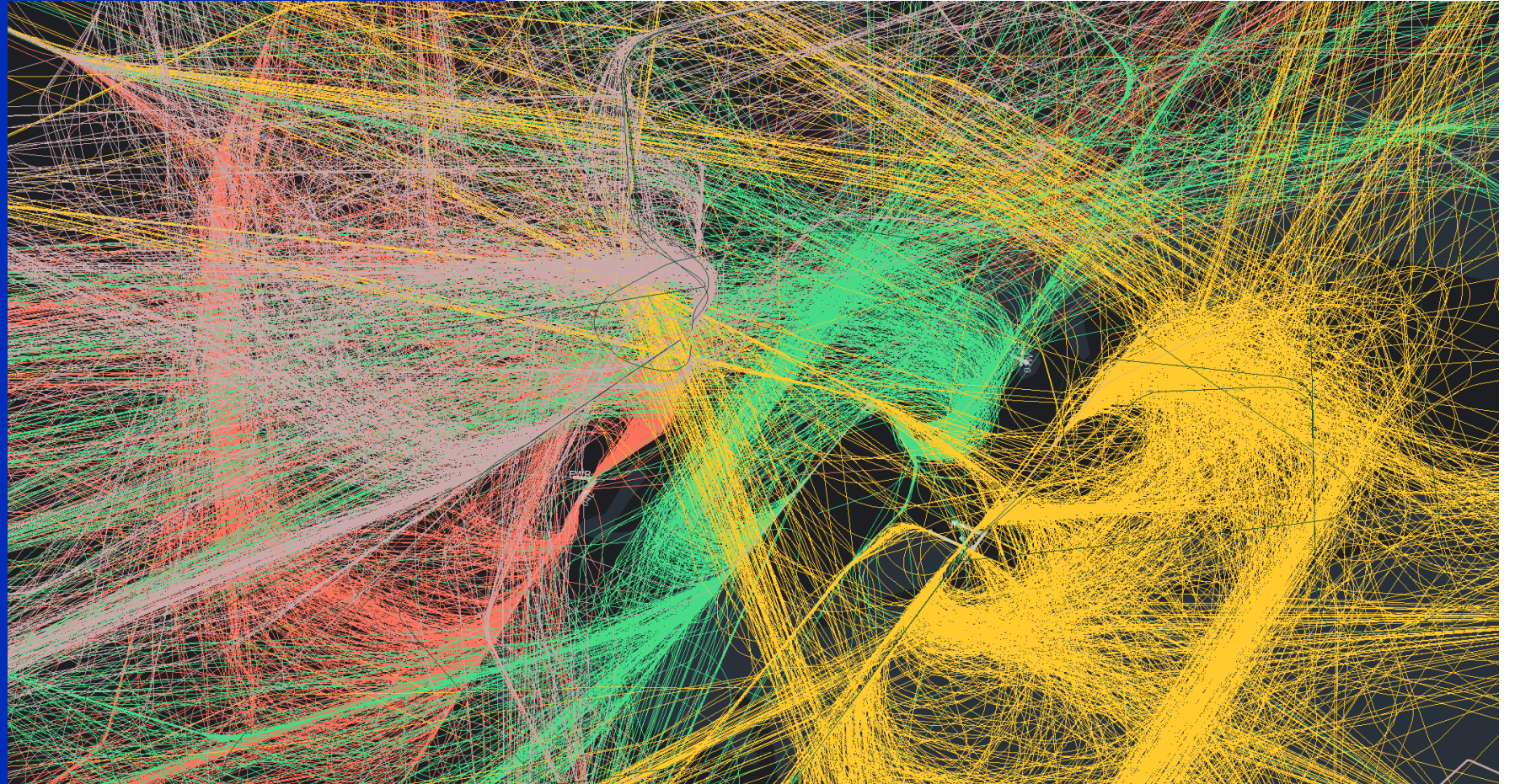


NYCAR Community Roundtable

April 22, 2026

**PORT
AUTHORITY
NY NJ**
AIR LAND RAIL SEA



Acronyms and phrases

- ILS – Instrument Landing System – radio signal aligns aircraft with the runway and provides vertical guidance to the runway. @ component system Localizer and Glideslope
- GBAS – Ground Based Augmentation System
- Localizer – Part of an ILS system - lateral guidance to the runway
- Glideslope – Part of the ILS system - that provide vertical guidance
- Vector – Controller issued heading to guide aircraft
- Dispersal Headings – two or more paths assigned to a departure, off a runway
- Headings – paths based on a 360-degree compass
- Airspace Boundary – controllers use to provide separation between delegated airspace (Radar Video Map)
- RNAV GPS – type of approach that uses GPS technology

JFK Runways

- JFK has 4 runways
- 8 runway ends
- Runway numbers are based the magnetic heading to the nearest 10 degrees dropping the last digit
- Left or Right is used when there is a parallel pair of runways

LGA Runways

- LGA has 2 runways
4 runway ends
- Runway numbers are based the magnetic heading to the nearest 10 degrees dropping the last digit
- Left or Right is only used when there is a parallel pair of runways

JFK/LGA Runway Selections

- Prior to 2012 these same configurations were used; however, the FAA was limited to the JFK VOR/DME approach 22L (RNAV/GPS X 22L) whenever LGA was departing runway 13 and JFK was departing 22R AND 31L.
- The LGA runway 13 TNNIS climb allowed for the use of the ILS 22L and 22R safely
- Balancing the use of the ILS's 22L/R vs the RNAV GPS X 22L approaches would provide some benefits to the communities but this is dependent on volume at each of the airports

JFK/LGA runway configurations

Primary JFK/LGA runway configurations we will discuss tonight

JFK

- Land 13L/22L Depart 13R
- Land 22L Depart 22R
- Land 4R depart 4L

LGA

- Land 22 depart 13
- Land 4 depart 13

Radar Video Map

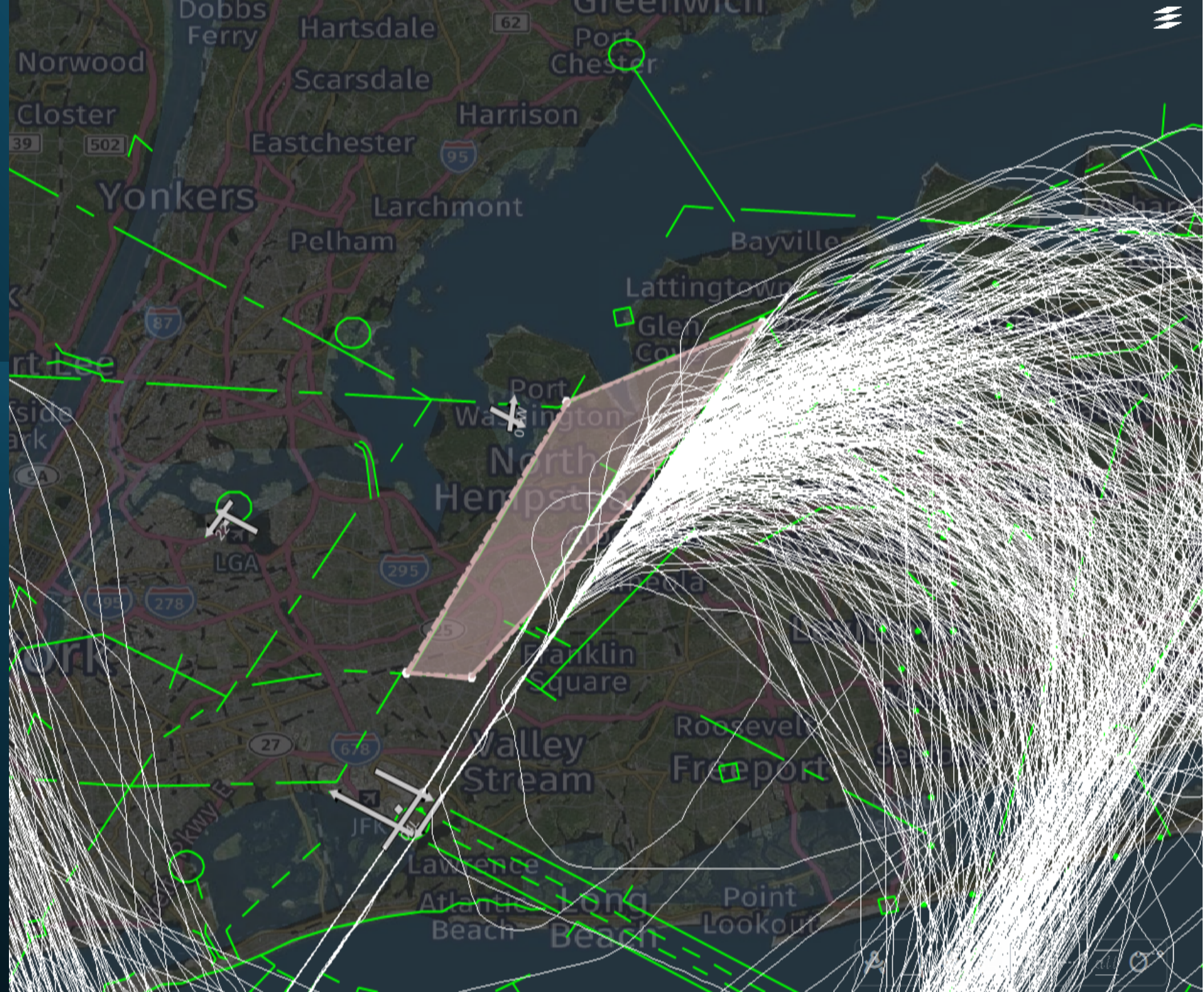
Used by controller to identify delegated airspace



