

Part 150 Noise Compatibility Study

Public Information Meeting
September 2, 2020



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INTERNATIONAL



Meeting Logistics

The image shows a Zoom Webinar interface with a 'Question and Answer' window open. The main interface features three service icons: Meetings (Collaborate Seamlessly), Webinars (Frictionless Communication Experience), and Zoom Phone (Clear Audio, Effortless Usability, Reliable). The 'Question and Answer' window displays a 'Welcome' message and a text input field labeled 'Type your question here...'. Two yellow callout boxes provide instructions: one points to the 'Q&A' icon in the bottom toolbar, and the other points to the text input field in the 'Question and Answer' window.

Click Q&A below to open window

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Welcome
Feel free to ask the host and panelists questions

Type your question here...

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Agenda

- Welcome and Discussion of Virtual Meeting Resources
- Part 150 Noise Compatibility Study Process
- History of Noise Compatibility Planning
- Data Collection
- Existing and Future Baseline Noise Exposure Contours
- Noise Compatibility Program (NCP) Measures
- Next Steps

Part 150 Noise Compatibility Study Process

What is a Part 150 Study?

- Part 150 studies are planning studies to identify airport noise and land use compatibility impacts
- Named for 14 CFR Part 150 of the Code of Federal Regulations
- Must follow Federal guidelines with regard to process and methodology
- Makes an airport eligible for funding for certain mitigation measures
- Funding is not guaranteed




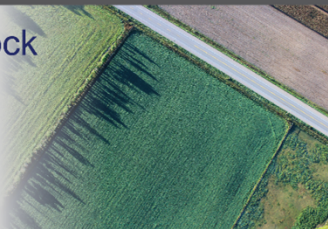
Part 150 Noise Compatibility Study Process

Essential Elements of a Part 150 Study

- Noise Exposure Maps (NEMs):
 - Description of the noise levels for existing and future (+5 years) conditions
- Noise Compatibility Program (NCP):
 - Recommendations for reducing, minimizing, and/or mitigating aircraft noise and land use conflicts
 - Noise Abatement
 - Land Use Mitigation
 - Implementation Measures
- Public Involvement

Part 150 Noise Compatibility Study Process

Land Use / Noise Sensitivity Matrix

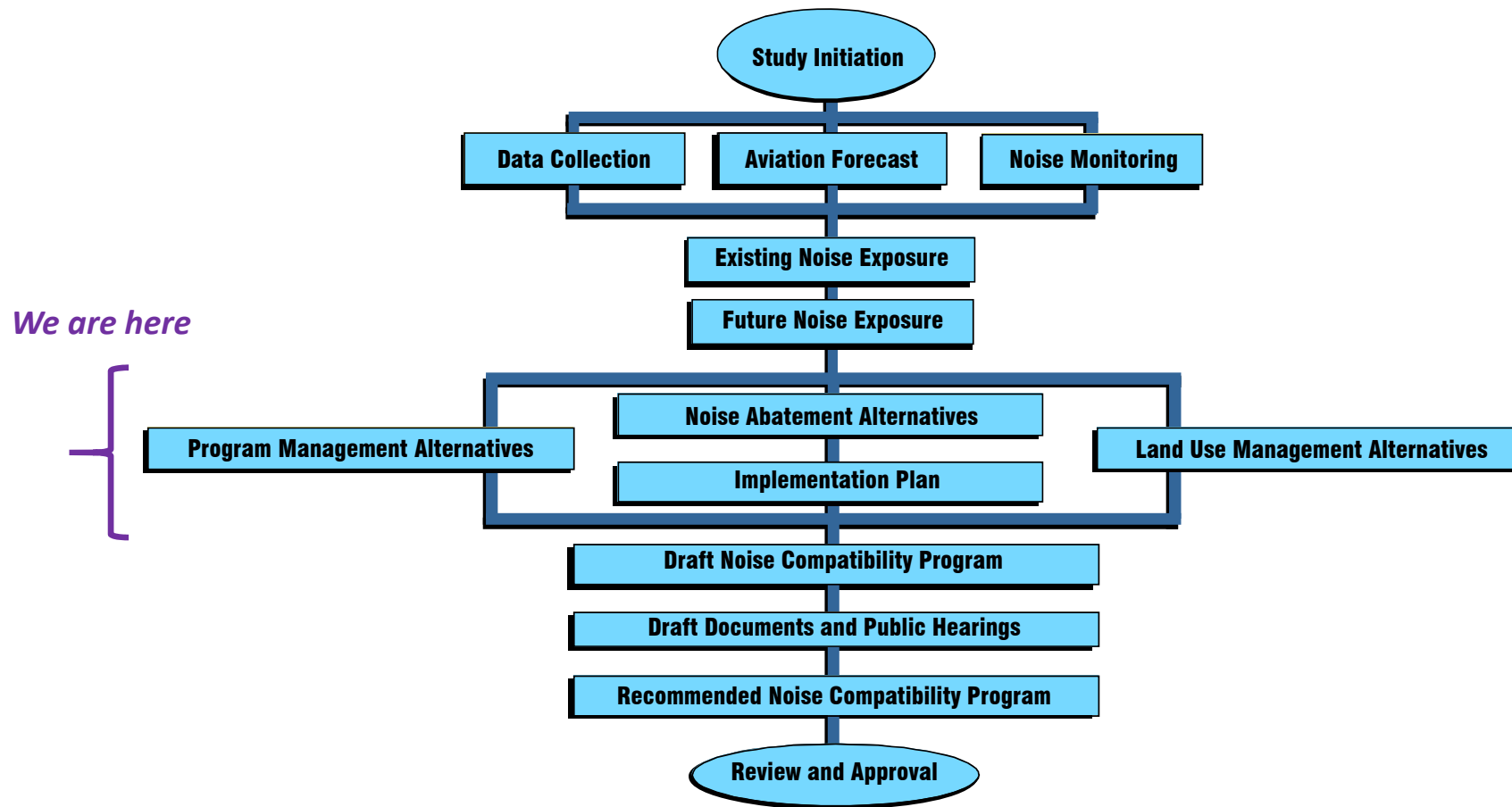
		OUTDOOR NOISE LEVEL			OUTDOOR NOISE LEVEL				
Residential		< 65 DNL	65-75 DNL	75+ DNL	< 65 DNL	65-75 DNL	75+ DNL	Institutional	
	1-2 Family	Compatible	Compatible with Sound Insulation	Incompatible	Compatible	Compatible with Sound Insulation	Incompatible		Schools/Libraries
	Multi-Family	Compatible	Compatible with Sound Insulation	Incompatible	Compatible	Compatible with Sound Insulation	Incompatible		Place of Worship
	Mobile Homes	Compatible	Compatible with Sound Insulation	Incompatible	Compatible	Compatible with Sound Insulation	Incompatible		Hospitals
	Dorms, etc.	Compatible	Compatible with Sound Insulation	Incompatible	Compatible	Compatible with Sound Insulation	Incompatible		Nursing Homes
									Government
Recreational		< 65 DNL	65-75 DNL	75+ DNL	< 65 DNL	65-75 DNL	75+ DNL	Commercial Industrial Agricultural*	
	Sports/Play	Compatible	Compatible with Sound Insulation	Incompatible	Compatible	Compatible with Sound Insulation	Incompatible		Farming/Livestock
	Amphitheatres/Music Shells	Compatible	Compatible with Sound Insulation	Incompatible	Compatible	Compatible with Sound Insulation	Incompatible		Office/Retail/Wholesale
	Camping	Compatible	Compatible with Sound Insulation	Incompatible	Compatible	Compatible with Sound Insulation	Incompatible		Manufacturing/Production
					*	*			

Per Part 150:

Compatible
 Compatible with Sound Insulation
 Incompatible

*Appropriate noise level reduction must be incorporated into the design of areas where the public is received, office areas, residential uses associated with farming, and other noise-sensitive areas.

Part 150 Noise Compatibility Study Process



History of Noise Compatibility Planning

Previous Part 150 Studies Completed at CMH

- 1987 Part 150 Study (original)
- 1993 Part 150 Study Update
- 1999 Part 150 Study Update
- 2001 Noise Exposure Map Update
- 2007 Part 150 Study Update (FAA Record of Approval in 2008)
 - Conducted concurrently with the Environmental Impact Statement (EIS) for relocation of the south runway

History of Noise Compatibility Planning

Mitigation Program Measures

- Residential Sound Insulation
 - CRAA has provided sound insulation to nearly 800 homes
- Acquisition Program
 - Acquisition of 35 homes impacted by relocation of the south runway
 - Provided relocation assistance to affected residents
- Tracking and Measuring Noise
 - Operates WebTrak System with 16 permanent noise monitors
 - Allows staff and the general public the ability to track flight activity and noise levels
- Noise Complaint & Inquiries
 - Dedicated staff to respond to complaints and inquiries about aircraft operations and noise
- Proactive planning
 - Adhere to both federal and local regulations
 - Maintain transparent communication
 - Provide information to land use planners, developers, and the general public

