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Midair Collision Involving US Army PAT25 and PSA Airlines Flight 5342 Washington, DC January 29, 2025

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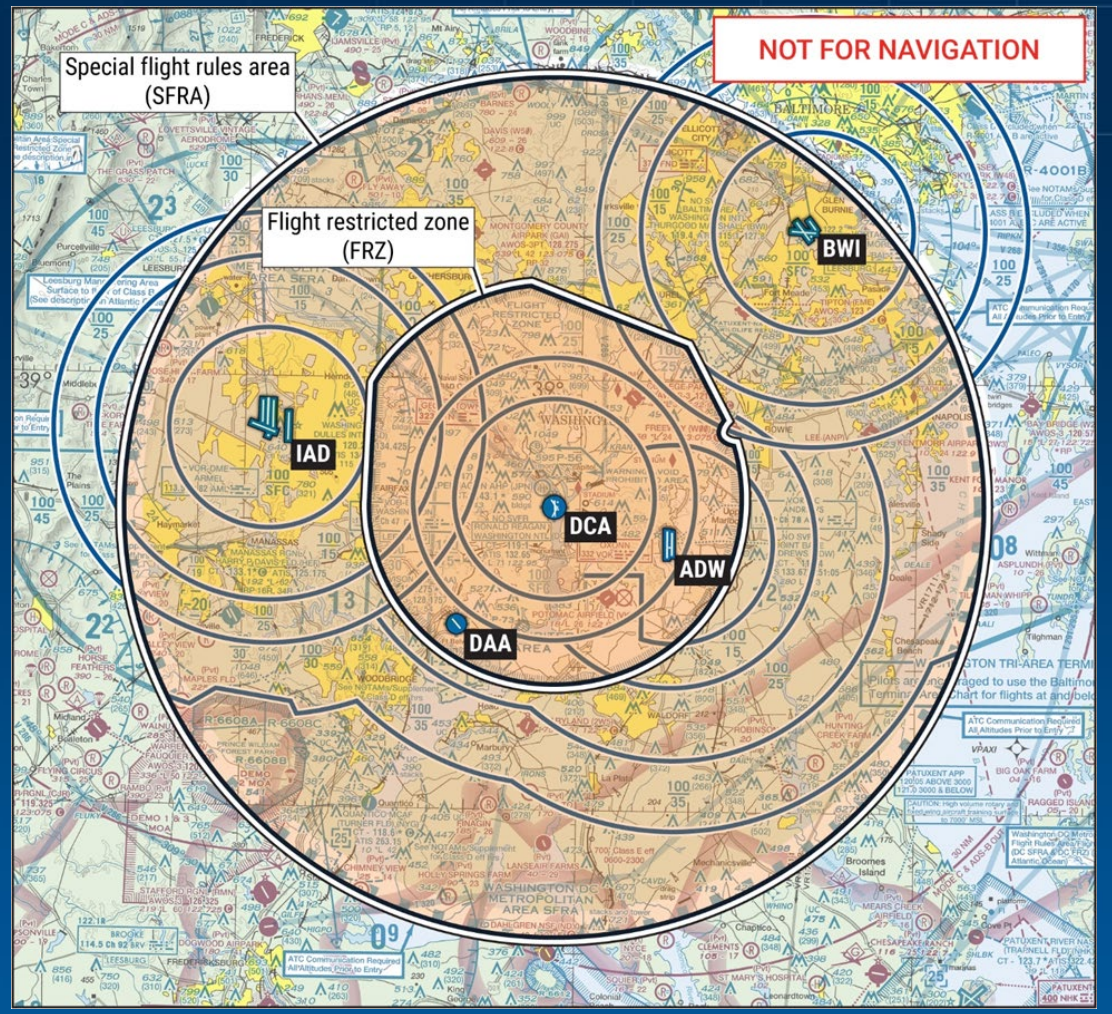
Air Traffic Control Group Chairman

Overview of Air Traffic Control (ATC)

- DCA airspace
- Helicopter Route 4
- DCA ATC tower helicopter working group
- DCA ATC tower facility level
- DCA traffic management
- Combining of local and helicopter control positions
- Visual separation
- Traffic advisories
- Safety alerts and positive control

Airspace Surrounding DCA

- Complex ATC operational environment with Special Flight Rules Area, Flight-Restricted Zone, and prohibited areas
- DCA tower's delegated airspace responsibility far more expansive than that of similar airports
- Extensive charted helicopter operating areas and routes



