ILM

Wilmington International Airport

14 CFR Part 150 Noise Compatibility Study

Agenda

1. Welcome and Introductions
   - Jeff Bourk, Wilmington International Airport
2. Study Process
   - Kory Lewis, Coffman Associates
3. Role of the PAC
   - Kory Lewis, Coffman Associates
4. Noise Exposure Maps Overview
   - Kory Lewis, Coffman Associates
5. Chapter 1: Inventory
   - Madeline Holliman, Coffman Associates
6. Chapter 2: Forecasts
   - Mike Dmyterko, Coffman Associates
7. Next Steps
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8. PAC Members Discussion
   - Sarah Ferrara, Compass Rose Communications

Welcome and Introductions

What information can you provide to support the study?

What are your expectations for the Part 150 Study?

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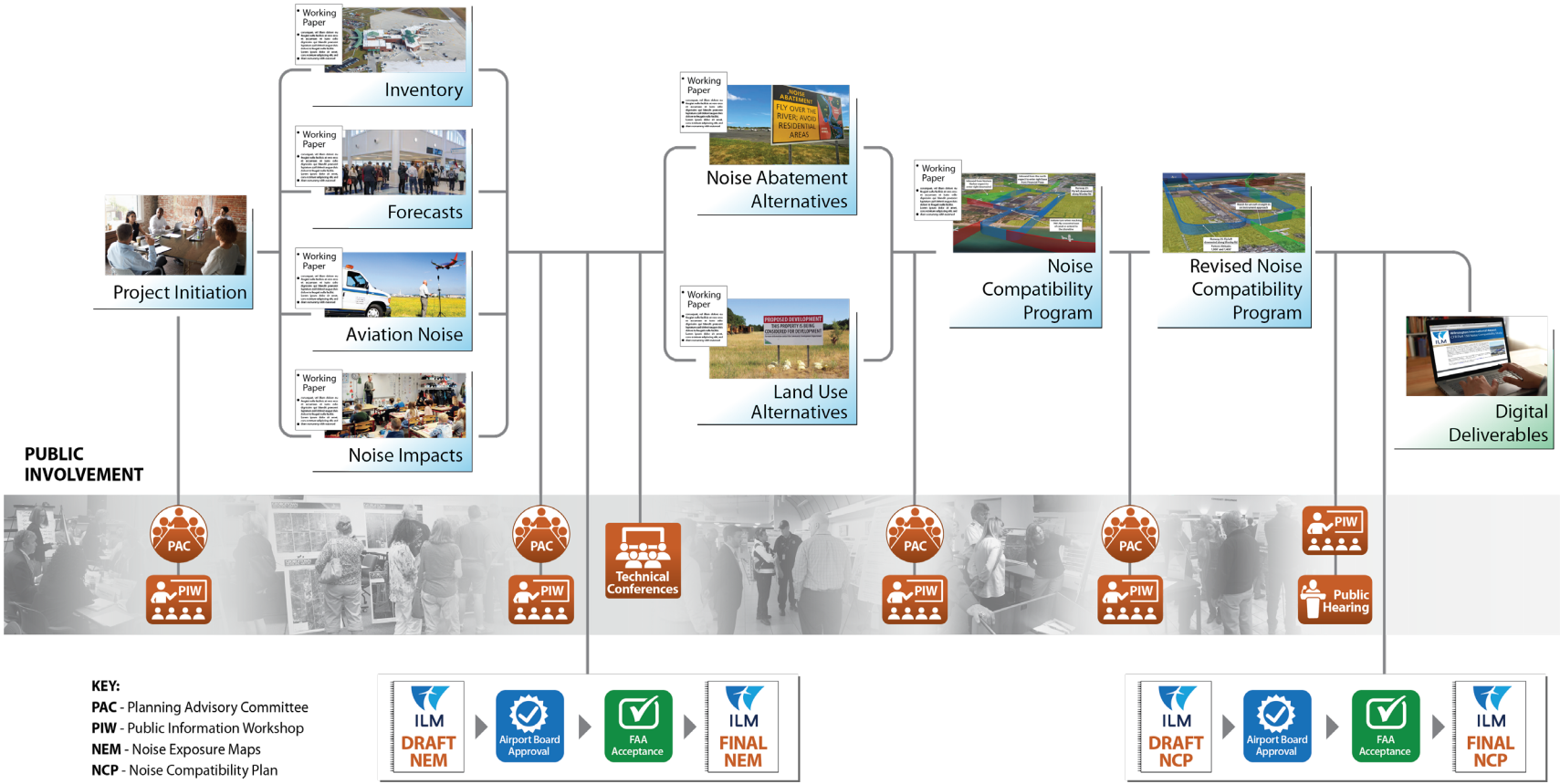
Study Process



KEY:
PAC - Planning Advisory Committee
PIW - Public Information Workshop
NEM - Noise Exposure Maps
NCP - Noise Compatibility Plan

PAC Roles and Responsibilities

- Sounding Board
- Linkage to the Community
- Resource
- Critical Review

- Neighborhood groups
- Airport users
- FAA
- Aviation industry

What is a Part 150 Study?

A Part 150 Study:

- Identifies the current and projected annualized aircraft noise levels at ILM using the Day Night Average Sound Level (DNL) noise metric.
- Identifies measures to reduce the noise impacts within the noise exposure contours from aircraft operating to and from Airport through changes in aircraft operations or airport facilities.
- Encourages future land uses which are compatible with aircraft noise, such as commercial or industrial in undeveloped areas.
- Determines methods to reduce the adverse impacts of noise above FAA thresholds in existing residential areas.
- Establishes a procedure to implement, review, and update the program.

A Part 150 Study does not:

- Evaluate aircraft operations from other area airports.
- Consider other types of impacts (air quality, accidents, etc.).
- Use noise metrics other than DNL to determine noise impacts.
- Provide justification for airport expansion.

