CHICAGO
MAYOR BRANDON JOHNSON

Fly Quiet Proposal - Modeling Analysis

O'Hare Noise Compatibility Commission Meeting

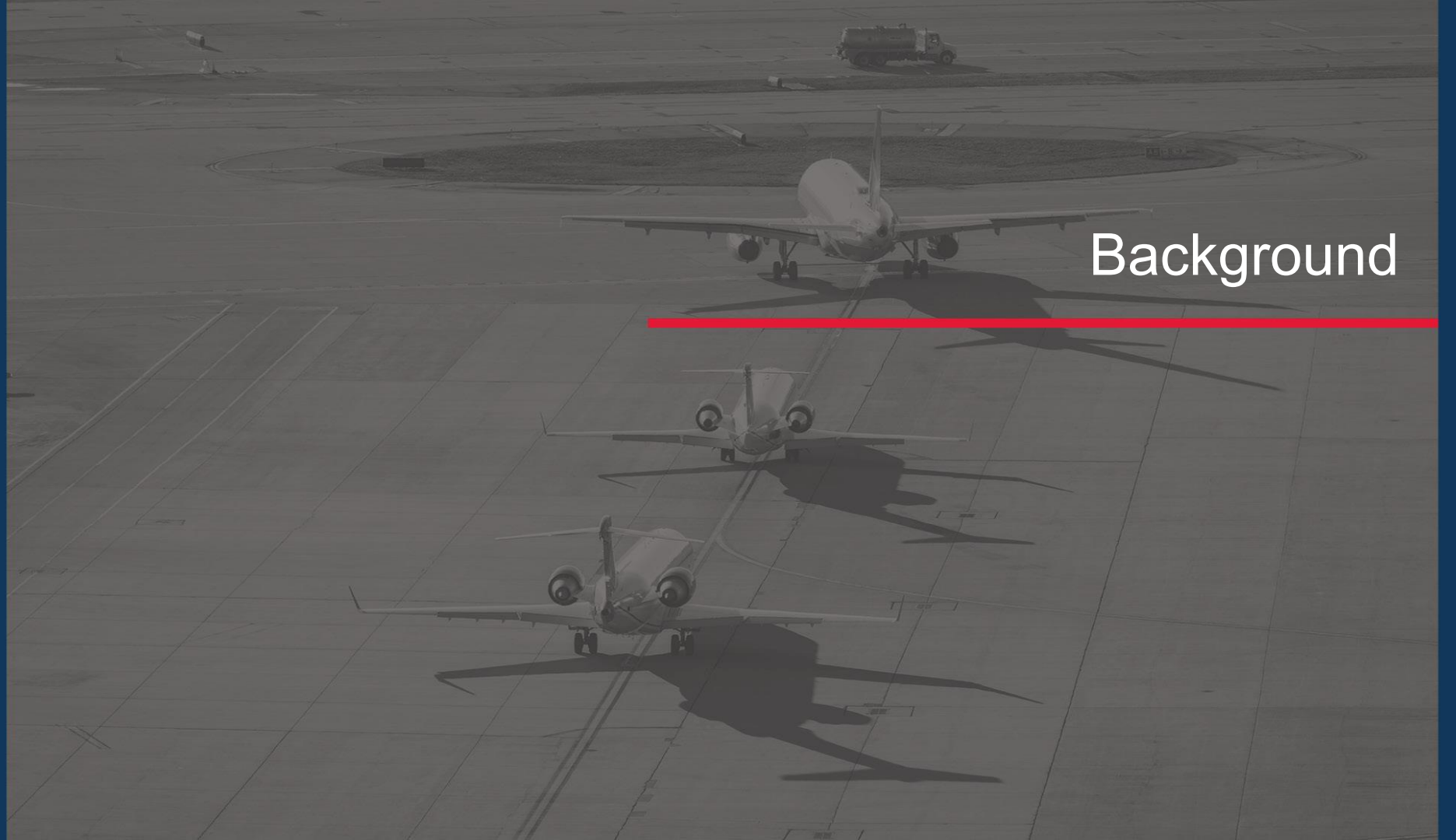
October 3, 2025

CDA
Chicago Department of Aviation

O'HARE & MIDWAY
INTERNATIONAL AIRPORTS

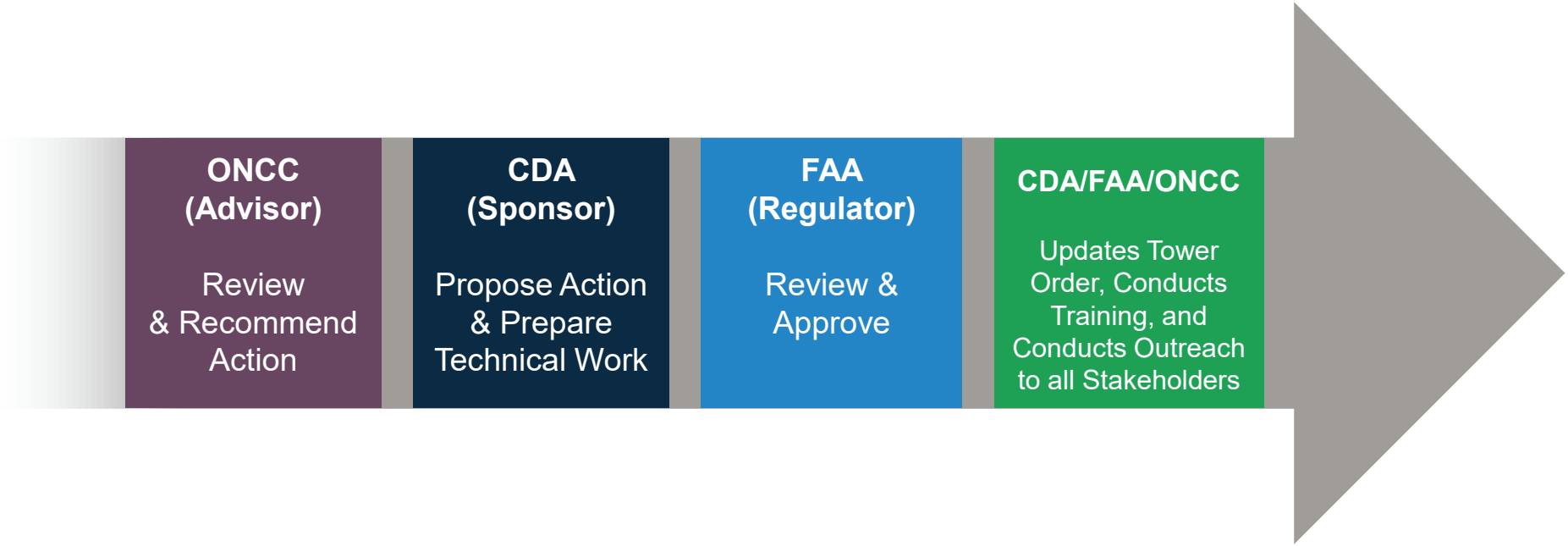
AGENDA

1. Background
2. Fly Quiet Proposal Review
3. Modeling Analysis – **Purpose**
4. Modeling Analysis – **Process**
5. Modeling Analysis – **Findings**
6. Next Steps

