

Metroplex

An Update on Charlotte Airspace Modernization

Phase 3

July 13, 2016



FAA

| **NextGEN**

Why We Must Modernize



NEXT GEN Components: RNAV/RNP

Moving to Performance-Based Navigation

Conventional Routes

Today's airways connect ground-based navigation aids



Limited Design Flexibility

RNAV

Area Navigation (RNAV) routes follow defined "waypoints"



Increased Airspace Efficiency

RNP

Required Navigation Performance (RNP) routes within specified "containment area"



Optimize Use of Airspace

Source: Federal Aviation Administration



Top 10 Airports in the United States

1. Atlanta
2. Chicago
3. Dallas/Ft Worth
4. Los Angeles
5. **Charlotte**
6. Denver
7. Las Vegas
8. Houston
9. New York JFK
10. Phoenix

Challenges of the Charlotte Airspace

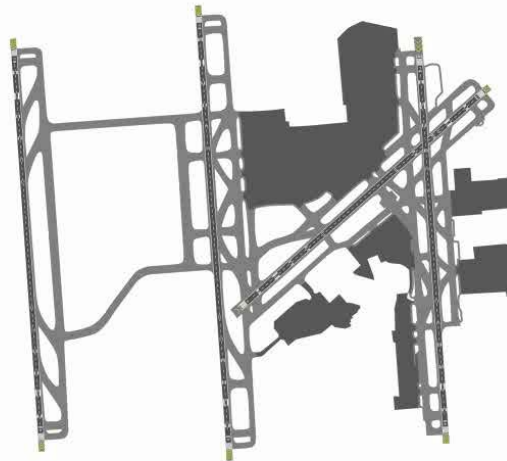
- Charlotte is the 5th busiest airport in the United States.
- It is adjacent to Atlanta, the busiest airport in the world.
- Traffic moving along the East Coast represents some of the greatest areas of congestion and potential delay in the system.

The Process

- Metroplex Implemented over Phases
 - ✦ Phase 1 implemented on October 15, 2015
 - ✦ Phase 2 implemented on May 31, 2016
 - ✦ Phase 3 will occur July 21, 2016

NORTH FLOW – 45% OF THE TIME

Why do we fly this way?



