

**Village of Bensenville
Village Board Room
12 South Center Street
Bensenville, Illinois 60106
Counties of DuPage and Cook**

**MINUTES OF THE O'HARE IMPACT COMMITTEE MEETING
September 9, 2014**

CALL TO ORDER: President Soto called the meeting to order at 6:53 p.m.

PRESENT: Upon roll call by Village Clerk, Ilsa Rivera-Trujillo, the following Board Members were present:

President Soto, Bartlett, Janowiak, Jarecki, O'Connell, Ridder, Wessler

Absent: None

A quorum was present.

Staff Present: Village Attorney, Pat Bond, Cassady, Caracci, DiSanto, Kosman, Rysavy, Sloth, Viger, Williamsen

**Approval of
Minutes:**

The August 12, 2014 O'Hare Impact Committee Minutes were presented.

Motion: Trustee Ridder made a motion to approve the minutes as presented. Trustee Janowiak seconded the motion.

All were in favor. Motion carried.

**Informational
Items:**

Village Manager, Michael Cassady, reviewed the Village's efforts within the last month. Mr. Cassady stated the Village hosted a ONCC Tech meeting on September 9, 2014 along with attending a SOC meeting on September 9, 2014. Mr. Cassady stated the Village is currently collecting data from the six noise monitors that have been purchased and placed mainly along Hillside Drive. Mr. Cassady stated the Village continues to communicate with the University of Illinois at Chicago. UIC will be studying the noise in Bensenville within their upcoming fall semester.

Mr. Cassady stated the Village had recently approved three ballot questions that will be place on the November 4, 2014 ballot. Mr. Cassady stated the Village will continue to educate the Residents regarding the questions. Mr. Cassady stated the Village has retained the services of Lockridge Grindal Nauen, LLP.

Trustee Ridder provided a review of the September 5, 2014 ONCC meeting. Trustee Ridder stated she has made a request to the ONCC to provide a new number to Residents that would replace the 311 hotline. Trustee Ridder stated she has also requested proper training for personal receiving complaints.

Trustee Ridder provided a review of the September 9, 2014 ONCC Tech meeting. Trustee Ridder announced the ONCC Tech Committee received confirmation of that two of the eight noise monitors being purchased by the City of Chicago would be placed on the west side of O'Hare Airport and that one of the two monitors would be placed in Bensenville. Trustee Ridder stated she has requested the noise monitor be placed at Mohawk School and that the Village has offered hired help for faster installation.

Trustee Ridder announced there has been a new manager hired that will be meeting with ONCC in September to address the lack of enforcement of the "Fly-Quiet" program.

Mr. Dave Redszus of 901 Hillside Drive presented to the Village Board and member of the audience a presentation explaining noise and its effects on the Residents of Hillside Drive. Mr. Redszus' presentation has been attached to the minutes as "Exhibit A". Mr. Redszus commended the Village Board and Staff for their efforts to address the concerns of the noise levels along Hillside Drive.

ADJOURNMENT: Trustee Ridder made a motion to adjourn the meeting. Trustee Wessler seconded the motion.

All were in favor. Motion carried.

President Soto adjourned the meeting at 8:13 p.m.

Ilsa Rivera-Trujillo
Village Clerk

PASSED AND APPROVED by the President and Board of Trustees of the Village of Bensenville this 14th day, October 2014

Presented by

David Redszus

copyright 2014

630 926-4371

*The Sound and the
Fury
of Noise at O'Hare*

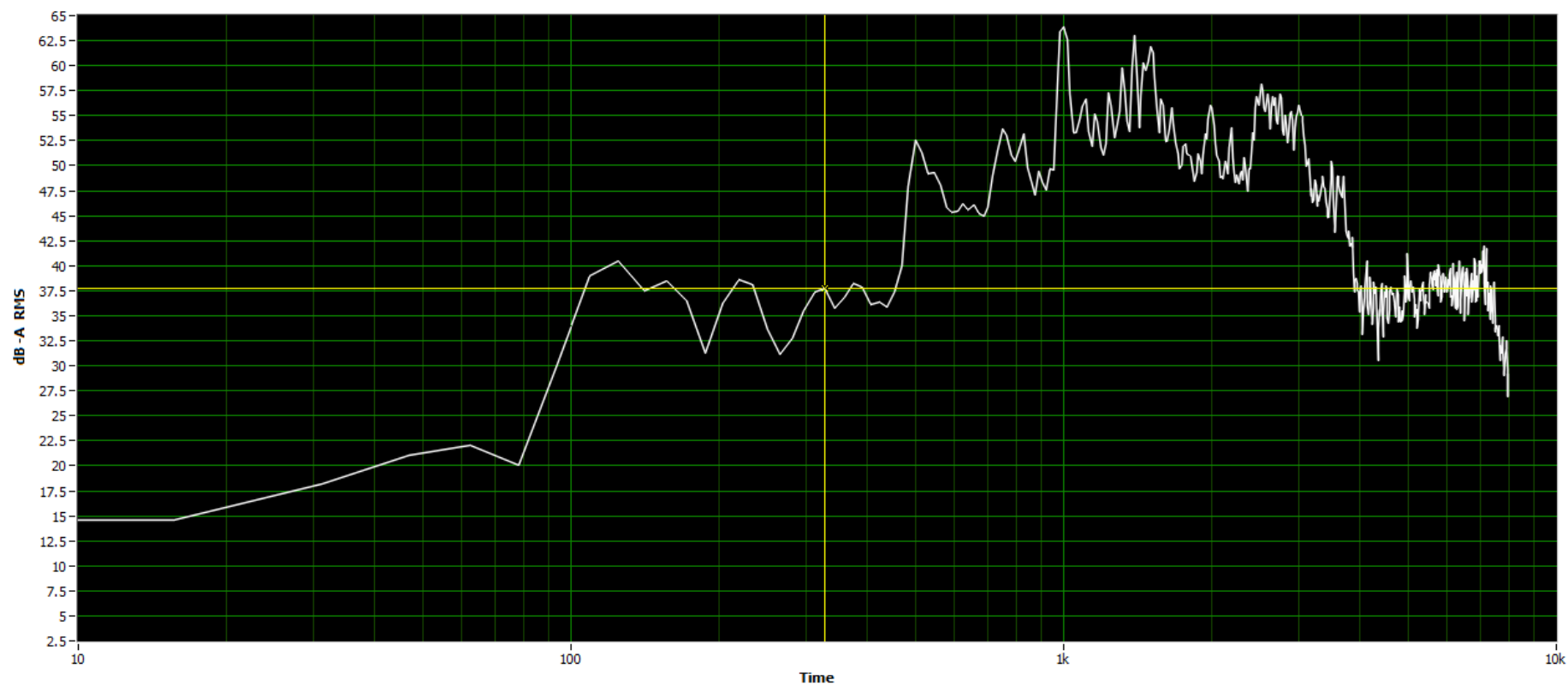
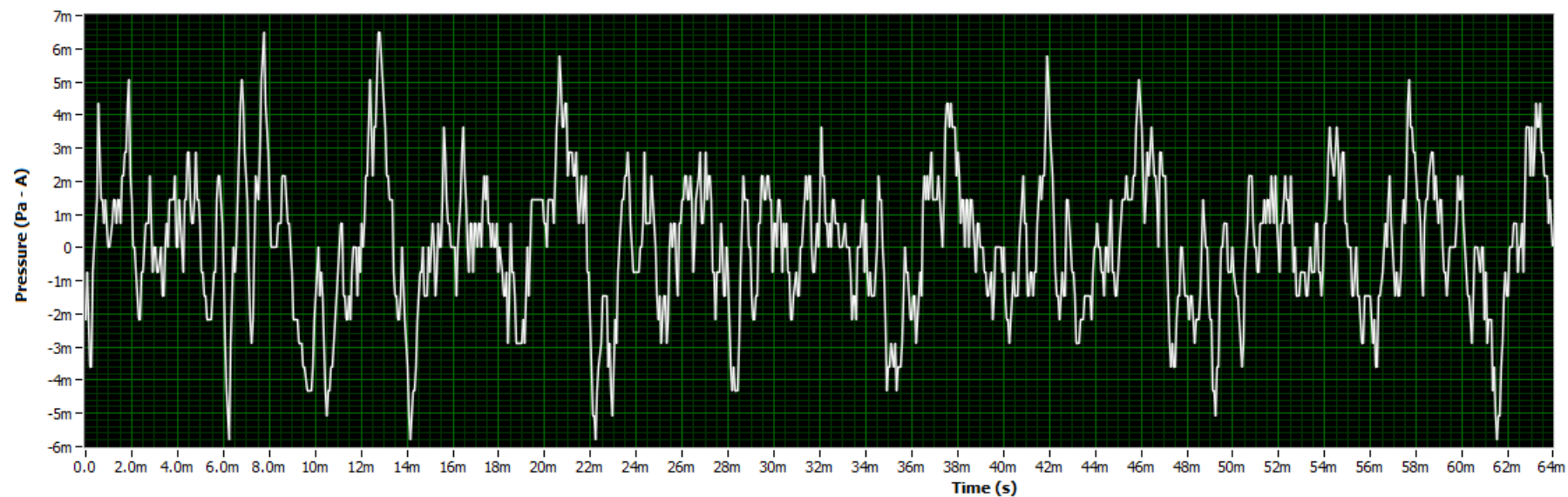
Sound is energy in wave form.

It has:

Loudness

Duration

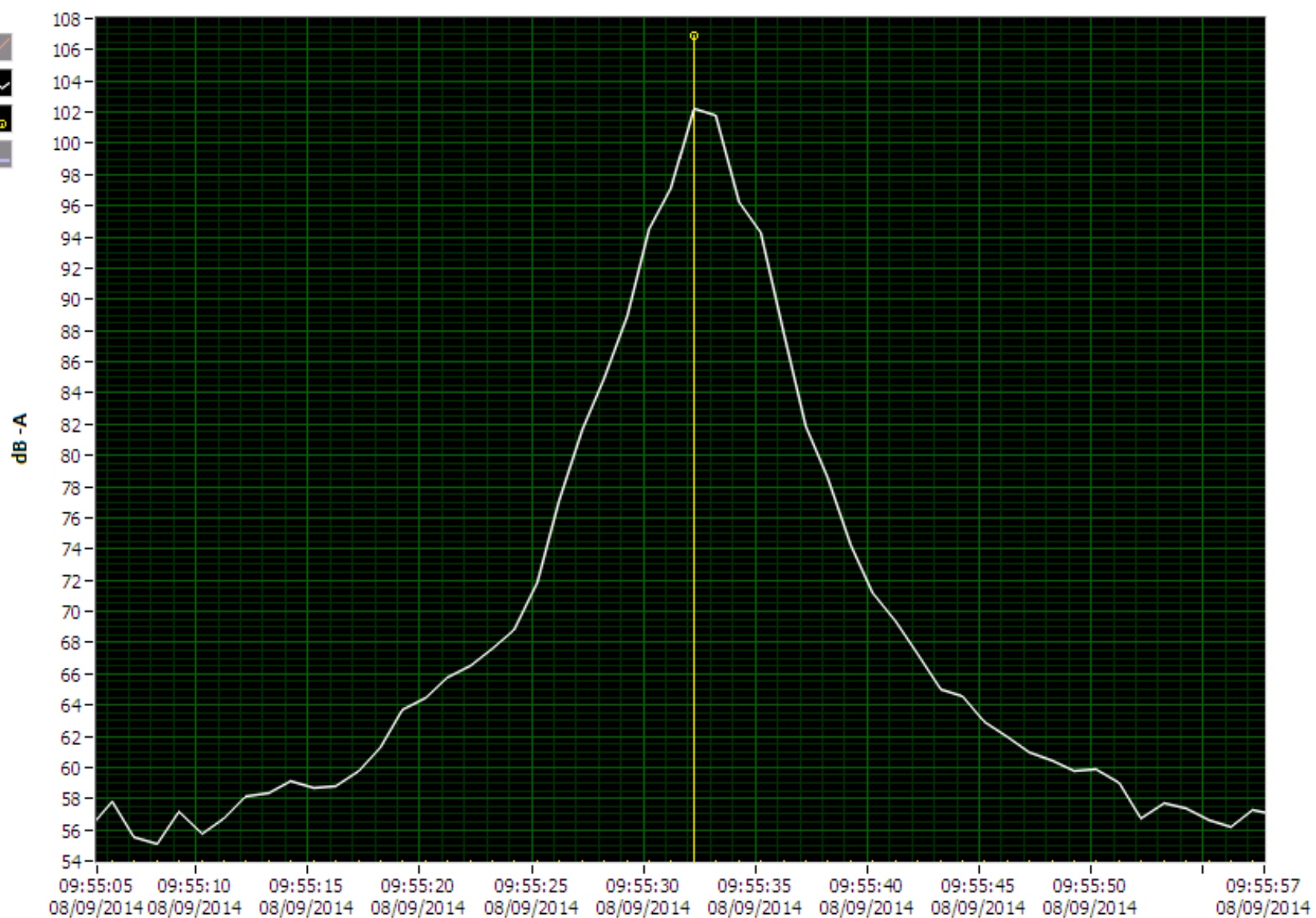
Frequency



Music consists is an arrangement of
pure tones.

Noise consists of a wide range of
frequencies in disarray.

