Plaines	Church of Christ	1794 Illinois Street
W41	Des Plaines	First Presbyterian Church	1755 Howard Avenue

TABLE F-48 (CONTINUED)
PLACES OF WORSHIP

Map ID	City	Name	Address
W42	Des Plaines	Good Shepherd Lutheran Church	1177 Howard Avenue
W43	Des Plaines	Korean Philippi Presbyterian	1969 E Touhy Avenue
W44	Des Plaines	Phat Bao Temple	1495 Prospect Avenue
W45	Des Plaines	St. Stephen Catholic Church	1267 Everett Avenue
W46	Des Plaines	St. Zachary Catholic Church	567 W Algonquin Road
W47	Des Plaines	Trinity Lutheran Church	675 E Algonquin Road
W48	Elk Grove Village	1st Baptist Church of Elk Grove Village	590 Tonne Road
W49	Elk Grove Village	Elk Grove Presbyterian Church	600 E Elk Grove Boulevard
W50	Elk Grove Village	Evangelical Free Church	312 Bonnie Lane
W51	Elk Grove Village	Gethsemane Presbyterian Church	301 Ridge Avenue
W52	Elk Grove Village	Lutheran Church of the Holy Spirit	150 Lions Drive
W53	Elk Grove Village	Queen of the Rosary Church	750 W Elk Grove Boulevard
W54	Elk Grove Village	St. Nicholas Episcopal Church	1072 Ridge Avenue
W55	Elk Grove Village	Wesleyan Community Church	545 Landmeier Road
W56	Elmhurst	Assembly God Hammond Church	643 Willow Road
W57	Elmhurst	Chicago Church Of Christ Inc	609 N York Street
W58	Elmhurst	Elmhurst Korean Presbyterian Church	300 E Belden Avenue
W59	Franklin Park	Espirity Santo Episcopal Church	3245 Calwagner Street
W60	Franklin Park	Faith Christian Center	3350 River Road
W61	Franklin Park	Mt. Calvary Lutheran Church	3222 Rose Street
W62	Franklin Park	St. Paul's United Church of Christ	3342 Calwagner Street
W63	Harwood Heights	Bethany Baptist Church	6700 W Gunnison Street
W64	Harwood Heights	Northside Arabic Church	4256 N Oriole Avenue
W65	Itasca	Bethany United Methdst Church	400 N Walnut Street
W66	Itasca	Christian Fellowship Church	152 E Devon Avenue
W67	Itasca	Hanmee Presbyterian Church	1149 W Bloomingdale Road
W68	Norridge	Acacia Park Evangelical Lutheran Church	4307 N Oriole Avenue
W69	Norridge	Church of Our Savior	4701 N Canfield Avenue
W70	Norridge	Divine Savior	7750 W Montrose Avenue
W71	Norridge	Zion Evangelical Lutheran Church	8600 W Lawrence Avenue
W72	Northlake	Bethel Fellowship Church	35 E North Avenue
W73	Northlake	Iglesia Bautista Hispana	316 La Porte Avenue
W74	Northlake	Parkview Baptist Church	70 Golfview Drive
W75	Northlake	St. John the Baptist Melkite Catholic Church	200 E North Avenue
W76	Northlake	St. John Vianney Church	46 N Wolf Road
W77	Northlake	St. Peter's Syrian Orthodox Church	150 Belle Drive
W78	Northlake	Trinity Presbyterian Church	2788 N Wolf Road
W79	Park Ridge	Mary Seat of Wisdom Church	920 Granville Avenue
W80	Park Ridge	South Park Church	1330 Courtland Avenue
W81	Schiller Park	Grace Community Evangelical	4244 Grace Street
W82	Schiller Park	International Christian Assembly of God	9628 Irving Park Road
W83	Schiller Park	St. Beatrice Church	4141 Atlantic Avenue
W84	Wood Dale	Calvary Evangelical Lutheran Church	107 N Wood Dale Road
W85	Wood Dale	Christian Congregation	120 S Mill Road
W86	Wood Dale	First Baptist Church- Wood Dale	292 E 3rd Avenue
W87	Wood Dale	St. Peter's Latvian Lutheran Church	450 Forest Preserve Drive

Source: Search on www.smartpages.com

F.3.1.4 Parks

The following is a list of parks that fall within the project area. There are 100 parks located in the project area (see **Table F-49**).

TABLE F-49
PARKS

Map ID	City	Name
FP-1	Elk Grove Village	Elk Grove Forest Preserve (Salt Creek West)
FP-2	Elk Grove Village	Elk Grove Forest Preserve (Salt Creek East)
FP-3	Bensenville	Silver Creek (DuPage County Forest Preserve)
FP-4	Elk Grove Village	Ned Brown Forest Preserve
P1	Bensenville	Bretman Park
P2	Bensenville	DiOrio Park
P3	Bensenville	Kremples Park
P4	Bensenville	Lions Park
P5	Bensenville	Pines Park
P6	Bensenville	Poplar Park
P7	Bensenville	Rose Park
P8	Bensenville	Schuster Park
P9	Bensenville	Sunrise Park
P10	Bensenville	Sunset Park
P11	Bensenville	Varble Park / Water Park & Golf Waters / Deer Grove
P12	Bensenville	Veterans Park
P13	Bensenville	Woodcrest Park
P14	Bensenville	Woodside Park
P15	Chicago	Grandparents Park
P16	Chicago	Mulberry Point Park
P17	Chicago	Myrtle Point Park
P18	Chicago	Norwood Circle Park
P19	Chicago	Norwood Park
P20	Chicago	Oriole Park
P21	Chicago	Summerdale Park
P22	Des Plaines	Administrative & Leisure Center
P23	Des Plaines	Apache Park
P24	Des Plaines	Arndt Park
P25	Des Plaines	Lake Park
P26	Des Plaines	McKay Neils Park
P27	Des Plaines	Seminole Park
P28	Des Plaines	Winnebago Park
P29	DuPage County	Salt Creek Park
P30	Elk Grove Village	Andrews Park
P31	Elk Grove Village	Appleseed Park
P32	Elk Grove Village	Community Athletic Fields
P33	Elk Grove Village	Audubon Park
P34	Elk Grove Village	Bartrum Park
P35	Elk Grove Village	Burbank Park
P36	Elk Grove Village	Fairchild Park

TABLE F-49 (CONTINUED)
PARKS

Map ID	City	Name
P37	Elk Grove Village	Lions Park (Rainbow Falls)
P38	Elk Grove Village	Muir Park
P39	Elk Grove Village	Olmstead Park
P40	Elk Grove Village	Osborn Park
P41	Elk Grove Village	Sanders Park
P42	Elk Grove Village	Udall Park
P43	Franklin Park	Hawthorne Park
P44	Franklin Park	Iceland Park
P45	Franklin Park	James Park
P46	Franklin Park	Linden Park
P47	Franklin Park	North Park
P49	Franklin Park	Pine Park
P50	Franklin Park	Robinson and Crusoe Park
P51	Franklin Park	Ruby-Addison Park
P52	Harwood Heights	St. Rosalie's Kiddie Park
P53	Harwood Heights	Tot Park
P54	Itasca	Benson Park
P55	Itasca	Clayson Park
P56	Itasca	Country Club Park
P57	Itasca	Franzen Park
P58	Itasca	Peacoak Park
P59	Itasca	Schiller Park
P60	Itasca	Washington Park
P61	Norridge	Norridge Park
P62	Park Ridge	Brickton Park
P63	Park Ridge	Centennial Park
P64	Park Ridge	Jaycee Park
P65	Park Ridge	Southwest Park
P66	Schiller Park	Fairview Park
P67	Schiller Park	Kennedy Park / Memorial Pool
P68	Schiller Park	North Village Park
P69	Schiller Park	Stalica Park
P70	Schiller Park	Wm. M. Dooley Memorial Park
P71	Wood Dale	Brookwood Park
P72	Wood Dale	Central Park
P73	Wood Dale	Community Park
P74	Wood Dale	Lionwood Park
P75	Wood Dale	Veteran's Memorial Park
P76	Wood Dale	White Oak Park
P77	Wood Dale	Wood Dale Water Park
PP1	Elk Grove Village	LGK Pocket Park (under construction)
PP2	Elk Grove Village	Pocket Park #2 (under construction)
PP3	Elk Grove Village	Pocket Park #3 (under construction)
PP4	Elk Grove Village	Pocket Park #4 (under construction)
PP5	Elk Grove Village	Pocket Park #5 (under construction)
PP6	Elk Grove Village	Pocket Park #6 (future)
PP7	Elk Grove Village	Pocket Park #7 (under construction)
PP8	Elk Grove Village	Pocket Park #8 (future)

TABLE F-49 (CONTINUED)
PARKS

Map ID	City	Name
PP9	Elk Grove Village	Pocket Park #9 (existing)
PP10	Elk Grove Village	Pocket Park #10 (future)
PP11	Elk Grove Village	Pocket Park #11 (future)
PP12	Elk Grove Village	Pocket Park #12 (existing)
PP13	Elk Grove Village	Pocket Park #13 (future)
PP14	Elk Grove Village	Pocket Park #14 (future)
PP15	Elk Grove Village	Pocket Park #15 (existing)
PP16	Elk Grove Village	Pocket Park #16 (future)
PP17	Elk Grove Village	Pocket Park #17 (future)
PP18	Elk Grove Village	Pocket Park #18 (existing)
PP19	Elk Grove Village	Pocket Park #19 (future)
PP20	Elk Grove Village	Pocket Park #20 (future)

Note: P48 was omitted from Park numbering.
Source: DuPage County Park District, Cook County Park District, Community Park Districts.

F.3.2 DNL Levels at Noise Facilities

Table F-50 through **Table F-53** show results of DNL analyses at each of the identified facilities. Each table compares the No Action Alternative (Alternative A) to the proposed Build Alternatives (Alternatives C, D, and G). The tables include results for Construction Phase I, Construction Phase II, Build Out, and Build Out + 5.

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TABLE F-50
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (LEARNING INSTITUTIONS)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
Universities and Colleges														
U1	Bensenville	Robert Morris College	64.0	65.7	64.2	65.7	63.6	63.6	63.7	63.6	63.7	64.4	64.5	64.4
U2	Des Plaines	De Paul University	61.6	62.0	61.5	61.6	59.2	60.0	61.6	60.1	59.4	61.2	62.1	60.9
U3	Elmhurst	Mac Cormac College Inc	53.6	55.1	53.8	55.3	52.7	53.2	53.0	53.2	52.8	55.2	53.9	54.0
U4	Schiller Park	Westwood College of Technology	71.5	71.5	71.1	73.6	70.1	72.0	72.4	72.1	71.4	72.7	73.2	72.9
Libraries														
L1	Bensenville	Bensenville Community Library	62.4	63.0	62.6	65.5	61.5	65.5	65.0	65.1	61.8	66.1	65.8	65.8
L2	Harwood Heights	Eisenhower Library	62.3	62.6	62.2	60.8	61.9	60.9	60.9	60.9	62.3	61.8	61.9	61.7
L3	Itasca	Itasca Community Library	60.4	60.7	60.4	61.9	59.4	61.0	61.0	61.0	60.3	61.7	61.6	61.7
L4	Northlake	Northlake Public Library	63.6	64.3	64.2	63.8	61.2	57.6	58.0	58.7	60.5	57.2	57.6	58.5
L5	Schiller Park	Schiller Park Public Library	59.4	59.0	59.1	62.3	58.0	61.9	60.3	59.4	60.8	62.7	61.1	60.2
L6	Wood Dale	Wood Dale Public Library	64.3	65.4	64.4	66.6	63.3	65.3	65.2	65.3	64.1	65.8	65.7	65.8
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools														
S1	**Bensenville**	**Blackhawk Middle School**	**60.0**	**60.4**	**60.2**	**60.4**	**59.0**	**61.5**	**60.1**	**60.2**	**59.3**	**63.1**	**60.9**	**60.9**
S2	**Bensenville**	**Chippewa Elementary School**	**60.0**	**61.9**	**60.2**	**58.9**	**58.6**	**60.4**	**58.9**	**59.0**	**59.1**	**62.4**	**59.8**	**59.8**
S3	**Bensenville**	**Fenton High School**	**61.1**	**61.3**	**61.3**	**64.5**	**60.1**	**64.5**	**63.9**	**63.9**	**60.4**	**64.8**	**64.5**	**64.6**
S4	**Bensenville**	**Mohawk Elementary School**	**64.6**	**66.1**	**64.7**	**71.0**	**63.9**	**69.5**	**69.7**	**69.6**	**64.6**	**70.5**	**70.9**	**70.8**
S5	**Bensenville**	**St Charles Borromeo**	**58.5**	**60.0**	**58.9**	**57.2**	**57.4**	**55.3**	**54.5**	**54.6**	**57.6**	**56.5**	**55.1**	**55.3**
S6	**Bensenville**	**Tioga Elementary School**	**59.8**	**61.5**	**60.0**	**59.0**	**58.6**	**60.9**	**59.0**	**59.1**	**59.1**	**63.0**	**59.9**	**59.9**
S7	**Bensenville**	**Tioga School Special Education**	**59.8**	**61.5**	**60.0**	**59.0**	**58.6**	**60.9**	**59.0**	**59.1**	**59.1**	**63.0**	**59.9**	**59.9**
S8	**Bensenville**	**W A Johnson Elementary School**	**59.1**	**59.6**	**59.4**	**60.2**	**57.9**	**60.5**	**59.6**	**59.6**	**58.2**	**61.7**	**60.3**	**60.3**
S9	Chicago	Brickton Montessori School	64.8	63.6	64.3	66.3	62.5	64.3	64.6	64.4	62.5	64.8	65.0	65.0
S10	**Chicago**	**Dirksen Elementary School**	**64.3**	**65.2**	**64.1**	**63.4**	**63.3**	**61.3**	**61.1**	**61.5**	**63.9**	**62.0**	**62.5**	**62.1**

TABLE F-50
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (LEARNING INSTITUTIONS)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)														
S11	**Chicago**	**Edison Elementary Regional Gifted Center**	**55.4**	**59.9**	**54.9**	**58.6**	**51.8**	**60.0**	**60.5**	**60.3**	**51.8**	**60.4**	**60.9**	**60.6**
S12	**Chicago**	**Garvy Elementary School**	**59.0**	**56.3**	**58.4**	**58.9**	**55.3**	**59.2**	**59.6**	**59.1**	**55.1**	**60.3**	**60.6**	**60.5**
S13	**Chicago**	**Immaculate Conception School**	**61.5**	**60.4**	**61.3**	**65.7**	**60.5**	**65.5**	**65.5**	**65.4**	**60.3**	**66.0**	**66.0**	**66.1**
S14	**Chicago**	**Norwood Park Elementary School**	**60.2**	**58.0**	**59.8**	**62.9**	**58.3**	**63.5**	**63.7**	**63.5**	**58.2**	**64.0**	**64.1**	**64.3**
S15	**Chicago**	**Oriole Park Elementary School**	**60.6**	**60.5**	**60.2**	**63.1**	**59.2**	**61.6**	**61.8**	**61.7**	**59.5**	**62.2**	**62.3**	**62.4**
S16	Chicago	Our Savior Lutheran	59.4	56.5	58.9	60.9	56.8	61.5	61.8	61.6	56.7	62.1	62.3	62.4
S17	**Chicago**	**Resurrection High School**	**60.2**	**57.4**	**59.7**	**61.2**	**57.1**	**62.2**	**62.4**	**62.2**	**56.9**	**63.0**	**63.2**	**63.3**
S18	**Chicago**	**Socrates School**	**64.0**	**63.4**	**63.8**	**68.5**	**63.2**	**67.1**	**67.2**	**67.0**	**63.0**	**67.6**	**67.7**	**67.7**
S19	**Chicago**	**St Eugene**	**62.5**	**63.3**	**62.2**	**61.3**	**61.4**	**59.5**	**59.5**	**59.7**	**61.9**	**60.3**	**60.6**	**60.5**
S20	**Chicago**	**St Paul Lutheran**	**63.6**	**63.1**	**63.4**	**68.2**	**62.8**	**66.7**	**66.8**	**66.7**	**62.6**	**67.3**	**67.3**	**67.4**
S21	**Chicago**	**Taft High School**	**60.4**	**59.7**	**60.1**	**65.0**	**59.7**	**64.0**	**64.1**	**64.1**	**59.7**	**64.5**	**64.5**	**64.6**
S22	**Des Plaines**	**Algonquin Middle School**	**57.4**	**60.0**	**57.1**	**58.0**	**55.7**	**51.0**	**52.7**	**50.9**	**56.0**	**50.2**	**53.0**	**51.0**
S23	Des Plaines	Angel Town Private School	63.7	60.7	63.5	60.5	62.6	56.8	58.3	55.8	63.0	57.2	58.9	56.6
S24	**Des Plaines**	**Devonshire School**	**60.2**	**62.1**	**60.1**	**61.3**	**58.7**	**57.3**	**57.4**	**57.3**	**59.1**	**55.4**	**57.6**	**57.4**
S25	Des Plaines	Forest Elementary School	58.1	60.4	57.8	57.9	56.3	50.8	52.4	50.6	56.6	50.1	52.8	50.8
S26	**Des Plaines**	**Friendship Junior High School**	**61.1**	**61.4**	**60.8**	**62.4**	**59.6**	**58.3**	**58.4**	**58.3**	**59.9**	**56.8**	**58.5**	**58.4**
S27	Des Plaines	Iroquois Community School	65.7	61.9	65.5	61.1	65.1	57.1	58.5	56.3	65.5	57.5	59.1	57.2
S28	**Des Plaines**	**Maine West High School**	**59.9**	**61.2**	**59.7**	**58.1**	**58.4**	**50.5**	**51.7**	**50.2**	**58.5**	**50.2**	**52.1**	**50.6**
S29	**Des Plaines**	**Orchard Place Elementary School**	**63.8**	**68.7**	**63.9**	**67.2**	**61.7**	**67.9**	**68.6**	**68.3**	**62.0**	**68.0**	**68.6**	**68.3**
S30	**Des Plaines**	**Our Lady Of Destiny Elementary South**	**57.8**	**58.1**	**57.4**	**58.1**	**55.9**	**51.9**	**54.4**	**51.2**	**56.1**	**52.5**	**55.0**	**51.6**
S31	**Des Plaines**	**Plainfield Elementary School**	**58.7**	**60.5**	**58.4**	**58.8**	**57.3**	**50.4**	**52.0**	**50.0**	**57.4**	**50.5**	**52.5**	**50.4**
S32	Des Plaines	South Elementary School	57.5	56.6	56.8	58.5	55.4	52.1	54.6	51.3	55.8	52.9	55.1	52.0

TABLE F-50
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (LEARNING INSTITUTIONS)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)														
S33	**Des Plaines**	**St Zachary School**	**60.3**	**60.7**	**60.1**	**61.9**	**58.8**	**58.0**	**58.1**	**58.0**	**59.1**	**56.5**	**58.2**	**58.2**
S34	**Elk Grove Village**	**Clearmont Elementary School**	**60.4**	**60.5**	**60.5**	**60.8**	**59.3**	**59.9**	**60.7**	**60.0**	**59.0**	**60.6**	**61.4**	**60.6**
S35	**Elk Grove Village**	**Elk Grove High School**	**59.3**	**60.1**	**59.4**	**60.0**	**58.5**	**59.1**	**59.9**	**59.1**	**58.1**	**59.9**	**60.7**	**59.9**
S36	**Elk Grove Village**	**Grove Junior High School**	**58.6**	**59.7**	**58.7**	**58.6**	**57.9**	**57.8**	**58.4**	**57.9**	**57.6**	**58.8**	**59.2**	**58.6**
S37	**Elk Grove Village**	**Lutheran School Of The Holy Spirit**	**56.9**	**58.4**	**57.0**	**56.0**	**56.6**	**55.6**	**55.7**	**55.5**	**56.2**	**56.5**	**56.3**	**56.1**
S38	**Elk Grove Village**	**Queen Of The Rosary School**	**60.5**	**61.3**	**60.6**	**59.3**	**59.6**	**58.5**	**59.1**	**58.6**	**59.3**	**59.9**	**60.4**	**59.9**
S39	**Elk Grove Village**	**Ridge Family Center For Learning**	**58.2**	**59.5**	**58.2**	**57.3**	**57.5**	**56.7**	**56.9**	**56.6**	**57.2**	**57.8**	**57.8**	**57.6**
S40	**Elk Grove Village**	**Rupley Elementary School**	**59.1**	**61.5**	**59.0**	**55.2**	**58.5**	**56.0**	**56.0**	**55.9**	**58.4**	**57.4**	**57.3**	**57.3**
S41	**Elmhurst**	**Churchville Junior High School**	**58.8**	**59.8**	**59.2**	**57.3**	**58.1**	**55.1**	**54.9**	**54.6**	**58.2**	**56.2**	**55.5**	**55.2**
S42	**Elmhurst**	**Conrad Fischer Elementary School**	**61.3**	**61.5**	**61.6**	**58.6**	**60.8**	**56.3**	**56.7**	**55.8**	**60.9**	**57.0**	**57.2**	**56.3**
S43	Franklin Park	East Leyden High School	59.0	58.0	58.8	56.1	57.9	57.7	54.5	53.8	58.9	58.2	55.3	54.6
S44	**Franklin Park**	**Enger Elementary School**	**64.0**	**62.4**	**64.0**	**58.6**	**62.2**	**56.2**	**56.5**	**58.8**	**61.5**	**56.3**	**56.7**	**59.0**
S45	**Franklin Park**	**North Elementary School**	**59.0**	**58.0**	**58.7**	**55.1**	**57.5**	**57.2**	**53.7**	**52.9**	**58.4**	**57.6**	**54.6**	**53.6**
S46	Harwood Heights	Maple Park Academy	59.0	59.1	58.8	57.4	58.4	57.8	57.7	57.6	58.9	58.6	58.5	58.3
S47	**Harwood Heights**	**Union Ridge Elementary School**	**61.9**	**62.2**	**61.8**	**59.6**	**61.8**	**59.8**	**59.9**	**59.8**	**62.1**	**60.7**	**60.7**	**60.6**
S48	**Itasca**	**Elmer H. Franzen Elementary School**	**57.0**	**58.2**	**57.2**	**58.4**	**56.5**	**56.9**	**57.1**	**57.1**	**56.6**	**58.1**	**58.0**	**58.0**
S49	**Itasca**	**F.E. Peacock Junior High School**	**58.8**	**60.0**	**59.0**	**60.1**	**58.1**	**58.6**	**58.7**	**58.7**	**58.4**	**59.6**	**59.5**	**59.5**
S50	**Itasca**	**Lutheran School Of St Luke**	**59.8**	**60.1**	**59.9**	**62.6**	**58.9**	**61.4**	**61.6**	**61.6**	**59.7**	**62.3**	**62.4**	**62.4**
S51	Itasca	New Morning Children's House	59.3	60.3	59.4	60.5	58.5	59.4	59.4	59.4	59.0	60.3	60.1	60.2
S52	**Itasca**	**St Peter The Apostle School**	**59.0**	**60.1**	**59.1**	**60.2**	**58.2**	**58.8**	**58.9**	**58.9**	**58.5**	**59.7**	**59.6**	**59.6**

TABLE F-50
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (LEARNING INSTITUTIONS)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)														
S53	**Itasca**	**Washington Elementary School**	**60.6**	**60.7**	**60.7**	**63.0**	**59.6**	**62.0**	**62.1**	**62.1**	**60.5**	**62.7**	**62.8**	**62.9**
S54	**Norridge**	**Divine Savior School**	**59.0**	**59.4**	**58.7**	**57.9**	**57.3**	**58.1**	**57.5**	**57.4**	**58.0**	**58.7**	**58.5**	**58.2**
S55	**Norridge**	**J Giles Elementary School**	**57.7**	**58.1**	**57.4**	**55.8**	**55.7**	**56.3**	**55.0**	**54.9**	**56.3**	**56.8**	**55.9**	**55.5**
S56	Norridge	Jolly Fun House (JFH) Educational Academy, Inc	56.6	57.0	56.5	55.2	54.8	54.3	53.7	53.4	55.2	54.7	54.6	54.0
S57	**Norridge**	**J Leigh Elementary School**	**64.6**	**64.9**	**64.5**	**63.8**	**64.2**	**63.6**	**63.6**	**63.6**	**64.6**	**64.6**	**64.7**	**64.5**
S58	**Norridge**	**Pennoyer Elementary School**	**62.9**	**63.5**	**62.6**	**62.8**	**61.6**	**60.7**	**60.6**	**60.9**	**62.2**	**61.4**	**61.8**	**61.6**
S59	Norridge	Ridgewood Community High School	59.2	59.4	58.9	58.1	57.9	58.3	58.1	58.0	58.4	59.1	59.0	58.7
S60	**Northlake**	**Parkview Baptist Academy**	**63.8**	**64.6**	**64.4**	**64.2**	**61.2**	**57.8**	**58.2**	**59.0**	**60.6**	**57.4**	**57.9**	**58.8**
S61	**Northlake**	**Roy Elementary School**	**65.3**	**64.0**	**65.7**	**62.8**	**63.3**	**57.9**	**58.4**	**59.6**	**62.3**	**57.6**	**58.2**	**59.5**
S62	**Northlake**	**St John Vianney School**	**63.2**	**63.9**	**63.8**	**63.5**	**60.8**	**57.4**	**57.7**	**58.4**	**60.2**	**57.1**	**57.4**	**58.2**
S63	**Northlake**	**West Leyden High School**	**68.1**	**68.4**	**68.8**	**67.7**	**66.2**	**61.6**	**62.3**	**63.3**	**65.2**	**61.0**	**62.0**	**63.2**
S64	**Northlake**	**Westdale Elementary School**	**66.2**	**64.7**	**66.5**	**62.2**	**64.3**	**58.4**	**59.0**	**60.7**	**63.6**	**58.2**	**59.0**	**60.8**
S65	Park Ridge	Alternative Resource Center	60.7	61.2	60.4	61.6	57.9	59.6	61.1	59.7	58.1	60.7	61.6	60.4
S66	Park Ridge	George Washington Elementary School	57.6	62.0	57.5	61.0	54.7	61.6	62.4	62.0	55.1	61.9	62.5	62.1
S67	**Park Ridge**	**Maine South High School**	**58.6**	**62.9**	**58.3**	**62.9**	**55.9**	**62.3**	**63.2**	**62.6**	**56.3**	**62.8**	**63.4**	**62.8**
S68	**Park Ridge**	**Mary Seat Of Wisdom**	**60.9**	**59.1**	**60.2**	**60.3**	**57.0**	**59.9**	**60.7**	**59.9**	**57.1**	**61.2**	**61.6**	**61.3**
S69	**Rosemont**	**Rosemont Elementary School**	**66.8**	**66.3**	**67.4**	**65.3**	**64.5**	**67.4**	**68.3**	**67.6**	**64.3**	**68.6**	**68.9**	**68.8**
S70	**Schiller Park**	**John F Kennedy Elementary School**	**62.6**	**61.0**	**62.7**	**60.8**	**61.6**	**61.4**	**58.9**	**58.6**	**62.7**	**61.8**	**59.5**	**59.2**
S71	**Schiller Park**	**Lincoln Middle School**	**60.1**	**59.0**	**60.1**	**60.4**	**59.3**	**62.3**	**59.1**	**58.5**	**61.2**	**62.9**	**59.8**	**59.1**
S72	**Schiller Park**	**St Beatrice School**	**60.1**	**59.4**	**59.9**	**61.4**	**59.2**	**63.3**	**60.1**	**59.5**	**61.5**	**63.9**	**60.9**	**60.2**
S73	**Schiller Park**	**St Maria Goretti School**	**61.7**	**60.0**	**61.8**	**59.8**	**61.1**	**59.9**	**57.9**	**57.7**	**62.2**	**60.3**	**58.5**	**58.3**

TABLE F-50
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (LEARNING INSTITUTIONS)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)														
S74	**Schiller Park**	**Washington Elementary School**	**69.9**	**70.5**	**69.5**	**70.9**	**69.1**	**69.2**	**69.5**	**69.3**	**70.4**	**70.1**	**70.6**	**70.2**
S75	**Wood Dale**	**Early Childhood Education Center**	**64.7**	**65.6**	**64.8**	**66.9**	**63.7**	**65.8**	**65.7**	**65.8**	**64.5**	**66.3**	**66.2**	**66.3**
S76	**Wood Dale**	**Holy Ghost School**	**59.2**	**60.2**	**59.4**	**64.1**	**58.5**	**62.4**	**62.5**	**62.5**	**58.6**	**63.4**	**63.6**	**63.6**
S77	**Wood Dale**	**Oakbrook Elementary School**	**57.5**	**58.3**	**57.8**	**62.2**	**56.6**	**60.9**	**60.7**	**60.7**	**56.5**	**61.2**	**61.5**	**61.5**
S78	**Wood Dale**	**Westview Elementary School**	**57.9**	**58.5**	**58.1**	**61.1**	**57.1**	**59.2**	**59.2**	**59.2**	**57.0**	**60.1**	**60.2**	**60.2**
S79	**Wood Dale**	**Wood Dale Junior High School**	**63.9**	**65.3**	**64.0**	**66.3**	**63.0**	**64.8**	**64.8**	**64.8**	**63.6**	**65.4**	**65.3**	**65.4**

Notes: **Bold** indicates schools that have been sound insulated or funded for sound insulation through the 2004 School Sound Insulation Program (SSIP).

Sources: SSIP: City of Chicago Department of Aviation Noise Office, SSIP Information, June 2005.

Learning institutions:

1. 2002 Non-public School Database, Illinois State Board of Education
2. 2001 Public School Database, Illinois State Board of Education
3. Searches on www.smartpages.com for "university," "college," "library," "preschool," "Montessori," "junior high," "middle school," "high school," "school," "learning center," and "academy" for the communities of Bensenville, Chicago, Des Plaines, Elk Grove Village, Franklin Park, Harwood Heights, Itasca, Norridge, Northlake, Park Ridge, Rosemont, Schiller Park, and Wood Dale. Only non-profit entities were included in results.
4. National Center for Educational Statistics (NCES), on-line at http://nces.ed.gov/globallocator/

TABLE F-51
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (HEALTH CARE FACILITIES)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
Hospitals														
H1	Chicago	Resurrection Medical Center	61.4	59.7	61.1	64.7	59.7	65.1	65.3	65.1	59.5	65.7	65.8	65.9
H2	Northlake	Vencor Hospital	61.1	59.0	61.8	58.1	59.5	55.1	54.7	55.7	58.5	55.0	54.5	55.7
Nursing Homes														
N1	Bensenville	Bridgeway Of Bensenville	60.2	62.2	60.4	58.8	58.8	60.0	58.7	58.8	59.2	61.7	59.6	59.7
N2	Elmhurst	York Convalescent Center Lt	57.4	58.9	57.7	56.6	56.3	54.6	53.9	54.0	56.5	56.1	54.6	54.7
N3	Franklin Park	Scallabrini Life Center	65.1	63.7	65.2	60.4	63.4	57.4	58.0	60.2	62.7	57.3	58.1	60.4
N4	Itasca	Arbor Of Itasca Inc	60.5	60.6	60.6	62.9	59.5	61.9	62.0	62.0	60.4	62.6	62.7	62.8
N5	Norridge	Norridge Nursing Center	56.6	57.1	56.2	54.9	55.0	55.4	54.5	54.2	55.5	56.0	55.2	54.8
N6	Northlake	Concord Plaza Assisted Living Center	64.8	65.5	65.4	65.0	62.5	58.7	59.2	60.1	61.7	58.2	58.9	59.9

Source: Searches on www.smartpages.com for "hospital," "nursing home," "convalescent home," "clinic," and "emergency" for the communities of Bensenville, Chicago, Des Plaines, Elk Grove Village, Franklin Park, Harwood Heights, Itasca, Norridge, Northlake, Park Ridge, Rosemont, Schiller Park, and Wood Dale. Only in-patient facilities were included in results.

TABLE F-52
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (PLACES OF WORSHIP)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
W1	Addison	Sunnyplace Church Of God	55.2	57.3	55.5	57.9	54.2	56.8	56.4	56.5	54.2	58.2	57.3	57.3
W2	Arlington Heights	Baptist General Conference	58.9	57.8	58.8	53.9	58.1	51.2	51.4	51.2	58.2	53.4	53.1	53.0
W3	Bensenville	Bensenville Bible Church	60.4	62.2	60.5	59.3	59.0	61.0	59.4	59.5	59.5	62.9	60.3	60.3
W4	Bensenville	Bensenville United Methodist Church	59.2	59.7	59.3	59.7	58.1	60.5	59.1	59.2	58.5	62.2	59.9	59.9
W5	Bensenville	Calvary Baptist Church	60.9	62.7	61.0	59.5	59.6	60.1	58.7	58.8	59.9	61.3	59.5	59.6
W6	Bensenville	Cornerstone Christian Assembly	63.1	64.9	63.9	62.0	62.2	58.4	58.6	59.1	62.0	58.3	58.5	59.0
W7	Bensenville	First Spanish Baptist Church	65.8	67.8	65.9	69.8	65.2	67.8	67.9	67.9	65.9	68.5	68.5	68.5
W8	Bensenville	Grace Gospel Ctr.	56.5	58.4	56.8	59.0	55.4	57.8	57.3	57.4	55.6	58.9	58.1	58.1
W9	Bensenville	Grace Lutheran Church	57.6	60.1	58.0	56.7	56.5	55.9	54.2	54.5	56.8	57.6	55.1	55.3
W10	Bensenville	Immanuel United Church-Christ	55.5	58.4	55.9	57.0	54.4	55.5	54.1	54.2	54.9	57.8	55.0	55.2
W11	Bensenville	Jesus Alive Church	61.1	61.4	61.4	66.1	60.1	64.6	64.5	64.5	60.4	65.3	65.7	65.7
W12	Bensenville	Manav Seva Mandir	62.1	62.5	62.3	63.9	61.1	64.7	63.7	63.7	61.4	65.7	64.4	64.4
W13	Bensenville	Peace Church United Chr-Christ	61.6	62.9	61.7	61.3	60.3	63.3	61.4	61.5	60.7	65.1	62.3	62.3
W14	Bensenville	Sam Mool United Methodist Church/St. John's United Church Of Christ	66.4	68.2	66.5	70.2	65.7	68.5	68.5	68.5	66.5	69.1	69.1	69.1
W15	Bensenville	St. Alexis	60.9	61.8	61.0	60.9	59.8	62.7	60.9	60.9	60.2	64.5	61.7	61.7
W16	Bensenville	St. Bede's Episcopal Church	59.5	59.9	59.8	61.6	58.2	61.4	60.9	60.9	58.5	61.8	61.5	61.5
W17	Bensenville	St. Charles Borromeo	58.6	60.2	59.0	57.1	57.4	55.5	54.5	54.7	57.5	56.7	55.1	55.4
W18	Bensenville	True Jesus Church	57.4	59.1	57.6	58.3	56.4	58.4	56.7	56.8	56.9	60.5	57.5	57.6
W19	Bensenville	Ukranian Pentecostal Church	63.3	64.1	64.1	61.9	62.3	58.5	58.9	59.3	62.1	58.4	58.8	59.2
W20	Bensenville	Zion Evangelical Lutheran Church	58.4	59.3	58.6	58.9	57.5	59.7	58.0	58.1	57.8	61.7	58.8	58.9
W21	Chicago	All Saints Polish National Catholic Church	66.5	63.8	66.4	66.5	63.0	68.0	68.3	67.9	62.7	68.8	68.9	68.8

TABLE F-52
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (PLACES OF WORSHIP)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
W22	Chicago	Bethel Community Church	62.0	62.9	61.8	60.4	61.1	58.7	58.8	59.0	61.6	59.5	59.8	59.7
W23	Chicago	Church Of The Full Gospel Inc	59.3	56.3	58.7	59.7	56.1	60.4	60.7	60.4	55.9	61.3	61.5	61.6
W24	Chicago	First Korean Presbyterian Church	59.8	59.7	59.4	62.7	58.7	61.3	61.5	61.4	59.0	61.8	61.8	62.0
W25	Chicago	Holy Resurrection Church	64.2	63.7	64.1	69.0	63.5	67.6	67.7	67.5	63.3	68.1	68.2	68.2
W26	Chicago	Norwood Park Evangelical Lutheran Church	60.5	58.6	60.1	63.7	58.9	64.1	64.3	64.1	58.8	64.7	64.7	64.8
W27	Chicago	Our Lady Mother Of Church	65.9	66.3	65.8	66.0	65.4	65.5	65.5	65.5	65.9	66.4	66.6	66.3
W28	Chicago	Our Savior Lutheran Church Of Norwood Park	59.2	56.2	58.7	60.0	56.3	60.7	61.0	60.7	56.1	61.5	61.6	61.7
W29	Chicago	Our Saviors English Lutheran Church	59.6	56.9	59.2	61.3	57.2	62.0	62.3	62.1	57.1	62.6	62.8	62.9
W30	Chicago	Sisters of Charity BVM	62.2	63.0	61.9	61.4	61.1	59.6	59.6	59.8	61.5	60.4	60.7	60.6
W31	Chicago	Sisters of the Living Word	62.8	63.4	62.5	62.6	61.5	60.5	60.4	60.7	62.1	61.2	61.6	61.4
W32	Chicago	St Albans Episcopal Church	58.4	55.9	57.8	58.6	55.0	58.8	59.1	58.8	54.8	59.8	60.0	60.0
W33	Chicago	St Andrew Presbyterian Church	60.9	61.3	60.5	61.2	59.4	59.5	59.7	59.8	59.9	60.2	60.4	60.5
W34	Chicago	St James Lutheran Church	61.5	62.4	61.2	60.0	60.6	58.5	58.6	58.7	61.1	59.2	59.4	59.4
W35	Chicago	St Josephs Ukrainian Church	66.9	68.2	66.9	62.9	66.7	61.4	61.2	61.5	67.1	62.4	62.7	62.4
W36	Chicago	St Paul Evangelical Lutheran Church	63.4	62.9	63.2	67.8	62.5	66.4	66.5	66.4	62.3	67.0	67.0	67.0
W37	Chicago	St Sophia Ukrainian Church	59.4	59.5	59.0	61.8	58.3	60.4	60.6	60.5	58.6	60.9	60.9	61.1
W38	Des Plaines	Brentwood Baptist Church	57.7	57.8	57.4	58.1	56.1	56.0	56.2	56.0	56.5	55.6	56.2	56.0
W39	Des Plaines	Calvary Korean Baptist Church	59.7	61.2	59.5	57.5	58.1	51.1	52.1	51.0	58.3	50.4	52.4	51.3
W40	Des Plaines	Church of Christ	57.4	56.8	56.7	58.3	55.4	51.9	54.4	51.2	55.6	52.7	55.0	51.8
W41	Des Plaines	First Presbyterian Church	62.5	58.7	61.7	60.5	61.3	54.8	56.4	54.1	61.8	55.5	57.0	55.0
W42	Des Plaines	Good Shepherd Lutheran Church	58.3	58.1	57.8	58.9	56.5	51.9	54.3	51.3	56.6	52.5	54.9	51.7

TABLE F-52
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (PLACES OF WORSHIP)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
W43	Des Plaines	Korean Philippi Presbyterian	62.9	60.3	62.7	60.1	61.4	56.6	58.2	55.6	61.8	57.0	58.8	56.3
W44	Des Plaines	Phat Bao Temple	57.8	56.8	57.0	58.9	55.8	52.6	55.0	51.8	56.1	53.4	55.7	52.5
W45	Des Plaines	St. Stephen Catholic Church	57.7	58.3	57.3	57.9	55.8	51.6	54.2	50.9	56.0	52.2	54.7	51.3
W46	Des Plaines	St. Zachary Catholic Church	60.3	60.7	60.0	62.0	58.7	58.0	58.1	58.0	59.1	56.5	58.3	58.2
W47	Des Plaines	Trinity Lutheran Church	57.5	60.2	57.2	57.9	55.9	51.4	52.8	51.3	56.3	50.4	53.1	51.4
W48	Elk Grove Village	1st Baptist Church of Elk Grove Village	59.8	61.1	59.7	57.1	58.9	57.0	57.1	57.0	58.7	58.7	58.6	58.5
W49	Elk Grove Village	Elk Grove Presbyterian Church	60.5	61.3	60.6	59.4	59.6	58.6	59.2	58.6	59.3	60.0	60.5	59.9
W50	Elk Grove Village	Evangelical Free Church	65.2	64.6	65.4	56.7	65.4	55.7	55.8	55.7	65.2	59.3	58.9	58.9
W51	Elk Grove Village	Gethsemane Presbyterian Church	57.6	59.6	57.5	55.7	57.0	55.8	55.8	55.7	56.8	56.9	56.8	56.8
W52	Elk Grove Village	Lutheran Church of the Holy Spirit	57.8	59.0	57.9	57.3	57.3	56.7	57.0	56.6	57.0	57.6	57.7	57.3
W53	Elk Grove Village	Queen of the Rosary Church	57.5	58.9	57.6	56.6	57.0	56.1	56.3	56.0	56.7	57.1	57.0	56.8
W54	Elk Grove Village	St. Nicholas Episcopal Church	60.3	60.4	60.3	61.6	59.2	60.6	61.6	60.7	58.8	61.2	62.2	61.3
W55	Elk Grove Village	Wesleyan Community Church	59.5	61.3	59.4	56.2	58.7	56.7	56.7	56.6	58.5	58.3	58.2	58.1
W56	Elmhurst	Assembly God Hammond Church	59.3	59.5	59.5	57.8	58.0	54.6	54.9	55.2	58.1	55.3	55.3	55.4
W57	Elmhurst	Chicago Church Of Christ Inc	59.5	59.4	59.7	57.1	59.0	54.8	55.4	54.8	59.2	55.7	56.0	55.2
W58	Elmhurst	Elmhurst Korean Presbyterian	59.7	60.2	60.0	59.0	58.0	55.2	55.4	56.1	58.0	55.5	55.5	56.1
W59	Franklin Park	Espiritu Santo Episcopal Church	60.9	58.9	60.9	56.2	60.3	56.6	54.0	53.5	61.4	57.1	54.8	54.2
W60	Franklin Park	Faith Christian Center	57.9	57.2	57.3	56.0	55.6	56.4	54.5	53.0	56.8	57.0	55.4	53.8
W61	Franklin Park	Mt. Calvary Lutheran Church	63.0	62.6	63.0	58.1	61.9	55.9	56.1	59.0	61.6	56.1	56.3	59.3

TABLE F-52
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (PLACES OF WORSHIP)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
W62	Franklin Park	St. Pauls United Church of Christ	60.2	58.6	60.1	56.3	59.3	57.0	54.2	53.7	60.3	57.5	55.0	54.4
W63	Harwood Heights	Bethany Baptist Church	63.2	63.9	63.1	58.9	63.2	58.9	58.9	59.0	63.5	59.7	59.6	59.7
W64	Harwood Heights	Northside Arabic Church	61.8	62.0	61.7	60.6	61.2	60.6	60.7	60.6	61.6	61.5	61.6	61.4
W65	Itasca	Bethany United Methodist Church	59.5	60.4	59.7	60.7	58.7	59.6	59.6	59.7	59.3	60.5	60.4	60.4
W66	Itasca	Christian Fellowship Church	57.5	58.6	57.8	59.0	57.1	58.8	59.0	59.0	57.1	59.2	59.4	59.4
W67	Itasca	Hanmee Presbyterian Church	54.5	55.2	54.5	56.1	53.6	55.1	55.2	55.2	54.0	55.7	55.8	55.8
W68	Norridge	Acacia Park Evangelical Lutheran Church	63.6	64.0	63.6	61.7	63.4	61.7	61.7	61.7	63.7	62.6	62.7	62.5
W69	Norridge	Church of Our Savior	64.8	65.2	64.7	63.2	64.5	63.1	63.1	63.1	64.9	64.0	64.1	63.9
W70	Norridge	Divine Savior	58.8	59.3	58.5	57.6	57.1	57.8	57.1	57.0	57.7	58.4	58.1	57.8
W71	Norridge	Zion Evangelical Lutheran Church	67.4	68.1	67.4	65.4	67.1	64.8	64.7	64.8	67.6	65.8	65.9	65.7
W72	Northlake	Bethel Fellowship Church	62.6	63.1	63.3	62.8	60.3	57.0	57.2	57.8	59.7	56.7	56.9	57.6
W73	Northlake	Iglesia Bautista Hispana Jeth	63.9	64.4	64.5	64.0	61.6	57.8	58.2	59.0	60.9	57.4	57.9	58.8
W74	Northlake	Parkview Baptist Church	63.6	64.3	64.2	63.9	61.0	57.6	58.0	58.8	60.4	57.3	57.7	58.6
W75	Northlake	St. John the Baptist Melkite Catholic Church	61.6	61.6	62.1	61.5	59.2	56.3	56.6	57.6	58.8	56.1	56.3	57.4
W76	Northlake	St. John Vianney Church	63.0	63.6	63.6	63.3	60.6	57.3	57.5	58.2	60.0	56.9	57.2	58.0
W77	Northlake	St. Peter's Syrian Orthodox Church	62.9	61.7	63.6	61.1	60.9	56.4	56.5	57.4	60.1	56.2	56.3	57.3
W78	Northlake	Trinity Presbyterian Church	70.0	69.8	70.8	68.7	68.2	63.0	63.8	64.8	67.4	62.5	63.5	64.7
W79	Park Ridge	Mary Seat of Wisdom Church	61.6	59.2	61.0	61.2	57.8	61.6	62.2	61.7	57.8	62.8	63.1	63.0
W80	Park Ridge	South Park Church	60.0	58.1	59.3	59.6	56.1	59.2	59.8	59.2	56.2	60.5	61.0	60.5
W81	Schiller Park	Grace Community Evangelical	59.8	59.5	59.5	62.6	58.5	62.9	60.8	60.0	61.3	63.6	61.6	60.7

TABLE F-52
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (PLACES OF WORSHIP)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
W82	Schiller Park	International Christian Assembly of God	60.0	59.5	59.7	61.8	58.9	63.4	60.5	59.8	61.5	64.0	61.3	60.5
W83	Schiller Park	St. Beatrice Church	60.2	59.6	59.9	61.7	59.2	63.6	60.5	59.9	61.7	64.2	61.2	60.6
W84	Wood Dale	Calvary Evangelical Lutheran Church	57.8	58.6	58.1	62.6	57.0	61.3	61.1	61.1	56.9	61.9	61.9	61.9
W85	Wood Dale	Christian Congregation	56.1	56.5	56.2	57.6	55.0	55.8	55.6	55.6	54.9	56.4	56.3	56.3
W86	Wood Dale	First Baptist Church- Wood Dale	57.7	58.6	58.0	60.4	56.5	59.9	59.6	59.6	56.6	60.0	60.2	60.2
W87	Wood Dale	St. Peter's Latvian Lutheran Church	56.5	57.2	56.7	59.7	55.7	57.6	57.4	57.4	55.4	58.0	58.1	58.1

Source: Search on www.smartpages.com

TABLE F-53
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (PARKS)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
P1	Bensenville	Bretman Park	63.1	64.6	63.2	63.1	61.9	65.5	62.9	63.0	62.3	67.0	63.8	63.8
P2	Bensenville	DiOrio Park	60.4	61.5	60.5	60.0	59.3	62.0	60.1	60.1	59.7	64.0	60.9	60.9
P3	Bensenville	Kremples Park	58.6	61.9	59.1	57.9	57.3	56.2	55.1	55.4	57.7	57.5	55.8	56.1
P4	Bensenville	Lions Park	61.4	62.8	61.5	61.2	60.1	63.2	61.3	61.4	60.6	65.0	62.1	62.2
P5	Bensenville	Pines Park	57.3	59.1	57.5	58.2	56.4	58.3	56.6	56.7	56.8	60.5	57.5	57.5
P6	Bensenville	Poplar Park	64.7	65.4	64.8	69.8	63.7	68.1	68.3	68.2	64.5	69.2	69.5	69.4
P7	Bensenville	Rose Park	58.2	60.4	58.7	56.9	57.0	55.7	54.4	54.7	57.3	57.0	55.1	55.4
P8	Bensenville	Schuster Park	63.8	64.9	63.9	63.7	62.7	67.7	63.2	63.3	63.1	69.0	64.0	64.0
P9	Bensenville	Sunrise Park	60.7	62.6	60.9	59.3	59.4	59.9	58.6	58.8	59.7	61.2	59.4	59.6
P10	Bensenville	Sunset Park	61.7	62.2	61.9	62.4	60.7	63.7	62.4	62.4	61.0	65.1	63.1	63.1
P11	Bensenville	Varble Park/ Water Park & Golf Waters	59.8	60.2	60.0	61.2	58.6	61.5	60.8	60.8	58.9	62.4	61.5	61.5
P12	Bensenville	Veterans Park	63.0	63.7	63.2	66.1	62.0	66.0	65.6	65.6	62.3	66.7	66.4	66.4
P13	Bensenville	Woodcrest Park	57.3	58.4	57.6	60.2	56.2	59.8	59.5	59.5	56.3	59.9	60.2	60.2
P14	Bensenville	Woodside Park	58.1	58.8	58.4	60.2	56.8	59.5	59.1	59.1	57.1	60.1	59.8	59.8
P15	Chicago	Grandparents Park	63.3	62.5	62.9	65.2	61.2	63.3	63.5	63.4	61.3	63.9	64.0	64.0
P16	Chicago	Mulberry Point Park	60.7	59.1	60.4	64.2	59.3	64.5	64.6	64.5	59.1	65.0	65.0	65.1
P17	Chicago	Myrtle Point Park	59.1	56.1	58.5	59.5	55.9	60.2	60.5	60.2	55.8	61.1	61.2	61.3
P18	Chicago	Norwood Circle Park	60.4	58.2	60.0	63.1	58.5	63.7	63.9	63.7	58.3	64.3	64.4	64.5
P19	Chicago	Norwood Park	60.5	59.7	60.2	65.0	59.7	64.2	64.3	64.3	59.6	64.7	64.7	64.8
P20	Chicago	Oriole Park	61.6	61.2	61.3	65.5	60.5	64.1	64.3	64.2	60.5	64.7	64.8	64.8
P21	Chicago	Summerdale Park	60.2	60.3	59.8	62.0	58.8	60.5	60.7	60.7	59.2	61.1	61.2	61.3
P22	Des Plaines	Administrative & Leisure Center	68.1	63.7	68.0	61.7	67.9	56.8	58.1	56.9	68.3	57.5	58.7	57.8
P23	Des Plaines	Apache Park	58.4	57.3	57.5	59.7	56.5	53.6	56.0	52.8	56.7	54.5	56.7	53.4
P24	Des Plaines	Arndt Park	58.4	56.7	57.5	59.4	56.5	53.2	55.4	52.3	56.8	54.0	56.1	53.1
P25	Des Plaines	Lake Park	58.7	58.0	58.3	60.3	57.2	52.6	54.4	51.9	57.3	53.1	55.0	52.4
P26	Des Plaines	McKay Neils Park	59.3	56.3	58.3	58.8	57.5	53.0	54.9	52.2	58.0	53.7	55.5	53.1
P27	Des Plaines	Seminole Park	59.7	61.4	59.8	59.3	58.5	59.0	60.1	58.8	58.7	59.9	60.6	59.5