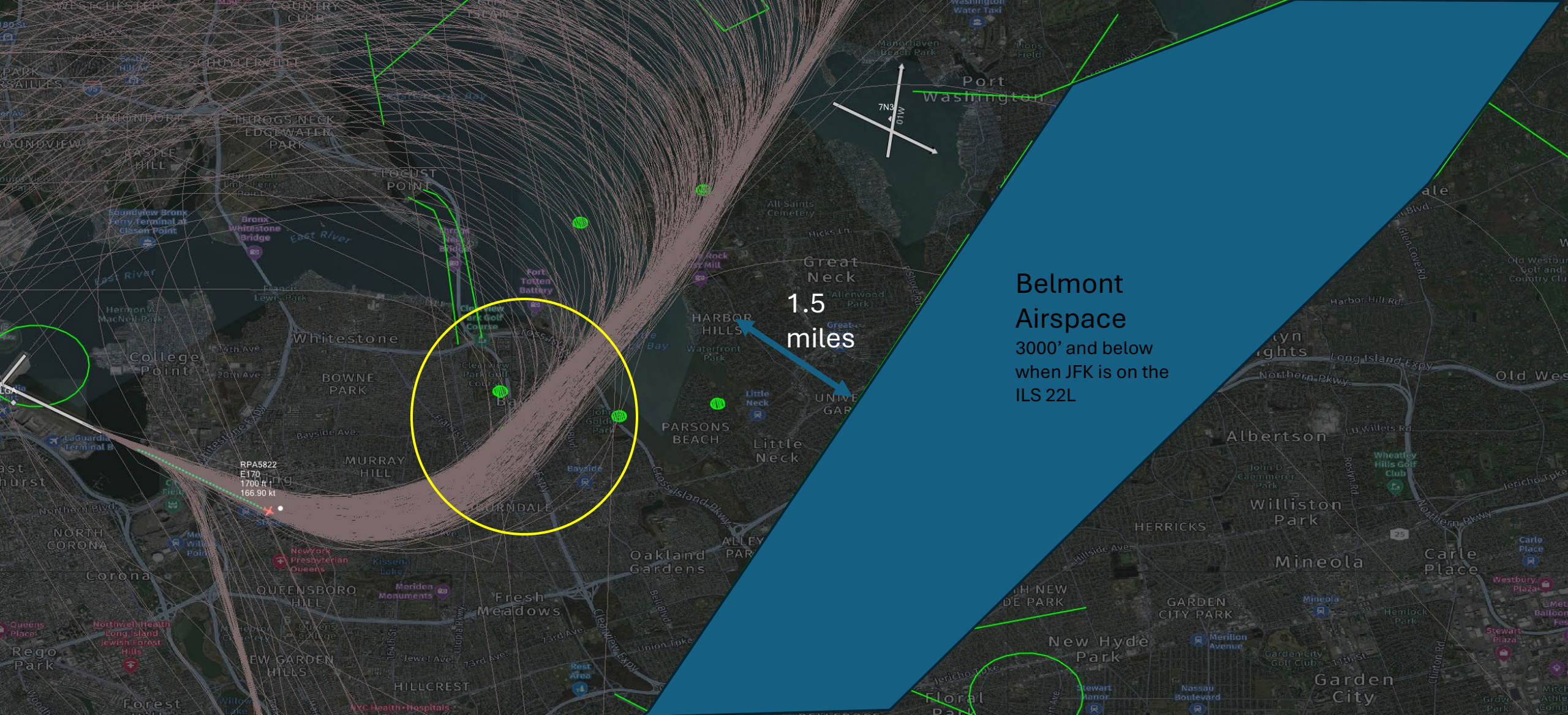
"A World Class Operator of World Class Airports"