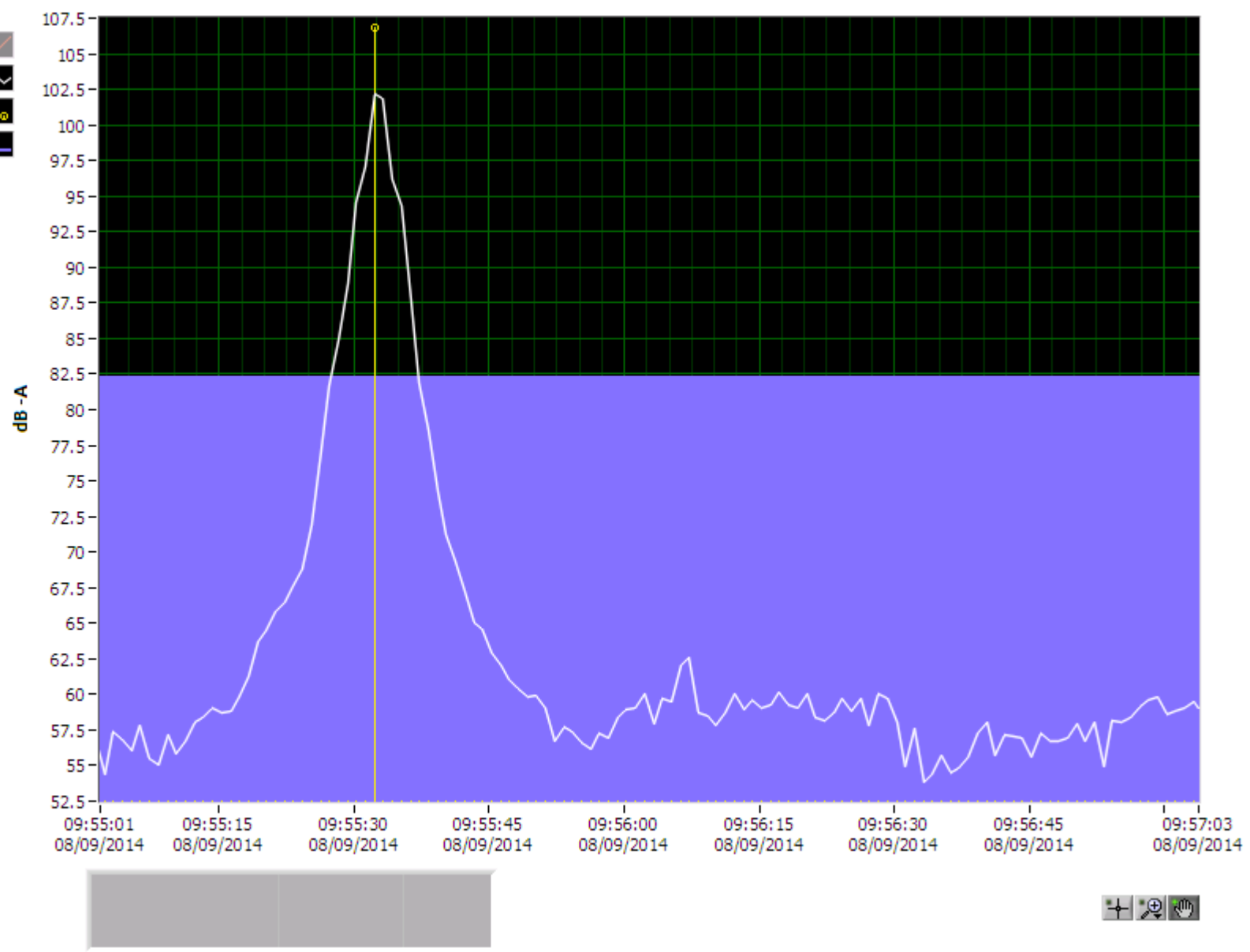
Percentile
LEQ
SEL
Noise Idx



Aircraft noise is measured as an average of the dBA values.

It does not matter how many flights, only loudness of flights.

- Percentile
- LEQ
- SEL
- Noise Idx

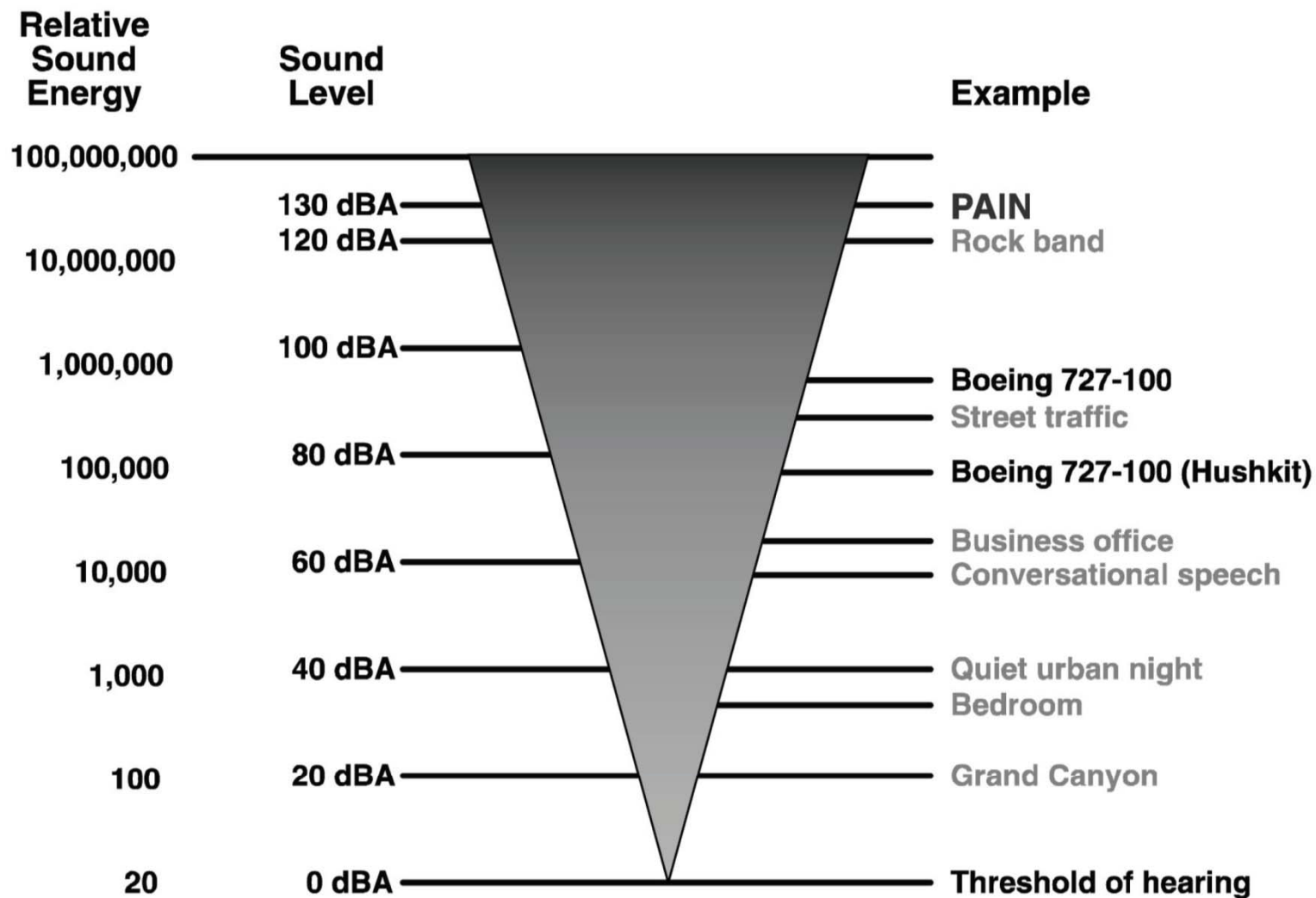


Noise is measured in deciBels; dBA

Two tones of equal value are louder when they occur at the same time.

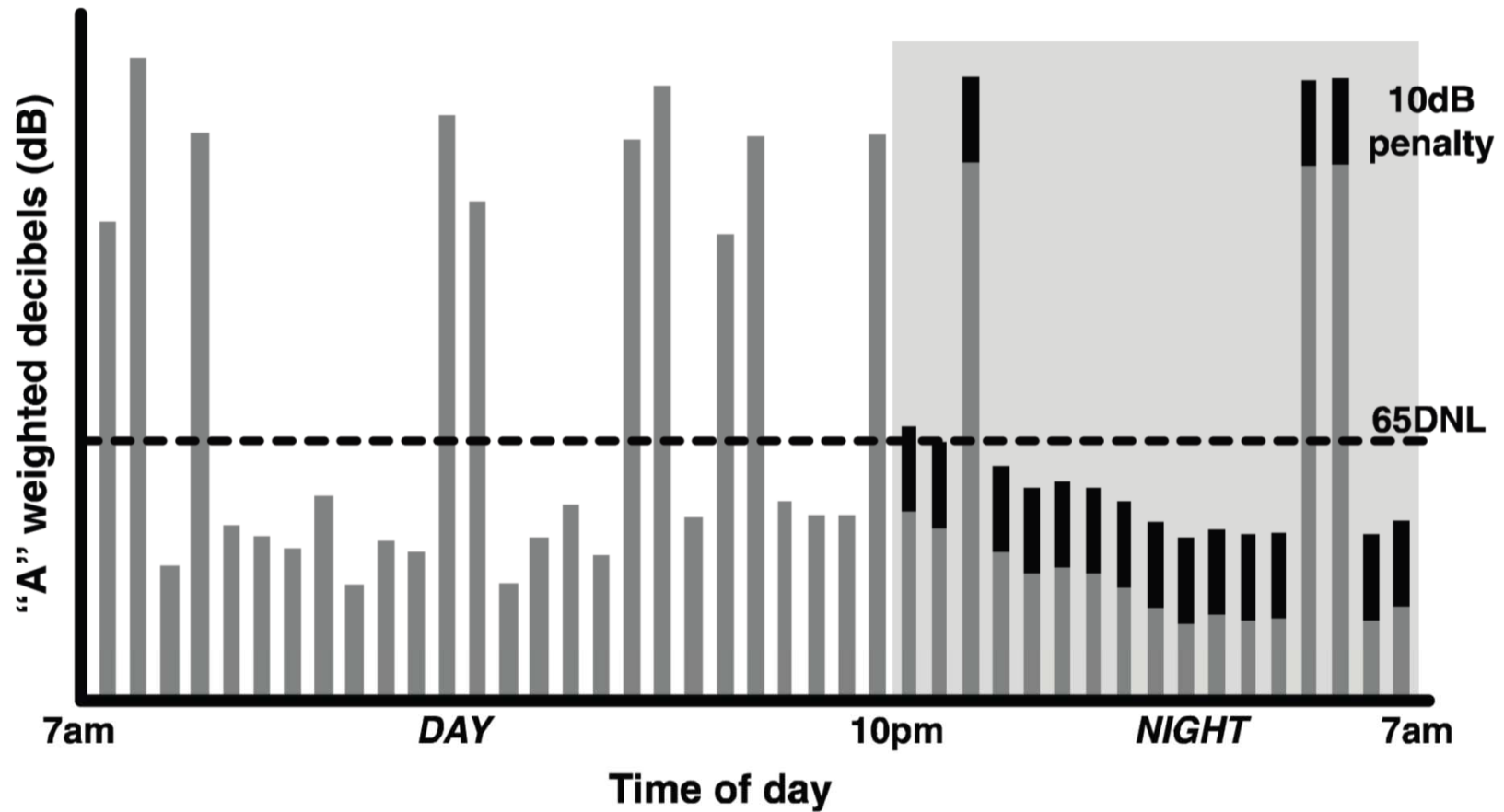
$$65\text{dBA} + 65\text{dBA} = 67\text{dBA}$$

NOISE METRICS—TYPICAL SOUND LEVELS



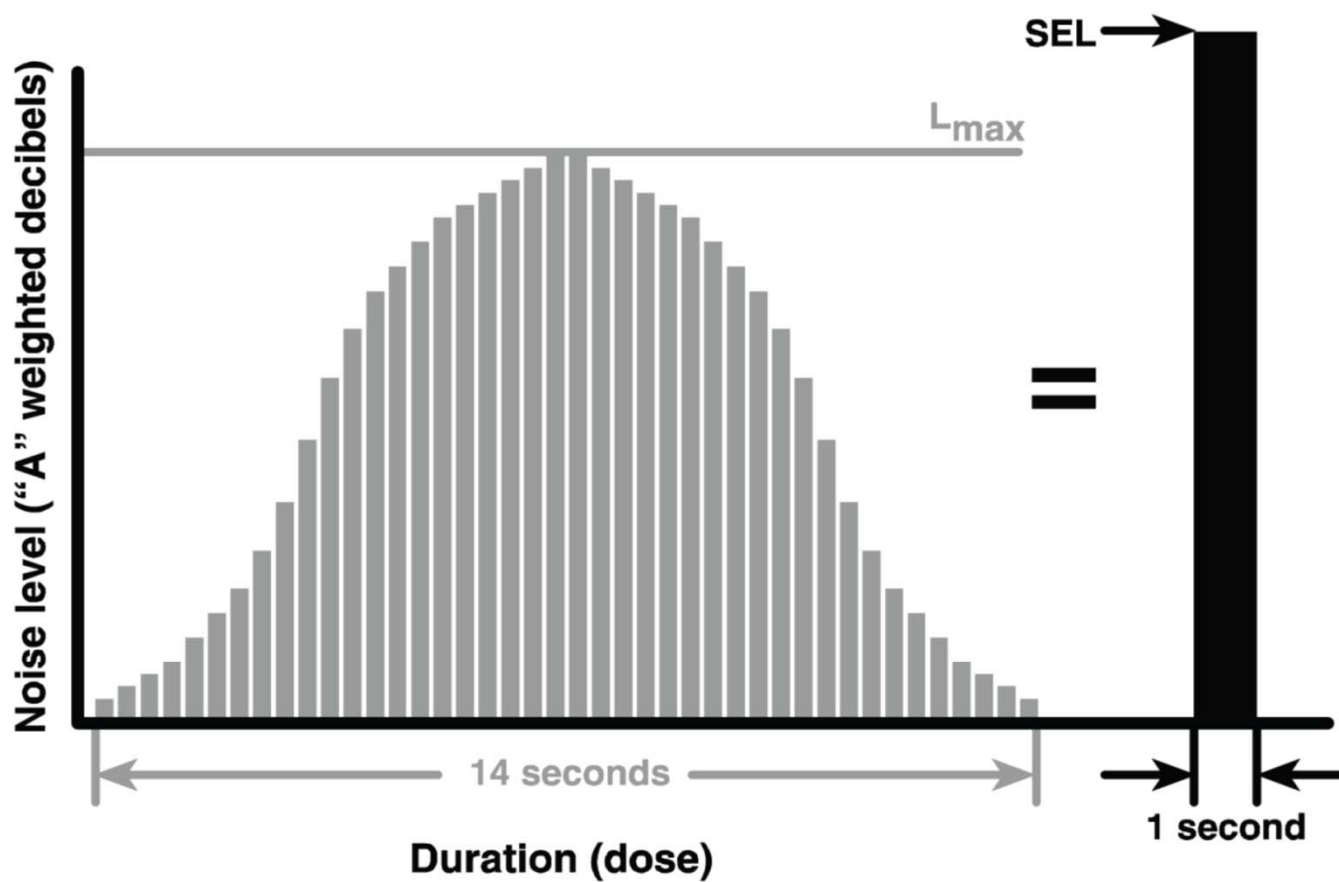
NOISE METRICS—DAY-NIGHT AVERAGE SOUND LEVEL (DNL)

The average noise level over a 24-hour period.