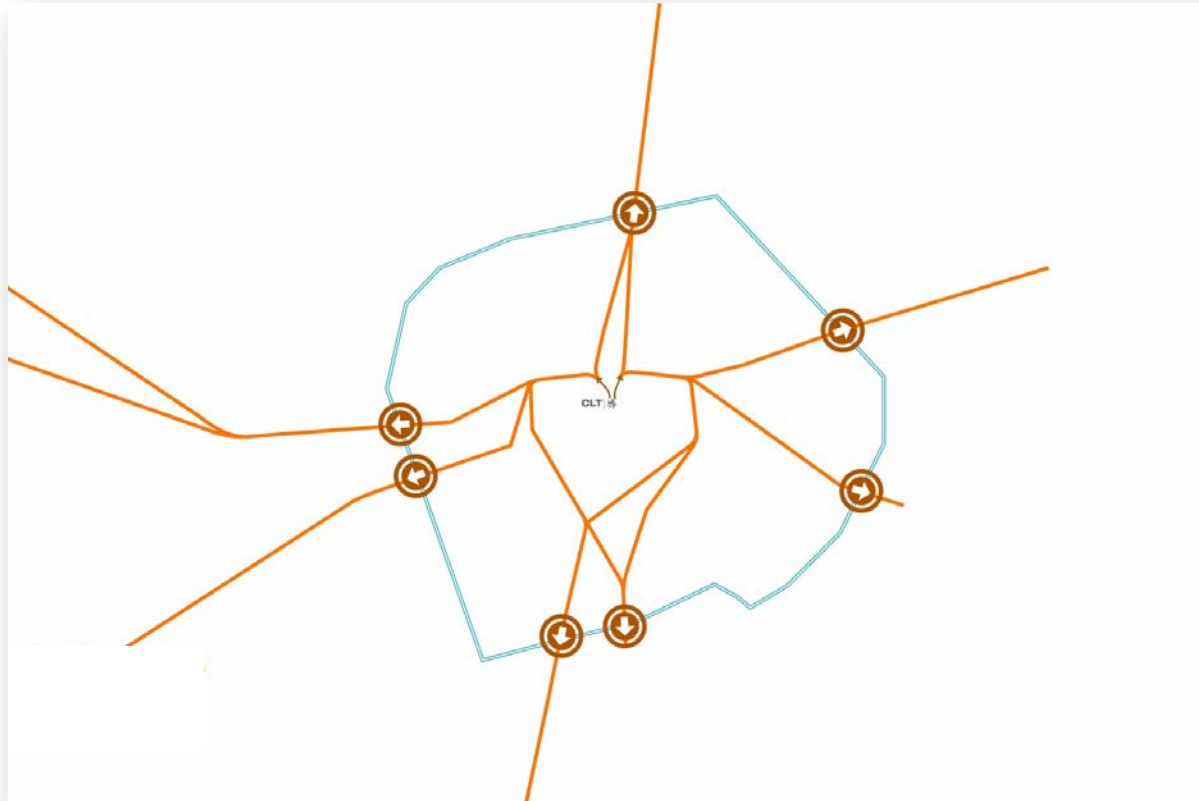
CLT

NORTH FLOW

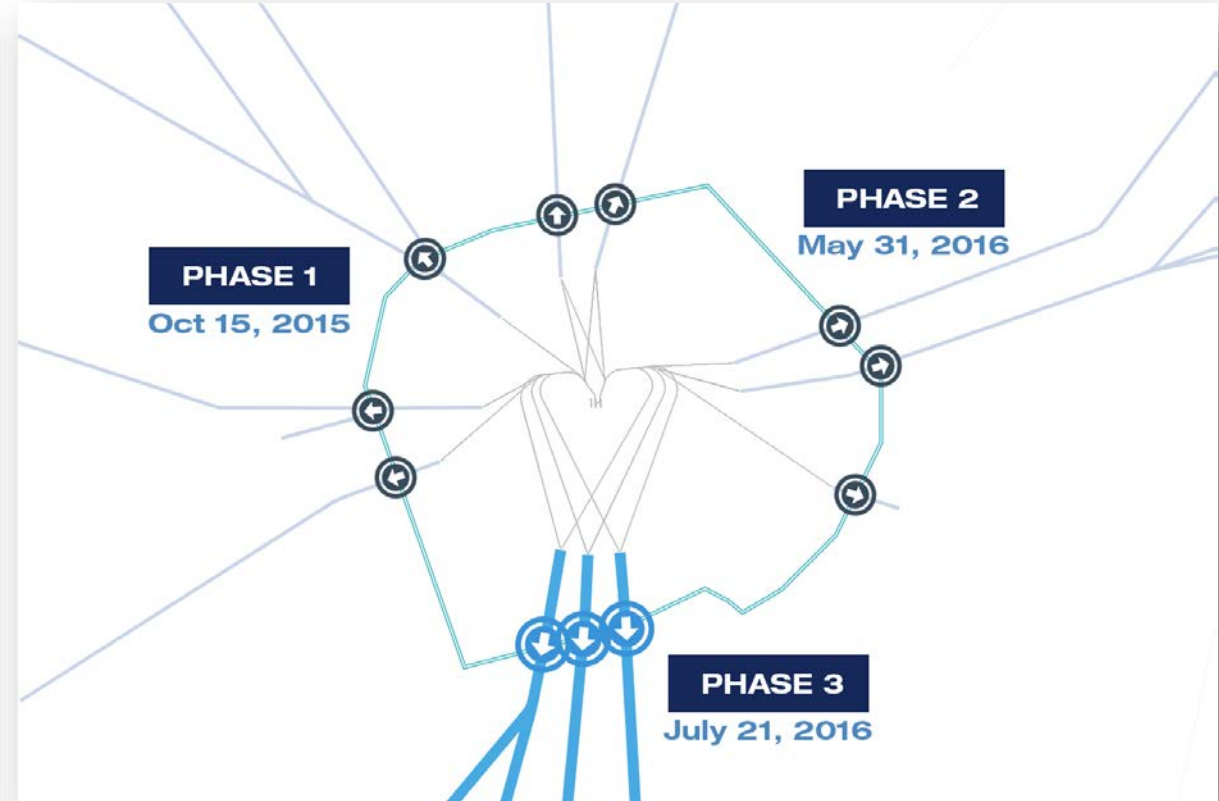
What are the Changes

Departure SIDs

Pre Metroplex Departures – North Flow