JFK

ILS 22L, ILS 22R
Depart 22R
Requires
airspace from
LGA



Belmont airspace



**Belmont
Airspace**
3000' and below
when JFK is on the
ILS 22L

1.5
miles

LGA

ILS 4 depart 13
Whitestone and
NTHNS climb
JFK
ILS 4R depart 4L

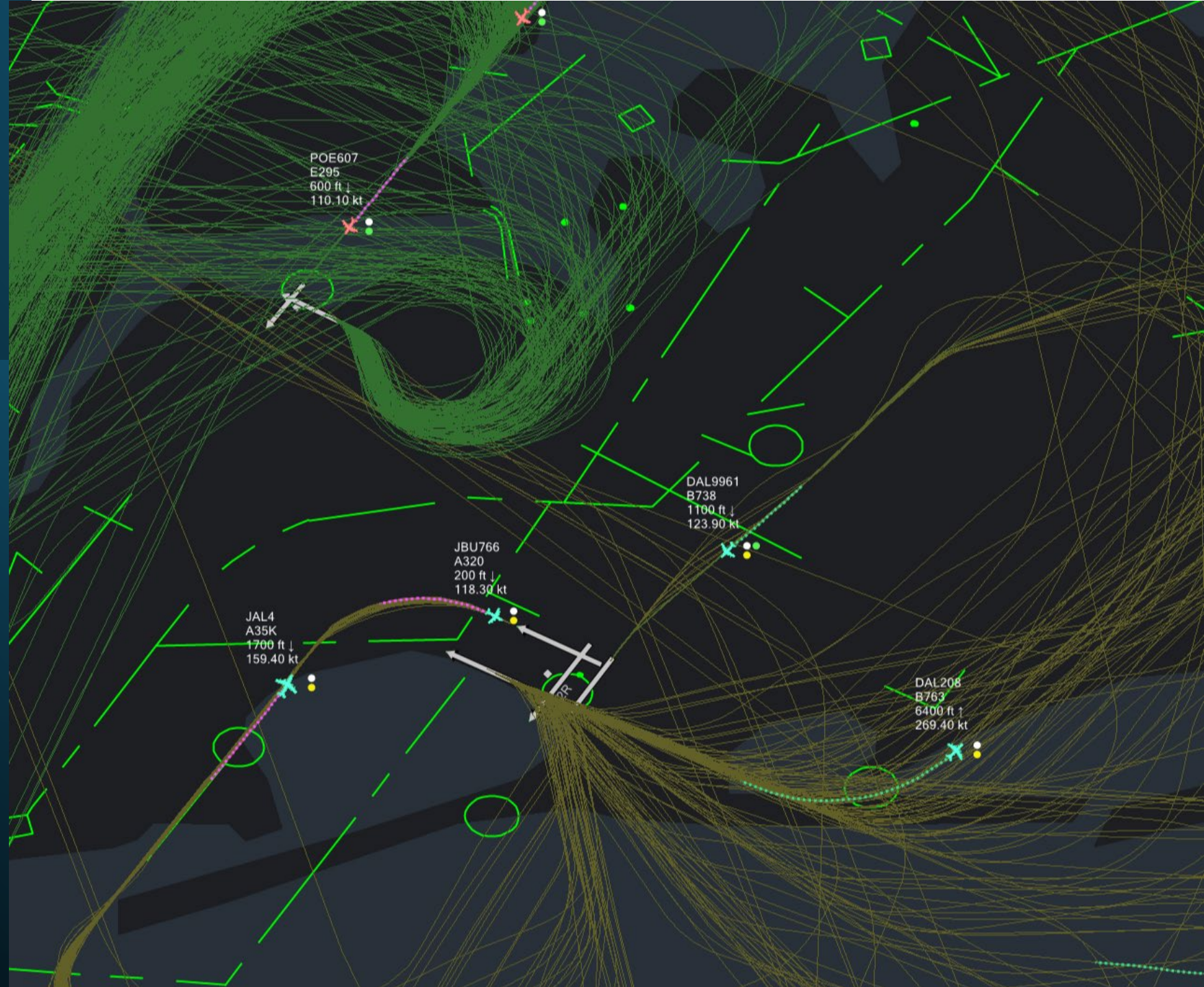


LGA

ILS 22 depart 13
Whitestone
Climb

JFK

RNAV GPS Z 13L
RNAV GPS X 22L
Depart 13R

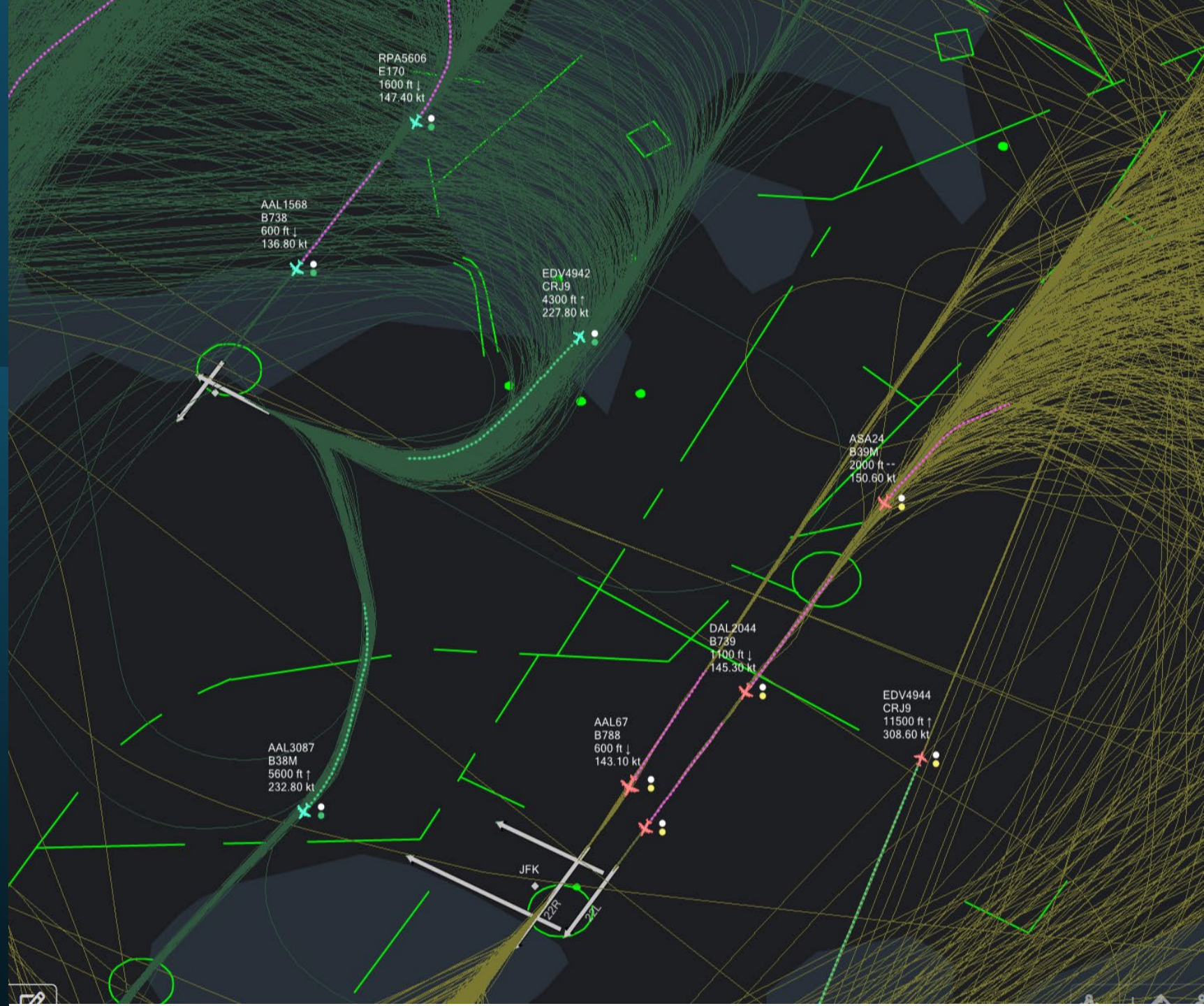


LGA

ILS 22 depart 13
Whitestone and
NTHNS climb

JFK

ILS 22L ILS 22R
Depart 22R

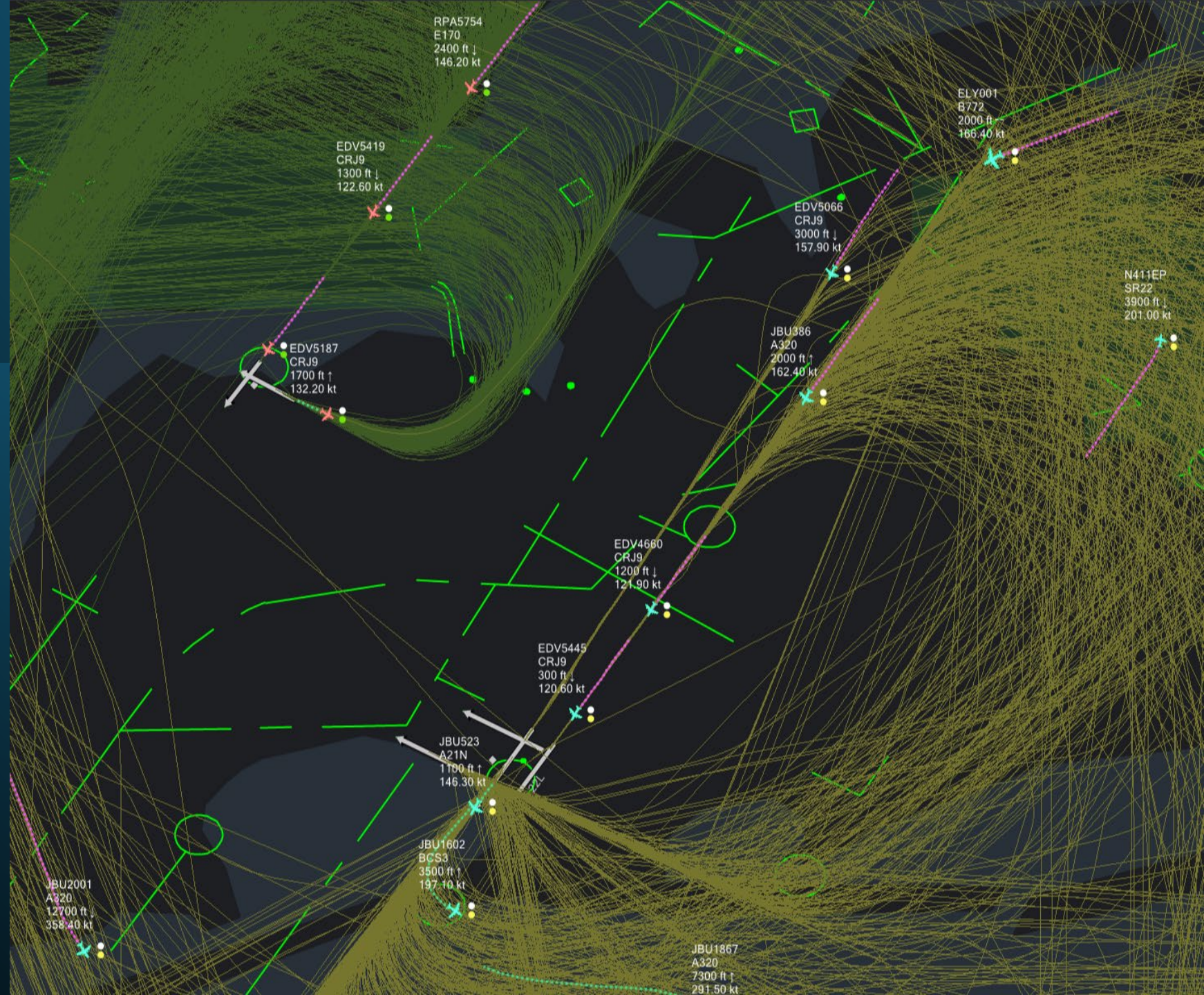


LGA

ILS 22 depart
13 TNNIS

JFK

ILS 22L 22R
Depart 22R



JFK GBAS system

- Each GBAS system manages approaches for all the runways vs ILS which handles one approach.
- GBAS is a GPS based navigational system but is highly accurate down to .5 of a meter.
- Allows for up to 48 different approaches on the one system.
- This will allow us to design various approaches to each runway end.
- Higher glideslope angles are possible but require close coordination with the airlines and aircraft manufacturers since there are limits to a safe descent rate.

LGA GBAS system

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LGA GBAS system

- Additional flexibility in approach design, we could follow highways or major roadways, maybe come over the Long Island Sound with arrivals that fly over Nassau and Suffolk counties today
- LGA GBAS is expected to be certified for use by mid 2027
- Publications dates are in October that will cover 4 approaches: ILS 4, ILS 22, ILS 13, RNAV 31
- Workgroup to develop new procedures utilizing the GBAS systems

Multiple Airport Route Separation

M.A.R.S.

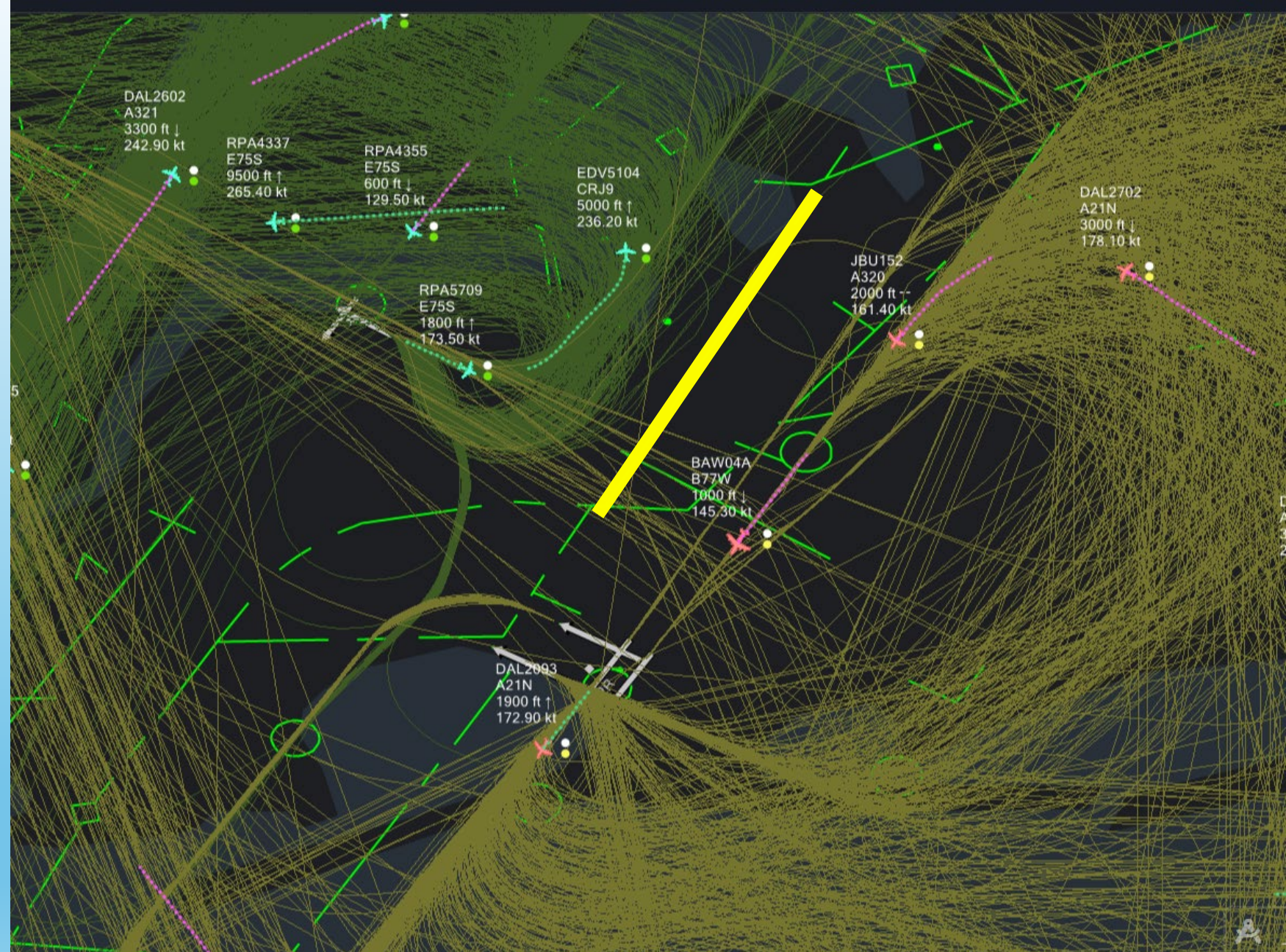
- MARS is a concept that will allow for better management of congested airspace
First conceived by the PANYNJ to improve airspace management and deconflict the NY Airports
- FAA has conducted some of the required safety studies for any new concept
- Three basic concepts:
 - Same direction arrivals (two arrivals flows operating in the same direction)
 - Same direction Arrival/Departure
 - Opposite direction
- What does this mean for the NY Airspace