TABLE F-53
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (PARKS)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
P28	Des Plaines	Winnebago Park	57.2	59.4	56.8	57.6	55.1	50.3	52.6	50.0	55.3	50.1	53.0	50.1
P29	DuPage County	Salt Creek Park	57.2	58.1	57.5	61.6	56.4	60.0	59.8	59.8	56.1	60.4	60.6	60.6
P30	Elk Grove Village	Andrews Park	59.0	61.3	58.9	55.3	58.3	56.0	56.0	56.0	58.2	57.4	57.4	57.3
P31	Elk Grove Village	Appleseed Park	57.5	59.3	57.4	56.0	56.9	55.9	55.9	55.8	56.6	57.0	56.9	56.8
P32	Elk Grove Village	Athletic Fields	58.9	59.8	59.1	59.8	58.3	59.6	59.8	59.7	58.2	58.8	60.3	60.3
P33	Elk Grove Village	Audubon Park	58.9	59.9	58.9	58.4	58.1	57.6	58.1	57.6	57.7	58.7	59.0	58.5
P34	Elk Grove Village	Bartrum Park	59.2	60.4	59.2	57.6	58.4	57.1	57.3	57.0	58.0	58.5	58.5	58.3
P35	Elk Grove Village	Burbank Park	59.4	59.7	59.5	59.5	58.6	58.9	59.3	58.9	58.3	59.4	60.0	59.6
P36	Elk Grove Village	Fairchild Park	60.7	60.7	60.7	60.3	59.5	59.5	59.9	59.5	59.2	60.2	60.7	60.3
P37	Elk Grove Village	Lions Park	57.4	58.5	57.5	56.8	56.9	56.2	56.6	56.2	56.6	57.1	57.2	56.8
P38	Elk Grove Village	Muir Park	61.3	61.3	61.3	60.6	60.4	59.7	59.7	59.6	60.2	60.7	60.8	60.8
P39	Elk Grove Village	Olmstead Park	58.8	59.3	58.9	60.5	58.1	59.6	60.6	59.7	57.7	60.1	61.2	60.2
P40	Elk Grove Village	Osborn Park	61.3	62.2	61.3	55.2	61.1	55.7	55.7	55.6	61.0	57.3	57.2	57.2
P41	Elk Grove Village	Sanders Park	59.8	61.1	59.7	57.0	58.9	57.0	57.1	56.9	58.6	58.7	58.6	58.5
P42	Elk Grove Village	Udall Park	64.0	64.0	64.1	56.5	64.0	56.2	56.2	56.2	63.8	59.2	58.9	58.9
P43	Franklin Park	Hawthorne Park	63.5	60.4	63.7	57.1	63.4	55.6	54.4	54.9	64.3	56.2	55.1	55.4
P44	Franklin Park	Iceland Park	59.8	58.5	59.9	58.0	59.0	59.0	56.2	55.7	60.1	59.5	57.0	56.4
P45	Franklin Park	James Park	65.4	64.2	65.5	60.4	63.9	57.6	58.1	60.8	63.2	57.5	58.2	61.0
P46	Franklin Park	Linden Park	64.8	61.5	65.1	58.1	64.9	56.9	56.1	57.6	65.8	57.3	56.6	58.1
P47	Franklin Park	North Park	61.8	59.7	62.0	59.2	61.4	58.8	57.1	57.1	62.5	59.2	57.7	57.7
P49	Franklin Park	Pine Park	58.8	57.9	58.5	55.3	57.4	57.4	53.9	53.1	58.4	57.9	54.8	53.8
P50	Franklin Park	Robinson and Crusoe Park	58.0	57.1	57.5	56.2	56.1	57.8	54.8	53.6	57.4	58.3	55.7	54.3
P51	Franklin Park	Ruby-Addison Park	59.9	58.6	60.0	57.9	59.1	58.3	55.8	55.3	60.3	58.7	56.5	56.0
P52	Harwood Heights	St. Rosalie's Kiddie Park	58.3	58.3	58.1	56.8	57.7	57.2	57.1	56.9	58.2	58.0	57.8	57.6
P53	Harwood Heights	Tot Park	57.8	57.8	57.6	56.3	57.2	56.7	56.6	56.4	57.7	57.5	57.3	57.1
P54	Itasca	Benson Park	56.4	56.9	56.5	57.9	55.3	56.2	56.0	56.1	55.3	57.0	56.8	56.9
P55	Itasca	Clayson Park	58.0	59.2	58.2	59.2	57.3	57.8	57.9	57.9	57.6	58.9	58.7	58.7
P56	Itasca	Country Club Park	58.8	60.2	59.0	60.7	58.0	59.0	59.2	59.2	58.0	59.7	59.7	59.7
P57	Itasca	Franzen Park	56.8	57.7	57.1	58.2	56.3	57.1	57.4	57.4	56.2	58.1	58.2	58.2

TABLE F-53
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (PARKS)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
P58	Itasca	Peacoak Park	58.4	59.7	58.6	59.8	57.7	58.3	58.4	58.4	57.8	59.2	59.1	59.1
P59	Itasca	Schiller Park	62.8	63.0	62.9	65.1	61.8	64.2	64.2	64.2	62.8	64.8	64.8	64.9
P60	Itasca	Washington Park	61.1	61.2	61.2	63.4	60.1	62.4	62.4	62.5	61.1	63.1	63.1	63.2
P61	Norridge	Norridge Park	64.9	65.4	64.8	62.1	64.7	62.0	62.0	62.0	65.0	63.0	63.0	62.8
P62	Park Ridge	Brickton Park	62.8	60.1	62.4	63.9	59.7	65.3	65.6	65.3	59.5	66.1	66.3	66.3
P63	Park Ridge	Centennial Park	57.4	59.0	57.3	57.8	54.3	57.2	58.3	57.4	54.7	57.9	58.6	57.7
P64	Park Ridge	Jaycee Park	61.1	58.2	60.6	61.5	57.7	62.7	63.0	62.7	57.5	63.6	63.8	63.8
P65	Park Ridge	Southwest Park	63.3	60.7	62.9	62.9	59.6	64.2	64.8	64.3	59.5	65.2	65.5	65.5
P66	Schiller Park	Fairview Park	68.9	67.9	66.4	69.8	65.4	66.9	67.4	67.1	67.1	67.1	68.1	67.4
P67	Schiller Park	Kennedy Park/Memorial Pool	61.7	59.9	61.9	61.5	60.9	62.6	59.5	59.1	62.5	63.0	60.2	59.7
P68	Schiller Park	North Village Park	67.6	68.3	67.1	71.0	66.3	70.0	70.2	70.0	68.3	70.9	71.2	70.8
P69	Schiller Park	Stalica Park	59.0	58.4	58.8	61.8	57.6	60.9	59.7	58.7	60.2	61.7	60.5	59.4
P70	Schiller Park	Wm. M. Dooley Memorial Park	65.2	65.6	64.7	68.0	63.9	66.8	66.7	66.3	66.3	67.5	67.4	67.0
P71	Wood Dale	Brookwood Park	56.1	56.6	56.3	58.9	55.2	56.6	56.5	56.5	55.0	56.8	57.1	57.1
P72	Wood Dale	Central Park	66.5	67.1	66.6	70.0	65.4	68.8	68.7	68.7	66.5	69.4	69.3	69.4
P73	Wood Dale	Community Park	62.2	64.1	62.4	65.0	61.3	62.9	63.1	63.0	61.4	63.6	63.6	63.6
P74	Wood Dale	Lionwood Park	60.0	60.8	60.2	64.3	59.2	62.6	62.8	62.8	59.6	63.7	63.9	63.9
P75	Wood Dale	Veteran's Memorial Park	61.9	62.3	62.0	65.5	60.9	63.9	64.1	64.2	61.6	65.0	65.2	65.2
P76	Wood Dale	White Oak Park	58.0	58.7	58.3	62.8	57.0	61.6	61.3	61.3	57.0	61.9	62.1	62.0
P77	Wood Dale	Wood Dale Water Park	62.7	63.3	62.8	66.5	61.8	65.0	65.2	65.2	62.6	66.0	66.2	66.1
PP1	Elk Grove Village	LGK Pocket Park (under construction)	69.3	70.2	69.2	73	68.4	70	71.7	70.3	68.4	69.9	72.1	70.5
PP2	Elk Grove Village	Pocket Park #2 (under construction)	67.9	66.3	68.1	61.4	67.4	63.9	63.7	63.7	67.3	66.7	66.4	66.4
PP3	Elk Grove Village	Pocket Park #3 (under construction)	67.2	65.7	67.3	60.3	66.6	61.9	61.8	61.7	66.4	65.1	64.8	64.7

TABLE F-53
DNL FOR ALL ALTERNATIVES AT EACH FACILITY (PARKS)

Map ID	City	Name	DNL Levels											
			Construction Phase I		Construction Phase II		Build Out				Build Out + 5			
			Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C, D, and G	Alt. A No Action	Alt. C	Alt. D	Alt. G	Alt. A No Action	Alt. C	Alt. D	Alt. G
PP4	Elk Grove Village	Pocket Park #4 (under construction)	66.8	66.2	66.9	61	66.2	62.3	62.6	62.3	66.1	65.6	65.4	65.2
PP5	Elk Grove Village	Pocket Park #5 (under construction)	66.8	66.2	66.9	61	66.2	62.3	62.6	62.3	66.1	65.6	65.4	65.2
PP6	Elk Grove Village	Pocket Park #6 (future)	66.8	66.2	66.9	61	66.2	62.3	62.6	62.3	66.1	65.6	65.4	65.2
PP7	Elk Grove Village	Pocket Park #7 (under construction)	66.8	66.2	66.9	61	66.2	62.3	62.6	62.3	66.1	65.6	65.4	65.2
PP8	Elk Grove Village	Pocket Park #8 (future)	65.9	64.5	66	60.2	65.2	60.8	60.7	60.5	65	63.3	63	62.9
PP9	Elk Grove Village	Pocket Park #9 (existing)	65.5	64.7	65.6	60.9	64.9	61.4	61.7	61.3	64.7	64.1	64	63.7
PP10	Elk Grove Village	Pocket Park #10 (future)	65.5	64.7	65.6	60.9	64.9	61.4	61.7	61.3	64.7	64.1	64	63.7
PP11	Elk Grove Village	Pocket Park #11 (future)	65.1	65.1	65.2	64.5	64.4	64.1	65.4	64.3	64.3	66.1	66.9	66
PP12	Elk Grove Village	Pocket Park #12 (existing)	65.1	65.1	65.2	64.5	64.4	64.1	65.4	64.3	64.3	66.1	66.9	66
PP13	Elk Grove Village	Pocket Park #13 (future)	62.4	64.2	64.3	56.7	64.1	56.4	56.4	56.4	63.9	59.6	59.3	59.2
PP14	Elk Grove Village	Pocket Park #14 (future)	61.2	62	62.2	63.1	61.1	62.1	63.3	62.2	60.8	63	64.1	63
PP15	Elk Grove Village	Pocket Park #15 (existing)	64.2	64.2	64.3	56.7	64.1	56.4	56.4	56.4	63.9	59.6	59.3	59.2
PP16	Elk Grove Village	Pocket Park #16 (future)	66.8	65.9	67	57.4	67.1	56.1	56.2	56.1	66.8	60.9	60.4	60.4
PP17	Elk Grove Village	Pocket Park #17 (future)	68	67.1	68.2	58.2	68.3	56.9	57	56.9	68	61.8	61.3	61.2
PP18	Elk Grove Village	Pocket Park #18 (existing)	68	67.1	68.2	58.2	68.3	56.9	57	56.9	68	61.8	61.3	61.2
PP19	Elk Grove Village	Pocket Park #19 (future)	68	67.1	68.2	58.2	68.3	56.9	57	56.9	68	61.8	61.3	61.2
PP20	Elk Grove Village	Pocket Park #20 (future)	63.5	62.9	63.7	55.2	63.9	54.7	54.7	54.7	63.7	56.6	56.4	56.4

Note: P48 was omitted from Park numbering.
Source: DuPage County Park District, Cook County Park District, Community Park Districts.

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F.3.3 Supplemental Metrics and Noise Sensitive Facilities

The following tables, **Table F-54** through **Table F-69**, show results for supplemental noise metrics at each of the identified facilities. Supplemental noise metrics (DNL, SEL, and L_{max}) were described previously in **Section F.1.1.2, Supplemental Noise Metrics**. The Time Above (TA) metric is the amount of time (in minutes) that the noise level is above a given threshold, in this case above 85 dB. The tables are paired, first showing the No Action Alternative (Alternative A) and Alternative C, the second showing Alternative D and Alternative G. The tables are presented for both Build Out and Build Out + 5.

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TABLE F-54
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES A AND C AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
Universities and Colleges												
U1	Bensenville	Robert Morris College	63.6	110.4	99.6	96.6	0.3	63.6	109.1	100.8	94.9	0.2
U2	Des Plaines	De Paul University	59.2	104.8	96.2	94.4	0.0	60.0	107.5	94.7	95.4	0.1
U3	Elmhurst	Mac Cormac College Inc	52.7	99.0	89.2	85.0	0.0	53.2	96.6	91.3	85.8	0.0
U4	Schiller Park	Westwood College of Technology	70.1	114.6	107.8	97.2	0.5	72.0	119.3	107.1	100.5	9.8
Libraries												
L1	Bensenville	Bensenville Community Library	61.5	107.5	98.2	95.4	0.2	65.5	112.5	101.1	92.8	0.4
L2	Harwood Heights	Eisenhower Library	61.9	105.9	99.7	88.1	0.0	60.9	108.8	94.6	87.3	0.0
L3	Itasca	Itasca Community Library	59.4	105.4	96.1	84.9	0.0	61.0	103.6	99.4	86.6	0.0
L4	Northlake	Northlake Public Library	61.2	105.3	99.0	88.4	0.0	57.6	105.2	92.3	91.8	0.0
L5	Schiller Park	Schiller Park Public Library	58.0	104.4	94.3	93.7	0.0	61.9	109.7	96.3	92.8	0.1
L6	Wood Dale	Wood Dale Public Library	63.3	108.8	100.5	90.5	0.1	65.3	106.9	103.8	89.0	0.2
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools												
S1	**Bensenville**	**Blackhawk Middle School**	**59.0**	**105.9**	**94.6**	**93.8**	**0.1**	**61.5**	**108.8**	**96.6**	**92.8**	**0.1**
S2	**Bensenville**	**Chippewa Elementary School**	**58.6**	**105.1**	**95.0**	**95.7**	**0.1**	**60.4**	**106.8**	**96.8**	**91.5**	**0.0**
S3	**Bensenville**	**Fenton High School**	**60.1**	**106.0**	**96.9**	**93.6**	**0.1**	**64.5**	**111.8**	**99.5**	**90.5**	**0.4**
S4	**Bensenville**	**Mohawk Elementary School**	**63.9**	**109.3**	**101.1**	**95.7**	**0.2**	**69.5**	**116.0**	**105.6**	**97.5**	**3.0**
S5	**Bensenville**	**St Charles Borromeo**	**57.4**	**104.3**	**93.2**	**91.6**	**0.0**	**55.3**	**102.1**	**91.2**	**90.0**	**0.0**
S6	**Bensenville**	**Tioga Elementary School**	**58.6**	**105.2**	**94.7**	**94.4**	**0.1**	**60.9**	**107.7**	**96.7**	**91.1**	**0.0**
S7	**Bensenville**	**Tioga School Special Education**	**58.6**	**105.2**	**94.7**	**94.4**	**0.1**	**60.9**	**107.7**	**96.7**	**91.1**	**0.0**
S8	**Bensenville**	**W A Johnson Elementary School**	**57.9**	**104.5**	**94.0**	**93.6**	**0.1**	**60.5**	**107.6**	**95.9**	**91.1**	**0.1**
S9	Chicago	Brickton Montessori School	62.5	107.7	99.7	92.2	0.1	64.3	106.4	102.7	94.7	0.2
S10	**Chicago**	**Dirksen Elementary School**	**63.3**	**108.2**	**100.8**	**91.0**	**0.1**	**61.3**	**105.7**	**98.9**	**94.8**	**0.1**

TABLE F-54
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES A AND C AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S11	**Chicago**	**Edison Elementary Regional Gifted Center**	**51.8**	**98.6**	**87.7**	**84.5**	**0.0**	**60.0**	**108.1**	**93.2**	**87.6**	**0.0**
S12	**Chicago**	**Garvy Elementary School**	**55.3**	**100.8**	**92.3**	**85.4**	**0.0**	**59.2**	**105.7**	**95.3**	**89.0**	**0.0**
S13	**Chicago**	**Immaculate Conception School**	**60.5**	**106.8**	**96.9**	**87.6**	**0.0**	**65.5**	**108.9**	**103.6**	**85.6**	**0.0**
S14	**Chicago**	**Norwood Park Elementary School**	**58.3**	**104.4**	**95.0**	**87.7**	**0.0**	**63.5**	**108.9**	**100.6**	**85.1**	**0.0**
S15	**Chicago**	**Oriole Park Elementary School**	**59.2**	**105.0**	**96.1**	**88.1**	**0.0**	**61.6**	**103.2**	**100.2**	**84.6**	**0.0**
S16	Chicago	Our Savior Lutheran	56.8	102.6	93.7	86.9	0.0	61.5	107.5	98.3	85.0	0.0
S17	**Chicago**	**Resurrection High School**	**57.1**	**102.8**	**94.1**	**86.2**	**0.0**	**62.2**	**108.4**	**98.7**	**90.1**	**0.0**
S18	**Chicago**	**Socrates School**	**63.2**	**109.5**	**99.6**	**88.1**	**0.1**	**67.1**	**106.8**	**105.9**	**87.7**	**0.2**
S19	**Chicago**	**St Eugene**	**61.4**	**106.0**	**99.1**	**91.0**	**0.0**	**59.5**	**104.0**	**97.1**	**91.0**	**0.0**
S20	**Chicago**	**St Paul Lutheran**	**62.8**	**109.2**	**99.2**	**87.6**	**0.1**	**66.7**	**106.5**	**105.6**	**87.2**	**0.1**
S21	**Chicago**	**Taft High School**	**59.7**	**106.5**	**95.6**	**83.6**	**0.0**	**64.0**	**106.1**	**102.5**	**83.8**	**0.0**
S22	**Des Plaines**	**Algonquin Middle School**	**55.7**	**102.6**	**91.5**	**93.7**	**0.0**	**51.0**	**98.7**	**85.5**	**91.9**	**0.0**
S23	Des Plaines	Angel Town Private School	62.6	110.9	95.5	95.7	0.2	56.8	102.9	93.3	99.5	0.0
S24	**Des Plaines**	**Devonshire School**	**58.7**	**105.8**	**94.2**	**94.4**	**0.1**	**57.3**	**105.6**	**90.1**	**92.1**	**0.0**
S25	Des Plaines	Forest Elementary School	56.3	102.9	92.5	94.3	0.0	50.8	98.4	85.4	92.9	0.0
S26	**Des Plaines**	**Friendship Junior High School**	**59.6**	**106.7**	**95.1**	**94.3**	**0.3**	**58.3**	**106.6**	**91.2**	**93.0**	**0.0**
S27	Des Plaines	Iroquois Community School	65.1	113.1	98.7	96.3	0.4	57.1	103.1	93.7	104.6	0.1
S28	**Des Plaines**	**Maine West High School**	**58.4**	**104.6**	**94.9**	**96.5**	**0.1**	**50.5**	**98.0**	**85.2**	**96.3**	**0.0**
S29	**Des Plaines**	**Orchard Place Elementary School**	**61.7**	**110.5**	**91.9**	**92.5**	**0.9**	**67.9**	**116.2**	**100.6**	**102.7**	**3.5**
S30	**Des Plaines**	**Our Lady Of Destiny Elementary South**	**55.9**	**101.7**	**92.8**	**97.0**	**0.0**	**51.9**	**99.1**	**87.1**	**104.0**	**0.0**
S31	**Des Plaines**	**Plainfield Elementary School**	**57.3**	**103.5**	**93.9**	**92.4**	**0.1**	**50.4**	**97.7**	**85.4**	**97.0**	**0.0**
S32	Des Plaines	South Elementary School	55.4	102.1	91.5	94.4	0.0	52.1	99.1	87.8	95.4	0.0

TABLE F-54
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES A AND C AT EACH FACILITY (LEARNING INSTITUTIONS)

Map ID	City	Name	Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
			DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S33	**Des Plaines**	**St Zachary School**	**58.8**	**105.9**	**94.2**	**93.9**	**0.2**	**58.0**	**106.3**	**91.0**	**92.6**	**0.0**
S34	**Elk Grove Village**	**Clearmont Elementary School**	**59.3**	**106.2**	**95.1**	**88.1**	**0.1**	**59.9**	**107.2**	**95.1**	**87.8**	**0.0**
S35	**Elk Grove Village**	**Elk Grove High School**	**58.5**	**105.2**	**94.5**	**87.8**	**0.0**	**59.1**	**106.6**	**93.8**	**90.5**	**0.0**
S36	**Elk Grove Village**	**Grove Junior High School**	**57.9**	**104.5**	**94.1**	**87.3**	**0.0**	**57.8**	**105.1**	**93.1**	**89.6**	**0.0**
S37	**Elk Grove Village**	**Lutheran School Of The Holy Spirit**	**56.6**	**102.6**	**93.2**	**86.3**	**0.0**	**55.6**	**102.1**	**91.7**	**86.1**	**0.0**
S38	**Elk Grove Village**	**Queen Of The Rosary School**	**59.6**	**106.3**	**95.6**	**88.4**	**0.0**	**58.5**	**106.0**	**93.3**	**86.9**	**0.0**
S39	**Elk Grove Village**	**Ridge Family Center For Learning**	**57.5**	**103.9**	**93.9**	**87.1**	**0.0**	**56.7**	**103.6**	**92.3**	**90.6**	**0.0**
S40	**Elk Grove Village**	**Rupley Elementary School**	**58.5**	**103.7**	**95.7**	**90.5**	**0.0**	**56.0**	**103.5**	**90.8**	**84.6**	**0.0**
S41	**Elmhurst**	**Churchville Junior High School**	**58.1**	**105.6**	**92.9**	**91.3**	**0.0**	**55.1**	**101.6**	**91.3**	**88.8**	**0.0**
S42	**Elmhurst**	**Conrad Fischer Elementary School**	**60.8**	**108.6**	**94.9**	**91.6**	**0.0**	**56.3**	**103.0**	**92.4**	**90.4**	**0.0**
S43	Franklin Park	East Leyden High School	57.9	102.9	95.2	93.3	0.0	57.7	105.7	91.6	91.1	0.0
S44	**Franklin Park**	**Enger Elementary School**	**62.2**	**107.4**	**99.4**	**95.3**	**0.1**	**56.2**	**104.6**	**88.8**	**93.7**	**0.0**
S45	**Franklin Park**	**North Elementary School**	**57.5**	**101.7**	**95.3**	**94.2**	**0.0**	**57.2**	**105.2**	**90.7**	**89.4**	**0.0**
S46	Harwood Heights	Maple Park Academy	58.4	102.7	96.2	85.6	0.0	57.8	105.9	91.2	84.0	0.0
S47	**Harwood Heights**	**Union Ridge Elementary School**	**61.8**	**105.9**	**99.6**	**84.4**	**0.0**	**59.8**	**108.0**	**93.0**	**87.3**	**0.0**
S48	**Itasca**	**Elmer H. Franzen Elementary School**	**56.5**	**102.9**	**92.9**	**85.0**	**0.0**	**56.9**	**101.9**	**94.4**	**83.1**	**0.0**
S49	**Itasca**	**F.E. Peacock Junior High School**	**58.1**	**104.1**	**94.8**	**85.4**	**0.0**	**58.6**	**102.4**	**96.6**	**84.2**	**0.0**
S50	**Itasca**	**Lutheran School Of St Luke**	**58.9**	**104.9**	**95.6**	**85.0**	**0.0**	**61.4**	**106.8**	**98.6**	**87.8**	**0.0**
S51	Itasca	New Morning Children's House	58.5	104.6	95.2	85.3	0.0	59.4	102.6	97.5	83.9	0.0
S52	**Itasca**	**St Peter The Apostle School**	**58.2**	**104.2**	**94.9**	**85.7**	**0.0**	**58.8**	**102.6**	**96.8**	**84.4**	**0.0**

TABLE F-54
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES A AND C AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S53	**Itasca**	**Washington Elementary School**	**59.6**	**105.5**	**96.3**	**85.4**	**0.0**	**62.0**	**106.6**	**99.6**	**87.4**	**0.0**
S54	**Norridge**	**Divine Savior School**	**57.3**	**102.8**	**94.5**	**86.2**	**0.0**	**58.1**	**105.3**	**93.4**	**83.4**	**0.0**
S55	**Norridge**	**J Giles Elementary School**	**55.7**	**101.6**	**92.5**	**88.5**	**0.0**	**56.3**	**103.5**	**91.7**	**82.3**	**0.0**
S56	Norridge	Jolly Fun House (JFH) Educational Academy, Inc	54.8	100.9	0.0	88.5	0.0	54.3	100.5	90.8	84.4	0.0
S57	**Norridge**	**J Leigh Elementary School**	**64.2**	**108.1**	**102.1**	**90.1**	**0.1**	**63.6**	**111.5**	**97.6**	**89.4**	**0.2**
S58	**Norridge**	**Pennoyer Elementary School**	**61.6**	**106.3**	**99.1**	**90.5**	**0.0**	**60.7**	**104.8**	**98.6**	**92.3**	**0.0**
S59	Norridge	Ridgewood Community High School	57.9	102.7	95.3	85.6	0.0	58.3	105.9	93.0	83.8	0.0
S60	**Northlake**	**Parkview Baptist Academy**	**61.2**	**105.4**	**99.0**	**88.3**	**0.0**	**57.8**	**105.3**	**92.6**	**92.6**	**0.1**
S61	**Northlake**	**Roy Elementary School**	**63.3**	**107.9**	**101.0**	**93.6**	**0.1**	**57.9**	**105.5**	**92.5**	**94.0**	**0.0**
S62	**Northlake**	**St John Vianney School**	**60.8**	**104.9**	**98.6**	**87.9**	**0.0**	**57.4**	**104.9**	**92.3**	**92.2**	**0.0**
S63	**Northlake**	**West Leyden High School**	**66.2**	**110.6**	**103.9**	**95.9**	**0.2**	**61.6**	**109.1**	**96.3**	**96.2**	**0.4**
S64	**Northlake**	**Westdale Elementary School**	**64.3**	**109.6**	**101.5**	**94.5**	**0.1**	**58.4**	**106.5**	**92.0**	**95.6**	**0.0**
S65	Park Ridge	Alternative Resource Center	57.9	104.0	94.5	92.1	0.0	59.6	107.0	94.5	96.1	0.1
S66	Park Ridge	George Washington Elementary School	54.7	102.3	89.3	87.2	0.0	61.6	109.8	94.6	94.2	0.1
S67	**Park Ridge**	**Maine South High School**	**55.9**	**102.8**	**91.7**	**88.6**	**0.0**	**62.3**	**110.5**	**95.3**	**95.8**	**0.1**
S68	**Park Ridge**	**Mary Seat Of Wisdom**	**57.0**	**102.4**	**94.2**	**88.9**	**0.0**	**59.9**	**107.0**	**95.4**	**93.1**	**0.1**
S69	**Rosemont**	**Rosemont Elementary School**	**64.5**	**109.5**	**102.0**	**98.4**	**0.6**	**67.4**	**115.7**	**100.0**	**97.5**	**1.2**
S70	**Schiller Park**	**John F Kennedy Elementary School**	**61.6**	**108.4**	**97.4**	**97.8**	**0.6**	**61.4**	**109.0**	**95.9**	**97.2**	**0.2**
S71	**Schiller Park**	**Lincoln Middle School**	**59.3**	**106.1**	**95.2**	**96.1**	**0.2**	**62.3**	**110.3**	**96.2**	**96.2**	**0.2**
S72	**Schiller Park**	**St Beatrice School**	**59.2**	**105.5**	**95.6**	**93.7**	**0.1**	**63.3**	**111.2**	**97.1**	**96.4**	**0.4**
S73	**Schiller Park**	**St Maria Goretti School**	**61.1**	**107.1**	**97.9**	**97.7**	**0.3**	**59.9**	**107.4**	**94.6**	**96.6**	**0.1**

TABLE F-54
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES A AND C AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S74	**Schiller Park**	**Washington Elementary School**	**69.1**	**112.7**	**107.1**	**96.5**	**0.7**	**69.2**	**116.3**	**104.8**	**99.4**	**1.3**
S75	**Wood Dale**	**Early Childhood Education Center**	**63.7**	**109.2**	**100.8**	**90.1**	**0.2**	**65.8**	**107.0**	**104.4**	**90.1**	**0.3**
S76	**Wood Dale**	**Holy Ghost School**	**58.5**	**103.9**	**95.6**	**87.5**	**0.0**	**62.4**	**107.8**	**99.5**	**87.5**	**0.1**
S77	**Wood Dale**	**Oakbrook Elementary School**	**56.6**	**101.6**	**94.0**	**87.3**	**0.0**	**60.9**	**106.3**	**98.1**	**87.5**	**0.0**
S78	**Wood Dale**	**Westview Elementary School**	**57.1**	**102.2**	**94.5**	**86.5**	**0.0**	**59.2**	**104.8**	**96.1**	**85.8**	**0.0**
S79	**Wood Dale**	**Wood Dale Junior High School**	**63.0**	**108.3**	**100.2**	**90.8**	**0.1**	**64.8**	**106.8**	**103.3**	**88.4**	**0.2**

Notes **Bold** indicates schools that have been sound insulated or funded for sound insulation through the 2004 School Sound Insulation Program (SSIP).

Sources: SSIP: City of Chicago Department of Aviation Noise Office, SSIP Information, June 2005.

Learning institutions:

1. 2002 Non-public School Database, Illinois State Board of Education
2. 2001 Public School Database, Illinois State Board of Education
3. Searches on www.smartpages.com for "university," "college," "library," "preschool," "Montessori," "junior high," "middle school," "high school," "school," "learning center," and "academy" for the communities of Bensenville, Chicago, Des Plaines, Elk Grove Village, Franklin Park, Harwood Heights, Itasca, Norridge, Northlake, Park Ridge, Rosemont, Schiller Park, and Wood Dale. Only non-profit entities were included in results.
4. National Center for Educational Statistics (NCES), on-line at http://nces.ed.gov/globallocator/

TABLE F-55
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out Alternative D					Build Out Alternative G				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
Universities and Colleges												
U1	Bensenville	Robert Morris College	63.7	108.9	100.9	95.3	0.2	63.6	108.9	100.9	95.6	0.2
U2	Des Plaines	De Paul University	61.6	108.6	97.1	95.4	0.1	60.1	107.2	95.5	95.4	0.1
U3	Elmhurst	Mac Cormac College Inc	53.0	95.5	91.4	85.8	0.0	53.2	96.3	91.4	85.8	0.0
U4	Schiller Park	Westwood College of Technology	72.4	119.8	107.3	100.5	10.6	72.1	119.7	106.9	100.5	10.6
Libraries												
L1	Bensenville	Bensenville Community Library	65.0	111.7	101.1	92.8	0.3	65.1	111.7	101.1	92.8	0.3
L2	Harwood Heights	Eisenhower Library	60.9	109.2	93.8	87.3	0.0	60.9	109.2	93.7	87.3	0.0
L3	Itasca	Itasca Community Library	61.0	103.6	99.3	86.6	0.0	61.0	103.7	99.3	86.6	0.0
L4	Northlake	Northlake Public Library	58.0	105.7	92.3	91.8	0.1	58.7	106.7	92.4	91.8	0.1
L5	Schiller Park	Schiller Park Public Library	60.3	105.6	97.5	89.9	0.1	59.4	104.9	96.5	89.9	0.0
L6	Wood Dale	Wood Dale Public Library	65.2	107.0	103.8	89.0	0.2	65.3	107.0	103.8	89.0	0.2
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools												
S1	**Bensenville**	**Blackhawk Middle School**	**60.1**	**106.4**	**96.6**	**89.4**	**0.0**	**60.2**	**106.4**	**96.6**	**89.4**	**0.0**
S2	**Bensenville**	**Chippewa Elementary School**	**58.9**	**102.9**	**96.8**	**91.5**	**0.0**	**59.0**	**103.3**	**96.7**	**91.5**	**0.0**
S3	**Bensenville**	**Fenton High School**	**63.9**	**110.8**	**99.6**	**90.5**	**0.3**	**63.9**	**110.8**	**99.5**	**90.5**	**0.3**
S4	**Bensenville**	**Mohawk Elementary School**	**69.7**	**115.9**	**106.1**	**97.5**	**2.9**	**69.6**	**116.0**	**106.0**	**97.5**	**3.0**
S5	**Bensenville**	**St Charles Borromeo**	**54.5**	**100.0**	**91.5**	**90.0**	**0.0**	**54.6**	**100.5**	**91.4**	**90.0**	**0.0**
S6	**Bensenville**	**Tioga Elementary School**	**59.0**	**103.4**	**96.7**	**91.1**	**0.0**	**59.1**	**103.7**	**96.7**	**91.1**	**0.0**
S7	**Bensenville**	**Tioga School Special Education**	**59.0**	**103.4**	**96.7**	**91.1**	**0.0**	**59.1**	**103.7**	**96.7**	**91.1**	**0.0**
S8	**Bensenville**	**W A Johnson Elementary School**	**59.6**	**106.0**	**95.9**	**87.7**	**0.0**	**59.6**	**106.1**	**95.9**	**87.7**	**0.0**
S9	Chicago	Brickton Montessori School	64.6	107.1	103.0	94.7	0.2	64.4	106.2	102.9	94.7	0.2
S10	**Chicago**	**Dirksen Elementary School**	**61.1**	**105.2**	**98.9**	**94.8**	**0.1**	**61.5**	**106.2**	**99.0**	**94.8**	**0.1**

TABLE F-55
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out Alternative D					Build Out Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S11	**Chicago**	**Edison Elementary Regional Gifted Center**	**60.5**	**108.5**	**94.2**	**87.6**	**0.0**	**60.3**	**108.4**	**93.9**	**87.6**	**0.0**
S12	**Chicago**	**Garvy Elementary School**	**59.6**	**106.1**	**95.7**	**89.0**	**0.0**	**59.1**	**105.6**	**95.4**	**88.9**	**0.0**
S13	**Chicago**	**Immaculate Conception School**	**65.5**	**108.8**	**103.7**	**85.6**	**0.0**	**65.4**	**108.5**	**103.6**	**85.6**	**0.0**
S14	**Chicago**	**Norwood Park Elementary School**	**63.7**	**109.0**	**100.8**	**85.1**	**0.0**	**63.5**	**108.8**	**100.7**	**85.1**	**0.0**
S15	**Chicago**	**Oriole Park Elementary School**	**61.8**	**103.1**	**100.4**	**84.6**	**0.0**	**61.7**	**103.3**	**100.3**	**84.6**	**0.0**
S16	Chicago	Our Savior Lutheran	61.8	107.6	98.6	85.0	0.0	61.6	107.4	98.4	85.0	0.0
S17	**Chicago**	**Resurrection High School**	**62.4**	**108.6**	**99.0**	**90.1**	**0.0**	**62.2**	**108.3**	**98.8**	**90.1**	**0.0**
S18	**Chicago**	**Socrates School**	**67.2**	**106.9**	**106.0**	**87.7**	**0.2**	**67.0**	**106.3**	**106.0**	**87.7**	**0.2**
S19	**Chicago**	**St Eugene**	**59.5**	**103.6**	**97.3**	**91.0**	**0.0**	**59.7**	**104.5**	**97.2**	**91.0**	**0.0**
S20	**Chicago**	**St Paul Lutheran**	**66.8**	**106.6**	**105.7**	**87.2**	**0.1**	**66.7**	**106.0**	**105.6**	**87.2**	**0.1**
S21	**Chicago**	**Taft High School**	**64.1**	**106.0**	**102.7**	**83.8**	**0.0**	**64.1**	**105.9**	**102.6**	**83.5**	**0.0**
S22	**Des Plaines**	**Algonquin Middle School**	**52.7**	**100.0**	**87.9**	**91.9**	**0.0**	**50.9**	**98.2**	**86.0**	**91.9**	**0.0**
S23	Des Plaines	Angel Town Private School	58.3	104.0	95.2	99.5	0.0	55.8	102.2	92.1	98.7	0.0
S24	**Des Plaines**	**Devonshire School**	**57.4**	**105.7**	**90.4**	**92.1**	**0.0**	**57.3**	**105.5**	**90.3**	**92.1**	**0.0**
S25	Des Plaines	Forest Elementary School	52.4	99.6	87.8	92.9	0.0	50.6	97.9	85.8	92.9	0.0
S26	**Des Plaines**	**Friendship Junior High School**	**58.4**	**106.6**	**91.5**	**93.0**	**0.0**	**58.3**	**106.5**	**91.5**	**93.0**	**0.0**
S27	Des Plaines	Iroquois Community School	58.5	104.1	95.5	104.6	0.1	56.3	102.7	92.7	99.9	0.0
S28	**Des Plaines**	**Maine West High School**	**51.7**	**98.8**	**87.0**	**96.3**	**0.0**	**50.2**	**97.5**	**85.4**	**96.3**	**0.0**
S29	**Des Plaines**	**Orchard Place Elementary School**	**68.6**	**116.6**	**102.5**	**102.7**	**3.8**	**68.3**	**116.4**	**101.7**	**102.7**	**3.7**
S30	**Des Plaines**	**Our Lady Of Destiny Elementary South**	**54.4**	**100.4**	**91.1**	**104.0**	**0.0**	**51.2**	**97.7**	**87.4**	**104.0**	**0.0**
S31	**Des Plaines**	**Plainfield Elementary School**	**52.0**	**98.7**	**88.0**	**97.0**	**0.0**	**50.0**	**97.0**	**85.7**	**97.0**	**0.0**
S32	Des Plaines	South Elementary School	54.6	101.1	90.8	95.4	0.0	51.3	97.8	87.5	95.4	0.0

TABLE F-55
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (LEARNING INSTITUTIONS)

Map ID	City	Name	Build Out Alternative D					Build Out Alternative G				
			DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S33	**Des Plaines**	**St Zachary School**	**58.1**	**106.3**	**91.3**	**92.6**	**0.0**	**58.0**	**106.2**	**91.3**	**92.6**	**0.0**
S34	**Elk Grove Village**	**Clearmont Elementary School**	**60.7**	**107.2**	**96.8**	**87.8**	**0.0**	**60.0**	**107.2**	**95.3**	**87.8**	**0.0**
S35	**Elk Grove Village**	**Elk Grove High School**	**59.9**	**106.6**	**95.9**	**90.5**	**0.0**	**59.1**	**106.6**	**94.0**	**90.5**	**0.0**
S36	**Elk Grove Village**	**Grove Junior High School**	**58.4**	**105.1**	**94.5**	**89.6**	**0.0**	**57.9**	**105.1**	**93.2**	**89.6**	**0.0**
S37	**Elk Grove Village**	**Lutheran School Of The Holy Spirit**	**55.7**	**102.0**	**92.0**	**86.1**	**0.0**	**55.5**	**102.0**	**91.6**	**86.1**	**0.0**
S38	**Elk Grove Village**	**Queen Of The Rosary School**	**59.1**	**106.0**	**94.9**	**86.9**	**0.0**	**58.6**	**106.0**	**93.4**	**86.9**	**0.0**
S39	**Elk Grove Village**	**Ridge Family Center For Learning**	**56.9**	**103.6**	**92.8**	**90.6**	**0.0**	**56.6**	**103.6**	**92.3**	**90.6**	**0.0**
S40	**Elk Grove Village**	**Rupley Elementary School**	**56.0**	**103.4**	**90.9**	**84.6**	**0.0**	**55.9**	**103.4**	**90.8**	**84.6**	**0.0**
S41	**Elmhurst**	**Churchville Junior High School**	**54.9**	**100.2**	**92.0**	**88.8**	**0.0**	**54.6**	**100.6**	**91.3**	**88.8**	**0.0**
S42	**Elmhurst**	**Conrad Fischer Elementary School**	**56.7**	**102.2**	**93.8**	**90.4**	**0.0**	**55.8**	**102.3**	**92.0**	**90.4**	**0.0**
S43	Franklin Park	East Leyden High School	54.5	99.1	92.1	83.9	0.0	53.8	99.3	90.9	83.9	0.0
S44	**Franklin Park**	**Enger Elementary School**	**56.5**	**104.7**	**89.5**	**93.7**	**0.0**	**58.8**	**107.5**	**89.7**	**97.2**	**0.1**
S45	**Franklin Park**	**North Elementary School**	**53.7**	**98.1**	**91.4**	**81.6**	**0.0**	**52.9**	**98.3**	**90.0**	**81.6**	**0.0**
S46	Harwood Heights	Maple Park Academy	57.7	106.0	90.6	84.0	0.0	57.6	105.9	90.3	84.0	0.0
S47	**Harwood Heights**	**Union Ridge Elementary School**	**59.9**	**108.3**	**92.1**	**87.3**	**0.0**	**59.8**	**108.3**	**91.9**	**87.3**	**0.0**
S48	**Itasca**	**Elmer H. Franzen Elementary School**	**57.1**	**102.0**	**94.6**	**83.1**	**0.0**	**57.1**	**102.0**	**94.5**	**83.1**	**0.0**
S49	**Itasca**	**F.E. Peacock Junior High School**	**58.7**	**102.5**	**96.7**	**84.2**	**0.0**	**58.7**	**102.6**	**96.7**	**84.2**	**0.0**
S50	**Itasca**	**Lutheran School Of St Luke**	**61.6**	**106.8**	**98.8**	**87.8**	**0.0**	**61.6**	**106.9**	**98.8**	**87.8**	**0.0**
S51	Itasca	New Morning Children's House	59.4	102.7	97.5	83.9	0.0	59.4	102.8	97.6	83.9	0.0
S52	**Itasca**	**St Peter The Apostle School**	**58.9**	**102.7**	**96.8**	**84.4**	**0.0**	**58.9**	**102.7**	**96.9**	**84.4**	**0.0**

TABLE F-55
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out Alternative D					Build Out Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S53	**Itasca**	**Washington Elementary School**	**62.1**	**106.6**	**99.7**	**87.4**	**0.0**	**62.1**	**106.7**	**99.7**	**87.4**	**0.0**
S54	**Norridge**	**Divine Savior School**	**57.5**	**104.6**	**93.0**	**83.4**	**0.0**	**57.4**	**104.5**	**92.9**	**83.4**	**0.0**
S55	**Norridge**	**J Giles Elementary School**	**55.0**	**101.3**	**91.4**	**83.0**	**0.0**	**54.9**	**101.1**	**91.3**	**82.3**	**0.0**
S56	Norridge	Jolly Fun House (JFH) Educational Academy, Inc	53.7	99.3	90.8	84.4	0.0	53.4	98.6	90.6	84.4	0.0
S57	**Norridge**	**J Leigh Elementary School**	**63.6**	**111.8**	**96.7**	**89.4**	**0.3**	**63.6**	**111.8**	**96.7**	**89.4**	**0.3**
S58	**Norridge**	**Pennoyer Elementary School**	**60.6**	**104.3**	**98.6**	**92.3**	**0.0**	**60.9**	**105.3**	**98.7**	**92.3**	**0.0**
S59	Norridge	Ridgewood Community High School	58.1	105.8	92.4	83.8	0.0	58.0	105.7	92.3	83.8	0.0
S60	**Northlake**	**Parkview Baptist Academy**	**58.2**	**105.9**	**92.7**	**92.6**	**0.1**	**59.0**	**107.0**	**92.7**	**92.6**	**0.1**
S61	**Northlake**	**Roy Elementary School**	**58.4**	**106.2**	**92.6**	**94.0**	**0.1**	**59.6**	**107.8**	**92.7**	**94.0**	**0.1**
S62	**Northlake**	**St John Vianney School**	**57.7**	**105.4**	**92.3**	**92.2**	**0.1**	**58.4**	**106.3**	**92.3**	**92.2**	**0.1**
S63	**Northlake**	**West Leyden High School**	**62.3**	**110.2**	**96.2**	**96.2**	**0.5**	**63.3**	**111.5**	**96.6**	**96.2**	**0.6**
S64	**Northlake**	**Westdale Elementary School**	**59.0**	**107.2**	**92.1**	**95.6**	**0.0**	**60.7**	**109.3**	**92.4**	**95.7**	**0.1**
S65	Park Ridge	Alternative Resource Center	61.1	108.1	96.8	96.1	0.1	59.7	106.7	95.2	96.1	0.1
S66	Park Ridge	George Washington Elementary School	62.4	110.2	96.6	94.2	0.1	62.0	110.0	95.7	94.2	0.1
S67	**Park Ridge**	**Maine South High School**	**63.2**	**111.0**	**97.4**	**95.8**	**0.1**	**62.6**	**110.6**	**96.3**	**95.8**	**0.1**
S68	**Park Ridge**	**Mary Seat Of Wisdom**	**60.7**	**107.5**	**96.5**	**93.1**	**0.1**	**59.9**	**106.9**	**95.6**	**93.1**	**0.1**
S69	**Rosemont**	**Rosemont Elementary School**	**68.3**	**116.1**	**102.3**	**97.5**	**0.9**	**67.6**	**115.7**	**101.0**	**97.5**	**0.8**
S70	**Schiller Park**	**John F Kennedy Elementary School**	**58.9**	**104.2**	**96.0**	**92.8**	**0.0**	**58.6**	**104.5**	**95.4**	**92.8**	**0.0**
S71	**Schiller Park**	**Lincoln Middle School**	**59.1**	**103.9**	**96.6**	**85.9**	**0.0**	**58.5**	**103.5**	**95.8**	**85.9**	**0.0**
S72	**Schiller Park**	**St Beatrice School**	**60.1**	**105.0**	**97.6**	**86.9**	**0.0**	**59.5**	**104.6**	**96.9**	**86.9**	**0.0**
S73	**Schiller Park**	**St Maria Goretti School**	**57.9**	**103.3**	**95.0**	**91.9**	**0.0**	**57.7**	**103.8**	**94.3**	**91.9**	**0.0**

TABLE F-55
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out Alternative D					Build Out Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S74	**Schiller Park**	**Washington Elementary School**	**69.5**	**116.6**	**105.0**	**99.4**	**1.5**	**69.3**	**116.6**	**104.5**	**99.4**	**1.7**
S75	**Wood Dale**	**Early Childhood Education Center**	**65.7**	**107.1**	**104.3**	**90.1**	**0.3**	**65.8**	**107.1**	**104.4**	**90.1**	**0.3**
S76	**Wood Dale**	**Holy Ghost School**	**62.5**	**107.7**	**99.8**	**87.5**	**0.1**	**62.5**	**107.8**	**99.7**	**87.5**	**0.1**
S77	**Wood Dale**	**Oakbrook Elementary School**	**60.7**	**105.8**	**98.1**	**87.5**	**0.0**	**60.7**	**105.8**	**98.1**	**87.5**	**0.0**
S78	**Wood Dale**	**Westview Elementary School**	**59.2**	**104.6**	**96.3**	**85.8**	**0.0**	**59.2**	**104.6**	**96.3**	**85.8**	**0.0**
S79	**Wood Dale**	**Wood Dale Junior High School**	**64.8**	**106.9**	**103.3**	**88.4**	**0.2**	**64.8**	**106.9**	**103.3**	**88.4**	**0.2**

Note: **Bold** indicates schools that have been sound insulated or funded for sound insulation through the 2004 School Sound Insulation Program (SSIP).

Sources: SSIP: City of Chicago Department of Aviation Noise Office, SSIP Information, June 2005.
Learning institutions:
1. 2002 Non-public School Database, Illinois State Board of Education
2. 2001 Public School Database, Illinois State Board of Education
3. Searches on www.smartpages.com for "university," "college," "library," "preschool," "Montessori," "junior high," "middle school," "high school," "school," "learning center," and "academy" for the communities of Bensenville, Chicago, Des Plaines, Elk Grove Village, Franklin Park, Harwood Heights, Itasca, Norridge, Northlake, Park Ridge, Rosemont, Schiller Park, and Wood Dale. Only non-profit entities were included in results.
4. National Center for Educational Statistics (NCES), on-line at http://nces.ed.gov/globallocator/

TABLE F-56
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (HEALTH CARE FACILITIES)

			Build Out Alternative A					Build Out Alternative C				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
Hospitals												
H1	Chicago	Resurrection Medical Center	59.7	105.8	96.3	86.4	0.0	65.1	110.2	102.5	88.6	0.1
H2	Northlake	Vencor Hospital	59.5	104.3	97.1	91.5	0.0	55.1	103.0	88.8	91.2	0.0
Nursing Homes												
N1	Bensenville	Bridgeway Of Bensenville	58.8	105.1	95.3	97.2	0.1	60.0	106.0	96.7	91.8	0.0
N2	Elmhurst	York Convalescent Center Lt	56.3	103.4	91.9	91.5	0.0	54.6	100.9	91.0	88.6	0.0
N3	Franklin Park	Scallabrini Life Center	63.4	108.8	100.6	96.4	0.2	57.4	105.8	89.8	95.0	0.0
N4	Itasca	Arbor Of Itasca Inc	59.5	105.4	96.2	85.5	0.0	61.9	106.5	99.5	87.6	0.0
N5	Norridge	Norridge Nursing Center	55.0	100.2	92.2	88.4	0.0	55.4	103.2	89.7	82.8	0.0
N6	Northlake	Concord Plaza Assisted Living Center	62.5	106.7	100.3	90.6	0.0	58.7	106.2	93.3	92.0	0.1

Source: Searches on www.smartpages.com for "hospital," "nursing home," "convalescent home," "clinic," and "emergency" for the communities of Bensenville, Chicago, Des Plaines, Elk Grove Village, Franklin Park, Harwood Heights, Itasca, Norridge, Northlake, Park Ridge, Rosemont, Schiller Park, and Wood Dale. Only in-patient facilities were included in results.