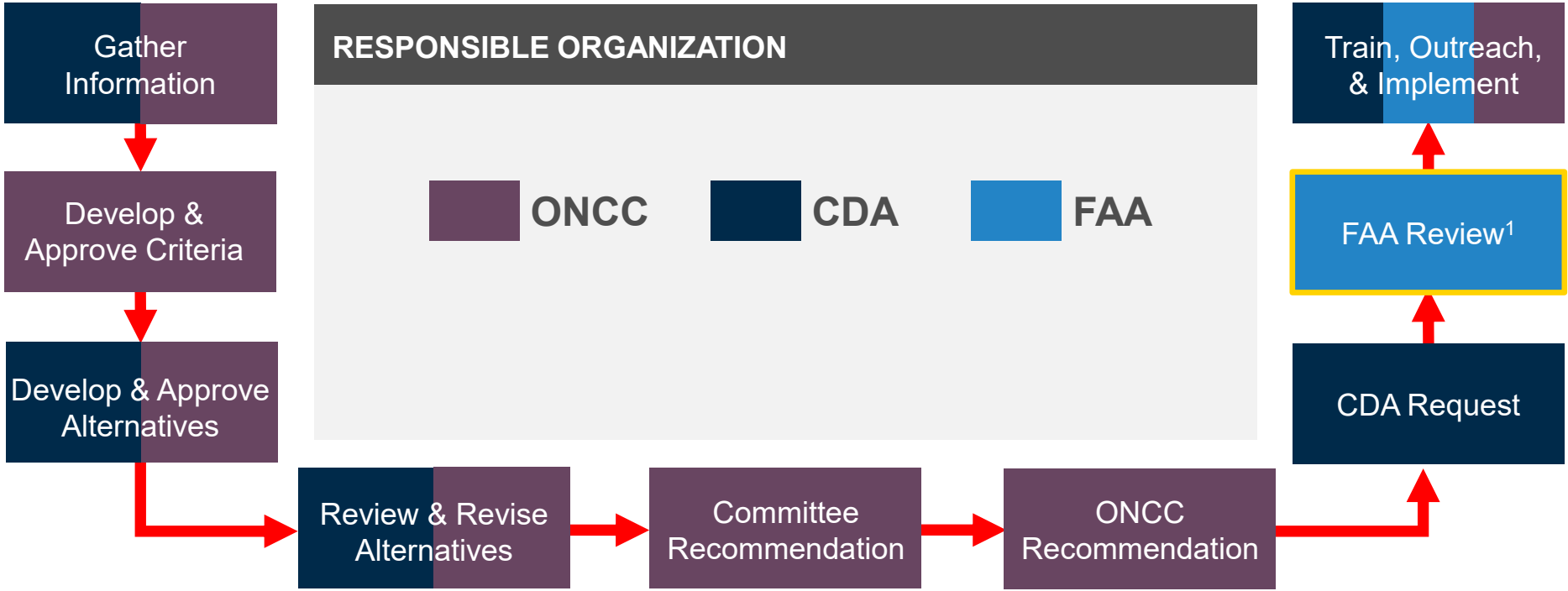


Background

FLY QUIET REDEVELOPMENT ROLES AND PROCESS



FLY QUIET PROCESS



1: FAA Review includes but is not limited to Air Traffic and NEPA

Fly Quiet Proposal Review

ONCC FLY QUIET CRITERIA – ADOPTED IN 2016

1. **Establish Rotation Plan** – Request the FAA/CDA establish a weekly **(or another frequency as deemed appropriate)** runway rotation program to achieve a more balanced distribution of noise exposure. Each period may consist of one arrival and one departure runway or one mixed use runway (runway used for both arrivals and departures).
2. **Alternate East and West Flow (5 knot Tailwind)** – Minimize the potential for consecutive periods of east flow or west flow runway use to the extent possible, except when conditions require the opposite flow due to a tailwind exceeding 5 knots.
3. **Avoid Consecutive Community Impacts** – Minimize the potential for impacting communities with the same operation type (arrival or departure) two periods in a row.
4. **Reduce Use of 10L/28R** – Include Runway 10L/28R in the rotation but reduce its use if needed by assigning it for departing aircraft that require additional runway length to the extent possible. Prioritize the use of other runways to the extent possible for flights that do not require additional runway length.
5. **Include 14R and 32L** – Include 14R arrivals and 32L departures until the permanent closing of 14R/32L. Once this occurs, the compatible land use corridor to the northwest could be utilized with other runways to the extent possible.
6. **Conduct a Test and Monitor Performance** – Ask FAA to Conduct a 6-month test that applies these principles. Request CDA records nightly runway use and collects citizen feedback for ONCC review.
7. **Require ONCC Review** – Final rotation plans including any changes are to be reviewed by ONCC after the test prior to finalization and publication.

ALTERNATIVE B3 – OVERVIEW

12 Week Rotation
- 6 Configurations

North/South Airfield

Vector Headings (VH) Only
- 2 Headings per Configuration

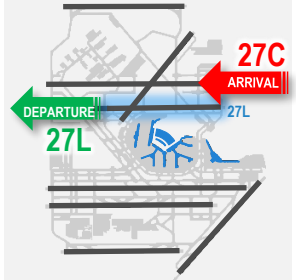
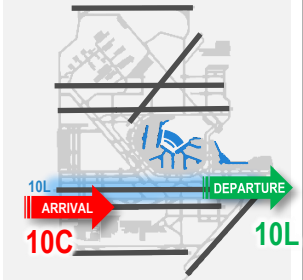
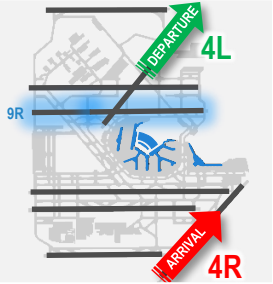
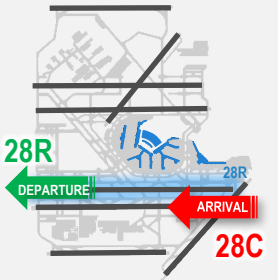
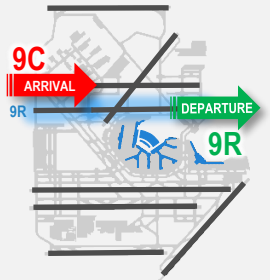
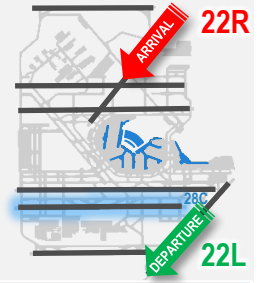
8 East/West Weeks