Post Metroplex Departures – North Flow

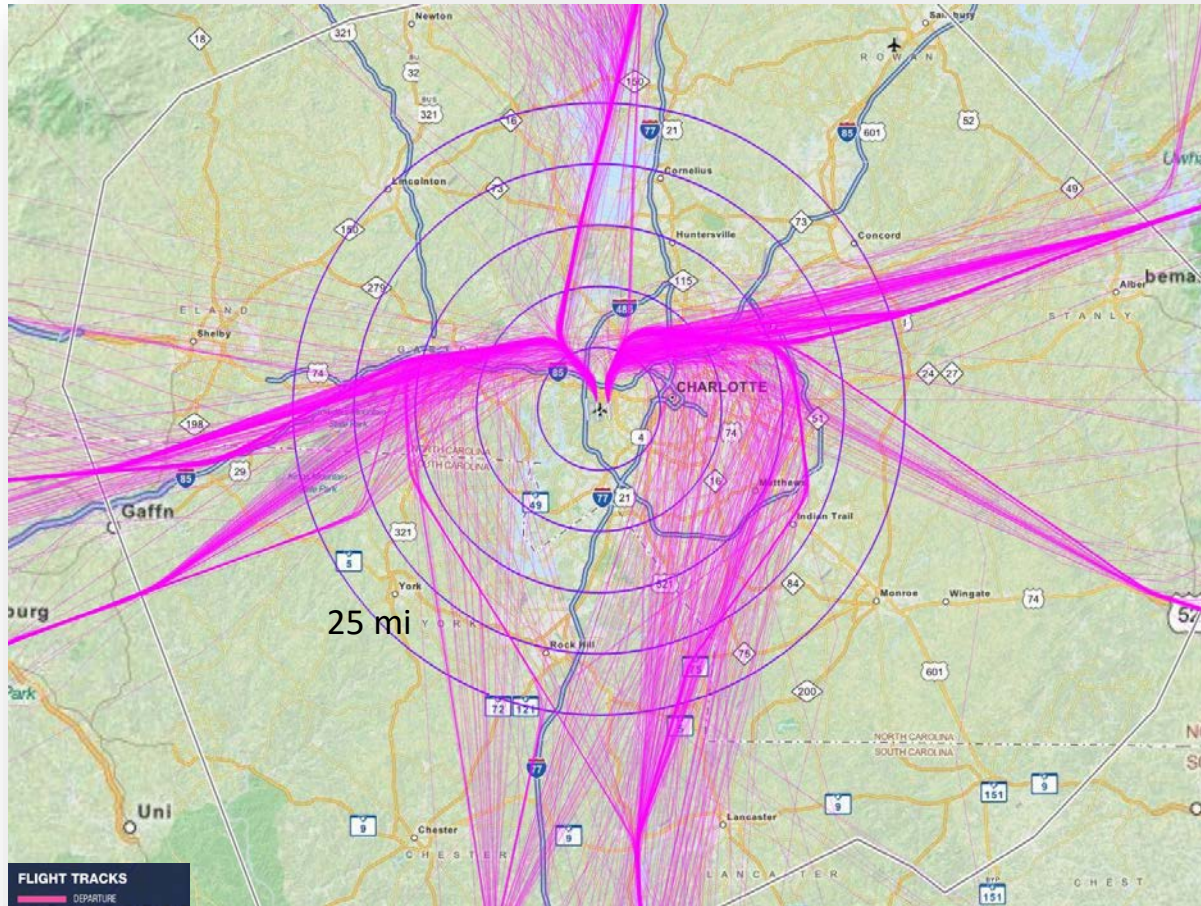


NORTH FLOW

Departures out of the Airspace

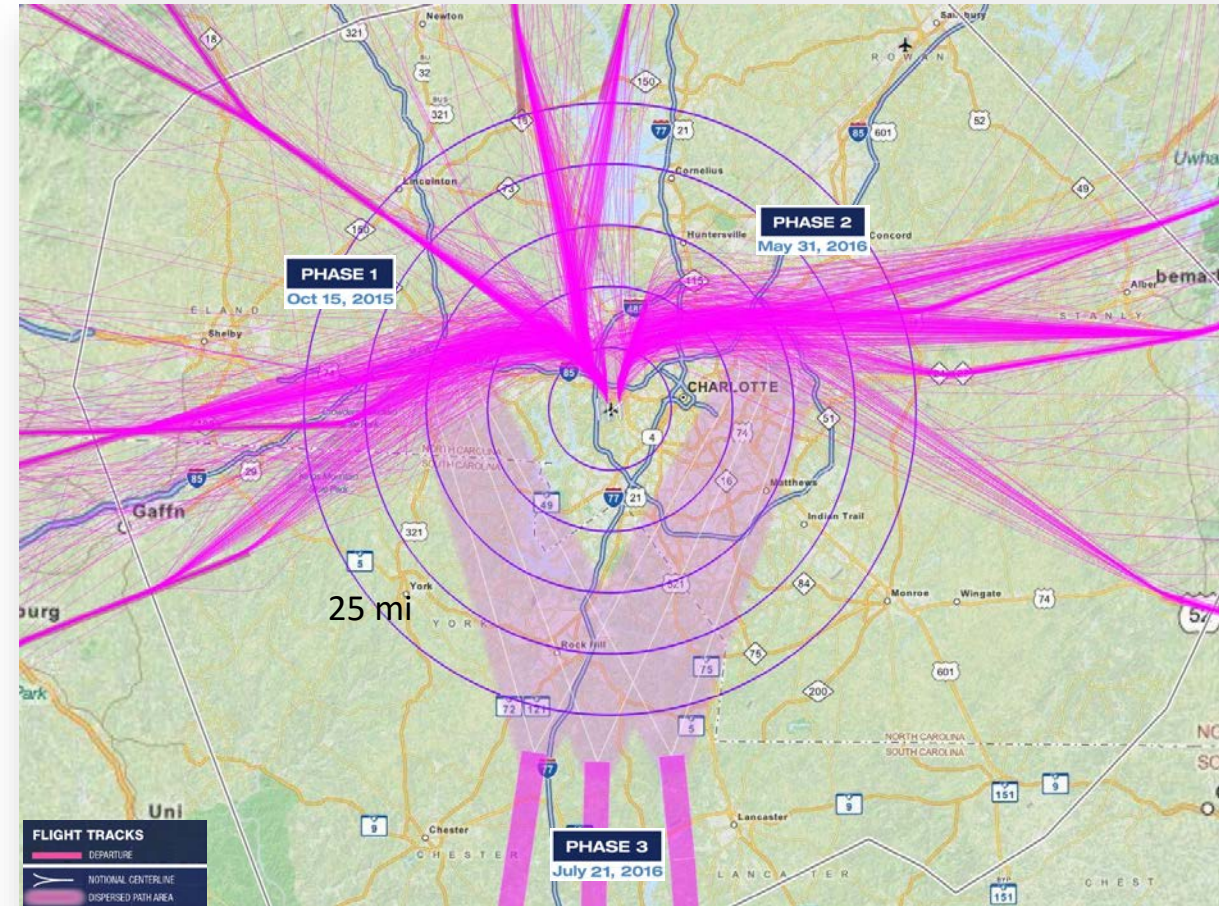
Departure SIDs (Slide 1)