TABLE F-57
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (HEALTH CARE FACILITIES)

			Build Out Alternative D					Build Out Alternative G				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
Hospitals												
H1	Chicago	Resurrection Medical Center	65.3	110.2	102.7	88.6	0.1	65.1	109.9	102.6	88.6	0.1
H2	Northlake	Vencor Hospital	54.7	102.1	89.5	91.2	0.0	55.7	103.9	88.9	91.2	0.0
Nursing Homes												
N1	Bensenville	Bridgeway Of Bensenville	58.7	102.6	96.7	91.8	0.0	58.8	103.0	96.6	91.8	0.0
N2	Elmhurst	York Convalescent Center Lt	53.9	98.9	91.3	88.6	0.0	54.0	99.4	91.1	88.6	0.0
N3	Franklin Park	Scallabrini Life Center	58.0	106.4	90.2	95.0	0.0	60.2	109.0	90.6	96.7	0.1
N4	Itasca	Arbor Of Itasca Inc	62.0	106.5	99.6	87.6	0.0	62.0	106.6	99.6	87.6	0.0
N5	Norridge	Norridge Nursing Center	54.5	101.9	89.5	82.8	0.0	54.2	101.6	89.3	82.8	0.0
N6	Northlake	Concord Plaza Assisted Living Center	59.2	107.0	93.3	92.0	0.1	60.1	108.2	93.4	92.0	0.1

Source: Searches on www.smartpages.com for "hospital," "nursing home," "convalescent home," "clinic," and "emergency" for the communities of Bensenville, Chicago, Des Plaines, Elk Grove Village, Franklin Park, Harwood Heights, Itasca, Norridge, Northlake, Park Ridge, Rosemont, Schiller Park, and Wood Dale. Only in-patient facilities were included in results.

TABLE F-58
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W1	Addison	Sunnyplace Church Of God	54.2	100.1	90.9	86.3	0.0	56.8	102.2	93.9	87.5	0.0
W2	Arlington Heights	Baptist General Conference	58.1	103.7	95.2	89.7	0.0	51.2	97.6	87.6	85.6	0.0
W3	Bensenville	Bensenville Bible Church	59.0	105.4	95.4	95.5	0.1	61.0	107.4	97.2	92.3	0.0
W4	Bensenville	Bensenville United Methodist Church	58.1	105.0	93.8	93.5	0.1	60.5	107.8	95.7	91.9	0.1
W5	Bensenville	Calvary Baptist Church	59.6	105.0	96.8	95.2	0.1	60.1	106.5	96.4	97.8	0.0
W6	Bensenville	Cornerstone Christian Assembly	62.2	106.6	99.9	94.2	0.1	58.4	104.8	94.6	96.7	0.0
W7	Bensenville	first Spanish Baptist Church	65.2	109.9	102.7	95.9	0.4	67.8	111.0	106.0	98.8	0.8
W8	Bensenville	Grace Gospel Ctr.	55.4	101.7	91.8	89.9	0.0	57.8	104.0	94.2	88.9	0.0
W9	Bensenville	Grace Lutheran Church	56.5	103.4	92.3	92.7	0.0	55.9	102.6	92.0	98.4	0.0
W10	Bensenville	Immanuel United Church-Christ	54.4	100.9	90.7	90.9	0.0	55.5	101.8	92.0	88.9	0.0
W11	Bensenville	Jesus Alive Church	60.1	105.8	97.0	92.9	0.1	64.6	110.7	101.2	88.9	0.3
W12	Bensenville	Manav Seva Mandir	61.1	107.6	97.4	96.1	0.3	64.7	112.0	99.8	93.4	0.5
W13	Bensenville	Peace Church United Chr-Christ	60.3	106.7	96.5	94.4	0.1	63.3	110.4	98.8	94.3	0.5
W14	Bensenville	Sam Mool United Methodist Church/St. John's United Church Of Christ	65.7	110.6	103.1	95.9	0.5	68.5	111.2	106.8	99.5	0.9
W15	Bensenville	St. Alexis	59.8	106.7	95.6	95.2	0.1	62.7	110.0	97.8	94.9	0.4
W16	Bensenville	St. Bede's Episcopal Church	58.2	104.5	94.6	91.7	0.1	61.4	108.5	96.8	88.7	0.1
W17	Bensenville	St. Charles Borromeo	57.4	103.9	93.5	89.9	0.0	55.5	102.3	91.3	94.6	0.0
W18	Bensenville	True Jesus Church	56.4	103.3	92.3	91.8	0.0	58.4	105.5	93.9	91.0	0.1
W19	Bensenville	Ukranian Pentecostal Church	62.3	107.1	99.7	93.4	0.1	58.5	105.1	94.7	94.0	0.0
W20	Bensenville	Zion Evangelical Lutheran Church	57.5	104.4	93.1	92.4	0.1	59.7	107.0	94.9	91.6	0.1

TABLE F-58
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W21	Chicago	All Saints Polish National Catholic Church	63.0	108.1	100.4	93.5	0.1	68.0	115.3	103.0	94.0	1.2
W22	Chicago	Bethel Community Church	61.1	105.8	98.7	87.3	0.0	58.7	103.5	96.3	89.8	0.0
W23	Chicago	Church Of The Full Gospel Inc	56.1	101.7	93.1	84.9	0.0	60.4	106.8	96.8	85.8	0.0
W24	Chicago	First Korean Presbyterian Church	58.7	104.8	95.3	84.8	0.0	61.3	102.7	99.9	83.3	0.0
W25	Chicago	Holy Resurrection Church	63.5	109.9	99.9	88.2	0.2	67.6	107.9	106.4	88.2	0.2
W26	Chicago	Norwood Park Evangelical Lutheran Church	58.9	105.1	95.5	88.1	0.0	64.1	109.1	101.5	84.7	0.0
W27	Chicago	Our Lady Mother Of Church	65.4	109.2	103.4	93.4	0.2	65.5	113.3	99.5	91.1	0.4
W28	Chicago	Our Savior Lutheran Church Of Norwood Park	56.3	101.9	93.2	85.8	0.0	60.7	106.9	97.3	84.8	0.0
W29	Chicago	Our Saviors English Lutheran Church	57.2	103.1	94.0	87.0	0.0	62.0	107.9	98.9	85.2	0.0
W30	Chicago	Sisters of Charity BVM	61.1	105.6	98.7	91.0	0.0	59.6	103.9	97.3	90.6	0.0
W31	Chicago	Sisters of the Living Word	61.5	106.2	99.1	90.0	0.0	60.5	104.6	98.3	92.2	0.0
W32	Chicago	St Albans Episcopal Church	55.0	100.6	91.9	84.2	0.0	58.8	105.4	94.9	85.0	0.0
W33	Chicago	St Andrew Presbyterian Church	59.4	104.3	96.8	87.9	0.0	59.5	103.1	97.6	87.4	0.0
W34	Chicago	St James Lutheran Church	60.6	105.4	98.1	86.4	0.0	58.5	103.2	96.0	88.9	0.0
W35	Chicago	St Josephs Ukrainian Church	66.7	111.5	104.2	91.3	0.4	61.4	107.2	98.2	95.5	0.0
W36	Chicago	St Paul Evangelical Lutheran Church	62.5	108.8	98.9	87.3	0.0	66.4	106.0	105.3	86.6	0.1
W37	Chicago	St Sophia Ukrainian Church	58.3	104.4	95.0	85.5	0.0	60.4	102.1	98.9	82.8	0.0
W38	Des Plaines	Brentwood Baptist Church	56.1	102.9	92.0	91.1	0.0	56.0	103.7	90.3	87.7	0.0
W39	Des Plaines	Calvary Korean Baptist Church	58.1	104.7	94.2	95.0	0.1	51.1	98.9	85.5	94.3	0.0
W40	Des Plaines	Church of Christ	55.4	101.8	91.7	94.9	0.0	51.9	99.0	87.5	95.0	0.0
W41	Des Plaines	First Presbyterian Church	61.3	109.3	95.1	94.4	0.1	54.8	101.2	91.0	107.1	0.0

TABLE F-58
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W42	Des Plaines	Good Shepherd Lutheran Church	56.5	102.2	93.5	97.9	0.0	51.9	99.1	87.2	96.0	0.0
W43	Des Plaines	Korean Philippi Presbyterian	61.4	109.8	93.8	95.7	0.1	56.6	102.8	93.1	99.3	0.0
W44	Des Plaines	Phat Bao Temple	55.8	102.7	91.5	93.5	0.0	52.6	99.5	88.4	96.0	0.0
W45	Des Plaines	St. Stephen Catholic Church	55.8	101.5	92.8	96.9	0.0	51.6	98.9	86.8	101.1	0.0
W46	Des Plaines	St. Zachary Catholic Church	58.7	105.9	94.1	94.1	0.2	58.0	106.3	91.0	92.8	0.0
W47	Des Plaines	Trinity Lutheran Church	55.9	103.0	91.4	93.1	0.0	51.4	99.1	85.8	91.9	0.0
W48	Elk Grove Village	1st Baptist Church of Elk Grove Village	58.9	105.1	95.4	88.1	0.0	57.0	104.4	92.2	85.5	0.0
W49	Elk Grove Village	Elk Grove Presbyterian Church	59.6	106.4	95.6	88.4	0.0	58.6	106.1	93.3	87.0	0.0
W50	Elk Grove Village	Evangelical Free Church	65.4	108.9	103.5	93.8	0.3	55.7	103.2	90.7	91.1	0.0
W51	Elk Grove Village	Gethsemane Presbyterian Church	57.0	102.7	93.9	86.9	0.0	55.8	103.0	91.2	86.9	0.0
W52	Elk Grove Village	Lutheran Church of the Holy Spirit	57.3	103.6	93.7	86.8	0.0	56.7	103.5	92.5	87.2	0.0
W53	Elk Grove Village	Queen of the Rosary Church	57.0	103.2	93.5	86.6	0.0	56.1	102.9	92.0	88.2	0.0
W54	Elk Grove Village	St. Nicholas Episcopal Church	59.2	106.1	94.9	88.0	0.1	60.6	108.3	95.0	88.1	0.1
W55	Elk Grove Village	Wesleyan Community Church	58.7	104.5	95.6	88.6	0.0	56.7	104.1	91.6	85.2	0.0
W56	Elmhurst	Assembly God Hammond Church	58.0	105.5	92.9	88.0	0.0	54.6	101.2	90.7	88.8	0.0
W57	Elmhurst	Chicago Church Of Christ Inc	59.0	107.0	92.6	87.5	0.0	54.8	100.8	91.5	88.2	0.0
W58	Elmhurst	Elmhurst Korean Presbyter	58.0	104.7	94.1	88.5	0.0	55.2	102.2	90.8	90.5	0.0
W59	Franklin Park	Espiritu Santo Episcopal Church	60.3	102.0	98.8	93.6	0.0	56.6	104.5	90.6	91.4	0.0
W60	Franklin Park	Faith Christian Center	55.6	100.8	92.8	92.8	0.0	56.4	104.3	90.4	88.2	0.0

TABLE F-58
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W61	Franklin Park	Mt. Calvary Lutheran Church	61.9	106.2	99.6	96.0	0.1	55.9	103.8	89.8	98.9	0.0
W62	Franklin Park	St. Pauls United Church of Christ	59.3	102.3	97.5	94.5	0.0	57.0	104.8	91.0	91.7	0.0
W63	Harwood Heights	Bethany Baptist Church	63.2	107.6	100.8	84.1	0.0	58.9	106.8	92.9	87.1	0.0
W64	Harwood Heights	Northside Arabic Church	61.2	105.3	99.0	88.4	0.0	60.6	108.5	94.7	86.7	0.0
W65	Itasca	Bethany United Methodist Church	58.7	104.8	95.4	85.4	0.0	59.6	102.7	97.8	84.0	0.0
W66	Itasca	Christian Fellowship Church	57.1	103.6	93.4	86.2	0.0	58.8	104.8	95.5	85.7	0.0
W67	Itasca	Hanmee Presbyterian Church	53.6	100.0	90.0	83.7	0.0	55.1	102.0	90.9	80.9	0.0
W68	Norridge	Acacia Park Evangelical Lutheran church	63.4	107.3	101.3	89.5	0.0	61.7	109.7	95.3	88.7	0.0
W69	Norridge	Church of Our Savior	64.5	108.4	102.4	89.8	0.1	63.1	111.0	96.9	89.8	0.2
W70	Norridge	Divine Savior	57.1	102.6	94.1	86.1	0.0	57.8	105.0	93.1	83.2	0.0
W71	Norridge	Zion Evangelical Lutheran Church	67.1	111.1	105.0	93.2	0.5	64.8	112.4	99.3	92.3	0.3
W72	Northlake	Bethel Fellowship Church	60.3	104.4	98.2	87.8	0.0	57.0	104.6	91.7	91.6	0.0
W73	Northlake	Iglesia Bautista Hispana Jeth	61.6	105.8	99.5	90.4	0.0	57.8	105.4	92.4	91.7	0.1
W74	Northlake	Parkview Baptist Church	61.0	105.2	98.8	88.2	0.0	57.6	105.1	92.5	92.3	0.0
W75	Northlake	St. John the Baptist Melkite Catholic Church	59.2	103.7	96.8	87.3	0.0	56.3	103.5	91.7	90.4	0.0
W76	Northlake	St. John Vianney Church	60.6	104.7	98.5	87.9	0.0	57.3	104.8	92.0	91.9	0.0
W77	Northlake	St. Peter's Syrian Orthodox Church	60.9	105.2	98.7	92.3	0.0	56.4	104.1	90.8	92.9	0.0
W78	Northlake	Trinity Presbyterian Church	68.2	112.9	105.8	96.8	0.9	63.0	110.6	97.7	97.6	0.7
W79	Park Ridge	Mary Seat of Wisdom Church	57.8	103.0	95.1	90.0	0.0	61.6	108.9	96.8	93.2	0.1
W80	Park Ridge	South Park Church	56.1	101.5	93.3	88.0	0.0	59.2	106.2	94.9	92.2	0.0

TABLE F-58
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
W81	Schiller Park	Grace Community Evangelical	58.5	104.7	94.9	95.3	0.0	62.9	110.7	97.0	93.9	0.2
W82	Schiller Park	International Christian Assembly of God	58.9	105.1	95.4	95.2	0.1	63.4	111.3	97.2	96.0	0.4
W83	Schiller Park	St. Beatrice Church	59.2	105.4	95.7	95.1	0.1	63.6	111.5	97.4	96.4	0.5
W84	Wood Dale	Calvary Evangelical Lutheran Church	57.0	102.0	94.3	87.8	0.0	61.3	106.6	98.6	86.9	0.0
W85	Wood Dale	Christian Congregation	55.0	100.8	91.9	85.1	0.0	55.8	102.0	92.3	85.3	0.0
W86	Wood Dale	First Baptist Church- Wood Dale	56.5	102.5	93.2	90.1	0.0	59.9	106.5	96.0	92.7	0.0
W87	Wood Dale	St. Peter's Latvian Lutheran Church	55.7	100.4	93.3	85.8	0.0	57.6	103.3	94.5	89.3	0.0

Source: www.smartpages.com

TABLE F-59
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out Alternative D					Build Out Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W1	Addison	Sunnyplace Church Of God	56.4	101.3	93.9	85.8	0.0	56.5	101.4	93.9	85.8	0.0
W2	Arlington Heights	Baptist General Conference	51.4	97.8	87.7	85.6	0.0	51.2	97.5	87.7	85.6	0.0
W3	Bensenville	Bensenville Bible Church	59.4	103.5	97.2	92.3	0.0	59.5	103.8	97.2	92.3	0.0
W4	Bensenville	Bensenville United Methodist Church	59.1	105.2	95.8	88.2	0.0	59.2	105.3	95.7	88.2	0.0
W5	Bensenville	Calvary Baptist Church	58.7	103.2	96.3	97.8	0.0	58.8	103.7	96.3	97.8	0.0
W6	Bensenville	Cornerstone Christian Assembly	58.6	105.1	94.8	96.7	0.0	59.1	105.8	95.0	96.7	0.0
W7	Bensenville	first Spanish Baptist Church	67.9	111.1	106.0	98.8	0.8	67.9	111.1	106.1	98.8	0.8
W8	Bensenville	Grace Gospel Ctr.	57.3	103.1	94.2	86.8	0.0	57.4	103.2	94.2	86.8	0.0
W9	Bensenville	Grace Lutheran Church	54.2	98.5	92.0	98.4	0.0	54.5	99.2	92.0	98.4	0.0
W10	Bensenville	Immanuel United Church-Christ	54.1	98.2	92.0	87.5	0.0	54.2	98.6	92.0	87.5	0.0
W11	Bensenville	Jesus Alive Church	64.5	110.4	101.3	88.9	0.2	64.5	110.5	101.3	88.9	0.2
W12	Bensenville	Manav Seva Mandir	63.7	110.2	99.9	90.2	0.1	63.7	110.3	99.9	90.2	0.1
W13	Bensenville	Peace Church United Chr-Christ	61.4	106.4	98.8	93.5	0.0	61.5	106.6	98.8	93.5	0.0
W14	Bensenville	Sam Mool United Methodist Church/St. John's United Church Of Christ	68.5	111.3	106.8	99.5	0.9	68.5	111.3	106.8	99.5	0.9
W15	Bensenville	St. Alexis	60.9	106.5	97.8	91.0	0.0	60.9	106.7	97.8	91.0	0.0
W16	Bensenville	St. Bede's Episcopal Church	60.9	107.7	96.8	88.1	0.1	60.9	107.7	96.8	88.1	0.1
W17	Bensenville	St. Charles Borromeo	54.5	100.0	91.5	94.6	0.0	54.7	100.6	91.5	94.6	0.0
W18	Bensenville	True Jesus Church	56.7	102.0	93.9	91.0	0.0	56.8	102.2	93.9	91.0	0.0
W19	Bensenville	Ukranian Pentecostal Church	58.9	105.5	95.0	94.0	0.0	59.3	106.1	95.1	94.0	0.0
W20	Bensenville	Zion Evangelical Lutheran Church	58.0	103.7	95.0	87.9	0.0	58.1	103.9	95.0	87.9	0.0

TABLE F-59
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out Alternative D					Build Out Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W21	Chicago	All Saints Polish National Catholic Church	68.3	115.4	103.8	94.0	0.8	67.9	115.0	103.4	94.0	0.8
W22	Chicago	Bethel Community Church	58.8	103.1	96.5	89.8	0.0	59.0	104.0	96.4	89.8	0.0
W23	Chicago	Church Of The Full Gospel Inc	60.7	107.0	97.2	85.8	0.0	60.4	106.6	97.0	85.8	0.0
W24	Chicago	First Korean Presbyterian Church	61.5	102.5	100.1	84.0	0.0	61.4	102.9	100.0	84.0	0.0
W25	Chicago	Holy Resurrection Church	67.7	107.9	106.5	88.2	0.2	67.5	107.3	106.4	88.2	0.2
W26	Chicago	Norwood Park Evangelical Lutheran Church	64.3	109.1	101.7	84.7	0.0	64.1	108.9	101.6	84.7	0.0
W27	Chicago	Our Lady Mother Of Church	65.5	113.7	98.8	91.1	0.6	65.5	113.7	98.7	91.1	0.6
W28	Chicago	Our Savior Lutheran Church Of Norwood Park	61.0	107.1	97.6	84.8	0.0	60.7	106.7	97.4	84.8	0.0
W29	Chicago	Our Saviors English Lutheran Church	62.3	108.0	99.1	85.2	0.0	62.1	107.8	99.0	85.2	0.0
W30	Chicago	Sisters of Charity BVM	59.6	103.5	97.5	90.6	0.0	59.8	104.4	97.4	90.6	0.0
W31	Chicago	Sisters of the Living Word	60.4	104.1	98.4	92.2	0.0	60.7	105.1	98.4	92.2	0.0
W32	Chicago	St Albans Episcopal Church	59.1	105.7	95.3	85.0	0.0	58.8	105.3	95.0	85.0	0.0
W33	Chicago	St Andrew Presbyterian Church	59.7	102.8	97.9	87.4	0.0	59.8	103.5	97.8	87.4	0.0
W34	Chicago	St James Lutheran Church	58.6	102.9	96.3	88.9	0.0	58.7	103.7	96.2	88.9	0.0
W35	Chicago	St Josephs Ukrainian Church	61.2	107.0	98.0	95.5	0.0	61.5	107.7	98.1	95.5	0.0
W36	Chicago	St Paul Evangelical Lutheran Church	66.5	106.2	105.4	86.6	0.1	66.4	105.6	105.3	86.6	0.1
W37	Chicago	St Sophia Ukrainian Church	60.6	101.9	99.2	83.6	0.0	60.5	102.4	99.1	83.6	0.0
W38	Des Plaines	Brentwood Baptist Church	56.2	103.8	90.7	87.7	0.0	56.0	103.6	90.6	87.7	0.0
W39	Des Plaines	Calvary Korean Baptist Church	52.1	99.6	87.0	94.3	0.0	51.0	98.5	85.8	94.3	0.0
W40	Des Plaines	Church of Christ	54.4	101.0	90.6	95.0	0.0	51.2	97.7	87.4	95.0	0.0
W41	Des Plaines	First Presbyterian Church	56.4	102.7	92.8	107.1	0.0	54.1	100.3	90.5	107.1	0.0

TABLE F-59
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out Alternative D					Build Out Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W42	Des Plaines	Good Shepherd Lutheran Church	54.3	100.1	91.1	96.0	0.0	51.3	97.8	87.5	96.0	0.0
W43	Des Plaines	Korean Philippi Presbyterian	58.2	104.1	95.0	99.3	0.0	55.6	102.0	91.9	98.5	0.0
W44	Des Plaines	Phat Bao Temple	55.0	101.1	91.7	96.0	0.0	51.8	98.1	88.1	96.0	0.0
W45	Des Plaines	St. Stephen Catholic Church	54.2	100.3	90.8	101.1	0.0	50.9	97.4	87.1	101.1	0.0
W46	Des Plaines	St. Zachary Catholic Church	58.1	106.3	91.3	92.8	0.0	58.0	106.2	91.3	92.8	0.0
W47	Des Plaines	Trinity Lutheran Church	52.8	100.2	87.9	91.9	0.0	51.3	98.8	86.2	91.9	0.0
W48	Elk Grove Village	1st Baptist Church of Elk Grove Village	57.1	104.3	92.5	85.5	0.0	57.0	104.3	92.2	85.5	0.0
W49	Elk Grove Village	Elk Grove Presbyterian Church	59.2	106.1	95.0	87.0	0.0	58.6	106.1	93.5	87.0	0.0
W50	Elk Grove Village	Evangelical Free Church	55.8	103.1	90.9	91.1	0.0	55.7	103.1	90.8	91.1	0.0
W51	Elk Grove Village	Gethsemane Presbyterian Church	55.8	102.9	91.3	86.9	0.0	55.7	102.9	91.1	86.9	0.0
W52	Elk Grove Village	Lutheran Church of the Holy Spirit	57.0	103.5	93.3	87.2	0.0	56.6	103.4	92.4	87.2	0.0
W53	Elk Grove Village	Queen of the Rosary Church	56.3	102.8	92.5	88.2	0.0	56.0	102.8	92.0	88.2	0.0
W54	Elk Grove Village	St. Nicholas Episcopal Church	61.6	108.4	97.5	88.3	0.1	60.7	108.3	95.3	88.1	0.1
W55	Elk Grove Village	Wesleyan Community Church	56.7	104.1	91.7	85.2	0.0	56.6	104.0	91.6	85.2	0.0
W56	Elmhurst	Assembly God Hammond Church	54.9	100.9	91.6	88.8	0.0	55.2	102.0	91.0	88.8	0.0
W57	Elmhurst	Chicago Church Of Christ Inc	55.4	100.2	92.9	88.2	0.0	54.8	101.0	91.3	88.2	0.0
W58	Elmhurst	Elmhurst Korean Presbyter	55.4	102.2	91.3	90.5	0.0	56.1	103.3	91.4	90.5	0.0
W59	Franklin Park	Espiritu Santo Episcopal Church	54.0	98.6	91.6	85.6	0.0	53.5	99.3	90.3	85.5	0.0
W60	Franklin Park	Faith Christian Center	54.5	98.5	92.4	83.8	0.0	53.0	97.9	90.5	82.9	0.0

TABLE F-59
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out Alternative D					Build Out Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W61	Franklin Park	Mt. Calvary Lutheran Church	56.1	103.8	90.5	98.9	0.0	59.0	107.5	90.8	98.9	0.1
W62	Franklin Park	St. Pauls United Church of Christ	54.2	98.8	91.8	85.3	0.0	53.7	99.4	90.6	85.3	0.0
W63	Harwood Heights	Bethany Baptist Church	58.9	106.9	92.5	87.1	0.0	59.0	107.1	92.3	87.1	0.0
W64	Harwood Heights	Northside Arabic Church	60.7	108.9	93.9	86.7	0.0	60.6	108.8	93.8	86.7	0.0
W65	Itasca	Bethany United Methodist Church	59.6	102.9	97.8	84.0	0.0	59.7	102.9	97.8	84.0	0.0
W66	Itasca	Christian Fellowship Church	59.0	104.5	96.0	85.7	0.0	59.0	104.7	95.9	85.7	0.0
W67	Itasca	Hanmee Presbyterian Church	55.2	101.7	91.4	80.9	0.0	55.2	101.8	91.4	80.9	0.0
W68	Norridge	Acacia Park Evangelical Lutheran church	61.7	110.0	94.4	88.7	0.1	61.7	110.0	94.3	88.7	0.1
W69	Norridge	Church of Our Savior	63.1	111.3	96.0	89.8	0.2	63.1	111.3	96.0	89.8	0.2
W70	Norridge	Divine Savior	57.1	104.1	92.8	83.5	0.0	57.0	104.0	92.7	83.2	0.0
W71	Norridge	Zion Evangelical Lutheran Church	64.7	112.6	98.7	92.3	0.4	64.8	112.7	98.6	92.3	0.4
W72	Northlake	Bethel Fellowship Church	57.2	104.8	91.8	91.6	0.0	57.8	105.7	91.7	91.6	0.1
W73	Northlake	Iglesia Bautista Hispana Jeth	58.2	106.0	92.4	91.7	0.1	59.0	107.1	92.5	91.7	0.1
W74	Northlake	Parkview Baptist Church	58.0	105.7	92.6	92.3	0.1	58.8	106.8	92.7	92.3	0.1
W75	Northlake	St. John the Baptist Melkite Catholic Church	56.6	103.8	91.8	90.4	0.0	57.6	105.3	91.9	91.0	0.0
W76	Northlake	St. John Vianney Church	57.5	105.2	92.1	91.9	0.1	58.2	106.1	92.1	91.9	0.1
W77	Northlake	St. Peter's Syrian Orthodox Church	56.5	104.2	91.0	92.9	0.0	57.4	105.5	90.9	92.9	0.0
W78	Northlake	Trinity Presbyterian Church	63.8	111.8	97.6	97.6	0.9	64.8	113.0	98.0	97.6	1.1
W79	Park Ridge	Mary Seat of Wisdom Church	62.2	109.3	97.7	93.2	0.1	61.7	108.8	97.0	93.2	0.1
W80	Park Ridge	South Park Church	59.8	106.6	95.8	92.2	0.0	59.2	106.0	95.0	92.2	0.0
W81	Schiller Park	Grace Community Evangelical	60.8	106.0	98.0	90.1	0.0	60.0	105.4	97.1	90.1	0.0

TABLE F-59
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out Alternative D					Build Out Alternative G				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
W82	Schiller Park	International Christian Assembly of God	60.5	105.5	97.9	88.1	0.0	59.8	105.0	97.1	88.1	0.0
W83	Schiller Park	St. Beatrice Church	60.5	105.4	97.9	87.2	0.0	59.9	104.9	97.2	87.2	0.0
W84	Wood Dale	Calvary Evangelical Lutheran Church	61.1	105.8	98.6	86.9	0.0	61.1	105.8	98.6	86.9	0.0
W85	Wood Dale	Christian Congregation	55.6	101.3	92.4	85.3	0.0	55.6	101.4	92.4	85.3	0.0
W86	Wood Dale	First Baptist Church- Wood Dale	59.6	105.9	96.0	92.7	0.0	59.6	105.9	96.0	92.7	0.0
W87	Wood Dale	St. Peter's Latvian Lutheran Church	57.4	102.8	94.5	89.3	0.0	57.4	102.8	94.5	89.3	0.0

Source: www.smartpages.com

TABLE F-60
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PARKS)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
P1	Bensenville	Bretman Park	61.9	108.0	98.5	97.2	0.3	65.5	112.9	100.5	100.8	1.6
P2	Bensenville	DiOrio Park	59.3	106.2	95.1	94.9	0.1	62.0	109.3	97.2	93.3	0.2
P3	Bensenville	Kremples Park	57.3	103.6	93.8	91.5	0.0	56.2	102.5	92.6	91.7	0.0
P4	Bensenville	Lions Park	60.1	106.7	96.3	94.3	0.1	63.2	110.3	98.6	94.2	0.5
P5	Bensenville	Pines Park	56.4	103.2	92.2	91.9	0.0	58.3	105.4	93.8	91.4	0.1
P6	Bensenville	Poplar Park	63.7	109.5	100.6	93.3	0.2	68.1	113.8	105.0	94.7	0.7
P7	Bensenville	Rose Park	57.0	103.5	93.3	89.9	0.0	55.7	102.4	91.7	99.5	0.0
P8	Bensenville	Schuster Park	62.7	108.2	99.8	100.5	0.4	67.7	115.8	100.9	105.7	3.8
P9	Bensenville	Sunrise Park	59.4	105.1	96.3	95.4	0.1	59.9	106.2	96.4	94.7	0.0
P10	Bensenville	Sunset Park	60.7	107.4	96.6	95.3	0.3	63.7	111.0	98.9	95.1	0.4
P11	Bensenville	Varble Park/ Water Park & Golf Waters	58.6	105.1	94.8	93.8	0.1	61.5	108.7	96.9	90.4	0.1
P12	Bensenville	Veterans Park	62.0	108.0	98.7	95.5	0.4	66.0	112.8	101.8	96.1	0.5
P13	Bensenville	Woodcrest Park	56.2	102.0	93.0	88.3	0.0	59.8	106.2	96.2	89.7	0.0
P14	Bensenville	Woodside Park	56.8	103.2	93.2	90.7	0.0	59.5	106.4	95.3	92.4	0.0
P15	Chicago	Grandparents Park	61.2	106.3	98.6	90.9	0.0	63.3	105.3	101.8	94.2	0.1
P16	Chicago	Mulberry Point Park	59.3	105.5	95.8	88.2	0.0	64.5	109.1	102.1	84.6	0.0
P17	Chicago	Myrtle Point Park	55.9	101.5	92.9	85.1	0.0	60.2	106.5	96.6	84.8	0.0
P18	Chicago	Norwood Circle Park	58.5	104.5	95.1	86.9	0.0	63.7	109.2	100.8	85.1	0.0
P19	Chicago	Norwood Park	59.7	106.4	95.7	83.7	0.0	64.2	106.8	102.6	84.1	0.0
P20	Chicago	Oriole Park	60.5	106.7	97.0	89.5	0.0	64.1	104.2	102.9	85.2	0.0
P21	Chicago	Summerdale Park	58.8	104.4	95.8	85.8	0.0	60.5	102.8	98.9	85.2	0.0
P22	Des Plaines	Administrative & Leisure Center	67.9	115.6	102.4	95.7	2.4	56.8	102.9	93.5	105.8	0.1
P23	Des Plaines	Apache Park	56.5	103.7	91.7	92.6	0.0	53.6	100.5	89.4	100.3	0.0
P24	Des Plaines	Arndt Park	56.5	104.0	91.3	91.2	0.0	53.2	99.9	89.1	97.8	0.0
P25	Des Plaines	Lake Park	57.2	103.2	94.0	98.0	0.0	52.6	99.8	87.8	97.9	0.0
P26	Des Plaines	McKay Neils Park	57.5	105.3	91.6	93.1	0.0	53.0	99.8	88.7	100.1	0.0

TABLE F-60
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PARKS)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
P27	Des Plaines	Seminole Park	58.5	105.8	93.5	91.1	0.0	59.0	106.5	93.8	102.3	0.0
P28	Des Plaines	Winnebago Park	55.1	101.1	91.7	92.4	0.0	50.3	97.8	85.0	90.8	0.0
P29	DuPage County	Salt Creek Park	56.4	101.1	93.9	86.9	0.0	60.0	105.3	97.3	89.1	0.0
P30	Elk Grove Village	Andrews Park	58.3	103.7	95.5	89.7	0.0	56.0	103.5	90.9	84.4	0.0
P31	Elk Grove Village	Appleseed Park	56.9	102.8	93.7	87.1	0.0	55.9	102.9	91.4	88.6	0.0
P32	Elk Grove Village	Athletic Fields	58.3	104.5	94.8	87.2	0.0	59.6	105.5	96.4	86.7	0.0
P33	Elk Grove Village	Audubon Park	58.1	104.6	94.3	87.5	0.0	57.6	104.8	93.0	90.9	0.0
P34	Elk Grove Village	Bartrum Park	58.4	104.8	94.7	87.9	0.0	57.1	104.2	92.6	88.4	0.0
P35	Elk Grove Village	Burbank Park	58.6	105.1	94.7	87.3	0.0	58.9	105.5	95.1	90.9	0.0
P36	Elk Grove Village	Fairchild Park	59.5	106.4	95.3	88.2	0.1	59.5	106.3	95.4	86.8	0.0
P37	Elk Grove Village	Lions Park	56.9	103.1	93.4	86.3	0.0	56.2	102.9	92.3	85.4	0.0
P38	Elk Grove Village	Muir Park	60.4	107.3	96.0	89.8	0.1	59.7	105.9	96.3	90.3	0.1
P39	Elk Grove Village	Olmstead Park	58.1	104.7	94.1	86.8	0.0	59.6	107.2	94.1	87.3	0.0
P40	Elk Grove Village	Osborn Park	61.1	105.6	98.7	91.6	0.0	55.7	103.2	90.3	85.0	0.0
P41	Elk Grove Village	Sanders Park	58.9	105.1	95.5	88.1	0.0	57.0	104.3	92.1	85.5	0.0
P42	Elk Grove Village	Udall Park	64.0	108.0	101.9	93.9	0.1	56.2	103.7	90.9	90.4	0.0
P43	Franklin Park	Hawthorne Park	63.4	102.8	102.3	97.6	0.1	55.6	103.4	90.0	91.7	0.0
P44	Franklin Park	Iceland Park	59.0	105.3	95.3	95.7	0.1	59.0	106.8	93.3	94.2	0.0
P45	Franklin Park	James Park	63.9	108.9	101.3	97.2	0.1	57.6	105.9	90.3	96.4	0.0
P46	Franklin Park	Linden Park	64.9	105.1	103.7	95.8	0.2	56.9	104.3	91.7	94.1	0.0
P47	Franklin Park	North Park	61.4	106.0	99.0	94.1	0.2	58.8	106.3	93.5	96.6	0.1
P49	Franklin Park	Pine Park	57.4	102.1	95.0	94.3	0.0	57.4	105.4	91.0	90.0	0.0
P50	Franklin Park	Robinson and Crusoe Park	56.1	102.3	92.6	89.7	0.0	57.8	105.9	91.1	89.4	0.1
P51	Franklin Park	Ruby-Addison Park	59.1	104.5	96.3	92.6	0.1	58.3	106.0	92.6	93.9	0.1
P52	Harwood Heights	St. Rosalie's Kiddie Park	57.7	102.0	95.5	86.4	0.0	57.2	105.3	90.7	83.0	0.0
P53	Harwood Heights	Tot Park	57.2	101.6	94.9	86.9	0.0	56.7	104.8	90.2	82.3	0.0
P54	Itasca	Benson Park	55.3	101.3	92.0	85.9	0.0	56.2	102.5	92.7	86.8	0.0
P55	Itasca	Clayson Park	57.3	103.5	93.9	84.3	0.0	57.8	102.1	95.6	83.6	0.0
P56	Itasca	Country Club Park	58.0	104.1	94.6	86.0	0.0	59.0	103.2	96.8	84.8	0.0
P57	Itasca	Franzen Park	56.3	102.9	92.3	85.1	0.0	57.1	103.0	93.9	83.4	0.0

TABLE F-60
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PARKS)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
P58	Itasca	Peacoak Park	57.7	103.8	94.3	85.3	0.0	58.3	102.4	96.1	84.1	0.0
P59	Itasca	Schiller Park	61.8	107.5	98.7	85.5	0.0	64.2	106.2	102.7	87.3	0.1
P60	Itasca	Washington Park	60.1	106.0	96.9	85.7	0.0	62.4	106.2	100.4	86.9	0.0
P61	Norridge	Norridge Park	64.7	108.7	102.5	90.1	0.1	62.0	109.9	95.8	90.1	0.1
P62	Park Ridge	Brickton Park	59.7	104.9	96.9	90.7	0.0	65.3	112.2	101.1	91.2	0.2
P63	Park Ridge	Centennial Park	54.3	102.3	88.0	84.6	0.0	57.2	105.1	91.4	94.1	0.0
P64	Park Ridge	Jaycee Park	57.7	103.0	94.9	87.2	0.0	62.7	109.5	98.5	91.6	0.0
P65	Park Ridge	Southwest Park	59.6	104.8	97.0	90.7	0.0	64.2	111.7	99.0	93.0	0.2
P66	Schiller Park	Fairview Park	65.4	110.7	102.6	97.4	0.6	66.9	111.0	104.8	103.4	0.8
P67	Schiller Park	Kennedy Park/Memorial Pool	60.9	107.8	96.6	97.9	0.5	62.6	110.4	96.8	97.0	0.4
P68	Schiller Park	North Village Park	66.3	110.4	104.2	95.3	0.2	70.0	117.6	104.5	97.7	5.7
P69	Schiller Park	Stalica Park	57.6	104.2	93.6	91.3	0.1	60.9	108.5	95.5	91.9	0.1
P70	Schiller Park	Wm. M. Dooley Memorial Park	63.9	108.8	101.3	100.3	0.1	66.8	112.8	103.5	94.7	0.2
P71	Wood Dale	Brookwood Park	55.2	100.1	92.7	85.3	0.0	56.6	102.5	93.4	86.0	0.0
P72	Wood Dale	Central Park	65.4	111.0	102.4	92.6	0.5	68.8	110.3	107.3	93.7	0.7
P73	Wood Dale	Community Park	61.3	106.1	98.8	90.8	0.1	62.9	106.3	101.1	91.8	0.1
P74	Wood Dale	Lionwood Park	59.2	104.7	96.4	87.2	0.0	62.6	108.5	99.4	88.1	0.1
P75	Wood Dale	Veteran's Memorial Park	60.9	106.5	98.0	88.2	0.0	63.9	109.5	101.0	89.6	0.1
P76	Wood Dale	White Oak Park	57.0	102.2	94.3	87.4	0.0	61.6	107.2	98.6	87.1	0.1
P77	Wood Dale	Wood Dale Water Park	61.8	107.4	98.8	88.3	0.1	65.0	110.1	102.4	90.4	0.2
PP1	Elk Grove Village	LGK Pocket Park (under construction)	68.4	114.2	105.3	104.9	1.6	70	118.8	100.1	106.1	7.1
PP2	Elk Grove Village	Pocket Park #2 (under construction)	67.4	114.9	102.3	98	2.4	63.9	112	97.3	96.3	0.5
PP3	Elk Grove Village	Pocket Park #3 (under construction)	66.6	113.9	101.6	96.7	1.8	61.9	109.9	95.7	93.4	0.4
PP4	Elk Grove Village	Pocket Park #4 (under construction)	66.2	113.3	101.8	96.3	0.9	62.3	110.6	95.3	94.4	0.4

TABLE F-60
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PARKS)

			Build Out Alternative A (No Action Alternative)					Build Out Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
PP5	Elk Grove Village	Pocket Park #5 (under construction)	66.2	113.3	101.8	96.3	0.9	62.3	110.6	95.3	94.4	0.4
PP6	Elk Grove Village	Pocket Park #6 (future)	66.2	113.3	101.8	96.3	0.9	62.3	110.6	95.3	94.4	0.4
PP7	Elk Grove Village	Pocket Park #7 (under construction)	66.2	113.3	101.8	96.3	0.9	62.3	110.6	95.3	94.4	0.4
PP8	Elk Grove Village	Pocket Park #8 (future)	65.2	112.7	100	95.8	1	60.8	108.3	95.5	91.8	0.1
PP9	Elk Grove Village	Pocket Park #9 (existing)	64.9	112.1	100.1	95	0.5	61.4	109.4	95	92.3	0.2
PP10	Elk Grove Village	Pocket Park #10 (future)	64.9	112.1	100.1	95	0.5	61.4	109.4	95	92.3	0.2
PP11	Elk Grove Village	Pocket Park #11 (future)	64.4	111.3	100.1	93.2	0.3	64.1	112.7	95.9	94	0.8
PP12	Elk Grove Village	Pocket Park #12 (existing)	64.4	111.3	100.1	93.2	0.3	64.1	112.7	95.9	94	0.8
PP13	Elk Grove Village	Pocket Park #13 (future)	61.5	108.8	96.7	91.1	0.1	59.7	106.4	95.8	92.7	0.1
PP14	Elk Grove Village	Pocket Park #14 (future)	61.1	108.3	96.4	89.7	0.1	62.1	110.3	95.1	90.6	0.2
PP15	Elk Grove Village	Pocket Park #15 (existing)	64.1	108.2	101.9	94.1	0.1	56.4	104	911	90.8	0
PP16	Elk Grove Village	Pocket Park #16 (future)	67.1	110.4	105.2	94.1	0.6	56.1	103.5	91.2	90.8	0
PP17	Elk Grove Village	Pocket Park #17 (future)	68.3	111.8	106.4	97.4	0.8	56.9	104.4	91.8	90.4	0.1
PP18	Elk Grove Village	Pocket Park #18 (existing)	68.3	111.8	106.4	97.4	0.8	56.9	104.4	91.8	90.4	0.1
PP19	Elk Grove Village	Pocket Park #19 (future)	68.3	111.8	106.4	97.4	0.8	56.9	104.4	91.8	90.4	0.1
PP20	Elk Grove Village	Pocket Park #20 (future)	63.9	107.3	102	92	0.1	54.7	102.1	89.7	88.2	0

Note: P48 was omitted from Park numbering.
Source: DuPage County Park District, Cook County Park District, Community Park Districts.