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Chapter 1 — Inventory

- Federal Government
- State and Local
- Local Land Use Policies and Regulations
- Airport Facility Inventory

Roles and Responsibilities

- Pilots
  - Responsible for safe operation of aircraft in the air and on the ground
- FAA
  - Establishes airspace – where aircraft may be flown
  - Sets aircraft noise standards
  - Certifies aircraft and pilots
  - No off-airport land use authority
  - Establishes the Part 150 land use compatibility planning process
- Wilmington International Airport
  - No control over aircraft in flight
  - May establish run-up times, voluntary noise abatement procedures
  - Responsible for maintaining a safe airport
  - Must comply with FAA Grant Assurances
- New Hanover County and City of Wilmington
  - Promote compatible land use through zoning
  - Set noise ordinances, but aircraft are exempt per City of Burbank v. Lockheed Air Terminal (411 U.S. 624 (1973))

Inventory Mapping

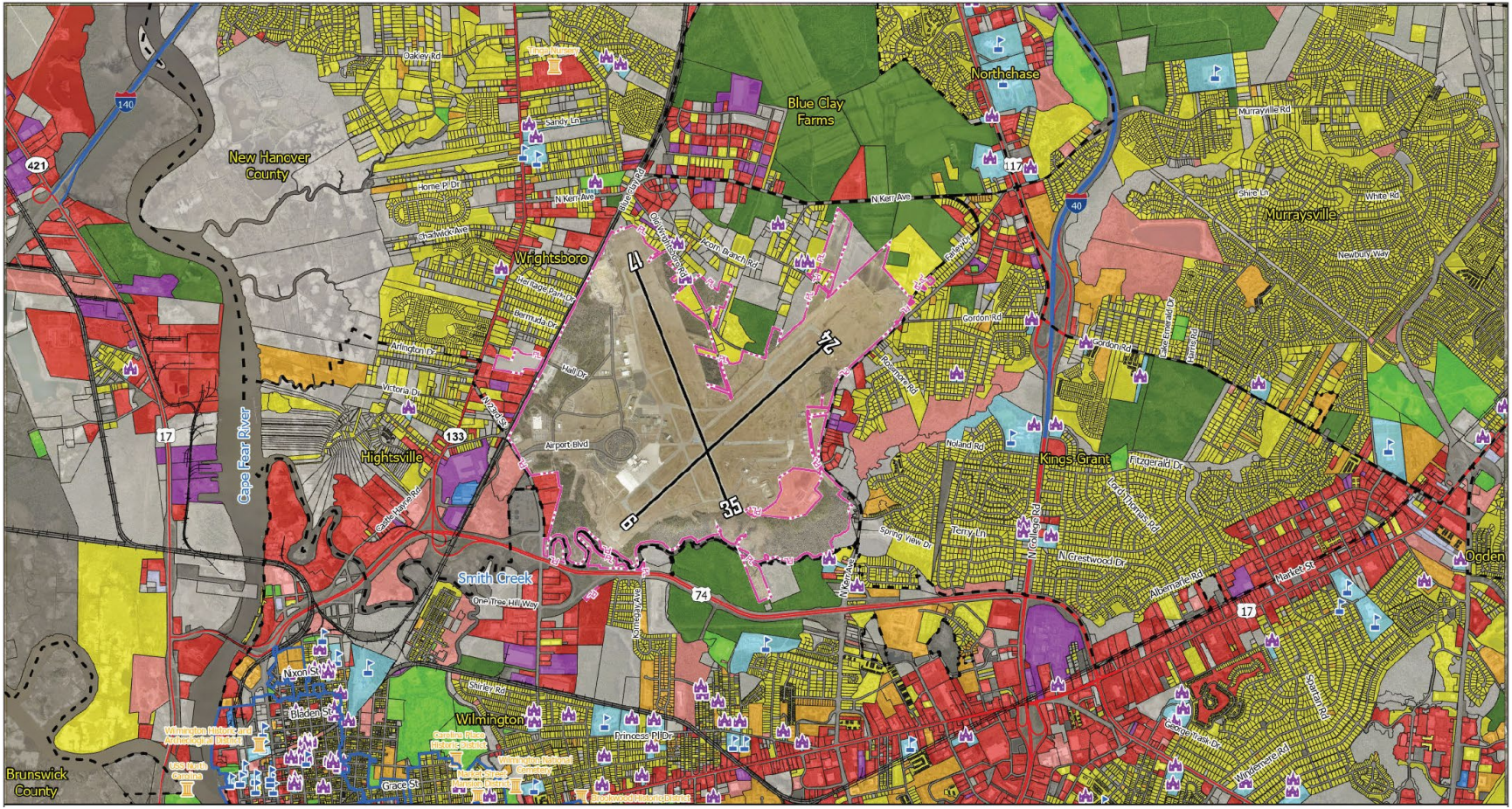