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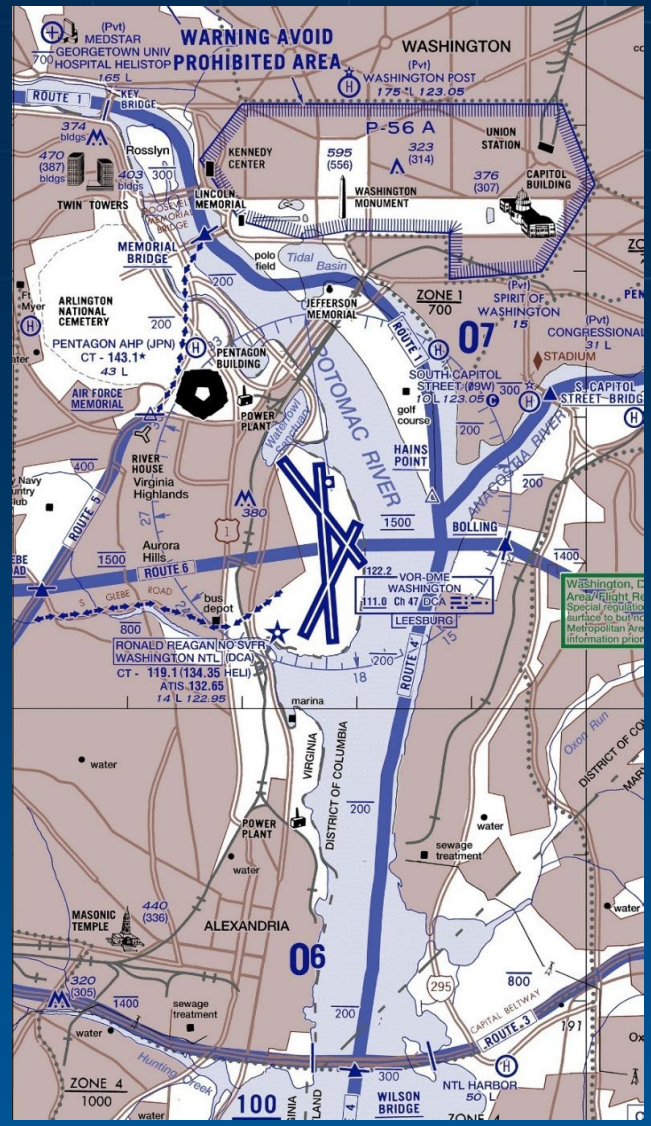
Helicopter Route 4

- Established in 1986
- One of several charted routes to transition helicopters through DCA Class B airspace
- Posed proximal conflict to runway 33 approach and runway 15 departure corridors
  - Routes never procedurally separated
- Understanding and interpretations varied across user groups



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DCA ATC Tower Helicopter Working Group

- Formed as direct result of near-midair collision in 2013 involving helicopter and airplane in same location as this accident
- Composed of DCA ATC tower staff only, local helicopter operators attended by invitation
- Proposed recommendations to remove or relocate Route 4 and add “hot spots” to aeronautical charting
- FAA chose not to act on recommendation to remove or relocate Route 4
- FAA rejected recommendation to add hot spots to helicopter route chart

DCA ATC Tower Facility Level

- In 2018 DCA ATC tower facility level downgraded from 10 to 9 due to change in method of computing traffic count
- FAA declined to provide criteria or metrics used to establish facility level
- Traffic count appears to be driving factor in facility level classification
- Inadequate consideration of airspace, airport, and operations complexity
- Facility health impacted by downgrade
  - Loss and inability to retain or recruit experience required at DCA tower
  - DC cost of living – biggest salary gap between two levels: 15%