Data Collection

Comparison of Noise Levels

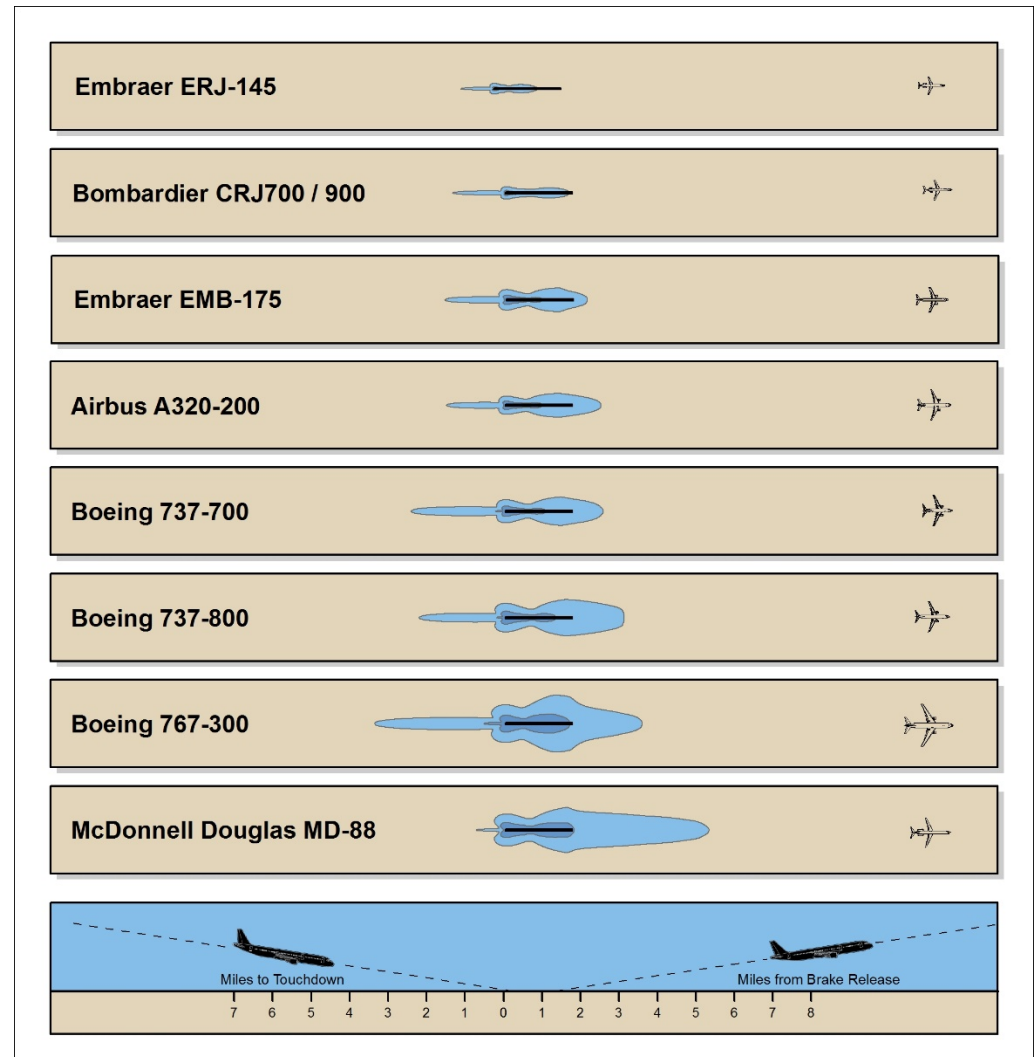


* As measured along the takeoff path 2 miles from the overflight end of the runway.

Data Collection

Aircraft Noise Footprints

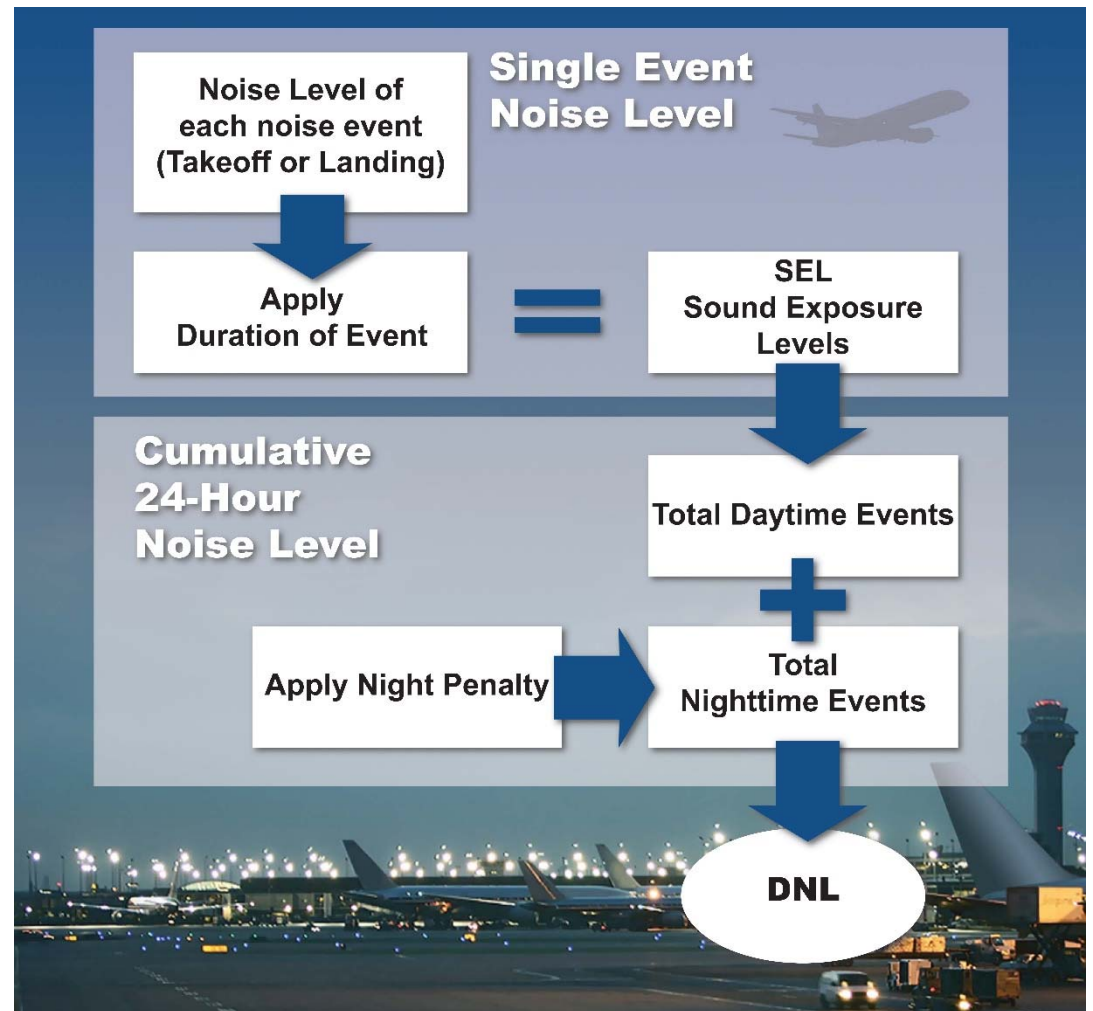
- Represent single event noise levels.
- Overhead view of noise from arrival landing from the left and departure to the right.
- Older and larger aircraft such as the 767-300 and MD-88 have been or are being phased out at CMH.
- Newer aircraft have a smaller noise footprint.



Data Collection

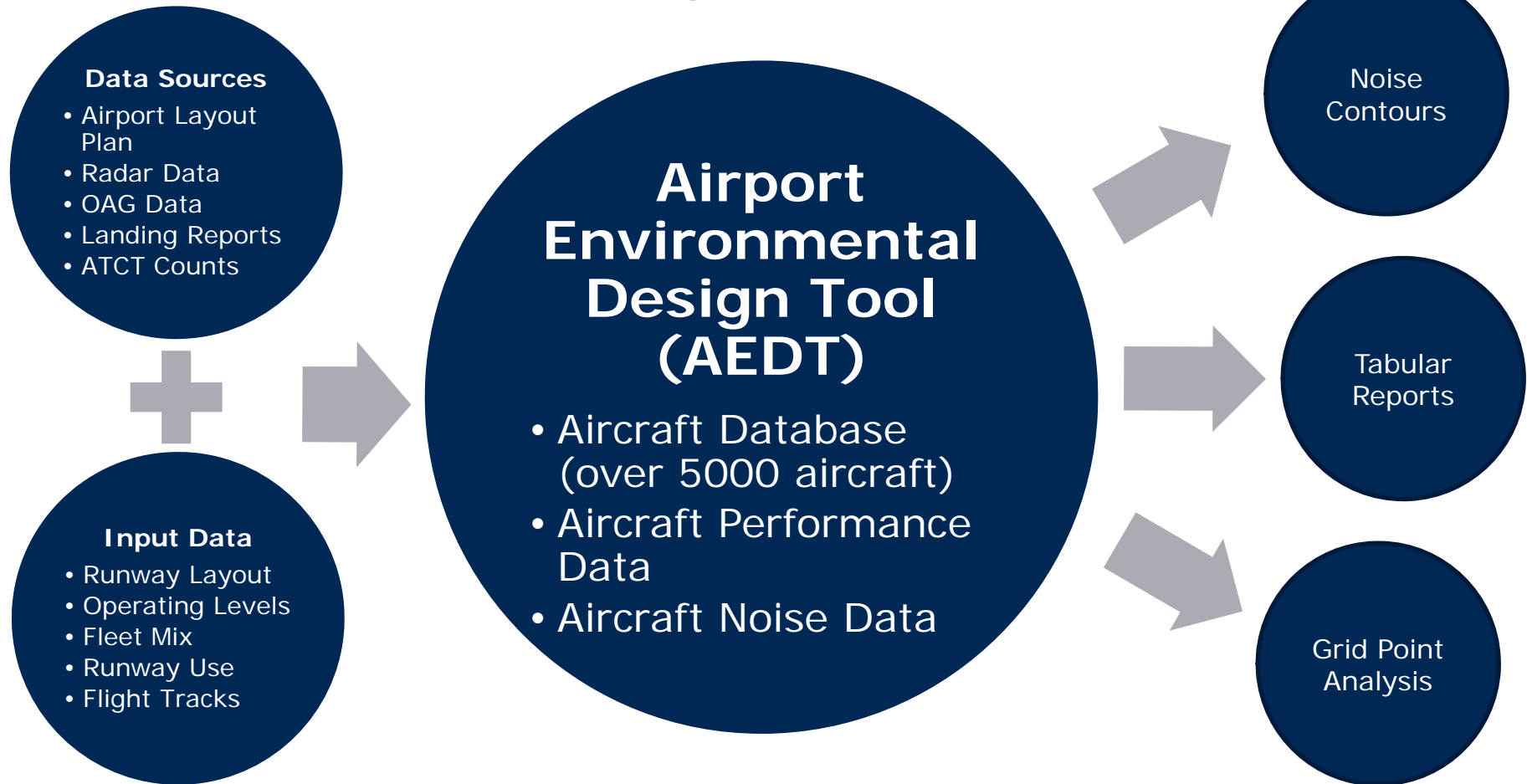
What is DNL

- Day-Night Average Sound Level
- Represents the average noise level over a 24-hour period
- Applies a 10 decibel “penalty” to nighttime noise events (between 10:00pm and 6:59am)
- Required metric for Federal noise studies