4 Crosswind Weeks

WEEK	CONFIGURATION	AIRFIELD	FLOW	DEPARTURE	HEADING	ARRIVAL	LONG RUNWAY
1	Q	North	West	27L	1- 275°	27C	9R-27L
2	M	South	East	10L	1- 100°	10C	10L-28R
3	L	Crosswind	East	4L	VH with Turn	4R	9R-27L
4	O	South	West	28R	1- 260°	28C	10L-28R
5	P	North	East	9R	1- 080°	9C	9R-27L
6	I	Crosswind	West	22L	VH with Turn	22R	10C-28C
7	Q	North	West	27L	2 - 295°	27C	9R-27L
8	M	South	East	10L	2 - 110°	10C	10L-28R
9	L	Crosswind	East	4L	VH with Turn	4R	9R-27L
10	O	South	West	28R	2 - 245°	28C	10L-28R
11	P	North	East	9R	2 - 065°	9C	9R-27L
12	I	Crosswind	West	22L	VH with Turn	22R	10C-28C

ALTERNATIVE B3 – OVERVIEW
RUNWAY ROTATION SCHEDULE (WEEKS 1-6)

ALT B3

	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
PRIMARY	Q-1 VH 275°	M-1 VH 100°	L VH w/ Turn	O-1 VH 260°	P-1 VH 080°	I VH w/ Turn
						
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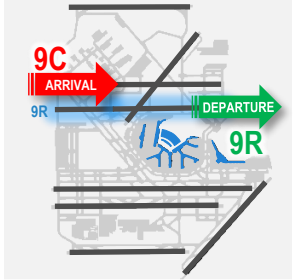
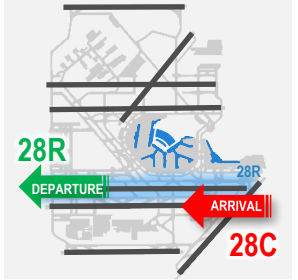
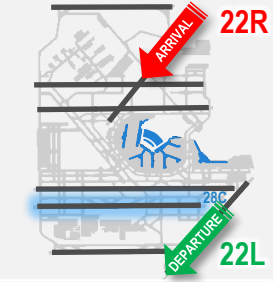
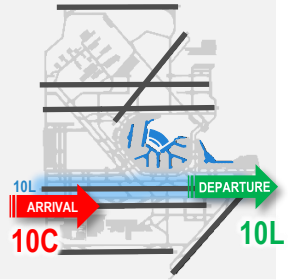
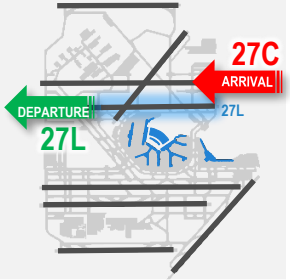
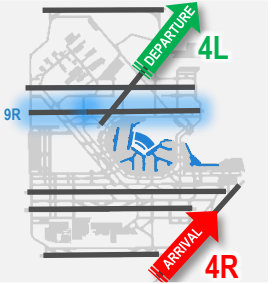
SECONDARY	P-1 VH 080°	O-1 VH 260°	I VH w/ Turn	M-1 VH 100°	Q-1 VH 275°	L VH w/ Turn
						
	EAST FLOW	WEST FLOW	WEST FLOW	EAST FLOW	WEST FLOW	EAST FLOW

CDA

Designated Long Runway

O'HARE & MIDWAY INTERNATIONAL AIRPORTS

ALTERNATIVE B3 – OVERVIEW
RUNWAY ROTATION SCHEDULE (WEEKS 7-12)