Exhibit 1C: Existing Land Use

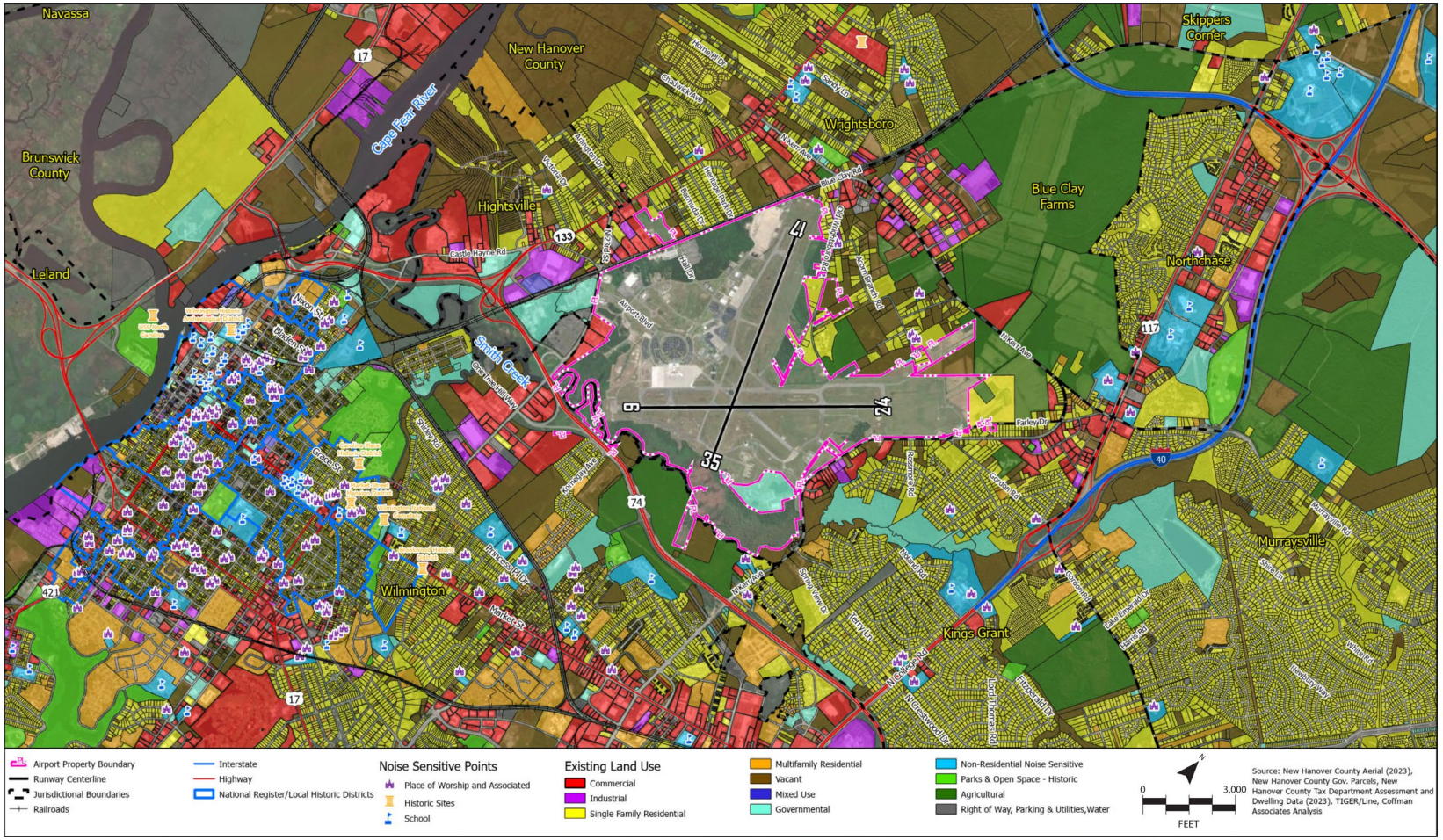


Exhibit 1D: Zoning

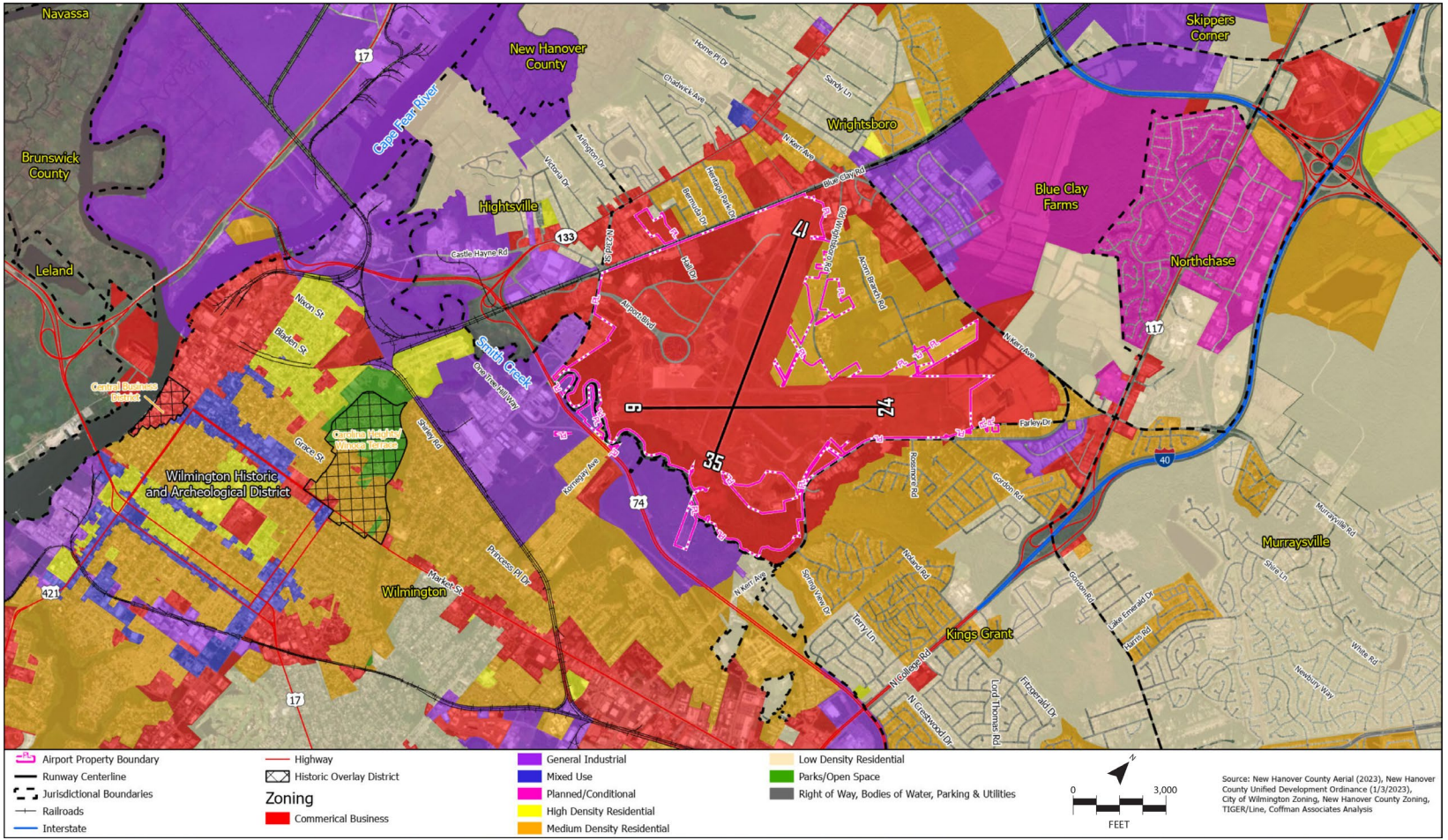
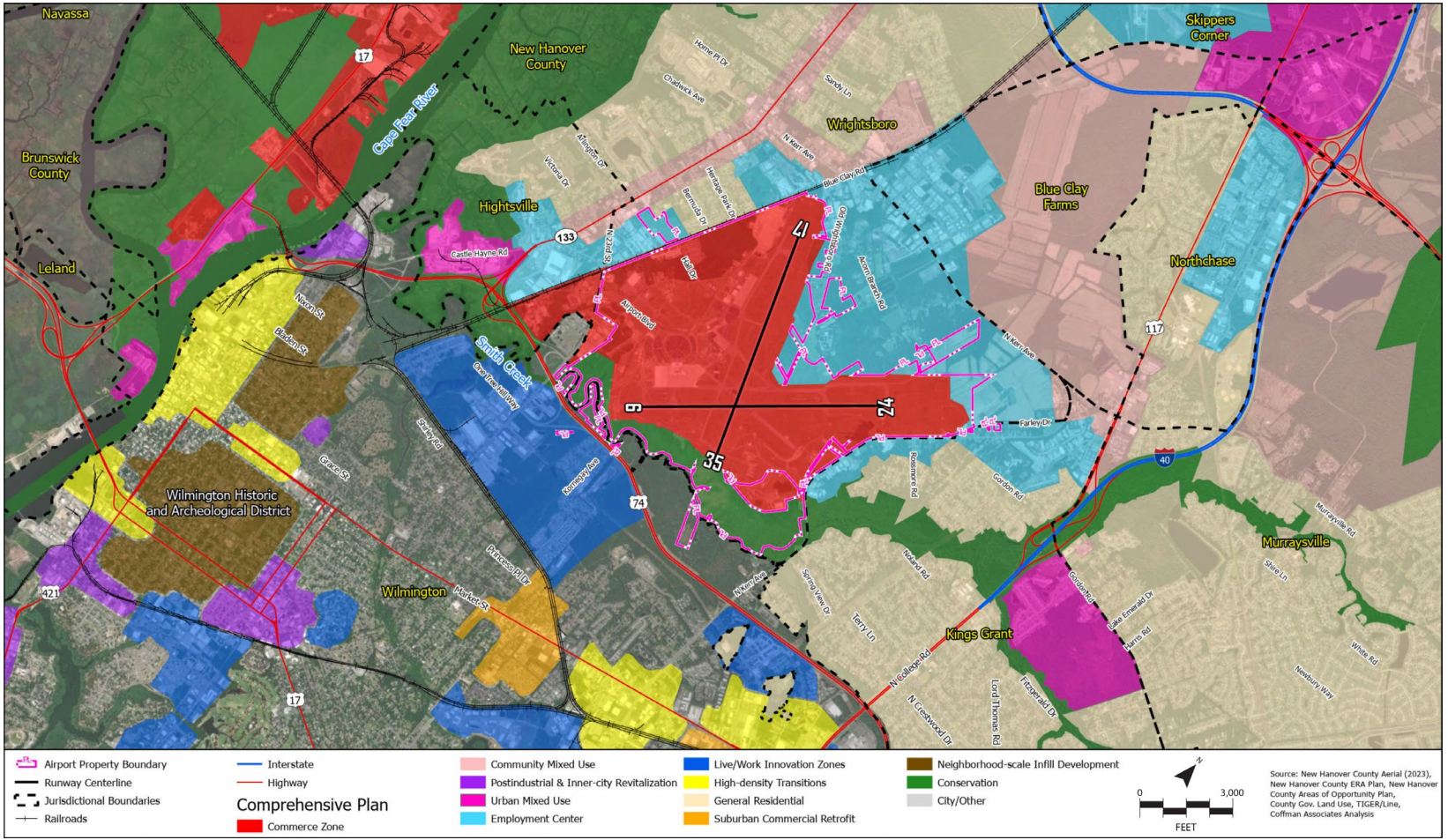


Exhibit 1E: Comprehensive Plan



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Chapter 2 — Forecasts

- National Aviation Trends
- Core Socioeconomic Forecast
- Commercial Service Forecast
- Enplanement Forecast
- Airline Operations Forecast
- Air Cargo Forecast
- Other Commercial Operations Forecast