MARS

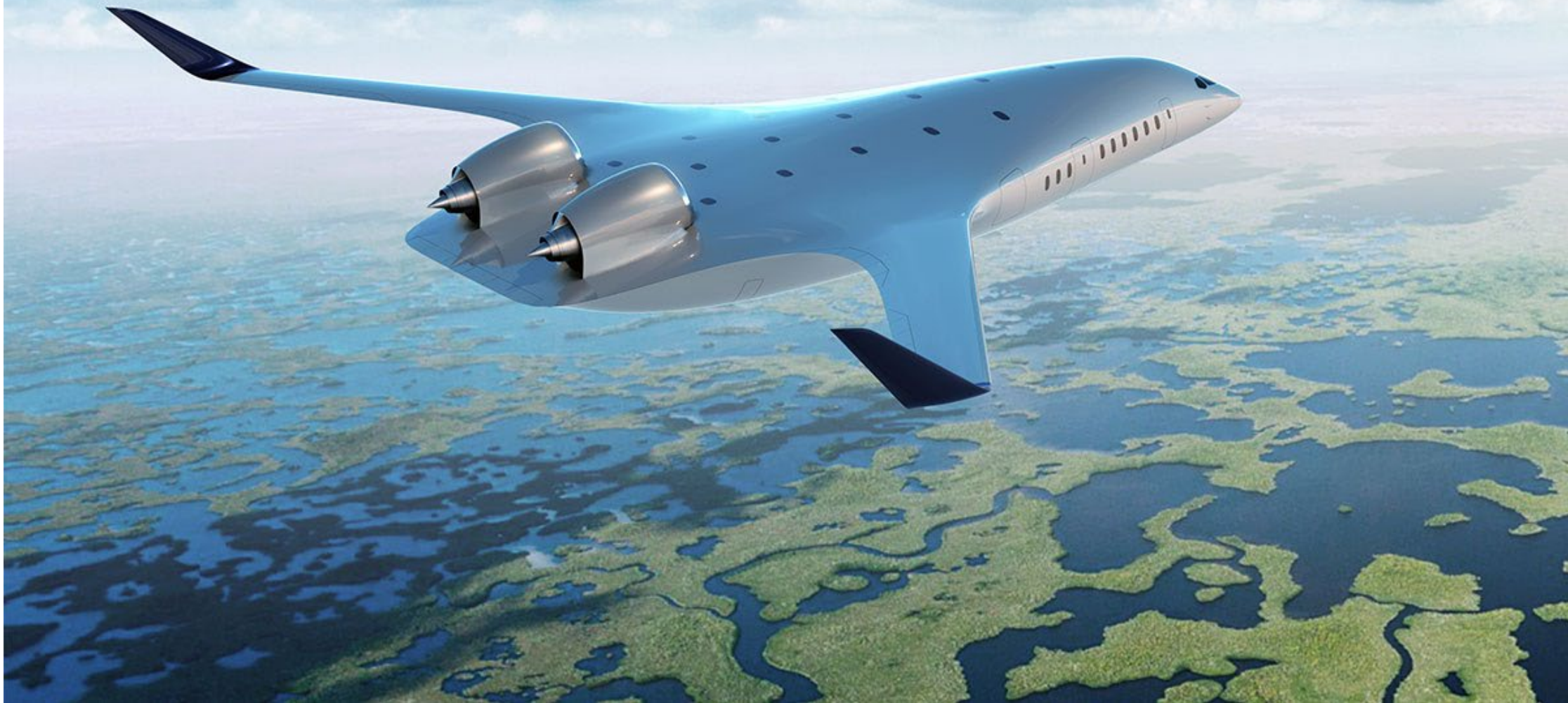
One possible use of MARS would be to create an RNAV version of the Whitestone Climb.

MARS may allow for reduced separation between and airspace boundary and the LGA departure path and the JFK 22R arrivals

This would be considered an opposite direction operation and will be the last configuration to go through the safety evaluation



Questions?



“A World Class Operator of World Class Airports”

NYCAR Meeting

April 22, 2026



Agenda

- Project Scope
- Recap of Ongoing Work for JFK
- Recap of Ongoing Work for LGA
- Next Steps
- Questions / Comments



Project Scope

- The contract scope is limited to focus on creation of new procedures and amendment of existing ones (2 new and 2 mods per airport)
- We intend to focus our efforts on procedure creation and amendments that have the greatest possibility of being implemented and result in meaningful change
- Due to the complexity of the airspace and volume of existing traffic, limited options are available

Preliminary Procedure Change Options - JFK

- RWY 4L/22R Departures
 - *Alternative Flight Paths
- RWY 22 Arrivals
- RWY 31R Arrivals