TABLE F-61
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (PARKS)

			Build Out Alternative D					Build Out Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
P1	Bensenville	Bretman Park	62.9	107.3	100.6	96.0	0.0	63.0	107.6	100.6	96.0	0.0
P2	Bensenville	DiOrio Park	60.1	105.4	97.3	91.2	0.0	60.1	105.5	97.2	91.2	0.0
P3	Bensenville	Kremples Park	55.1	99.8	92.6	91.7	0.0	55.4	100.5	92.7	91.7	0.0
P4	Bensenville	Lions Park	61.3	106.3	98.7	91.9	0.0	61.4	106.6	98.6	91.9	0.0
P5	Bensenville	Pines Park	56.6	101.9	93.8	91.4	0.0	56.7	102.1	93.8	91.4	0.0
P6	Bensenville	Poplar Park	68.3	113.8	105.3	94.7	0.7	68.2	113.9	105.2	94.7	0.7
P7	Bensenville	Rose Park	54.4	99.5	91.8	99.5	0.0	54.7	100.1	91.8	99.5	0.0
P8	Bensenville	Schuster Park	63.2	107.6	100.9	92.2	0.0	63.3	108.0	100.8	92.2	0.0
P9	Bensenville	Sunrise Park	58.6	102.9	96.4	94.7	0.0	58.8	103.4	96.4	94.7	0.0
P10	Bensenville	Sunset Park	62.4	108.6	98.9	89.8	0.0	62.4	108.7	98.9	89.8	0.0
P11	Bensenville	Varble Park/ Water Park & Golf Waters	60.8	107.4	96.9	88.5	0.1	60.8	107.5	96.8	88.5	0.1
P12	Bensenville	Veterans Park	65.6	112.1	101.8	96.1	0.4	65.6	112.2	101.8	96.1	0.4
P13	Bensenville	Woodcrest Park	59.5	105.6	96.2	89.7	0.0	59.5	105.6	96.2	89.7	0.0
P14	Bensenville	Woodside Park	59.1	105.6	95.3	92.4	0.0	59.1	105.7	95.3	92.4	0.0
P15	Chicago	Grandparents Park	63.5	105.6	102.0	94.2	0.1	63.4	105.2	102.0	94.2	0.1
P16	Chicago	Mulberry Point Park	64.6	109.0	102.3	84.5	0.0	64.5	108.8	102.2	84.5	0.0
P17	Chicago	Myrtle Point Park	60.5	106.8	96.9	84.8	0.0	60.2	106.4	96.7	84.7	0.0
P18	Chicago	Norwood Circle Park	63.9	109.3	101.0	85.1	0.0	63.7	109.0	100.9	85.1	0.0
P19	Chicago	Norwood Park	64.3	106.7	102.8	84.1	0.0	64.3	106.6	102.7	83.5	0.0
P20	Chicago	Oriole Park	64.3	104.4	103.1	85.2	0.0	64.2	104.1	103.0	85.2	0.0
P21	Chicago	Summerdale Park	60.7	102.6	99.2	85.2	0.0	60.7	103.1	99.1	85.2	0.0
P22	Des Plaines	Administrative & Leisure Center	58.1	104.0	94.8	105.8	0.1	56.9	103.1	93.5	103.2	0.1
P23	Des Plaines	Apache Park	56.0	101.3	93.2	100.3	0.0	52.8	99.1	89.2	100.3	0.0
P24	Des Plaines	Arndt Park	55.4	101.4	92.2	97.8	0.0	52.3	98.6	88.7	97.8	0.0
P25	Des Plaines	Lake Park	54.4	100.3	91.1	97.9	0.0	51.9	98.7	87.8	97.9	0.0
P26	Des Plaines	McKay Neils Park	54.9	102.0	90.5	100.1	0.0	52.2	98.8	88.3	100.1	0.0
P27	Des Plaines	Seminole Park	60.1	107.0	95.7	102.3	0.0	58.8	106.1	93.8	102.3	0.0

TABLE F-61
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (PARKS)

			Build Out Alternative D					Build Out Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
P28	Des Plaines	Winnebago Park	52.6	99.9	87.9	90.8	0.0	50.0	97.0	85.6	90.8	0.0
P29	DuPage County	Salt Creek Park	59.8	104.7	97.3	89.1	0.0	59.8	104.7	97.3	89.1	0.0
P30	Elk Grove Village	Andrews Park	56.0	103.5	91.0	84.4	0.0	56.0	103.5	90.9	84.4	0.0
P31	Elk Grove Village	Appleseed Park	55.9	102.9	91.5	88.6	0.0	55.8	102.9	91.3	88.6	0.0
P32	Elk Grove Village	Athletic Fields	59.8	105.2	96.9	86.7	0.0	59.7	105.3	96.7	86.7	0.0
P33	Elk Grove Village	Audubon Park	58.1	104.8	94.1	90.9	0.0	57.6	104.8	93.0	90.9	0.0
P34	Elk Grove Village	Bartrum Park	57.3	104.1	93.1	88.4	0.0	57.0	104.1	92.5	88.4	0.0
P35	Elk Grove Village	Burbank Park	59.3	105.3	96.0	90.9	0.0	58.9	105.3	95.3	90.9	0.0
P36	Elk Grove Village	Fairchild Park	59.9	106.2	96.4	86.8	0.0	59.5	106.1	95.5	86.8	0.0
P37	Elk Grove Village	Lions Park	56.6	102.8	93.1	85.4	0.0	56.2	102.8	92.3	85.4	0.0
P38	Elk Grove Village	Muir Park	59.7	105.7	96.5	90.3	0.1	59.6	105.7	96.3	90.3	0.1
P39	Elk Grove Village	Olmstead Park	60.6	107.3	96.7	87.3	0.0	59.7	107.3	94.4	87.3	0.0
P40	Elk Grove Village	Osborn Park	55.7	103.2	90.4	85.0	0.0	55.6	103.1	90.4	85.0	0.0
P41	Elk Grove Village	Sanders Park	57.1	104.3	92.4	85.5	0.0	56.9	104.3	92.1	85.5	0.0
P42	Elk Grove Village	Udall Park	56.2	103.7	91.1	90.4	0.0	56.2	103.7	91.0	90.4	0.0
P43	Franklin Park	Hawthorne Park	54.4	100.1	91.4	88.2	0.0	54.9	101.9	90.5	88.2	0.0
P44	Franklin Park	Iceland Park	56.2	100.9	93.7	87.0	0.0	55.7	101.1	92.8	87.0	0.0
P45	Franklin Park	James Park	58.1	106.5	90.7	96.4	0.0	60.8	109.6	91.2	99.0	0.1
P46	Franklin Park	Linden Park	56.1	102.5	92.5	89.3	0.0	57.6	105.2	92.3	92.9	0.0
P47	Franklin Park	North Park	57.1	102.6	94.1	91.1	0.0	57.1	103.4	93.4	91.1	0.0
P49	Franklin Park	Pine Park	53.9	98.3	91.6	81.8	0.0	53.1	98.5	90.3	81.8	0.0
P50	Franklin Park	Robinson and Crusoe Park	54.8	99.2	92.5	83.0	0.0	53.6	98.7	90.9	83.0	0.0
P51	Franklin Park	Ruby-Addison Park	55.8	100.6	93.3	87.8	0.0	55.3	101.0	92.3	87.8	0.0
P52	Harwood Heights	St. Rosalie's Kiddie Park	57.1	105.3	90.1	83.0	0.0	56.9	105.2	89.8	83.0	0.0
P53	Harwood Heights	Tot Park	56.6	104.8	89.6	82.3	0.0	56.4	104.6	89.3	82.3	0.0
P54	Itasca	Benson Park	56.0	101.8	92.9	86.8	0.0	56.1	101.9	92.9	86.8	0.0
P55	Itasca	Clayson Park	57.9	102.2	95.7	83.6	0.0	57.9	102.2	95.7	83.6	0.0
P56	Itasca	Country Club Park	59.2	103.3	97.0	84.8	0.0	59.2	103.3	97.0	84.8	0.0
P57	Itasca	Franzen Park	57.4	103.1	94.4	83.3	0.0	57.4	103.2	94.3	83.3	0.0
P58	Itasca	Peacoak Park	58.4	102.5	96.2	84.1	0.0	58.4	102.5	96.2	84.1	0.0
P59	Itasca	Schiller Park	64.2	106.3	102.6	87.3	0.1	64.2	106.4	102.7	87.3	0.1

TABLE F-61
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (PARKS)

			Build Out Alternative D					Build Out Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
P60	Itasca	Washington Park	62.4	106.2	100.4	86.9	0.0	62.5	106.3	100.4	86.9	0.0
P61	Norridge	Norridge Park	62.0	110.2	95.0	90.1	0.1	62.0	110.3	94.9	90.1	0.1
P62	Park Ridge	Brickton Park	65.6	112.4	101.5	91.2	0.2	65.3	112.1	101.2	91.2	0.2
P63	Park Ridge	Centennial Park	58.3	105.6	93.5	94.1	0.0	57.4	105.1	91.9	94.1	0.0
P64	Park Ridge	Jaycee Park	63.0	109.7	99.0	91.6	0.0	62.7	109.4	98.7	91.6	0.0
P65	Park Ridge	Southwest Park	64.8	112.1	100.0	93.0	0.2	64.3	111.7	99.4	93.0	0.2
P66	Schiller Park	Fairview Park	67.4	112.2	104.9	103.4	1.1	67.1	111.0	104.9	103.4	0.8
P67	Schiller Park	Kennedy Park/Memorial Pool	59.5	104.4	97.0	92.2	0.0	59.1	104.4	96.3	92.2	0.0
P68	Schiller Park	North Village Park	70.2	118.0	104.6	97.7	6.5	70.0	117.9	104.1	97.7	6.4
P69	Schiller Park	Stalica Park	59.7	105.0	96.9	89.3	0.1	58.7	104.2	95.8	89.3	0.0
P70	Schiller Park	Wm. M. Dooley Memorial Park	66.7	111.6	104.2	92.6	0.2	66.3	111.3	103.7	92.6	0.2
P71	Wood Dale	Brookwood Park	56.5	102.1	93.4	86.0	0.0	56.5	102.2	93.4	86.0	0.0
P72	Wood Dale	Central Park	68.7	110.3	107.2	93.7	0.7	68.7	110.3	107.3	93.7	0.7
P73	Wood Dale	Community Park	63.1	106.4	101.2	91.8	0.1	63.0	106.4	101.2	91.8	0.1
P74	Wood Dale	Lionwood Park	62.8	108.4	99.8	88.1	0.1	62.8	108.5	99.7	88.1	0.1
P75	Wood Dale	Veteran's Memorial Park	64.1	109.5	101.3	89.6	0.1	64.2	109.6	101.2	89.6	0.1
P76	Wood Dale	White Oak Park	61.3	106.5	98.6	87.1	0.0	61.3	106.5	98.6	87.1	0.0
P77	Wood Dale	Wood Dale Water Park	65.2	110.1	102.6	90.4	0.2	65.2	110.2	102.6	90.4	0.2
PP1	Elk Grove Village	LGK Pocket Park (under construction)	71.7	119	106.8	106.1	7.7	70.3	118.9	101.4	104.2	7.5
PP2	Elk Grove Village	Pocket Park #2 (under construction)	63.7	111.7	97.5	96.3	0.5	63.7	111.7	97.3	96.3	0.5
PP3	Elk Grove Village	Pocket Park #3 (under construction)	61.8	109.7	95.9	93.4	0.4	61.7	109.7	95.6	93.4	0.5
PP4	Elk Grove Village	Pocket Park #4 (under construction)	62.6	110.5	96.6	94.4	0.4	62.3	110.5	95.3	94.4	0.4
PP5	Elk Grove Village	Pocket Park #5 (under construction)	62.6	110.5	96.6	94.4	0.4	62.3	110.5	95.3	94.4	0.4
PP6	Elk Grove Village	Pocket Park #6 (future)	62.6	110.5	96.6	94.4	0.4	62.3	110.5	95.3	94.4	0.4

TABLE F-61
SUPPLEMENTAL METRICS FOR BUILD OUT ALTERNATIVES D AND G AT EACH FACILITY (PARKS)

			Build Out Alternative D					Build Out Alternative G				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
PP7	Elk Grove Village	Pocket Park #7 (under construction)	62.6	110.5	96.6	94.4	0.4	62.3	110.5	95.3	94.4	0.4
PP8	Elk Grove Village	Pocket Park #8 (future)	60.7	108.1	95.6	91.8	0.1	60.5	108.1	95.3	91.8	0.1
PP9	Elk Grove Village	Pocket Park #9 (existing)	61.7	109.3	96.4	92.3	0.2	61.3	109.3	95	92.3	0.2
PP10	Elk Grove Village	Pocket Park #10 (future)	61.7	109.3	96.4	92.3	0.2	61.3	109.3	95	92.3	0.2
PP11	Elk Grove Village	Pocket Park #11 (future)	65.4	112.8	100.4	94	0.8	64.3	112.7	96.5	93.6	0.8
PP12	Elk Grove Village	Pocket Park #12 (existing)	65.4	112.8	100.4	94	0.8	64.3	112.7	96.5	93.6	0.8
PP13	Elk Grove Village	Pocket Park #13 (future)	59.7	106.2	96	92.7	0.1	59.6	106.2	95.7	92.7	0.1
PP14	Elk Grove Village	Pocket Park #14 (future)	63.3	110.4	98.8	90.6	0.3	62.2	110.4	95.5	90.6	0.2
PP15	Elk Grove Village	Pocket Park #15 (existing)	56.4	103.9	91.2	90.8	0	56.4	103.9	91.1	90.8	0
PP16	Elk Grove Village	Pocket Park #16 (future)	56.2	103.5	91.4	90.8	0	56.1	103.4	91.3	90.8	0
PP17	Elk Grove Village	Pocket Park #17 (future)	57	104.4	92.1	90.4	0.1	56.9	104.3	91.9	90.4	0.1
PP18	Elk Grove Village	Pocket Park #18 (existing)	57	104.4	92.1	90.4	0.1	56.9	104.3	91.9	90.4	0.1
PP19	Elk Grove Village	Pocket Park #19 (future)	57	104.4	92.1	90.4	0.1	56.9	104.3	91.9	90.4	0.1
PP20	Elk Grove Village	Pocket Park #20 (future)	54.7	102.1	89.9	88.2	0	54.7	102	89.8	88.2	0

Note: P48 was omitted from Park numbering.
Source: DuPage County Park District, Cook County Park District, Community Park Districts.

TABLE F-62
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
Universities and Colleges												
U1	Bensenville	Robert Morris College	63.6	110.4	99.6	96.6	0.3	63.6	109.1	100.8	94.9	0.2
U2	Des Plaines	De Paul University	59.2	104.8	96.2	94.4	0.0	60.0	107.5	94.7	95.4	0.1
U3	Elmhurst	Mac Cormac College Inc	52.7	99.0	89.2	85.0	0.0	53.2	96.6	91.3	85.8	0.0
U4	Schiller Park	Westwood College of Technology	70.1	114.6	107.8	97.2	0.5	72.0	119.3	107.1	100.5	9.8
Libraries												
L1	Bensenville	Bensenville Community Library	61.8	107.8	98.5	97.4	0.3	66.1	112.5	102.5	92.4	0.3
L2	Harwood Heights	Eisenhower Library	62.3	106.2	100.2	77.1	0.0	61.8	109.1	96.9	87.3	0.0
L3	Itasca	Itasca Community Library	60.3	105.6	97.4	77.7	0.0	61.7	104.4	100.0	84.9	0.0
L4	Northlake	Northlake Public Library	60.5	105.4	98.0	79.7	0.0	57.2	105.1	91.2	91.8	0.0
L5	Schiller Park	Schiller Park Public Library	60.8	104.6	98.8	84.3	0.0	62.7	110.0	97.7	92.8	0.1
L6	Wood Dale	Wood Dale Public Library	64.1	109.1	101.5	93.1	0.0	65.8	107.6	104.4	89.2	0.3
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools												
S1	**Bensenville**	**Blackhawk Middle School**	**59.0**	**105.9**	**94.6**	**93.8**	**0.1**	**61.5**	**108.8**	**96.6**	**92.8**	**0.1**
S2	**Bensenville**	**Chippewa Elementary School**	**58.6**	**105.1**	**95.0**	**95.7**	**0.1**	**60.4**	**106.8**	**96.8**	**91.5**	**0.0**
S3	**Bensenville**	**Fenton High School**	**60.1**	**106.0**	**96.9**	**93.6**	**0.1**	**64.5**	**111.8**	**99.5**	**90.5**	**0.4**
S4	**Bensenville**	**Mohawk Elementary School**	**63.9**	**109.3**	**101.1**	**95.7**	**0.2**	**69.5**	**116.0**	**105.6**	**97.5**	**3.0**
S5	**Bensenville**	**St Charles Borromeo**	**57.4**	**104.3**	**93.2**	**91.6**	**0.0**	**55.3**	**102.1**	**91.2**	**90.0**	**0.0**
S6	**Bensenville**	**Tioga Elementary School**	**58.6**	**105.2**	**94.7**	**94.4**	**0.1**	**60.9**	**107.7**	**96.7**	**91.1**	**0.0**
S7	**Bensenville**	**Tioga School Special Education**	**58.6**	**105.2**	**94.7**	**94.4**	**0.1**	**60.9**	**107.7**	**96.7**	**91.1**	**0.0**
S8	**Bensenville**	**W A Johnson Elementary School**	**57.9**	**104.5**	**94.0**	**93.6**	**0.1**	**60.5**	**107.6**	**95.9**	**91.1**	**0.1**
S9	Chicago	Brickton Montessori School	62.5	107.7	99.7	92.2	0.1	64.3	106.4	102.7	94.7	0.2

TABLE F-62
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S10	**Chicago**	**Dirksen Elementary School**	**63.3**	**108.2**	**100.8**	**91.0**	**0.1**	**61.3**	**105.7**	**98.9**	**94.8**	**0.1**
S11	**Chicago**	**Edison Elementary Regional Gifted Center**	**51.8**	**98.6**	**87.7**	**84.5**	**0.0**	**60.0**	**108.1**	**93.2**	**87.6**	**0.0**
S12	**Chicago**	**Garvy Elementary School**	**55.3**	**100.8**	**92.3**	**85.4**	**0.0**	**59.2**	**105.7**	**95.3**	**89.0**	**0.0**
S13	**Chicago**	**Immaculate Conception School**	**60.5**	**106.8**	**96.9**	**87.6**	**0.0**	**65.5**	**108.9**	**103.6**	**85.6**	**0.0**
S14	**Chicago**	**Norwood Park Elementary School**	**58.3**	**104.4**	**95.0**	**87.7**	**0.0**	**63.5**	**108.9**	**100.6**	**85.1**	**0.0**
S15	**Chicago**	**Oriole Park Elementary School**	**59.2**	**105.0**	**96.1**	**88.1**	**0.0**	**61.6**	**103.2**	**100.2**	**84.6**	**0.0**
S16	Chicago	Our Savior Lutheran	56.8	102.6	93.7	86.9	0.0	61.5	107.5	98.3	85.0	0.0
S17	**Chicago**	**Resurrection High School**	**57.1**	**102.8**	**94.1**	**86.2**	**0.0**	**62.2**	**108.4**	**98.7**	**90.1**	**0.0**
S18	**Chicago**	**Socrates School**	**63.2**	**109.5**	**99.6**	**88.1**	**0.1**	**67.1**	**106.8**	**105.9**	**87.7**	**0.2**
S19	**Chicago**	**St Eugene**	**61.4**	**106.0**	**99.1**	**91.0**	**0.0**	**59.5**	**104.0**	**97.1**	**91.0**	**0.0**
S20	**Chicago**	**St Paul Lutheran**	**62.8**	**109.2**	**99.2**	**87.6**	**0.1**	**66.7**	**106.5**	**105.6**	**87.2**	**0.1**
S21	**Chicago**	**Taft High School**	**59.7**	**106.5**	**95.6**	**83.6**	**0.0**	**64.0**	**106.1**	**102.5**	**83.8**	**0.0**
S22	**Des Plaines**	**Algonquin Middle School**	**55.7**	**102.6**	**91.5**	**93.7**	**0.0**	**51.0**	**98.7**	**85.5**	**91.9**	**0.0**
S23	Des Plaines	Angel Town Private School	62.6	110.9	95.5	95.7	0.2	56.8	102.9	93.3	99.5	0.0
S24	**Des Plaines**	**Devonshire School**	**58.7**	**105.8**	**94.2**	**94.4**	**0.1**	**57.3**	**105.6**	**90.1**	**92.1**	**0.0**
S25	Des Plaines	Forest Elementary School	56.3	102.9	92.5	94.3	0.0	50.8	98.4	85.4	92.9	0.0
S26	**Des Plaines**	**Friendship Junior High School**	**59.6**	**106.7**	**95.1**	**94.3**	**0.3**	**58.3**	**106.6**	**91.2**	**93.0**	**0.0**
S27	Des Plaines	Iroquois Community School	65.1	113.1	98.7	96.3	0.4	57.1	103.1	93.7	104.6	0.1
S28	**Des Plaines**	**Maine West High School**	**58.4**	**104.6**	**94.9**	**96.5**	**0.1**	**50.5**	**98.0**	**85.2**	**96.3**	**0.0**
S29	**Des Plaines**	**Orchard Place Elementary School**	**61.7**	**110.5**	**91.9**	**92.5**	**0.9**	**67.9**	**116.2**	**100.6**	**102.7**	**3.5**
S30	**Des Plaines**	**Our Lady Of Destiny Elementary South**	**55.9**	**101.7**	**92.8**	**97.0**	**0.0**	**51.9**	**99.1**	**87.1**	**104.0**	**0.0**

TABLE F-62
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S31	**Des Plaines**	**Plainfield Elementary School**	**57.3**	**103.5**	**93.9**	**92.4**	**0.1**	**50.4**	**97.7**	**85.4**	**97.0**	**0.0**
S32	Des Plaines	South Elementary School	55.4	102.1	91.5	94.4	0.0	52.1	99.1	87.8	95.4	0.0
S33	**Des Plaines**	**St Zachary School**	**58.8**	**105.9**	**94.2**	**93.9**	**0.2**	**58.0**	**106.3**	**91.0**	**92.6**	**0.0**
S34	**Elk Grove Village**	**Clearmont Elementary School**	**59.3**	**106.2**	**95.1**	**88.1**	**0.1**	**59.9**	**107.2**	**95.1**	**87.8**	**0.0**
S35	**Elk Grove Village**	**Elk Grove High School**	**58.5**	**105.2**	**94.5**	**87.8**	**0.0**	**59.1**	**106.6**	**93.8**	**90.5**	**0.0**
S36	**Elk Grove Village**	**Grove Junior High School**	**57.9**	**104.5**	**94.1**	**87.3**	**0.0**	**57.8**	**105.1**	**93.1**	**89.6**	**0.0**
S37	**Elk Grove Village**	**Lutheran School Of The Holy Spirit**	**56.6**	**102.6**	**93.2**	**86.3**	**0.0**	**55.6**	**102.1**	**91.7**	**86.1**	**0.0**
S38	**Elk Grove Village**	**Queen Of The Rosary School**	**59.6**	**106.3**	**95.6**	**88.4**	**0.0**	**58.5**	**106.0**	**93.3**	**86.9**	**0.0**
S39	**Elk Grove Village**	**Ridge Family Center For Learning**	**57.5**	**103.9**	**93.9**	**87.1**	**0.0**	**56.7**	**103.6**	**92.3**	**90.6**	**0.0**
S40	**Elk Grove Village**	**Rupley Elementary School**	**58.5**	**103.7**	**95.7**	**90.5**	**0.0**	**56.0**	**103.5**	**90.8**	**84.6**	**0.0**
S41	**Elmhurst**	**Churchville Junior High School**	**58.1**	**105.6**	**92.9**	**91.3**	**0.0**	**55.1**	**101.6**	**91.3**	**88.8**	**0.0**
S42	**Elmhurst**	**Conrad Fischer Elementary School**	**60.8**	**108.6**	**94.9**	**91.6**	**0.0**	**56.3**	**103.0**	**92.4**	**90.4**	**0.0**
S43	Franklin Park	East Leyden High School	57.9	102.9	95.2	93.3	0.0	57.7	105.7	91.6	91.1	0.0
S44	**Franklin Park**	**Enger Elementary School**	**62.2**	**107.4**	**99.4**	**95.3**	**0.1**	**56.2**	**104.6**	**88.8**	**93.7**	**0.0**
S45	**Franklin Park**	**North Elementary School**	**57.5**	**101.7**	**95.3**	**94.2**	**0.0**	**57.2**	**105.2**	**90.7**	**89.4**	**0.0**
S46	Harwood Heights	Maple Park Academy	58.4	102.7	96.2	85.6	0.0	57.8	105.9	91.2	84.0	0.0
S47	**Harwood Heights**	**Union Ridge Elementary School**	**61.8**	**105.9**	**99.6**	**84.4**	**0.0**	**59.8**	**108.0**	**93.0**	**87.3**	**0.0**
S48	**Itasca**	**Elmer H. Franzen Elementary School**	**56.5**	**102.9**	**92.9**	**85.0**	**0.0**	**56.9**	**101.9**	**94.4**	**83.1**	**0.0**
S49	**Itasca**	**F.E. Peacock Junior High School**	**58.1**	**104.1**	**94.8**	**85.4**	**0.0**	**58.6**	**102.4**	**96.6**	**84.2**	**0.0**

TABLE F-62
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S50	**Itasca**	**Lutheran School Of St Luke**	**58.9**	**104.9**	**95.6**	**85.0**	**0.0**	**61.4**	**106.8**	**98.6**	**87.8**	**0.0**
S51	Itasca	New Morning Children's House	58.5	104.6	95.2	85.3	0.0	59.4	102.6	97.5	83.9	0.0
S52	**Itasca**	**St Peter The Apostle School**	**58.2**	**104.2**	**94.9**	**85.7**	**0.0**	**58.8**	**102.6**	**96.8**	**84.4**	**0.0**
S53	**Itasca**	**Washington Elementary School**	**59.6**	**105.5**	**96.3**	**85.4**	**0.0**	**62.0**	**106.6**	**99.6**	**87.4**	**0.0**
S54	**Norridge**	**Divine Savior School**	**57.3**	**102.8**	**94.5**	**86.2**	**0.0**	**58.1**	**105.3**	**93.4**	**83.4**	**0.0**
S55	**Norridge**	**J Giles Elementary School**	**55.7**	**101.6**	**92.5**	**88.5**	**0.0**	**56.3**	**103.5**	**91.7**	**82.3**	**0.0**
S56	Norridge	Jolly Fun House (JFH) Educational Academy, Inc	54.8	100.9	0.0	88.5	0.0	54.3	100.5	90.8	84.4	0.0
S57	**Norridge**	**J Leigh Elementary School**	**64.2**	**108.1**	**102.1**	**90.1**	**0.1**	**63.6**	**111.5**	**97.6**	**89.4**	**0.2**
S58	**Norridge**	**Pennoyer Elementary School**	**61.6**	**106.3**	**99.1**	**90.5**	**0.0**	**60.7**	**104.8**	**98.6**	**92.3**	**0.0**
S59	Norridge	Ridgewood Community High School	57.9	102.7	95.3	85.6	0.0	58.3	105.9	93.0	83.8	0.0
S60	**Northlake**	**Parkview Baptist Academy**	**61.2**	**105.4**	**99.0**	**88.3**	**0.0**	**57.8**	**105.3**	**92.6**	**92.6**	**0.1**
S61	**Northlake**	**Roy Elementary School**	**63.3**	**107.9**	**101.0**	**93.6**	**0.1**	**57.9**	**105.5**	**92.5**	**94.0**	**0.0**
S62	**Northlake**	**St John Vianney School**	**60.8**	**104.9**	**98.6**	**87.9**	**0.0**	**57.4**	**104.9**	**92.3**	**92.2**	**0.0**
S63	**Northlake**	**West Leyden High School**	**66.2**	**110.6**	**103.9**	**95.9**	**0.2**	**61.6**	**109.1**	**96.3**	**96.2**	**0.4**
S64	**Northlake**	**Westdale Elementary School**	**64.3**	**109.6**	**101.5**	**94.5**	**0.1**	**58.4**	**106.5**	**92.0**	**95.6**	**0.0**
S65	Park Ridge	Alternative Resource Center	57.9	104.0	94.5	92.1	0.0	59.6	107.0	94.5	96.1	0.1
S66	Park Ridge	George Washington Elementary School	54.7	102.3	89.3	87.2	0.0	61.6	109.8	94.6	94.2	0.1
S67	**Park Ridge**	**Maine South High School**	**55.9**	**102.8**	**91.7**	**88.6**	**0.0**	**62.3**	**110.5**	**95.3**	**95.8**	**0.1**
S68	**Park Ridge**	**Mary Seat Of Wisdom**	**57.0**	**102.4**	**94.2**	**88.9**	**0.0**	**59.9**	**107.0**	**95.4**	**93.1**	**0.1**
S69	**Rosemont**	**Rosemont Elementary School**	**64.5**	**109.5**	**102.0**	**98.4**	**0.6**	**67.4**	**115.7**	**100.0**	**97.5**	**1.2**

TABLE F-62
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S70	Schiller Park	John F Kennedy Elementary School	61.6	108.4	97.4	97.8	0.6	61.4	109.0	95.9	97.2	0.2
S71	Schiller Park	Lincoln Middle School	59.3	106.1	95.2	96.1	0.2	62.3	110.3	96.2	96.2	0.2
S72	Schiller Park	St Beatrice School	59.2	105.5	95.6	93.7	0.1	63.3	111.2	97.1	96.4	0.4
S73	Schiller Park	St Maria Goretti School	61.1	107.1	97.9	97.7	0.3	59.9	107.4	94.6	96.6	0.1
S74	Schiller Park	Washington Elementary School	69.1	112.7	107.1	96.5	0.7	69.2	116.3	104.8	99.4	1.3
S75	Wood Dale	Early Childhood Education Center	63.7	109.2	100.8	90.1	0.2	65.8	107.0	104.4	90.1	0.3
S76	Wood Dale	Holy Ghost School	58.5	103.9	95.6	87.5	0.0	62.4	107.8	99.5	87.5	0.1
S77	Wood Dale	Oakbrook Elementary School	56.6	101.6	94.0	87.3	0.0	60.9	106.3	98.1	87.5	0.0
S78	Wood Dale	Westview Elementary School	57.1	102.2	94.5	86.5	0.0	59.2	104.8	96.1	85.8	0.0
S79	Wood Dale	Wood Dale Junior High School	63.0	108.3	100.2	90.8	0.1	64.8	106.8	103.3	88.4	0.2

Note: **Bold** indicates schools that have been sound insulated or funded for sound insulation through the 2004 School Sound Insulation Program (SSIP).

Sources: SSIP: City of Chicago Department of Aviation Noise Office, SSIP Information, June 2005.
Learning institutions:
1. 2002 Non-public School Database, Illinois State Board of Education
2. 2001 Public School Database, Illinois State Board of Education
3. Searches on www.smartpages.com for "university," "college," "library," "preschool," "Montessori," "junior high," "middle school," "high school," "school," "learning center," and "academy" for the communities of Bensenville, Chicago, Des Plaines, Elk Grove Village, Franklin Park, Harwood Heights, Itasca, Norridge, Northlake, Park Ridge, Rosemont, Schiller Park, and Wood Dale. Only non-profit entities were included in results.
4. National Center for Educational Statistics (NCES), on-line at http://nces.ed.gov/globallocator/

TABLE F-63
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
Universities and Colleges												
U1	Bensenville	Robert Morris College	63.7	108.9	100.9	95.3	0.2	63.6	108.9	100.9	95.6	0.2
U2	Des Plaines	De Paul University	61.6	108.6	97.1	95.4	0.1	60.1	107.2	95.5	95.4	0.1
U3	Elmhurst	Mac Cormac College Inc	53.0	95.5	91.4	85.8	0.0	53.2	96.3	91.4	85.8	0.0
U4	Schiller Park	Westwood College of Technology	72.4	119.8	107.3	100.5	10.6	72.1	119.7	106.9	100.5	10.6
Libraries												
L1	Bensenville	Bensenville Community Library	65.8	111.8	102.5	92.2	0.2	65.8	111.9	102.5	92.2	0.2
L2	Harwood Heights	Eisenhower Library	61.9	109.4	96.6	87.3	0.0	61.7	109.3	96.2	87.3	0.0
L3	Itasca	Itasca Community Library	61.6	103.9	100.0	84.9	0.0	61.7	103.9	100.1	84.9	0.0
L4	Northlake	Northlake Public Library	57.6	105.6	91.4	91.8	0.1	58.5	106.7	91.6	91.8	0.1
L5	Schiller Park	Schiller Park Public Library	61.1	105.9	98.7	89.9	0.0	60.2	105.0	97.7	89.9	0.0
L6	Wood Dale	Wood Dale Public Library	65.7	107.2	104.3	89.2	0.3	65.8	107.2	104.4	89.2	0.3
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools												
S1	**Bensenville**	**Blackhawk Middle School**	**60.1**	**106.4**	**96.6**	**89.4**	**0.0**	**60.2**	**106.4**	**96.6**	**89.4**	**0.0**
S2	**Bensenville**	**Chippewa Elementary School**	**58.9**	**102.9**	**96.8**	**91.5**	**0.0**	**59.0**	**103.3**	**96.7**	**91.5**	**0.0**
S3	**Bensenville**	**Fenton High School**	**63.9**	**110.8**	**99.6**	**90.5**	**0.3**	**63.9**	**110.8**	**99.5**	**90.5**	**0.3**
S4	**Bensenville**	**Mohawk Elementary School**	**69.7**	**115.9**	**106.1**	**97.5**	**2.9**	**69.6**	**116.0**	**106.0**	**97.5**	**3.0**
S5	**Bensenville**	**St Charles Borromeo**	**54.5**	**100.0**	**91.5**	**90.0**	**0.0**	**54.6**	**100.5**	**91.4**	**90.0**	**0.0**
S6	**Bensenville**	**Tioga Elementary School**	**59.0**	**103.4**	**96.7**	**91.1**	**0.0**	**59.1**	**103.7**	**96.7**	**91.1**	**0.0**
S7	**Bensenville**	**Tioga School Special Education**	**59.0**	**103.4**	**96.7**	**91.1**	**0.0**	**59.1**	**103.7**	**96.7**	**91.1**	**0.0**
S8	**Bensenville**	**W A Johnson Elementary School**	**59.6**	**106.0**	**95.9**	**87.7**	**0.0**	**59.6**	**106.1**	**95.9**	**87.7**	**0.0**
S9	Chicago	Brickton Montessori School	64.6	107.1	103.0	94.7	0.2	64.4	106.2	102.9	94.7	0.2
S10	**Chicago**	**Dirksen Elementary School**	**61.1**	**105.2**	**98.9**	**94.8**	**0.1**	**61.5**	**106.2**	**99.0**	**94.8**	**0.1**

TABLE F-63
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S11	**Chicago**	**Edison Elementary Regional Gifted Center**	**60.5**	**108.5**	**94.2**	**87.6**	**0.0**	**60.3**	**108.4**	**93.9**	**87.6**	**0.0**
S12	**Chicago**	**Garvy Elementary School**	**59.6**	**106.1**	**95.7**	**89.0**	**0.0**	**59.1**	**105.6**	**95.4**	**88.9**	**0.0**
S13	**Chicago**	**Immaculate Conception School**	**65.5**	**108.8**	**103.7**	**85.6**	**0.0**	**65.4**	**108.5**	**103.6**	**85.6**	**0.0**
S14	**Chicago**	**Norwood Park Elementary School**	**63.7**	**109.0**	**100.8**	**85.1**	**0.0**	**63.5**	**108.8**	**100.7**	**85.1**	**0.0**
S15	**Chicago**	**Oriole Park Elementary School**	**61.8**	**103.1**	**100.4**	**84.6**	**0.0**	**61.7**	**103.3**	**100.3**	**84.6**	**0.0**
S16	Chicago	Our Savior Lutheran	61.8	107.6	98.6	85.0	0.0	61.6	107.4	98.4	85.0	0.0
S17	**Chicago**	**Resurrection High School**	**62.4**	**108.6**	**99.0**	**90.1**	**0.0**	**62.2**	**108.3**	**98.8**	**90.1**	**0.0**
S18	**Chicago**	**Socrates School**	**67.2**	**106.9**	**106.0**	**87.7**	**0.2**	**67.0**	**106.3**	**106.0**	**87.7**	**0.2**
S19	**Chicago**	**St Eugene**	**59.5**	**103.6**	**97.3**	**91.0**	**0.0**	**59.7**	**104.5**	**97.2**	**91.0**	**0.0**
S20	**Chicago**	**St Paul Lutheran**	**66.8**	**106.6**	**105.7**	**87.2**	**0.1**	**66.7**	**106.0**	**105.6**	**87.2**	**0.1**
S21	**Chicago**	**Taft High School**	**64.1**	**106.0**	**102.7**	**83.8**	**0.0**	**64.1**	**105.9**	**102.6**	**83.5**	**0.0**
S22	**Des Plaines**	**Algonquin Middle School**	**52.7**	**100.0**	**87.9**	**91.9**	**0.0**	**50.9**	**98.2**	**86.0**	**91.9**	**0.0**
S23	Des Plaines	Angel Town Private School	58.3	104.0	95.2	99.5	0.0	55.8	102.2	92.1	98.7	0.0
S24	**Des Plaines**	**Devonshire School**	**57.4**	**105.7**	**90.4**	**92.1**	**0.0**	**57.3**	**105.5**	**90.3**	**92.1**	**0.0**
S25	Des Plaines	Forest Elementary School	52.4	99.6	87.8	92.9	0.0	50.6	97.9	85.8	92.9	0.0
S26	**Des Plaines**	**Friendship Junior High School**	**58.4**	**106.6**	**91.5**	**93.0**	**0.0**	**58.3**	**106.5**	**91.5**	**93.0**	**0.0**
S27	Des Plaines	Iroquois Community School	58.5	104.1	95.5	104.6	0.1	56.3	102.7	92.7	99.9	0.0
S28	**Des Plaines**	**Maine West High School**	**51.7**	**98.8**	**87.0**	**96.3**	**0.0**	**50.2**	**97.5**	**85.4**	**96.3**	**0.0**
S29	**Des Plaines**	**Orchard Place Elementary School**	**68.6**	**116.6**	**102.5**	**102.7**	**3.8**	**68.3**	**116.4**	**101.7**	**102.7**	**3.7**
S30	**Des Plaines**	**Our Lady Of Destiny Elementary South**	**54.4**	**100.4**	**91.1**	**104.0**	**0.0**	**51.2**	**97.7**	**87.4**	**104.0**	**0.0**
S31	**Des Plaines**	**Plainfield Elementary School**	**52.0**	**98.7**	**88.0**	**97.0**	**0.0**	**50.0**	**97.0**	**85.7**	**97.0**	**0.0**
S32	Des Plaines	South Elementary School	54.6	101.1	90.8	95.4	0.0	51.3	97.8	87.5	95.4	0.0

TABLE F-63
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (LEARNING INSTITUTIONS)

Map ID	City	Name	Build Out + 5 Alternative D					Build Out + 5 Alternative G				
			DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S33	**Des Plaines**	**St Zachary School**	**58.1**	**106.3**	**91.3**	**92.6**	**0.0**	**58.0**	**106.2**	**91.3**	**92.6**	**0.0**
S34	**Elk Grove Village**	**Clearmont Elementary School**	**60.7**	**107.2**	**96.8**	**87.8**	**0.0**	**60.0**	**107.2**	**95.3**	**87.8**	**0.0**
S35	**Elk Grove Village**	**Elk Grove High School**	**59.9**	**106.6**	**95.9**	**90.5**	**0.0**	**59.1**	**106.6**	**94.0**	**90.5**	**0.0**
S36	**Elk Grove Village**	**Grove Junior High School**	**58.4**	**105.1**	**94.5**	**89.6**	**0.0**	**57.9**	**105.1**	**93.2**	**89.6**	**0.0**
S37	**Elk Grove Village**	**Lutheran School Of The Holy Spirit**	**55.7**	**102.0**	**92.0**	**86.1**	**0.0**	**55.5**	**102.0**	**91.6**	**86.1**	**0.0**
S38	**Elk Grove Village**	**Queen Of The Rosary School**	**59.1**	**106.0**	**94.9**	**86.9**	**0.0**	**58.6**	**106.0**	**93.4**	**86.9**	**0.0**
S39	**Elk Grove Village**	**Ridge Family Center For Learning**	**56.9**	**103.6**	**92.8**	**90.6**	**0.0**	**56.6**	**103.6**	**92.3**	**90.6**	**0.0**
S40	**Elk Grove Village**	**Rupley Elementary School**	**56.0**	**103.4**	**90.9**	**84.6**	**0.0**	**55.9**	**103.4**	**90.8**	**84.6**	**0.0**
S41	**Elmhurst**	**Churchville Junior High School**	**54.9**	**100.2**	**92.0**	**88.8**	**0.0**	**54.6**	**100.6**	**91.3**	**88.8**	**0.0**
S42	**Elmhurst**	**Conrad Fischer Elementary School**	**56.7**	**102.2**	**93.8**	**90.4**	**0.0**	**55.8**	**102.3**	**92.0**	**90.4**	**0.0**
S43	Franklin Park	East Leyden High School	54.5	99.1	92.1	83.9	0.0	53.8	99.3	90.9	83.9	0.0
S44	**Franklin Park**	**Enger Elementary School**	**56.5**	**104.7**	**89.5**	**93.7**	**0.0**	**58.8**	**107.5**	**89.7**	**97.2**	**0.1**
S45	**Franklin Park**	**North Elementary School**	**53.7**	**98.1**	**91.4**	**81.6**	**0.0**	**52.9**	**98.3**	**90.0**	**81.6**	**0.0**
S46	Harwood Heights	Maple Park Academy	57.7	106.0	90.6	84.0	0.0	57.6	105.9	90.3	84.0	0.0
S47	**Harwood Heights**	**Union Ridge Elementary School**	**59.9**	**108.3**	**92.1**	**87.3**	**0.0**	**59.8**	**108.3**	**91.9**	**87.3**	**0.0**
S48	**Itasca**	**Elmer H. Franzen Elementary School**	**57.1**	**102.0**	**94.6**	**83.1**	**0.0**	**57.1**	**102.0**	**94.5**	**83.1**	**0.0**
S49	**Itasca**	**F.E. Peacock Junior High School**	**58.7**	**102.5**	**96.7**	**84.2**	**0.0**	**58.7**	**102.6**	**96.7**	**84.2**	**0.0**
S50	**Itasca**	**Lutheran School Of St Luke**	**61.6**	**106.8**	**98.8**	**87.8**	**0.0**	**61.6**	**106.9**	**98.8**	**87.8**	**0.0**
S51	Itasca	New Morning Children's House	59.4	102.7	97.5	83.9	0.0	59.4	102.8	97.6	83.9	0.0
S52	**Itasca**	**St Peter The Apostle School**	**58.9**	**102.7**	**96.8**	**84.4**	**0.0**	**58.9**	**102.7**	**96.9**	**84.4**	**0.0**

TABLE F-63
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S53	**Itasca**	**Washington Elementary School**	**62.1**	**106.6**	**99.7**	**87.4**	**0.0**	**62.1**	**106.7**	**99.7**	**87.4**	**0.0**
S54	**Norridge**	**Divine Savior School**	**57.5**	**104.6**	**93.0**	**83.4**	**0.0**	**57.4**	**104.5**	**92.9**	**83.4**	**0.0**
S55	**Norridge**	**J Giles Elementary School**	**55.0**	**101.3**	**91.4**	**83.0**	**0.0**	**54.9**	**101.1**	**91.3**	**82.3**	**0.0**
S56	Norridge	Jolly Fun House (JFH) Educational Academy, Inc	53.7	99.3	90.8	84.4	0.0	53.4	98.6	90.6	84.4	0.0
S57	**Norridge**	**J Leigh Elementary School**	**63.6**	**111.8**	**96.7**	**89.4**	**0.3**	**63.6**	**111.8**	**96.7**	**89.4**	**0.3**
S58	**Norridge**	**Pennoyer Elementary School**	**60.6**	**104.3**	**98.6**	**92.3**	**0.0**	**60.9**	**105.3**	**98.7**	**92.3**	**0.0**
S59	Norridge	Ridgewood Community High School	58.1	105.8	92.4	83.8	0.0	58.0	105.7	92.3	83.8	0.0
S60	**Northlake**	**Parkview Baptist Academy**	**58.2**	**105.9**	**92.7**	**92.6**	**0.1**	**59.0**	**107.0**	**92.7**	**92.6**	**0.1**
S61	**Northlake**	**Roy Elementary School**	**58.4**	**106.2**	**92.6**	**94.0**	**0.1**	**59.6**	**107.8**	**92.7**	**94.0**	**0.1**
S62	**Northlake**	**St John Vianney School**	**57.7**	**105.4**	**92.3**	**92.2**	**0.1**	**58.4**	**106.3**	**92.3**	**92.2**	**0.1**
S63	**Northlake**	**West Leyden High School**	**62.3**	**110.2**	**96.2**	**96.2**	**0.5**	**63.3**	**111.5**	**96.6**	**96.2**	**0.6**
S64	**Northlake**	**Westdale Elementary School**	**59.0**	**107.2**	**92.1**	**95.6**	**0.0**	**60.7**	**109.3**	**92.4**	**95.7**	**0.1**
S65	Park Ridge	Alternative Resource Center	61.1	108.1	96.8	96.1	0.1	59.7	106.7	95.2	96.1	0.1
S66	Park Ridge	George Washington Elementary School	62.4	110.2	96.6	94.2	0.1	62.0	110.0	95.7	94.2	0.1
S67	**Park Ridge**	**Maine South High School**	**63.2**	**111.0**	**97.4**	**95.8**	**0.1**	**62.6**	**110.6**	**96.3**	**95.8**	**0.1**
S68	**Park Ridge**	**Mary Seat Of Wisdom**	**60.7**	**107.5**	**96.5**	**93.1**	**0.1**	**59.9**	**106.9**	**95.6**	**93.1**	**0.1**
S69	**Rosemont**	**Rosemont Elementary School**	**68.3**	**116.1**	**102.3**	**97.5**	**0.9**	**67.6**	**115.7**	**101.0**	**97.5**	**0.8**
S70	**Schiller Park**	**John F Kennedy Elementary School**	**58.9**	**104.2**	**96.0**	**92.8**	**0.0**	**58.6**	**104.5**	**95.4**	**92.8**	**0.0**
S71	**Schiller Park**	**Lincoln Middle School**	**59.1**	**103.9**	**96.6**	**85.9**	**0.0**	**58.5**	**103.5**	**95.8**	**85.9**	**0.0**
S72	**Schiller Park**	**St Beatrice School**	**60.1**	**105.0**	**97.6**	**86.9**	**0.0**	**59.5**	**104.6**	**96.9**	**86.9**	**0.0**
S73	**Schiller Park**	**St Maria Goretti School**	**57.9**	**103.3**	**95.0**	**91.9**	**0.0**	**57.7**	**103.8**	**94.3**	**91.9**	**0.0**

TABLE F-63
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (LEARNING INSTITUTIONS)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
Preschools, Montessori, Elementary Schools, Middle Schools, Junior High Schools, and High Schools (Continued)												
S74	**Schiller Park**	**Washington Elementary School**	**69.5**	**116.6**	**105.0**	**99.4**	**1.5**	**69.3**	**116.6**	**104.5**	**99.4**	**1.7**
S75	**Wood Dale**	**Early Childhood Education Center**	**65.7**	**107.1**	**104.3**	**90.1**	**0.3**	**65.8**	**107.1**	**104.4**	**90.1**	**0.3**
S76	**Wood Dale**	**Holy Ghost School**	**62.5**	**107.7**	**99.8**	**87.5**	**0.1**	**62.5**	**107.8**	**99.7**	**87.5**	**0.1**
S77	**Wood Dale**	**Oakbrook Elementary School**	**60.7**	**105.8**	**98.1**	**87.5**	**0.0**	**60.7**	**105.8**	**98.1**	**87.5**	**0.0**
S78	**Wood Dale**	**Westview Elementary School**	**59.2**	**104.6**	**96.3**	**85.8**	**0.0**	**59.2**	**104.6**	**96.3**	**85.8**	**0.0**
S79	**Wood Dale**	**Wood Dale Junior High School**	**64.8**	**106.9**	**103.3**	**88.4**	**0.2**	**64.8**	**106.9**	**103.3**	**88.4**	**0.2**

Note: **Bold** indicates schools that have been sound insulated or funded for sound insulation through the 2004 School Sound Insulation Program (SSIP).

Sources: SSIP: City of Chicago Department of Aviation Noise Office, SSIP Information, June 2005.
Learning institutions:
1. 2002 Non-public School Database, Illinois State Board of Education
2. 2001 Public School Database, Illinois State Board of Education
3. Searches on www.smartpages.com for "university," "college," "library," "preschool," "Montessori," "junior high," "middle school," "high school," "school," "learning center," and "academy" for the communities of Bensenville, Chicago, Des Plaines, Elk Grove Village, Franklin Park, Harwood Heights, Itasca, Norridge, Northlake, Park Ridge, Rosemont, Schiller Park, and Wood Dale. Only non-profit entities were included in results.
4. National Center for Educational Statistics (NCES), on-line at http://nces.ed.gov/globallocator/

TABLE F-64
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (HEALTH CARE FACILITIES)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
Hospitals												
H1	Chicago	Resurrection Medical Center	59.5	105.6	96.1	86.4	0.0	65.7	110.6	103.2	90.7	0.2
H2	Northlake	Vencor Hospital	58.5	104.4	95.4	87.5	0.0	55.0	103.2	88.3	91.2	0.0
Nursing Homes												
N1	Bensenville	Bridgeway Of Bensenville	59.2	105.3	95.9	97.2	0.1	61.7	108.4	97.7	91.8	0.0
N2	Elmhurst	York Convalescent Center Lt	56.5	103.6	92.0	91.5	0.0	56.1	102.7	92.1	94.6	0.0
N3	Franklin Park	Scallabrini Life Center	62.7	108.9	99.2	95.4	0.2	57.3	105.8	89.6	95.0	0.0
N4	Itasca	Arbor Of Itasca Inc	60.4	105.6	97.7	89.6	0.0	62.6	106.9	100.4	85.4	0.0
N5	Norridge	Norridge Nursing Center	55.5	100.4	92.9	84.0	0.0	56.0	103.5	90.8	82.8	0.0
N6	Northlake	Concord Plaza Assisted Living Center	61.7	106.7	99.1	89.4	0.0	58.2	106.1	92.3	91.9	0.0

Source: Searches on www.smartpages.com for "hospital," "nursing home," "convalescent home," "clinic," and "emergency" for the communities of Bensenville, Chicago, Des Plaines, Elk Grove Village, Franklin Park, Harwood Heights, Itasca, Norridge, Northlake, Park Ridge, Rosemont, Schiller Park, and Wood Dale. Only in-patient facilities were included in results.

TABLE F-65
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (HEALTH CARE FACILITIES)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
Hospitals												
H1	Chicago	Resurrection Medical Center	65.8	110.6	103.3	90.7	0.1	65.9	110.4	103.5	90.7	0.2
H2	Northlake	Vencor Hospital	54.5	102.2	89.0	91.2	0.0	55.7	104.0	88.3	91.2	0.0
Nursing Homes												
N1	Bensenville	Bridgeway Of Bensenville	59.6	102.8	97.8	91.8	0.0	59.7	103.2	97.7	91.8	0.0
N2	Elmhurst	York Convalescent Center Lt	54.6	99.0	92.4	94.6	0.0	54.7	99.5	92.2	94.6	0.0
N3	Franklin Park	Scallabrini Life Center	58.1	106.6	90.0	95.0	0.0	60.4	109.2	90.7	96.7	0.1
N4	Itasca	Arbor Of Itasca Inc	62.7	106.8	100.6	85.4	0.0	62.8	106.9	100.6	85.4	0.0
N5	Norridge	Norridge Nursing Center	55.2	102.0	91.0	82.8	0.0	54.8	101.7	90.6	82.8	0.0
N6	Northlake	Concord Plaza Assisted Living Center	58.9	107.0	92.4	92.0	0.1	59.9	108.1	92.7	92.0	0.1

Source: Searches on www.smartpages.com for "hospital," "nursing home," "convalescent home," "clinic," and "emergency" for the communities of Bensenville, Chicago, Des Plaines, Elk Grove Village, Franklin Park, Harwood Heights, Itasca, Norridge, Northlake, Park Ridge, Rosemont, Schiller Park, and Wood Dale. Only in-patient facilities were included in results.