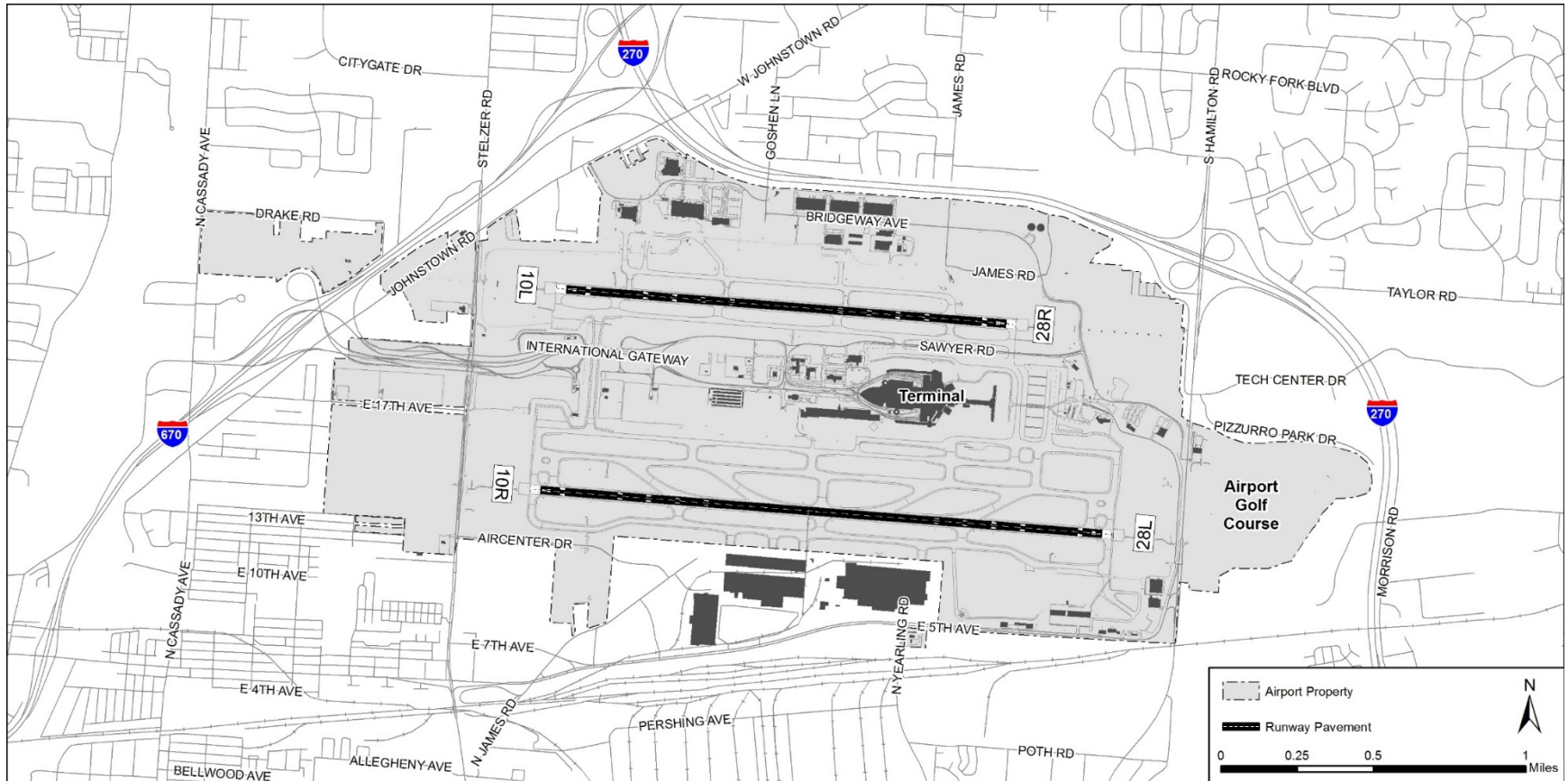
Data Collection

Airport Environmental Design Tool (AEDT)



Data Collection

Runway Layout



Data Collection

Operating Levels

- Existing (2020) Operations
 - Actual based on FAA Air Traffic Control Tower records for September 2018 through August 2019
 - Reflects operating levels prior to decrease resulting from COVID-19 pandemic

Aircraft Category	2020 Existing Operations		
	Actual	Average Annual Day	Percent
Air Carrier & Commuter	113,961	312	84.4%
General Aviation	20,294	56	15.0%
Military	744	2	0.6%
Total	134,999	370	100.0%

Data Collection

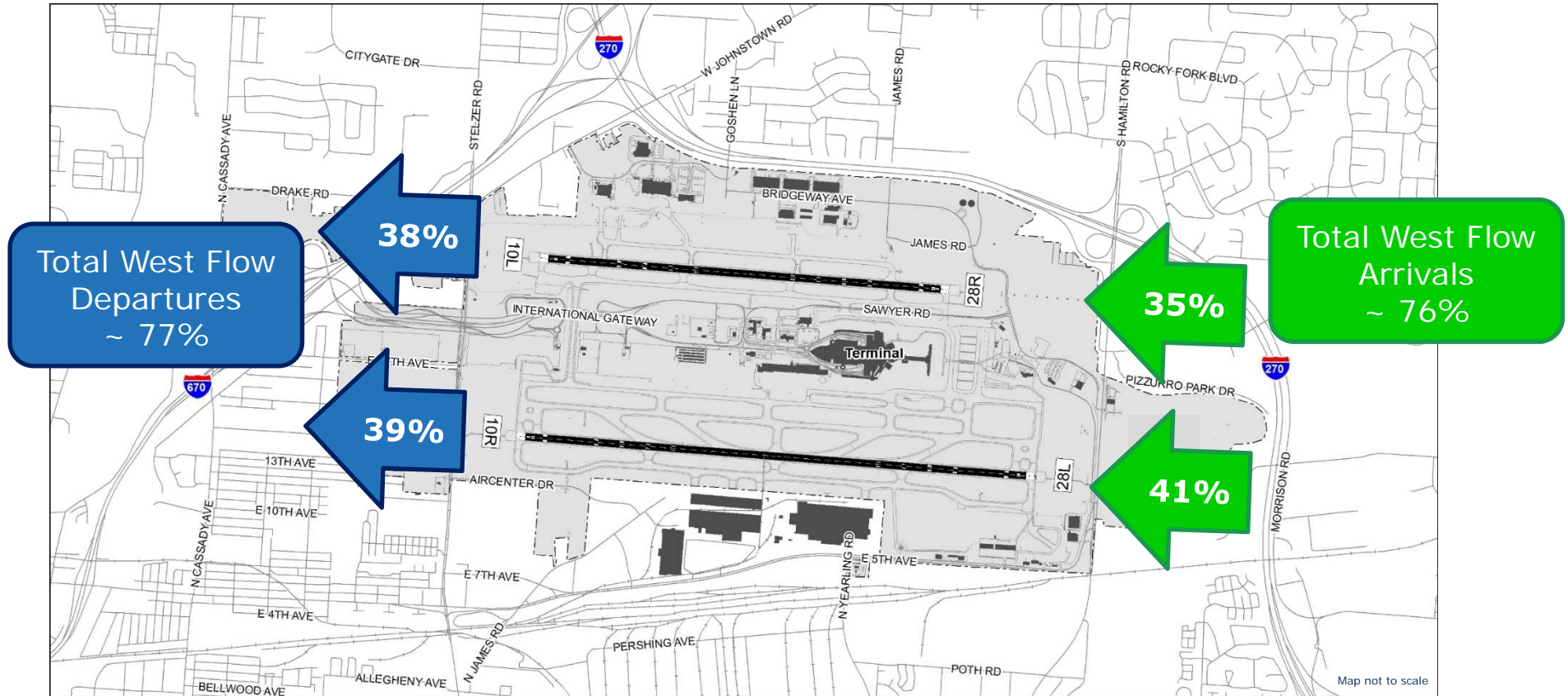
Operating Levels

- Future (2025) Operations
 - Based on aviation activity forecast prepared for this Part 150 Study
 - The forecast was prepared and approved by the FAA prior to COVID-19 outbreak. Although the current outlook may differ, the forecast provides a conservative projection of future noise conditions.

Aircraft Category	2025 Forecast Operations		
	Forecast	Average Annual Day	Percent
Air Carrier & Commuter	128,580	352	85.6%
General Aviation	20,930	57	13.9%
Military	630	2	0.4%
Total	150,140	411	100.0%