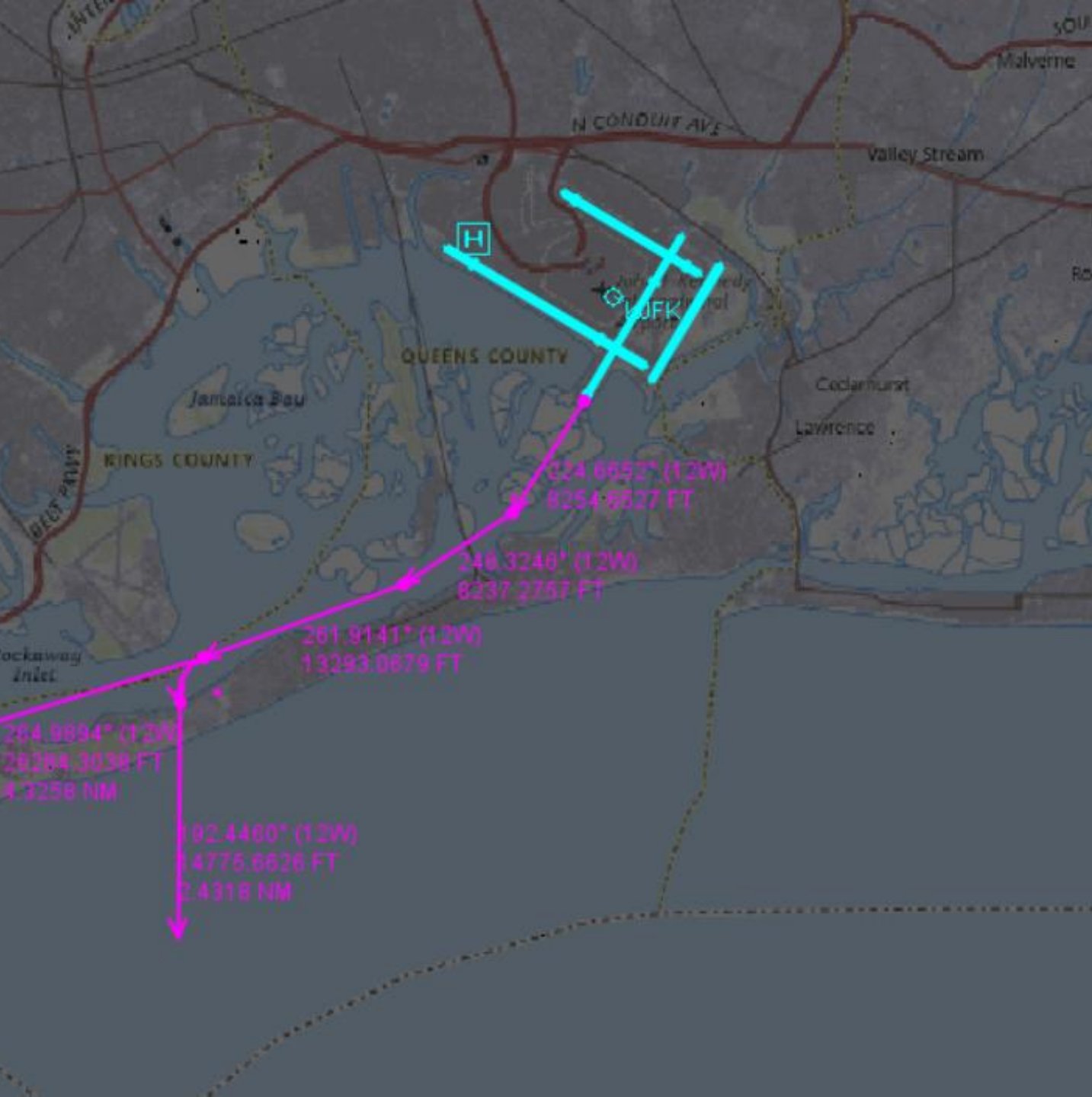
Runway 4L / 22R Departures

- Dispersal headings
- Additional 22R Path for Consideration



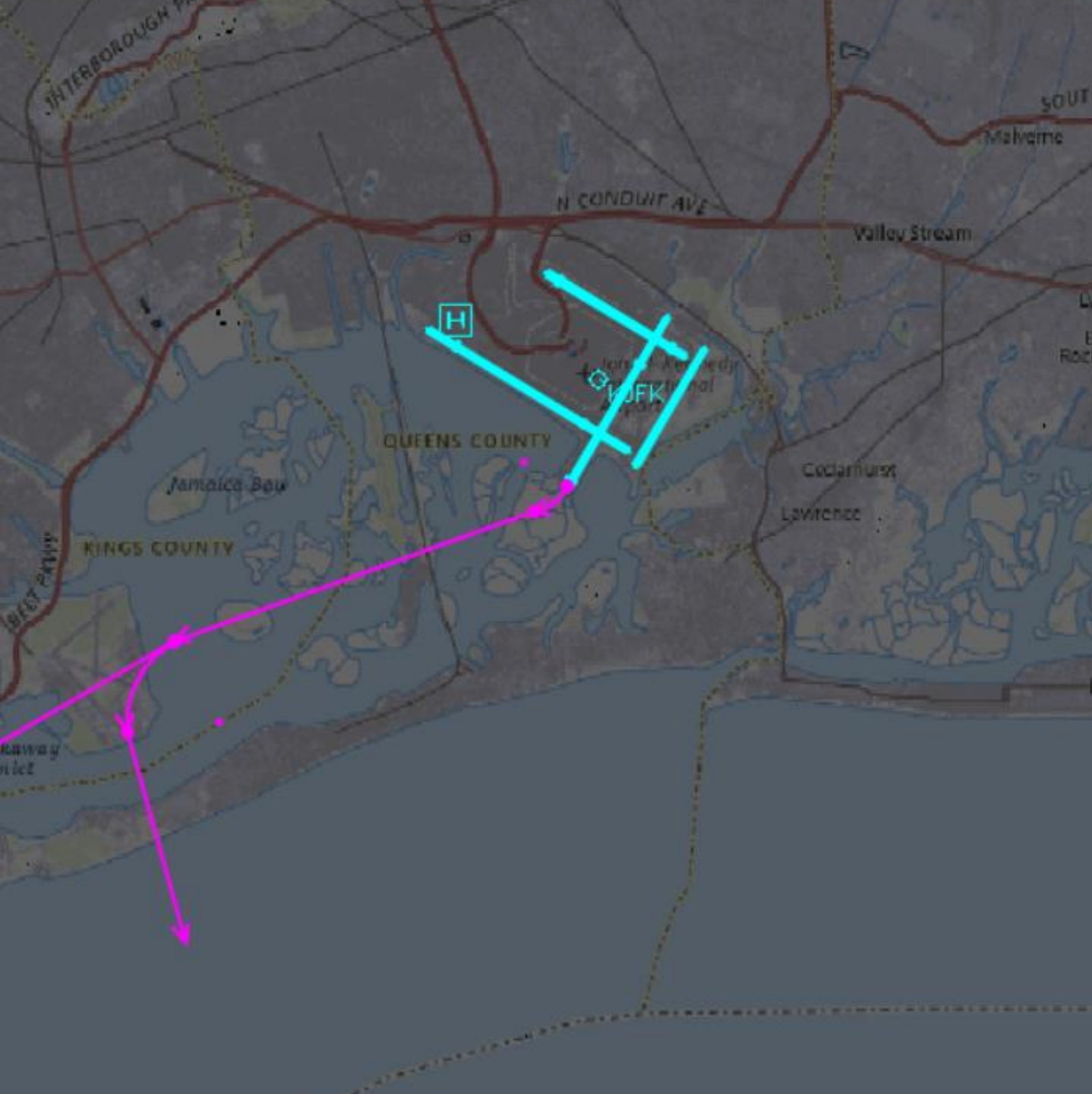
Runway 4L & 22R Dispersal Headings

- Objectives include:
 - Provide relief to communities off departure end of Runways 4L & 22R
 - Aircraft would be cycled through varied departure headings
 - Variation in headings is unique to airport and will need to be studied further
 - Creates dispersion among departures
- Dispersal headings have been used at other airports across the country including Denver and San Diego



Additional 22R Path to Consider

- Objectives include:
 - Path takes aircraft south of Broad Channel
 - Aircraft continue over Riis Park or Rockaway Inlet
 - Nighttime Use

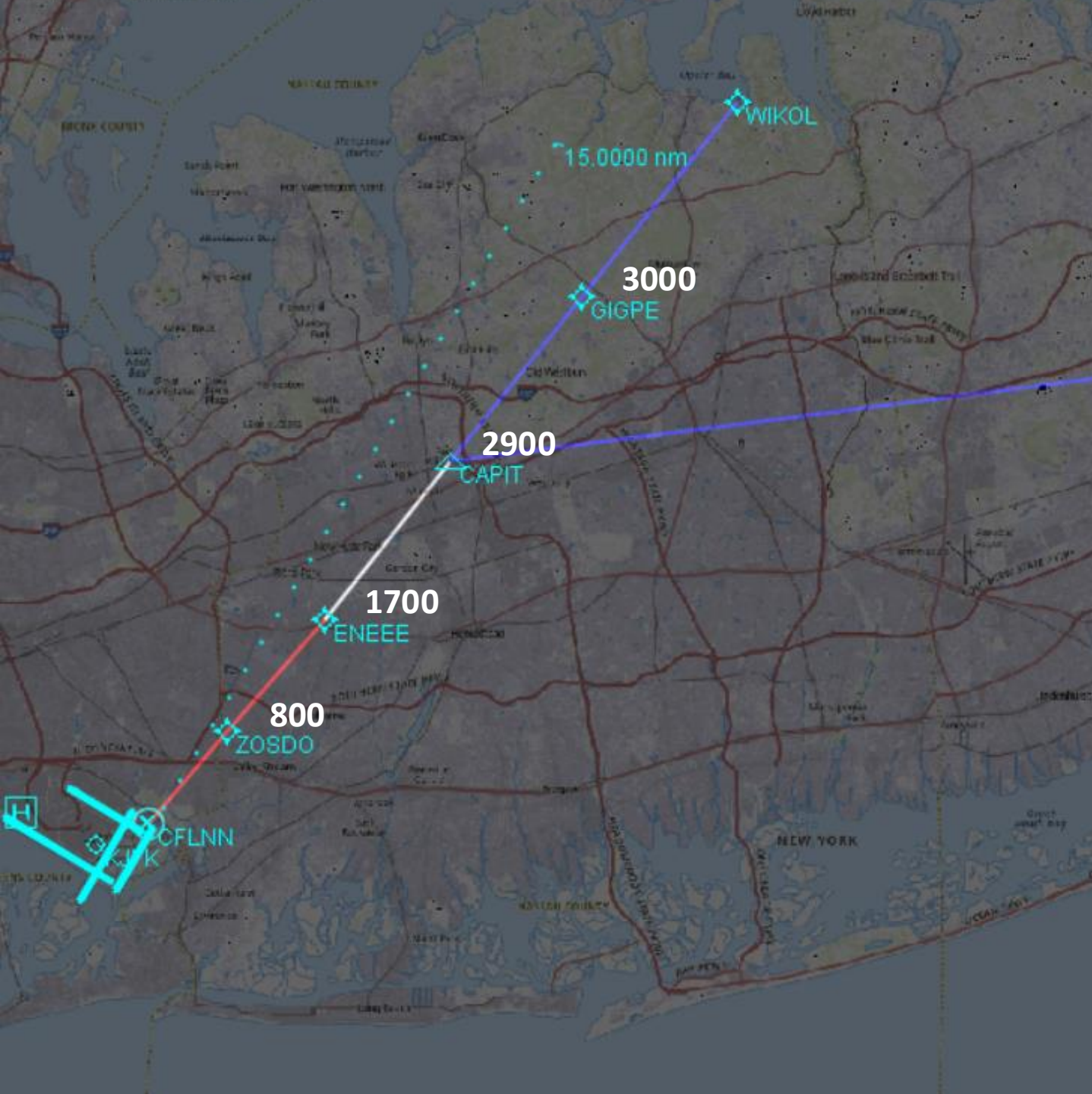


Additional 22R Path to Consider

- Objectives include:
 - Avoids Broad Channel to the North
 - Outbound Legs over Riis Park & Floyd Bennett Field
 - Nighttime Use

Runway 22L Arrivals

- Increase altitudes of arrivals to 22L
 - Enabled through alternative flight paths
 - Aircraft will remain at higher altitudes over Long Island



Runway 22L Arrivals

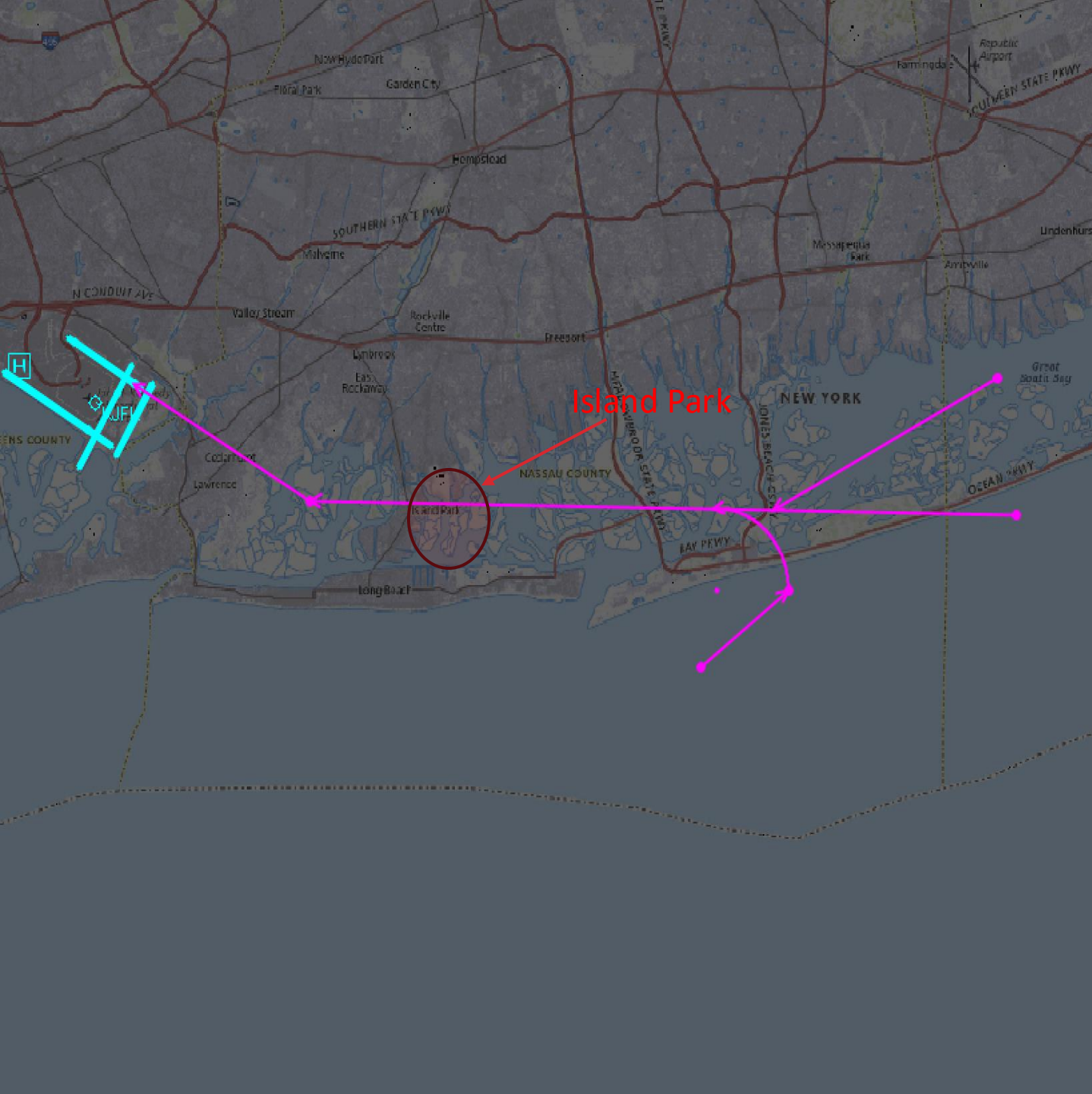
Procedure shown is the existing RNAV (GPS) X RWY 22L