Pre - Metroplex Departures



Jet radar tracks prior to Oct 15, 2015 – Pre Metroplex

Post - Phase 1, Phase 2 and Future Phase 3 Departures

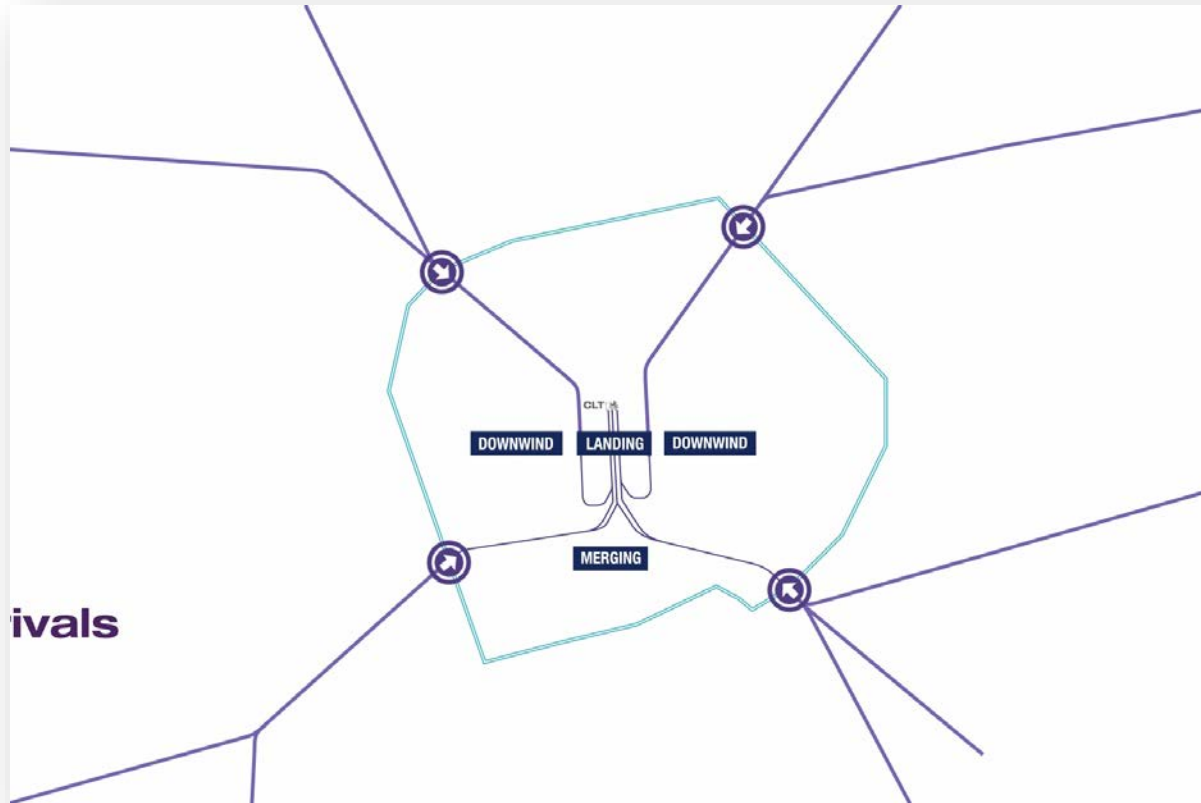


Jet radar tracks after May 30, 2016 – New Phase 1 & 2 tracks only

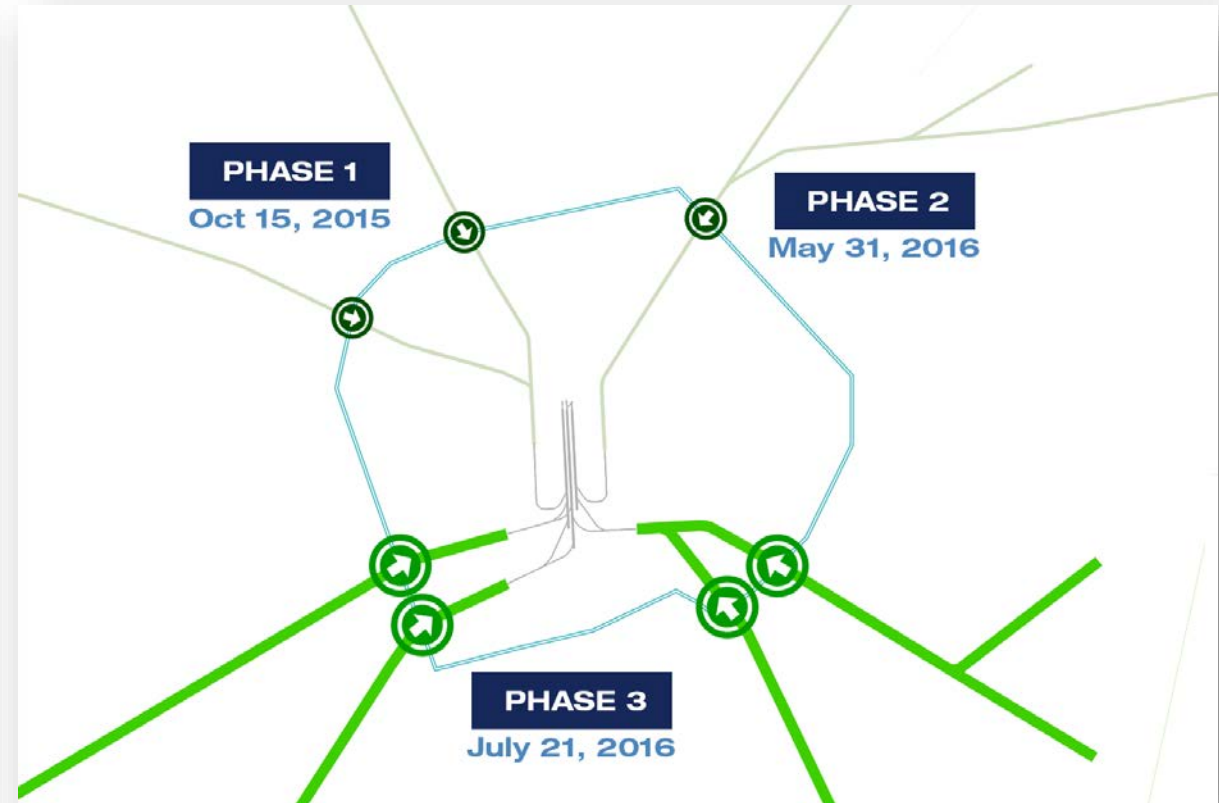