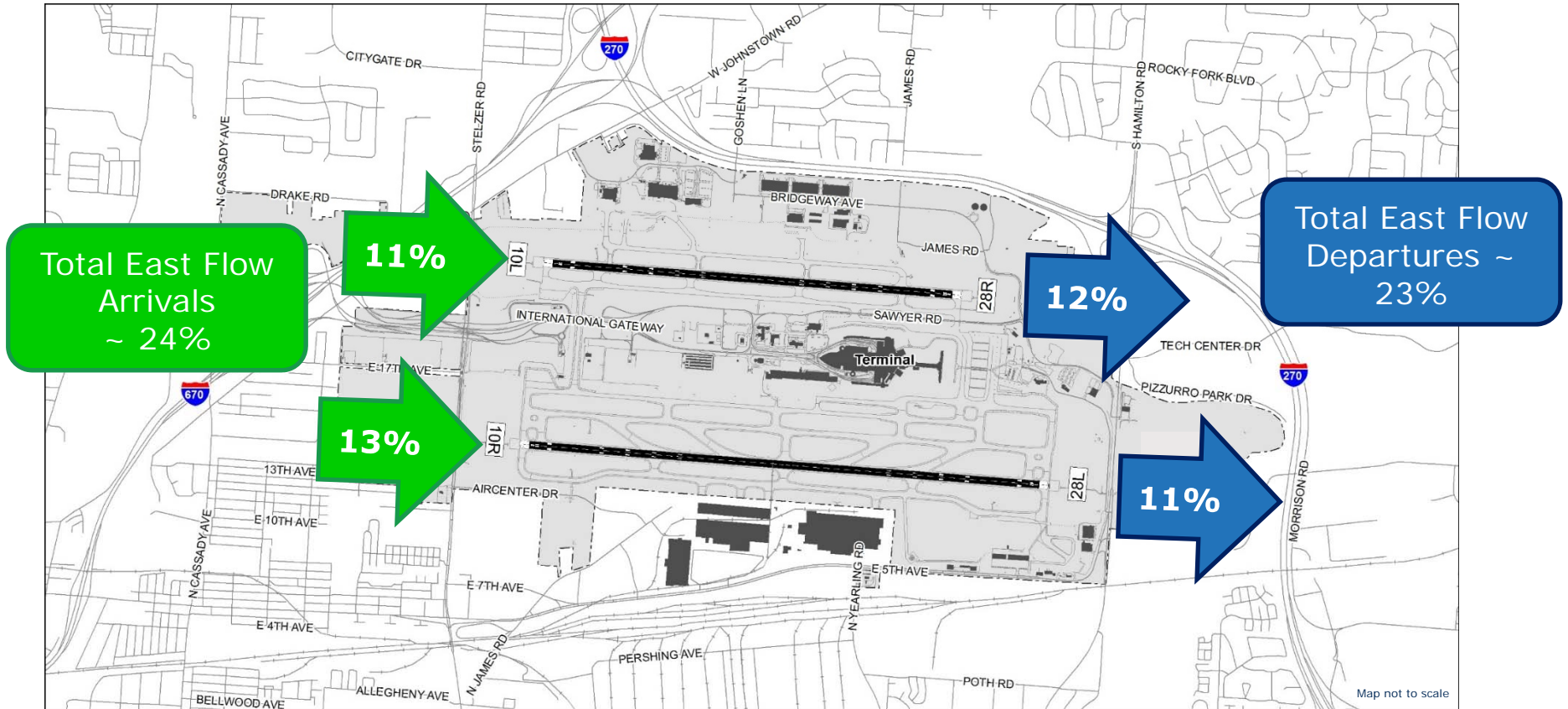
Existing Data Collection

Runway Use – West Flow



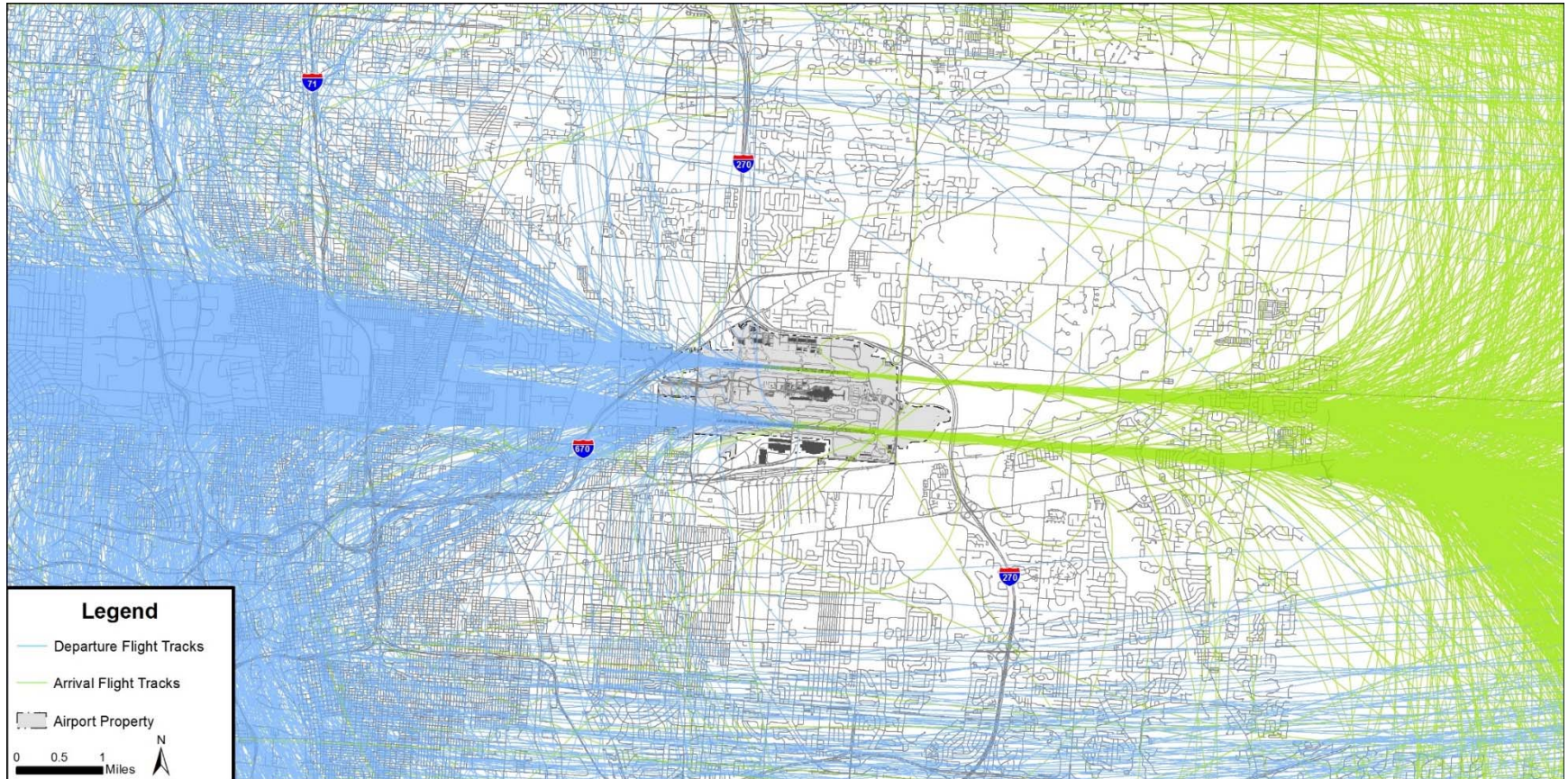
Existing Data Collection

Runway Use – East Flow



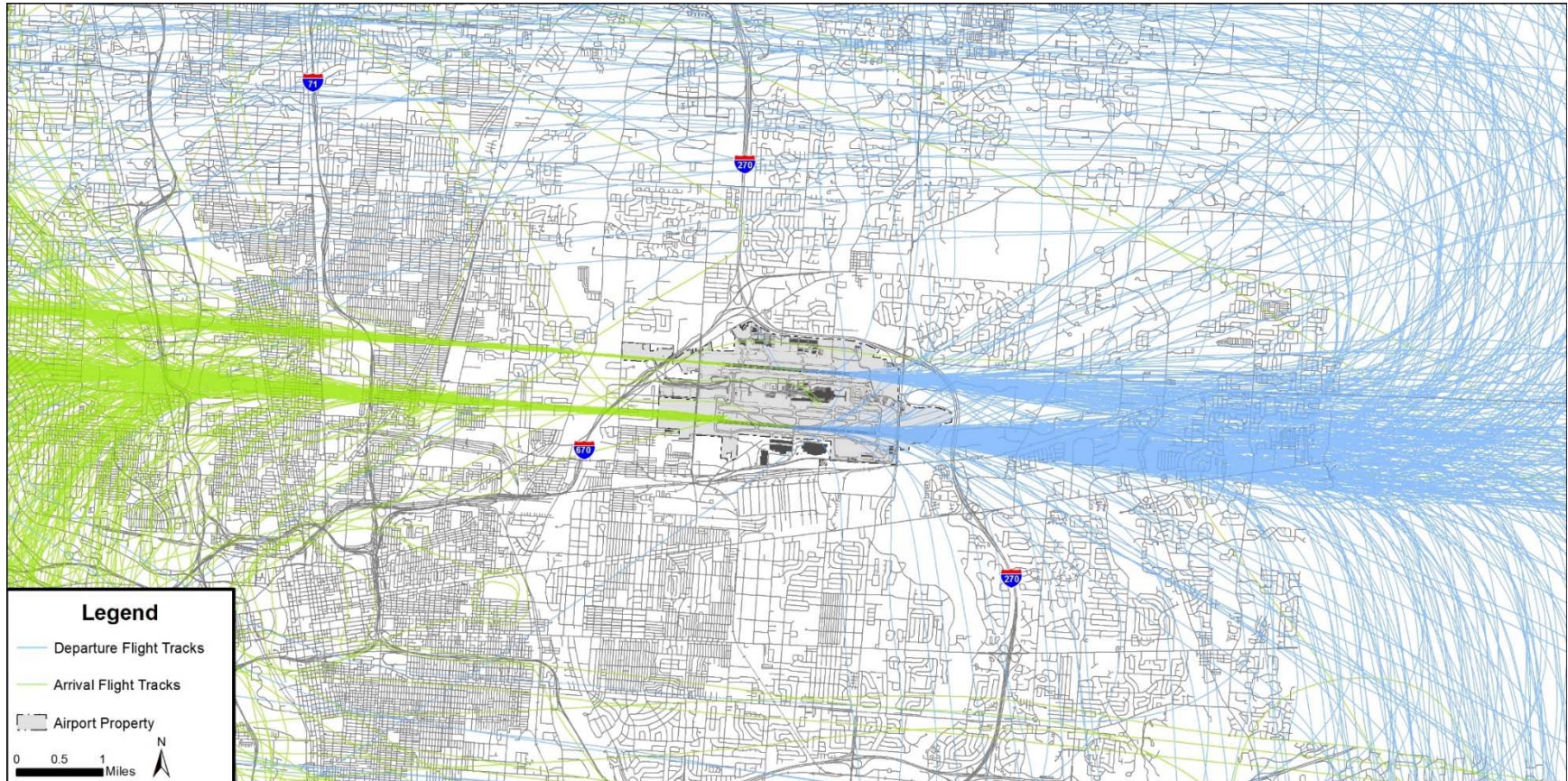
Existing Data Collection

West Flow Flight Tracks



Existing Data Collection

East Flow Flight Tracks



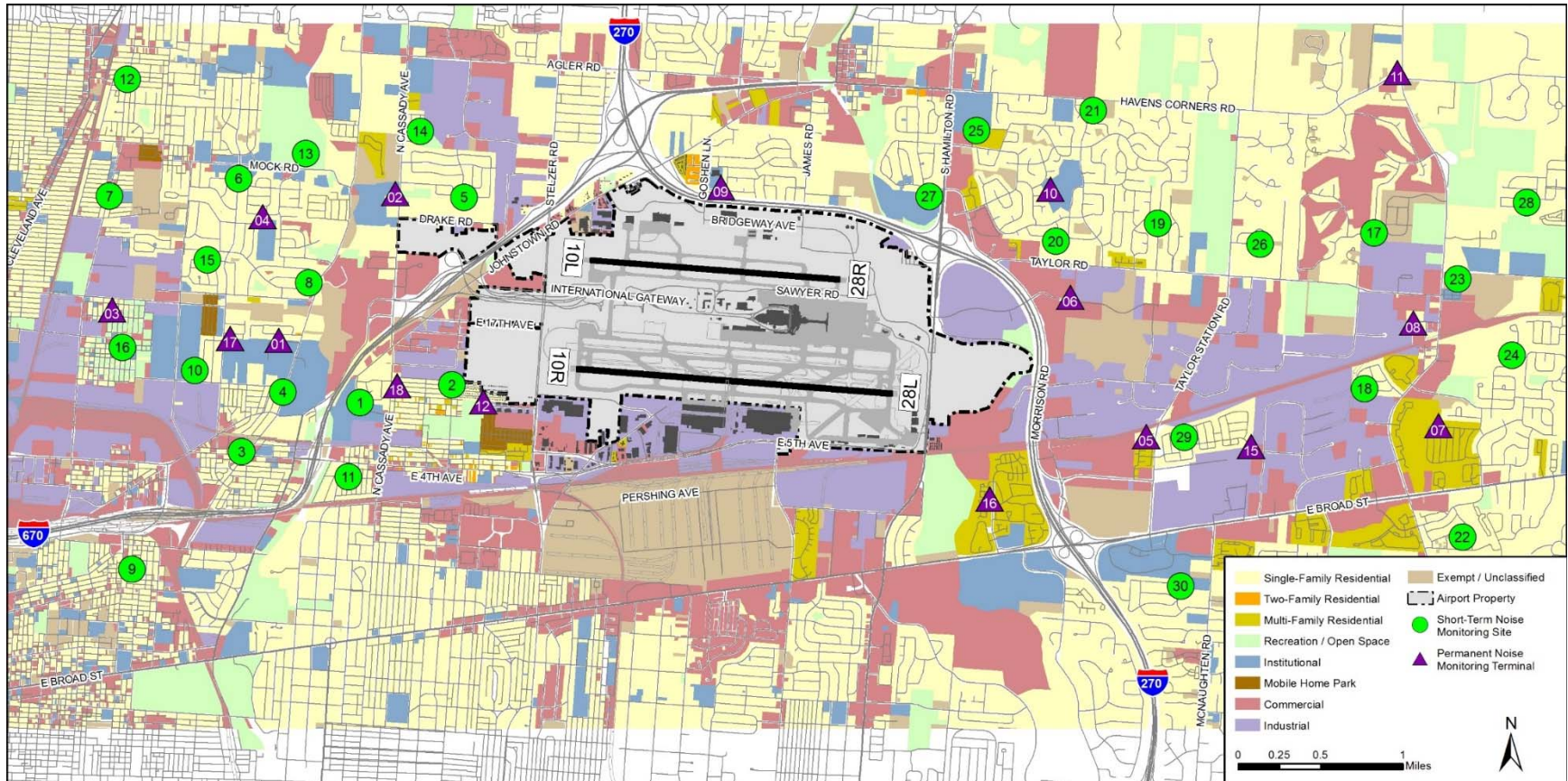
Existing Data Collection

Noise Monitoring Program

- Validate/verify the input data in the AEDT (focus on departures)
- Obtain “real-life” noise measurements to assist in understanding the total noise environment
- Conducted the week of November 11, 2019