TABLE F-66
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W1	Addison	Sunnyplace Church Of God	54.2	100.1	90.9	86.3	0.0	56.8	102.2	93.9	87.5	0.0
W2	Arlington Heights	Baptist General Conference	58.1	103.7	95.2	89.7	0.0	51.2	97.6	87.6	85.6	0.0
W3	Bensenville	Bensenville Bible Church	59.0	105.4	95.4	95.5	0.1	61.0	107.4	97.2	92.3	0.0
W4	Bensenville	Bensenville United Methodist Church	58.1	105.0	93.8	93.5	0.1	60.5	107.8	95.7	91.9	0.1
W5	Bensenville	Calvary Baptist Church	59.6	105.0	96.8	95.2	0.1	60.1	106.5	96.4	97.8	0.0
W6	Bensenville	Cornerstone Christian Assembly	62.2	106.6	99.9	94.2	0.1	58.4	104.8	94.6	96.7	0.0
W7	Bensenville	First Spanish Baptist Church	65.2	109.9	102.7	95.9	0.4	67.8	111.0	106.0	98.8	0.8
W8	Bensenville	Grace Gospel Ctr.	55.4	101.7	91.8	89.9	0.0	57.8	104.0	94.2	88.9	0.0
W9	Bensenville	Grace Lutheran Church	56.5	103.4	92.3	92.7	0.0	55.9	102.6	92.0	98.4	0.0
W10	Bensenville	Immanuel United Church-Christ	54.4	100.9	90.7	90.9	0.0	55.5	101.8	92.0	88.9	0.0
W11	Bensenville	Jesus Alive Church	60.1	105.8	97.0	92.9	0.1	64.6	110.7	101.2	88.9	0.3
W12	Bensenville	Manav Seva Mandir	61.1	107.6	97.4	96.1	0.3	64.7	112.0	99.8	93.4	0.5
W13	Bensenville	Peace Church United Chr-Christ	60.3	106.7	96.5	94.4	0.1	63.3	110.4	98.8	94.3	0.5
W14	Bensenville	Sam Mool United Methodist Church/St. John's United Church Of Christ	65.7	110.6	103.1	95.9	0.5	68.5	111.2	106.8	99.5	0.9
W15	Bensenville	St. Alexis	59.8	106.7	95.6	95.2	0.1	62.7	110.0	97.8	94.9	0.4
W16	Bensenville	St. Bede's Episcopal Church	58.2	104.5	94.6	91.7	0.1	61.4	108.5	96.8	88.7	0.1
W17	Bensenville	St. Charles Borromeo	57.4	103.9	93.5	89.9	0.0	55.5	102.3	91.3	94.6	0.0
W18	Bensenville	True Jesus Church	56.4	103.3	92.3	91.8	0.0	58.4	105.5	93.9	91.0	0.1
W19	Bensenville	Ukranian Pentecostal Church	62.3	107.1	99.7	93.4	0.1	58.5	105.1	94.7	94.0	0.0
W20	Bensenville	Zion Evangelical Lutheran Church	57.5	104.4	93.1	92.4	0.1	59.7	107.0	94.9	91.6	0.1

TABLE F-66
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W21	Chicago	All Saints Polish National Catholic Church	63.0	108.1	100.4	93.5	0.1	68.0	115.3	103.0	94.0	1.2
W22	Chicago	Bethel Community Church	61.1	105.8	98.7	87.3	0.0	58.7	103.5	96.3	89.8	0.0
W23	Chicago	Church Of The Full Gospel Inc	56.1	101.7	93.1	84.9	0.0	60.4	106.8	96.8	85.8	0.0
W24	Chicago	First Korean Presbyterian Church	58.7	104.8	95.3	84.8	0.0	61.3	102.7	99.9	83.3	0.0
W25	Chicago	Holy Resurrection Church	63.5	109.9	99.9	88.2	0.2	67.6	107.9	106.4	88.2	0.2
W26	Chicago	Norwood Park Evangelical Lutheran Church	58.9	105.1	95.5	88.1	0.0	64.1	109.1	101.5	84.7	0.0
W27	Chicago	Our Lady Mother Of Church	65.4	109.2	103.4	93.4	0.2	65.5	113.3	99.5	91.1	0.4
W28	Chicago	Our Savior Lutheran Church Of Norwood Park	56.3	101.9	93.2	85.8	0.0	60.7	106.9	97.3	84.8	0.0
W29	Chicago	Our Saviors English Lutheran Church	57.2	103.1	94.0	87.0	0.0	62.0	107.9	98.9	85.2	0.0
W30	Chicago	Sisters of Charity BVM	61.1	105.6	98.7	91.0	0.0	59.6	103.9	97.3	90.6	0.0
W31	Chicago	Sisters of the Living Word	61.5	106.2	99.1	90.0	0.0	60.5	104.6	98.3	92.2	0.0
W32	Chicago	St Albans Episcopal Church	55.0	100.6	91.9	84.2	0.0	58.8	105.4	94.9	85.0	0.0
W33	Chicago	St Andrew Presbyterian Church	59.4	104.3	96.8	87.9	0.0	59.5	103.1	97.6	87.4	0.0
W34	Chicago	St James Lutheran Church	60.6	105.4	98.1	86.4	0.0	58.5	103.2	96.0	88.9	0.0
W35	Chicago	St Josephs Ukrainian Church	66.7	111.5	104.2	91.3	0.4	61.4	107.2	98.2	95.5	0.0
W36	Chicago	St Paul Evangelical Lutheran Church	62.5	108.8	98.9	87.3	0.0	66.4	106.0	105.3	86.6	0.1
W37	Chicago	St Sophia Ukrainian Church	58.3	104.4	95.0	85.5	0.0	60.4	102.1	98.9	82.8	0.0
W38	Des Plaines	Brentwood Baptist Church	56.1	102.9	92.0	91.1	0.0	56.0	103.7	90.3	87.7	0.0
W39	Des Plaines	Calvary Korean Baptist Church	58.1	104.7	94.2	95.0	0.1	51.1	98.9	85.5	94.3	0.0
W40	Des Plaines	Church of Christ	55.4	101.8	91.7	94.9	0.0	51.9	99.0	87.5	95.0	0.0
W41	Des Plaines	First Presbyterian Church	61.3	109.3	95.1	94.4	0.1	54.8	101.2	91.0	107.1	0.0

TABLE F-66
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W42	Des Plaines	Good Shepherd Lutheran Church	56.5	102.2	93.5	97.9	0.0	51.9	99.1	87.2	96.0	0.0
W43	Des Plaines	Korean Philippi Presbyterian	61.4	109.8	93.8	95.7	0.1	56.6	102.8	93.1	99.3	0.0
W44	Des Plaines	Phat Bao Temple	55.8	102.7	91.5	93.5	0.0	52.6	99.5	88.4	96.0	0.0
W45	Des Plaines	St. Stephen Catholic Church	55.8	101.5	92.8	96.9	0.0	51.6	98.9	86.8	101.1	0.0
W46	Des Plaines	St. Zachary Catholic Church	58.7	105.9	94.1	94.1	0.2	58.0	106.3	91.0	92.8	0.0
W47	Des Plaines	Trinity Lutheran Church	55.9	103.0	91.4	93.1	0.0	51.4	99.1	85.8	91.9	0.0
W48	Elk Grove Village	1st Baptist Church of Elk Grove Village	58.9	105.1	95.4	88.1	0.0	57.0	104.4	92.2	85.5	0.0
W49	Elk Grove Village	Elk Grove Presbyterian Church	59.6	106.4	95.6	88.4	0.0	58.6	106.1	93.3	87.0	0.0
W50	Elk Grove Village	Evangelical Free Church	65.4	108.9	103.5	93.8	0.3	55.7	103.2	90.7	91.1	0.0
W51	Elk Grove Village	Gethsemane Presbyterian Church	57.0	102.7	93.9	86.9	0.0	55.8	103.0	91.2	86.9	0.0
W52	Elk Grove Village	Lutheran Church of the Holy Spirit	57.3	103.6	93.7	86.8	0.0	56.7	103.5	92.5	87.2	0.0
W53	Elk Grove Village	Queen of the Rosary Church	57.0	103.2	93.5	86.6	0.0	56.1	102.9	92.0	88.2	0.0
W54	Elk Grove Village	St. Nicholas Episcopal Church	59.2	106.1	94.9	88.0	0.1	60.6	108.3	95.0	88.1	0.1
W55	Elk Grove Village	Wesleyan Community Church	58.7	104.5	95.6	88.6	0.0	56.7	104.1	91.6	85.2	0.0
W56	Elmhurst	Assembly God Hammond Church	58.0	105.5	92.9	88.0	0.0	54.6	101.2	90.7	88.8	0.0
W57	Elmhurst	Chicago Church Of Christ Inc	59.0	107.0	92.6	87.5	0.0	54.8	100.8	91.5	88.2	0.0
W58	Elmhurst	Elmhurst Korean Presbyter	58.0	104.7	94.1	88.5	0.0	55.2	102.2	90.8	90.5	0.0
W59	Franklin Park	Espiritu Santo Episcopal Church	60.3	102.0	98.8	93.6	0.0	56.6	104.5	90.6	91.4	0.0
W60	Franklin Park	Faith Christian Center	55.6	100.8	92.8	92.8	0.0	56.4	104.3	90.4	88.2	0.0

TABLE F-66
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W61	Franklin Park	Mt. Calvary Lutheran Church	61.9	106.2	99.6	96.0	0.1	55.9	103.8	89.8	98.9	0.0
W62	Franklin Park	St. Pauls United Church of Christ	59.3	102.3	97.5	94.5	0.0	57.0	104.8	91.0	91.7	0.0
W63	Harwood Heights	Bethany Baptist Church	63.2	107.6	100.8	84.1	0.0	58.9	106.8	92.9	87.1	0.0
W64	Harwood Heights	Northside Arabic Church	61.2	105.3	99.0	88.4	0.0	60.6	108.5	94.7	86.7	0.0
W65	Itasca	Bethany United Methodist Church	58.7	104.8	95.4	85.4	0.0	59.6	102.7	97.8	84.0	0.0
W66	Itasca	Christian Fellowship Church	57.1	103.6	93.4	86.2	0.0	58.8	104.8	95.5	85.7	0.0
W67	Itasca	Hanmee Presbyterian Church	53.6	100.0	90.0	83.7	0.0	55.1	102.0	90.9	80.9	0.0
W68	Norridge	Acacia Park Evangelical Lutheran church	63.4	107.3	101.3	89.5	0.0	61.7	109.7	95.3	88.7	0.0
W69	Norridge	Church of Our Savior	64.5	108.4	102.4	89.8	0.1	63.1	111.0	96.9	89.8	0.2
W70	Norridge	Divine Savior	57.1	102.6	94.1	86.1	0.0	57.8	105.0	93.1	83.2	0.0
W71	Norridge	Zion Evangelical Lutheran Church	67.1	111.1	105.0	93.2	0.5	64.8	112.4	99.3	92.3	0.3
W72	Northlake	Bethel Fellowship Church	60.3	104.4	98.2	87.8	0.0	57.0	104.6	91.7	91.6	0.0
W73	Northlake	Iglesia Bautista Hispana Jeth	61.6	105.8	99.5	90.4	0.0	57.8	105.4	92.4	91.7	0.1
W74	Northlake	Parkview Baptist Church	61.0	105.2	98.8	88.2	0.0	57.6	105.1	92.5	92.3	0.0
W75	Northlake	St. John the Baptist Melkite Catholic Church	59.2	103.7	96.8	87.3	0.0	56.3	103.5	91.7	90.4	0.0
W76	Northlake	St. John Vianney Church	60.6	104.7	98.5	87.9	0.0	57.3	104.8	92.0	91.9	0.0
W77	Northlake	St. Peter's Syrian Orthodox Church	60.9	105.2	98.7	92.3	0.0	56.4	104.1	90.8	92.9	0.0
W78	Northlake	Trinity Presbyterian Church	68.2	112.9	105.8	96.8	0.9	63.0	110.6	97.7	97.6	0.7
W79	Park Ridge	Mary Seat of Wisdom Church	57.8	103.0	95.1	90.0	0.0	61.6	108.9	96.8	93.2	0.1
W80	Park Ridge	South Park Church	56.1	101.5	93.3	88.0	0.0	59.2	106.2	94.9	92.2	0.0

TABLE F-66
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVE A (NO ACTION ALTERNATIVE) AND ALTERNATIVE C AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
W81	Schiller Park	Grace Community Evangelical	58.5	104.7	94.9	95.3	0.0	62.9	110.7	97.0	93.9	0.2
W82	Schiller Park	International Christian Assembly of God	58.9	105.1	95.4	95.2	0.1	63.4	111.3	97.2	96.0	0.4
W83	Schiller Park	St. Beatrice Church	59.2	105.4	95.7	95.1	0.1	63.6	111.5	97.4	96.4	0.5
W84	Wood Dale	Calvary Evangelical Lutheran Church	57.0	102.0	94.3	87.8	0.0	61.3	106.6	98.6	86.9	0.0
W85	Wood Dale	Christian Congregation	55.0	100.8	91.9	85.1	0.0	55.8	102.0	92.3	85.3	0.0
W86	Wood Dale	First Baptist Church- Wood Dale	56.5	102.5	93.2	90.1	0.0	59.9	106.5	96.0	92.7	0.0
W87	Wood Dale	St. Peter's Latvian Lutheran Church	55.7	100.4	93.3	85.8	0.0	57.6	103.3	94.5	89.3	0.0

Source: www.smartpages.com

TABLE F-67
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W1	Addison	Sunnyplace Church Of God	56.4	101.3	93.9	85.8	0.0	56.5	101.4	93.9	85.8	0.0
W2	Arlington Heights	Baptist General Conference	51.4	97.8	87.7	85.6	0.0	51.2	97.5	87.7	85.6	0.0
W3	Bensenville	Bensenville Bible Church	59.4	103.5	97.2	92.3	0.0	59.5	103.8	97.2	92.3	0.0
W4	Bensenville	Bensenville United Methodist Church	59.1	105.2	95.8	88.2	0.0	59.2	105.3	95.7	88.2	0.0
W5	Bensenville	Calvary Baptist Church	58.7	103.2	96.3	97.8	0.0	58.8	103.7	96.3	97.8	0.0
W6	Bensenville	Cornerstone Christian Assembly	58.6	105.1	94.8	96.7	0.0	59.1	105.8	95.0	96.7	0.0
W7	Bensenville	First Spanish Baptist Church	67.9	111.1	106.0	98.8	0.8	67.9	111.1	106.1	98.8	0.8
W8	Bensenville	Grace Gospel Ctr.	57.3	103.1	94.2	86.8	0.0	57.4	103.2	94.2	86.8	0.0
W9	Bensenville	Grace Lutheran Church	54.2	98.5	92.0	98.4	0.0	54.5	99.2	92.0	98.4	0.0
W10	Bensenville	Immanuel United Church-Christ	54.1	98.2	92.0	87.5	0.0	54.2	98.6	92.0	87.5	0.0
W11	Bensenville	Jesus Alive Church	64.5	110.4	101.3	88.9	0.2	64.5	110.5	101.3	88.9	0.2
W12	Bensenville	Manav Seva Mandir	63.7	110.2	99.9	90.2	0.1	63.7	110.3	99.9	90.2	0.1
W13	Bensenville	Peace Church United Chr-Christ	61.4	106.4	98.8	93.5	0.0	61.5	106.6	98.8	93.5	0.0
W14	Bensenville	Sam Mool United Methodist Church/St. John's United Church Of Christ	68.5	111.3	106.8	99.5	0.9	68.5	111.3	106.8	99.5	0.9
W15	Bensenville	St. Alexis	60.9	106.5	97.8	91.0	0.0	60.9	106.7	97.8	91.0	0.0
W16	Bensenville	St. Bede's Episcopal Church	60.9	107.7	96.8	88.1	0.1	60.9	107.7	96.8	88.1	0.1
W17	Bensenville	St. Charles Borromeo	54.5	100.0	91.5	94.6	0.0	54.7	100.6	91.5	94.6	0.0
W18	Bensenville	True Jesus Church	56.7	102.0	93.9	91.0	0.0	56.8	102.2	93.9	91.0	0.0
W19	Bensenville	Ukranian Pentecostal Church	58.9	105.5	95.0	94.0	0.0	59.3	106.1	95.1	94.0	0.0
W20	Bensenville	Zion Evangelical Lutheran Church	58.0	103.7	95.0	87.9	0.0	58.1	103.9	95.0	87.9	0.0

TABLE F-67
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W21	Chicago	All Saints Polish National Catholic Church	68.3	115.4	103.8	94.0	0.8	67.9	115.0	103.4	94.0	0.8
W22	Chicago	Bethel Community Church	58.8	103.1	96.5	89.8	0.0	59.0	104.0	96.4	89.8	0.0
W23	Chicago	Church Of The Full Gospel Inc	60.7	107.0	97.2	85.8	0.0	60.4	106.6	97.0	85.8	0.0
W24	Chicago	First Korean Presbyterian Church	61.5	102.5	100.1	84.0	0.0	61.4	102.9	100.0	84.0	0.0
W25	Chicago	Holy Resurrection Church	67.7	107.9	106.5	88.2	0.2	67.5	107.3	106.4	88.2	0.2
W26	Chicago	Norwood Park Evangelical Lutheran Church	64.3	109.1	101.7	84.7	0.0	64.1	108.9	101.6	84.7	0.0
W27	Chicago	Our Lady Mother Of Church	65.5	113.7	98.8	91.1	0.6	65.5	113.7	98.7	91.1	0.6
W28	Chicago	Our Savior Lutheran Church Of Norwood Park	61.0	107.1	97.6	84.8	0.0	60.7	106.7	97.4	84.8	0.0
W29	Chicago	Our Saviors English Lutheran Church	62.3	108.0	99.1	85.2	0.0	62.1	107.8	99.0	85.2	0.0
W30	Chicago	Sisters of Charity BVM	59.6	103.5	97.5	90.6	0.0	59.8	104.4	97.4	90.6	0.0
W31	Chicago	Sisters of the Living Word	60.4	104.1	98.4	92.2	0.0	60.7	105.1	98.4	92.2	0.0
W32	Chicago	St Albans Episcopal Church	59.1	105.7	95.3	85.0	0.0	58.8	105.3	95.0	85.0	0.0
W33	Chicago	St Andrew Presbyterian Church	59.7	102.8	97.9	87.4	0.0	59.8	103.5	97.8	87.4	0.0
W34	Chicago	St James Lutheran Church	58.6	102.9	96.3	88.9	0.0	58.7	103.7	96.2	88.9	0.0
W35	Chicago	St Josephs Ukrainian Church	61.2	107.0	98.0	95.5	0.0	61.5	107.7	98.1	95.5	0.0
W36	Chicago	St Paul Evangelical Lutheran Church	66.5	106.2	105.4	86.6	0.1	66.4	105.6	105.3	86.6	0.1
W37	Chicago	St Sophia Ukrainian Church	60.6	101.9	99.2	83.6	0.0	60.5	102.4	99.1	83.6	0.0
W38	Des Plaines	Brentwood Baptist Church	56.2	103.8	90.7	87.7	0.0	56.0	103.6	90.6	87.7	0.0
W39	Des Plaines	Calvary Korean Baptist Church	52.1	99.6	87.0	94.3	0.0	51.0	98.5	85.8	94.3	0.0
W40	Des Plaines	Church of Christ	54.4	101.0	90.6	95.0	0.0	51.2	97.7	87.4	95.0	0.0
W41	Des Plaines	First Presbyterian Church	56.4	102.7	92.8	107.1	0.0	54.1	100.3	90.5	107.1	0.0

TABLE F-67
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W42	Des Plaines	Good Shepherd Lutheran Church	54.3	100.1	91.1	96.0	0.0	51.3	97.8	87.5	96.0	0.0
W43	Des Plaines	Korean Philippi Presbyterian	58.2	104.1	95.0	99.3	0.0	55.6	102.0	91.9	98.5	0.0
W44	Des Plaines	Phat Bao Temple	55.0	101.1	91.7	96.0	0.0	51.8	98.1	88.1	96.0	0.0
W45	Des Plaines	St. Stephen Catholic Church	54.2	100.3	90.8	101.1	0.0	50.9	97.4	87.1	101.1	0.0
W46	Des Plaines	St. Zachary Catholic Church	58.1	106.3	91.3	92.8	0.0	58.0	106.2	91.3	92.8	0.0
W47	Des Plaines	Trinity Lutheran Church	52.8	100.2	87.9	91.9	0.0	51.3	98.8	86.2	91.9	0.0
W48	Elk Grove Village	1st Baptist Church of Elk Grove Village	57.1	104.3	92.5	85.5	0.0	57.0	104.3	92.2	85.5	0.0
W49	Elk Grove Village	Elk Grove Presbyterian Church	59.2	106.1	95.0	87.0	0.0	58.6	106.1	93.5	87.0	0.0
W50	Elk Grove Village	Evangelical Free Church	55.8	103.1	90.9	91.1	0.0	55.7	103.1	90.8	91.1	0.0
W51	Elk Grove Village	Gethsemane Presbyterian Church	55.8	102.9	91.3	86.9	0.0	55.7	102.9	91.1	86.9	0.0
W52	Elk Grove Village	Lutheran Church of the Holy Spirit	57.0	103.5	93.3	87.2	0.0	56.6	103.4	92.4	87.2	0.0
W53	Elk Grove Village	Queen of the Rosary Church	56.3	102.8	92.5	88.2	0.0	56.0	102.8	92.0	88.2	0.0
W54	Elk Grove Village	St. Nicholas Episcopal Church	61.6	108.4	97.5	88.3	0.1	60.7	108.3	95.3	88.1	0.1
W55	Elk Grove Village	Wesleyan Community Church	56.7	104.1	91.7	85.2	0.0	56.6	104.0	91.6	85.2	0.0
W56	Elmhurst	Assembly God Hammond Church	54.9	100.9	91.6	88.8	0.0	55.2	102.0	91.0	88.8	0.0
W57	Elmhurst	Chicago Church Of Christ Inc	55.4	100.2	92.9	88.2	0.0	54.8	101.0	91.3	88.2	0.0
W58	Elmhurst	Elmhurst Korean Presbyterian	55.4	102.2	91.3	90.5	0.0	56.1	103.3	91.4	90.5	0.0
W59	Franklin Park	Espiritu Santo Episcopal Church	54.0	98.6	91.6	85.6	0.0	53.5	99.3	90.3	85.5	0.0
W60	Franklin Park	Faith Christian Center	54.5	98.5	92.4	83.8	0.0	53.0	97.9	90.5	82.9	0.0

TABLE F-67
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
W61	Franklin Park	Mt. Calvary Lutheran Church	56.1	103.8	90.5	98.9	0.0	59.0	107.5	90.8	98.9	0.1
W62	Franklin Park	St. Pauls United Church of Christ	54.2	98.8	91.8	85.3	0.0	53.7	99.4	90.6	85.3	0.0
W63	Harwood Heights	Bethany Baptist Church	58.9	106.9	92.5	87.1	0.0	59.0	107.1	92.3	87.1	0.0
W64	Harwood Heights	Northside Arabic Church	60.7	108.9	93.9	86.7	0.0	60.6	108.8	93.8	86.7	0.0
W65	Itasca	Bethany United Methodist Church	59.6	102.9	97.8	84.0	0.0	59.7	102.9	97.8	84.0	0.0
W66	Itasca	Christian Fellowship Church	59.0	104.5	96.0	85.7	0.0	59.0	104.7	95.9	85.7	0.0
W67	Itasca	Hanmee Presbyterian Church	55.2	101.7	91.4	80.9	0.0	55.2	101.8	91.4	80.9	0.0
W68	Norridge	Acacia Park Evangelical Lutheran church	61.7	110.0	94.4	88.7	0.1	61.7	110.0	94.3	88.7	0.1
W69	Norridge	Church of Our Savior	63.1	111.3	96.0	89.8	0.2	63.1	111.3	96.0	89.8	0.2
W70	Norridge	Divine Savior	57.1	104.1	92.8	83.5	0.0	57.0	104.0	92.7	83.2	0.0
W71	Norridge	Zion Evangelical Lutheran Church	64.7	112.6	98.7	92.3	0.4	64.8	112.7	98.6	92.3	0.4
W72	Northlake	Bethel Fellowship Church	57.2	104.8	91.8	91.6	0.0	57.8	105.7	91.7	91.6	0.1
W73	Northlake	Iglesia Bautista Hispana Jeth	58.2	106.0	92.4	91.7	0.1	59.0	107.1	92.5	91.7	0.1
W74	Northlake	Parkview Baptist Church	58.0	105.7	92.6	92.3	0.1	58.8	106.8	92.7	92.3	0.1
W75	Northlake	St. John the Baptist Melkite Catholic Church	56.6	103.8	91.8	90.4	0.0	57.6	105.3	91.9	91.0	0.0
W76	Northlake	St. John Vianney Church	57.5	105.2	92.1	91.9	0.1	58.2	106.1	92.1	91.9	0.1
W77	Northlake	St. Peter's Syrian Orthodox Church	56.5	104.2	91.0	92.9	0.0	57.4	105.5	90.9	92.9	0.0
W78	Northlake	Trinity Presbyterian Church	63.8	111.8	97.6	97.6	0.9	64.8	113.0	98.0	97.6	1.1
W79	Park Ridge	Mary Seat of Wisdom Church	62.2	109.3	97.7	93.2	0.1	61.7	108.8	97.0	93.2	0.1
W80	Park Ridge	South Park Church	59.8	106.6	95.8	92.2	0.0	59.2	106.0	95.0	92.2	0.0
W81	Schiller Park	Grace Community Evangelical	60.8	106.0	98.0	90.1	0.0	60.0	105.4	97.1	90.1	0.0

TABLE F-67
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (PLACES OF WORSHIP)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
W82	Schiller Park	International Christian Assembly of God	60.5	105.5	97.9	88.1	0.0	59.8	105.0	97.1	88.1	0.0
W83	Schiller Park	St. Beatrice Church	60.5	105.4	97.9	87.2	0.0	59.9	104.9	97.2	87.2	0.0
W84	Wood Dale	Calvary Evangelical Lutheran Church	61.1	105.8	98.6	86.9	0.0	61.1	105.8	98.6	86.9	0.0
W85	Wood Dale	Christian Congregation	55.6	101.3	92.4	85.3	0.0	55.6	101.4	92.4	85.3	0.0
W86	Wood Dale	First Baptist Church- Wood Dale	59.6	105.9	96.0	92.7	0.0	59.6	105.9	96.0	92.7	0.0
W87	Wood Dale	St. Peter's Latvian Lutheran Church	57.4	102.8	94.5	89.3	0.0	57.4	102.8	94.5	89.3	0.0

Source: www.smartpages.com

TABLE F-68
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES A AND C AT EACH FACILITY (PARKS)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
P1	Bensenville	Bretman Park	62.3	108.0	99.1	102.4	0.3	67.0	114.6	101.6	98.3	2.5
P2	Bensenville	DiOrio Park	59.7	106.4	95.7	94.9	0.1	64.0	111.7	98.4	91.3	0.4
P3	Bensenville	Kremples Park	57.7	104.0	94.0	94.8	0.1	57.5	104.2	93.6	92.1	0.0
P4	Bensenville	Lions Park	60.6	106.9	97.0	97.9	0.1	65.0	112.6	99.7	93.2	0.7
P5	Bensenville	Pines Park	56.8	103.7	92.6	94.3	0.1	60.5	108.1	95.0	90.5	0.1
P6	Bensenville	Poplar Park	64.5	109.8	101.8	94.5	0.3	69.2	114.0	106.8	96.0	1.0
P7	Bensenville	Rose Park	57.3	103.8	93.4	90.8	0.0	57.0	104.0	92.7	94.8	0.0
P8	Bensenville	Schuster Park	63.1	108.2	100.3	102.6	0.4	69.0	117.3	102.0	103.5	5.0
P9	Bensenville	Sunrise Park	59.7	105.3	96.8	95.4	0.1	61.2	107.7	97.4	94.7	0.0
P10	Bensenville	Sunset Park	61.0	107.7	97.1	95.9	0.3	65.1	112.6	100.0	92.4	0.5
P11	Bensenville	Varble Park/ Water Park & Golf Waters	58.9	105.4	95.1	93.8	0.1	62.4	109.3	98.0	89.0	0.1
P12	Bensenville	Veterans Park	62.3	108.3	99.0	98.1	0.4	66.7	112.9	103.2	93.4	0.5
P13	Bensenville	Woodcrest Park	56.3	102.3	92.9	88.3	0.0	59.9	105.0	97.3	89.5	0.0
P14	Bensenville	Woodside Park	57.1	103.5	93.4	92.4	0.1	60.1	106.4	96.5	90.0	0.0
P15	Chicago	Grandparents Park	61.3	106.1	98.8	90.9	0.0	63.9	105.7	102.4	93.1	0.1
P16	Chicago	Mulberry Point Park	59.1	105.3	95.7	85.1	0.0	65.0	109.5	102.7	89.4	0.0
P17	Chicago	Myrtle Point Park	55.8	101.4	92.8	84.7	0.0	61.1	107.0	97.8	89.5	0.0
P18	Chicago	Norwood Circle Park	58.3	104.3	95.0	85.5	0.0	64.3	109.6	101.5	89.7	0.0
P19	Chicago	Norwood Park	59.6	106.2	95.8	83.7	0.0	64.7	107.1	103.1	84.7	0.0
P20	Chicago	Oriole Park	60.5	106.5	97.3	86.2	0.0	64.7	104.6	103.5	90.6	0.0
P21	Chicago	Summerdale Park	59.2	104.3	96.5	85.8	0.0	61.1	103.0	99.6	89.9	0.0
P22	Des Plaines	Administrative & Leisure Center	68.3	115.8	103.2	95.8	2.6	57.5	103.0	94.5	101.8	0.1
P23	Des Plaines	Apache Park	56.7	104.0	92.0	92.6	0.0	54.5	100.6	91.1	100.5	0.0
P24	Des Plaines	Arndt Park	56.8	104.3	91.7	92.9	0.0	54.0	99.9	90.8	101.4	0.0
P25	Des Plaines	Lake Park	57.3	103.4	94.0	98.0	0.0	53.1	99.8	89.1	97.9	0.0
P26	Des Plaines	McKay Neils Park	58.0	105.7	92.4	94.1	0.0	53.7	99.7	90.4	98.3	0.0
P27	Des Plaines	Seminole Park	58.7	106.1	93.7	93.2	0.0	59.9	106.8	95.7	102.3	0.0

TABLE F-68
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES A AND C AT EACH FACILITY (PARKS)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
P28	Des Plaines	Winnebago Park	55.3	101.3	92.0	92.4	0.0	50.1	96.9	85.9	90.8	0.0
P29	DuPage County	Salt Creek Park	56.1	101.5	93.3	86.9	0.0	60.4	104.3	98.4	86.1	0.0
P30	Elk Grove Village	Andrews Park	58.2	103.9	95.1	89.9	0.0	57.4	103.9	93.7	89.8	0.0
P31	Elk Grove Village	Appleseed Park	56.6	102.8	93.2	87.5	0.0	57.0	103.6	93.1	86.4	0.0
P32	Elk Grove Village	Athletic Fields	58.2	104.4	94.7	87.8	0.0	58.8	104.6	95.5	85.0	0.0
P33	Elk Grove Village	Audubon Park	57.7	104.6	93.6	87.5	0.0	58.7	105.7	94.4	87.5	0.1
P34	Elk Grove Village	Bartrum Park	58.0	104.8	94.0	89.0	0.0	58.5	105.0	94.8	90.9	0.0
P35	Elk Grove Village	Burbank Park	58.3	105.0	94.3	87.3	0.0	59.4	105.8	95.7	90.9	0.0
P36	Elk Grove Village	Fairchild Park	59.2	106.2	94.7	88.2	0.0	60.2	106.8	96.3	87.7	0.0
P37	Elk Grove Village	Lions Park	56.6	103.0	92.8	86.3	0.0	57.1	104.0	92.9	85.6	0.0
P38	Elk Grove Village	Muir Park	60.2	107.2	95.6	89.8	0.1	60.7	106.6	97.5	89.5	0.1
P39	Elk Grove Village	Olmstead Park	57.7	104.5	93.6	86.8	0.0	60.1	107.7	94.6	87.3	0.0
P40	Elk Grove Village	Osborn Park	61.0	105.9	98.4	90.7	0.1	57.3	103.7	93.7	89.5	0.0
P41	Elk Grove Village	Sanders Park	58.6	105.1	94.9	89.9	0.0	58.7	104.9	95.1	91.6	0.0
P42	Elk Grove Village	Udall Park	63.8	108.4	101.5	92.3	0.2	59.2	105.0	96.1	87.4	0.1
P43	Franklin Park	Hawthorne Park	64.3	103.0	103.3	96.1	0.2	56.2	103.5	91.4	91.7	0.0
P44	Franklin Park	Iceland Park	60.1	105.4	97.4	90.0	0.1	59.5	106.9	94.5	94.2	0.0
P45	Franklin Park	James Park	63.2	109.0	100.0	96.9	0.1	57.5	105.8	90.1	96.4	0.0
P46	Franklin Park	Linden Park	65.8	105.3	104.7	95.8	0.3	57.3	104.4	92.6	94.1	0.0
P47	Franklin Park	North Park	62.5	106.1	100.6	90.8	0.2	59.2	106.4	94.5	96.6	0.0
P49	Franklin Park	Pine Park	57.4	102.1	95.0	94.3	0.0	57.4	105.4	91.0	90.0	0.0
P50	Franklin Park	Robinson and Crusoe Park	56.1	102.3	92.6	89.7	0.0	57.8	105.9	91.1	89.4	0.1
P51	Franklin Park	Ruby-Addison Park	59.1	104.5	96.3	92.6	0.1	58.3	106.0	92.6	93.9	0.1
P52	Harwood Heights	St. Rosalie's Kiddie Park	57.7	102.0	95.5	86.4	0.0	57.2	105.3	90.7	83.0	0.0
P53	Harwood Heights	Tot Park	57.2	101.6	94.9	86.9	0.0	56.7	104.8	90.2	82.3	0.0
P54	Itasca	Benson Park	55.3	101.3	92.0	85.9	0.0	56.2	102.5	92.7	86.8	0.0
P55	Itasca	Clayson Park	57.3	103.5	93.9	84.3	0.0	57.8	102.1	95.6	83.6	0.0
P56	Itasca	Country Club Park	58.0	104.1	94.6	86.0	0.0	59.0	103.2	96.8	84.8	0.0
P57	Itasca	Franzen Park	56.3	102.9	92.3	85.1	0.0	57.1	103.0	93.9	83.4	0.0
P58	Itasca	Peacoak Park	57.7	103.8	94.3	85.3	0.0	58.3	102.4	96.1	84.1	0.0
P59	Itasca	Schiller Park	61.8	107.5	98.7	85.5	0.0	64.2	106.2	102.7	87.3	0.1

TABLE F-68
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES A AND C AT EACH FACILITY (PARKS)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
P60	Itasca	Washington Park	60.1	106.0	96.9	85.7	0.0	62.4	106.2	100.4	86.9	0.0
P61	Norridge	Norridge Park	64.7	108.7	102.5	90.1	0.1	62.0	109.9	95.8	90.1	0.1
P62	Park Ridge	Brickton Park	59.7	104.9	96.9	90.7	0.0	65.3	112.2	101.1	91.2	0.2
P63	Park Ridge	Centennial Park	54.3	102.3	88.0	84.6	0.0	57.2	105.1	91.4	94.1	0.0
P64	Park Ridge	Jaycee Park	57.7	103.0	94.9	87.2	0.0	62.7	109.5	98.5	91.6	0.0
P65	Park Ridge	Southwest Park	59.6	104.8	97.0	90.7	0.0	64.2	111.7	99.0	93.0	0.2
P66	Schiller Park	Fairview Park	65.4	110.7	102.6	97.4	0.6	66.9	111.0	104.8	103.4	0.8
P67	Schiller Park	Kennedy Park/Memorial Pool	60.9	107.8	96.6	97.9	0.5	62.6	110.4	96.8	97.0	0.4
P68	Schiller Park	North Village Park	66.3	110.4	104.2	95.3	0.2	70.0	117.6	104.5	97.7	5.7
P69	Schiller Park	Stalica Park	57.6	104.2	93.6	91.3	0.1	60.9	108.5	95.5	91.9	0.1
P70	Schiller Park	Wm. M. Dooley Memorial Park	63.9	108.8	101.3	100.3	0.1	66.8	112.8	103.5	94.7	0.2
P71	Wood Dale	Brookwood Park	55.2	100.1	92.7	85.3	0.0	56.6	102.5	93.4	86.0	0.0
P72	Wood Dale	Central Park	65.4	111.0	102.4	92.6	0.5	68.8	110.3	107.3	93.7	0.7
P73	Wood Dale	Community Park	61.3	106.1	98.8	90.8	0.1	62.9	106.3	101.1	91.8	0.1
P74	Wood Dale	Lionwood Park	59.2	104.7	96.4	87.2	0.0	62.6	108.5	99.4	88.1	0.1
P75	Wood Dale	Veteran's Memorial Park	60.9	106.5	98.0	88.2	0.0	63.9	109.5	101.0	89.6	0.1
P76	Wood Dale	White Oak Park	57.0	102.2	94.3	87.4	0.0	61.6	107.2	98.6	87.1	0.1
P77	Wood Dale	Wood Dale Water Park	61.8	107.4	98.8	88.3	0.1	65.0	110.1	102.4	90.4	0.2
PP1	Elk Grove Village	LGK Pocket Park (under construction)	68.4	114.5	104.9	103.3	1.8	69.9	118.8	100	104.2	7.4
PP2	Elk Grove Village	Pocket Park #2 (under construction)	67.3	114.9	101.8	98	2.3	66.7	113.2	103	97.7	0.8
PP3	Elk Grove Village	Pocket Park #3 (under construction)	66.4	113.9	101.2	96.7	1.7	65.1	111.3	101.7	96.2	0.6
PP4	Elk Grove Village	Pocket Park #4 (under construction)	66.1	113.3	101.5	96.3	0.8	65.6	111.9	102	96.8	0.7
PP5	Elk Grove Village	Pocket Park #5 (under construction)	66.1	113.3	101.5	96.3	0.8	65.6	111.9	102	96.8	0.7
PP6	Elk Grove Village	Pocket Park #6 (future)	66.1	113.3	101.5	96.3	0.8	65.6	111.9	102	96.8	0.7

TABLE F-68
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES A AND C AT EACH FACILITY (PARKS)

			Build Out + 5 Alternative A (No Action Alternative)					Build Out + 5 Alternative C				
Map ID	**City**	**Name**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**	**DNL**	**SEL Day**	**SEL Night**	**Lmax**	**Time Above 85 dB**
PP7	Elk Grove Village	Pocket Park #7 (under construction)	66.1	113.3	101.5	96.3	0.8	65.6	111.9	102	96.8	0.7
PP8	Elk Grove Village	Pocket Park #8 (future)	65	112.6	99.6	95.8	1	63.3	109.6	99.7	92	0.2
PP9	Elk Grove Village	Pocket Park #9 (existing)	64.7	112.1	99.6	95	0.4	64.1	110.5	100.3	94.9	0.4
PP10	Elk Grove Village	Pocket Park #10 (future)	64.7	112.1	99.6	95	0.4	64.1	110.5	100.3	94.9	0.4
PP11	Elk Grove Village	Pocket Park #11 (future)	64.3	111.4	99.7	93.2	0.2	66.1	113.3	101.3	95.5	0.9
PP12	Elk Grove Village	Pocket Park #12 (existing)	64.3	111.4	99.7	93.2	0.2	66.1	113.3	101.3	95.5	0.9
PP13	Elk Grove Village	Pocket Park #13 (future)	61.3	108.7	96.2	91.1	0.1	61.2	107.3	97.9	94.1	0.2
PP14	Elk Grove Village	Pocket Park #14 (future)	60.8	108.2	95.8	91.2	0.1	63	110.7	97.3	92.4	0.2
PP15	Elk Grove Village	Pocket Park #15 (existing)	63.9	108.6	101.5	92.5	0.2	59.6	105.4	96.6	88.5	0.1
PP16	Elk Grove Village	Pocket Park #16 (future)	66.8	110.8	104.7	93.8	0.7	60.9	105.8	98.3	92	0.2
PP17	Elk Grove Village	Pocket Park #17 (future)	68	112.1	105.9	95.5	0.9	61.8	107.1	99.1	93.6	0.3
PP18	Elk Grove Village	Pocket Park #18 (existing)	68	112.1	105.9	95.5	0.9	61.8	107.1	99.1	93.6	0.3
PP19	Elk Grove Village	Pocket Park #19 (future)	68	112.1	105.9	95.5	0.9	61.8	107.1	99.1	93.6	0.3
PP20	Elk Grove Village	Pocket Park #20 (future)	63.7	107.7	101.5	90.7	0.1	56.6	102.8	93.1	87.9	0

Note: P48 was omitted from Park numbering.
Source: DuPage County Park District, Cook County Park District, Community Park Districts.

TABLE F-69
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (PARKS)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
P1	Bensenville	Bretman Park	63.8	107.5	101.8	98.3	0.0	63.8	107.8	101.7	98.3	0.0
P2	Bensenville	DiOrio Park	60.9	105.6	98.4	91.2	0.0	60.9	105.8	98.4	91.2	0.0
P3	Bensenville	Kremples Park	55.8	100.0	93.6	92.1	0.0	56.1	100.7	93.7	92.1	0.0
P4	Bensenville	Lions Park	62.1	106.6	99.8	92.5	0.0	62.2	106.8	99.8	92.5	0.0
P5	Bensenville	Pines Park	57.5	102.3	95.0	90.5	0.0	57.5	102.5	94.9	90.5	0.0
P6	Bensenville	Poplar Park	69.5	114.2	107.0	96.0	0.9	69.4	114.3	106.9	96.0	0.9
P7	Bensenville	Rose Park	55.1	99.7	92.8	94.8	0.0	55.4	100.3	92.8	94.8	0.0
P8	Bensenville	Schuster Park	64.0	107.7	101.9	95.3	0.0	64.0	108.1	101.9	95.3	0.0
P9	Bensenville	Sunrise Park	59.4	103.2	97.4	94.7	0.0	59.6	103.7	97.4	94.7	0.0
P10	Bensenville	Sunset Park	63.1	108.8	100.1	90.4	0.0	63.1	108.9	100.1	90.4	0.0
P11	Bensenville	Varble Park/ Water Park & Golf Waters	61.5	107.6	98.0	88.5	0.0	61.5	107.7	98.0	88.5	0.0
P12	Bensenville	Veterans Park	66.4	112.2	103.3	93.4	0.4	66.4	112.3	103.2	93.4	0.4
P13	Bensenville	Woodcrest Park	60.2	105.7	97.2	89.5	0.0	60.2	105.7	97.2	89.5	0.0
P14	Bensenville	Woodside Park	59.8	105.8	96.4	90.0	0.0	59.8	105.8	96.4	90.0	0.0
P15	Chicago	Grandparents Park	64.0	105.8	102.6	93.1	0.1	64.0	105.7	102.6	91.1	0.1
P16	Chicago	Mulberry Point Park	65.0	109.4	102.7	89.3	0.0	65.1	109.3	103.0	89.4	0.0
P17	Chicago	Myrtle Point Park	61.2	107.2	97.9	89.3	0.0	61.3	106.9	98.3	89.5	0.0
P18	Chicago	Norwood Circle Park	64.4	109.7	101.6	89.7	0.0	64.5	109.5	101.9	89.7	0.0
P19	Chicago	Norwood Park	64.7	107.0	103.2	84.7	0.0	64.8	107.0	103.3	84.7	0.0
P20	Chicago	Oriole Park	64.8	104.4	103.6	90.6	0.0	64.8	104.5	103.7	87.6	0.0
P21	Chicago	Summerdale Park	61.2	102.5	99.8	89.9	0.0	61.3	103.3	99.8	85.2	0.0
P22	Des Plaines	Administrative & Leisure Center	58.7	104.2	95.8	101.8	0.1	57.8	103.4	94.9	101.8	0.1
P23	Des Plaines	Apache Park	56.7	101.6	94.1	100.5	0.0	53.4	99.5	90.0	100.5	0.0
P24	Des Plaines	Arndt Park	56.1	101.6	93.1	101.4	0.0	53.1	99.0	89.8	101.4	0.0
P25	Des Plaines	Lake Park	55.0	100.6	91.9	97.9	0.0	52.4	99.1	88.5	97.9	0.0
P26	Des Plaines	McKay Neils Park	55.5	102.2	91.6	98.3	0.0	53.1	99.2	89.6	98.3	0.0
P27	Des Plaines	Seminole Park	60.6	107.4	96.5	102.3	0.0	59.5	106.5	95.2	102.3	0.0

TABLE F-69
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (PARKS)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
P28	Des Plaines	Winnebago Park	53.0	100.0	88.5	90.8	0.0	50.1	97.2	85.6	90.8	0.0
P29	DuPage County	Salt Creek Park	60.6	104.8	98.4	86.1	0.0	60.6	104.8	98.3	86.1	0.0
P30	Elk Grove Village	Andrews Park	57.4	103.6	93.8	89.8	0.0	57.3	103.6	93.7	89.8	0.0
P31	Elk Grove Village	Appleseed Park	56.9	103.2	93.2	86.4	0.0	56.8	103.2	93.1	86.4	0.0
P32	Elk Grove Village	Athletic Fields	60.3	105.7	97.4	88.4	0.0	60.3	106.0	97.2	88.4	0.0
P33	Elk Grove Village	Audubon Park	59.0	105.4	95.4	87.5	0.1	58.5	105.3	94.5	87.5	0.1
P34	Elk Grove Village	Bartrum Park	58.5	104.6	95.2	90.9	0.0	58.3	104.5	94.9	90.9	0.0
P35	Elk Grove Village	Burbank Park	60.0	106.1	96.5	90.9	0.0	59.6	106.1	95.8	90.9	0.0
P36	Elk Grove Village	Fairchild Park	60.7	106.9	97.2	87.7	0.0	60.3	106.8	96.4	87.7	0.0
P37	Elk Grove Village	Lions Park	57.2	103.4	93.7	85.6	0.0	56.8	103.4	92.9	85.6	0.0
P38	Elk Grove Village	Muir Park	60.8	106.6	97.7	89.5	0.1	60.8	106.7	97.5	89.5	0.1
P39	Elk Grove Village	Olmstead Park	61.2	107.8	97.3	87.3	0.0	60.2	107.7	95.0	87.3	0.0
P40	Elk Grove Village	Osborn Park	57.2	103.4	93.7	89.5	0.0	57.2	103.3	93.7	89.5	0.0
P41	Elk Grove Village	Sanders Park	58.6	104.5	95.3	91.6	0.0	58.5	104.5	95.2	91.6	0.0
P42	Elk Grove Village	Udall Park	58.9	104.2	96.1	87.4	0.1	58.9	104.2	96.0	87.4	0.1
P43	Franklin Park	Hawthorne Park	55.1	100.4	92.2	88.2	0.0	55.4	102.1	91.5	88.2	0.0
P44	Franklin Park	Iceland Park	57.0	101.3	94.7	87.0	0.0	56.4	101.3	93.8	87.0	0.0
P45	Franklin Park	James Park	58.2	106.7	90.5	96.4	0.0	61.0	109.8	91.5	99.0	0.1
P46	Franklin Park	Linden Park	56.6	102.7	93.2	89.3	0.0	58.1	105.4	93.3	92.9	0.0
P47	Franklin Park	North Park	57.7	102.8	95.0	91.1	0.0	57.7	103.6	94.4	91.1	0.0
P49	Franklin Park	Pine Park	53.9	98.3	91.6	81.8	0.0	53.1	98.5	90.3	81.8	0.0
P50	Franklin Park	Robinson and Crusoe Park	54.8	99.2	92.5	83.0	0.0	53.6	98.7	90.9	83.0	0.0
P51	Franklin Park	Ruby-Addison Park	55.8	100.6	93.3	87.8	0.0	55.3	101.0	92.3	87.8	0.0
P52	Harwood Heights	St. Rosalie's Kiddie Park	57.1	105.3	90.1	83.0	0.0	56.9	105.2	89.8	83.0	0.0
P53	Harwood Heights	Tot Park	56.6	104.8	89.6	82.3	0.0	56.4	104.6	89.3	82.3	0.0
P54	Itasca	Benson Park	56.0	101.8	92.9	86.8	0.0	56.1	101.9	92.9	86.8	0.0
P55	Itasca	Clayson Park	57.9	102.2	95.7	83.6	0.0	57.9	102.2	95.7	83.6	0.0
P56	Itasca	Country Club Park	59.2	103.3	97.0	84.8	0.0	59.2	103.3	97.0	84.8	0.0
P57	Itasca	Franzen Park	57.4	103.1	94.4	83.3	0.0	57.4	103.2	94.3	83.3	0.0
P58	Itasca	Peacoak Park	58.4	102.5	96.2	84.1	0.0	58.4	102.5	96.2	84.1	0.0
P59	Itasca	Schiller Park	64.2	106.3	102.6	87.3	0.1	64.2	106.4	102.7	87.3	0.1

TABLE F-69
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (PARKS)

			Build Out + 5 Alternative D					Build Out + 5 Alternative G				
Map ID	City	Name	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
P60	Itasca	Washington Park	62.4	106.2	100.4	86.9	0.0	62.5	106.3	100.4	86.9	0.0
P61	Norridge	Norridge Park	62.0	110.2	95.0	90.1	0.1	62.0	110.3	94.9	90.1	0.1
P62	Park Ridge	Brickton Park	65.6	112.4	101.5	91.2	0.2	65.3	112.1	101.2	91.2	0.2
P63	Park Ridge	Centennial Park	58.3	105.6	93.5	94.1	0.0	57.4	105.1	91.9	94.1	0.0
P64	Park Ridge	Jaycee Park	63.0	109.7	99.0	91.6	0.0	62.7	109.4	98.7	91.6	0.0
P65	Park Ridge	Southwest Park	64.8	112.1	100.0	93.0	0.2	64.3	111.7	99.4	93.0	0.2
P66	Schiller Park	Fairview Park	67.4	112.2	104.9	103.4	1.1	67.1	111.0	104.9	103.4	0.8
P67	Schiller Park	Kennedy Park/Memorial Pool	59.5	104.4	97.0	92.2	0.0	59.1	104.4	96.3	92.2	0.0
P68	Schiller Park	North Village Park	70.2	118.0	104.6	97.7	6.5	70.0	117.9	104.1	97.7	6.4
P69	Schiller Park	Stalica Park	59.7	105.0	96.9	89.3	0.1	58.7	104.2	95.8	89.3	0.0
P70	Schiller Park	Wm. M. Dooley Memorial Park	66.7	111.6	104.2	92.6	0.2	66.3	111.3	103.7	92.6	0.2
P71	Wood Dale	Brookwood Park	56.5	102.1	93.4	86.0	0.0	56.5	102.2	93.4	86.0	0.0
P72	Wood Dale	Central Park	68.7	110.3	107.2	93.7	0.7	68.7	110.3	107.3	93.7	0.7
P73	Wood Dale	Community Park	63.1	106.4	101.2	91.8	0.1	63.0	106.4	101.2	91.8	0.1
P74	Wood Dale	Lionwood Park	62.8	108.4	99.8	88.1	0.1	62.8	108.5	99.7	88.1	0.1
P75	Wood Dale	Veteran's Memorial Park	64.1	109.5	101.3	89.6	0.1	64.2	109.6	101.2	89.6	0.1
P76	Wood Dale	White Oak Park	61.3	106.5	98.6	87.1	0.0	61.3	106.5	98.6	87.1	0.0
P77	Wood Dale	Wood Dale Water Park	65.2	110.1	102.6	90.4	0.2	65.2	110.2	102.6	90.4	0.2
PP1	Elk Grove Village	LGK Pocket Park (under construction)	72.1	119.3	107.3	104.2	8.4	70.5	119.1	101.7	104.2	7.8
PP2	Elk Grove Village	Pocket Park #2 (under construction)	66.4	112.5	103	97.7	0.8	66.4	112.5	102.9	97.7	0.8
PP3	Elk Grove Village	Pocket Park #3 (under construction)	64.8	110.5	101.7	96.2	0.6	64.7	110.5	101.6	96.2	0.6
PP4	Elk Grove Village	Pocket Park #4 (under construction)	65.4	111.2	102.2	96.8	0.6	65.2	111.2	101.9	96.8	0.6
PP5	Elk Grove Village	Pocket Park #5 (under construction)	65.4	111.2	102.2	96.8	0.6	65.2	111.2	101.9	96.8	0.6
PP6	Elk Grove Village	Pocket Park #6 (future)	65.4	111.2	102.2	96.8	0.6	65.2	111.2	101.9	96.8	0.6

TABLE F-69
SUPPLEMENTAL METRICS FOR BUILD OUT + 5 ALTERNATIVES D AND G AT EACH FACILITY (PARKS)

Map ID	City	Name	Build Out + 5 Alternative D					Build Out + 5 Alternative G				
			DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB	DNL	SEL Day	SEL Night	Lmax	Time Above 85 dB
PP7	Elk Grove Village	Pocket Park #7 (under construction)	65.4	111.2	102.2	96.8	0.6	65.2	111.2	101.9	96.8	0.6
PP8	Elk Grove Village	Pocket Park #8 (future)	63	108.8	99.8	92	0.2	62.9	108.8	99.7	92	0.2
PP9	Elk Grove Village	Pocket Park #9 (existing)	64	110	100.8	94.9	0.4	63.7	109.9	100.3	94.9	0.4
PP10	Elk Grove Village	Pocket Park #10 (future)	64	110	100.8	94.9	0.4	63.7	109.9	100.3	94.9	0.4
PP11	Elk Grove Village	Pocket Park #11 (future)	66.9	113.2	103.3	95.5	1	66	113.1	101.5	95.5	1
PP12	Elk Grove Village	Pocket Park #12 (existing)	66.9	113.2	103.3	95.5	1	66	113.1	101.5	95.5	1
PP13	Elk Grove Village	Pocket Park #13 (future)	61.2	107.1	98	94.1	0.2	61.1	107.1	97.9	94.1	0.2
PP14	Elk Grove Village	Pocket Park #14 (future)	64.1	110.8	100.2	92.4	0.3	63	110.6	97.7	92.4	0.2
PP15	Elk Grove Village	Pocket Park #15 (existing)	59.3	104.5	96.5	88.5	0.1	59.2	104.5	96.5	88.5	0.1
PP16	Elk Grove Village	Pocket Park #16 (future)	60.4	104.6	98.2	92	0.2	60.4	104.5	98.2	92	0.2
PP17	Elk Grove Village	Pocket Park #17 (future)	61.3	105.7	99	93.6	0.3	61.2	105.7	98.9	93.6	0.3
PP18	Elk Grove Village	Pocket Park #18 (existing)	61.3	105.7	99	93.6	0.3	61.2	105.7	98.9	93.6	0.3
PP19	Elk Grove Village	Pocket Park #19 (future)	61.3	105.7	99	93.6	0.3	61.2	105.7	98.9	93.6	0.3
PP20	Elk Grove Village	Pocket Park #20 (future)	56.4	102.3	93.1	87.9	0	56.4	102.3	93.1	87.9	0

Note: P48 was omitted from Park numbering.
Source: DuPage County Park District, Cook County Park District, Community Park Districts.