ALT B3

	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12
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	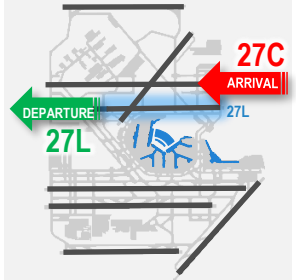	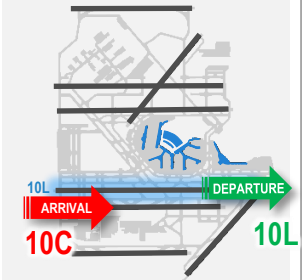	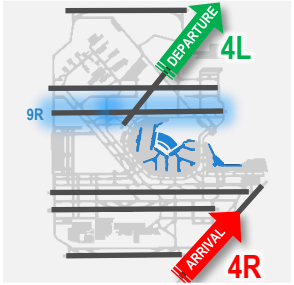	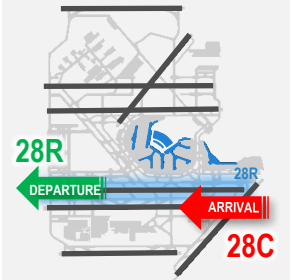	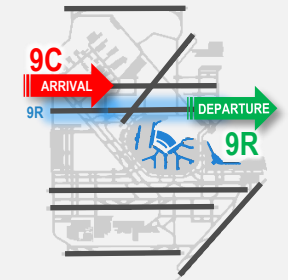	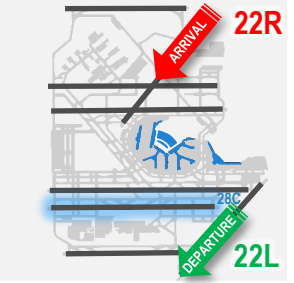
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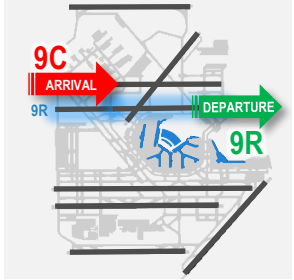
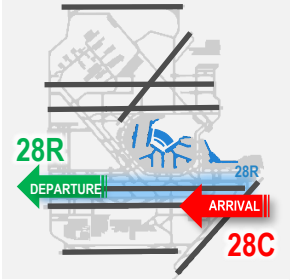
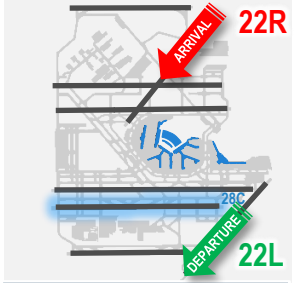
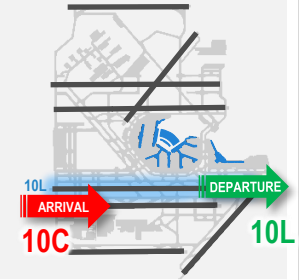
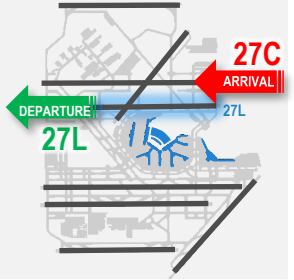
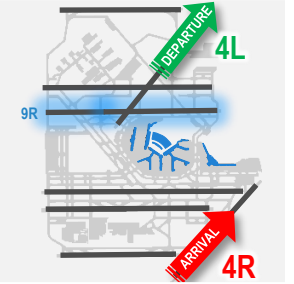
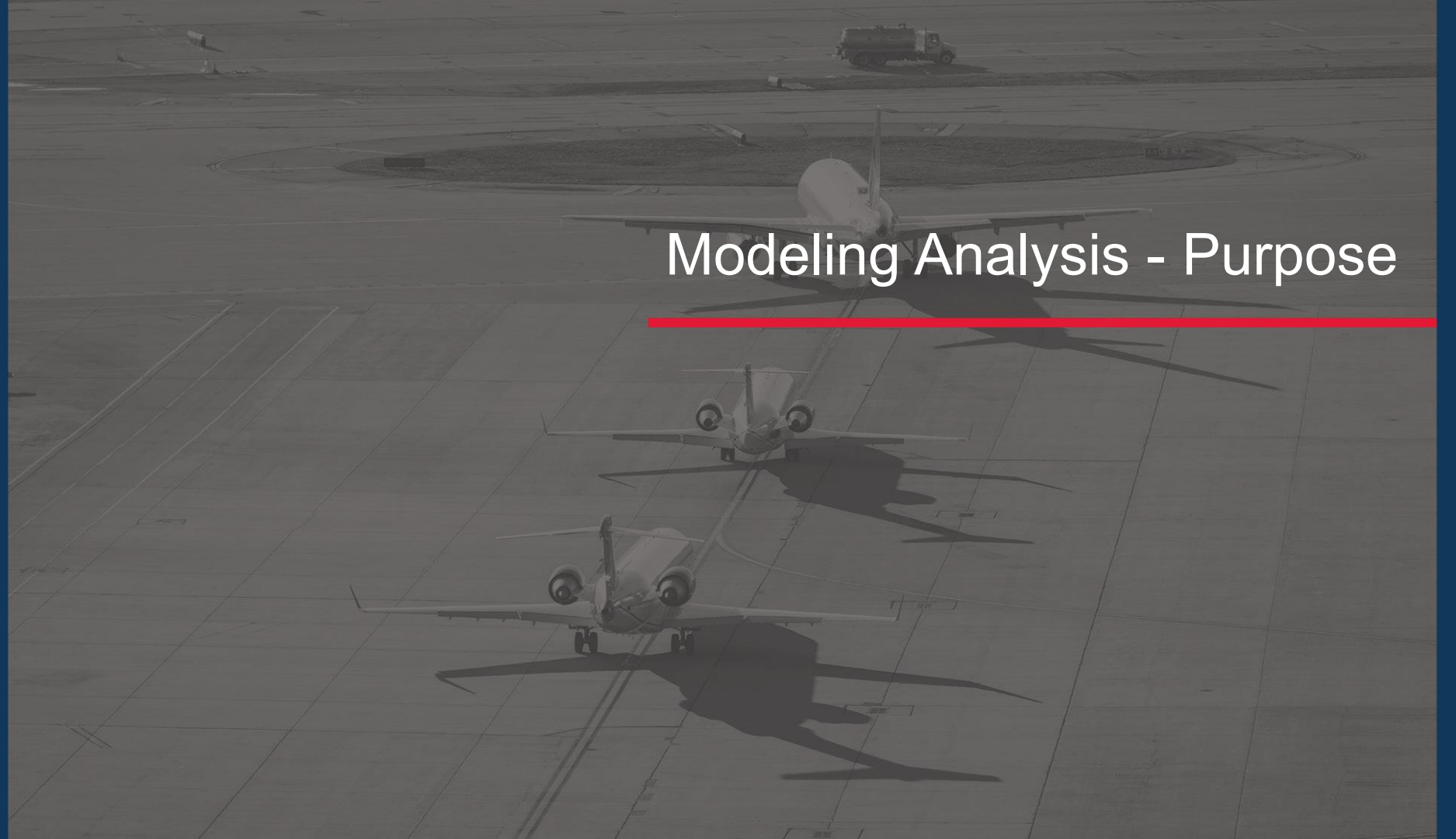
						