NOISE METRICS—SOUND EXPOSURE LEVEL (SEL)

The sound level that would be experienced if all sound energy of a single-event were condensed into 1 second.



The noise signature of an aircraft is influenced by:

Type of engine

Load/weight

Flap angle

Thrust/power

Altitude

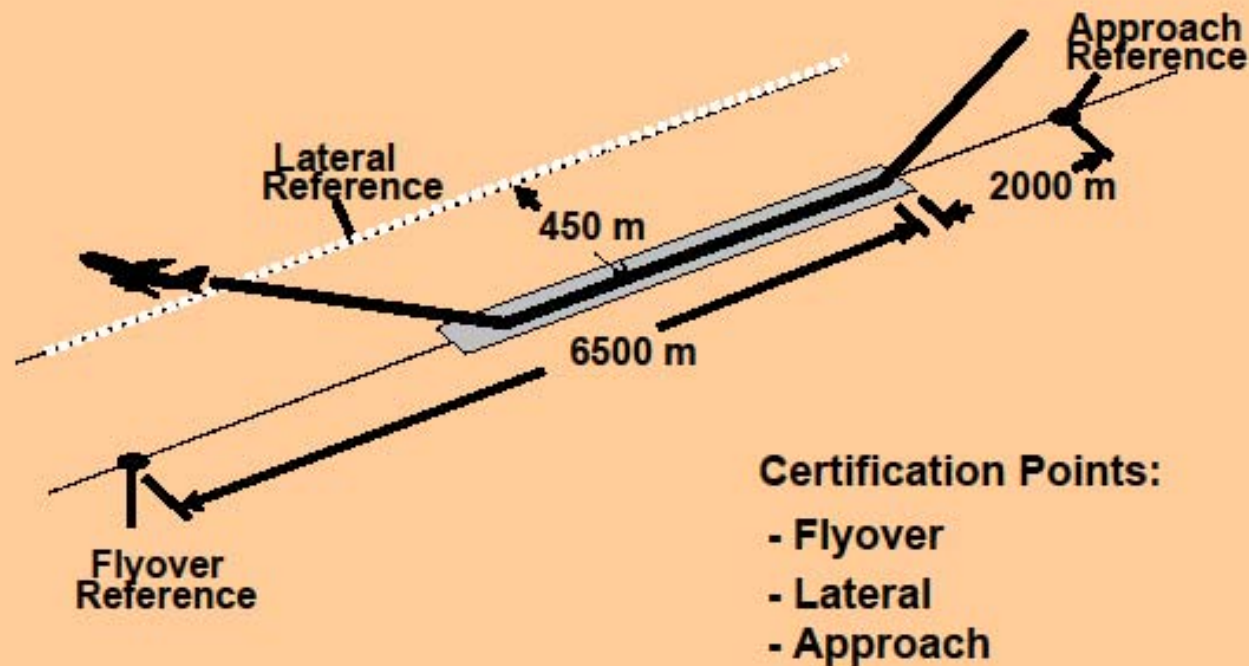
Speed

Noise from each type of aircraft is measured and certified by the FAA under certain test conditions.

Each type of aircraft has its own noise signature.

Aircraft Noise Certification Measurement Points

Trajectory and Certification Locations

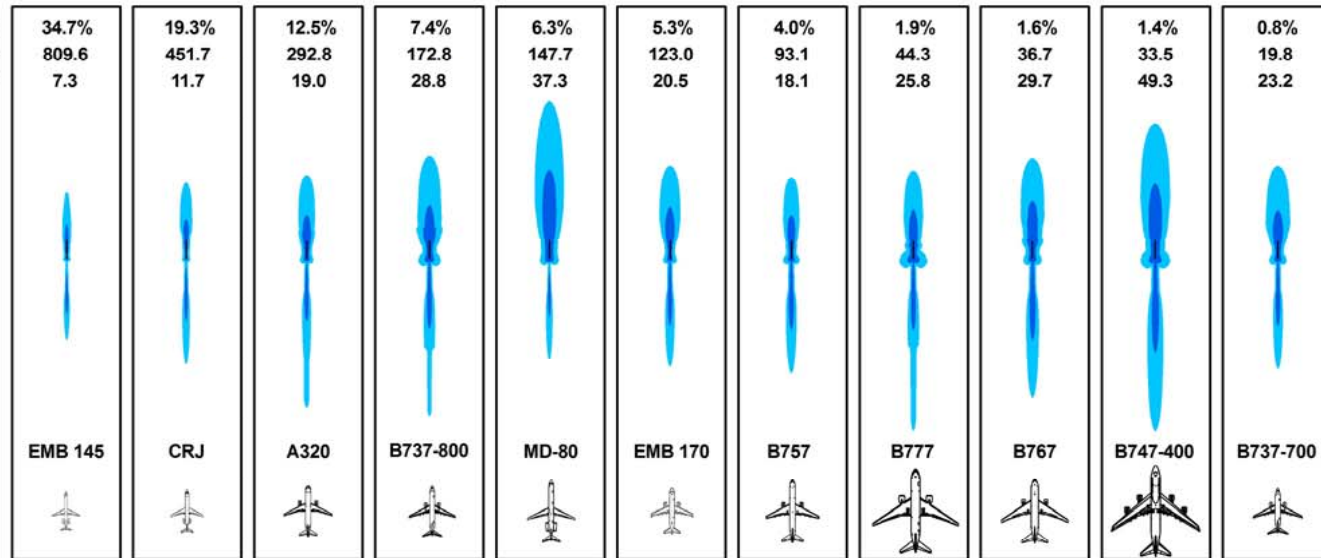
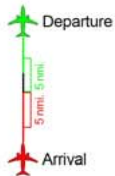




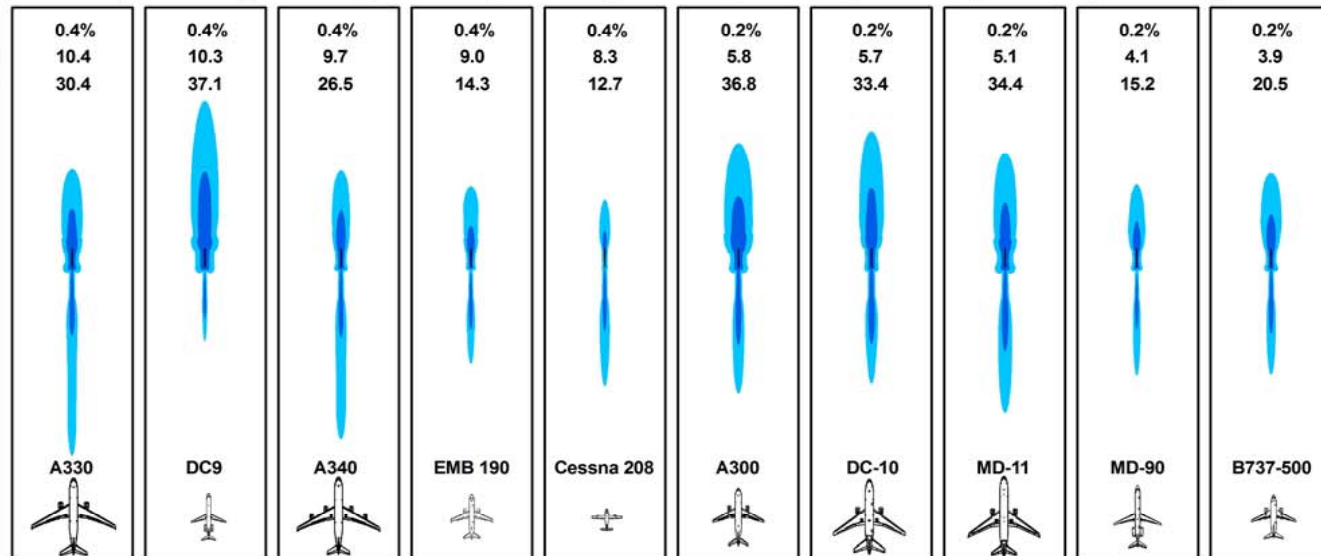
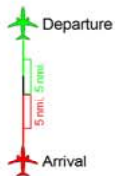
ORD AIRCRAFT NOISE COMPARISON

RANKED BY AVERAGE DAILY OPERATIONS

Percentage of Total Operations at O'Hare:
2012 Average Daily Operations:
Footprint Area (square miles):



Percentage of Total Operations at O'Hare:
2012 Average Daily Operations:
Footprint Area (square miles):



Source: Chicago Airport Noise Management System (ANMS) INM Version 7.0c

Aircraft Types may represent multiple series

Aircraft noise footprints represent the 65 and 75 LAMAX for one arrival and one departure

Updated: May 2013

**The DNL is based on a
weighted average of:**

Daytime 7:00AM-10:00PM
and

Nighttime 10:00PM-7:00AM
periods.

The nighttime dBA values are given an additional 10 dBA to compensate for the greater noise disturbance at night.

Noise metrics applied to raw data are used to compute noise levels.

FAA currently uses a value of 65DNL on the dBA scale.

Noise Contour Maps

The CDA uses software called INM, provided by the FAA, to compute the expected noise patterns around O'Hare.

Noise contour maps indicate the outer boundary noise limits.

They do not clearly show higher noise values that are within the boundary limits.

Noise contour maps are calculated using:

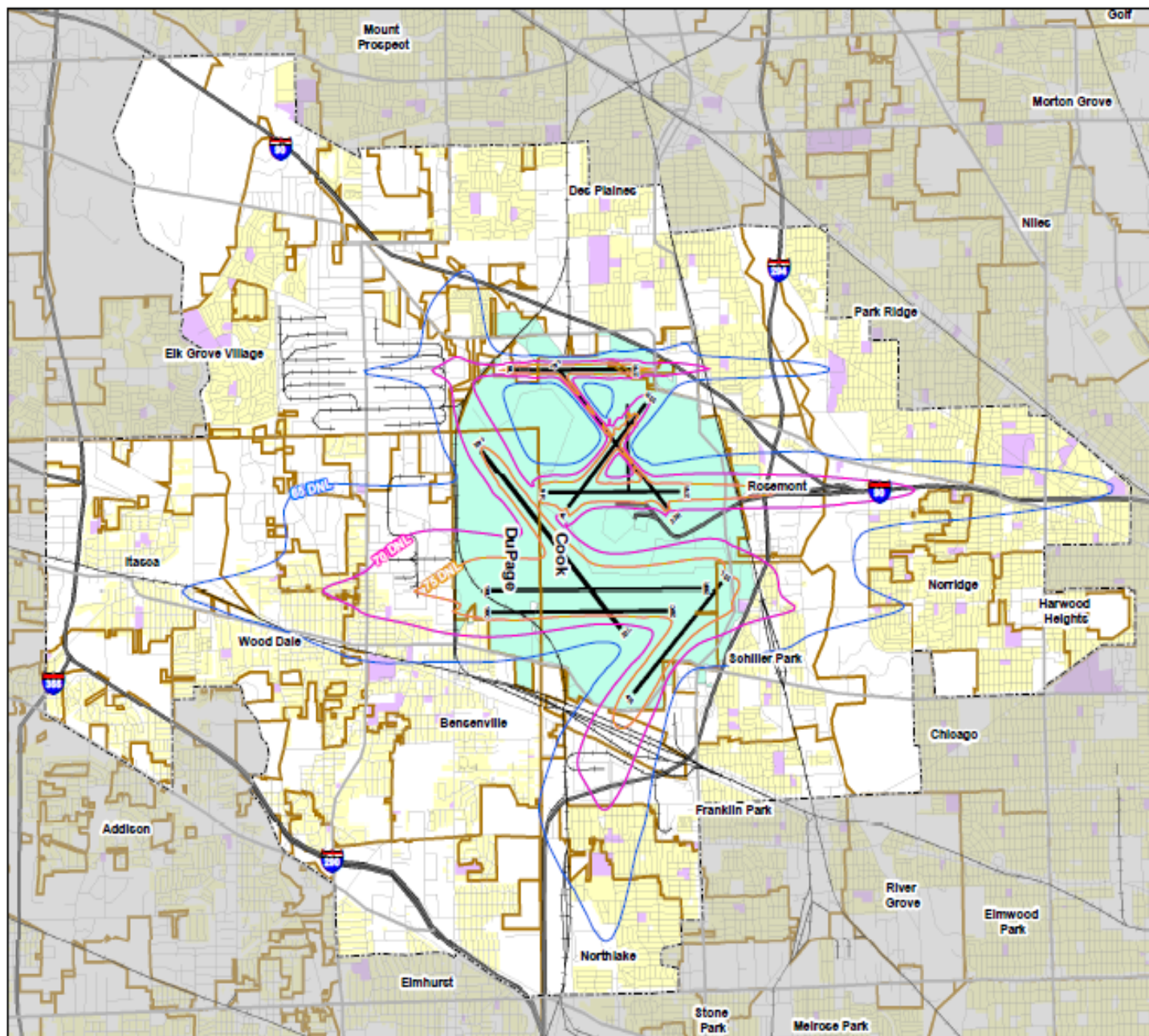
Aircraft noise signatures

Flight path

Altitude

Fleet mix

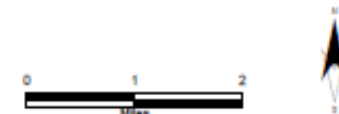
Weather



Chicago
O'Hare
International
Airport

O'Hare Modernization Environmental Impact Statement

- +— Rail Roads
- Freeways
- Secondary Roads
- Local Streets
- 65 DNL
- 70 DNL
- 75 DNL
- Project Area
- Municipal Boundary
- Compatible Land Use
- Residential
- Public, Hospitals, Institutional
- Existing Airport Property