Exhibit 2A: Enplaned Passenger History

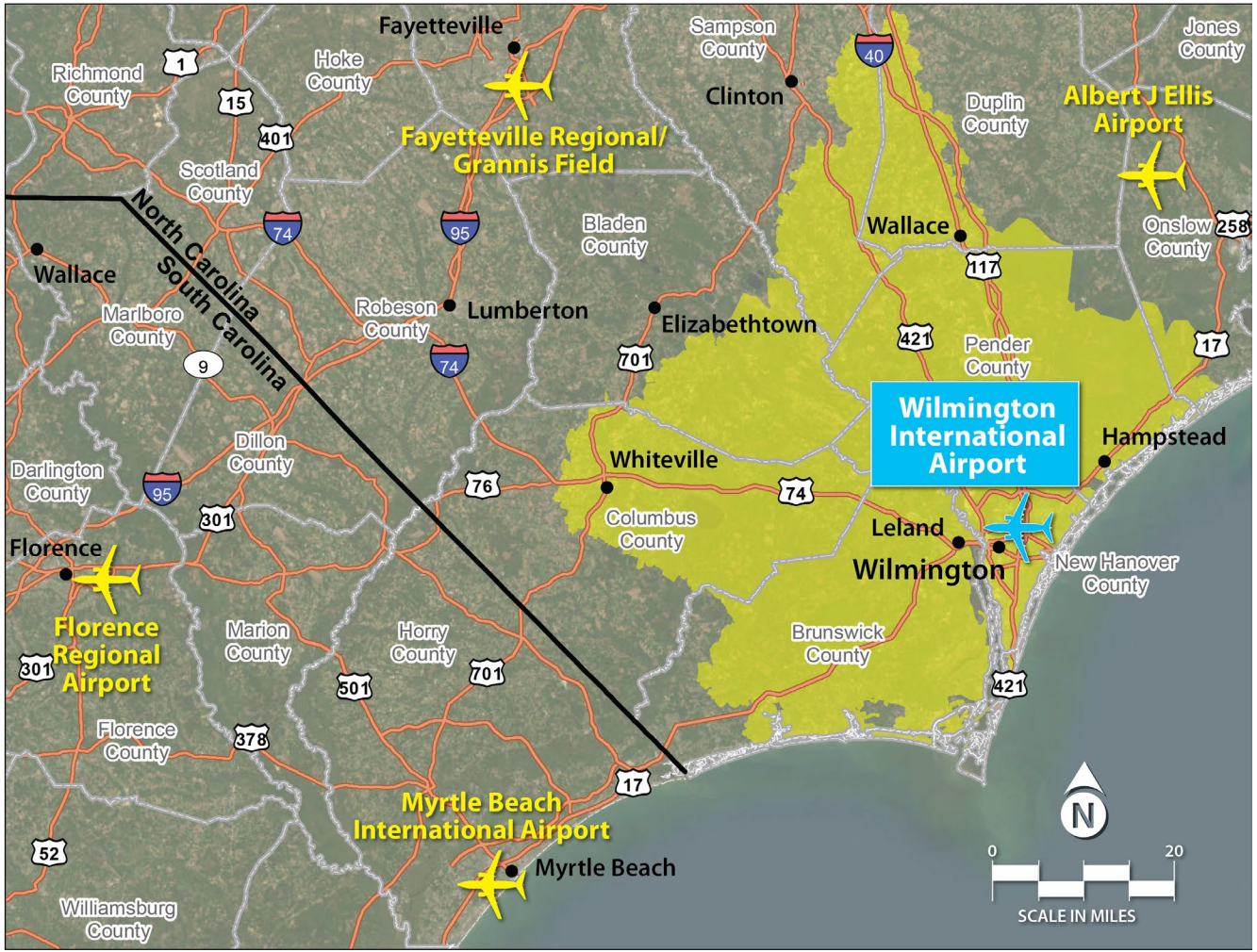
Exhibit 2B: Top 20 Markets and Nonstop Destinations

TOP 20 DESTINATIONS/NONSTOP ROUTES - 2023

TOP 20 DESTINATIONS - 2023

Rank	Market	Enplaned
1	New York-Newark (EWR,JFK,LGA)	91,996
2	Miami-South Florida (FLL,MIA,PBI)	28,472
3	D.C.-Baltimore (BWI,DCA,IAD)	25,801
4	Orlando (MCO,SFB)	25,365
5	Philadelphia (ILG,PHL)	21,393
6	Boston (BOS)	20,315
7	Atlanta (ATL)	18,269
8	Dallas-Ft. Worth (DAL,DFW)	17,381
9	New Haven (HVN)	17,262
10	Los Angeles (BUR,LAX,LGB,ONT,SNA)	15,705
11	Chicago (MDW,ORD)	14,681
12	Denver (DEN)	11,669
13	Tampa-St. Petersburg (TPA)	10,258
14	Minneapolis-St. Paul (MSP)	9,841
15	Las Vegas (LAS)	9,637
16	Phoenix (IWA,PHX)	9,032
17	San Francisco (OAK,SFO,SJC)	8,623
18	Nashville (BNA)	7,660
19	Houston (HOU,IAH)	6,227
20	Seattle (SEA)	6,059

Exhibit 2C: Commercial Airline Service Area



LEGEND

- Wilmington International Airport
- Competing Commercial Service Airports
- Equidistant Drive-Time Isochrone