	EAST FLOW	WEST FLOW	WEST FLOW	EAST FLOW	WEST FLOW	EAST FLOW

CDA

Designated Long Runway

O'HARE & MIDWAY INTERNATIONAL AIRPORTS

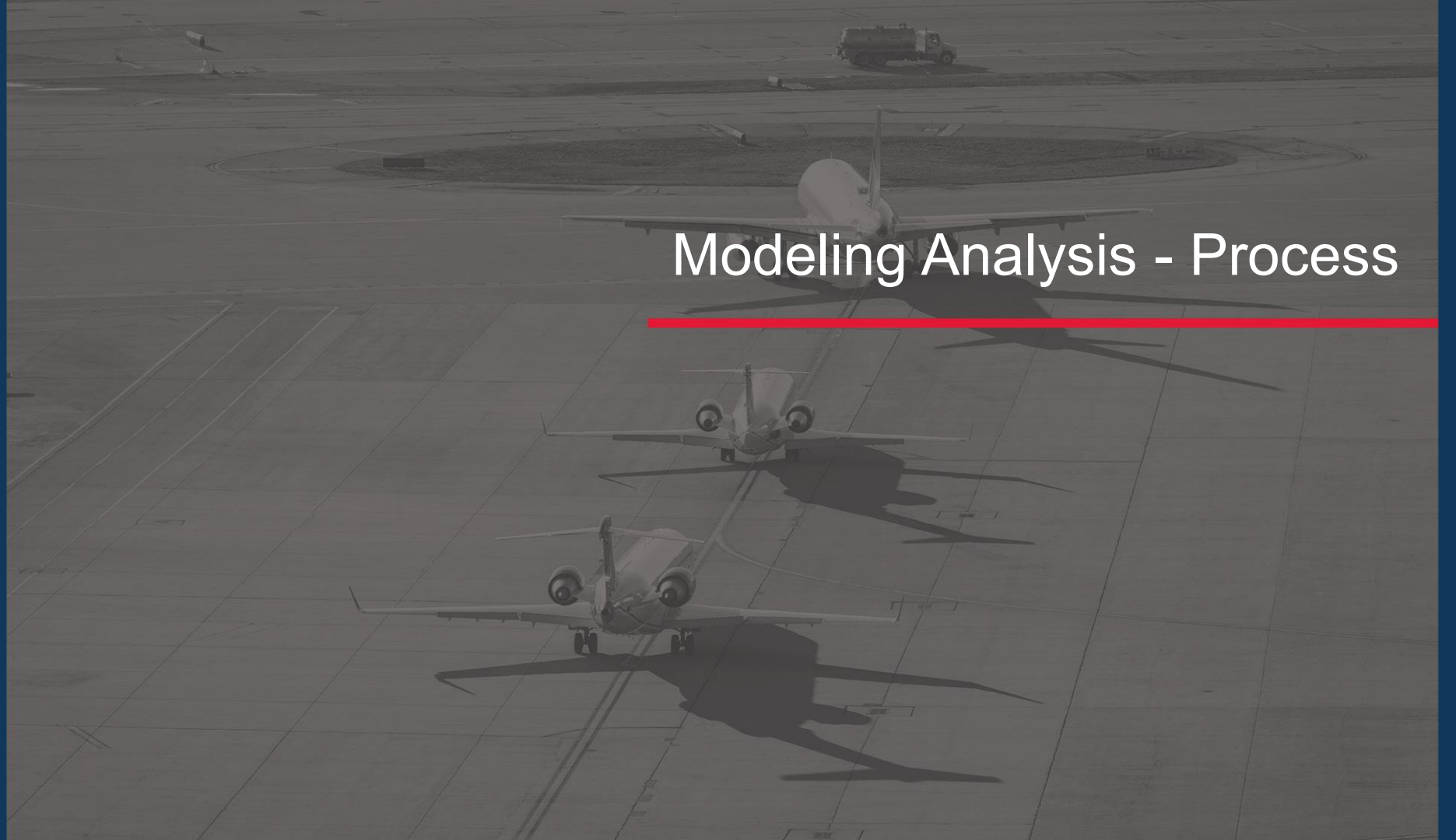


Modeling Analysis - Purpose

PURPOSE OF THE MODELING ANALYSIS

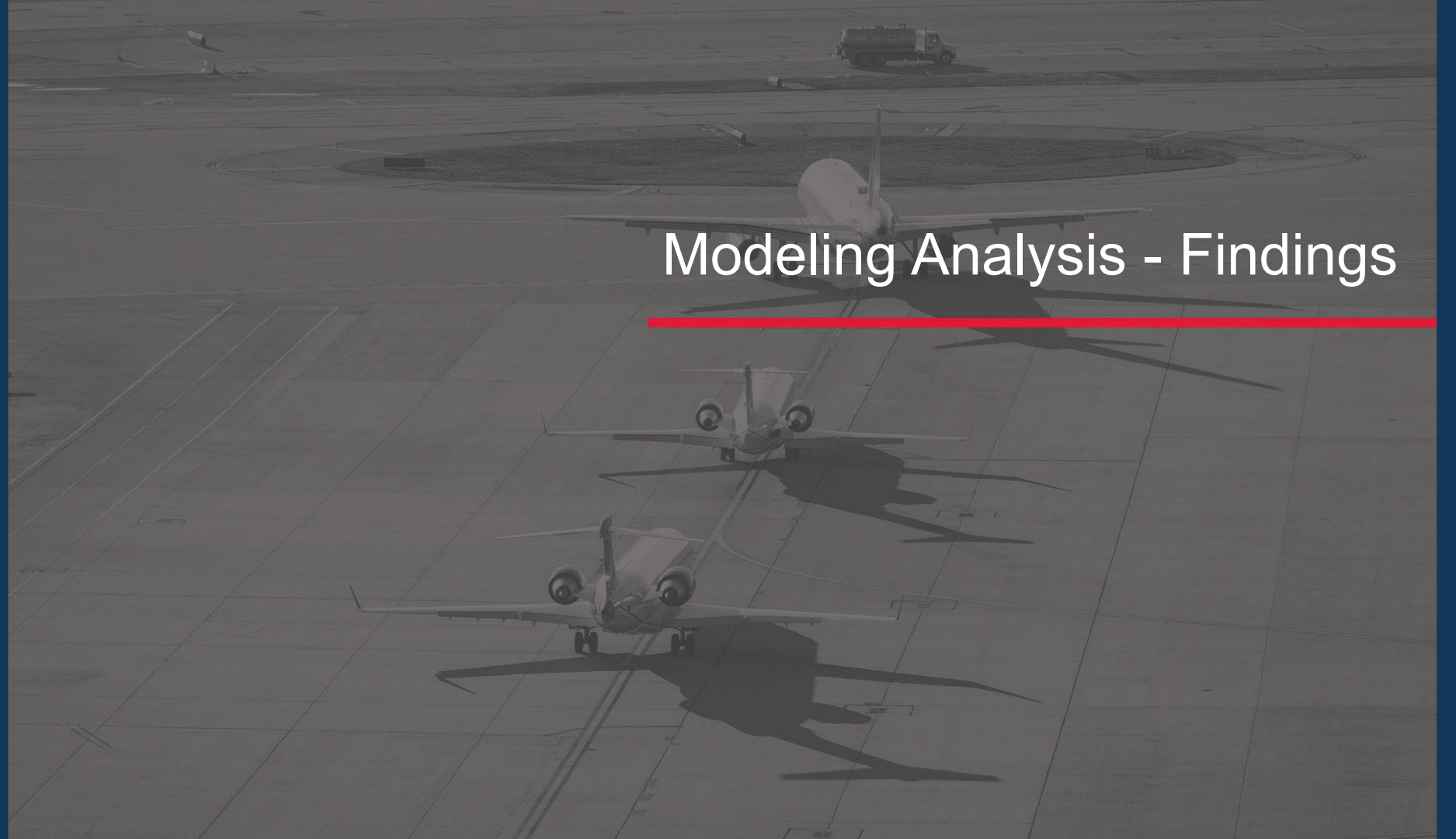
Provide all stakeholders with knowledge of the likelihood of potential change in flights as a result of the Fly Quiet Proposal

Modeling Analysis - Process



SCENARIOS MODELED AND INPUT DATA

1. The FAA's Aviation Environmental Design Tool (AEDT) was used for this modeling effort
2. Two scenarios were developed for comparison:
    1. Existing Fly Quiet Scenario – Existing Fly Quiet Program Remains
    2. Proposed Fly Quiet Scenario – Proposed Fly Quiet Program Replaces Existing Program
3. Modeled scenarios represented average annual day arrival and departure levels and included both day and night operations
4. Findings are based on areas where potential increases and decreases of flights were identified