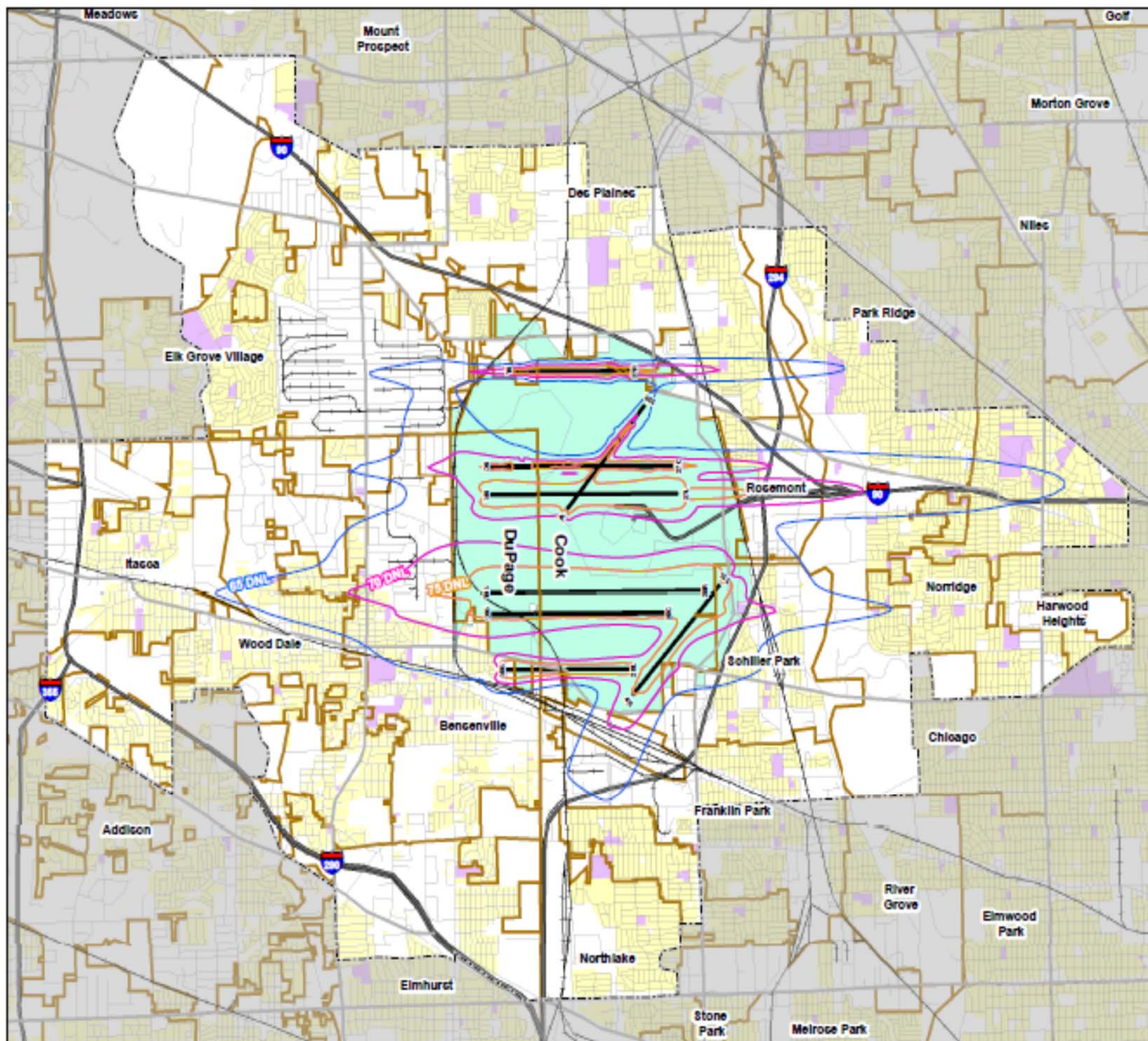
Noise Contours
Construction Phase II
Alternatives C, D, and G

► Exhibit 5.1-7

Source: StreetMapUSA, ©2004; Land Use, ©Page Co. 2002; City of Park Ridge, 1980; Northwestern Illinois Planning Commission, 1992; Noise Contours: IBM version 5.1 Leigh Fisher Associates, 2004.

**Since 2002 contour maps have
NOT been updated to reflect:**

- current aircraft fleet mix
- current runway usage
- current flight altitudes
- validated for accuracy
- peak noise values
- number of noisy flights



Source: StreetMapUSA, ESRI 2004. Land Use, DuPage Co. 2002, City of Park Ridge, 1980, Northwestern Illinois Planning Commission, 1982. Noise Contours: IBM version 5.1, Leigh Fisher Associates, 2004.



Chicago
O'Hare
International
Airport

O'Hare Modernization Environmental Impact Statement

- Rail Roads
- == Freeways
- Secondary Roads
- Local Streets
- 65 DNL
- 70 DNL
- 75 DNL
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- Residential
- Public, Hospitals, Institutional
- Existing Airport Property

0 1 2
Miles

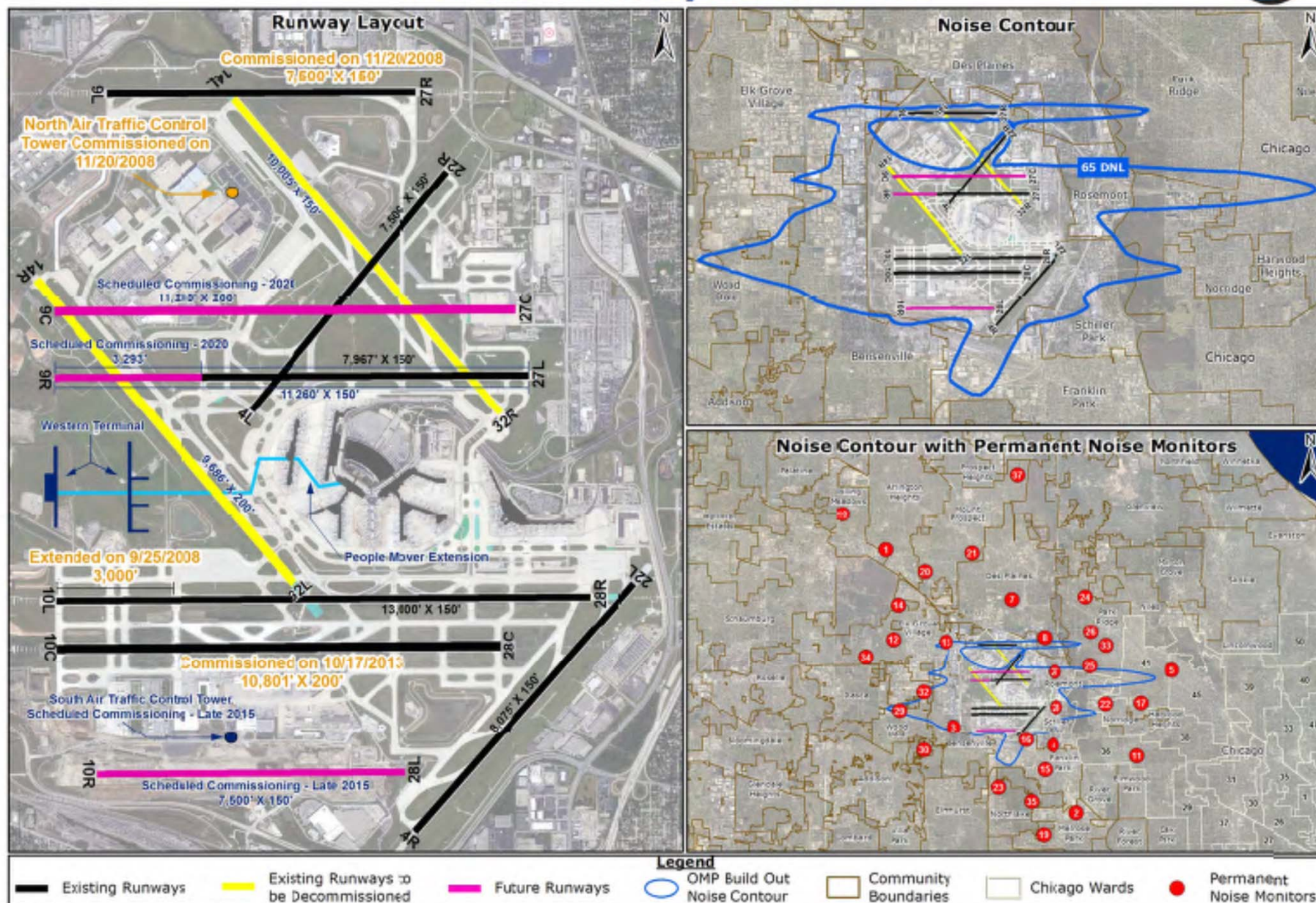


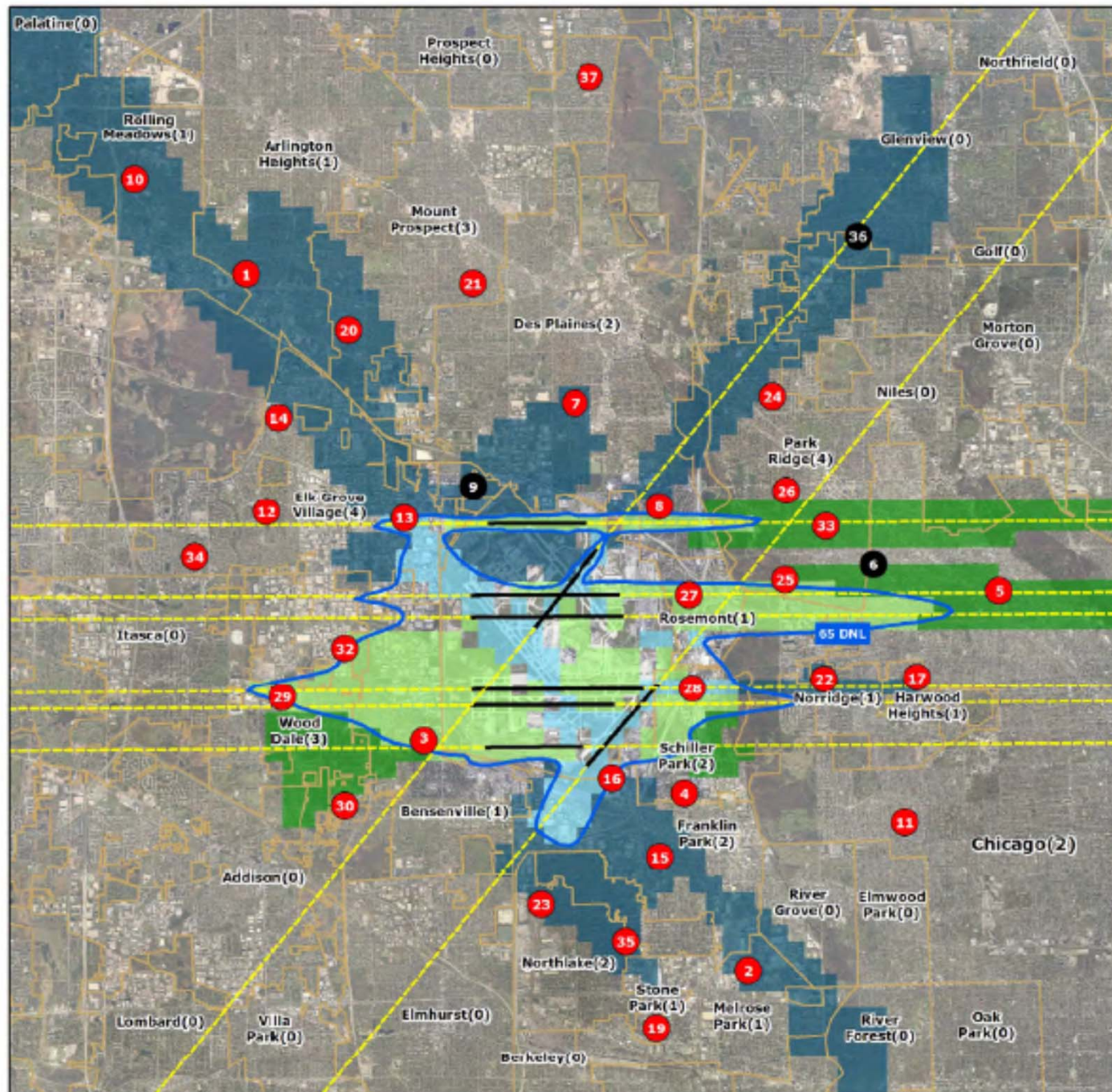
Noise Contours,
Build Out Phase
Alternative C