F.4 SUPPLEMENTAL NOISE ASSEMENTS

F.4.1 Ground Noise

In addition to noise from aircraft operations, noise assessments were done for ground activity. The following noise sources were evaluated:

- Aircraft Ground Movements,
- Roadway Vehicle Traffic, and
- Rail Noise and Vibration.

F.4.1.1 Aircraft Ground Movements

The primary noise sources included in the aircraft ground noise analysis are:

- Aircraft taxiing between arrival/departure runways and passenger gate areas or cargo areas.
- Aircraft idling while in departure queues.
- Aircraft idling while holding before approaching gate areas.
- Aircraft ground maintenance run-ups in the Ground Run-up Enclosure (GRE) and at the existing Runway 9R (potential future 10L) hold pad.
- Auxiliary Power Units (APUs) on cargo aircraft after arrival and prior to departure from air cargo areas.

APUs on air-carrier aircraft were not included in the evaluation because 400-Hertz power and pre-conditioned air would be provided by equipment built-in at each new gate. In addition, because the noise exposure contours produced by the INM include both takeoff roll and use of thrust reversers upon landing, these noise sources were not included in the evaluation of aircraft ground operations.

For each type of operation and every prediction site, the modeling needed to account for:

- Sound propagation characteristics between the noise source and the prediction site,
- Noise emission level data for each type of aircraft ground operation, and
- Aircraft operational data; i.e. how many of each type of operation occurred at which locations during either the day or the night.

The follow sections of the report describe each of these components of the analysis.

Sound Propagation Model

The commercially-available SoundPLAN computer model[30] was used to estimate sound propagation characteristics between each noise source and each prediction site. SoundPLAN provides an estimate of sound levels at a distance from a specific noise source, or sources, taking into account:

- Specific characteristics of each noise source including its frequency spectrum and directivity characteristics.
- Terrain features including relative elevations of noise sources, receivers, and intervening objects.
- Ground effects due to areas of pavement and unpaved ground. Large paved areas including airport ramp areas were specifically coded into the model. Composite characteristics were used for other areas including the airfield and residential areas.
- Shielding and reflections due to intervening buildings or other structures and diffracted paths around and over structures.
- Atmospheric effects on sound propagation. The SoundPLAN model includes several different methods of accounting for atmospheric effects on sound propagation. For this evaluation, the model's implementation of ISO Standard 9613-2[31] was used. ISO 9613-2 specifies use of "wind direction . . . with the wind blowing from the source to the receiver, and wind speed between approximately 1 m/s and 5 m/s . . . ."[32] The equations in the Standard "also hold, equivalently, for average propagation under a well-developed moderate ground-based temperature inversion, such as commonly occurs on clear, calm nights." Use of this Standard provides a conservatively-high estimate of community sound levels caused by ground-based airport sources.

Because of these features, the SoundPLAN model is more appropriate for evaluation of aircraft ground operations than the Integrated Noise Model (INM), which is intended primarily for the evaluation of aircraft flight operations.

The following sections describe the specific approaches for modeling each type of aircraft ground operation included in the evaluation.

Aircraft Taxiing and Idling

For a given scenario, the aircraft taxi noise model was based on the corresponding data provided in CCT's TAAM data packages, including:

- Percentage of runway use by operation and aircraft category
- Percentage of gate use by operation and aircraft category

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[30] SoundPLAN Version 6.2 is the current release and was used in the evaluation. Documentation provided in SoundPLAN User's Manual, Braunstein + Berndt GmbH, January 2004.

[31] ISO Standard 9613-2, "Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation," International Organization for Standardization, Geneva, 1996.

[32] Wind speeds of 2 miles per hour and 11 miles per hour, respectively.

- Unimpeded taxi time between gate and runway, by operation
- Delay and queue time between gate and runway, by operation

The Airfield Circulation section of each CCT's TAAM data packages also provided descriptions and schematic drawings of primary taxi routes, for each combination of gate, runway and operation.

Based on the schematic diagram of taxi routes from each of the scenario's operating configurations, each taxi route was broken up into a finite number of taxiway segments. The discrete taxiway segments represent the aggregate of possible aircraft positions while taxiing. The segments were then numbered to construct a model where each of the routes was accounted for by some subset of the numbered taxi segments. Some segments were incorporated in multiple taxi routes.

In a similar manner, the various gate areas were grouped by location and then broken into gate "segments" to make up the gate grouping. Typically, the gate segments represented both the area in close vicinity to the gate, as well as the taxiing area adjacent to the gate. In this way, the gate segment represented a gate area entry/exit point and encompassed taxi routes to and from each individual gate and ground maneuvers in the vicinity of each specific gate.

Based on gate, runway and operational data given in the CCT TAAM data packages, the annual average percentage of use was determined for each taxi route. Each route also had a corresponding average unimpeded taxi time distributed along its length. The overall combined use of each segment (accounting for use by all taxi routes) was calculated by summing the percent data and time duration for each occurrence of the segment along a route and multiplying by the number of annual average daily operations for the given scenario. These results were then added to the average daily queue/delay time at appropriate segments. The resulting distribution identified the approximate time that taxiing and idling aircraft were present at each segment on an annual basis, including time spent in queues.

Aircraft Ground Run-ups

This analysis assumes that the current GRE location would move in the Build Alternatives. The relocation of the GRE would not affect usage, although any differences in total aircraft operations between the No Action Alternative and Build Alternatives were considered in estimating the number of run-ups.

The distribution of run-up locations, orientations, and times was determined for each of five representative categories based on the maximum gross takeoff weight listed in the INM 6.1 standard database (see Noise Emission Level Data, below). The data was based upon a log of run-up operations provided by the City of Chicago for the period of May 1997 to July 2004. This distribution was applied to the total number of forecast run-ups for each year. The City of Chicago provided data on run-up durations for various airlines.

- The average run-up duration was based upon a weighted average of the number of operations by each airline in the log of run-up operations from 1997 to 2004.
- Three run-up locations were modeled: the GRE, and Runway 9R hold pad.
- All run-ups in the GRE were assumed to occur with the aircraft heading in the direction of the GRE opening (i.e., nose out).
- The GRE was assumed to provide 20 dB of noise reduction in directions receiving shielding.
- For run-ups occurring on the Runway 9R hold pad, the aircraft orientation was broken down by north, south, east, and west as dictated by the logged wind direction at the time of the run-up.
- The time of day that each run-up occurs was characterized as daytime or nighttime.

Noise Emission Level Data

The SoundPLAN model requires detailed noise emission level data to characterize each source included in the model. Data used in this evaluation includes:

- One-third octave band spectra
- Directivity
- Source height

This detailed information, which is not available in the INM 6.1 database, is necessary for detailed modeling of aircraft ground noise sources taking into account acoustical characteristics of various ground types (i.e., pavement, grass, etc.) and shielding provided by buildings, noise barriers, berms, and other terrain features. The following sections describe the sources of this information for the modeled aircraft ground operations. Tables showing the actual emission level data used as input to the SoundPLAN model for each type of modeled operation and aircraft type shown in the *OM EIS Aircraft Ground Noise Analysis, Attachment B*.

Aircraft Taxiing and Idling

All aircraft included in the INM modeling for each scenario also were included in the ground noise taxi/idle modeling. Emission level data for taxiing and idling aircraft were based upon measurement data from similar previous studies and, when available, from manufacturer's data. The aircraft were divided into five representative categories based on the maximum gross takeoff weight listed in the INM 6.1 standard database. Emission level data for one representative aircraft type was then used to characterize each of the categories. The five groups and the representative aircraft types are:

- Jumbo Air Carrier (B747),
- Heavy Air Carrier (B767),
- Large Air Carrier (B737),
- Regional and Corporate Jets (CRJ), and
- Propeller Aircraft (B1900).

Ground Run-ups

The emission level data for ground run-ups were extracted from the INM 6.1 database after grouping all aircraft conducting ground run-ups into the same five categories used for the taxi/idle modeling, as described above. The extracted data included the INM's standard directivity pattern for all run-ups, overall sound levels at a reference distance as computed by the INM, and spectral data based upon the INM's spectral class for each of the five representative aircraft types.

Auxiliary Power Units

As noted above, APUs on air-carrier aircraft were not included in the evaluation because 400-Hertz ground power and pre-conditioned air would be provided by equipment built-in at each gate. APUs may be turned on briefly to facilitate starting an aircraft's main engines even when ground power is used. However, because the APU run times would be brief compared to overall taxi and idle time with the aircraft's main engines running, air-carrier aircraft APUs would make only an insignificant contribution to overall noise exposure at community locations.

In contrast, APUs on cargo aircraft may run for extended periods after aircraft arrive at and before they depart from cargo facilities. Cargo aircraft APUs were modeled at each of the air cargo areas under each alternative. The two most common cargo aircraft categories at O'Hare in all modeled cases are "heavy" and "jumbo" jets, represented in this evaluation by the B767 and B747, respectively. An evaluation of measured APU emission levels for these two aircraft gave similar results. Therefore, the B767 APU was used to represent all cargo aircraft APUs.

Operational Inputs

Operational inputs to the noise model included:

- Daily numbers of aircraft operations projected on an annual average basis for each modeled alternative and divided into daytime (7 AM to 9:59:59 PM) and nighttime (10 PM to 6:59:59 AM)
- Aircraft fleet mix (percentage of each type of aircraft) for each modeled alternative
- Average times spent taxiing, in departure queues, and holding in gate areas for each alternative
- Average APU run times for cargo aircraft

- Typical taxi paths to/from runways and gate areas or cargo and General Aviation (GA) ramp areas
- Daily numbers of ground maintenance run-ups projected on an annual average basis for each modeled alternative and divided into daytime (7 AM to 9:59:59 PM) and nighttime (10 PM to 6:59:59 AM)
- Percentage of ground maintenance run-ups occurring both in the GRE and in unmitigated locations for each alternative
- Typical ground maintenance run-up durations and power settings

The following sections describe the specific approaches used to account for each of these operational inputs.

Taxiing and Idling

For each of the four alternatives evaluated, the aircraft taxi noise model was based on the corresponding data provided in the CCT TAAM data packages, including:

- Percentage of runway use by operation and aircraft category
- Percentage of gate use by operation and aircraft category
- Unimpeded taxi time between gate and runway, by operation
- Delay and queue time between gate and runway, by operation

The Airfield Circulation section of each CCT TAAM data packages provided descriptions and schematic drawings of primary taxi routes, for each combination of gate, runway and operation.

Based on the schematic diagram of taxi routes from each of the scenario's operating configurations, each taxi route was broken up into a finite number of taxiway segments. The discrete taxiway segments represent the aggregate of possible aircraft positions while taxiing. The segments were then numbered to construct a model where each of the routes was accounted for by some subset of the numbered taxi segments. Some segments were incorporated in multiple taxi routes.

In a similar manner, the various gate areas were grouped by location and then broken into gate "segments" to make up the gate grouping. Typically, the gate segments represented both the area in close vicinity to the gate, as well as the taxiing area adjacent to the gate. In this way, the gate segment represented a gate area entry/exit point and encompassed taxi routes to and from each individual gate and ground maneuvers in the vicinity of each specific gate.

Based on gate, runway and operational data given in the CCT TAAM data packages, the annual average percentage of use was determined for each taxi route. Each route also had a corresponding average unimpeded taxi time distributed along its length. The overall combined use of each segment (accounting for use by all taxi routes) was calculated by summing the percent data and time duration for each occurrence of the segment along a route and multiplying by the number of annual average daily operations for the given scenario. These results were then added to the average daily queue/delay time at appropriate segments. The

resulting distribution identified the approximate time that taxiing and idling aircraft were present at each segment on an annual basis, including time spent in queues.

Exhibit F-19 and **Exhibit F-20** show the modeled taxi and idle noise source locations. Modeled taxi and idle durations for each aircraft category at each of the source locations shown are summarized in *O'Hare Modernization EIS Aircraft Ground Noise Analysis, Attachment C*.[33] The noise sources on the figures are color-coded to identify modeled locations for taxiing/idling (including departure queues and ramp holds near gate areas), ground run-ups, and cargo aircraft APUs.

[33] The *O'Hare Modernization EIS Aircraft Ground Noise Analysis* report can be found at the end of this Appendix as **Attachment F-3.**

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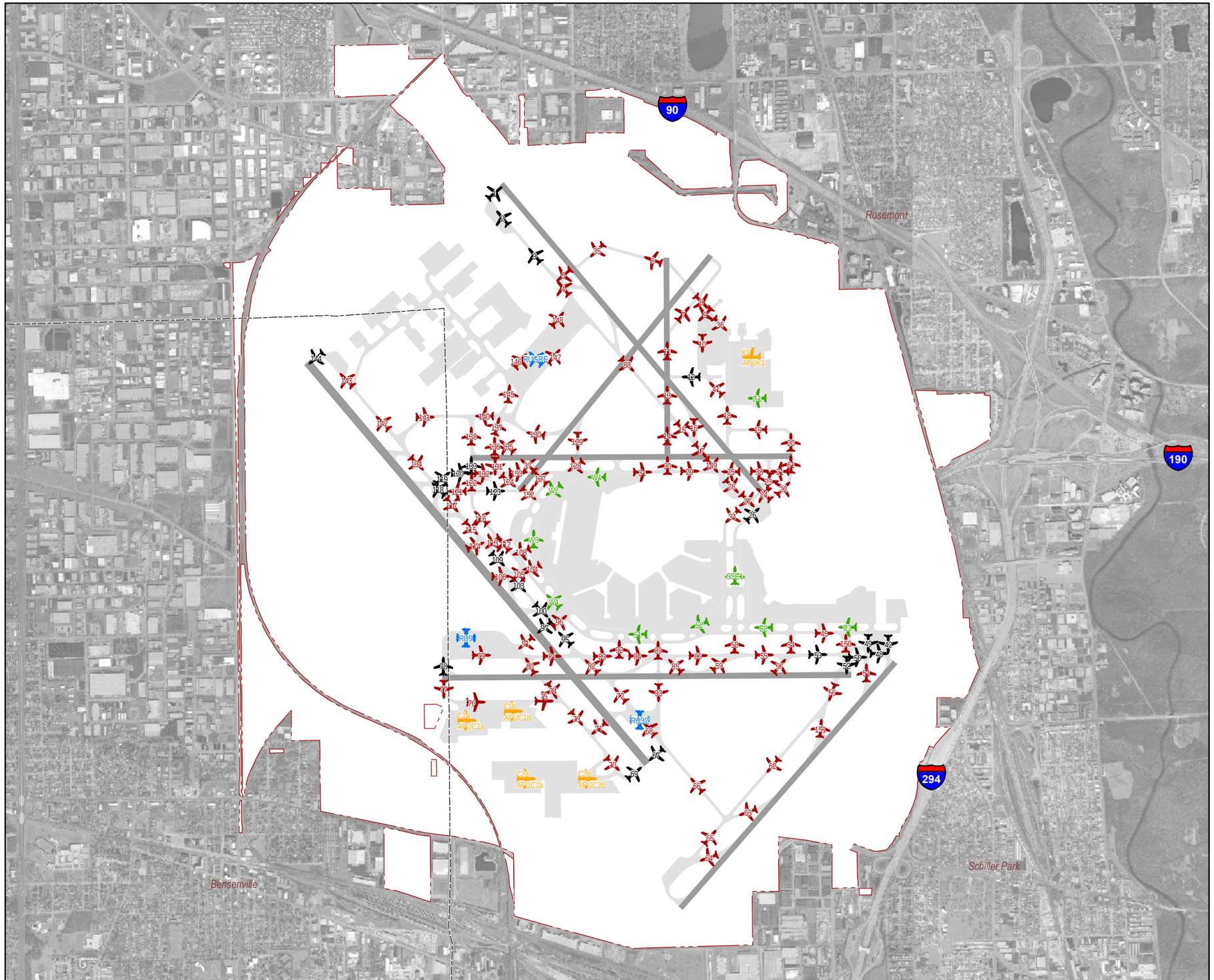


Source: Harris Miller Miller & Hanson Inc., Data Source: Northeastern Illinois Planning Commission; Leigh Fisher Associates, 2004; DuPage Co., 2002; ESRI, 2004

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

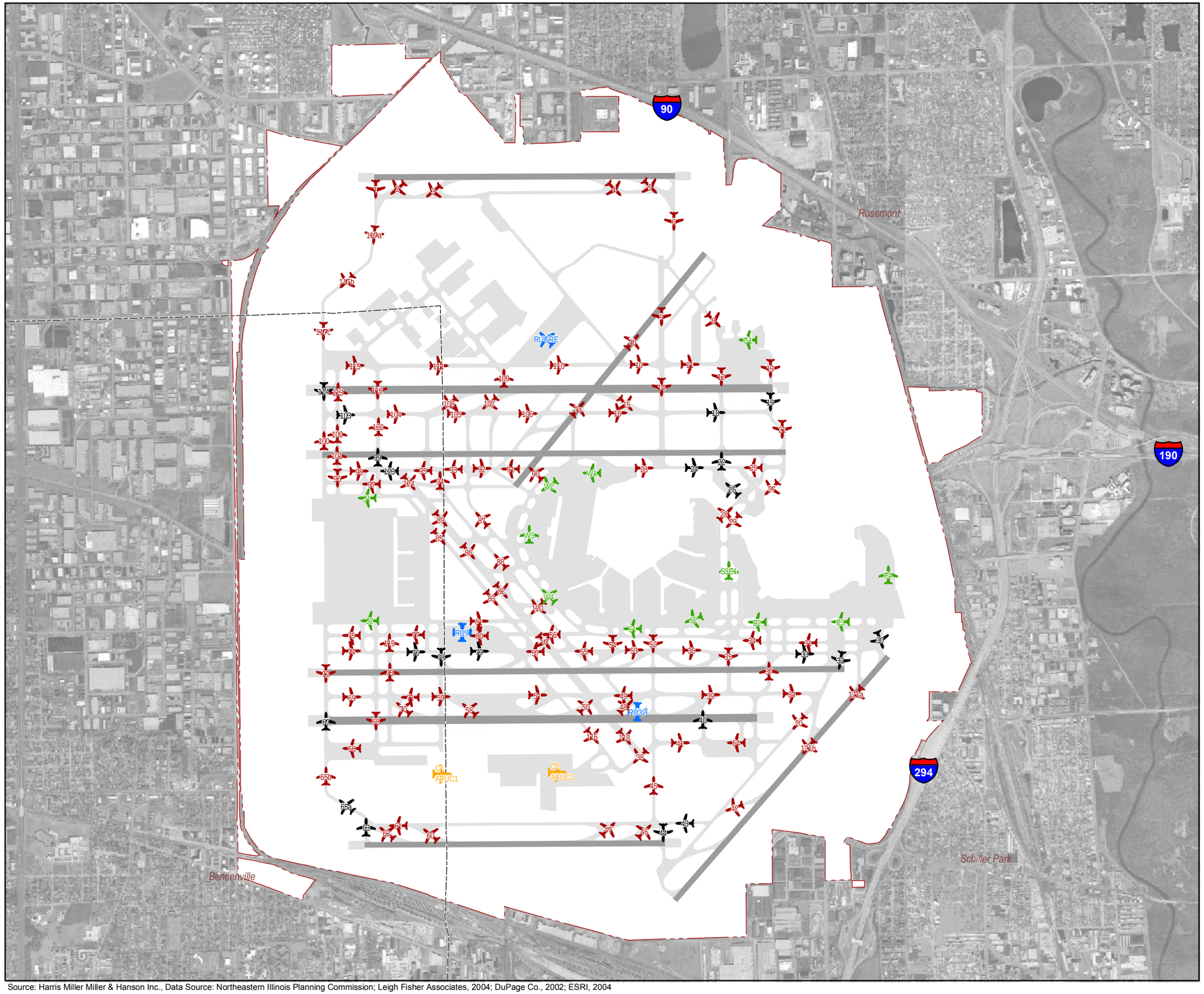
- Existing Airport Boundary
- County Boundary
- Terminal Gate Locations
- Taxi Locations
- Queue Locations
- Ground Run-up Locations
- Ground Run-up Locations (Multiple Directions)
- Cargo Gate / APU Locations

0 2,500 5,000
Feet

N
S

No Action Location of Ground Operation Noise Sources

▶ **Exhibit F-19**



Source: Harris Miller Miller & Hanson Inc., Data Source: Northeastern Illinois Planning Commission; Leigh Fisher Associates, 2004; DuPage Co., 2002; ESRI, 2004

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

- Future Airport Boundary
- County Boundary
- Terminal Gate Locations
- Taxi Locations
- Queue Locations
- Ground Run-up Locations
- Ground Run-up Locations (Multiple Directions)
- Cargo Gate / APU Locations

0 2,500 5,000
Feet

N
S

With Project Location of Ground Operations Noise Sources

▶ Exhibit F-20

In addition, the figures show an assumed orientation of each noise source (i.e. the aircraft's heading). This is important for the modeling process because aircraft are directional noise sources, i.e., they produce sound with different loudness and frequency characteristics in different directions. In many cases, more than one orientation is modeled for a particular noise source. For example, aircraft taxi on many of the taxiways in different directions at various times. In these cases, although the figures show only one orientation, the tables in *O'Hare Modernization EIS Aircraft Ground Noise Analysis, Attachment C* provide data for all directions.

Ground Maintenance Run-ups

The distribution of run-up locations, orientations, and times was determined for each of five representative categories based on the maximum gross takeoff weight listed in the INM 6.1 standard database. The data was based upon a log of run-up operations provided by the City of Chicago for the period of May 1997 to July 2004.[34] This distribution was applied to the total number of forecast run-ups for each year. The City of Chicago provided data on run-up durations for various airlines. The average run-up duration was based upon a weighted average of the number of operations by each airline in the log of run-up operations from 1997 to 2004.

Three run-up locations were modeled: the GRE, 32L hold pad, and Runway 9R hold pad. This analysis assumed that the current GRE location would move with the Alternative C improvements. The relocation of the GRE would not affect usage, although any differences in total aircraft operations between the Build Alternatives and No Action Alternative were considered in estimating the number of run-ups. All run-ups in the GRE were assumed to occur with the aircraft heading in the direction of the GRE opening (i.e., nose out), and the GRE was assumed to provide between 0 dB and 20 dB of noise reduction, depending on the receiver's location relative to the GRE's open side.

For run-ups occurring on the Runway 9R hold pad, the aircraft orientation was broken down by north, south, east, and west as dictated by the logged wind direction at the time of the run-up.

Exhibit F-19 and **Exhibit F-20** show the modeled ground run-up noise source locations. Modeled ground run-up durations for each aircraft category at each of the source locations shown are summarized in *OM EIS Aircraft Ground Noise Analysis, Attachment C*. In addition, to showing the location, the figures show the assumed aircraft orientation at each run-up site (i.e. the aircraft's heading).

Auxiliary Power Units

Exhibit F-19 and **Exhibit F-20** show the modeled APU noise source locations. In addition, to showing the location, the figures show the assumed aircraft orientation at each source location. Modeled APU durations for each aircraft category at each of the source locations shown are summarized in *OM EIS Aircraft Ground Noise Analysis, Attachment C*. On average, over one hour of APU use was modeled for each air cargo arrival and for each air cargo departure.

[34] Chicago O'Hare International Airport, Ground Run-Up Log Form Entries, May 2, 1997 – July 8, 2004, ORD Noise Office, August 11, 2004.

Representative Noise Prediction Sites

The study area for the aircraft ground noise evaluation extended approximately one mile in all directions from O'Hare's property line. SoundPLAN modeling using an array of sample receivers at distances extending over two miles from the property line indicated that it was unlikely that aircraft ground operations would have a significant effect on overall noise levels at distances greater than about one mile from the airport. Within the roughly one-mile zone, approximately 80 representative prediction sites were selected at noise-sensitive locations. These prediction sites included all of the noise-sensitive facilities within the one-mile zone identified in the O'Hare Modernization Program Affected Environment document[35] and additional residential sites. **Table F-70** lists the prediction sites and **Exhibit F-21** shows their locations.

Computed Sound Levels

Table F-46 reports computed sound levels due to aircraft ground operations for both Alternative A (No Action Alternative) and Alternative C in the Build Out and Build Out+ 5 phases. The table provides DNL values, which take into account all aircraft taxiing, idling, ground maintenance run-ups, and cargo aircraft APU use occurring during a 24-hour annual average day. In addition to the computed sound levels, the table identifies the land use category at each prediction site (residential, educational, place of worship, park, or historic site) and provides the identification code used on **Exhibit F-21** to identify the prediction site. In some cases, when Alternative C would acquire the locations represented by prediction sites, the table reports computed sound levels for only Alternative A (No Action Alternative).

Build Out Alternatives

Computed Build Out Alternative C DNL values at residential prediction sites vary from below 40 dB up to about 53 dB. Most residential prediction sites fall within the DNL 40 dB to 50 dB range. The highest computed sound level at a noise-sensitive site is DNL 61 dB at the Westwood College of Technology. This site is located adjacent to the Airport near its southeast corner. Because no computed sound levels at noise-sensitive sites equal or exceed DNL 65 dB, there are no significant noise impacts.

Build Out+5 Alternatives

Computed Build Out + 5 Alternative C DNL values at noise sensitive sites are up to about 1 dB higher than corresponding Build Out sound levels due to increased operations. Still, most residential prediction sites fall within the DNL 40 dB to 50 dB range. The highest computed sound level at a noise-sensitive site is DNL 61.5 dB at the Westwood College of Technology. As in the Build Out cases, no computed sound levels at noise-sensitive sites equal or exceed DNL 65 dB, therefore, there are no significant noise impacts.

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[35] Environmental Evaluation of Technical Working Reports for the O'Hare Modernization Program: Affected Environment (Draft Final), "Appendix A – Noise-Sensitive Facilities," Prepared by Landrum & Brown, November 25, 2003.

TABLE F-70
COMPUTED AIRCRAFT GROUND OPERATIONS SOUND LEVELS

Prediction Site			Computed Day-Night Average Sound Level (DNL, dB)			
Map ID	Name	Land Use Category	Build Out Alt. A	Build Out Alt. C	Build Out+5 Alt. A	Build Out+5 Alt. C
P22	Administrative and Leisure Center		39.7	41.6	40.2	42.0
S23	Angel Town Elementary School	Educational	39.9	42.3	40.4	42.8
LS-84	August Schwerdtfeger's Law Office	Historic Site	41.7	48.1	41.9	49.0
W3	Bensenville Bible Church	Place of Worship	40.5	47.0	40.7	47.9
P3	Bretman Park	Park	44.4	---*	44.7	---*
N1	Bridgeway Of Bensenville	Nursing Home	40.7	48.2	40.9	49.5
W5	Calvary Baptist Church	Place of Worship	42.3	47.3	42.6	48.2
S2	Chippewa Elementary School	Educational	40.2	47.1	40.4	48.2
LS-88	Chippewa School	Historic Site	43.3	50.5	43.6	51.5
P2	DiOrio Park	Park	39.5	45.1	39.7	45.8
HP-4	Green Street School	Historic Site	41.6	47.9	41.9	48.8
S27	Iroquois Community School	Educational	40.3	42.6	40.9	43.1
LS-90	Janker's Building	Historic Site	40.4	46.0	40.7	46.7
S70	John F. Kennedy Elementary School	Educational	45.8	45.9	45.8	46.7
P67	Kennedy Park / Memorial Pool	Park	47.0	46.9	47.0	47.6
W43	Korean Philippi Presbyterian	Place of Worship	39.8	42.2	40.3	42.6
P25	Lake Park	Park	42.3	45.6	43.7	46.0
P4	Lions Park	Park	40.9	46.4	41.1	47.0
P47	North Park	Park	43.9	44.1	43.9	44.8
HP-10	Nursery Site / Schwerdtfeger Farm	Historic Site	48.6	---*	49.2	---*
S29	Orchard Place Elementary School	Educational	42.4	45.2	42.8	45.7
LS-78	Peace Church 1	Historic Site	40.9	47.1	41.1	47.9
LS-57	Peace Church 2	Historic Site	40.9	47.1	41.1	47.9
LS-63	Peace Church Manse	Historic Site	41.6	47.6	41.8	48.5
W13	Peace Church United Church-Christ	Place of Worship	38.4	41.5	38.4	42.3
HMMH01	Residential Site 1	Residential	36.4	40.5	38.5	40.7
HMMH04	Residential Site 4	Residential	37.1	39.2	38.8	39.6
HMMH05	Residential Site 5	Residential	39.9	43.2	42.0	43.6
HMMH06	Residential Site 6	Residential	41.9	45.1	44.1	45.5
HMMH10	Residential Site 10	Residential	43.7	46.5	45.9	46.9
HMMH11	Residential Site 11	Residential	41.9	43.8	43.8	44.2
HMMH12	Residential Site 12	Residential	44.4	49.3	45.1	49.7
HMMH13	Residential Site 13	Residential	42.2	45.6	42.7	46.0
HMMH14	Residential Site 14	Residential	38.5	40.6	39.0	41.0
HMMH15	Residential Site 15	Residential	40.4	42.9	40.8	43.4
HMMH16	Residential Site 16	Residential	41.5	44.6	41.7	45.1
HMMH18	Residential Site 18	Residential	43.6	46.7	43.8	47.3
HMMH19	Residential Site 19	Residential	46.6	49.3	46.5	49.9
HMMH20	Residential Site 20	Residential	47.5	50.3	47.5	50.8
HMMH22	Residential Site 22	Residential	43.2	45.6	43.2	46.0

TABLE F-70
COMPUTED AIRCRAFT GROUND OPERATIONS SOUND LEVELS

Prediction Site			Computed Day-Night Average Sound Level (DNL, dB)			
Map ID	Name	Land Use Category	Build Out Alt. A	Build Out Alt. C	Build Out+5 Alt. A	Build Out+5 Alt. C
HMMH27	Residential Site 27	Residential	47.9	47.5	48.1	48.1
HMMH28	Residential Site 28	Residential	52.4	51.3	52.5	51.9
HMMH29	Residential Site 29	Residential	48.9	48.4	49.0	48.9
HMMH31	Residential Site 31	Residential	50.6	50.5	50.7	51.3
HMMH32	Residential Site 32	Residential	48.1	48.3	48.1	49.1
HMMH33	Residential Site 33	Residential	44.4	44.3	44.3	45.0
HMMH35	Residential Site 35	Residential	43.5	44.2	43.5	44.8
HMMH36	Residential Site 36	Residential	41.0	41.9	41.0	42.5
HMMH38	Residential Site 38	Residential	40.4	41.7	40.4	42.4
HMMH39	Residential Site 39	Residential	44.8	49.6	44.9	50.5
HMMH40	Residential Site 40	Residential	41.4	46.3	41.6	47.2
HMMH41	Residential Site 41	Residential	40.1	45.1	40.3	45.9
HMMH42	Residential Site 42	Residential	42.7	49.0	42.9	50.0
HMMH43	Residential Site 43	Residential	38.0	42.9	38.2	43.6
HMMH46	Residential Site 46	Residential	45.7	---*	45.9	---*
HMMH47	Residential Site 47	Residential	47.0	---*	47.3	---*
HMMH48	Residential Site 48	Residential	46.8	52.7	47.8	53.0
HMMH49	Residential Site 49	Residential	42.4	47.5	43.1	48.0
HMMH50	Residential Site 50	Residential	40.2	44.8	40.8	45.3
HMMH53	Residential Site 53	Residential	38.3	42.2	39.1	42.5
HMMH55	Residential Site 55	Residential	39.0	42.1	41.2	42.4
HP-6	Resthaven Cemetery	Historic Site	53.7	---*	55.8	---*
P8	Schuster Park	Park	45.7	---*	46.2	---*
P27	Seminole Park	Park	44.4	47.7	44.5	48.2
LS-65	Senne House	Historic Site	42.8	51.3	43.2	52.7
W15	St. Alexis	Place of Worship	32.4	35.2	33.0	35.7
HP-7	St. Johannes Cemetery	Historic Site	61.2	---*	64.4	---*
S73	St. Maria Goretti School	Educational	44.4	44.6	44.5	45.4
P9	Sunrise Park	Park	41.7	47.0	41.9	47.8
P10	Sunset Park	Park	40.0	45.7	40.3	46.4
LS-58	Theater/Stores	Historic Site	43.3	49.4	43.6	50.2
S6	Tioga Elementary School	Educational	39.7	45.6	39.9	46.5
LS-79	Tioga School	Historic Site	39.8	45.8	39.9	46.7
S7	Tioga School Special Education	Educational	39.7	45.6	39.9	46.5
P12	Veterans Park	Park	41.2	47.4	41.6	48.3
U4	Westwood College of Technology	Educational	63.1	61.0	63.3	61.5
P70	Wm. M. Dooley Memorial Park	Park	54.0	52.9	54.1	53.7

Note: ---* Indicates that site would be acquired under Alternative C scenario.
See **Exhibit F-21** for a map of the sites listed above.

Source: Harris Miller Miller & Hanson Inc.

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Existing Airport Boundary

Future Airport Boundary

County Boundary

ID

Noise Prediction Sites

0 3,500 7,000

Feet

N

S

Noise Prediction Sites

▶ **Exhibit F-21**

F.4.1.2 Roadway Vehicle Traffic

The reconfiguration of the airfield under all of the proposed Build Alternatives would expand the airport to the southwest, which requires the relocation of the existing Irving Park Road. Accordingly, analysis was undertaken to assess the noise impacts that may potentially arise from roadway relocation.[36]

Existing Conditions

Irving Park Road is an arterial that runs generally east-west along the southern boundary of O'Hare Airport, as shown in **Exhibit F-22**. It has two lanes in each direction and has a speed limit of 55 mph. The 2002 average daily traffic (ADT) volume along the existing road is 45,800 vehicles per day.

The land use adjacent to Irving Park Road is also shown in **Exhibit F-22**. North of the road is the airport property. South of the eastern part of the road is industrial and commercial use, and south of the western part of the road is residential land use.

Proposed Alignment

The proposed alignment would relocate the section of the road between York Road and the US Postal Service Building to the south, as shown in **Exhibit F-22**. At the west end of the relocation, Irving Park Road would curve to the north and intersect with York Road at the same location as the current intersection, although the plans call for a new grade-separated intersection. The grade separation is part of a separate project and is not part of the Build Alternatives.

The Relocated Irving Park Road would not increase in lanes or capacity compared to the existing road. It would continue to have two lanes in each direction and a speed limit of 55 mph. The ADT is projected to reach 70,300 vehicles per day in the Build Out + 5 phase with the Build Alternatives, an increase of approximately 53 percent over 2002.

The land use on the south side of the Relocated Irving Park Road would be different than that of the existing Irving Park Road. On the east end of the relocation, the land use would remain commercial, as it is currently. This area is labeled "Warehouses," on **Exhibit F-22**. However, on the west end and in the middle section of the relocation, the land use would change due to the relocation of the road and the acquisition of property by the airport. The airport proposes to acquire all of the land inside the Proposed Airport Boundary. Currently, the land use south of Irving Park Road is residential on the west end, and commercial/industrial in the middle section. All of the property south of the west end and middle section of the proposed Relocated Irving Park Road would be airport or rail yard.

[36] O'Hare Modernization EIS Highway Noise Technical Report, October 2004, this report can be found at the end of this Appendix as **Attachment F-4**.

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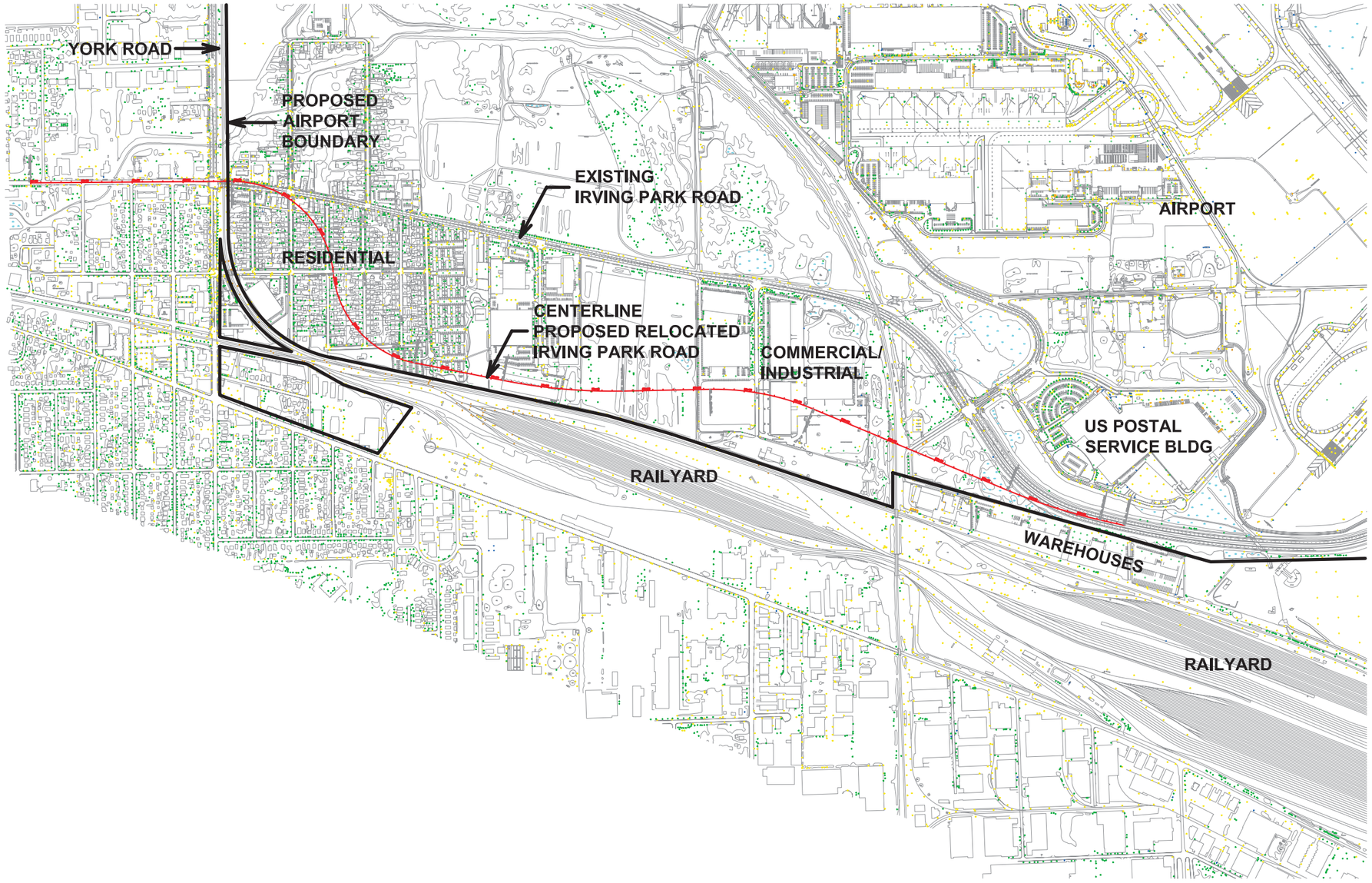

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Proposed Relocation of Irving Park Road

Existing Roads

N

S

Existing and Proposed Relocated Irving Park Road

▶ **Exhibit F-22**

Study Area

Existing land use in the study area is airport, residential, rail yard, and commercial/industrial, as shown in **Exhibit F-22**. The future land use adjacent to the Relocated Irving Park Road would be almost entirely airport and rail yard, with some commercial remaining at the east end. The airport and rail yard land uses are not analyzed in the study as they are not considered to be noise-sensitive land uses. But the commercial warehouses on the east end of Relocated Irving Park Road fit into Noise Abatement Criterion (NAC) Category C, and are analyzed for noise impacts in this study. Three warehouse buildings, labeled A, B, and C on **Exhibit F-23**, are included in the study.

At the west end of Relocated Irving Park Road, the planned intersection of Irving Park and York Roads would have a grade separation, with Irving Park in a depression going under York and the railroad tracks. This grade separation is a separate project and is not part of the Build Alternatives, and it is expected that the environmental documentation of the grade separation project would include a detailed noise analysis. At this time, the engineering of the grade separation has not progressed far enough to include it in this noise analysis.

However, it should be noted that the western end of Relocated Irving Park Road is fairly near to the residences on the west side of York Road. The relocation of Irving Park Road is not expected to increase the noise levels at these houses for three reasons:

1. The Relocated Irving Park Road would not be substantially closer to the houses than existing Irving Park Road,

2. The traffic noise from York Road would dominate any noise from Irving Park Road because it is much closer to the houses, and

3. The Proposed Irving Park Road would be depressed below grade, which would reduce the Irving Park Road contribution to the traffic noise at the houses.

Ambient Noise Measurement

Noise measurements were made with a Sound Level Meter (SLM) at three locations, shown as Sites SLM1, SLM2, and SLM3 on **Exhibit F-23**. The locations are in the parking lot between the warehouses and Irving Park Road, but far enough away from the warehouses to avoid capturing warehouses noise. **Table F-71** contains the measured noise levels at the SLM (Sound Level Meter) sites shown in **Exhibit F-23**.

Predicted Results

In accordance with FHWA policy, FHWA's Traffic Noise Model Version 2.5 (TNM) software (commercially-available) was used to model noise levels for existing (2002) conditions, the Design Year (Build Out + 5) No Action Alternative scenario, and the Design Year (Build Out + 5) Build Alternative scenario.

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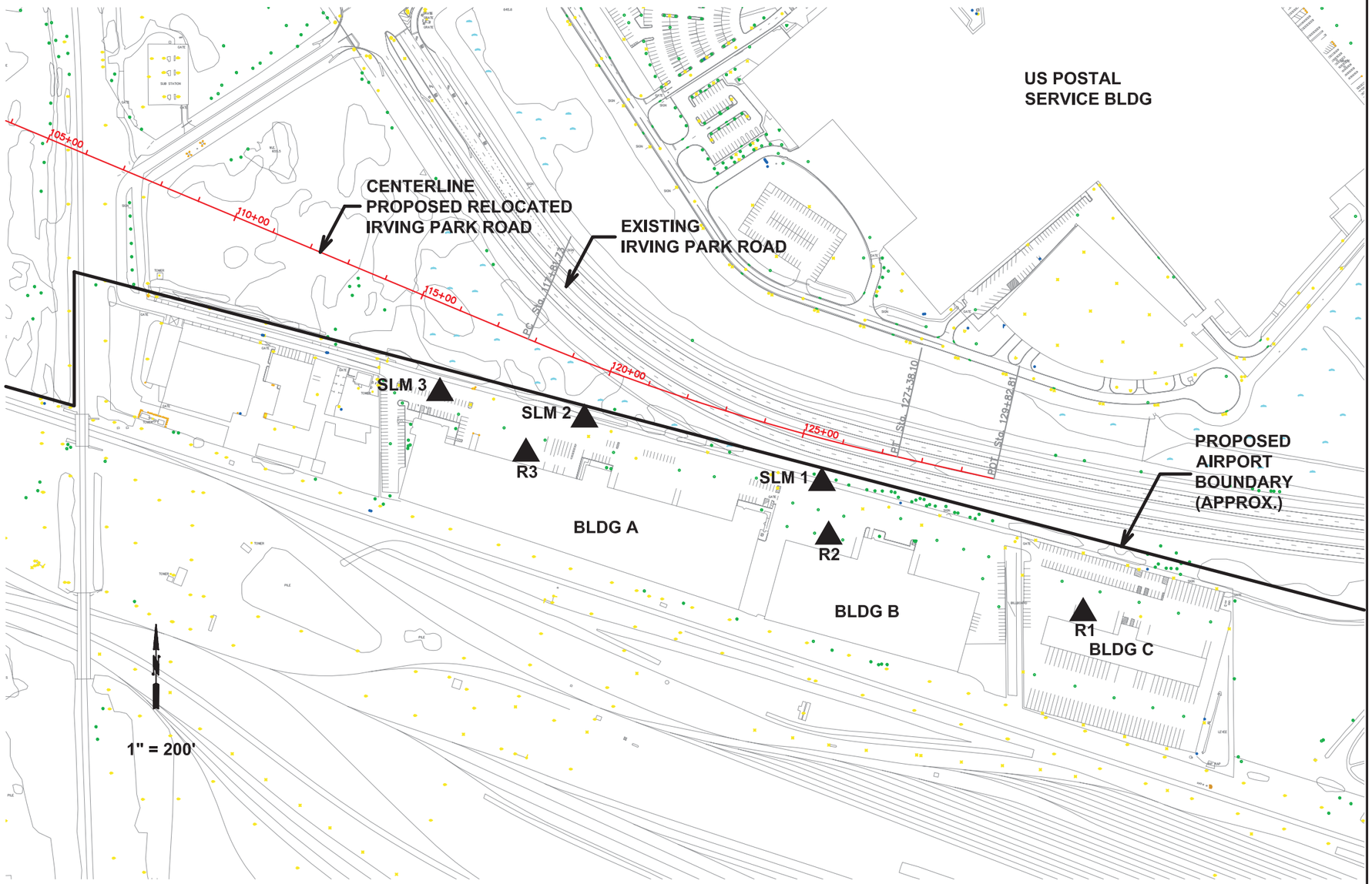

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Proposed Relocation of Irving Park Road

Existing Roads

SLM = Sound Level Meter Location Number
RX = TNM Receptor Location Number

N
S

Sound Measurement and TNM Receptor Locations

▶ **Exhibit F-23**

TABLE F-71
SUMMARY OF EXISTING NOISE MEASUREMENT SITES AND LEVELS

Site	Location	Date	Start Time	Measured Existing Noise Level Leq (dB)
1	Warehouse parking lot	8/14/2003	9:59 AM	72.0
2	Warehouse parking lot	8/14/2003	10:23 AM	71.2
3	Warehouse parking lot	8/14/2003	2:28 PM	69.6
4	Warehouse parking lot	8/14/2003	1:16 PM	68,8
5	Warehouse parking lot	8/14/2003	1:34 PM	65.7

Source: OM EIS Highway Noise Technical Report, Jacobs Civil Inc. [TPC], October 2004.

Existing and projected traffic volumes for the noise analysis were obtained from the traffic data prepared for this EIS. The existing peak hour volumes on Irving Park Road are 1,900 eastbound vehicles per hour (vph) and 1,470 westbound vph. In the Built Out + 5 phase No Action Alternative scenario, the peak hour is expected to have 1,990 eastbound vph and 1,530 westbound vph, and the Build Out + 5 Build Alternative scenario would have 2,710 eastbound vph and 2,460 westbound vph. These volumes represent the highest noise period of the facility and were input into a TNM model of the proposed Relocated Irving Park Road.

Three receptor locations were modeled for existing and design year noise levels, labels R1, R2, and R3 in **Exhibit F-23**. These receptors were located in the parking lots, about 30 – 40 feet away from the warehouse buildings. **Table F-72** is a summary of the predicted noise levels for receptors R1, R2, and R3.

Existing noise levels range from 61 dB to 63 dB. In the Build Out + 5 No Action Alternative scenario, the noise levels stay essentially the same, but in the Build Out + 5 Build Alternative scenario, they increase by 3 – 4 dB over existing levels. Because future noise levels are not expected to approach or exceed the 72 dB threshold, and because the overall increase is only projected to be 4 dB or less, none of the receptors would experience noise impacts.

TABLE F-72
SUMMARY OF MODELED EXISTING AND PROJECTED NOISE LEVELS

Receptor	Modeled Existing Noise Level Leq	Modeled Existing Build Out + 5 NA Noise Level Leq	Build Out + 5 NA minus Existing Leq	Modeled Build Out + 5 WP Noise Level Leq	Build Out + 5 WP minus NA Leq	Modeled Build Out + 5 WP minus Existing Leq
R1	61	61	0	64	3	3
R2	63	63	0	66	3	3
R3	61	61	0	65	4	4

Notes: All noise levels are in dB.
NA = No Action.
WP = With Project

Source: O'Hare Modernization EIS Highway Noise Technical Report, Jacobs Civil Inc. [TPC], October 2004.

Construction Impacts

The major construction elements of this project are expected to be earth removal, hauling, grading, paving, bridge demolition, and bridge construction. General construction noise impacts, such as temporary speech interference for passerby and those individuals working near the project, can be expected, particularly from earth moving equipment during grading operations, paving operations, and pile driving. It is expected that the road construction activities would be at least 180 feet away from Receptors R1, R2, and R3.

Considering the relatively short-term nature of construction noise, impacts are not expected to be substantial. At the time of construction, the land uses surrounding the Proposed Relocated Irving Park Road would be airport, rail yard, and commercial, and would not be adversely affected by temporary construction noise.