- Objectives include:
 - Look into possibilities to keep aircraft higher on arrival
 - Aircraft typically remain higher on RNAV (GPS) X RWY 22L however, usage is low
 - May increase usage by amending procedure to include straight in final segment

*Altitudes shown are existing RNAV (GPS) X RWY 22L Altitudes

Runway 31R Arrivals

- Investigating alternative flight paths / possibly with the use of Ground Based Augmentation System (GBAS)



Runway 31R Arrivals

Alternative Flight Path

- Avoids Long Beach by moving inbound path over Jones Beach
- May introduce noise to Island Park
- Aim to develop flight path over northern end of Island Park (less residential)
- Requires further analysis

Zoomed In Flight Path over Island Park for 31R Arrivals



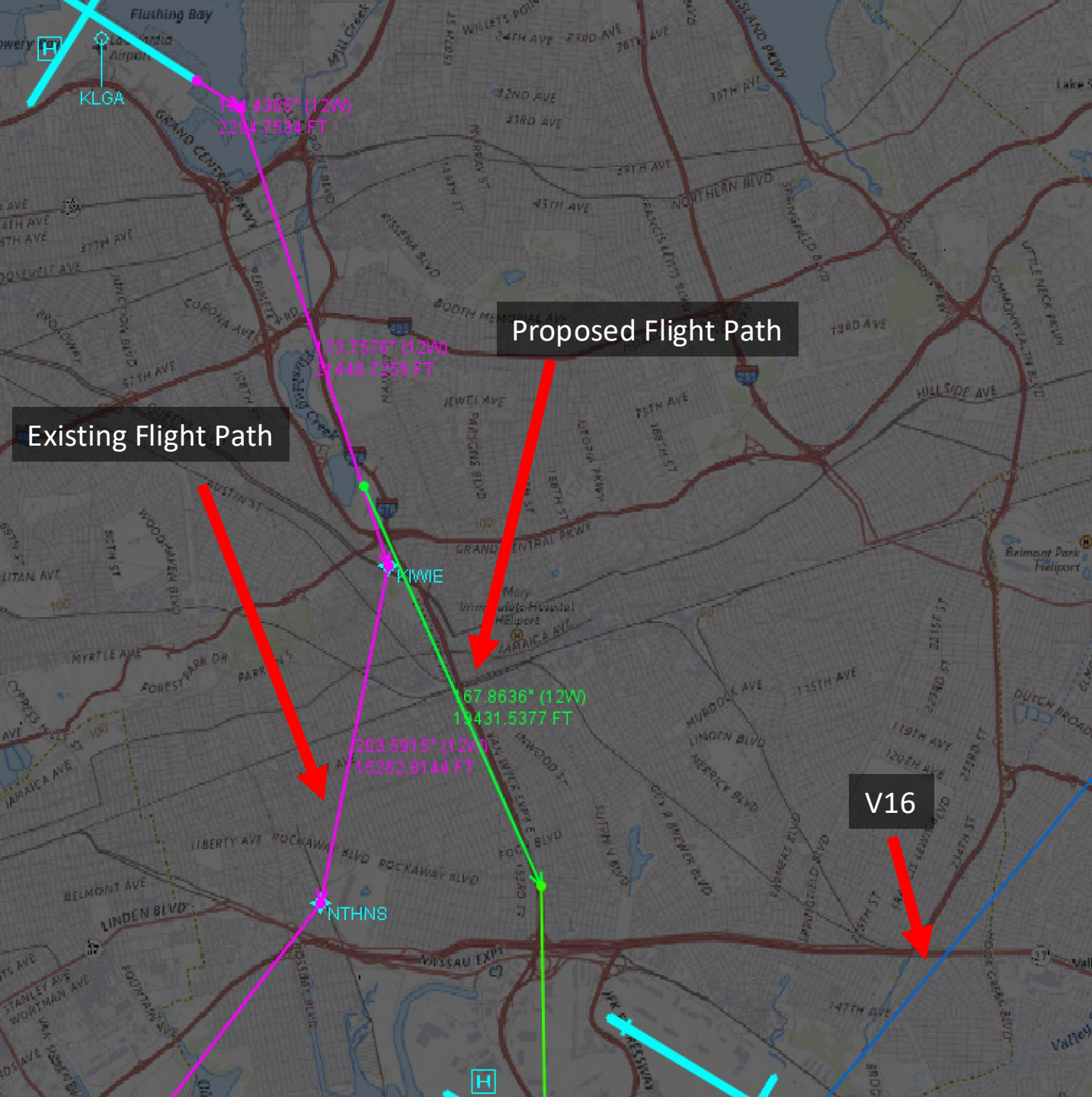
Preliminary Procedure Change Options - LGA

- NTHNS
- Whitestone Climb
- RWY 31 Approach
- TNNIS Early Turn



Amendment to NTHNS Departure

- NTHNS Departure would follow new path
 - Follow Flushing Meadows Corona Park
 - Van Wyck Expressway
 - Overfly JFK



NTHNS Departure

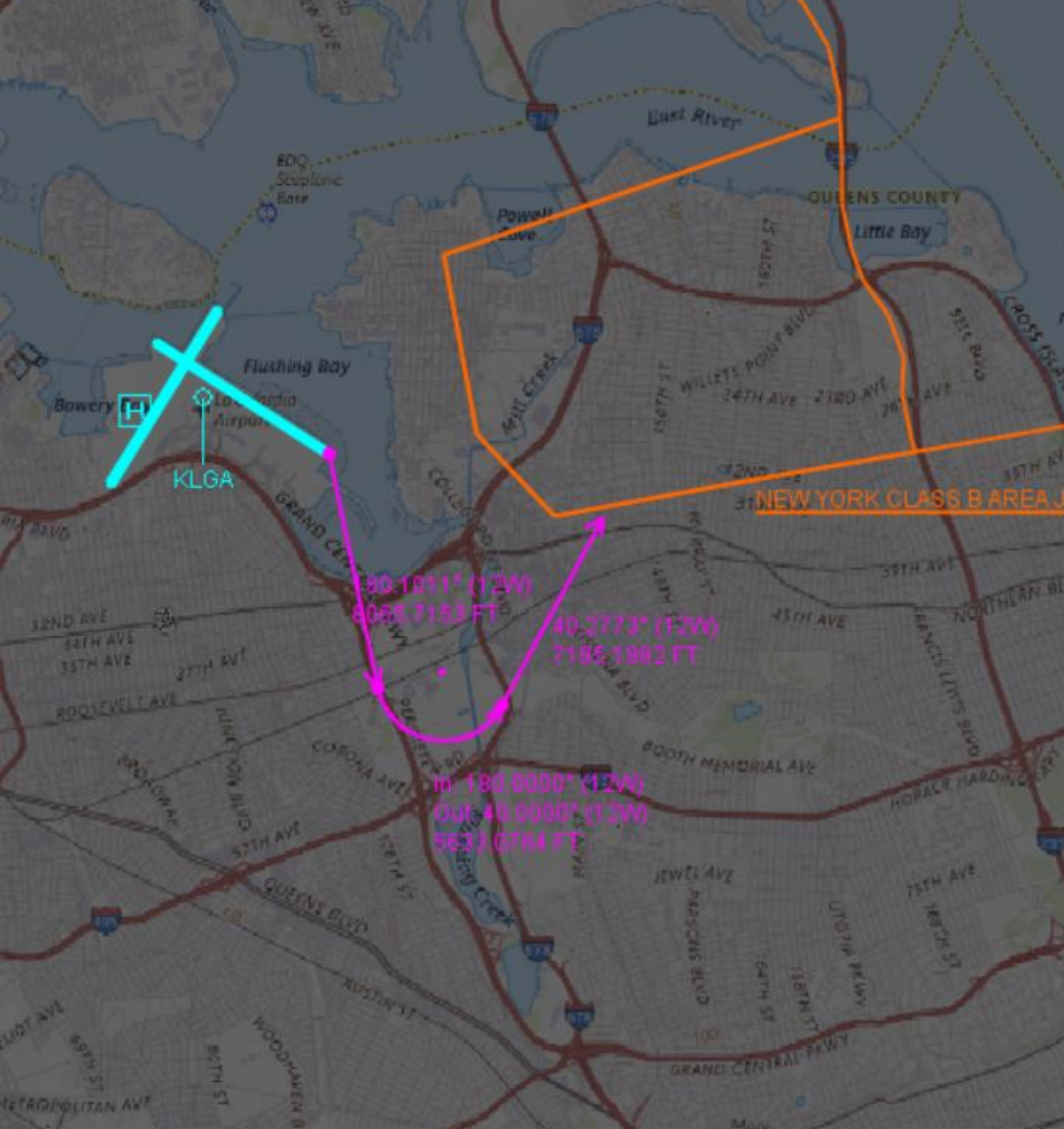
Procedure shown is the existing NTHNS SIX (RNAV) Departure (Red Path)

- Objectives include:
 - Amend procedure after WP KIWIE to follow Interstate 678 (Van Wyck Expressway)
 - May afford some noise benefit by overflying higher ambient noise areas (Interstate 678)
 - Will need to protect for aircraft on V16 and transitioning aircraft over JFK

* V-Routes are low altitude airways where aircraft are permitted to fly between 1,200 ft. AGL and 18,000 ft. MSL

Whitestone Climb (LGA 7)

- Turn Whitestone Climb from the LAGUARDIA SEVEN into an individual RNAV procedure



Whitestone Climb

Develop into Independent RNAV Departure

- Objectives include:
 - Develop “open SID” RNAV Whitestone
 - Aircraft would follow currently published Whitestone Climb
 - Initial 180 heading followed by 040 heading to await vectors from ATC
 - Airspace boundaries may pose a challenge, will require further analysis
 - Feasibility is improved with MARS implementation

Approach to Runway 31 (LGA)