- Collected noise readings at 30 sites (approx. 1 hour at each site)

Existing Data Collection

Noise Monitoring Program

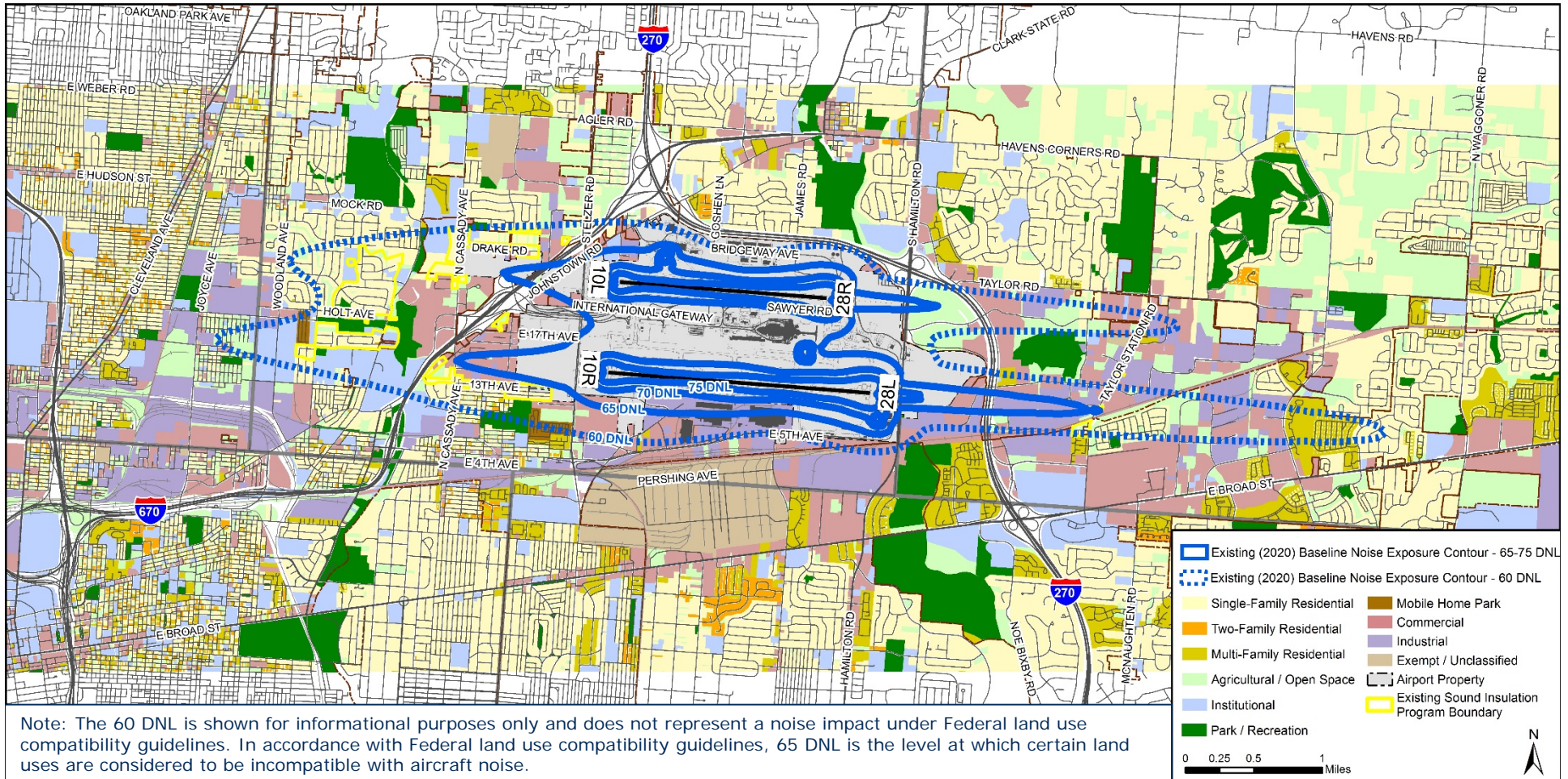


Noise Monitoring Program

Results

- Summary Results
 - Loudest aircraft recorded included, Boeing 737-800/900 and Embraer ERJ-175 aircraft
 - Average number of aircraft observed at each site was 11 to 12
 - Some aircraft noise events were combined with community noise sources such as intermittent car/truck traffic
 - Measured single event data was determined to be consistent with aircraft noise profiles modeled in AEDT

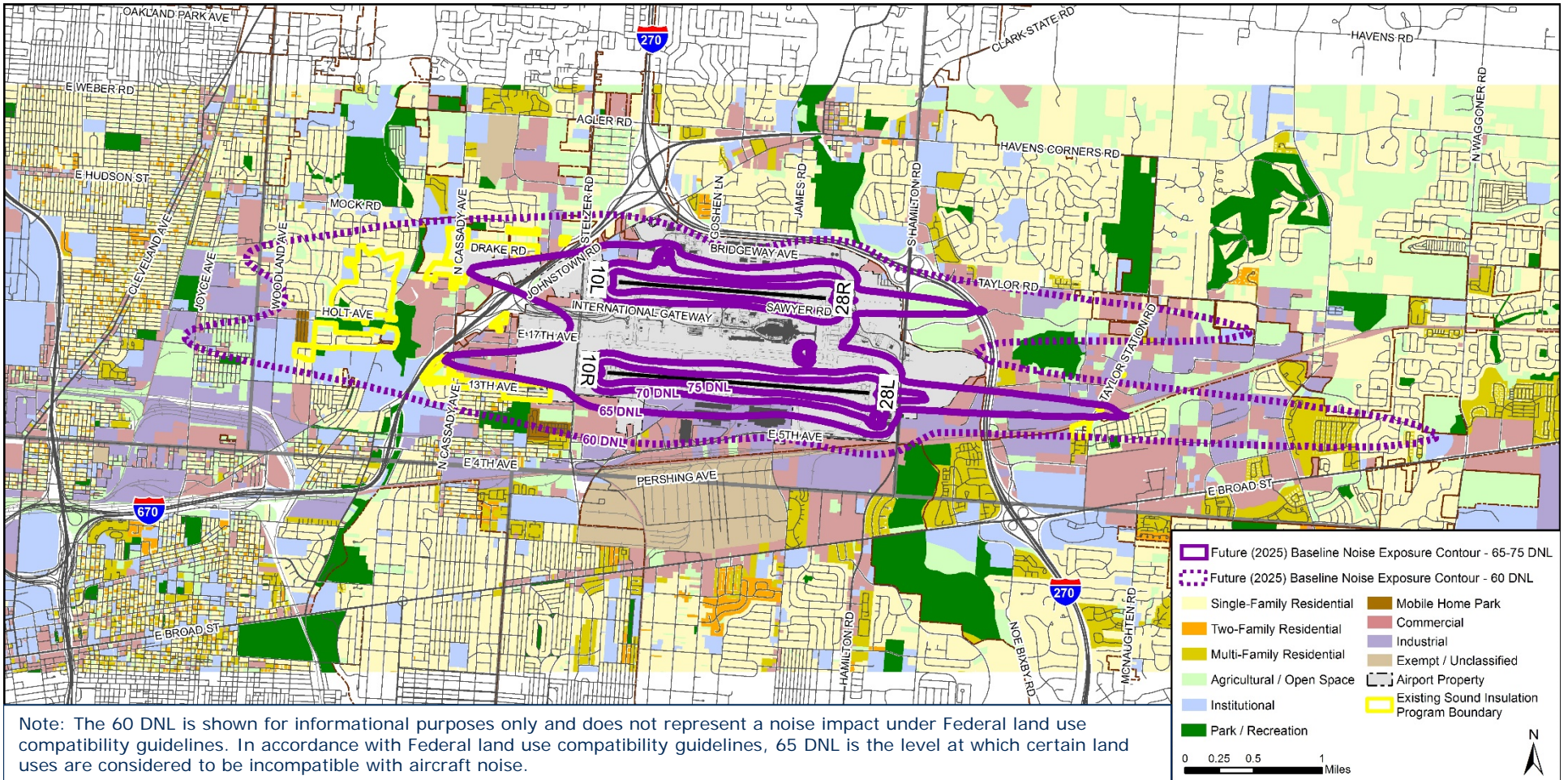
Existing (2020) Baseline Noise Exposure Contour