F.4.1.3 Rail Noise and Vibration

The reconfiguration of the airfield would expand the airport to the southwest, which requires the relocation of the existing Union Pacific Railroad (UPRR) tracks. Accordingly, analysis was undertaken to assess the noise impacts that may potentially arise from the relocation of the tracks.[37]

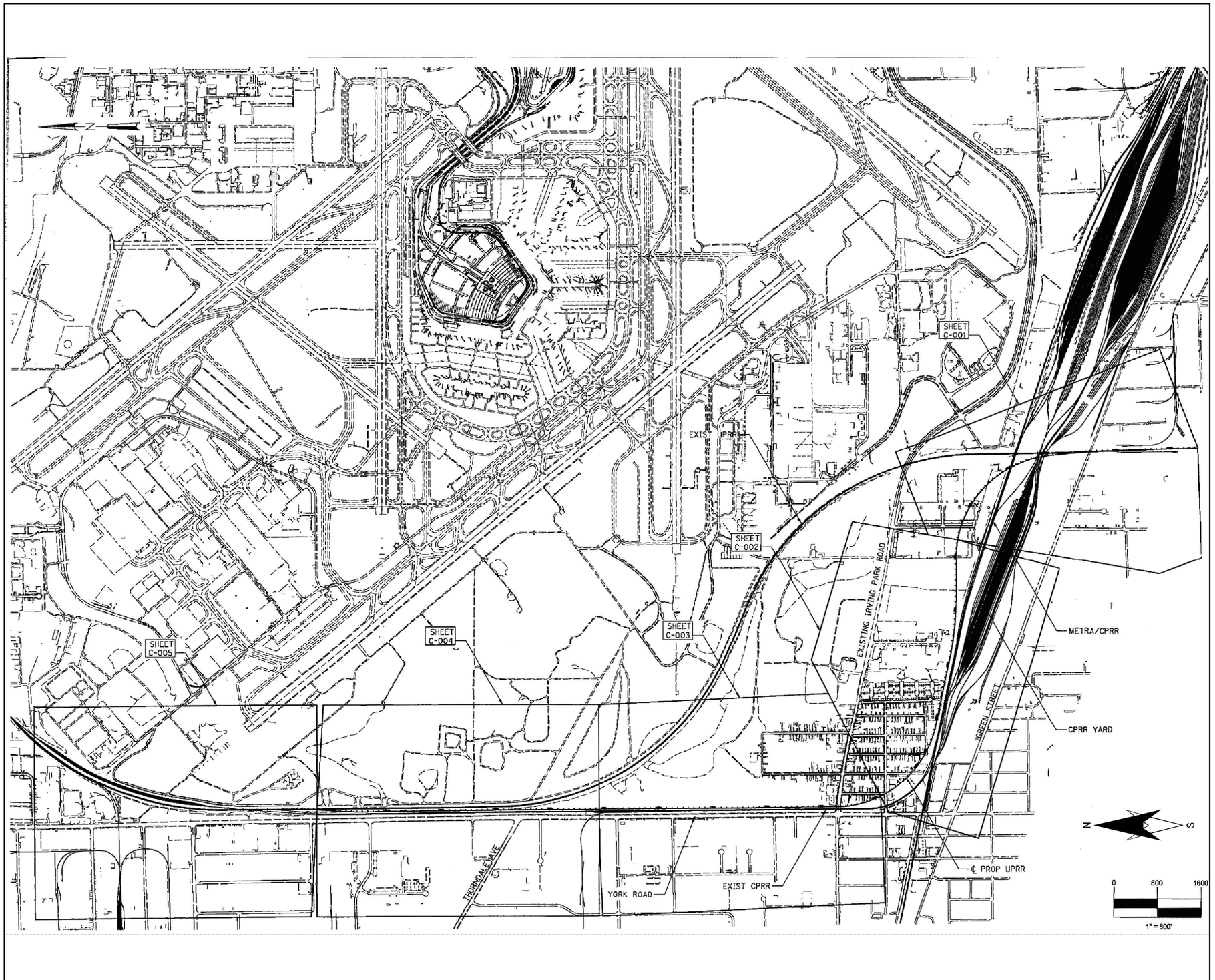
Existing Conditions

The existing UPRR tracks are two parallel tracks that enter the proposed airport property from the south near the intersections of existing Irving Park Road and Taft Road. They curve to the west and exit near the intersection of York Road and Thorndale Avenue, after which they continue north parallel to York Road.

Proposed alignment

The relocated UPRR tracks would be further south and west of the existing tracks, so that they generally run parallel to and adjacent to the proposed Irving Park Road and York Road. A plan of the existing and relocated UPRR tracks is shown in **Exhibit F-24**.

[37] O'Hare Modernization EIS Railroad Noise and Vibration Technical Report, October 2004, this report can be found at the end of this Appendix as **Attachment F-5.**



Source: BPC Airport Partners [CCT], 2002.

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Alignment and Survey Control Key Plan

▶ **Exhibit F-24**

The land that is between the existing and relocated UPRR tracks would be acquired by the airport so that all of the land north east of the relocated UPRR tracks would be airport property. The land south and west of the relocated tracks is currently and would continue to be used for rail yard, commercial, industrial, and residential purposes.

Study Area

The analysis follows the procedures of a "General Noise Assessment" specified in the FTA Manual called "Transit Noise and Vibration Impact Assessment," which is referred to hereafter as the "FTA Manual". The manual was created for analyzing noise from transit rail, but its methods also apply to freight rail.

Following the methods in the FTA Manual, the screening procedures prescribe *screening distances* for a project based on the type of project, which are used to define analysis areas surrounding the project. Two noise-sensitive residential land use areas were identified within the noise screening distance. These areas are labeled NSA1 and NSA2 on **Exhibit F-25**. All other land adjacent to the relocated UPRR tracks is airport-owned, industrial, commercial, or a rail yard, and therefore not considered to be noise-sensitive.

The two NSAs have been divided into five noise receiver "clusters" based on their distance from major noise sources, such as roadways and railroads. One receiver from each cluster was selected to represent that cluster. The receivers are shown as R1 – R5 on **Exhibit F-25** and described in **Table F-73**.

The results of the vibration screening procedure found no vibration-sensitive land uses within the vibration screening distance of 200 feet from the relocated UPRR tracks. This indicates that no land uses would be impacted by project vibration.

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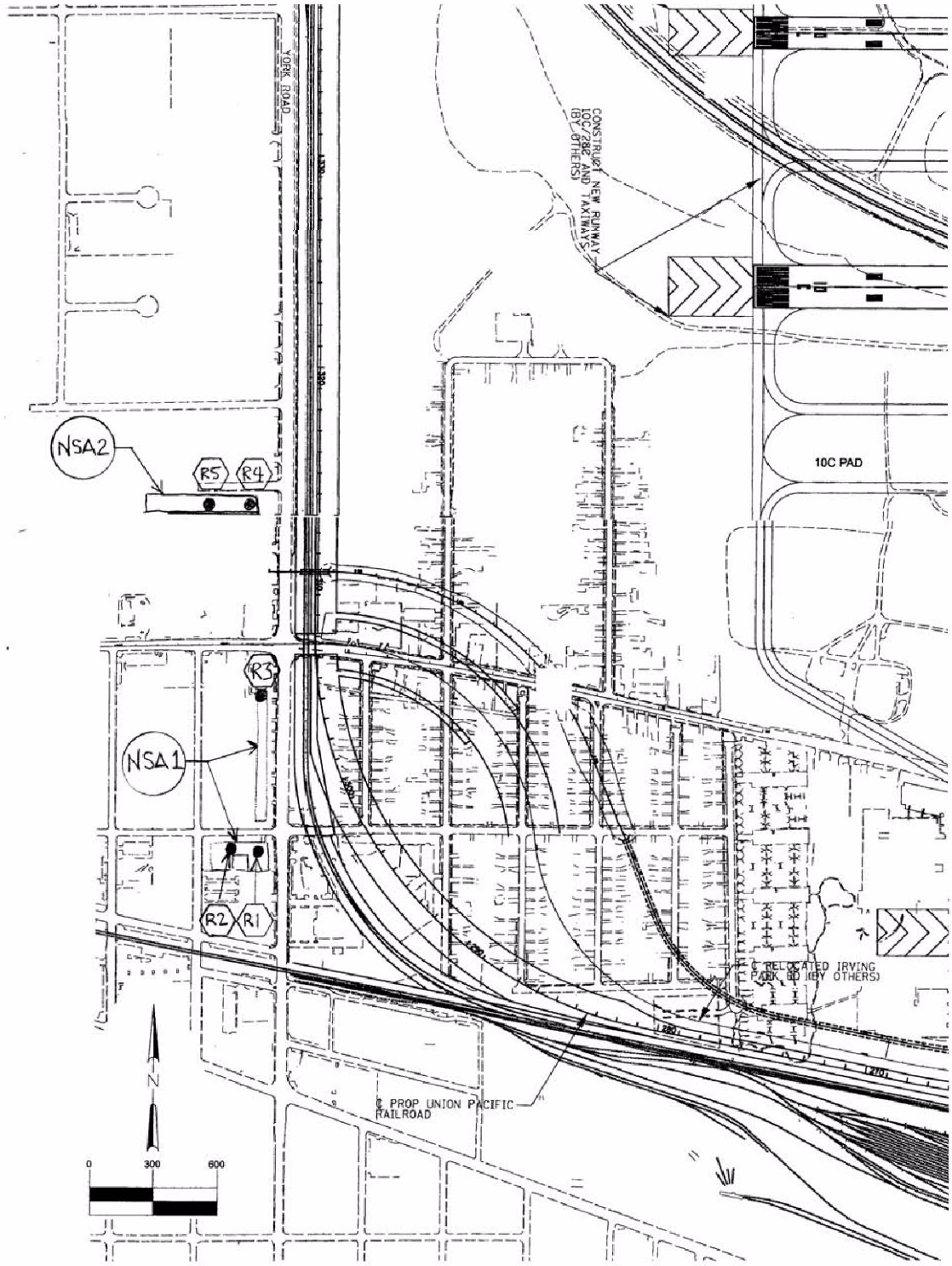

Source: BPC Airport Partners [CCT], 2002.

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Noise Sensitive Areas and Receptors

▶ Exhibit F-25

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TABLE F-73
RECEIVERS AND RECEIVER CLUSTERS

Receptor	Cluster Location	Cluster Description
R1	South of W. Roosevelt Avenue, between N. York Road and N. Center Street	Eastern half of condominium building 30 units
R2	South of W. Roosevelt Avenue, between N. York Road and N. Center Street	Western half of condominium building 29 units
R3	West of N. York Road, between W. Irving Park Road and W. Roosevelt Avenue	12 houses
R4	Along Brookwood Street, west of N. York Road, the eastern portion	2 houses
R5	Along Brookwood Street, west of N. York Road, the western portion	2 houses

Source: OM EIS Railroad Noise and Vibrational Technical Report, Jacobs Civil, Inc. [TPC], October 2004.

Ambient Noise Measurement

Existing noise levels for Receivers 1 - 5 have been estimated using the procedure specified in the FTA Manual. The noise level estimate is based on distance from the receiver to the major noise source, which in this case is the railroad, Irving Park Road, or York Road. The estimates reflect that none of the Receivers is shielded from the railroad noise by other buildings or noise barriers. For each receiver, Table 5-7 of the FTA Manual was used to create a preliminary noise level estimate from each major noise source, and the largest of the estimates was selected as the final noise estimate at the receiver. **Table F-74** shows the preliminary and final noise estimates for Receivers 1 – 5.

TABLE F-74
EXISTING NOISE LEVEL ESTIMATES

Receiver	Distance to York Road (feet)	Preliminary Ldn Estimate (dB)	Distance to Existing CPRR (feet)	Preliminary Ldn Estimate (dB)	Final Ldn Estimate (dB)
R1	90	65	180	60	65
R2	240	55	360	55	55
R3	90	65	180	60	65
R4	120	60	300	55	60
R3	240	55	420	55	55

Note: Receivers 1 and 2 represent the same property, but Receiver 1 is considerable closer to York Road, and therefore has a significantly higher existing noise level than Receiver 2. It should be noted that aircraft noise was not a factor in the existing noise level estimates because the FTA methodology does not include aircraft noise. This is a conservative tactic since the exclusion of aircraft noise makes the existing noise level estimates lower, which reduces the allowable amount of project noise.

Source: O'Hare Modernization M EIS Railroad Noise and Vibrational Technical Report, Jacobs Civil, Inc. [TPC], October 2004.

Predicted Results

Noise impacts have been determined using the noise criteria with the estimated existing noise and predicted project noise. The results are summarized in **Table F-75** and indicate that Receivers 4 and 5 are expected to experience noise impacts. However, project noise levels for

Receivers 4 and 5 are barely in the impact range. In fact, at Receiver 4, the project noise level is 2 dB lower than the existing noise level.

Given that project noise levels at both of the impacted Receivers are barely in the impact range and that the four impacted houses are already part of the O'Hare Residential Sound Insulation Program, mitigation measures are not recommend for the proposed Relocated UPRR Railroad.

TABLE F-75
PROJECT NOISE IMPACTS

Receiver	Distance from RR Centerline (feet)	Estimated Existing L_{dn} (dB)	Impact Level (dB)	Severe Impact Level (dB)	Project Noise L_{dn} (dB)	Impact
R1	480	65	61	66	55	None
R2	630	55	56	61	54	None
R3	270	65	61	66	59	None
R4	300	60	58	63	58	Impact
R3	400	55	56	61	56	Impact

Source: O'Hare Modernization EIS Railroad Noise and Vibrational Technical Report, Jacobs Civil, Inc. [TPC], October 2004.

Construction Impacts

The major construction elements of this project are expected to be earth removal, hauling, grading, paving, and bridge construction. General construction noise impacts, such as temporary speech interference for passerby and those individuals living or working near the project, can be expected, particularly from earth moving equipment during grading operations, paving operations, and pile driving. For this project, the Receivers would range from about 200 feet to about 550 feet from the construction, which would lower the construction sound levels by approximately 9 to 15 dB. Considering the relatively short-term nature of construction noise, impacts are not expected to be substantial.

F.4.2 Composite Noise Analysis

A composite noise analysis was undertaken to assess the noise impacts that may potentially arise from the additive effect of multiple noise sources associated with the proposed project. The composite analysis compares levels for Build Out Alternative A and C, and Build Out + 5 Alternatives A and C, and was prepared in accordance to an approved methodology.[38]

F.4.2.1 Noise Sources

Noise sources included in the composite noise analysis calculations are as follows:

- O'Hare airport flight operations
- Airport ground operations noise, including aircraft taxiing and idling, aircraft ground maintenance run-ups, and use of auxiliary power units on certain aircraft

[38] HMMH Technical memorandum dated October 8, 2004.

- Rail operations noise in areas where rail lines are relocated due to the Project
- Highway noise in areas where road traffic is to change materially due to the Project

F.4.2.2 Receiver Grid Points

The number and distribution of receiver grid points to compute noise from O'Hare flight operations, rail, highway and ground operations associated with the project was selected to provide adequate coverage to compute DNL values down to levels as low as the respective noise computation models can predict accurately. For O'Hare flight operations, two regular grids of points were established, a large "lattice" grid with 0.6 nautical mile spacing, and a smaller "study" grid with 0.2 nautical mile spacing. For the other noise sources, receivers were selected in noise-sensitive areas that may be affected by project changes to those sources. The grid also includes each of the noise-sensitive facilities identified in the study area.

F.4.2.3 Computations for Composite Analysis

Each of the noise analyses for the separate noise sources shared the complete grid of receiver points, and each study computed DNL values at all of the sites in the study areas of the respective sources. The DNL values were combined (logarithmically) from all of the noise sources at each of the grid points to produce the total or composite DNL values from all project noise sources for each study alternative.

Calculations of DNL were performed at receiver grid locations for each noise source where expected DNL values would contribute materially to the composite noise analysis and where computations could be made with reasonable accuracy. While at many of the grid points, several of the different noise sources each contribute DNL values, the composite DNL values at many other points is determined with contributions from only one or two of the sources. The points with fewer contributors are at the larger distances from O'Hare, where contributions from rail, highway and ground noise are too small to be included.

Airspace noise contributions were not included in the composite noise analysis, because changes to the airspace would be taking place well beyond the expected O'Hare flight operations 65 dB DNL contour and also beyond any influence of the ground-based sources.

F.4.2.4 Study Results

Results are presented as both tabular and graphical presentations of the composite noise levels for each project alternative. **Table F-76** provides counts of receiver grid points exposed to different categories of noise levels. For each study year, the total grid of points to be reported was selected from the set of points where the computed composite DNL was 45 dB or higher under *either* Alternative A or Alternative C. From this set, points on airport property in the Alternative A case were removed, and duplicate "lattice" and "study" points were removed.

Significant noise impacts, where the Alternative C DNL is projected to be 65 dB or greater and also 1.5 dB or more higher than the Alternative A DNL for same year, would occur at 193 receiver grid points in the Build Out + 5 case. In the Build Out phase, 161 grid points would

experience significant noise impact. The total number of points exposed to DNL 65 dB or higher in the Build Out + 5 year is 279 under Alternative C, whereas 261 points are similarly exposed with the No Action Alternative (Alternative A). In the Build Out year, the number of points exposed to DNL 65 dB or higher is 223 under Alternative C, whereas a greater number, 241 points, are similarly exposed with the No Action Alternative (Alternative A). The total number of grid points evaluated in this analysis averages about 4,700.

TABLE F-76
COMPOSITE NOISE ANALYSIS RESULTS FOR ENTIRE RECIEVER GRID

	Number of Grid Points in Sound Level Category (a)			
	Build Out		Build Out + 5	
Sound Level Category	Alternative A (No Action)	Alternative C	Alternative A (No Action)	Alternative C
DNL 65 dB or greater and DNL 1.5 dB or greater increase in Alternative A DNL for same year	N / A	161	N / A	193
DNL 65 dB or greater and less than DNL 1.5 dB increase in Alternative A DNL for same year	N / A	62	N / A	86
All DNL 65 dB or greater	241	223	261	279
Less than DNL 65 dB and greater than or equal to DNL 55 dB	1,809	1,564	1,871	1,654
Less than DNL 55 dB and greater than or equal to DNL 45 dB	2,512	2,457	2,449	2,444
Less than DNL 45 dB	133	430	140	323
All DNL 55 dB or greater	2,050	1,787	2,132	1,933
All DNL 45 dB or greater	4,562	4,244	4,581	4,377
Total number of points	4,695	4,674 (b)	4,721	4,700 (b)

Notes: (a) Grid set is all points where DNL is 45 dB or greater in either Alternative A or Alternative C case in the same year, excluding points on airport property under Alternative A, and duplicate "study" and "lattice" points.
(b) Twenty-one (21) points included in Alternative A but not in Alt C because they are acquired for the project construction.

Source HMMH [TPC] analysis, 2004.

O'Hare Modernization EIS Composite Noise Analysis, Attachment B[39] references a complete list of composite noise levels and the levels of the contributing noise sources for all of the approximately 4700 receiver grid points in the study area.

Table F-77 presents a similar table of grid point counts for the noise from flight operations only, for purposes of comparison with the composite results in **Table F-76**. The differences are small, which indicates that flight operations noise dominates the noise levels in the composite analysis. The number of grid points with significant noise impacts under Alternative C is two fewer for flight operations alone (191) than for composite noise (193) in the Build Out + 5 year, but two more in the Build Out year (163 for flight operations, and 161 for composite). The total number of points exposed to DNL 65 dB or greater under Alternative A is four fewer for flight operations only (237) than for composite noise (241) in the Build Out year, and six fewer in the Build Out + 5 year (255 for flight operations, and 261 for composite). With Alternative C, one fewer grid point is exposed to DNL 65 dB or greater from flight operations only (222), as

[39] The *O'Hare Modernization EIS Composite Noise Analysis* report can be found at the end of this Appendix as **Attachment F-6.**

compared with composite noise (223) in the Build Out year, and five fewer are similarly exposed in the Build Out+5 year (274 for flight operations, and 279 for composite).

TABLE F-77
RESULTS FOR FLIGHT OPERATIONS ONLY FOR ENTIRE RECEIVER GRID

	Number of Grid Points in Sound Level Category(a)			
	Build Out		Build Out + 5	
Sound Level Category	Alternative A (No Action)	Alternative C	Alternative A (No Action)	Alternative C
DNL 65 dB or greater and DNL 1.5 dB or greater increase in Alternative A DNL for same year	N / A	163	N / A	191
DNL 65 dB or greater and less than DNL 1.5 dB increase in Alternative A DNL for same year	N / A	59	N / A	83
All DNL 65 dB or greater	237	222	255	274
Less than DNL 65 dB and greater than or equal to DNL 55 dB	1813	1562	1877	1657
Less than DNL 55 dB and greater than or equal to DNL 45 dB	2512	2460	2449	2446
Less than DNL 45 dB	133	430	140	323
All DNL 55 dB or greater	2050	1784	2132	1931
All DNL 45 dB or greater	4562	4244	4581	4377
Total number of points	4695	4674 (b)	4721	4700 (b)

Notes: (a) Grid set is all points where DNL is 45 dB or greater in either Alternative A or Alternative C case in the same year, excluding points on airport property under Alternative A, and duplicate "study" and "lattice" points.
(b) Twenty-one (21) points included in Alternative A but not in Alt C because they are acquired for the project construction.

Source HMMH [TPC] analysis, 2004.

Table F-78 presents a similar breakdown of the composite noise analysis results for only the 385 noise-sensitive facilities in the study area (a subset of the **Table F-76** points). Significant noise impacts would occur at 42 noise-sensitive facilities in the Build Out+5 Alternative C case. In the Build Out (2013) year, 29 noise-sensitive facilities would experience significant noise impact. The total number of noise-sensitive facilities exposed to DNL 65 dB or higher in the Build Out+5 (2018) year is 49 under Alternative C, whereas 24 facilities are similarly exposed in the No-Action Alternative A. In the Build Out (2013) year, the number of facilities exposed to DNL 65 dB or higher is 34 under Alternative C, whereas 20 facilities are similarly exposed in Alternative A (No Action Alternative).

O'Hare Modernization EIS Composite Noise Analysis, Attachment C[40] to this report provides complete tables of the composite noise levels and the levels of the contributing noise sources for all 385 of the noise-sensitive facilities in the study area.

[40] The *O'Hare Modernization EIS Composite Noise Analysis* report can be found at the end of this Appendix as **Attachment F-6.**

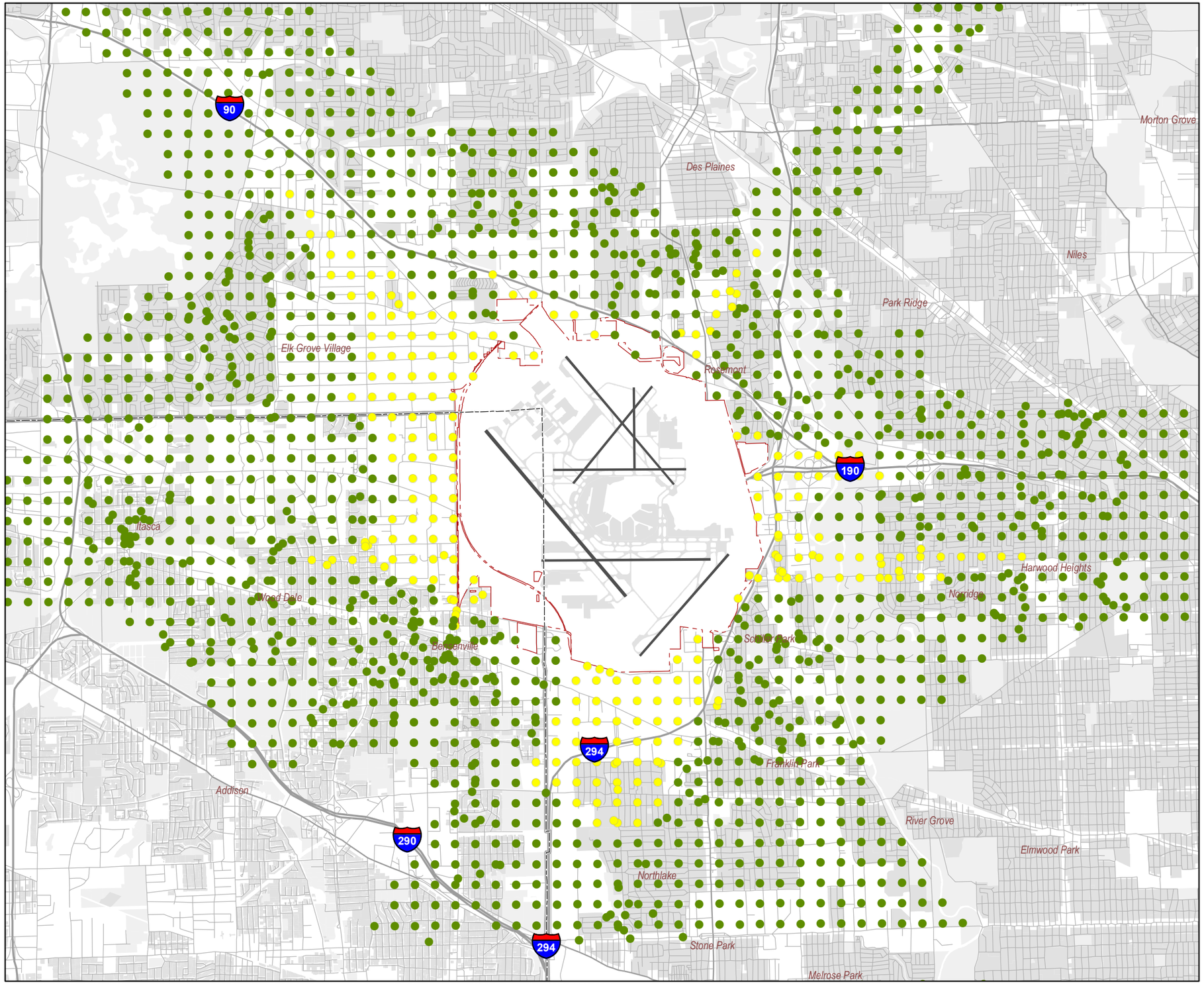
TABLE F-78
COMPOSITE NOISE ANALYSIS RESULTS FOR NOISE-SENSITIVE FACILITIES ONLY

	Number of Grid Points in Sound Level Category(a)			
	Build Out		Build Out + 5	
Sound Level Category	**Alternative A (No Action)**	**Alternative C**	**Alternative A (No Action)**	**Alternative C**
DNL 65 dB or greater and DNL 1.5 dB or greater increase in Alternative A DNL for same year	N / A	29	N / A	42
DNL 65 dB or greater and less than DNL 1.5 dB increase in Alternative A DNL for same year	N / A	5	N / A	7
All DNL 65 dB or greater	20	34	24	49
Less than DNL 65 dB and greater than or equal to DNL 55 dB	282	239	280	232
Less than DNL 55 dB and greater than or equal to DNL 45 dB	83	106	81	98
Less than DNL 45 dB	0	0	0	0
All DNL 55 dB or greater	302	273	304	281
All DNL 45 dB or greater	385	379	385	379
Total number of points	385	379 (b)	385	379 (b)

Notes: (a) Grid set is all points where DNL is 45 dB or greater in either Alternative A or Alternative C case in the same year, excluding points on airport property under Alternative A, and duplicate "study" and "lattice" points.
(b) Six (6) points included in Alternative A but not in Alternative C because they are acquired for the project construction.

Source HMMH [TPC] analysis, 2004.

Graphical depiction of the composite noise results is given in **Exhibit F-26** through **Exhibit F-29**; one figure is presented to represent each of the four alternatives evaluated. Each figure is a plan view (map) of the study area showing the receiver grid points where the computed DNL is 55 dB or greater, overlaid on a base map that shows noise-sensitive land uses. Maps of the Alternative A results show grid points with DNL 65 dB or greater in yellow, and those between 55 dB and 65 dB in green. For Alternative C, three colors are used for the grid points: green for DNL between 55 dB and 65 dB, yellow for DNL 65 dB or greater but less than 1.5 dB increase over Alternative A in the same year, and orange for DNL 65 or greater and DNL 1.5 dB or greater increase over Alternative A in the same year. **Exhibit F-26** presents the composite noise results for Build Out Alternative A, **Exhibit F-27** is for Build Out Alternative C, **Exhibit F-28** represents Build Out + 5 Alternative A, and **Exhibit F-29**is for Build Out + 5 Alternative C.



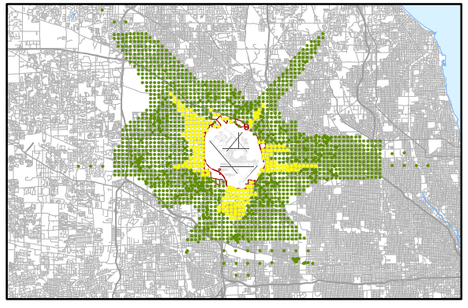
Source: Harris Miller Miller & Hanson Inc., Data Source: Northeastern Illinois Planning Commission; Leigh Fisher Associates, 2004; DuPage Co., 2002; ESRI, 2004

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

- Airport Runways
- Airport Boundary
- County Boundary
- Limited Access Freeway
- Highway
- Roads
- Residential / Learning Institutions, Hospitals and Church Land Uses
- Open Space Land Uses
- Greater than DNL 55 and Less than DNL 65
- Greater than or equal to 65 DNL

Note: Institutional Land Use = Learning Institutions, Hospitals, Nursing Homes, and Churches



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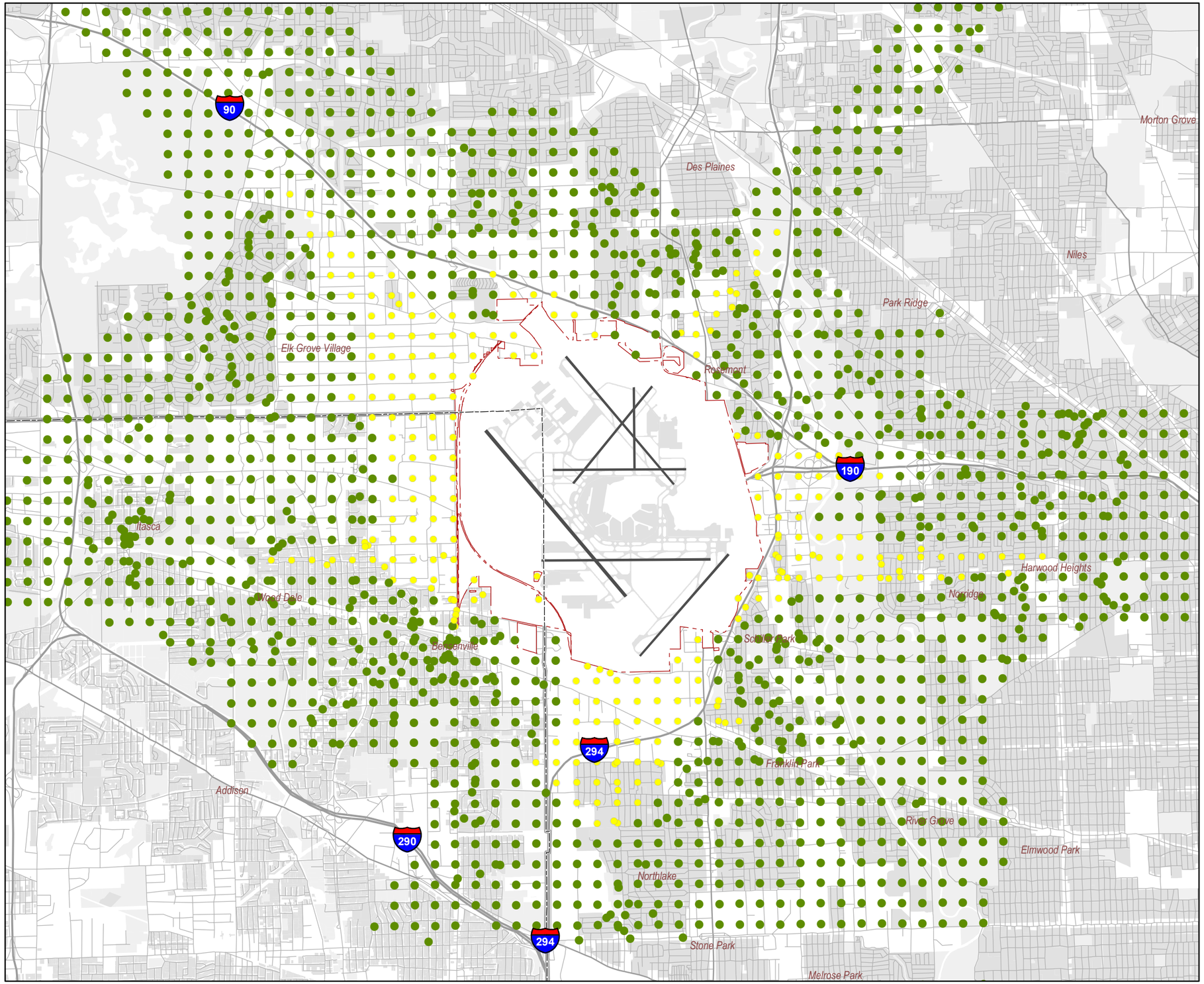
Composite Noise Analysis Results
Build Out (2013) Alternative A

▶ **Exhibit F-26**



Source: Harris Miller Miller & Hanson Inc., Data Source: Northeastern Illinois Planning Commission; Leigh Fisher Associates, 2004; DuPage Co., 2002; ESRI, 2004

Chicago O'Hare International Airport

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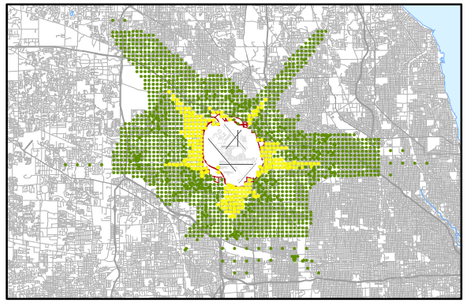
- Open Space Land Uses
- Greater than DNL 55 and Less than DNL 65
- Greater than or equal to 65 DNL

Note: Institutional Land Use = Learning Institutions, Hospitals, Nursing Homes, and Churches



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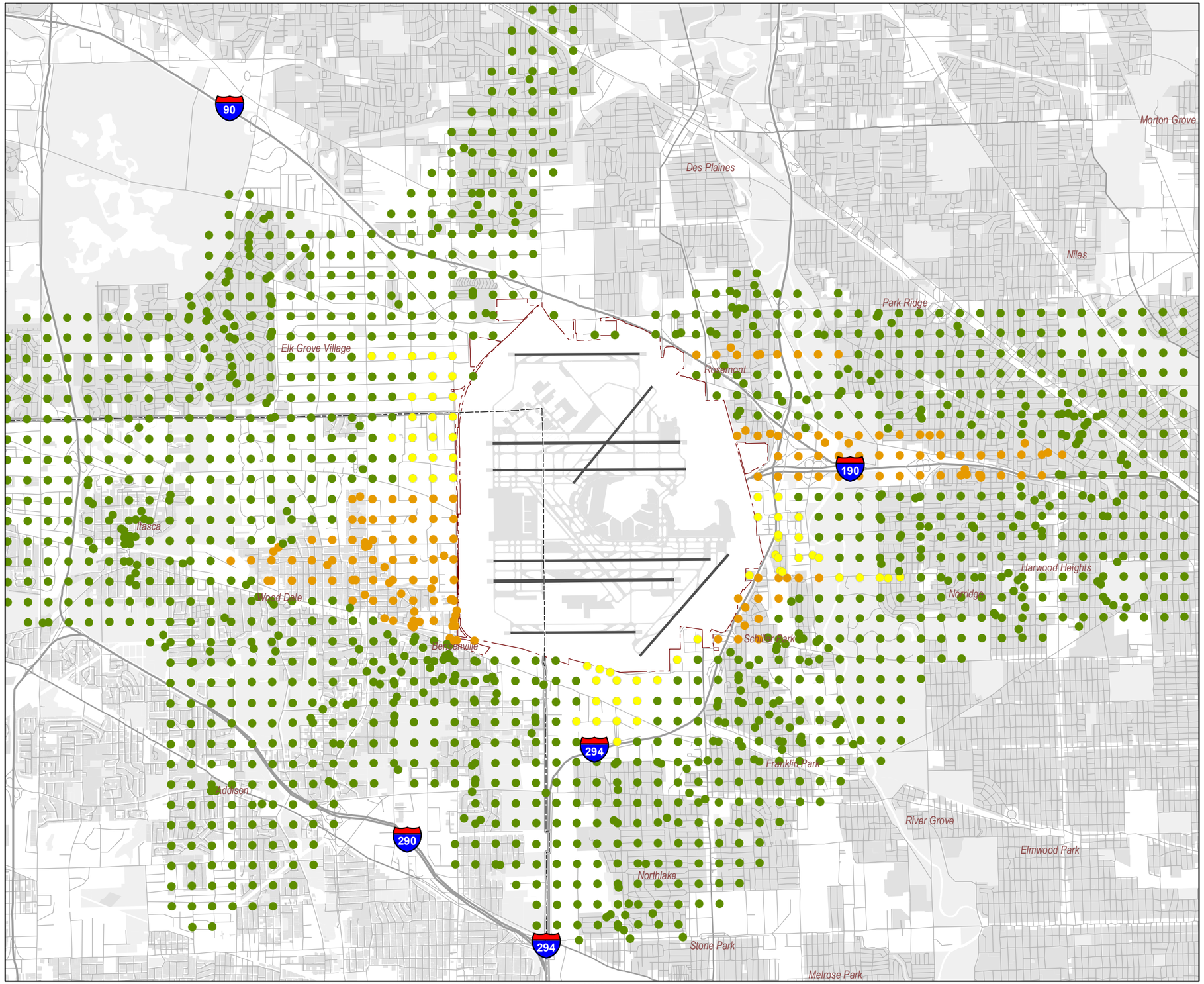
Composite Noise Analysis Results
Build Out+5 (2018) Alternative A

▶ **Exhibit F-27**



Source: Harris Miller Miller & Hanson Inc., Data Source: Northeastern Illinois Planning Commission; Leigh Fisher Associates, 2004; DuPage Co., 2002; ESRI, 2004

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

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- County Boundary
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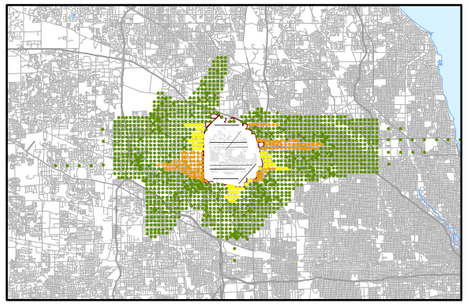
- Residential / Learning Institutions, Hospitals and Church Land Uses
- Open Space Land Uses
- Greater than DNL 55 and Less than DNL 65
- Greater than or Equal to DNL 65 and Less than 1.5 dB increase over 2013 Alt. A
- Greater than or Equal to DNL 65 and 1.5 dB or greater increase over 2013 Alt. A

Note: Institutional Land Use = Learning Institutions, Hospitals, Nursing Homes, and Churches



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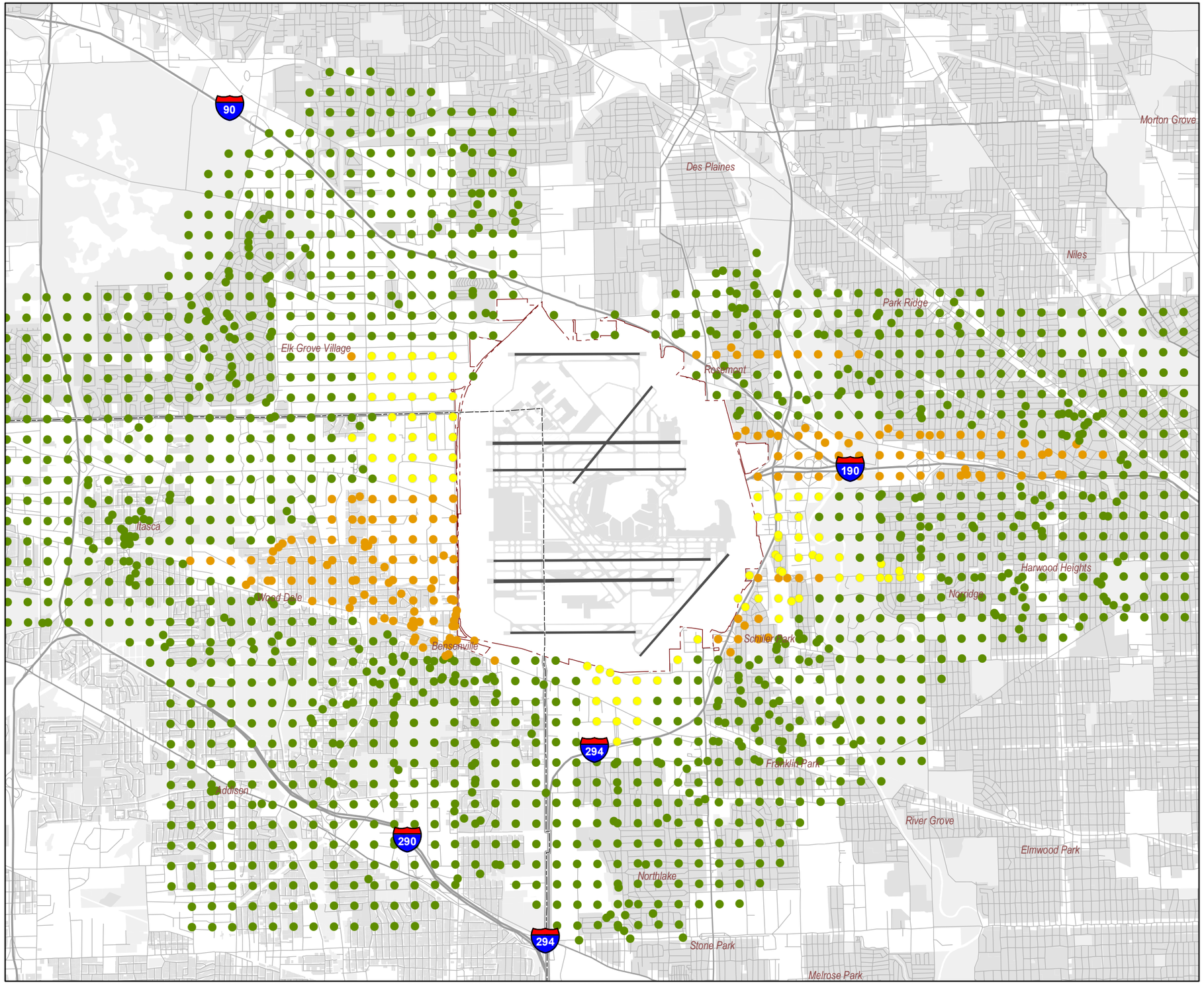
Composite Noise Analysis Results Build Out (2013) Alternative C

▶ **Exhibit F-28**



Source: Harris Miller Miller & Hanson Inc., Data Source: Northeastern Illinois Planning Commission; Leigh Fisher Associates, 2004; DuPage Co., 2002; ESRI, 2004

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

- Airport Runways
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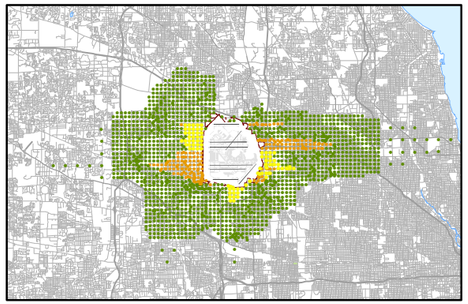
- Residential / Learning Institutions, Hospitals and Church Land Uses
- Open Space Land Uses
- Greater than DNL 55 and Less than DNL 65
- Greater than or Equal to DNL 65 and Less than 1.5 dB Increase over 2018 Alt. A
- Greater than or Equal to DNL 65 and 1.5 dB or Greater Increase over 2018 Alt. A

Note: Institutional Land Use = Learning Institutions, Hospitals, Nursing Homes, and Churches



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Composite Noise Analysis Results Build Out+5 (2018) Alternative C

▶ **Exhibit F-29**

F.4.3 High Altitude Airspace Operations

Beyond the immediate noise environment of O'Hare itself, air traffic and airspace analyses conducted for this EIS indicate some traffic arriving and departing other airports in the vicinity would be affected by the Build Alternatives. Specifically, implementation of the Build Alternatives would result in changes to aircraft operations in five geographical areas, as follows:

- General Mitchell International Airport (MKE) Eastbound Departure Corridor from Milwaukee, Wisconsin
- Midway Airport (MDW) arrivals Southeast from the Brickyard VORTAC (VHP) between 6,000 and 24,000 feet MSL
- South Bend Airport (SBN) flight tracks while O'Hare (ORD) is in west flow
- Rockford Airport (RFD) flight tracks while ORD is in east flow
- DuPage Airport (DPA) westbound departures while ORD is in east flow

FAA Order 1050.1E indicates that

> for air traffic airspace actions where the study area is larger than the immediate vicinity of an airport, incorporates more than one airport, or includes actions above 3,000 feet AGL, noise modeling will be conducted using NIRS… Noise contours will not be prepared for the NIRS, however, NIRS will be used to produce change-of-exposure tables and maps at population centroids using the following criteria:
>
> - DNL 60-65 dB ±3 dB
> - DNL 45-60 dB ±5 dB

An evaluation of potential noise impacts caused by changes to aircraft operations in Alternative A (No Action Alternative) and Alternative C in the Build Out + 5 phase was prepared for this EIS. For this EIS, Alternative C was analyzed to represent the Build Alternatives (Alternatives C, D, and G), as the same airspace changes would be required for all Build Alternatives. The changes listed above would not cause noise levels in Alternative C to exceed FAA's criteria for significant noise impact. The effect of the changes on total noise exposure is expected to be minimal because the number of affected aircraft operations is small, and most of the changes occur where aircraft are at altitudes above 3,000 feet.

In addition to there being no significant noise impact, the airspace analysis indicates that no noise impact is expected with respect to a DNL 5 dB increases at values above DNL 45 dB or 3 dB increases at values above DNL 60 dB.

A series of studies have been conducted to assess the direct and indirect effects of these changes resulting from the Build Alternatives. The study methods and results are discussed separately for each of the surrounding airports. Additional detailed analyses may be obtained in *O'Hare Modernization EIS Airspace Noise Analysis*.[41]

[41] The *O'Hare Modernization EIS Airspace Noise Analysis* report can be found at the end of this Appendix as **Attachment F-7.**

F.4.3.1 General Mitchell International Airport (MKE)

General Mitchell International Airport (MKE) is a medium hub airport situated approximately 70 miles north of O'Hare, close enough that its flights must be coordinated with O'Hare operations under certain flow conditions. Specifically, under Alternative C, during high traffic hours from 6:30 AM to 10:00 PM, existing departures out of MKE on easterly headings will, in the future, need to be rerouted to the southeast shortly after takeoff to join with eastbound departure streams leaving O'Hare. No other changes to MKE departure of arrival procedures are anticipated at this time.

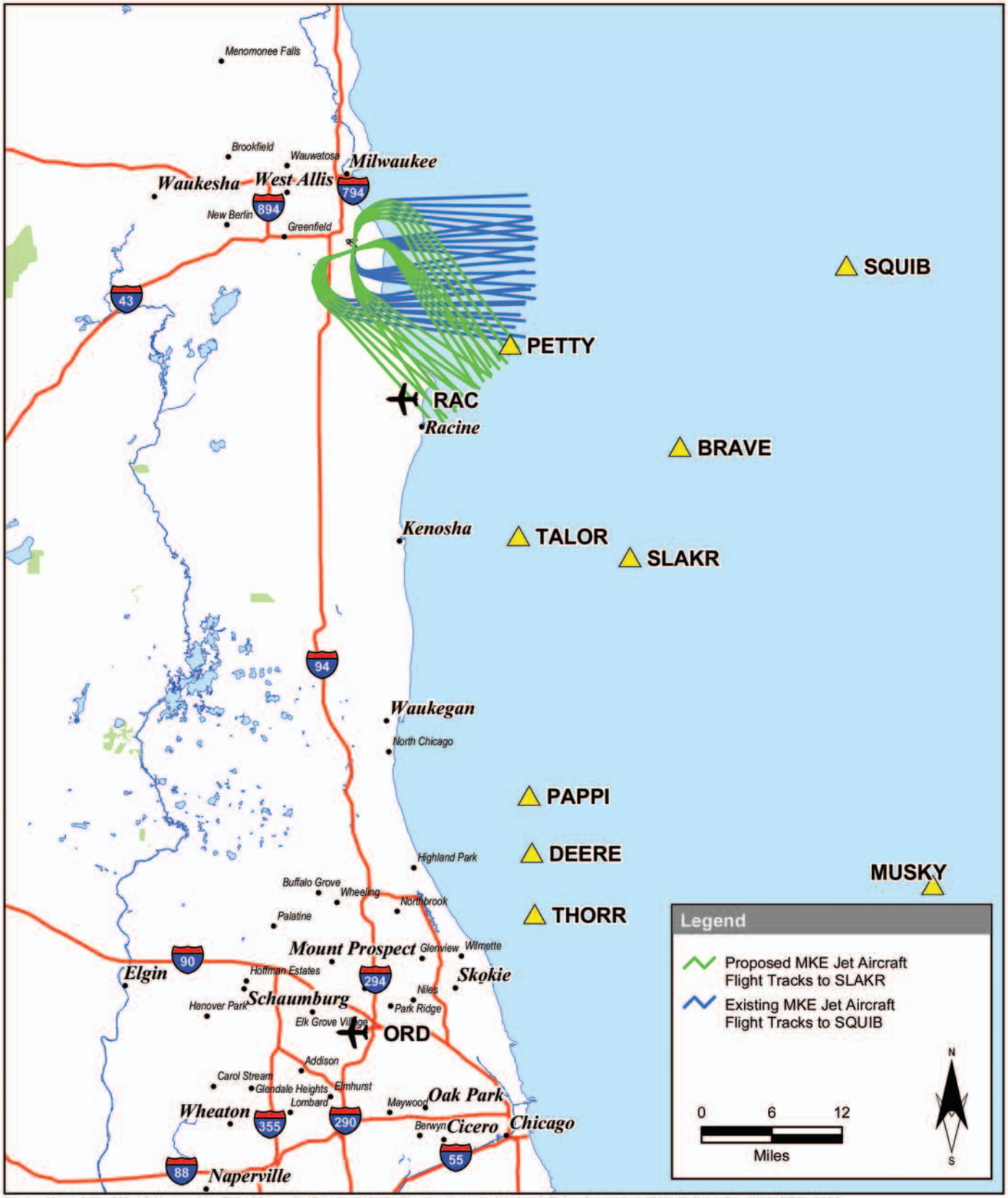
Analysis

Because the Alternative C affects some aircraft routings during climbout from MKE, the FAA's INM was used rather than Noise Impact Routing System (NIRS) to evaluate changes in noise exposure in the vicinity of this airport. For consistency with other on-going noise evaluations at MKE, noise model inputs used for both the No Action Alternative (Alternative A) and Alternative C came largely from a current FAR Part 150 Noise Compatibility Study, which was provided by staff at MKE. Relevant data included information on runway use, flight tracks and track usage, and climb profiles. The number and mix of operations by aircraft type were also derived from information collected for the Part 150 Study, but were modified to represent Build Out + 5 year operation levels by (a) scaling the traffic counts to match FAA's Fiscal Year 2003 Terminal Area Forecast (TAF), published in early calendar year 2004, and (b) substituting several new aircraft types to reflect the retirement of older, noisier aircraft that are not expected to remain in the fleet. The only differences in model inputs between No Action and Alternative C are the locations and usage of the eastbound flight tracks that are anticipated to change with the Build Alternative.