- Develop new path for aircraft arrivals to Runway 31

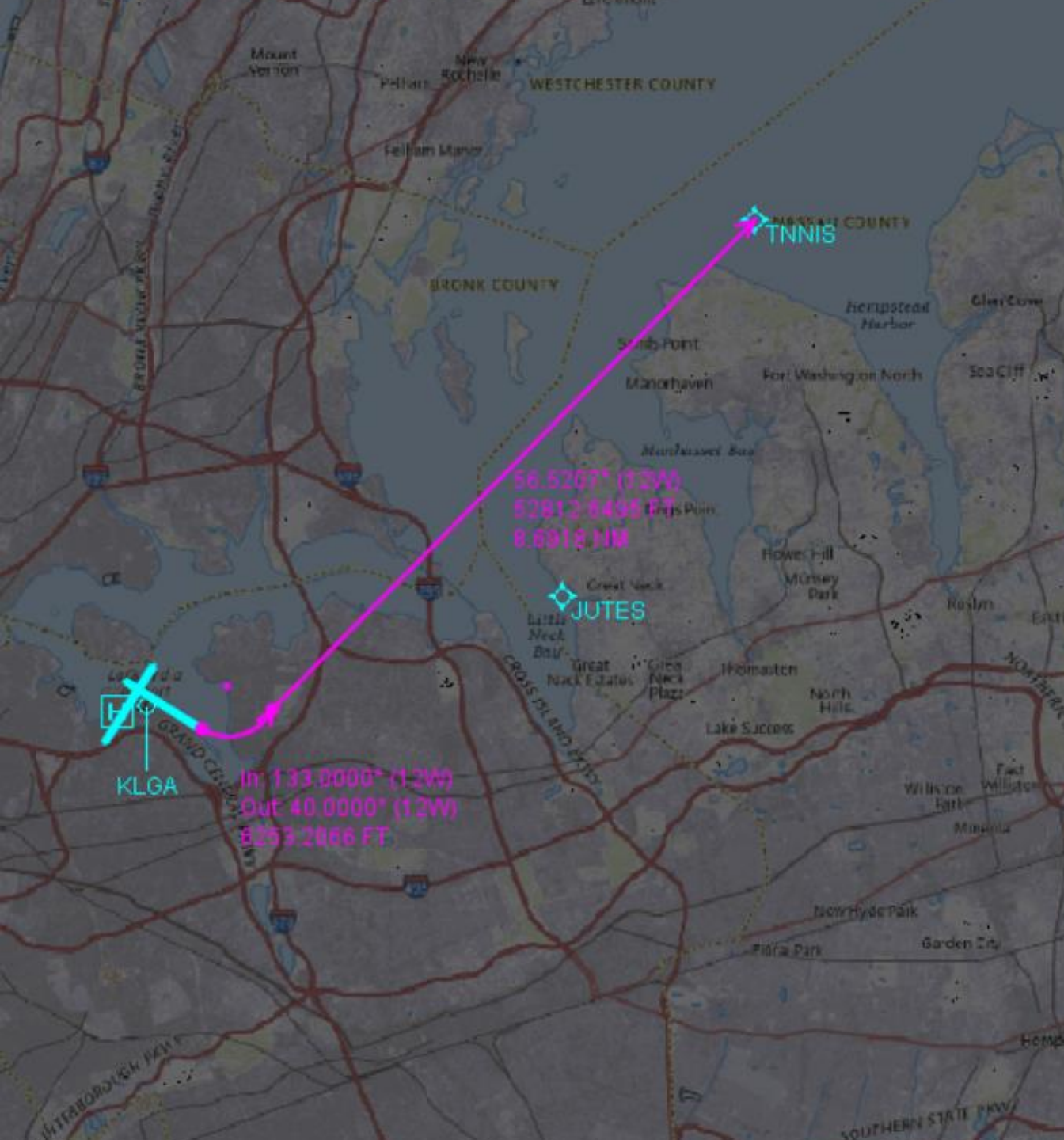


Proposed RNAV Approach RWY 31 (LGA)

- Objectives include:
 - Develop new RNAV approach to Runway 31
 - Maximize over water flight time
 - Minimize time over land and provide relief for residents under current arrival flight paths

Amendment to TNNIS (LGA)

- Develop early left turn for aircraft departing on TNNIS



Proposed Early Left Turn TNNIS Departure

- Objectives include:
 - Early left turn on TNNIS Departure
 - Would allow aircraft a straight on climb (reduced noise)
 - Will need to model procedure to determine benefit
 - Could be accomplished via RNAV (VA/DF Legs) or with RNP-AR Departure
 - Feasibility is improved with MARS implementation

Next Steps

- PANYNJ Staff and HMMH have a meeting scheduled with FAA on April 24th to discuss feasibility of proposed procedure redesigns and creations
- The preceding slides show preliminary procedure designs that will only advance to further analysis if FAA determines they are feasible from a safety and flyability standpoint
- The meeting with FAA is a necessary next step in the procedure implementation process and will likely affect our focus moving forward
- We will give a full debrief of the results of the FAA meeting to NYCAR at the next meeting

Questions and Discussion

Thank you!



Port Authority of New York and New Jersey

Fly Quiet Programs

NYCAR Briefing

April 22, 2026



Agenda for Today's Meeting

- Program Background
- Airline Scoring
- 2025 Awards
- Wrap-Up

Recent Program Activities

- Data collection and analysis – January-March
- Release 2025 FQP Reports – April 1
- Airline award presentations at Station Manager’s meetings – April 8, 14, 16
- Roundtable briefing – April 22

Background

PANYNJ Fly Quiet Programs



Background on PANYNJ Fly Quiet Programs

- Recommended program management measure in the Part 150s for all four PANYNJ airports
- Establish new programs at JFK, LGA, and EWR Airports
- Enhance and support the existing TEB Quiet Flying Program

Airline awards for JFK, LGA, and EWR have been presented for 2025

What is a Fly Quiet Program?

- A voluntary **collaboration** of Port Authority, Airlines, aircraft operators and FAA air traffic controllers that **encourages** them to use suggested quieter aircraft, noise abatement flight procedures, and preferential runways



**Awareness
Campaign**

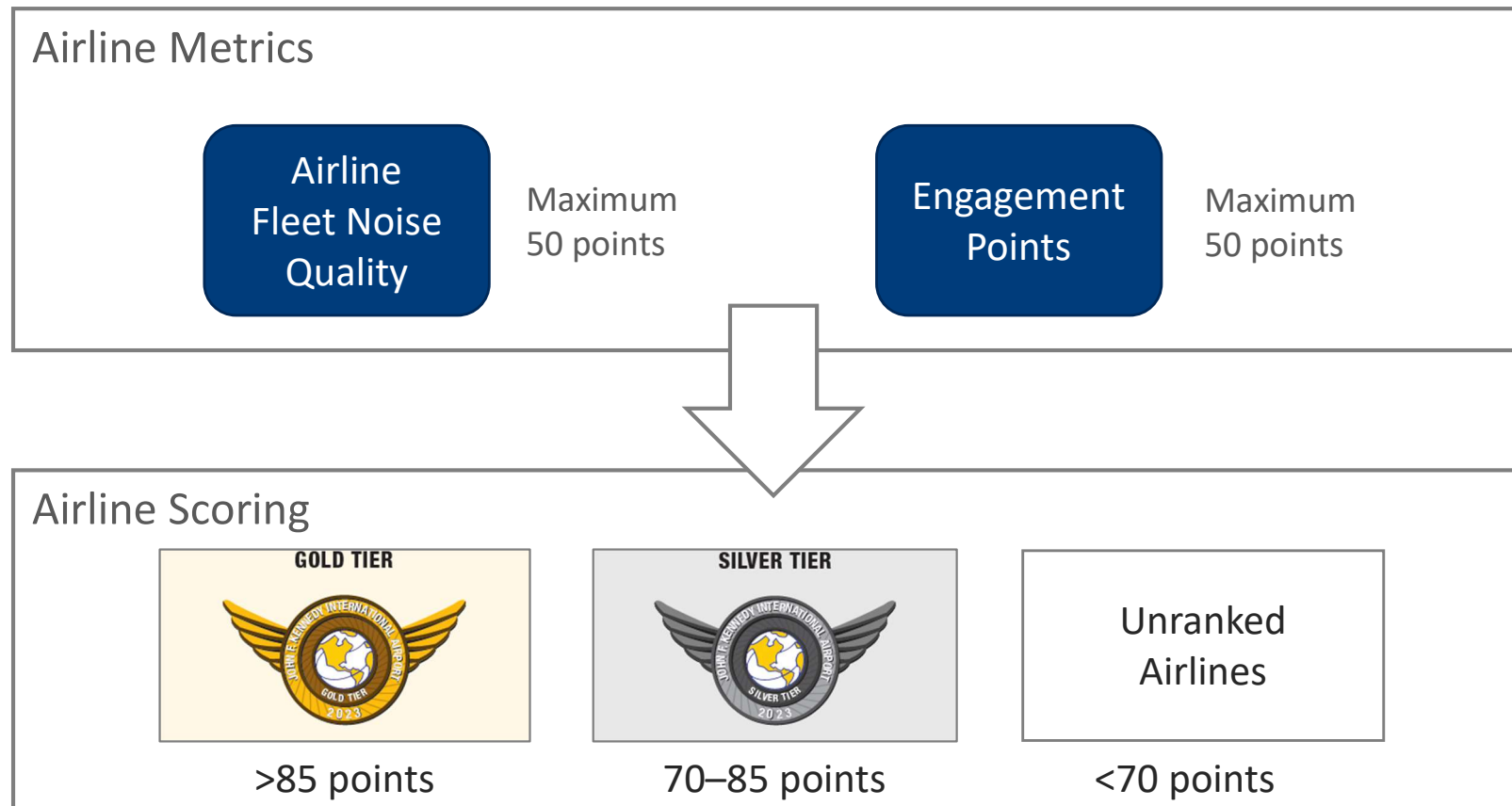
**Data
Reporting**

**Benefits
beyond the
65 DNL
contour**

Airline Scoring



Scoring System Overview



Website dashboard of each airline's achievements relative to FQP metrics:

- ✓ Details are not shared with public
- ✓ Used for FQP scoring on a scale of 0 to 100

Top Tiers recognized in the FQP Annual Report for the public:

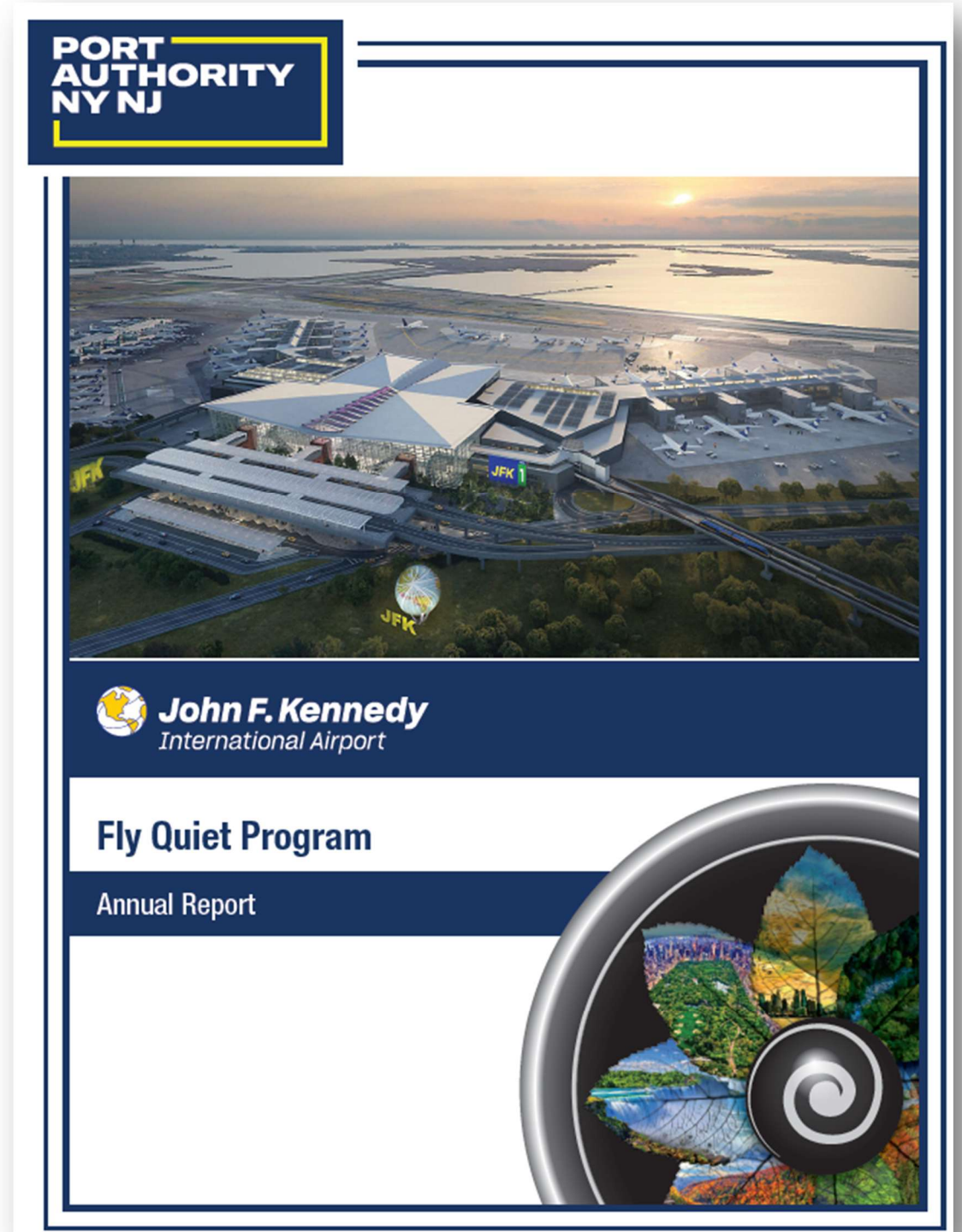
- ✓ Awarded in each airline category (Air Carrier, Regional, Int'l., Cargo)

Airline Scoring Details

Scoring Categories		Max. Points
Airline Fleet	Fleet Noise Quality: <ul style="list-style-type: none"> Weighted average of an airline’s operations and the certificated “Noise Stage” of each aircraft For airlines with minimum of 365 operations per year (operation is one arrival or one departure) 	50
Engagement	Participate in FQP Focus Group annual virtual briefings	10
	Participate in Roundtable Meetings (for JFK and LGA only) > one hour attendance each meeting <ul style="list-style-type: none"> Up to four meetings per year, 2.5 points per meeting, 10 points maximum 	10
	Access and review the FQP Dashboard Reporting site once per quarter <ul style="list-style-type: none"> Tracked four times per year, 2.5 points per login, 10 points maximum 	10
	Provide copies of pilot training/educational materials on noise abatement and Fly Quiet along with the date(s) training was conducted	10
	Provide information/documentation on airline fleet noise reductions (vortex generators, etc. installed on the aircraft; pilot operating techniques; NADP training; etc.)	5
	Provide information/documentation on any annual airline sustainability practices/offsets/etc.	5
Total:		100

2025 Annual Reports

- A separate report for each airport (JFK, LGA, and EWR)
- Based on annual data for Calendar Year 2025
- Brief, 10-page summary of Airline Awards and metrics
- Graphical, easy-to-read format



Airport-Wide Statistics in Annual FQP Report

- Provide statistics on noise and operations that are reported airport-wide (which are not a part of an airline's score)
 - Airport-wide fleet mix by Noise Stage
 - Runway use including late-night hours
 - Flight procedure use
- Recognizes the FAA's participation and role in runway selection and flight procedure selection

FQP Awards









CONGRATULATIONS TO THE WINNERS OF THE JFK FLY QUIET AWARDS

2025



 **John F. Kennedy**
International Airport

	GOLD TIER	SILVER TIER
DOMESTIC MAJOR AIR CARRIER	 American Airlines  jetBlue AIRWAYS 	 
INTERNATIONAL AIR CARRIER		NONE

Note: No Regional Air Carriers or Cargo Airlines won an award in 2025.

CONGRATULATIONS TO THE WINNERS OF THE LGA FLY QUIET AWARDS

2025



	GOLD TIER	SILVER TIER
DOMESTIC MAJOR AIR CARRIER		







Note: No Regional Air Carriers or International Air Carriers won an award in 2025.

CONGRATULATIONS TO THE WINNERS OF THE EWR FLY QUIET AWARDS

2025



Newark Liberty
International Airport

	GOLD TIER	SILVER TIER
		
DOMESTIC MAJOR AIR CARRIER	<p>UNITED </p> <p>American Airlines </p>	<p>jetBlue AIRWAYS</p> <p> DELTA</p>
INTERNATIONAL AIR CARRIER	NONE	

Note: No Regional Air Carriers or Cargo Airlines won an award in 2025.

Award Badges, Certificates, and Plaques

- PANYNJ created airport-specific award badges for each Gold and Silver winner
- Airlines can use these badges in their social media posts, websites, etc.
- The badge will be emailed directly to you
- Certificates (for Gold and Silver Tier) will be emailed to each winning airline
- Plaques (for Gold Tier) will be presented to each winning airline at upcoming Station Manager's meetings



Examples of awards from 2025.

Additional Recognition: Perfect Engagement Score

- Several airlines achieved a perfect airline engagement score (50 points)
- The FQP Annual Reports recognize these airlines' achievement
- Engagement scores are the same for a given airline for all three airports
 - Except for EWR which does not have a roundtable



Additional Recognition: Most-Improved Fleet Mix

- Several airlines made significant fleet score improvements in 2025 compared to previous years – each is recognized in Annual FQP Reports
- These scores are specific to the operations flown at each airport in 2025
- For some airlines, this made the difference between the Silver and Gold Tier

JFK



LGA

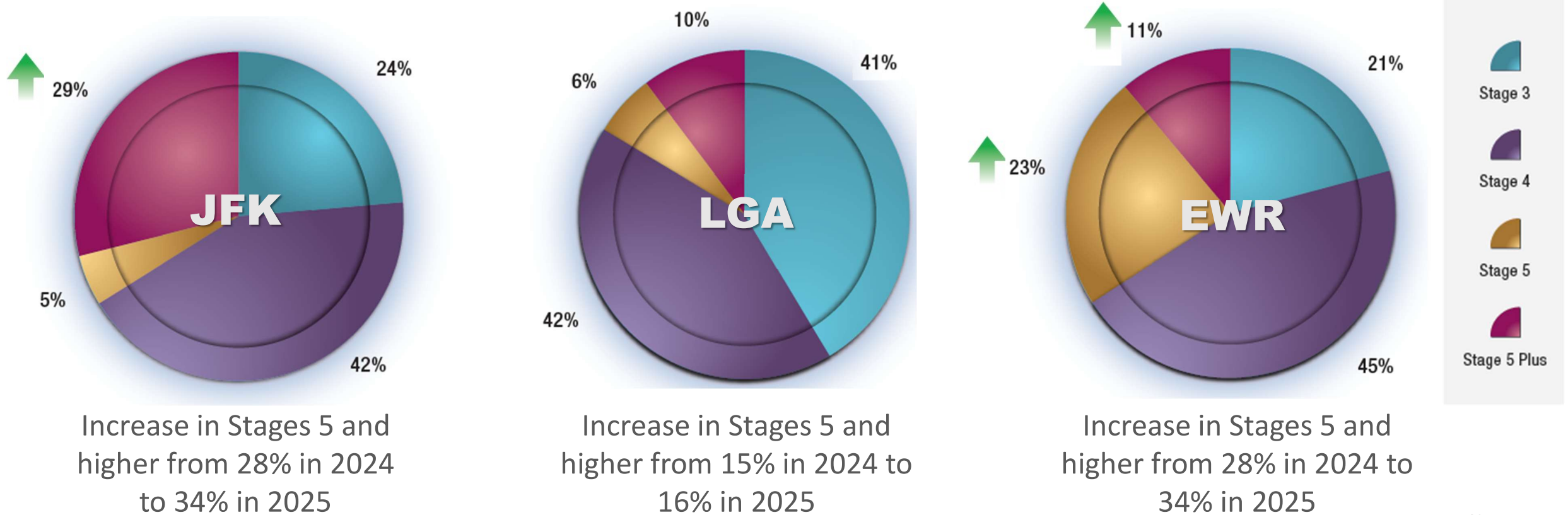


EWR



Improvements in Airport-Wide Fleet Mix

- In 2025 JFK and EWR had fleet score improvements compared to previous years
- Notable increases in Stage 5 and Stage 5 Plus operations at each airport (↑)



FQP Technical Manual

- A resource guide providing detailed technical information on score calculations and other program metrics
- Written for a technical audience (airlines, FAA, etc.) to provide:
 - FQP scoring methodology
 - Fleet noise calculations
 - Engagement points calculations
 - Runway and flight procedure use
 - Airline rankings and awards
- Available on PANYNJ website
 - Available for airlines, stakeholders, and the public to gain a full understanding of how the program and its metrics work

Thank you!



For more information please contact:
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