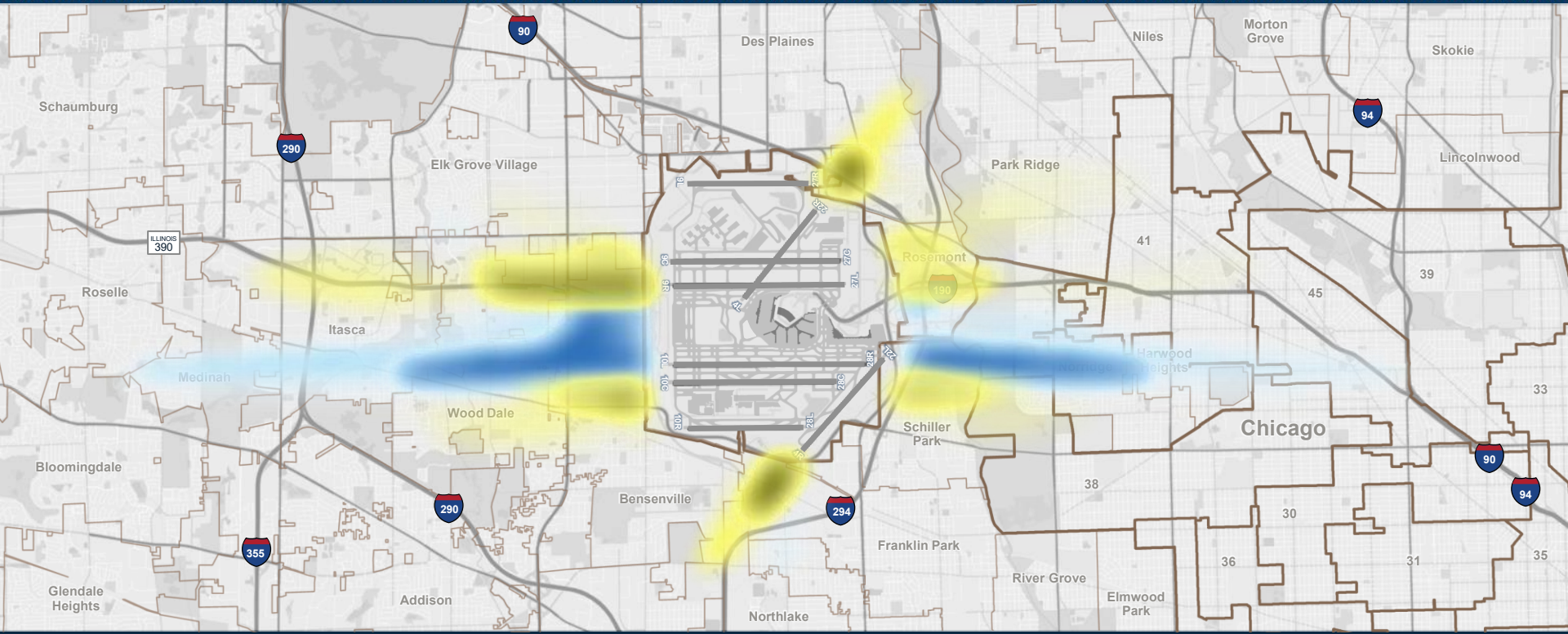


Modeling Analysis - Findings

FLY QUIET PROPOSAL - CHANGES IN FLIGHTS

OVERVIEW

- INCREASE +
- DECREASE +

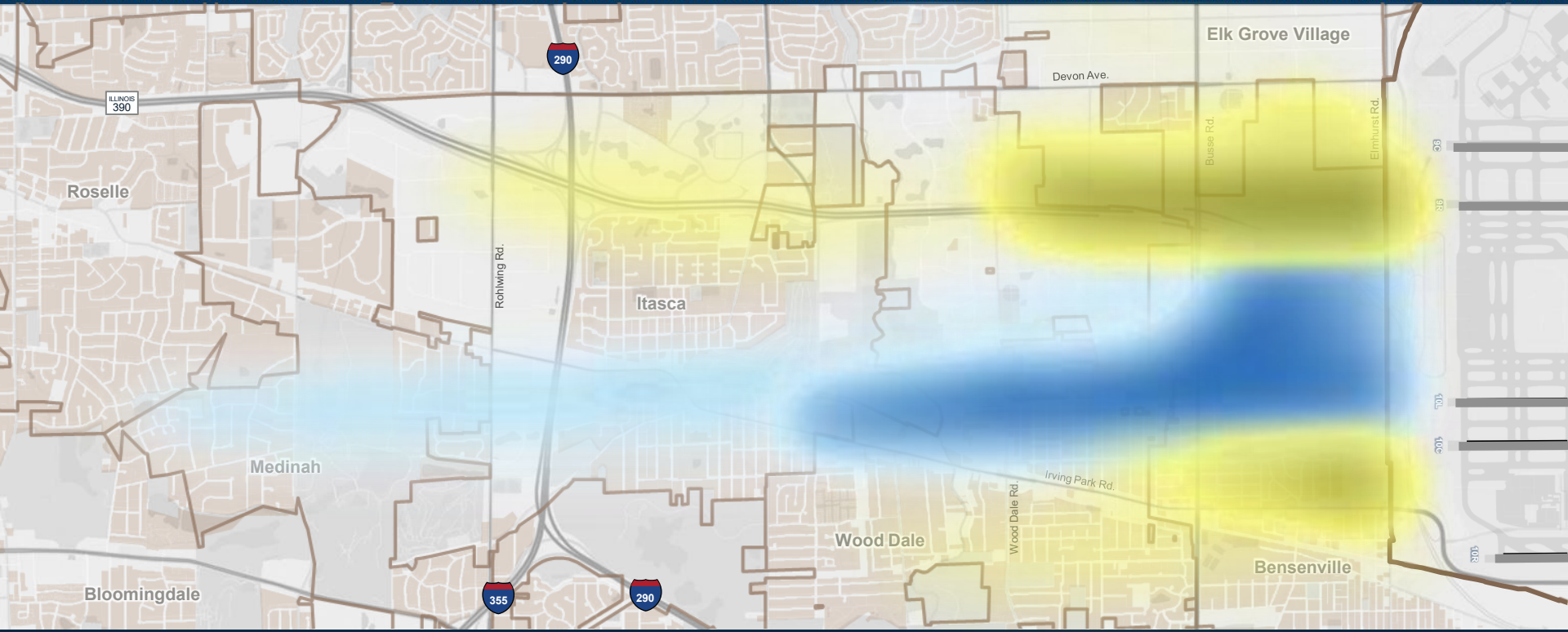


FLY QUIET PROPOSAL - CHANGES IN FLIGHTS

WEST

Non-Compatible Land Use

- INCREASE +
- DECREASE +

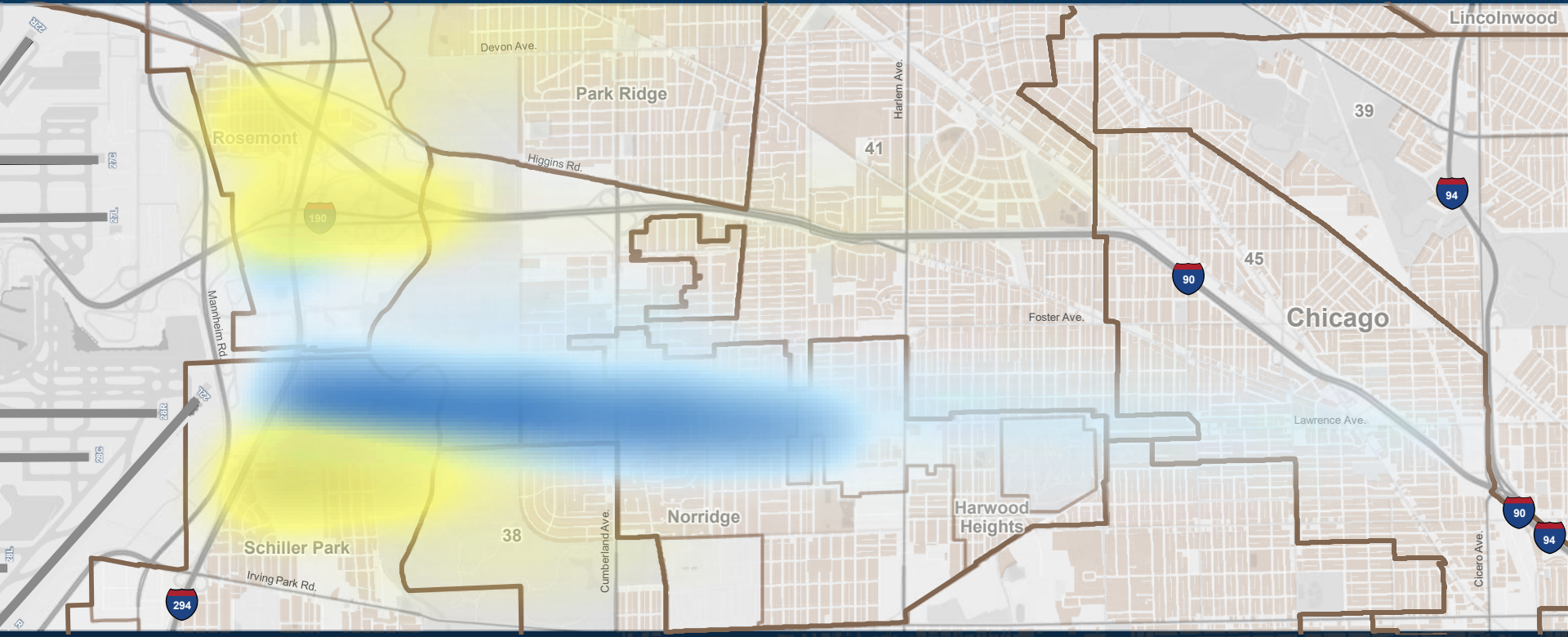


FLY QUIET PROPOSAL - CHANGES IN FLIGHTS

EAST

Non-Compatible Land Use

- INCREASE +
- DECREASE +



This Modeling Analysis is not intended for NEPA purposes

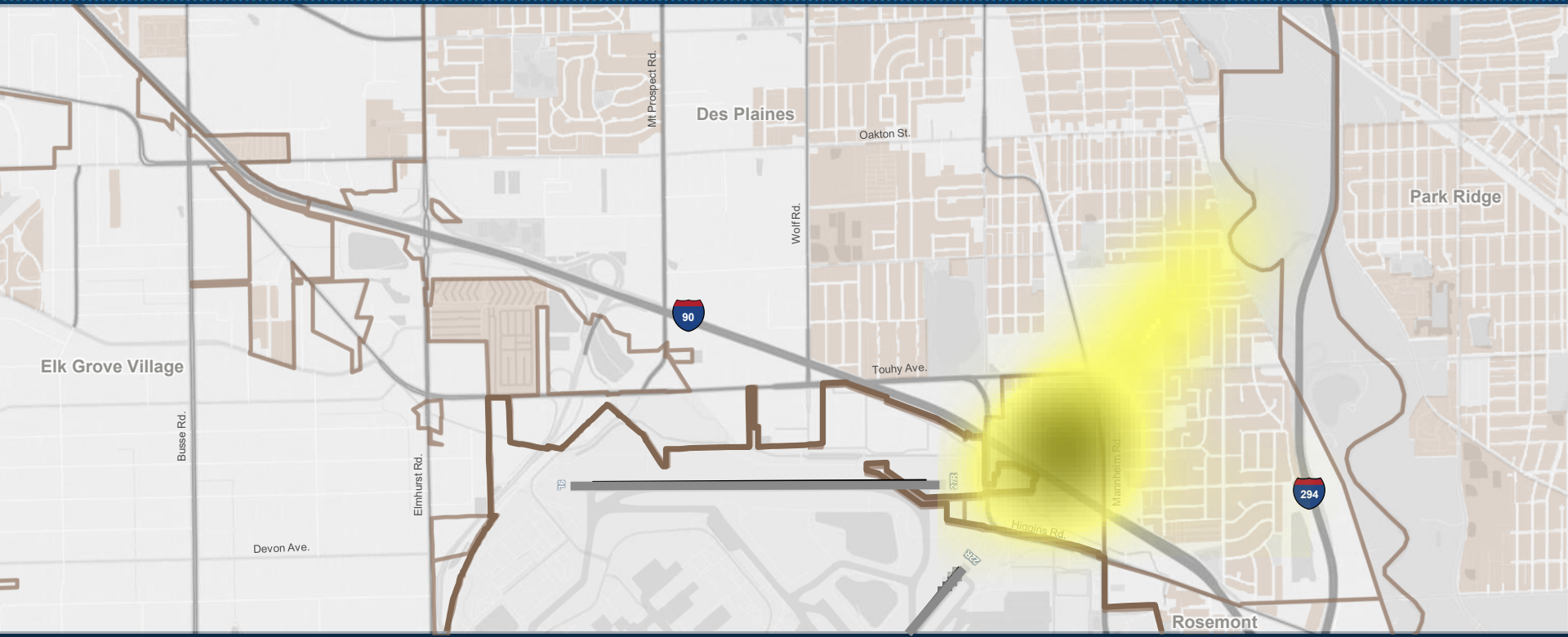
FLY QUIET PROPOSAL - CHANGES IN FLIGHTS

NORTH

Non-Compatible Land Use