What We Found: DCA ATC Tower Facility Level

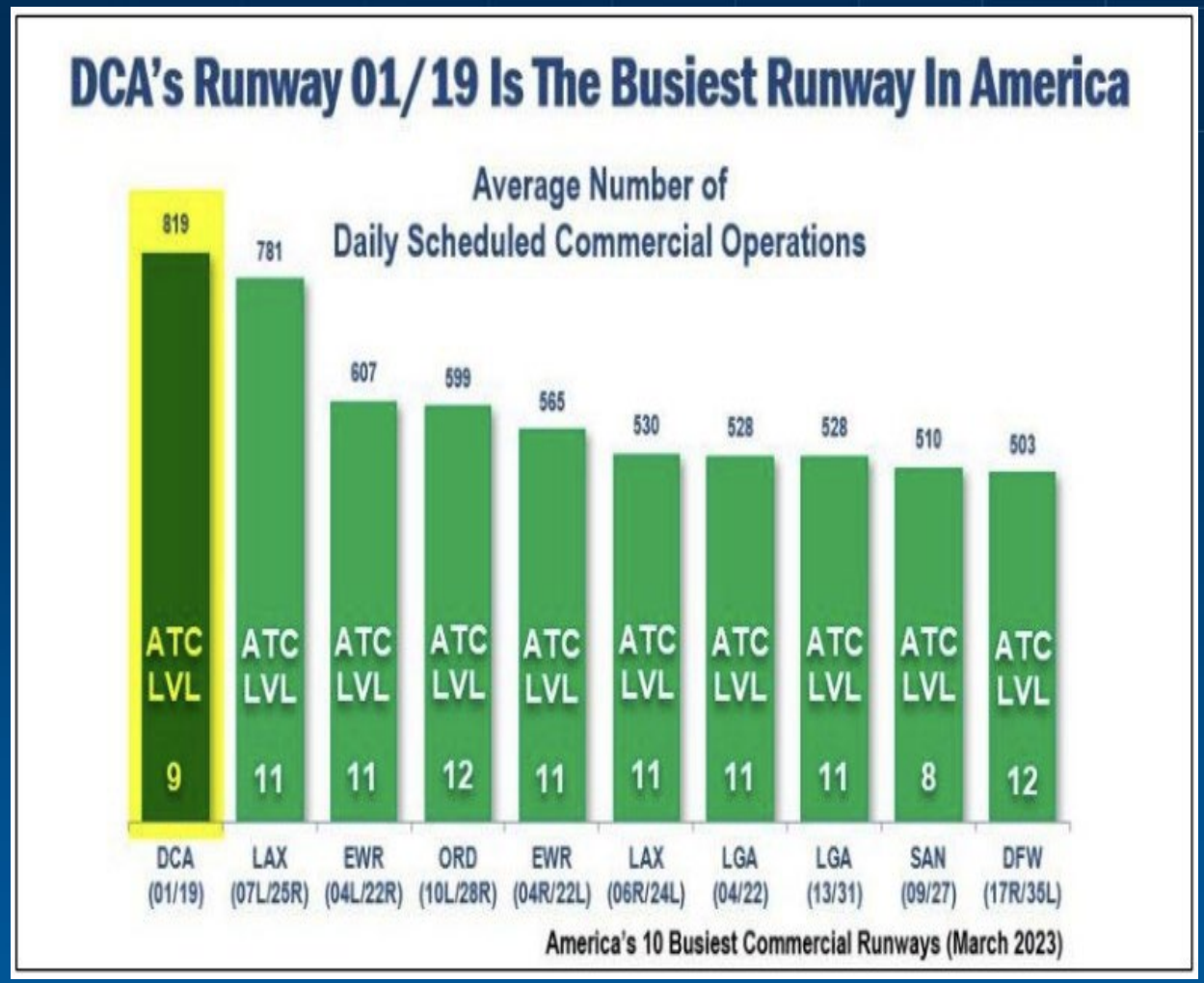
- DCA ATC tower has significant airfield, airspace, and mixed fleet complexities inconsistent with current facility level
- Aside from traffic count information, FAA provided no evidence that operational complexities or cost of living were considered in criteria for establishing facility levels

What we proposed:

- Two recommendations to FAA

Traffic Management

- DCA has busiest single runway in National Airspace System
- Capacity constrained airport
- Traffic flow managed through airport arrival rates, miles-in-trail spacing, and slot controls
- Limited surface area, complex geometry required “work-arounds” to avoid delays or gridlock



Traffic Management – Slot Controls

- FAA uses “slots” to limit scheduled air traffic at capacity-constrained airports, including DCA, John F. Kennedy (JFK), and LaGuardia (LGA)
- DCA was limited to maximum of 67 slots per hour
  - 60 by regulation
  - Additional 7 allowed by statute
- Some air carriers grouped slots into first and last half hour of 2-hour block
  - Resulted in periods of compacted demand
  - At times DCA operations reached 80 or more per hour
- DCA slots allocated in 60-minute blocks, LGA slots in 30-minute blocks