► Exhibit 5.1-10

Chicago O'Hare International Airport

Future Runways and Noise





O'Hare International Airport

Permanent Noise Monitor Locations

City of Chicago
Rahm Emanuel
Mayor

Department of Aviation
Rosemarie S. Andolino
Commissioner

Legend

- Existing Noise Monitors (32)
- Decommissioned Noise Monitors (3)
- O'Hare Modernization Program Build Out Runways
- Extended Runway Centerlines
- O'Hare Modernization Program Build Out Noise Contour (65 DNL)
- Area of Aircraft Noise Decreasing 3.0dB and Greater¹
- Areas of Aircraft Noise Decreasing 1.5dB to 3.0 dB¹
- Areas of Aircraft Noise Increasing 1.5dB to 3.0dB¹
- Areas of Aircraft Noise Increasing 3.0dB and Greater¹
- Community Boundaries

¹O'Hare Modernization Program Final Environmental Impact Statement, Appendix F, Build-Out - Exhibit 19, Page F-244

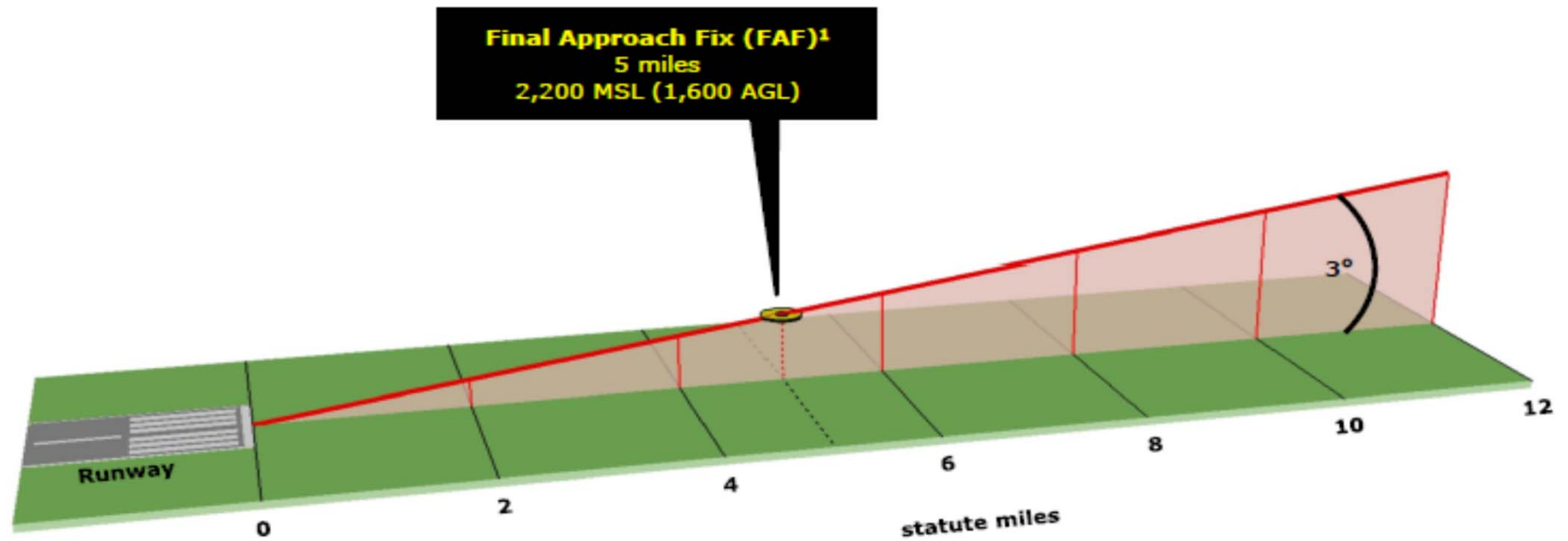
Miles

0 1 2

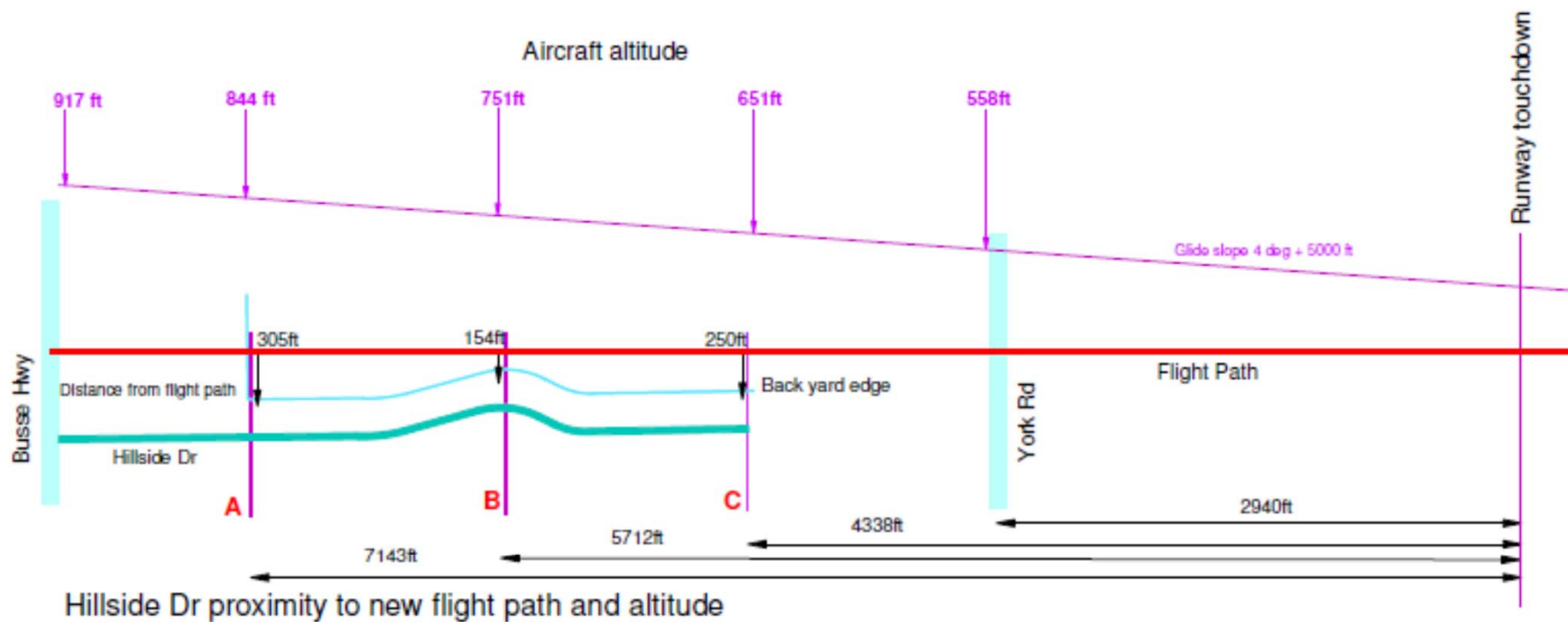
N

Date: April 2, 2014
File: CH11_NMT_Web.mxd

STANDARD APPROACH PROFILE



¹ Distance and altitude for each Final Approach Fix will vary

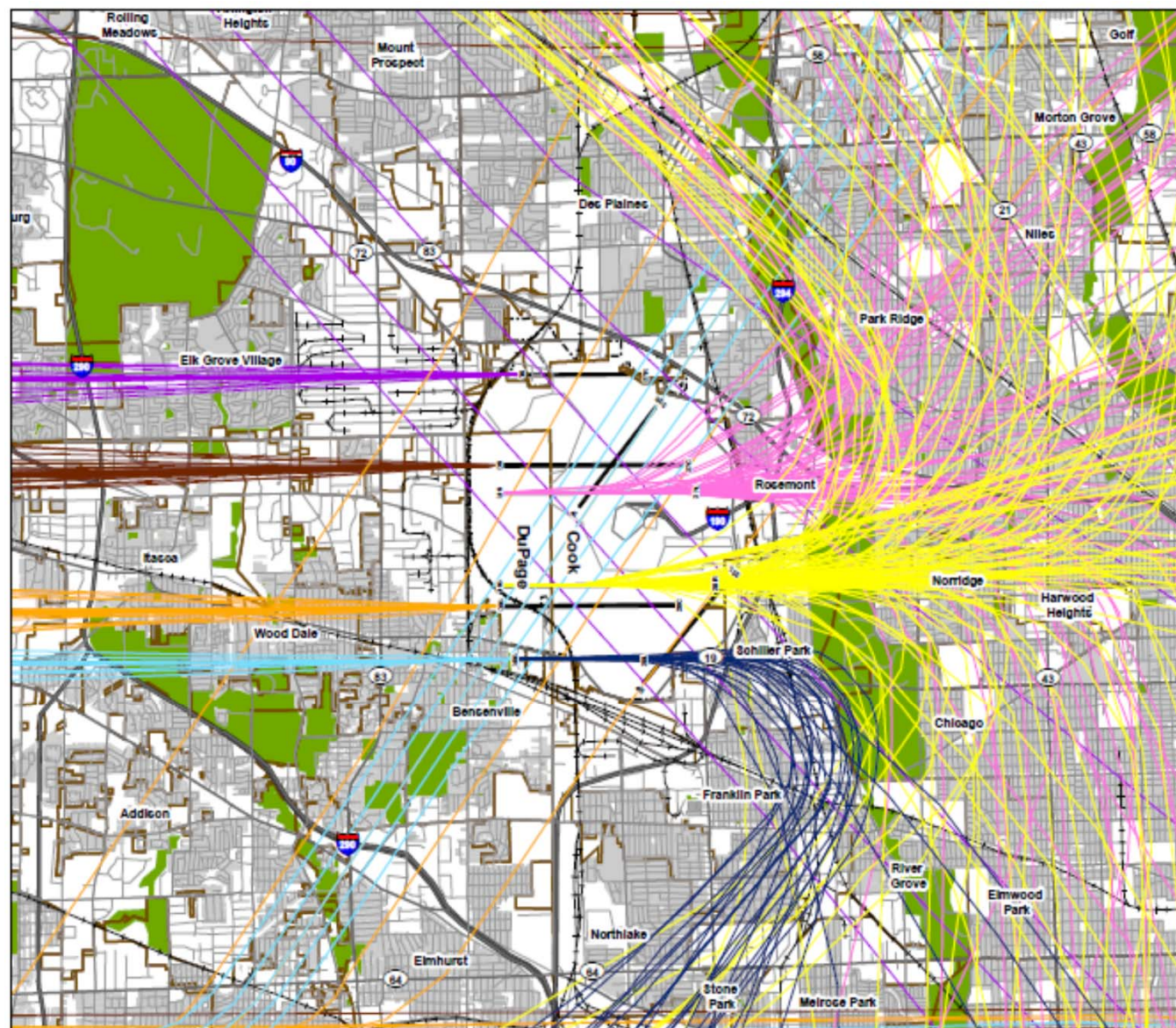


Actual sound distance from aircraft

A sound distance 897 ft

B sound distance 811 ft

C sound distance 719 ft



Source: StreetmapUSA, ©2004. Land Use, DuPage Co. 2002, City of Park Ridge, 1980, Northwestern Illinois Planning Commission, 1980. Flight Tracks: 1998 version 6.1, Leigh Fisher Associates, 2004.



Chicago
O'Hare
International
Airport

O'Hare Modernization Environmental Impact Statement

- 9C Arrival Tracks
- 9L Arrival Tracks
- 10C Arrival Tracks
- 10R Arrival Tracks
- 9R Departure Tracks
- 10L Departure Tracks
- 10R Departure Tracks
- Rail Roads
- Freeways
- Secondary Roads
- Local Roads
- Municipal Boundary
- Airport Property
- Noise Sensitive Land Use
- Forest Preserves














Alternative C Build Out
Flight Tracks Parallel 9s (Quads)
Operational Configuration