- INCREASE +

- DECREASE +



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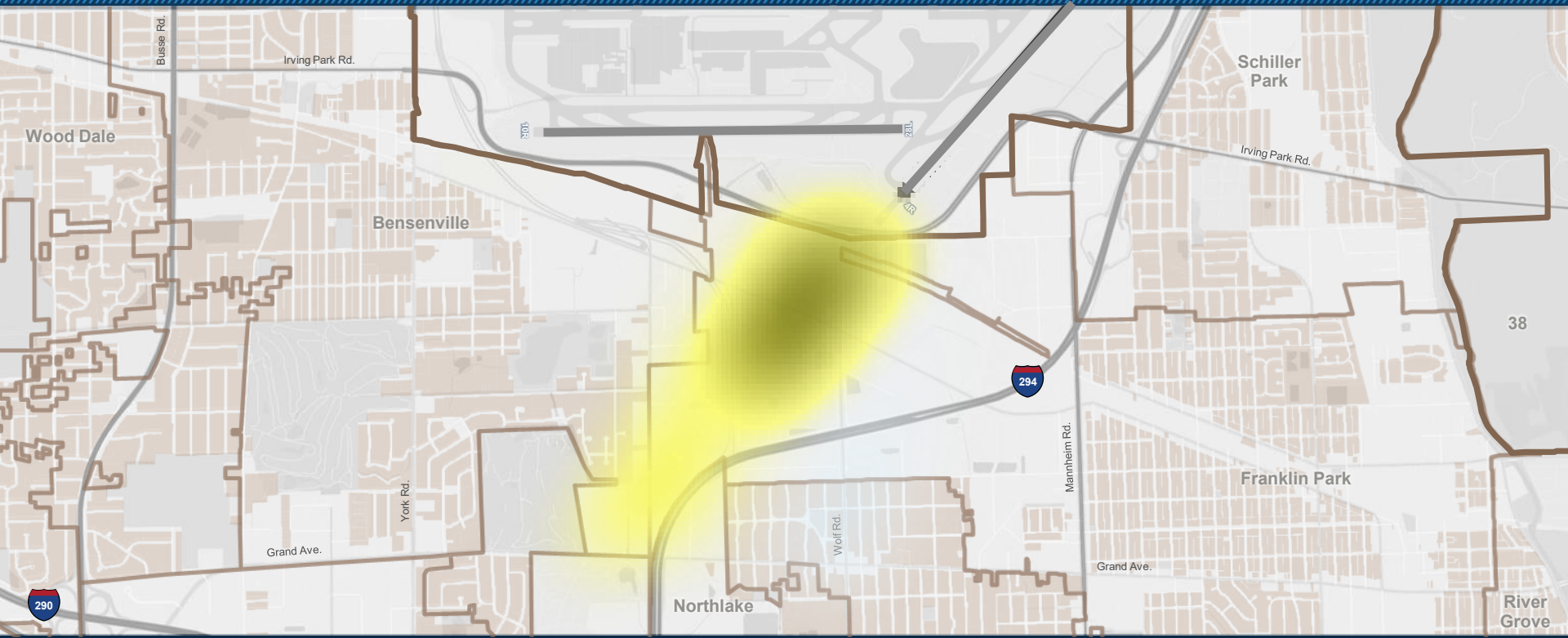
O'HARE & MIDWAY INTERNATIONAL AIRPORTS

FLY QUIET PROPOSAL - CHANGES IN FLIGHTS

SOUTH

Non-Compatible Land Use

- INCREASE +
- DECREASE +



SUMMARY OF FINDINGS

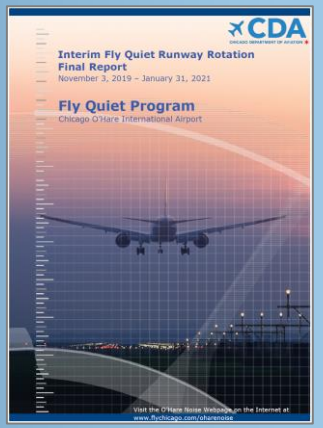
1. There are some areas where increases in flights occur and some areas where decreases in flights occur

2. The modeling analysis indicates that it is likely fewer people will be in the 65 DNL as a result of implementing the proposed Fly Quiet Program