What are the Changes

Arrivals STARs

Pre Metroplex Arrivals – North Flow



Post Metroplex Arrivals – North Flow

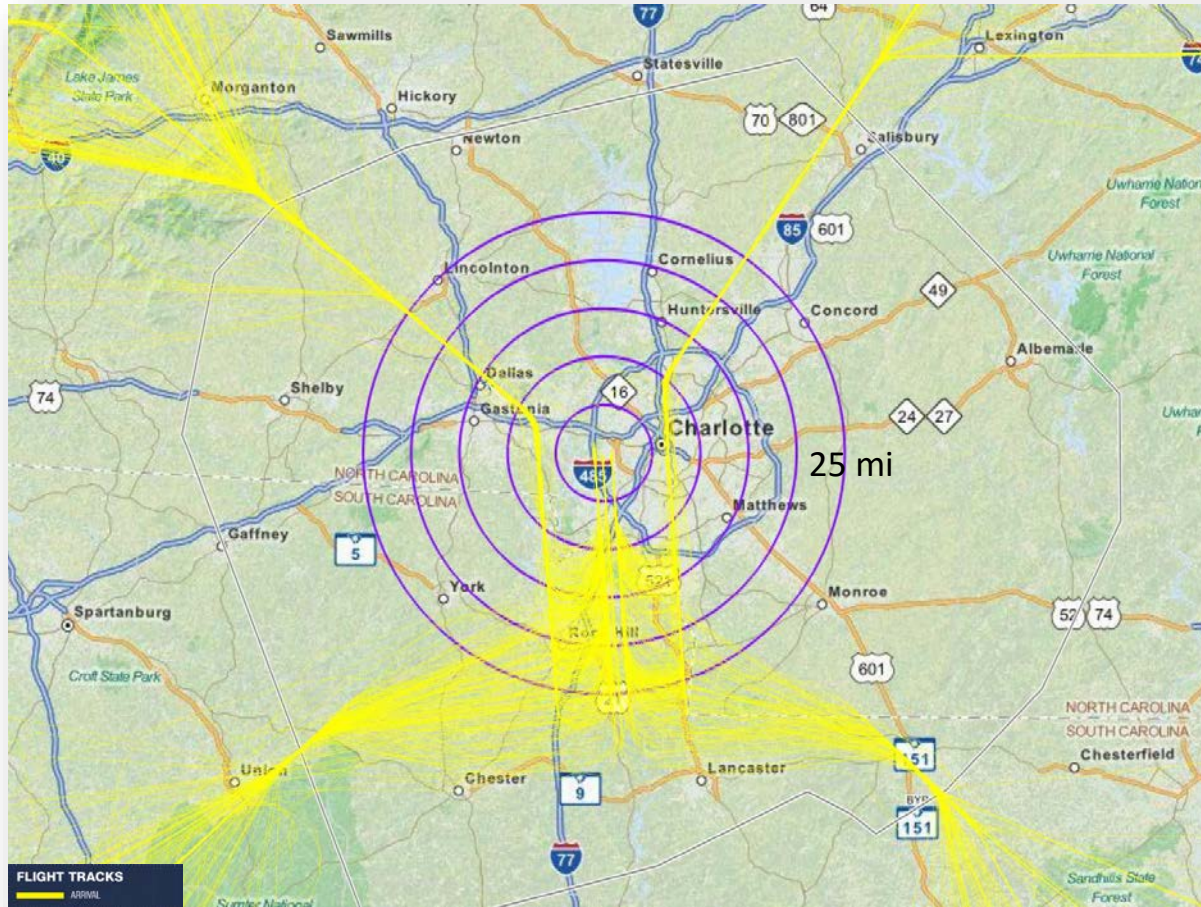


NORTH FLOW

Arrivals into the Airspace

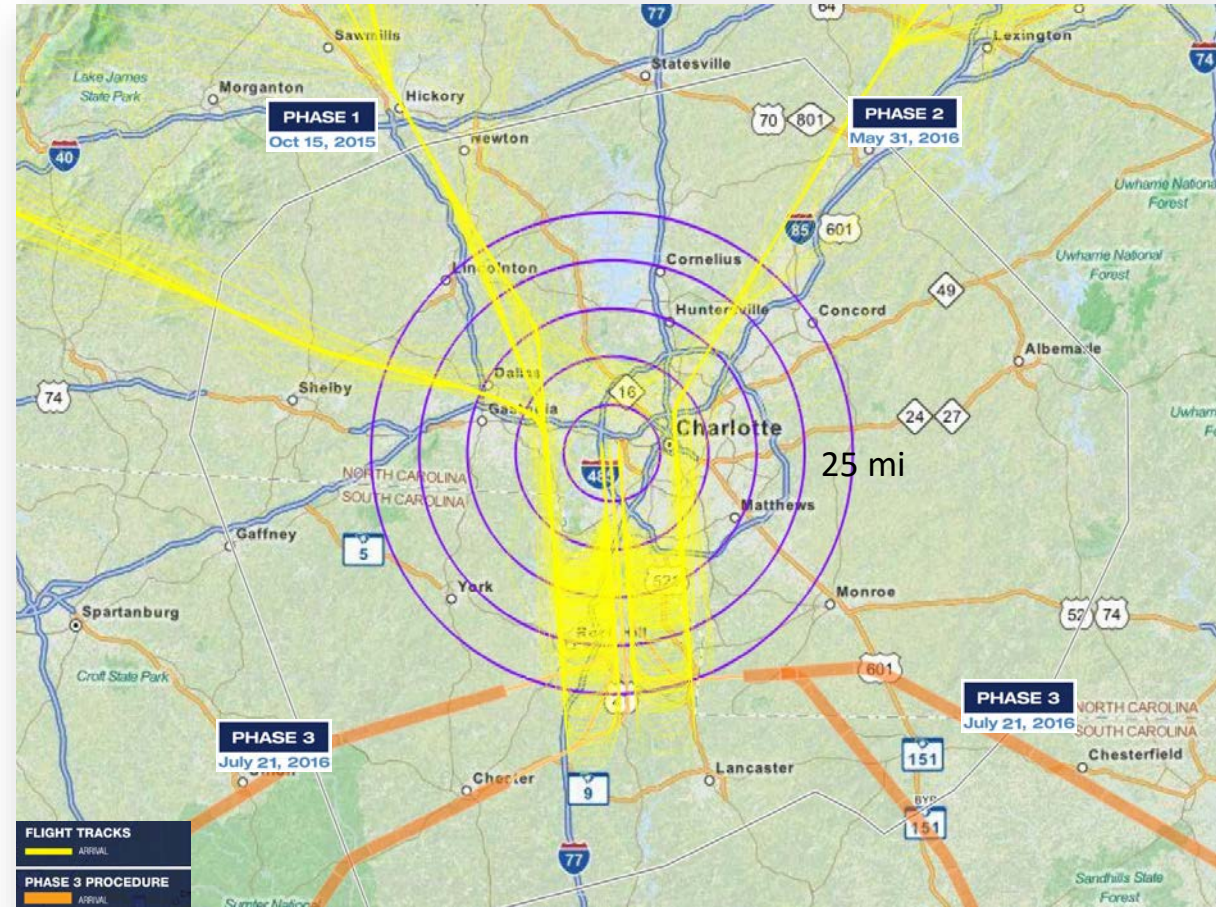
Arrival STARs (Slide 1)