► Exhibit 20

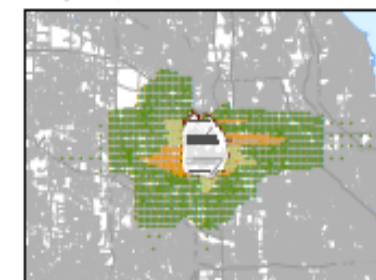
F-346



O'Hare Modernization Environmental Impact Statement

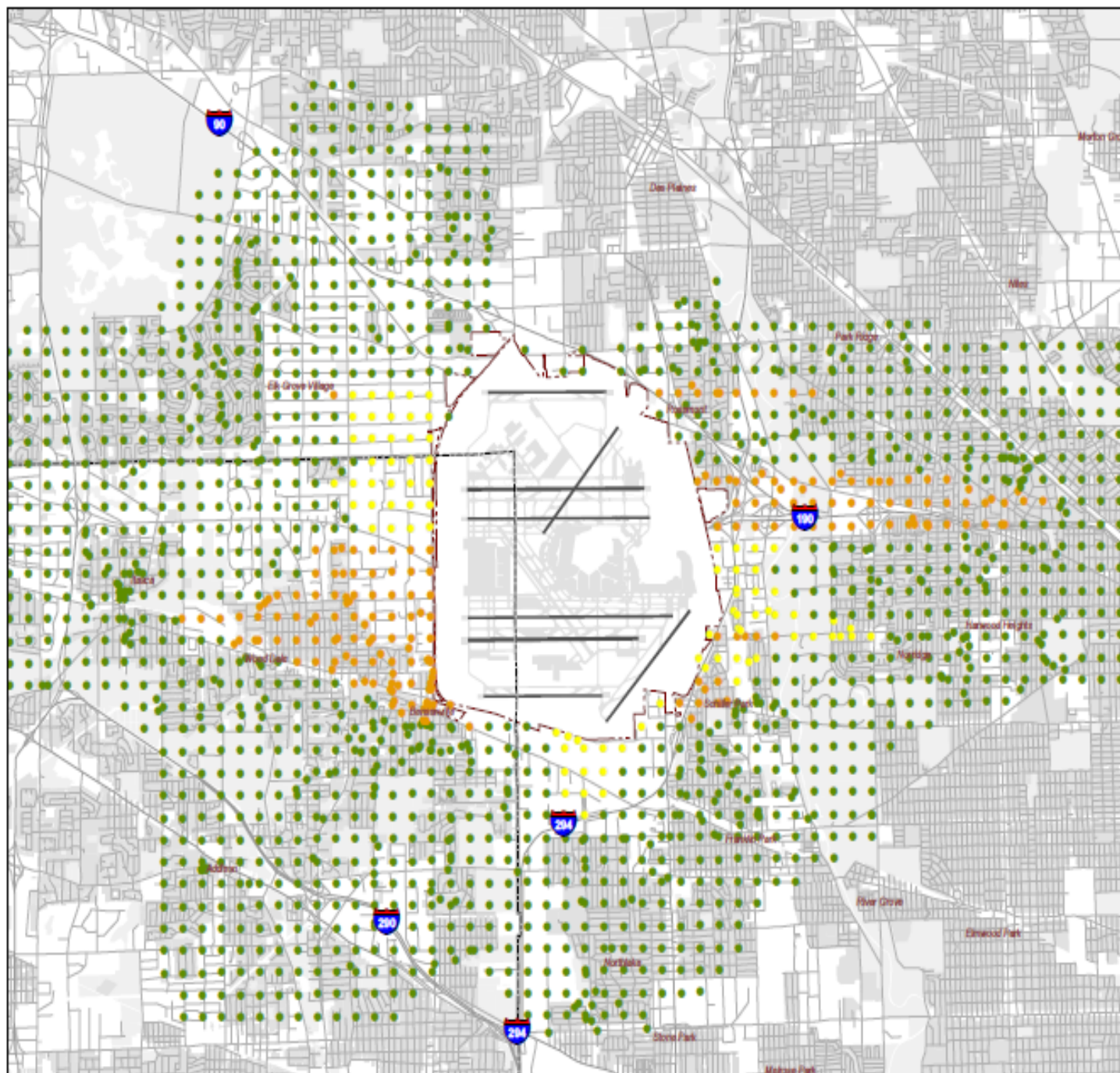
-  Airport Runways
 Airport Boundary
 County Boundary
 Limited Access Freeway
 Highway
 Roads
 Residential / Learning Institutions, Hospitals and Church Land Uses
 Open Space Land Uses
 Greater than DNL 55 and Less than DNL 65
 Greater than or Equal to DNL 65 and Less than 1.5 dB Increase over 2018 A1. A
 Greater than or Equal to DNL 65 and 1.5 dB or Greater Increase over 2018 A1. A

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



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

► Exhibit F-29



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



Chicago
O'Hare
International
Airport

O'Hare Modernization Environmental Impact Statement

Grid Points 65 DNL and Greater

- 1.5 dB and Greater Increase
- 1.5 dB and Greater Decrease

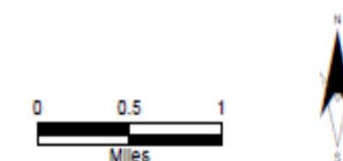
Grid Points 60 DNL - 65 DNL

- 3 dB and Greater Increase
- 3 dB and Greater Decrease

Grid Points 45 DNL - 60 DNL

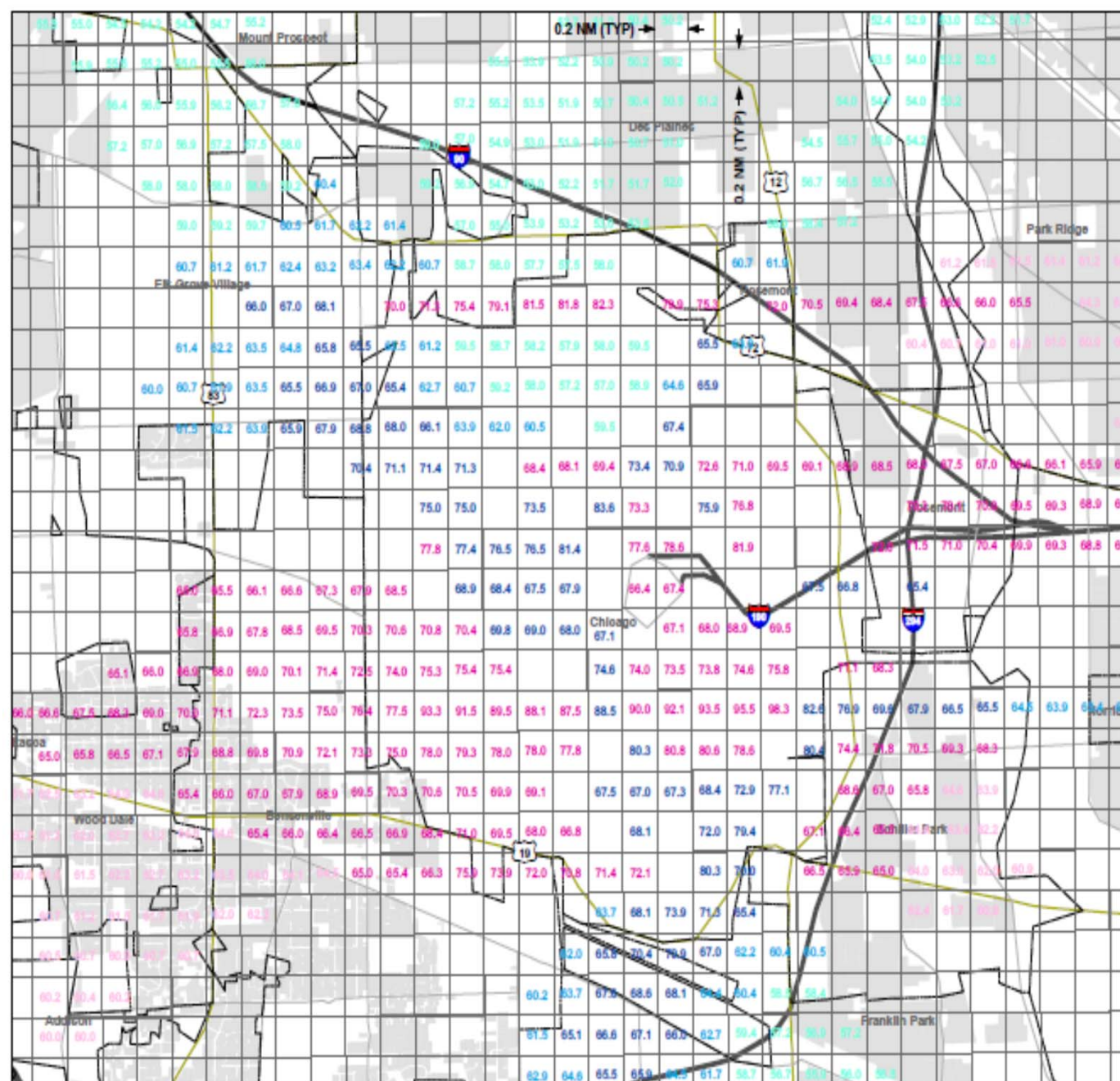
- 5 dB and Greater Increase
- 5 dB and Greater Decrease

- Freeways
- Secondary Roads
- Local Roads
- Non-Compatible Land Use
- Municipal Boundaries

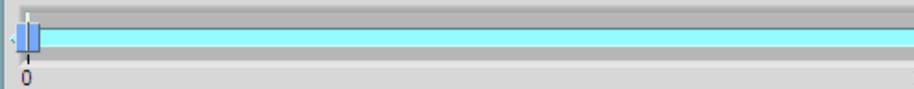


Grid Point Detail
Alternative C
Build Out Phase

► Exhibit 27



Source: StreetMapUSA, ESRI 2004; Land Use, DuPage Co. 2002; City of Park Ridge, 1989; Northwestern Slope Planning Commission, 1982; Grid Points: INM version 5.1 Leigh Fisher Associates, 2004



Record Selector

PrecisionAutoResearch

Source

Open File

Read Inst

Save File

Export

L10 Percentile

LEQ

SEL

DNL Noise Idx

All Data Based On

71.8DNL (dB -A)
Global

Event

65.0 min_level (dB)

Inf max_duration (s)

0.125 min_duration (s)

5.0 emergence (dB)