The INM study for MKE for the basecase conditions of the MKE Part 150 study was used to identify five jet departure flight paths from MKE, which turn to a 90-degree heading and proceed east towards the SQUIB fix. Using these flight paths as a guide, new flight paths were developed to follow the current initial turns but then turn to a 130-degree heading and proceed southeast toward the new fix SLAKR. It is important to note that the noise abatement procedures in place for MKE would not change as a result of the Build Alternatives. A comparison of the existing and proposed flight tracks is presented on **Exhibit F-30**.

Using the TAF as a guide, the operating fleet mix for MKE was developed for the Build Out + 5 study year. A Build Out + 5 No Action Alternative case was set up for MKE to run contours and a uniform grid covering the area to be affected by the route change.

The expected level of operations to be shifted to the new route was identified from data provided by the FAA. Operations are shifted from the existing eastbound route to the new southeast-bound route, and contours and the uniform grid covering the area were calculated for this case also. These results were compared with the Build Out + 5 No Action case to determine the potential noise impact to the surrounding communities.



Source: Harris Miller Miller & Hanson Inc., Data Source: Northeastern Illinois Planning Commission; Leigh Fisher Associates, 2004; DuPage Co., 2002; ESRI, 2004

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

Milwaukee Flight Tracks Existing and Alternative C (2018)

▶ **Exhibit F-30**

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Results

Comparisons of grid calculations every 1,215 feet over a 14 by 20 nautical mile area around MKE indicate that no location will experience a change in exposure above DNL 65 as a result of implementing Alternative C. Additionally, between DNL values of 60 and 65 dB, the maximum change in exposure (up or down) resulting from the Build Alternative is less than 0.5 dB. Between DNL values of 45 and 60 dB, the maximum change in exposure (up or down) is less than 2.0 dB. All of these changes are well within the criteria defined in FAA Order 1050.1E.

The changes in DNL values near MKE that result from Alternative C at ORD are considered minimal. The reasons for this are:

- As the future fleet gets quieter, the noise levels for the Build Out +5 operational levels at MKE are projected to decrease compared to current 2003 noise exposure levels produced for the current Part 150 Study. At low DNL values, a larger change is required before the differences are notable.
- The initial portions of most turns after takeoff will remain unchanged as a result of Alternative C; it is only after aircraft have climbed to relatively high altitudes that the flight tracks diverge between the No Action and Build Alternatives.
- Only a portion of the traffic is expected to be assigned the revised headings, and nearly all of it is occurring during the daytime when its effect on DNL is least.

These results indicate that the proposed re-routing of jet departures from MKE to a new fix called SLAKR due to the Build Alternatives at ORD would have no significant effects on the noise environment near Milwaukee, Wisconsin.

F.4.3.2 Midway Airport (MDW)

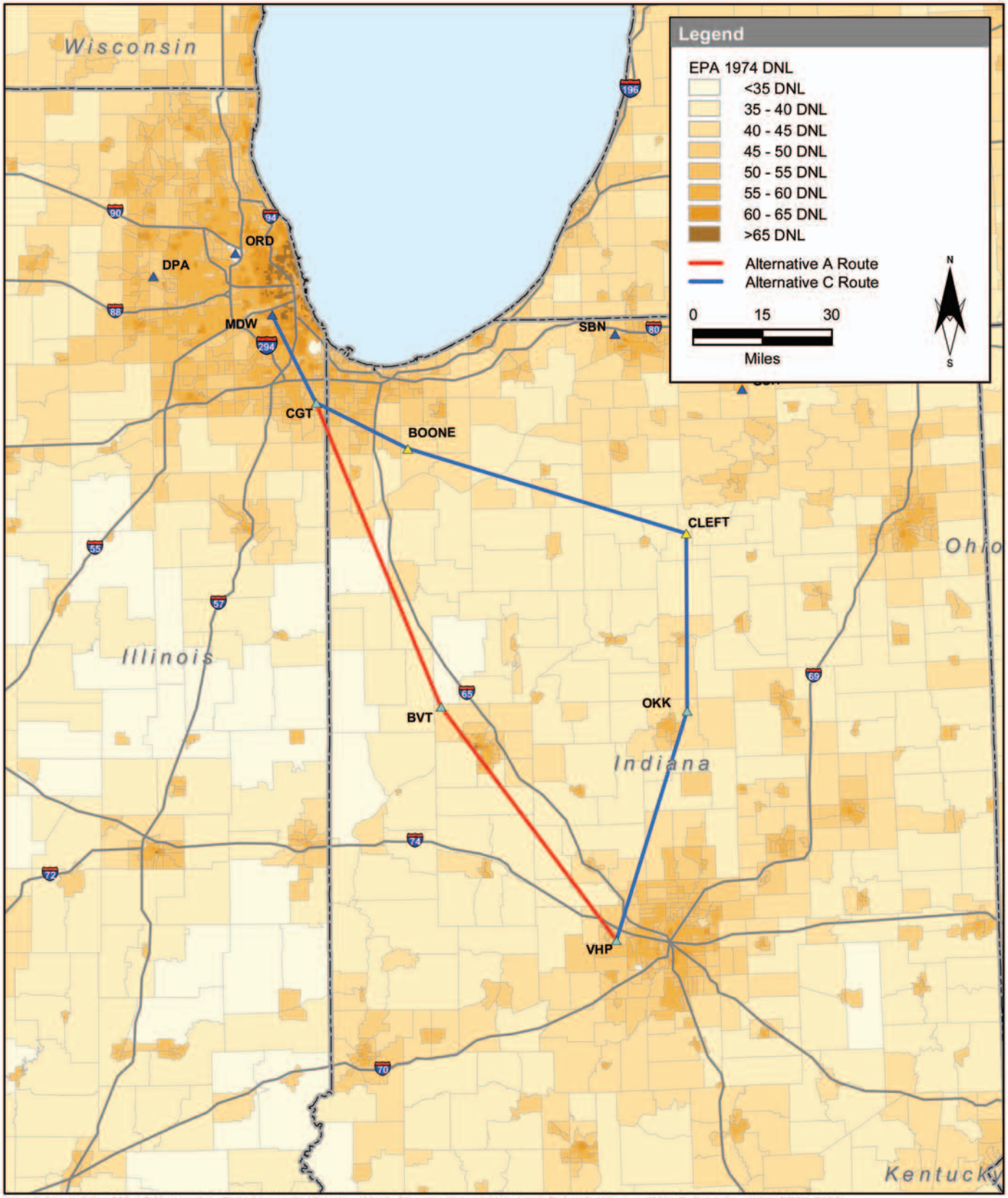
Midway Airport (MDW) is situated approximately 10 miles south of O'Hare, and is O'Hare's primary reliever airport. In some circumstances, the Build Alternatives would cause MDW arrivals approaching from the southeast on the BOILER TWO Standard Terminal Arrival Route (STAR) between BRICKYARD VORTAC (VHP) and Chicago Heights VORTAC (CGT) to be rerouted to the east. This procedure would affect arrivals between 6,000 feet and 24,000 feet MSL. Arrivals on the Goshen Three STAR and the Motif Two STAR are unaffected by the Build Alternatives.

The MDW arrivals are expected to change in ground track and in altitudes. **Table F-79** and **Exhibit F-31** summarize the affected route as expected by the FAA. Currently aircraft are vectored from VHP northwest to BVT and then onto CGT. Under the proposed procedure, the aircraft would be vectored from VHP northeast to the Kokomo VORTAC (OKK), then north to the CLEFT fix, then west to the BOONE fix and then northwest to CGT. The aircraft would turn west at CLEFT to avoid the northeast corner of Twelve Mile West Military Operations Area (MOA). The base map in **Exhibit F-31** is color-coded to show estimated ambient DNL values based on U.S. Census 2000 data, as calculated using the EPA equation for estimating DNL based on population density.

TABLE F-79
ALTERNATIVES A AND C ROUTES FOR MDW ARRIVALS FROM SOUTHWEST

Alternative A		Project Alternative C	
Location	**Altitude (MSL)**	**Location**	**Altitude (MSL)**
VHP	Greater than 24,000	VHP	Greater than 24,000
		OKK	24,000
BVT	24,000	CLEFT	~18,000 and Descending
		BOONE	6,000
CGT	6,000	CGT	6,000
MDW	Land	MDW	Land

Source: FAA October 22, 2003 Meeting.



Source: Harris Miller Miller & Hanson Inc., Data Source: Northeastern Illinois Planning Commission; Leigh Fisher Associates, 2004; DuPage Co., 2002; ESRI, 2004

Chicago O'Hare International Airport

O'Hare Modernization Environmental Impact Statement

Alternative A and Alternative C Routes for MDW Arrivals from Southeast (VHP)

▶ Exhibit F-31

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Analysis

Because of the large distances and high altitudes over which Alternative C affects Midway traffic, the FAA's NIRS (rather than the INM) was used to evaluate changes in noise exposure from the new routes described above. Calculations of noise were made at individual points conservatively located directly under the current and modified routes to identify the maximum degree of change that could expected from Alternative C. A total of 138 points were modeled for noise computations, spaced approximately 3 miles apart along each of the routes. **Exhibit F-31** shows the No Action and Proposed routes. Using the FAA's 2003 Terminal Area Forecast (TAF) and the FAA's Post Operations Evaluation Tool (POET) data as a guide, the operating fleet mix along these routes was determined for MDW arrivals for the Build Out + 5 year.

Using data provided from the FAA, the expected level of operations to be shifted to the new route were estimated, which included only operations requesting 13,000 feet and below. Specific points along both routes were computed and compared with the Build Out + 5 No Action case to determine any noise impact to the surrounding communities.

Results

The airspace noise calculations were performed using NIRS at 297 points for the potentially rerouted aircraft at Midway, South Bend, DuPage, and Rockford airports, as well as a simplified representation of the O'Hare arrivals from the southeast and southwest. The modeled routes are all associated with the Alternative C improvements for the Build Out + 5 year. Each of these modeled points was located directly under one, or under the intersection of two, of the modeled flight paths, and the DNL values computed from all of the rerouted aircraft were logarithmically added together at each point.

The Build Out + 5 No Action Alternative (Alternative A) conditions were modeled at all 297 points for the affected Midway operations and the Alternative A ORD arrivals[42] from the southeast and southwest. The Build Out + 5 Alternative C conditions were modeled at all 297 points for the affected Midway operations and the Build Out + 5 Alternative C ORD arrivals from the southeast and southwest (including the high-and-wide),[43] Rockford, South Bend and DuPage. As mentioned previously, Rockford, South Bend and DuPage airports were not modeled for Alternative A, so increases in DNL caused by Alternative C are exaggerated, and the analysis represents a worst-case assessment.

Only 12 points had Alternative C DNL values equal to or above 43.3 dB DNL. Of these, only seven (7) points had Alternative C DNL values equal to or above 43.3 dB DNL and a DNL 5 dB

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[42] Alternative A O'Hare arrivals from the Southwest were modeled on a simple track representing the Bradford Three Arrival STAR. Alternative A O'Hare arrivals from the Southeast were modeled on a simple track representing the Kokomo One STAR. Operations for both tracks were from the 2018 NA INM study.

[43] Alternative C O'Hare arrivals from the Southwest were modeled on one of two simple tracks representing the Bradford Three Arrival STAR using either the "high-and-wide" procedure or not using the "high-and-wide" procedure. Alternative C O'Hare arrivals from the Southeast were modeled on one of two simple tracks representing the Kokomo One STAR using either the "high-and-wide" procedure or not using the "high-and-wide" procedure. Operations for all four tracks were from the 2018 WP INM study.

or greater increase compared to Alternative A. Each of the seven points was a result of aircraft associated with DPA, RFD, or SBN at an altitude below 10,000 ft MSL. Since operations associated with these airports below 10,000 feet MSL would not be affected, these points are not representative of the noise change associated with the Alternative C improvements, and additional analysis is not warranted. The increase in DNL associated with these points occurs because Alternative C alone was modeled, and its DNL is not being compared to the Alternative A DNL. These points were modeled to assist with the analysis, determine where aircraft reach 10,000 ft MSL and to indicate a minimum altitude in which the operations could be affected without additional analysis being required.

The remaining five points with Alternative C DNL values equal to or above 43.3 dB DNL had increases of 1 dB or less, or decreases, compared to the respective Alternative A DNL, and therefore additional analysis was not warranted. Three of these points were associated with the changes of the MDW operations near CGT where the Alternative C and Alternative A tracks are the nearly identical, one point was associated with simplified modeling of the O'Hare arrivals from the southwest, and one point was associated with modeling a location where SBN departures could potentially cross over the MDW arrivals between CGT and MDW.

Furthermore, the analysis suggests this rerouting of the MDW arrivals between VHP and CGT to OKK-CLEFT-BOONE, could handle at least 10 times the operations expected without exceeding FAA noise criteria.[44]

The analysis for these airports included a simplified, assumption that had all operations associated with one airport flying on the same track. This simplification does not represent the variability in flight tracks that occurs because of difference in aircraft performance, weather conditions, runway use or Air Traffic Control instructions to the aircraft in flight. However, even with all of the aircraft flying the same flight track, an assumption that over-estimates the noise and the increase in noise compared to Alternative A directly under the modeled flight path, FAA criteria were not exceeded in this analysis. Therefore FAA criteria would not be exceeded in a detailed analysis that accounted for these factors.

F.4.3.3 South Bend Airport (SBN)

South Bend Regional Airport (SBN) is situated approximately 74 miles east of O'Hare. SBN is a small regional airport with three runways; the longest is 8,412 feet. Due to the Build Alternatives, SBN departures with westerly headings may be affected. This would only affect procedures above 10,000 feet MSL while ORD is in west flow.

[44] For this statement, Alternative C DNL values were recalculated by adding 10 dB to the affected MDW results, which is equivalent to a ten-fold increase in the number of affected MDW operations. The comparison of the recalculated Alternative C DNL values to Alternative A did not exceed FAA criteria or exceed levels that would indicate additional analysis is warranted. The recalculated Alternative C DNL values analysis assumes that the affected MDW operations' altitudes, aircraft types, and day/night split are still representative. If the affected MDW operations exceed ten times what is modeled, the aircraft types, day/night splits, and/or proposed action altitudes vary, additional analysis may be warranted.

Departures from SBN do not follow any Standard Instrument Departure (SID) procedures but do have published departure procedures that require aircraft to depart and follow the runway heading until reaching 2,000 feet and then they can turn and be vectored to the appropriate route. This procedure is expected to remain the same in the future.

Analysis

Using the FAA's 2003 Terminal Area Forecast (TAF) and the FAA's POET data as a guide, the operating fleet mix for SBN departures were estimated for the Build Out + 5 study year. The Build Out + 5 No Action case was run for SBN in NIRS to compute DNL values under the flight path with all of the operations on a single route. This conservative approach tends to over-estimate changes in DNL, since in practice, the departure tracks would be more dispersed.

Using data provided from the FAA, the expected level of operations to be shifted to the new route were estimated, which included only operations requesting 13,000 feet and below. Specific points along both routes were computed and compared with the Build Out + 5 No Action case to determine any noise impact to the surrounding communities.

Results

The results SBN are included in the text for Midway Airport in **Section F.4.3.2, Midway Airport (MDW)**.

F.4.3.4 Greater Rockford Airport (RFD)

The Greater Rockford Airport (RFD) is situated approximately 54 miles northwest of O'Hare. RFD is a regional airport with two runways and the longest is 10,000 feet long. Due to the Build Alternatives, RFD departures with easterly headings may be affected. This would only affect procedures above 10,000 feet MSL while ORD is in east flow.

Departures from RFD do not follow any Standard Instrument Departure (SID) procedures but for this analysis the departures would follow the runway heading until reaching 3,000 feet and then they can turn and be vectored to the appropriate route. This same procedure is expected in the future.

Approach

Using the FAA's 2003 Terminal Area Forecast (TAF) and the FAA's POET data as a guide, the operating fleet mix for RFD departures was estimated for the Build Out + 5 study year. The Build Out + 5 No Action case was run for RFD in NIRS to compute DNL values under the flight path with all of the operations on a single route. This conservative approach tends to over-estimate changes in DNL, since in practice, the departure tracks would be more dispersed.

Using data provided from the FAA, the expected level of operations to be shifted to the new route were estimated, which included only operations requesting 13,000 feet and below. Specific points along both routes were computed and compared with the Build Out + 5 No Action case to determine any noise impact to the surrounding communities.

Results

The results RFD are included in the text for Midway Airport in **Section F.4.3.2, Midway Airport (MDW)**.

F.4.3.5 DuPage Airport (DPA)

DuPage Airport (DPA) is situated approximately 16 miles west of O'Hare. DPA is a small regional airport with four runways and the longest is 7,570 feet long. Due to the Build Alternatives, DPA departures with westerly headings may be affected. This would only affect procedures above 10,000 feet MSL while ORD is in east flow.

Departures from DPA do not follow any Standard Instrument Departure (SID) procedures but for this analysis the departures would follow the runway heading until reaching 3,000 feet, and then they can turn and be vectored to the appropriate route. This same procedure is expected in the future.

Approach

Using the FAA's 2003 TAF and the FAA's POET data as a guide, the operating fleet mix for DPA departures for the Build Out + 5 study year was determined. The Build Out + 5 No Action case was run for DPA in NIRS to compute DNL values under the flight path with all of the operations on a single route. This conservative approach tends to over-estimate changes in DNL, since in practice, the departure tracks would be more dispersed.

Using data provided by the FAA, the expected level of operations to be shifted to the new route were estimated, which included only operations requesting 13,000 feet and below. Specific points along both routes were computed and compared with the Build Out + 5 No Action case to determine any noise impact to the surrounding communities.

Results

The results DPA are included in the text for Midway Airport in **Section F.4.3.2, Midway Airport (MDW)**.

F.5 EXISTING O'HARE NOISE ABATEMENT AND MITIGATION PROGRAMS

This section summarizes the Airport's existing noise abatement and mitigation programs. The existing 2002 Baseline noise analyses, including aircraft, surface traffic, and rail noise, are presented in **Section 5.1, Noise.**

F.5.1 O'Hare Noise Compatibility Commission

In 1996, the City initiated the formation of O'Hare Noise Compatibility Commission (ONCC) to oversee noise mitigation efforts around O'Hare. The Commission is comprised of

representatives of communities and public school districts located within the O'Hare area, and participates in the planning of noise relief projects to be implemented in the O'Hare area; oversees the operation of O'Hare's noise monitoring system; and advises the City on O'Hare-related noise issues.

F.5.2 Fly Quiet Program

The Fly Quiet Program was introduced in 1997 by the City of Chicago as a cooperative effort of the City, ONCC, FAA, and airlines serving O'Hare. The program consists of noise abatement flight and operating procedures that were developed over the previous decade, incorporated into airport rules and the FAA Tower Order, and designed to reduce the impact of aircraft noise during the nighttime hours (10 PM to 6:59:59 AM). Since 1997, the City has monitored the aviation activities at O'Hare through its Airport Noise Monitoring System (ANMS), as reported monthly in ANMS reports and quarterly in the "Fly Quiet Report". The ONCC, through its Technical Committee, periodically reviews the City's ANMS reports and evaluates the adherence to the Fly Quiet Program. The Technical Committee in cooperation with airport staff work with aviation users to improve adherence to the program. The ONCC also conducts public outreach efforts to educate the public on the efficacy of the Fly Quiet Program.

The three main elements of the Fly Quiet Program are 1.) Preferential Runway Use, 2.) Arrival and Departure Flight Procedures and 3.) Ground Run-Up Procedures. Use of Preferential Runway and Flight Procedures are encouraged under favorable wind, weather, and operational conditions, while the Ground Run-Up procedures are a requirement of the DOA. The following outlines the features of each of the three elements of the Fly Quiet Program in more detail. **Attachment F-8** includes a brochure of the Fly Quiet Program and an example of a recent Fly Quiet Adherence Report.

F.5.2.1 Preferential Runway Use

The preferential runway use plan at O'Hare utilizes flight procedures to minimize the effects of nighttime noise on nearby residential areas. These procedures are implemented between 10 PM and 6:59:59 AM, unless wind, weather, loss of navigational aids (NAVAIDS), or other operational conditions dictate otherwise. The FAA air traffic controllers direct the use of the runways in the following preferred order (refer to **Exhibit F-32**): 1) Arrivals on Runway 14R and departures on Runway 27L and Runway 14R; 2) Arrivals on Runway 32L and departures on Runway 27L and Runway 32L; 3) Arrivals on Runway 27R and departures on Runway 27L and Runway 32L; 4) Arrivals on Runway 22R and departures on Runway 27L and Runway 22R; and 5) Arrivals on Runway 9R and departures on Runway 9L and Runway 9R.

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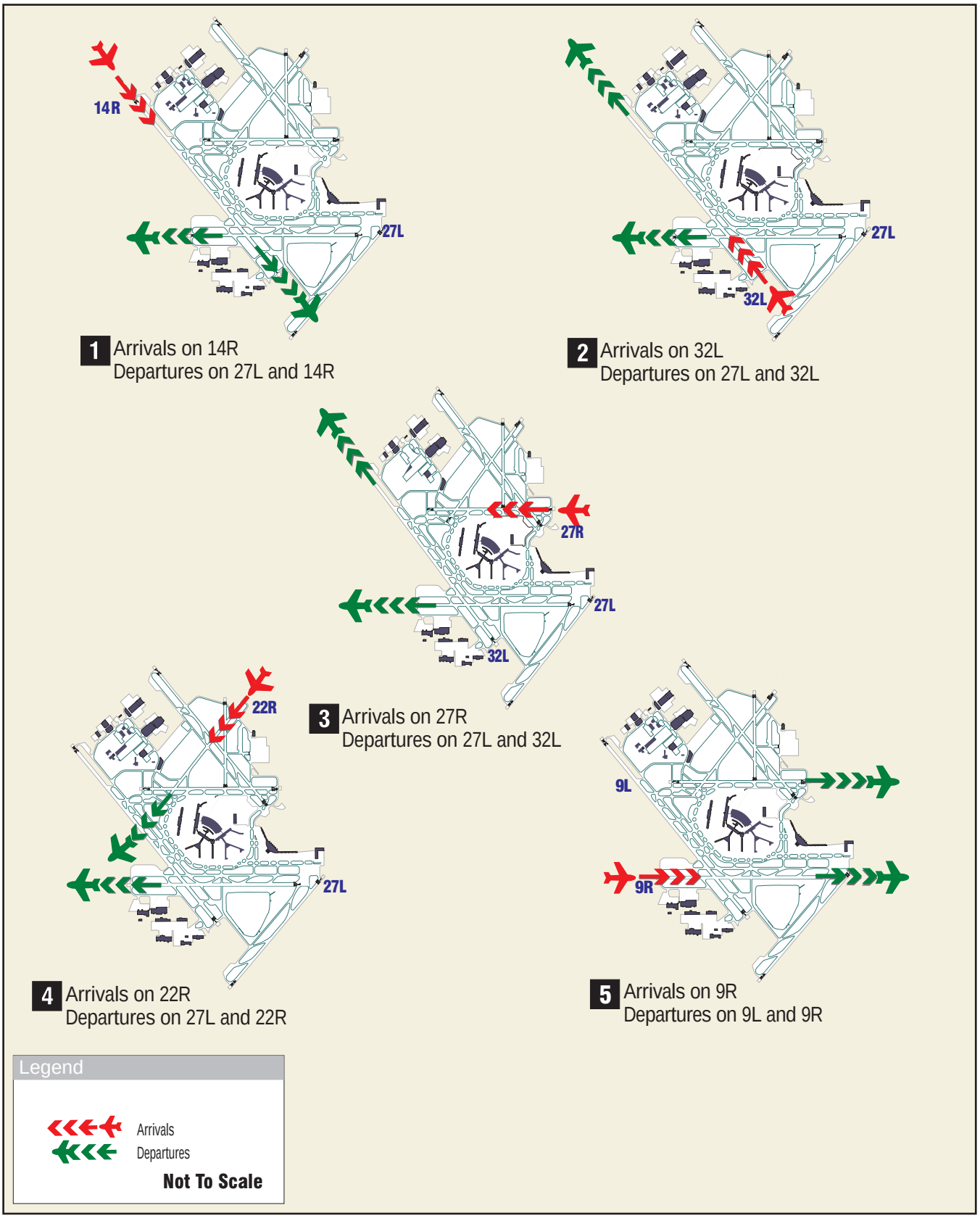

Source: Landrum and Brown, Inc. [CCT] 2003

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Nighttime Preferential Runway Use

▶Exhibit F-32

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Arrival and Departure Noise Abatement Procedures

Like the preferential runway use plan, the arrival and departure procedures are intended to reduce nighttime noise exposure in nearby residential areas. The recommended arrival procedures, which apply between 10 PM and 6:59:59 AM, include the following:

- Aircraft should not be lower than 4,000 feet MSL when turning onto final approach
- Pilots should limit the use of reverse thrust upon landing

The recommended departure procedures include a recommended noise abatement departure climb profile. Pilots are advised to use the "distant" departure profile, based on the FAA Advisory Circular 91-53(A), during both daytime and nighttime hours. This procedure involves a combination of thrust and flap settings and climb rates and is intended to minimize the amount of noise produced by the aircraft.

Preferential nighttime departure flight paths have also been designed as part of the Fly Quiet Program to direct aircraft away from heavily populated areas and toward compatible areas such as industrial parks, highways, and forest preserves. As shown in **Exhibit F-33**, the departure procedures are as follows:

- Runway 27L – Turn right to a heading of 290 degrees until reaching 3,000 feet MSL.
- Runway 22L – Turn left to a heading of 180 degrees until reaching 3,000 feet MSL (following I-294, the Tri-State Tollway).
- Runway 4R – Fly runway heading for one mile, then turn right to a heading of 090 degrees until reaching 3,000 feet MSL (following I-90, the Kennedy Expressway).
- Runway 32R – Turn left to a heading of 300 degrees until reaching 3,000 feet MSL (following I-90, the Northwest Tollway).
- All other runways (4L, 9L, 9R, 14R, 14L, 22R, 27R, 32L) – Fly runway heading until reaching 3,000 feet MSL.

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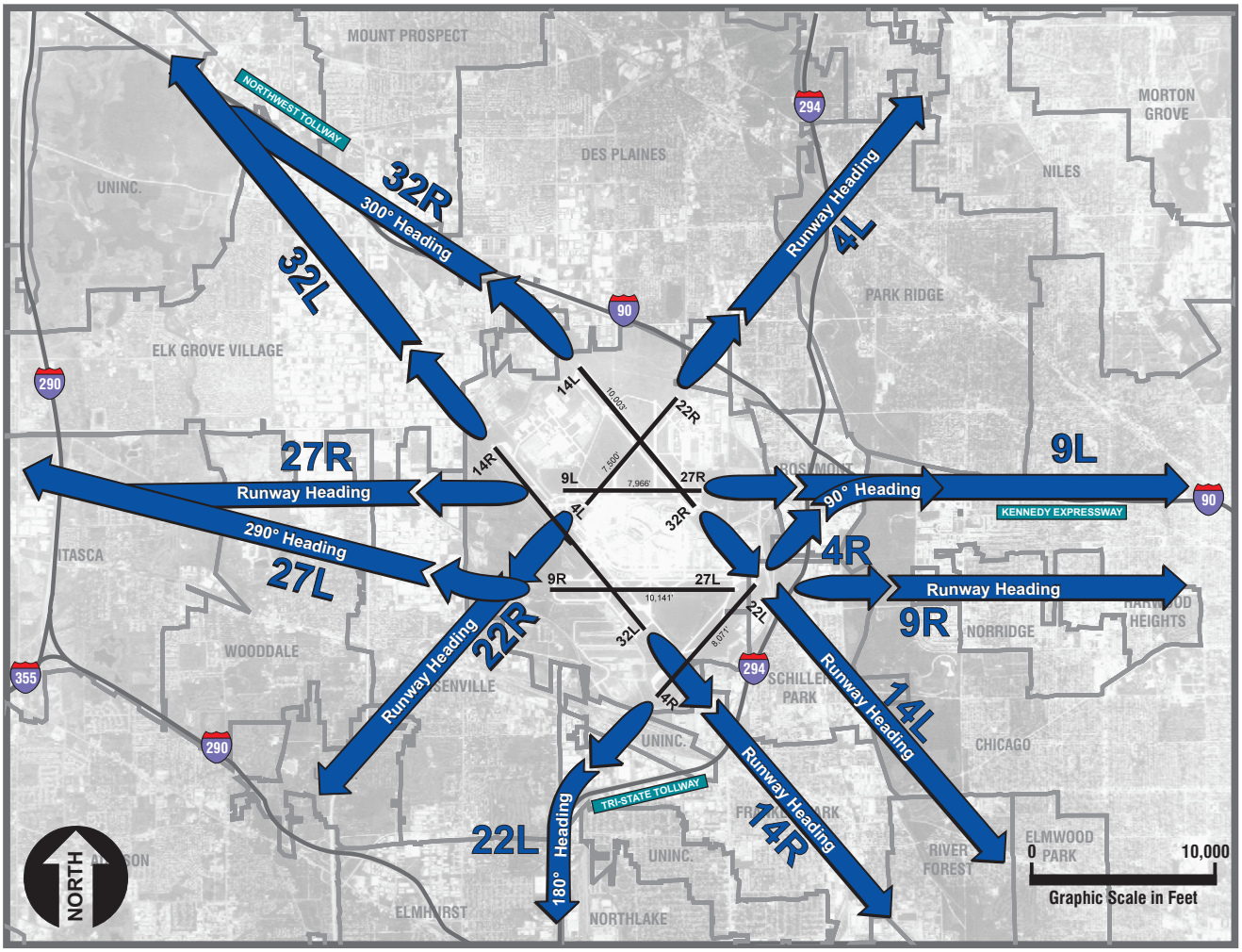

Recommended Nighttime Departure Procedures

During 10:00 p.m. to 7:00 a.m. local time

27L -Make right turn heading 290° until 3,000 feet MSL.

22L -Make left turn heading 180° until 3,000 feet MSL. *(following I-294 TriState Tollway).*

4R -Fly runway heading for 1 mile then right turn heading 090° until 3,000 feet MSL *(following I-90 Kennedy Expressway).*

32R -Make left turn heading 300° until 3,000 feet MSL *(following I-90 Northwest Tollway).*

***All other runways(4L, 9L, 9R, 14L, 14R, 22R, 27R, 32L)-** Fly runway heading until 3,000 feet MSL

.

Departure Profiles

I. Air Carriers -

Advisory Circular 91-53(A) "Distant" or FAA Approved Profile.

II. Other Aircraft -

Utilize Manufacturers Noise Abatement Profile when possible.

Source: Fly Quiet Program Preferential Runway Use Manual, 1997

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Recommended Nighttime Departure Procedures

▶ **Exhibit F-33**

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Ground Run-Up Policies and Procedures

Aircraft ground run-ups are routine aircraft engine and systems maintenance tests that require the operation of an engine at high power for extended periods of time, generating continuous elevated noise levels.

All run-ups of turbojet engines after 10 PM and before 6:59:59 AM require the pilot or mechanic to obtain approval from Airport Operations prior to contacting the O'Hare Air Traffic Control Tower (ATCT). To significantly reduce routine aircraft engine maintenance run-up noise, the City has invested $3.2 million and built the state-of-the-art acoustical dampening Ground Run-Up Enclosure (GRE) facility (refer to **Exhibit F-34**), which was the first of its kind in the U.S.

Ground run-ups are typically conducted at the following locations, listed in preferential order:

1. GRE on Scenic Hold Pad.
2. Runway 32L Hold Pad (at approach end of runway).
3. Runway 9R Hold Pad.

These locations are designed to minimize noise levels outside the Airport property. If these preferred run-up locations are inaccessible or unavailable for any reason, then the hold pads identified on **Exhibit F-31** can also be used for ground run-ups. Specific headings on the run-up pads may be assigned based on prevailing winds and to avoid interfering with aircraft operations on active runways.

F.5.3 School Sound Insulation Program (SSIP)

In addition to its noise abatement initiatives, the City has voluntarily undertaken a large-scale SSIP in the Airport environs to reduce aircraft sound levels in schools. The program provides schools with sound insulation that may include noise attenuating windows, additional roofing and ceiling insulation, improved doors, and related measures intended to reduce the transmission of aircraft noise into schools.

Accredited and operational schools located within the vicinity of O'Hare are eligible for consideration for the SSIP. Each school wishing to participate sends a letter to the DOA expressing their interest in the program. Each school expressing interest is then ranked according to the following four criteria: 1) DNL exposure as determined by the 2000 Noise Contour, 2) distance from the center of O'Hare, 3) whether the school has hired an architect, and 4) whether the school has completed a project summary. Those schools ranking the highest, based on these four criteria, are then scheduled for noise monitoring.

Noise monitoring is conducted at each eligible school over a consecutive four-day period in which wind and weather conditions are forecasted to favor air traffic over that school. During the noise monitoring process, noise monitors are placed simultaneously on the roof of the school, in a classroom with the windows closed, and in a classroom with the windows open for comparison purposes. The monitored 8-hour average sound level (Leq_8) from 8:00 AM to 4:00 PM in a classroom with windows open is used to rank the schools that are monitored from most noise impacted to least noise impacted in order to prioritize the insulation of schools.

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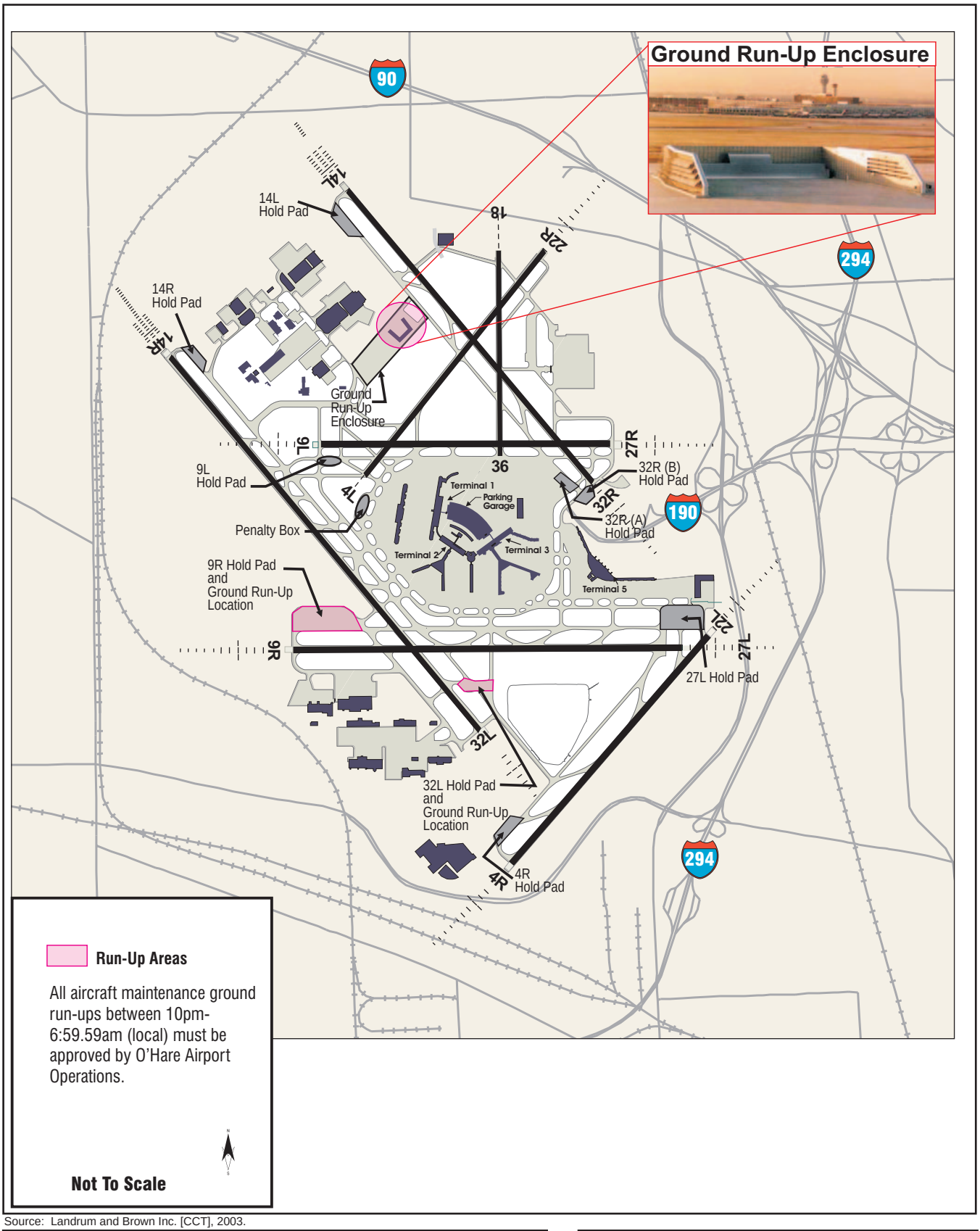

Source: Landrum and Brown Inc. [CCT], 2003.

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Proposed Relocation of Ground Run-Up Locations

Exhibit F-34

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The DOA and the ONCC review results and recommend to the FAA the insulation of the most noise impacted schools. The FAA then reviews the recommendation of the DOA and ONCC and approves or disapproves the sound insulation of a school based on available funding. Those schools that are approved for sound insulation must then agree to enter into the sound insulation grant agreement program.

The City's SSIP is one of the most extensive programs of its kind in the world with 110 O'Hare-area schools having been sound-insulated and/or funded for upcoming insulation at a cost of $246 million as of January 2004. Schools included in the SSIP are shown in **Exhibit F-35.**

F.5.4 Residential Sound Insulation Program (RSIP)

The RSIP aims to reduce the impact of aircraft noise in single-family homes surrounding O'Hare. The RSIP provides qualifying homes with sound insulation to reduce the transmission of outside noise into the homes. Per the initial program criteria, eligible homes for the RSIP must be single-family, owner-occupied, built before October 1, 1998,[45] and within the 70 DNL and greater range of the 2000 noise contour.[46]

With the completion of sound insulation for eligible and qualifying homes within the 70 DNL and greater range of the 2000 noise contour, the decision was made in 2003 to extend the program beyond the 70 DNL range, based on availability of funding. Under the ONCC's new guidelines, the program operates with three priorities. The first priority is given to eligible homes in areas covered by the 2000 Noise Contour Map, but not included in the earlier years of the program because the owners at the time declined to participate. New owners of those homes can request reconsideration for sound insulation work. The next priority is for the remaining homes in the 69 and greater DNL, as defined by the 2000 Noise Contour Map. The ONCC's goal is to round off the blocks that were only partly covered by previous phases of the program. The final priority for the 2003 O'Hare Residential Sound Insulation Program is to begin sound insulating homes within the 68 DNL, as defined by the 2000 Noise Contour Map. Also the City of Chicago pledged an additional $16.6 million in funding.

Sound insulation measures may include noise-attenuating windows, improved doors, new heating and air conditioning, and wall insulation. Sound insulation provides a quieter interior thereby enhancing indoor activities and may also provide increased efficiency in home heating and cooling.

With the completion of the 2004 program, 5,925 homes will have been sound-insulated and/or funded for insulation at a cost of $189 million since the Program began.

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[45] Final Policy on Part 150 Approval of Noise Mitigation Measures: Effect on the Use of Federal Grants for Noise Mitigation Projects, Federal Aviation Administration, 14 CFR 150.

[46] DNL, Day Night Sound Level, is the FAA's required metric for assessing airport noise. It represents the total, cumulative noise exposure for an average day during the study year and includes an extra weight of 10 decibels for all nighttime noise (occurring after 10:00 p.m. and before 6:59:59 a.m.).

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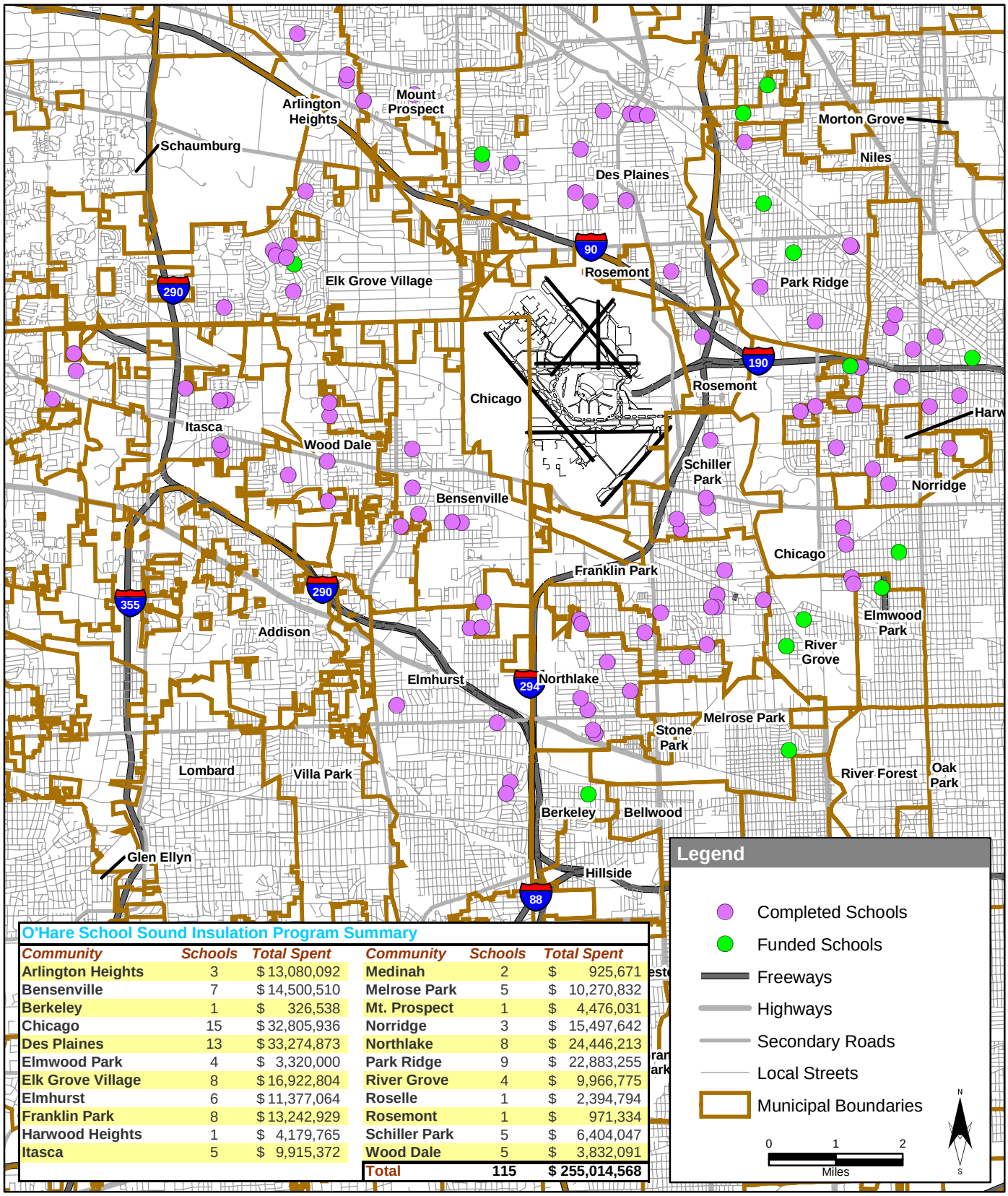

O'Hare School Sound Insulation Program Summary

Community	Schools	Total Spent	Community	Schools	Total Spent
Arlington Heights	3	$ 13,080,092	Medinah	2	$ 925,671
Bensenville	7	$ 14,500,510	Melrose Park	5	$ 10,270,832
Berkeley	1	$ 326,538	Mt. Prospect	1	$ 4,476,031
Chicago	15	$ 32,805,936	Norridge	3	$ 15,497,642
Des Plaines	13	$ 33,274,873	Northlake	8	$ 24,446,213
Elmwood Park	4	$ 3,320,000	Park Ridge	9	$ 22,883,255
Elk Grove Village	8	$ 16,922,804	River Grove	4	$ 9,966,775
Elmhurst	6	$ 11,377,064	Roselle	1	$ 2,394,794
Franklin Park	8	$ 13,242,929	Rosemont	1	$ 971,334
Harwood Heights	1	$ 4,179,765	Schiller Park	5	$ 6,404,047
Itasca	5	$ 9,915,372	Wood Dale	5	$ 3,832,091
			Total	115	$ 255,014,568

Source: City of Chicago, DOA Noise Office 2005

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School Sound Insulation Program (SSIP) Totals by Community

Exhibit F-35

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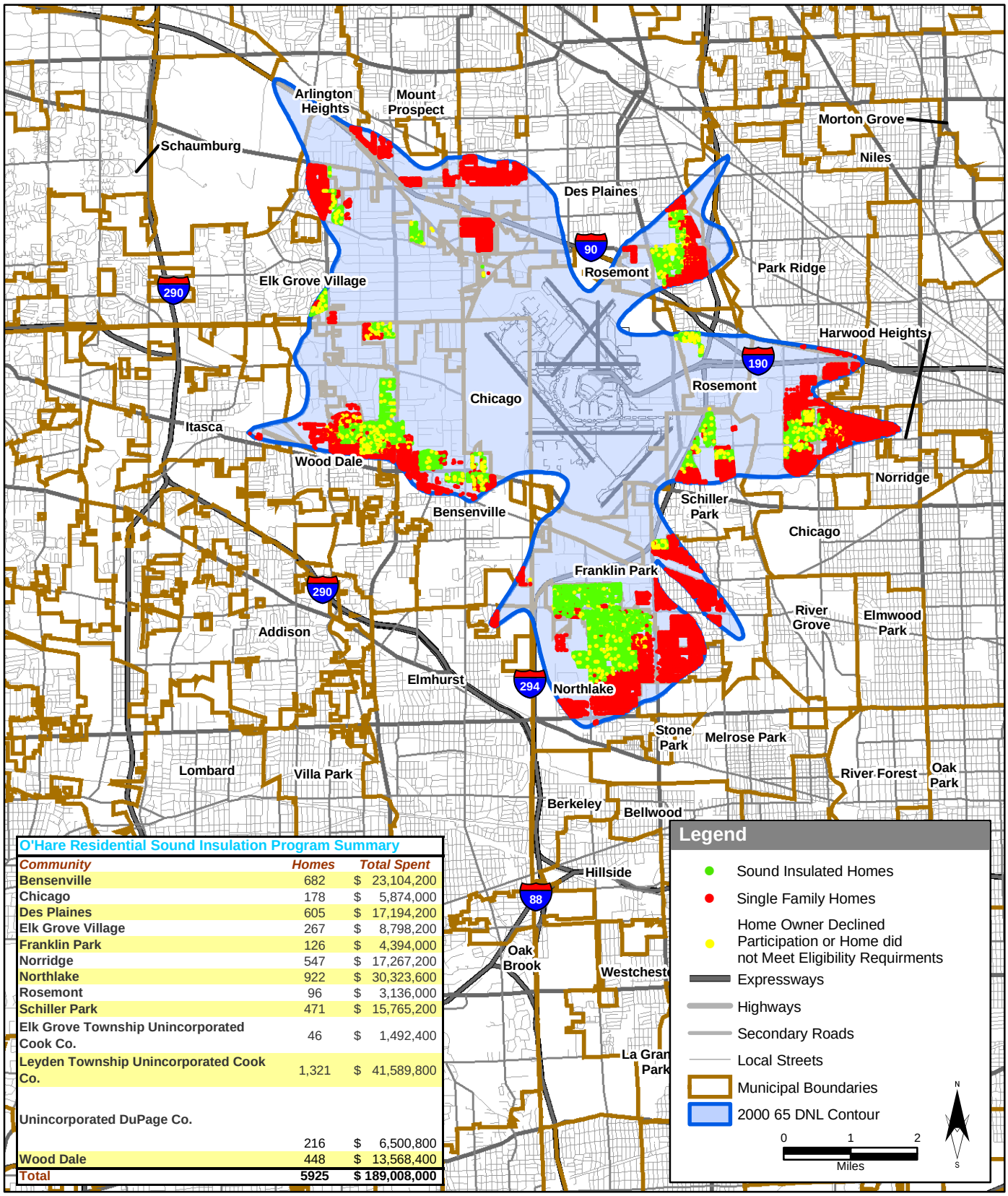

O'Hare Residential Sound Insulation Program Summary

Community	Homes	Total Spent
Bensenville	682	$ 23,104,200
Chicago	178	$ 5,874,000
Des Plaines	605	$ 17,194,200
Elk Grove Village	267	$ 8,798,200
Franklin Park	126	$ 4,394,000
Norridge	547	$ 17,267,200
Northlake	922	$ 30,323,600
Rosemont	96	$ 3,136,000
Schiller Park	471	$ 15,765,200
Elk Grove Township Unincorporated Cook Co.	46	$ 1,492,400
Leyden Township Unincorporated Cook Co.	1,321	$ 41,589,800
Unincorporated DuPage Co.	216	$ 6,500,800
Wood Dale	448	$ 13,568,400
Total	5925	$ 189,008,000

Source: City of Chicago, DOA Noise Office 2005

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Residential Sound Insulation through 2004 Program Year

Exhibit F-36

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