Pre - Metroplex Arrivals



Jet radar tracks prior to Oct 15, 2015 – Pre Metroplex

Post - Phase 1, Phase 2 and Future Phase 3 Arrivals



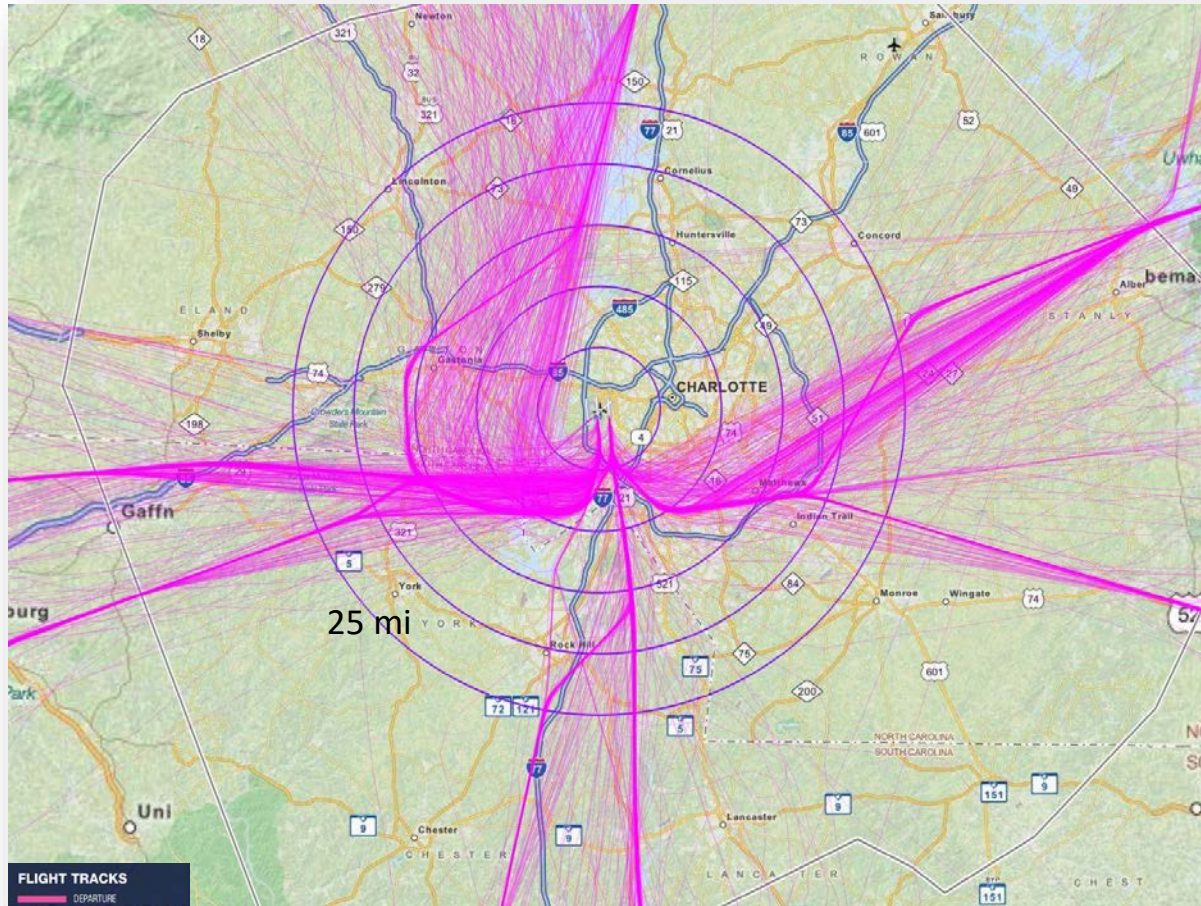
Jet radar tracks after May 30, 2016 – New Phase 1 & 2 tracks only

SOUTH FLOW

Departures out of the Airspace

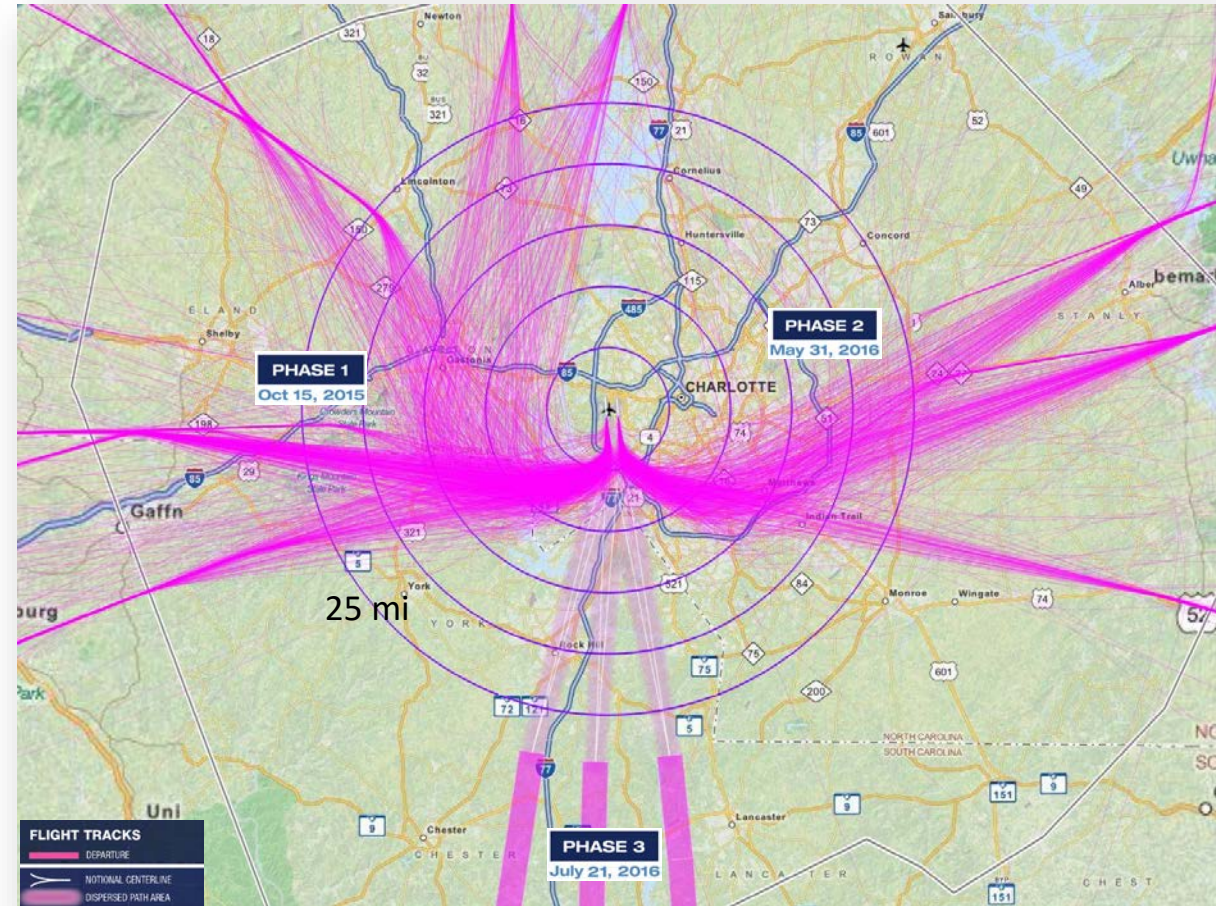
Departure SIDs (Slide 1)