Existing (2020) Baseline Noise Exposure Contour

Jurisdiction	65-70 DNL	70-75 DNL	75+ DNL
Housing Counts			
Columbus	0	0	0
Gahanna	0	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	0	0	0
Population			
Columbus	0	0	0
Gahanna	0	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	0	0	0
Noise-Sensitive Facilities			
Schools / Daycares	0	0	0

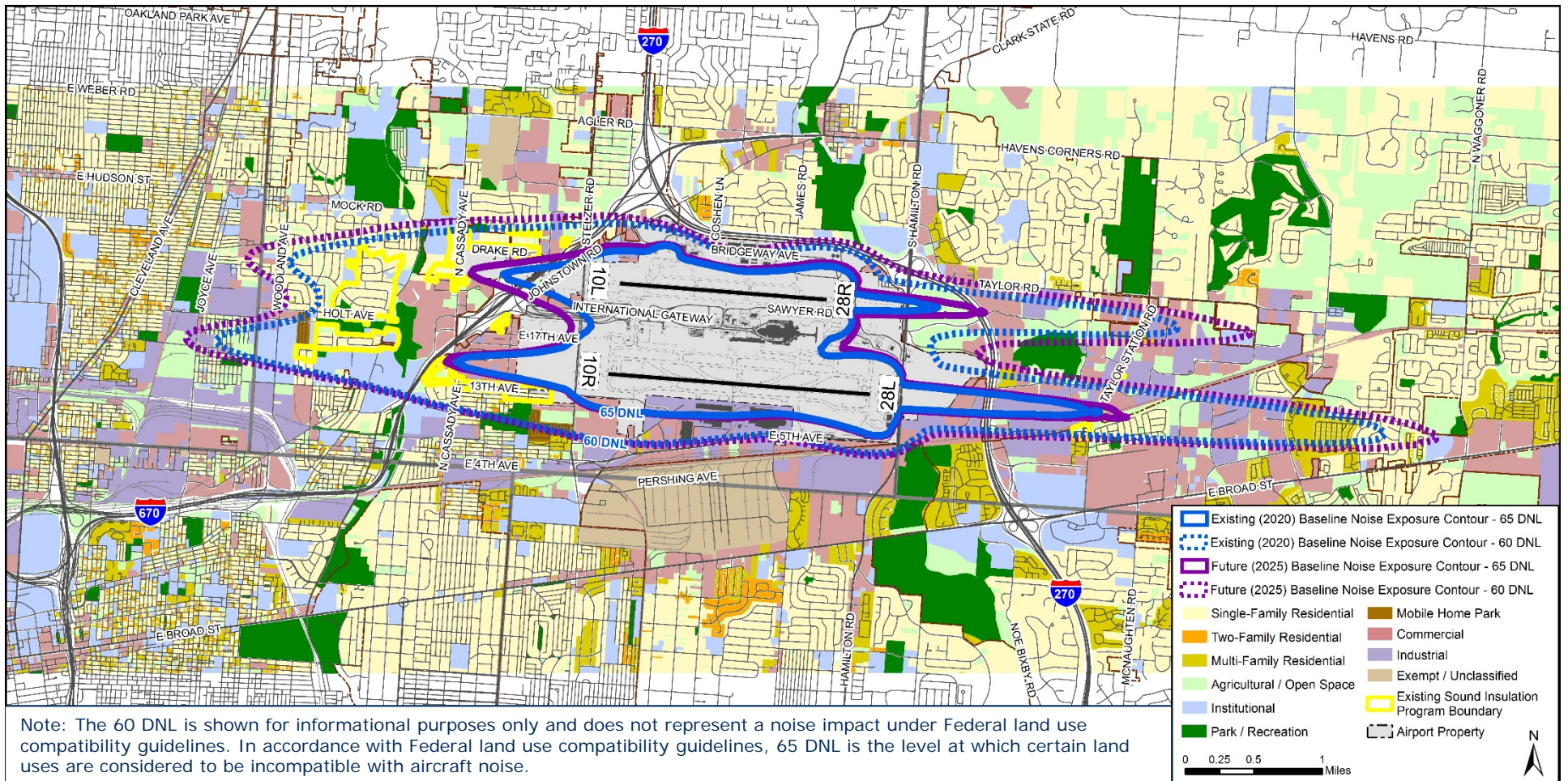
Future (2025) Baseline Noise Exposure Contour



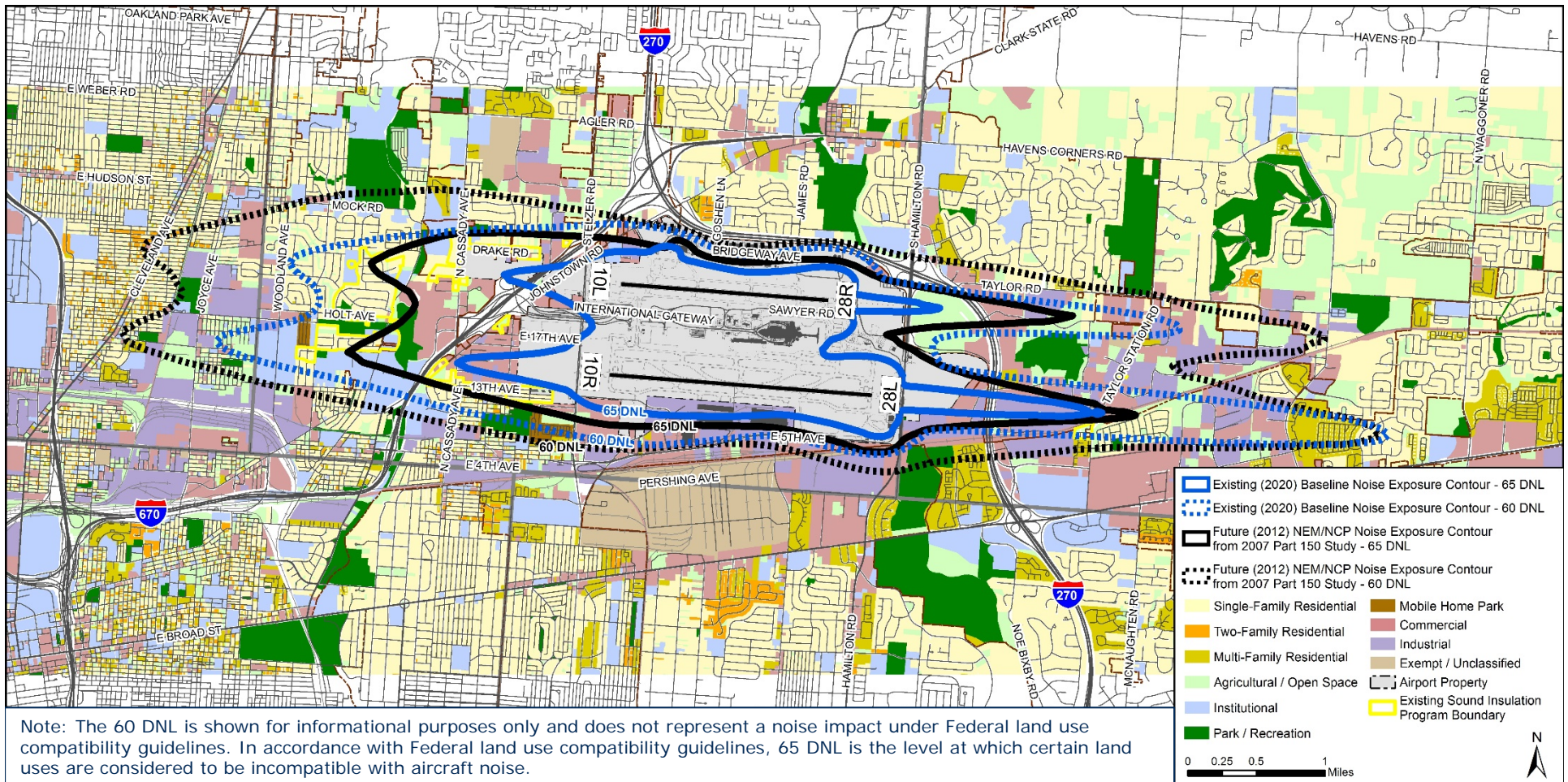
Future (2025) Baseline Noise Exposure Contour

Jurisdiction	65-70 DNL	70-75 DNL	75+ DNL
Housing Counts			
Columbus	1	0	0
Gahanna	1	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	2	0	0
Population			
Columbus	3	0	0
Gahanna	3	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	6	0	0
Noise-Sensitive Facilities			
Schools / Daycares	1	0	0