Traffic Management – Time-Based Flow Management (TBFM)

- TBFM core function is to provide ability to schedule aircraft within a stream of traffic to reach defined constraint point at specified times, creating a time-ordered sequence of traffic
- Equipment installed but system not activated for DCA
- American Airlines' testimony
  - TBFM at other hub airports "smooths out the volume" of traffic
  - Provides more accurate miles-in-trail

What We Found: Traffic Management

- DCA tower routinely received less than requested miles-in-trail spacing from Potomac TRACON, increasing controller workload
- Common mitigation strategy by DCA controllers was to “offload” arrival traffic to circling approach to runway 33
- DCA rulemaking to allocate traffic in 30-minute blocks similar to LGA would provide more consistent traffic flow
- TBFM would provide DCA tower with consistent flow of traffic with more accurate spacing and greater predictability

What we proposed:

- Three recommendations to FAA

Combining Local and Helicopter Control Positions

- Detailed policy guidance required to reduce risk by preventing combining of positions under the wrong circumstances
- Policy at DCA tower changed several times over several years
  - From “must be open” (2016)
  - To “must normally be decombined” (2023)
  - To “should normally be decombined” (2024)
- Softening of policy resulted in varied interpretation

What We Found: Combining Local and Helicopter Control Positions

- Day of accident: Helicopter position decombined for less than 1.5 hours entire day, had been combined for more than 5 hours before accident
- There was no requirement to log when helicopter control was combined to local control

What we proposed:

- One recommendation to FAA

Animation – DCA Tower View

Visual Separation

- Two types of visual separation: tower-applied and pilot-applied
- Used by ATC as primary means of separating helicopter and fixed-wing traffic operating in DCA class B airspace when weather allowed
- To not increase controller workload, traffic congestion and complexity:
  - Controllers motivated to authorize visual separation for helicopters
  - Helicopter crews encouraged to request visual separation early
- DCA tower documented history of lack of controller understanding and misapplication of pilot-applied visual separation

Traffic Advisories

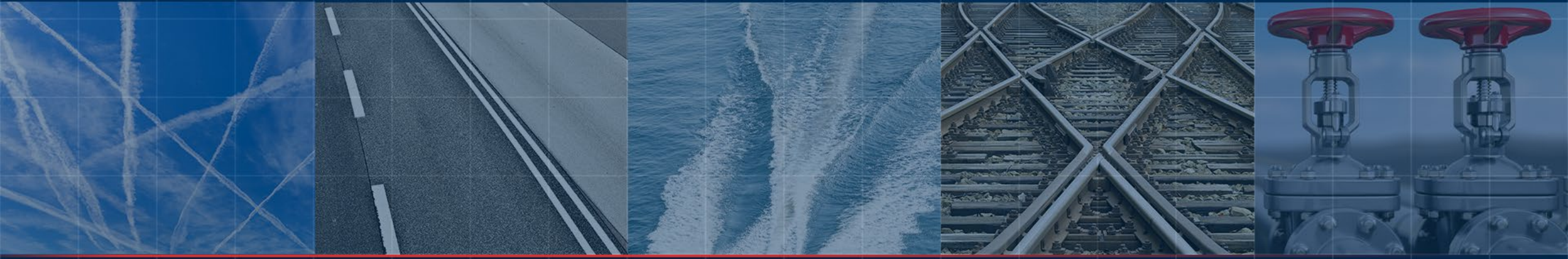
- Initial traffic advisory provided to PAT25, but no follow-on traffic advisories were provided
- No corresponding traffic advisories provided to PSA flight 5342
- Conflict alert first activated 26 seconds before collision while aircraft were 1.6 miles apart on converging courses
- Merging target procedures should have been provided, including traffic advisories to both aircraft

Safety Alerts

- Due to close proximity of PAT25 and PSA flight 5342 and a conflict alert active, local controller should have issued safety alert
- Safety alerts include updated traffic advisory information and an alternate course of action if feasible – neither were done in this case
- Would have increased situation awareness to both crews and alerted them of their closing proximity
- May have allowed action to be taken to avert the collision

Positive Control

- Positive control defined by FAA as “the separation of all air traffic within designated airspace” and includes “taking command of control situations and not acting in hesitant or unsure manner”
- Was not exercised by local controller on night of accident
- Had positive control with timely safety alert been provided, one or both flight crews may have been able to take action in time to avert collision



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