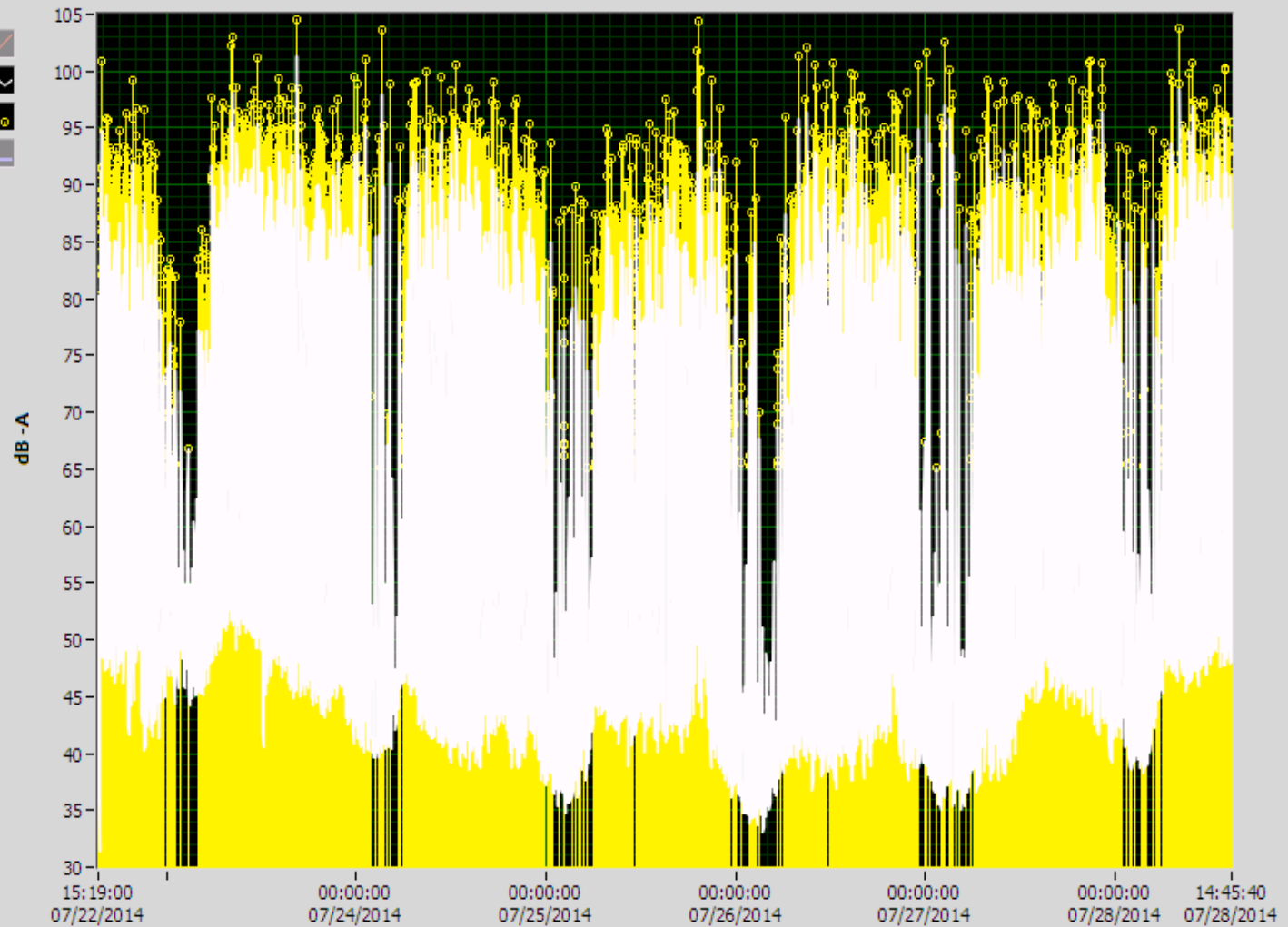
Adjustmen

Summer/All Season

Rural Location

Not Acceptance

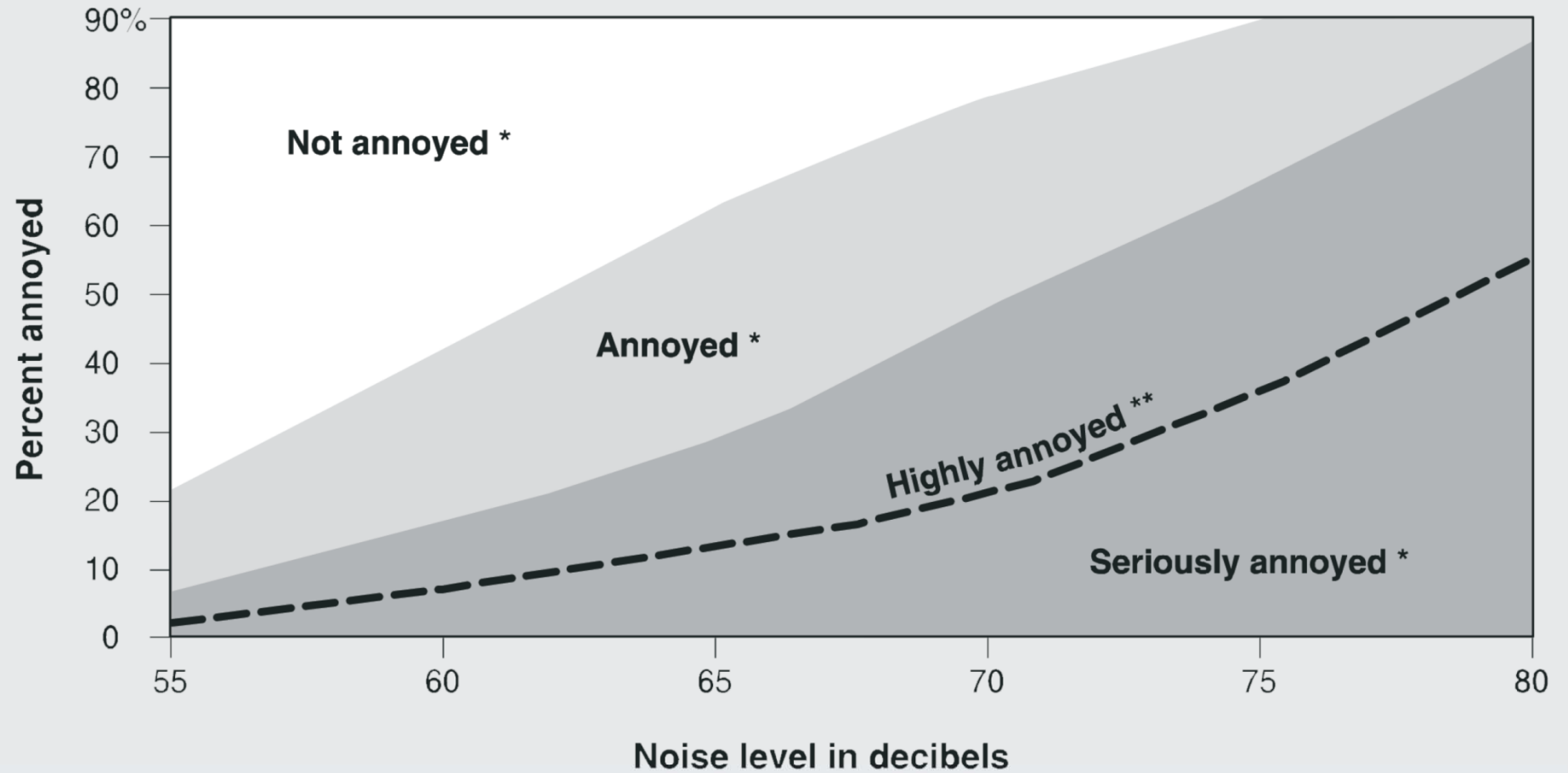
No Tones or Sound Type



Time_Adjust



NOISE METRICS—PERCENT OF PEOPLE ANNOYED



There is a problem with 65 DNL.

The current noise models are gathered from listening posts outside the 65DNL contour line and do not indicate:

- Higher than 65 DNL levels within the boundary

- Peak noise levels

- Number of noisy flights

- Time of day of noise

- Are not validated by actual measurement

- Are not updated to reflect current mix of aircraft

- Do not indicate home interior noise levels

A new measurement metric;

Community Noise Equivalent Level (CNEL) can be required by the State of Illinois.

CNEL is currently used in Europe and California.

The CNEL is used to more accurately depict noise produced disturbance.

CNEL divides the day into three parts:

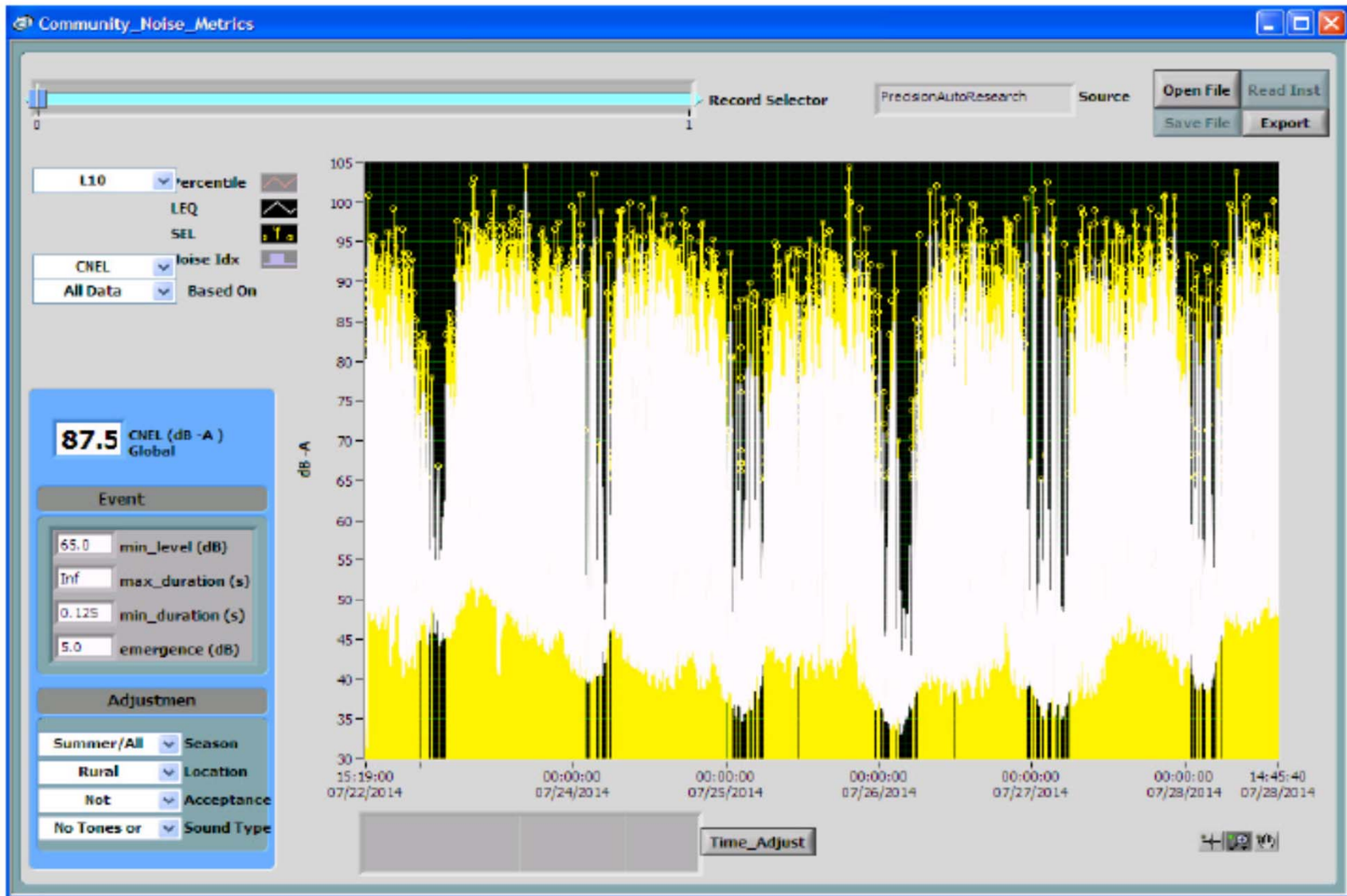
Daytime 7:00AM - 7:00PM

Evening 7:00PM - 10:00PM

Nighttime 10:00PM - 7:00AM

CNEL imposes a 5 dBA noise penalty on Evening flights and a 10 dBA noise penalty on Night flights.

CNEL (or Lden) would increase noise values slightly unless a flight pattern was exposed to noisy flights at dinner time, study time, and relaxing at home time.





Record Selector

PrecisionAutoResearch

Source

Open File

Read Inst

Save File

Export

L10

Percentile

LEQ

SEL

CNEL

Noise Idx

Events-Only

Based On

77.3

CNEL (dB -A)
Global

Event

65.0

min_level (dB)

Inf

max_duration (s)

0.125

min_duration (s)

5.0

emergence (dB)