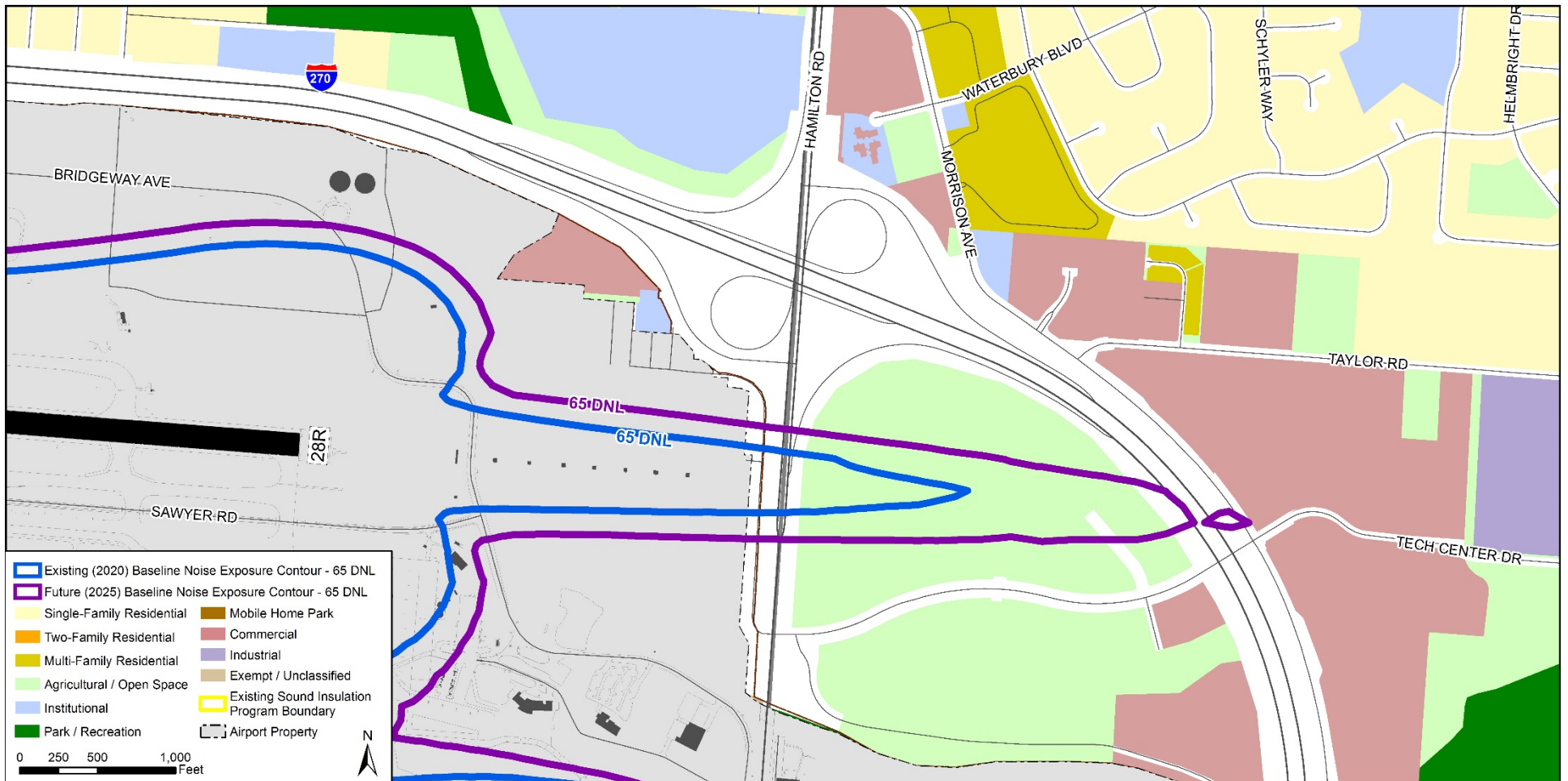
Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



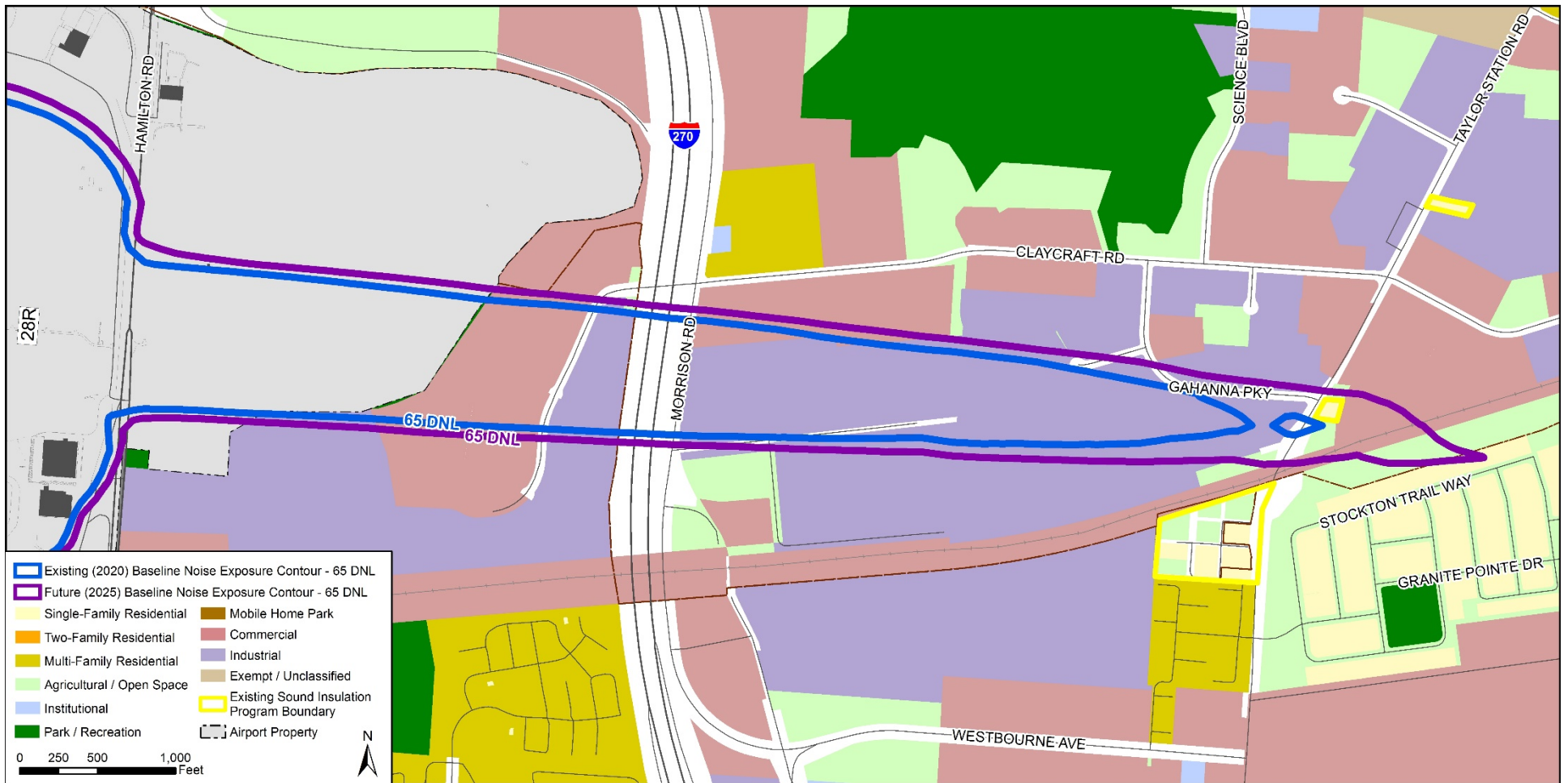
Existing (2020) compared to Future (2012) NEM/NCP from the 2007 Part 150 Study



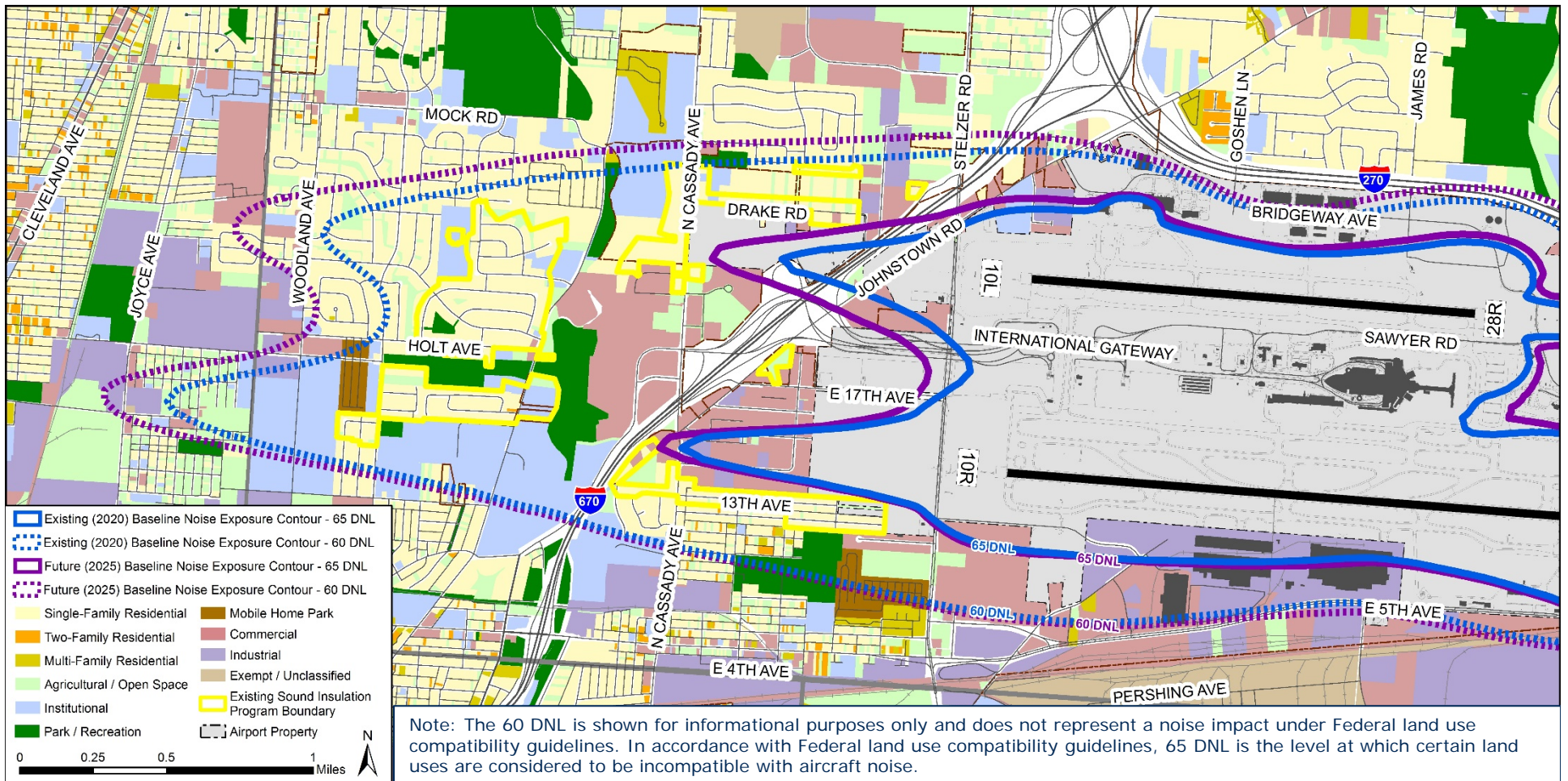
Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