Exhibit 2D: Enplanement Forecasts

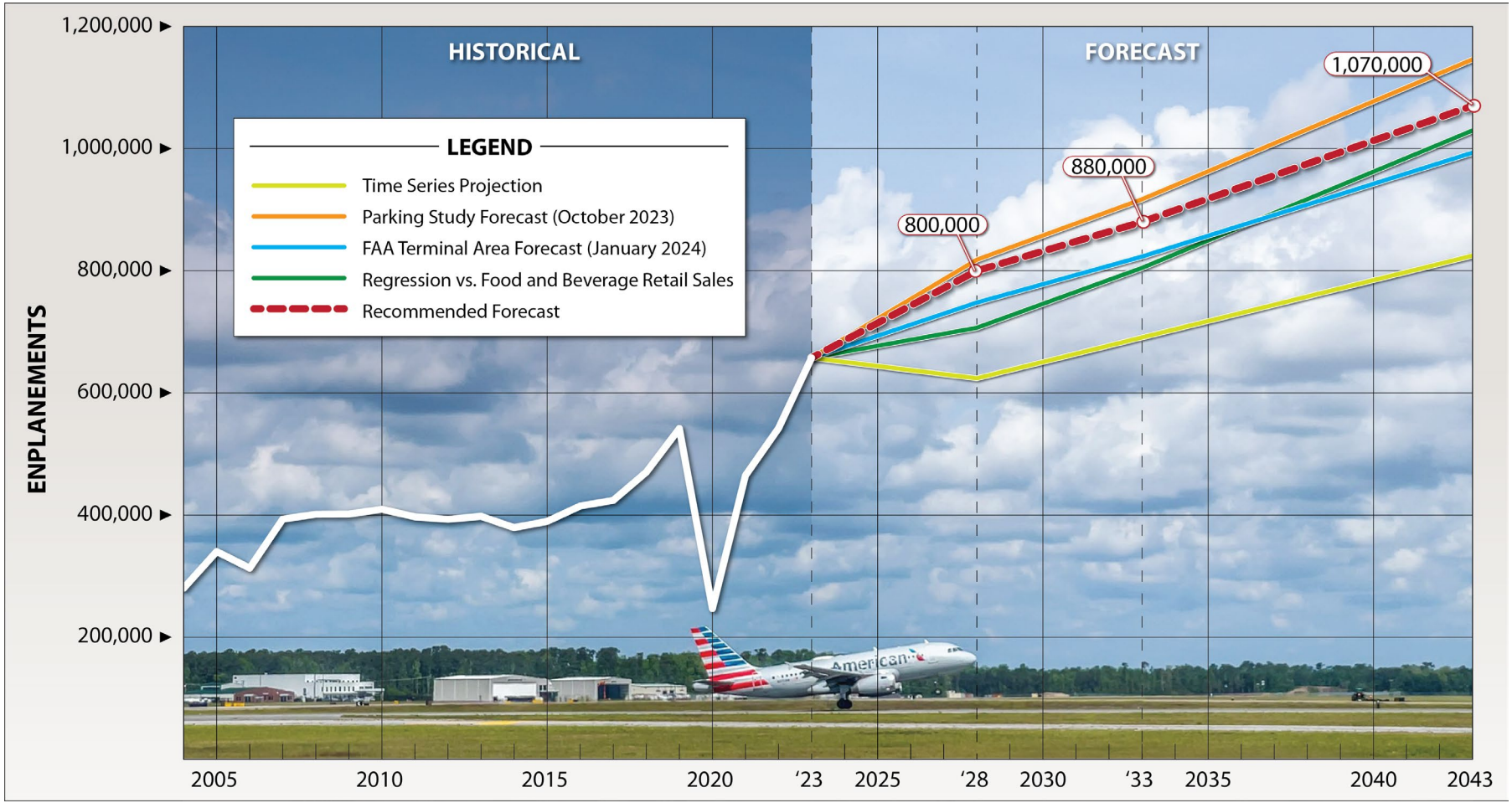


Exhibit 2J: Forecast Summary

	BASE	FORECAST		
	2023	2028	2033	2043
ENPLANEMENTS				
	657,292	800,000	880,000	1,070,000
OPERATIONS				
Itinerant				
Airline	17,800	19,600	20,400	21,800
Air Cargo	960	900	900	900
Other Air Taxi	6,669	7,700	8,500	10,400
General Aviation	33,113	37,000	38,400	41,800
Military	5,968	6,110	6,110	6,110
Subtotal	**64,510**	**71,310**	**74,310**	**81,010**
Local				
General Aviation	20,074	23,400	26,600	33,200
Military	3,078	3,129	3,129	3,129
Subtotal	**23,152**	**26,529**	**29,729**	**36,329**
Total Operations	**87,662**	**97,839**	**104,039**	**117,339**
PEAKING				
Peak Month	8,312	9,277	9,865	11,126
Busy Day	373	417	443	501
Design Day	273	305	324	366
Design Hour	14	15	16	18
Peak Hour	33	36	39	44
BASED AIRCRAFT				
Single-Engine Piston	74	82	87	104
Multi-Engine (Piston and Turboprop)	12	15	17	24
Jet	23	26	31	42
Helicopter	9	11	14	20
Total Based Aircraft	**118**	**133**	**149**	**189**

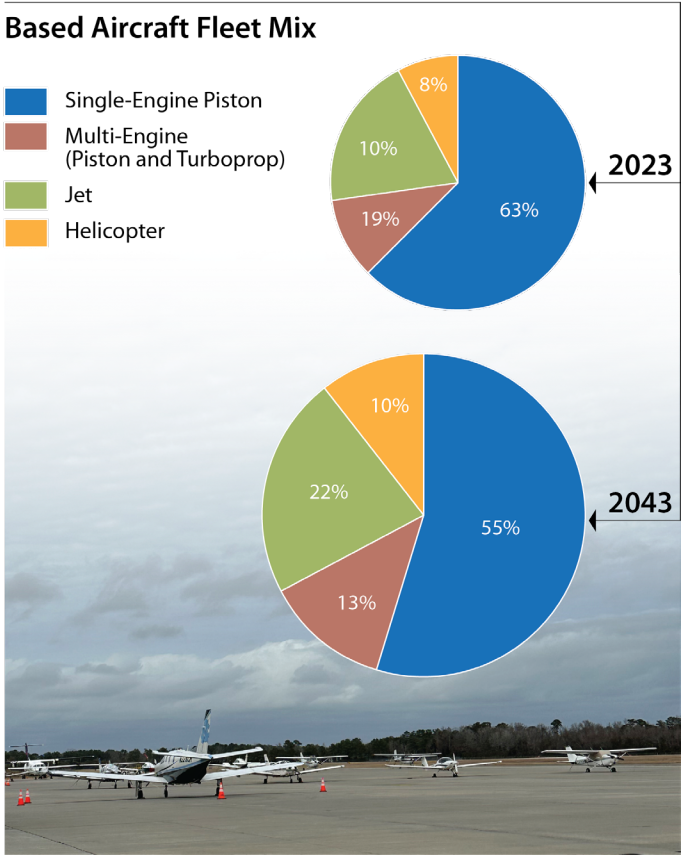


Exhibit 2M: Historical Jet and Turboprop Operations

AIRPORT REFERENCE CODE (ARC) SUMMARY

ARC	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
A-I	484	492	770	894	930	764	884	1,246	1,322	1,396
A-II	1,736	1,462	1,536	1,728	1,418	1,100	1,064	1,198	1,090	1,076
B-I	2,264	2,166	1,960	2,064	2,544	2,212	1,546	2,302	2,400	2,124
B-II	4,820	5,318	5,738	6,670	6,594	6,720	5,464	7,446	8,120	7,874
B-III	1,176	1,134	800	814	854	868	842	922	824	784
C-I	932	834	628	828	662	676	440	620	610	470
C-II	8,282	7,884	6,324	6,846	9,636	10,568	5,512	6,532	7,370	5,290
C-III	5,222	5,668	7,694	7,096	7,092	8,458	6,718	10,868	11,638	13,844
C-IV	282	318	310	364	302	268	392	426	274	274
C-V	78	142	154	290	350	620	622	546	558	490
D-I	264	336	316	348	336	278	196	1,192	468	484
D-II	490	482	418	288	294	262	202	334	420	286
D-III	566	648	680	838	896	716	304	332	520	1,278
D-IV	0	0	0	0	0	2	0	0	6	0
D-V	2	0	4	0	0	0	2	0	0	0
E-I	0	0	4	2	0	2	2	0	4	4
Total	**26,598**	**26,884**	**27,336**	**29,070**	**31,908**	**33,514**	**24,190**	**33,964**	**35,624**	**35,674**