Adjustmen

Summer/All

Season

Suburban

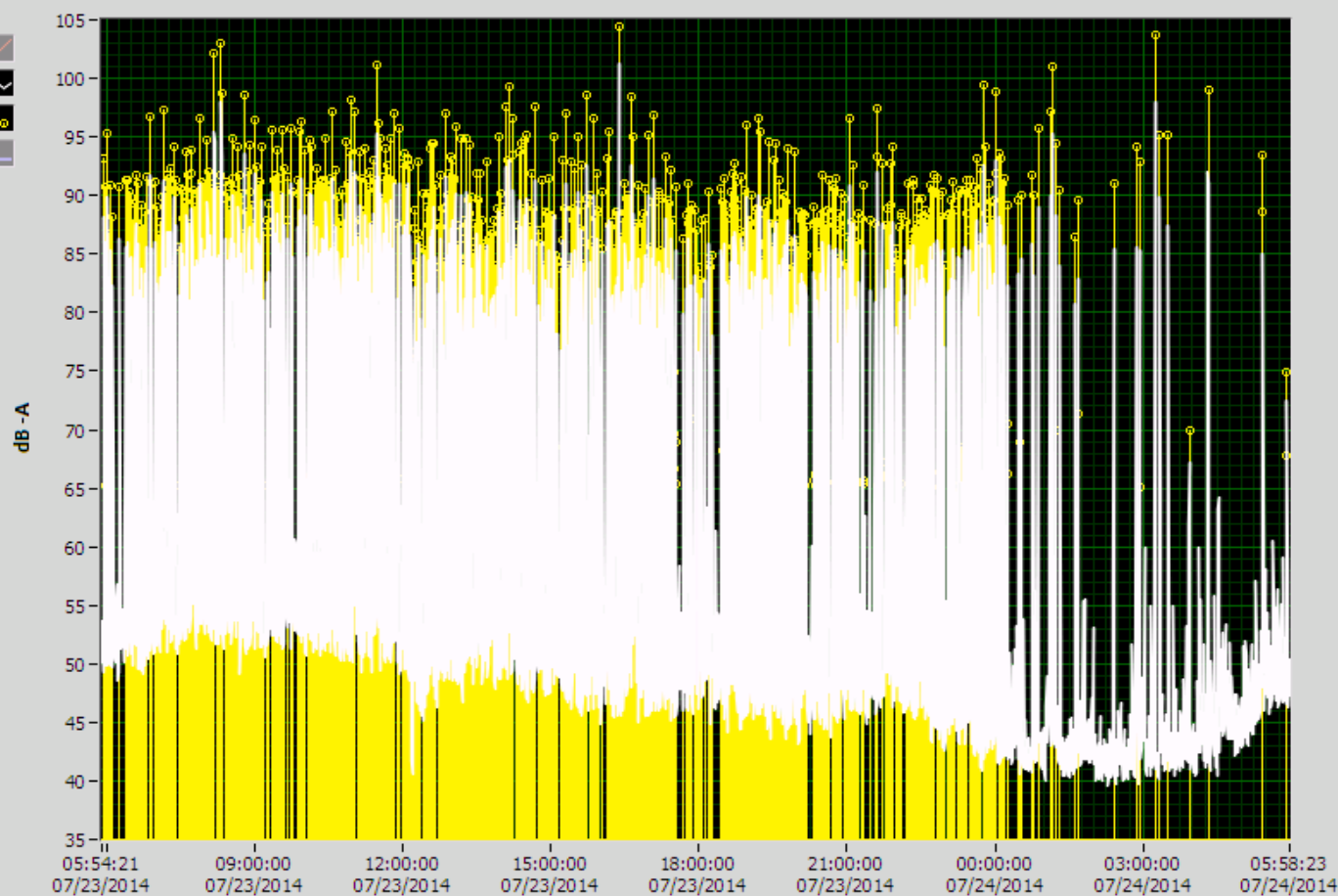
Location

Some Previous

Acceptance

No Tones or

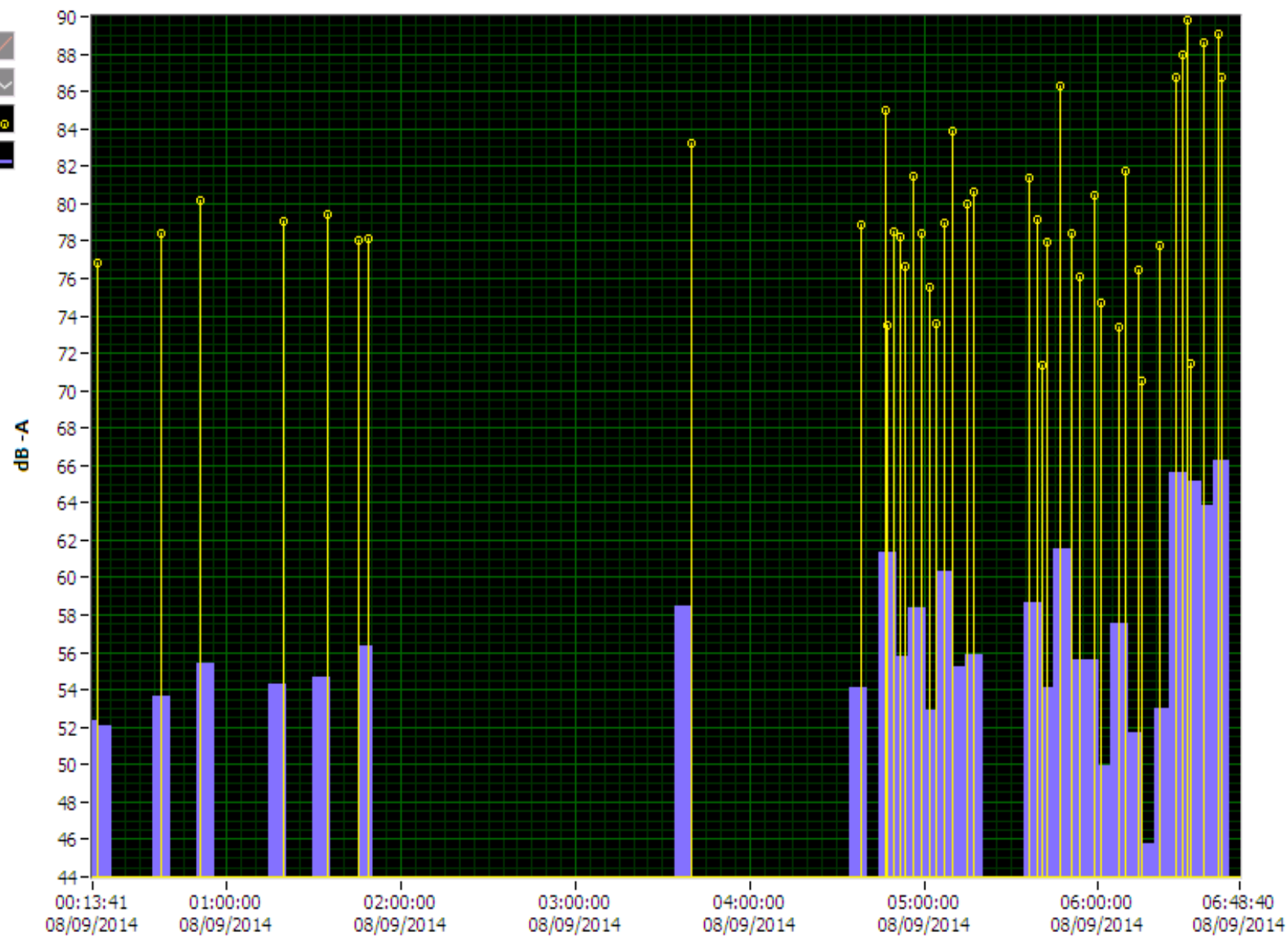
Sound Type



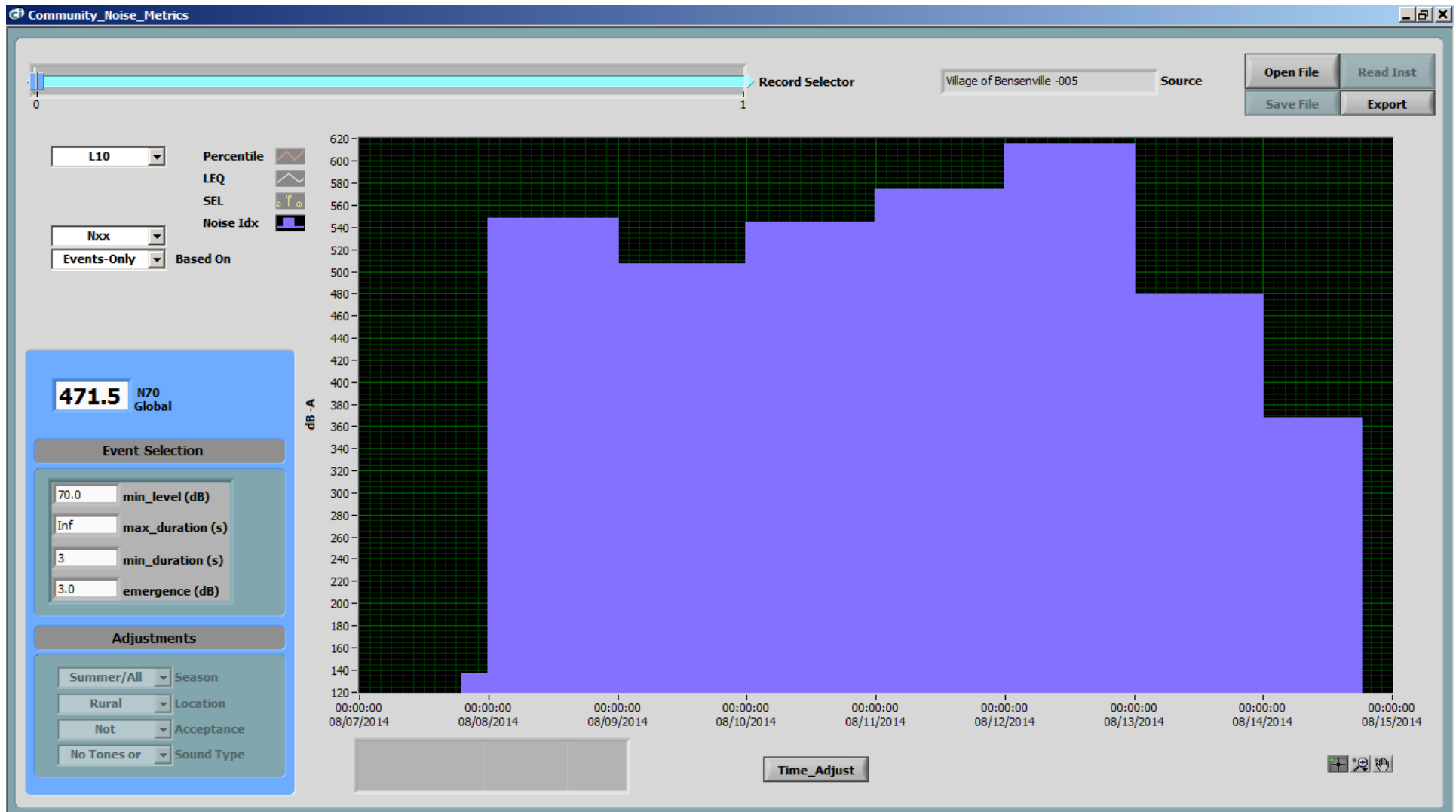
Time_Adjust

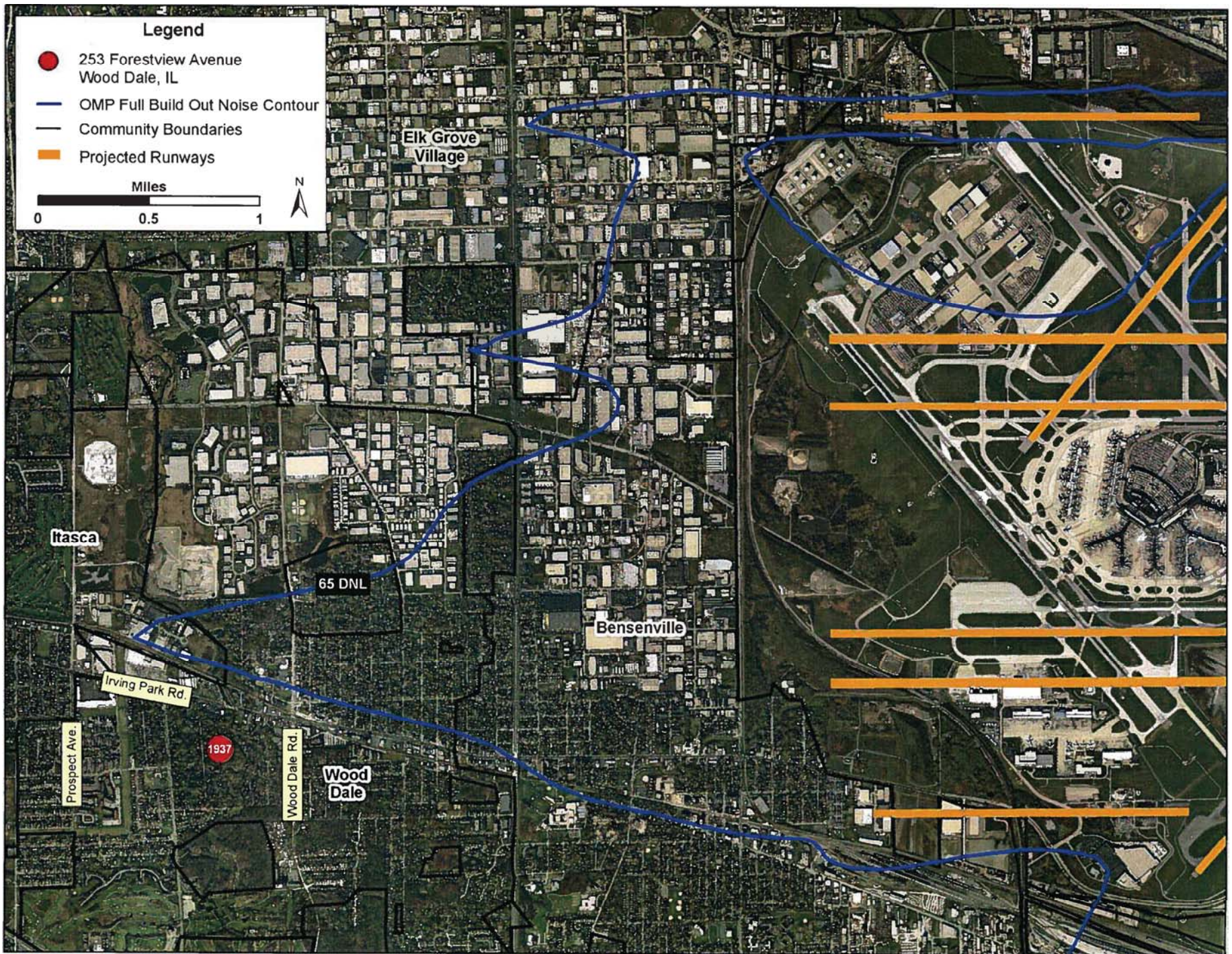


Percentile
LEQ
SEL
Noise Idx

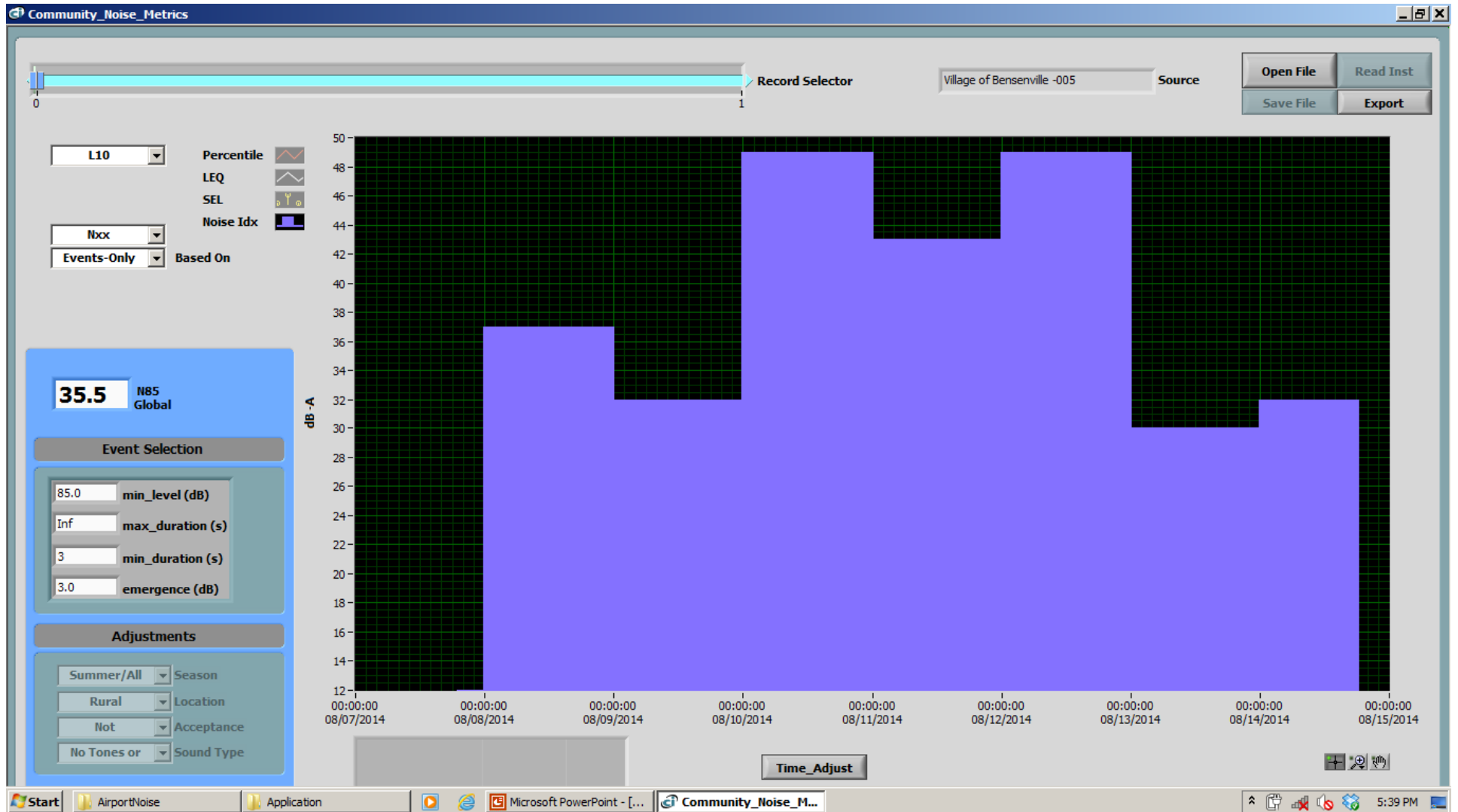


Week of 8/8: 470 Events per Day over 70dB





Week of 8/8: 35 Events per Day over 85dB



FlightRadar24.com

In order to reduce O'Hare airport noise, it is necessary to identify which flights are noisy and the type of aircraft.

A FlightRadar tracking program is available (at modest charge), to allow citizens to track and identify noisy flights.

Bensenville has led the way to install more radar receivers to improve flight tracking accuracy.

FlightRadar24.com

Flightradar24.com - Live flight tracker! - Internet Explorer

http://www.flightradar24.com/#41.98,-87.92/13?&_suic

Flightradar24.com - Live flight... AIM, The World Leader in Data ... AOL - News, Sports, Weather, ... Inbox (30) - daveredszus.sae@...

flightradar24 LIVE AIR TRAFFIC

MAP 13

Playback Settings Filter

Planes 8525 Premium Active

Like 401k Follow 8+1

Latest twitter

Easyjet U272, U216, U22404 & Ryanair FR3473 diverting to Stansted http://t.co/... 1 day ago

Latest Facebook

A Socata TBM-900 has crashed just north of the coast of Jamaica, after running o... 4 days ago

Map data ©2014 Google 1 km

REAL TIME 5 MIN DELAY ADS-B data FAA data

For more information or specific
noise measurement data contact

David Redszus

630 926-4371