Pre - Metroplex Departures



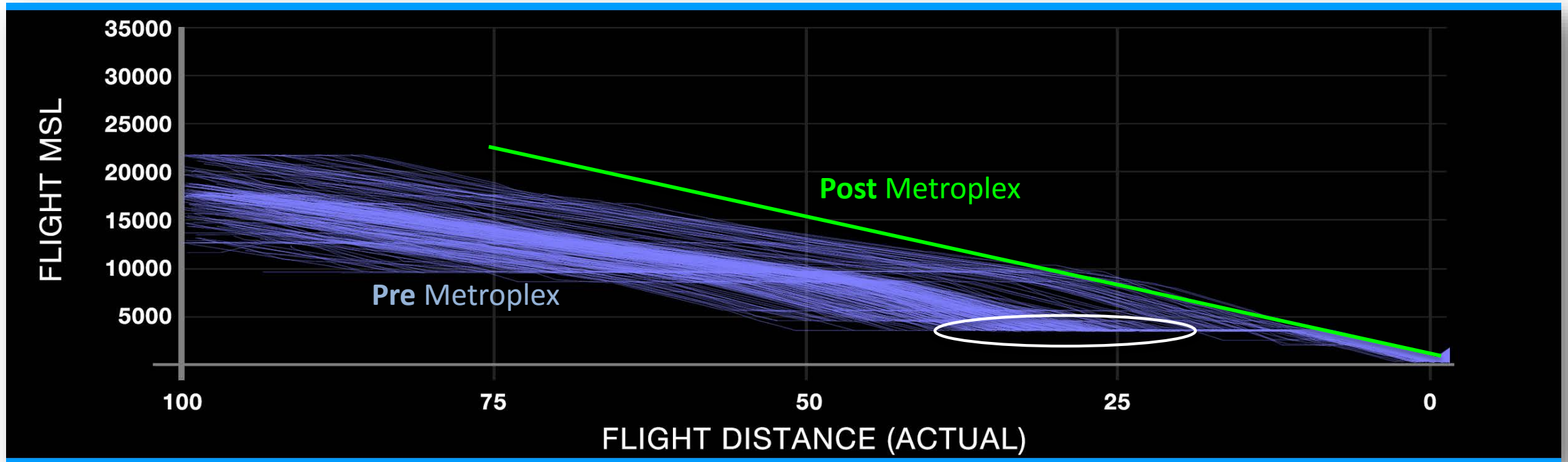
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Post - Phase 1, Phase 2 and Future Phase 3 Departures



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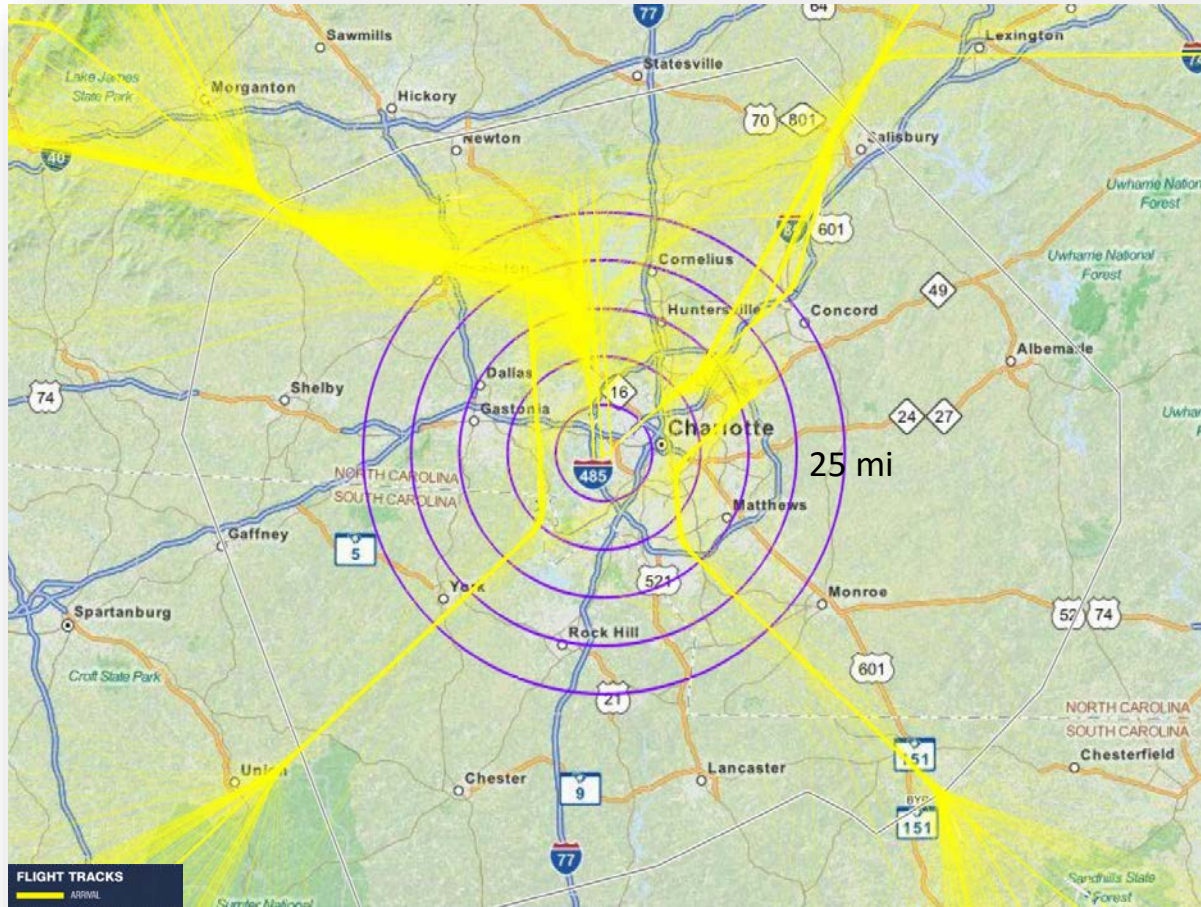
Increased Altitudes