Exhibit 2M: Historical Jet and Turboprop Operations

APPROACH CATEGORY

AAC	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
A	2,220	1,954	2,306	2,622	2,348	1,864	1,948	2,444	2,412	2,472
B	8,260	8,618	8,498	9,548	9,992	9,800	7,852	10,670	11,344	10,782
C	14,796	14,846	15,110	15,424	18,042	20,590	13,684	18,992	20,450	20,368
D	1,322	1,466	1,418	1,474	1,526	1,258	704	1,858	1,414	2,048
E	0	0	4	2	0	2	2	0	4	4
Total	26,598	26,884	27,336	29,070	31,908	33,514	24,190	33,964	35,624	35,674

DESIGN GROUP

ADG	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
I	3,944	3,828	3,678	4,136	4,472	3,932	3,068	5,360	4,804	4478
II	15,328	15,146	14,016	15,532	17,942	18,650	12,242	15,510	17,000	14,526
III	6,964	7,450	9,174	8,748	8,842	10,042	7,864	12,122	12,982	15,906
IV	282	318	310	364	302	270	392	426	280	274
V	80	142	158	290	350	620	624	546	558	490
Total	26,598	26,884	27,336	29,070	31,908	33,514	24,190	33,964	35,624	35,674

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Next Steps

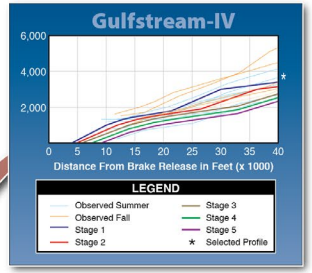
- Develop Noise Exposure Contours
- Analyze Noise Measurement Data
- Process radar flight track data
- Chapter 3 – Aviation Noise and Chapter 4 – Noise Impacts
- Next PAC Meeting in September 2024

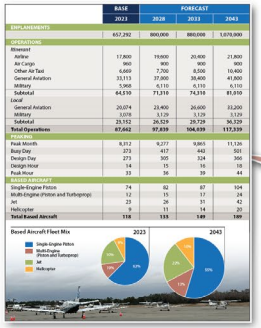
AEDT Process

Flight Tracks

Time of Day

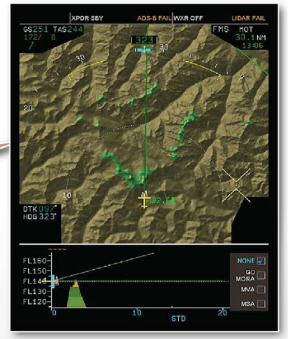
Profile Analysis





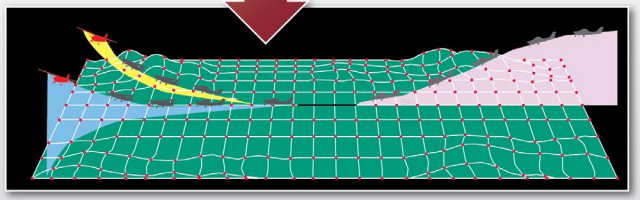
Existing & Forecast
Operations/Fleet Mix

AVIATION ENVIRONMENTAL DESIGN TOOL (AEDT)