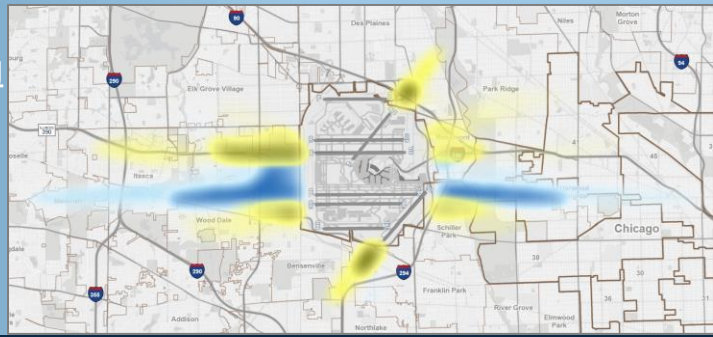
Next Steps

MATERIALS TO REVIEW

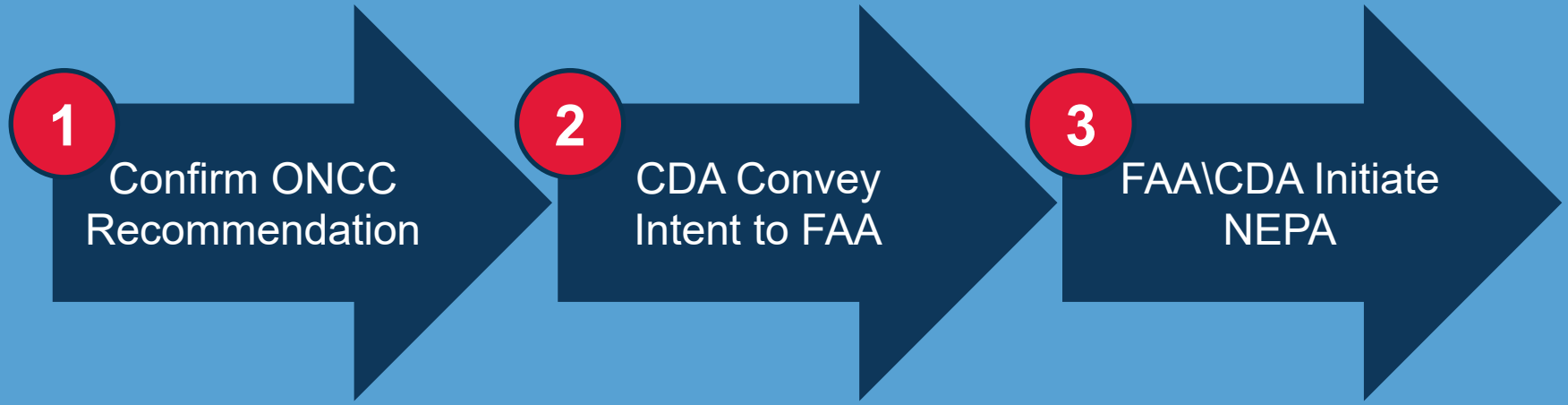
1. Actual Data
   - Tests 1, 2, 3
   - Interim Fly Quiet (IFQ)
   - Existing Fly Quiet Program
2. CDA Submittal to FAA (12/27/2022)
3. FAA Feasibility Review (9/20/2023)
4. Modeling Analysis (10/3/2025)



Available at:
oharenoise.org



NEXT STEPS


1
Confirm ONCC Recommendation
2
CDA Convey Intent to FAA
3
FAA\CDA Initiate NEPA

CHICAGO

MAYOR BRANDON JOHNSON

CHICAGO DEPARTMENT OF AVIATION

MICHAEL J. MCMURRAY, COMMISSIONER

O'HARE & MIDWAY

INTERNATIONAL AIRPORTS

flychicago.com