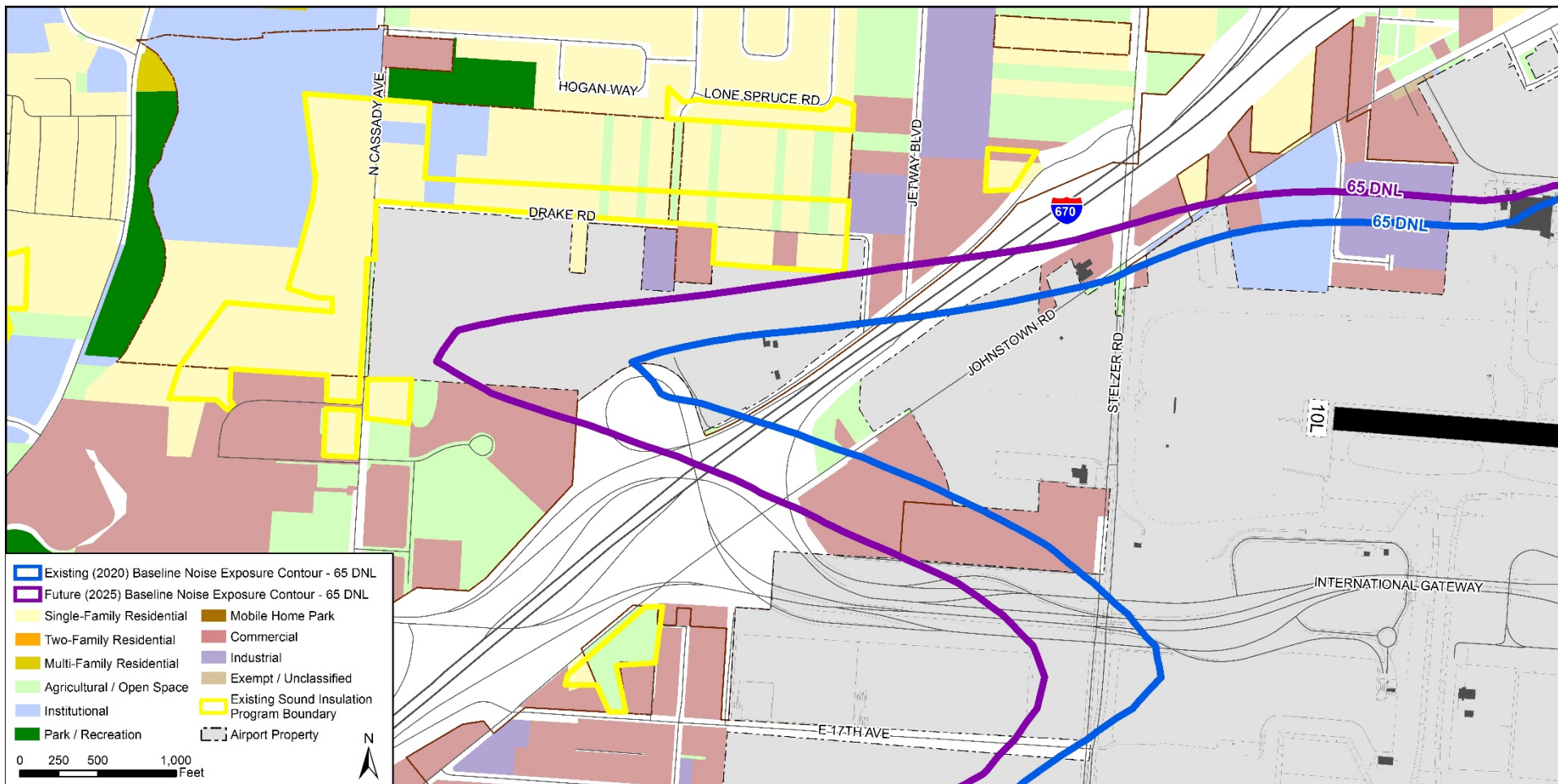
Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



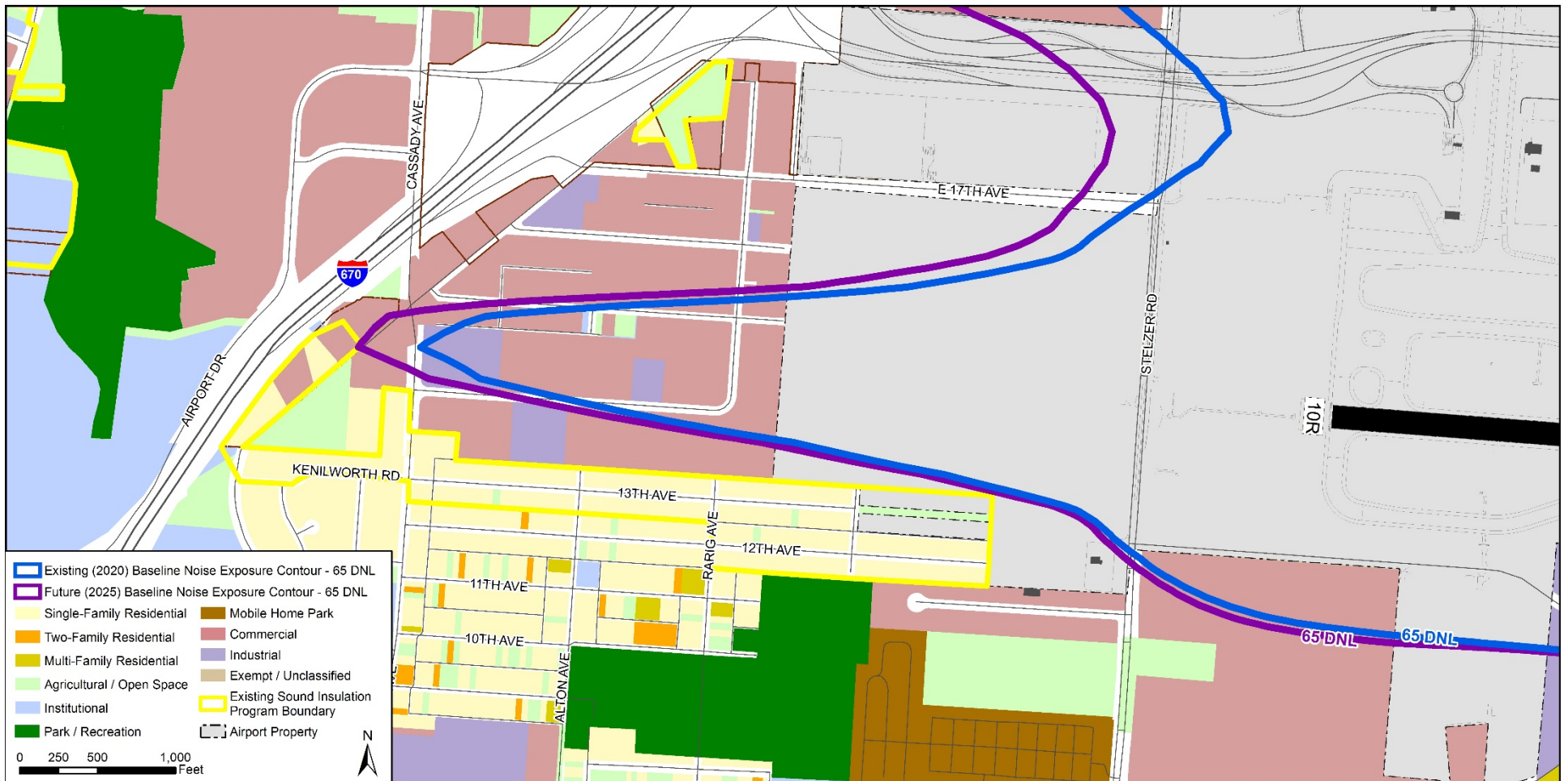
Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



Noise Compatibility Program

Types of Program Measures

- Noise Abatement Measures
 - Examples include preferential runway use, flight track adjustments, profile/thrust settings
- Corrective Land Use Measures
 - Examples include property acquisition and sound insulation
- Preventative Land Use Measures
 - Examples include compatible use zoning and noise standards in building codes
- Program Management (Implementation) Measures
 - Designed to assist with the implementation and management of the Noise Compatibility Program (NCP)
 - Examples include Airport staff dedicated to program management and outreach

Next Steps

Part 150 Process

- Review public comments
- Publish Draft Part 150 Noise Compatibility Program
- Public Hearing Winter 2020

How to submit questions or comments?

- Using the Q&A function during the meeting until 7pm
- Online: www.airportprojects.net/cmh-part150/contact
- Mail:
 - Landrum & Brown
 - Attn: Chris Sandfoss
 - 4445 Lake Forest Drive, Suite 700
 - Cincinnati, OH 45242
- Please submit comments by October 2, 2020
- Printed copies of the presentation are available at the CRAA office by request
- A recording of this presentation will be available online following this meeting

Thank You!