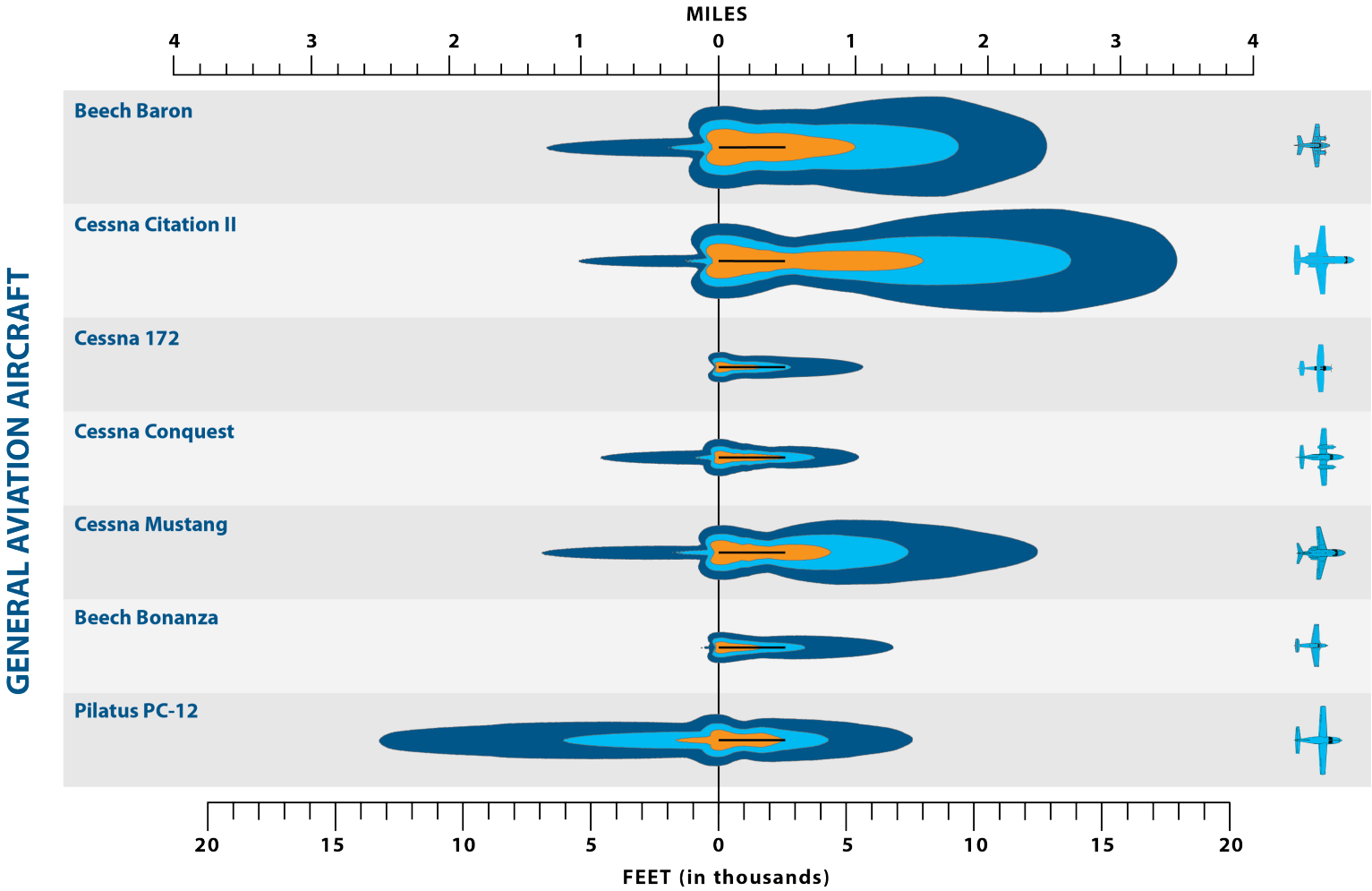


Terrain Data

Noise Contours

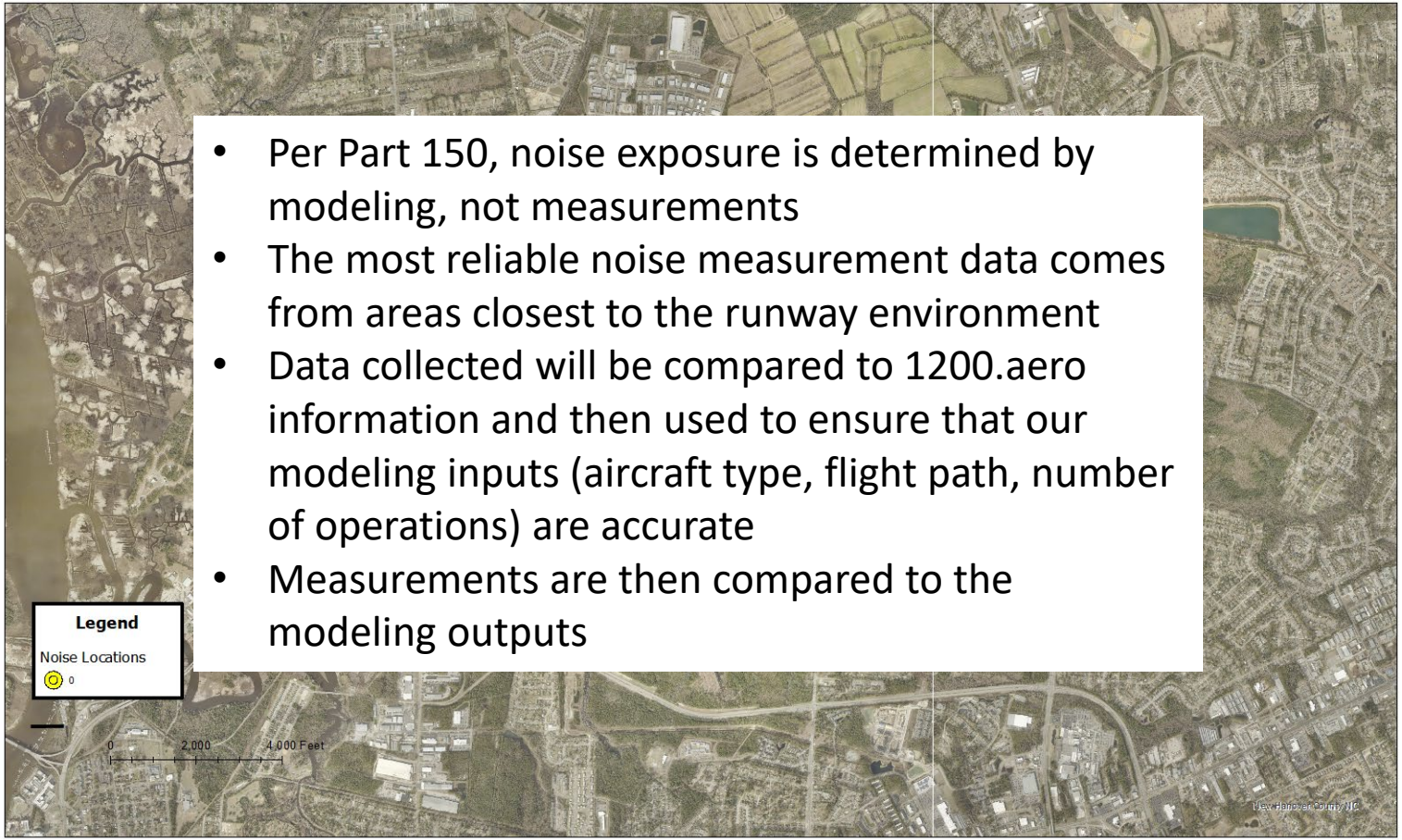


Grid Point Analysis



The contours represent sound exposure levels (SEL) of 85, 90 and 95 dB for one arrival and one departure of each aircraft type.
The outer contour represents 85 dB SEL. The inner contour represents 95 dB SEL.

Noise Measurement Locations



- Per Part 150, noise exposure is determined by modeling, not measurements
- The most reliable noise measurement data comes from areas closest to the runway environment
- Data collected will be compared to 1200.aero information and then used to ensure that our modeling inputs (aircraft type, flight path, number of operations) are accurate
- Measurements are then compared to the modeling outputs

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What are your expectations for the Part 150 Study?

Public Involvement

ilmpart150.airportstudy.net

ILM
WILMINGTON INTERNATIONAL AIRPORT

Community members are invited to attend a Public Information Workshop regarding the ongoing Part 150 Noise Study:

Wednesday, May 15, 2024 5:00-6:30 PM	Snipes Academy Gymnasium 2150 Chestnut Street Wilmington, NC 28405

The public workshop is an open house format, so attendees can drop in at their convenience. Your input and participation matter!

Why attend?
- Learn more about the noise study and the process
- View information boards on display in the meeting room
- Ask questions, participate, and provide feedback

For more information, please contact:
Kory Lewis - Project Manager
Coffman Associates, Inc.
klewis@coffmanassociates.com
800-892-7772

Learn more or submit a comment:
ILMPART150.AIRPORTSTUDY.NET

Thank You!