SOUTH FLOW Arrivals into the Airspace

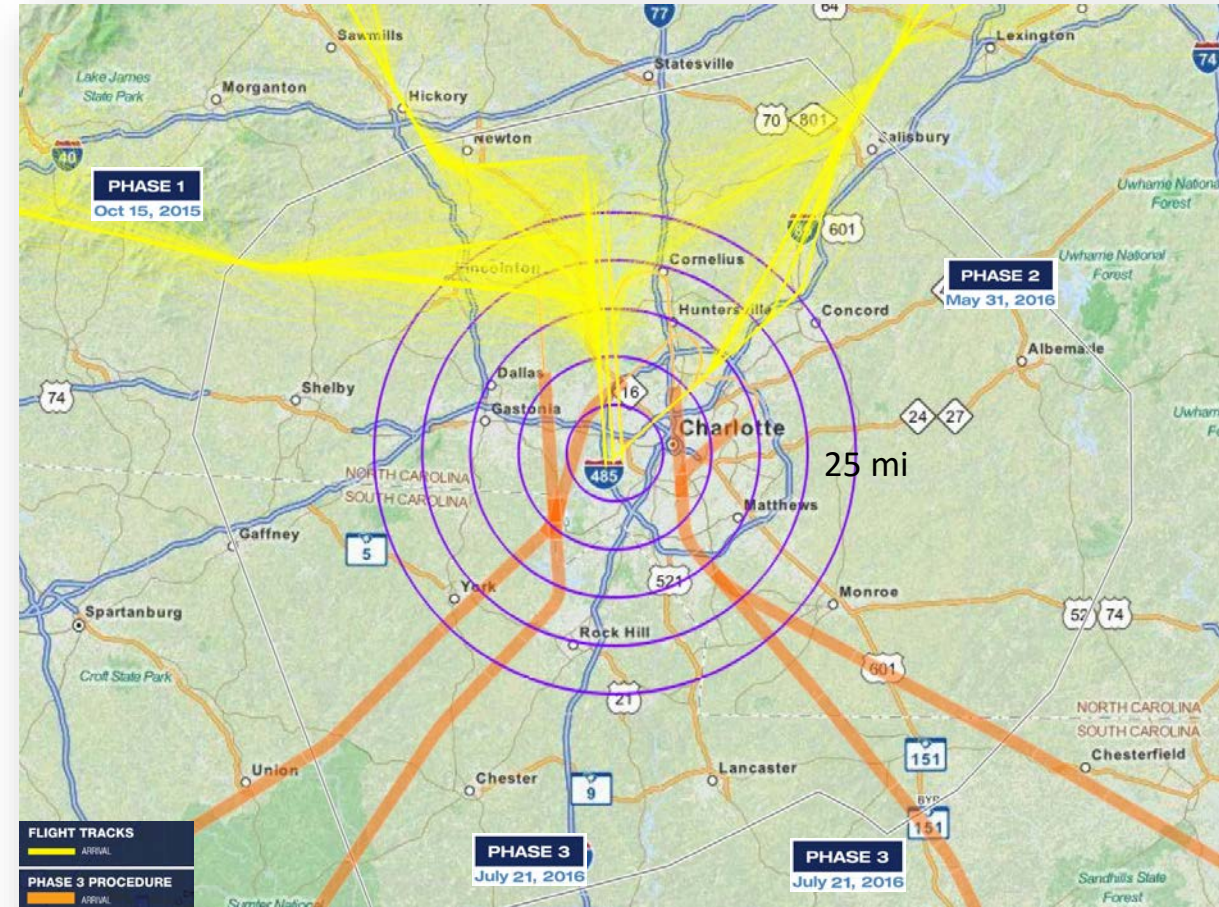
Arrival STARs (Slide 1)

Pre - Metroplex Arrivals



Jet radar tracks prior to Oct 15, 2015 – Pre Metroplex

Post - Phase 1, Phase 2 and Future Phase 3 Arrivals



Jet radar tracks after May 30, 2016 – New Phase 1 & 2 tracks only

Our Commitments

- To partner with our local airports and aviation teams to adhere to established noise abatement policies.
- To update the community on changes the Metroplex project is making to the airspace.
- To make the images from this presentation available on the web and in other mobile applications.
 - ★ www.faa.gov/go/charlotte/

Metroplex

Thank you!



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