

Philadelphia International Airport (PHL) Northeast Philadelphia Airport (PNE)

Thomas Joseph, PE, PMP, CM

Assistant Engineering Manager

June 25, 2024



City of Philadelphia, Department of Aviation



PHILADELPHIA INTERNATIONAL AIRPORT NORTHEAST PHILADELPHIA AIRPORT

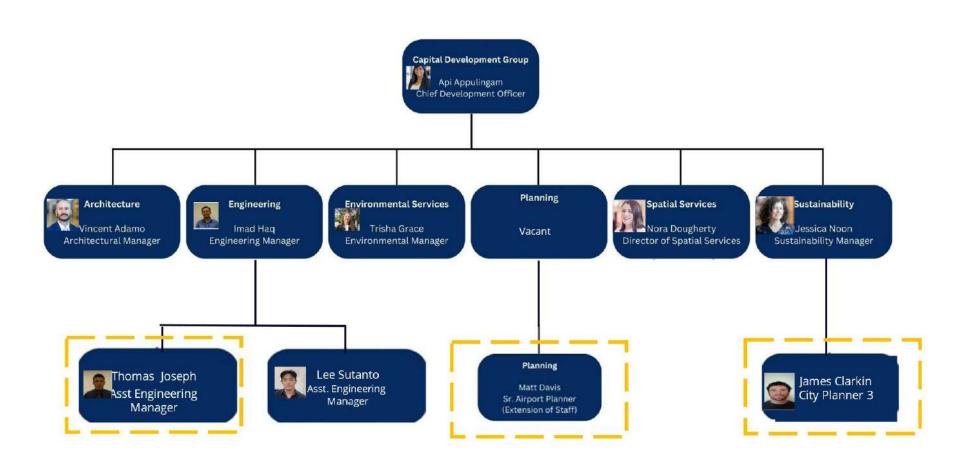
Department of Aviation's

Capital Development Group- Planning Unit



PHILADELPHIA INTERNATIONAL AIRPORT NORTHEAST PHILADELPHIA AIRPORT

Capital Development Group





j.

FAA Definition of Airport Planning

Airport planning is a systematic process that establishes a strategy for the efficient development of airports consistent with local, State and national goals.



What Does Planning Do?

Long Term Planning

- Master Plan Updates.
- Facility Assessments for Renewal and Replacement Projects.
- Coordinating Renewal and Replacement Projects with the Master Plan.

Short Term Planning

- Pen & Ink Changes to the ALP.
- Gate Planning: fitting new aircraft types into the existing gates.
- Processing and Tracking FAA 7460s.
- Obstruction Removal Coordination.

Advanced Planning

- Transitioning the Master Plan Projects from Planning to Design.
- Review of Other Proposed Developments.



Long Range Planning – Master Plan

Master Plan/Master Plan Update (MPU) development and coordination.

- To qualify for Federal Aid, an Airport must be included the FAA's National Plan of Integrated Airport Systems (NPIAS).
- The MPU defines the Long-Range (20 year) development goals of the Airport for incorporation into the NPIAS.
- The MPU includes:
 - Develop Long Range (20 Year) activity forecasts (Passengers, Cargo, and Operations). Current Master Plan was started in late 2019 and has a final target year of 2040.
 - Define Airport Federal Aid needs for the Planning Period (2040)
 - Establish an Implementation plan for recommended improvements.
 - Create a Funding Plan to identify FAA/Other Grant Eligibility.
 - Engagement to ensure community & other airport stakeholders' input/involvement.
 - An Airport Layout Plan (ALP) that depicts all the recommended improvements.



PHL AMPU Advanced Planning

FAA-Approved 2040 Planning Forecasts

Most recent FAA Forecast (TAF) is consistent with MPU forecast. **Aircraft Operations** Passenger Enplanements **PHL Historical and Forecast Passenger Enplanements** PHL Historical and Forecast Total Aircraft Operations 30.000.000 900000 Historical Forecast Historical Forecast 800000 FAA TAF 2010 MP (2007) 25,000,000 700000 21.2M MP (2007) FAA TAF 2023 20,000,000 60000 MPU (2021) 20.7M 500000 Actual 418k 15,000,000 8 Actual FAA TAF 2023 400000 409 MPU (2021) 10.000.000 300000 200000 5.000.000 100000 ---- FAA TAF (2023) ----- MPU (2021) ----- FAA TAF (2010) ----- Actual

Note: PHL 2007 MP based on 2004 actual activity, MPU 2021 FAA approved forecast based on 2019 actual activity.



CONFIDENTIAL

Preferred Terminal Alternative

Initial Phase

Terminal Benefits:

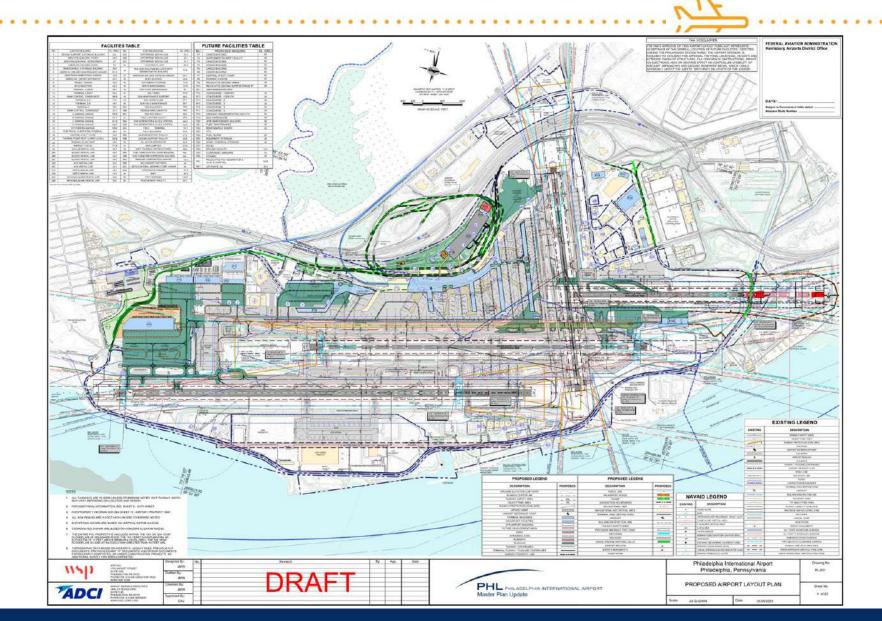
- Consolidated security checkpoint in headhouse
- Potential APM to help reduced walking distances
- Expanded concessions



Landside Benefits:

- Elevated roadways provide capacity
- Crosswalks eliminated
- Consolidated parking garage and rental car facility

Airport Layout Plan





What's not included in MPU?

- Coordination of Facility Assessments with Capital Development Program timelines.
 - Renewal and Replacement Projects that are the result of a more recent facility assessment that has identified a necessary repair or replacement that may be impacted by proposed MPU developments. (electrical systems, HVAC systems, telecommunications, roofing systems, etc.)
- Potential Non-Aeronautical Development. These are typically initially captured on an ALP with the area being identified and labeled as such.







PHLPNE

Short Term Planning

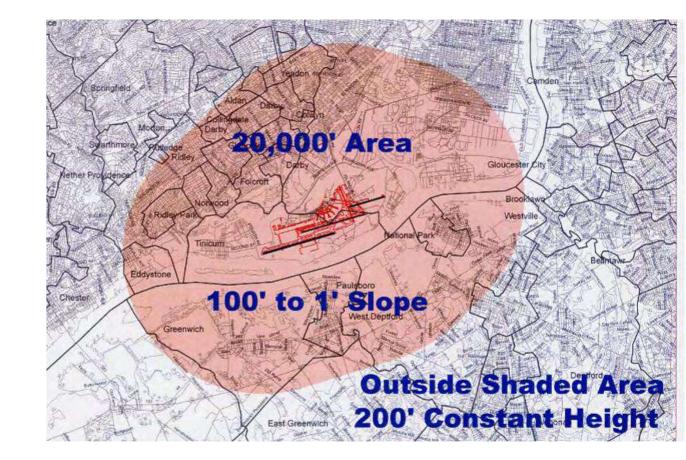
FAA Form 7460-1 Notice of Proposed Construction/Alteration

Within Airport Operation Area

 If any equipment or structure exceeds what has already been evaluated, a new 7460 will need to be filed. The new 7460 will then require 45 days notice for FAA review.

Outside Airport Operation Area

 The Federal Aviation Administration (FAA) requires a permit on equipment or structure any time that they will exceed a 100:1 sloped surface from the nearest point of the nearest runway out to 20,000 feet or 200 feet AGL (above ground level) beyond





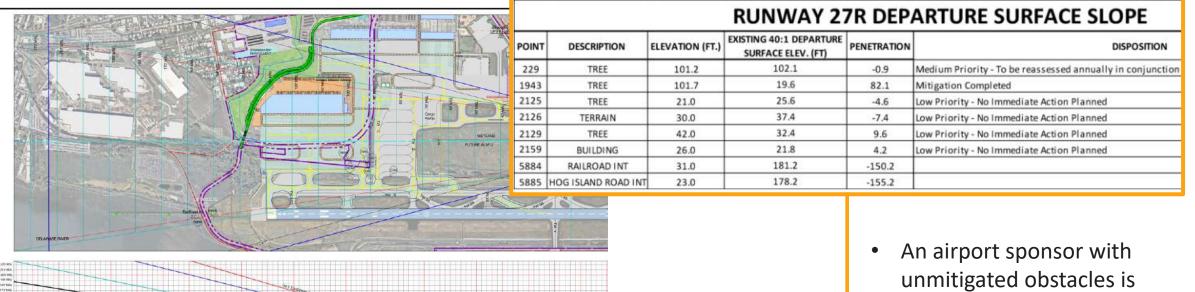
Short Term Planning – Gate Planning

A321 XLR Gate analysis for Concourses D and E





Short Term Planning Obstacle Action Plan (OAP)



- An airport sponsor with unmitigated obstacles is to develop an Obstacle Action Plan (OAP) that details how and when each of the surfaces will be cleared and maintained.
- OAP required to be updated annually.



Short Term Planning

- Review of new projects/developments not included in the Master Plan to ensure compatibility with the Master Plan/ALP and to facilitate changes to the Airport's ALP.
 - Review Business Case proposals for Commercial Development. (Examples)
 - New Airline/FBO Maintenance, Repair or Overhaul (MRO) facilities
 - Non-aeronautical developments (Hydrogen Terminal, Sea Level Rise Dike system, Community Walking Trails, etc.



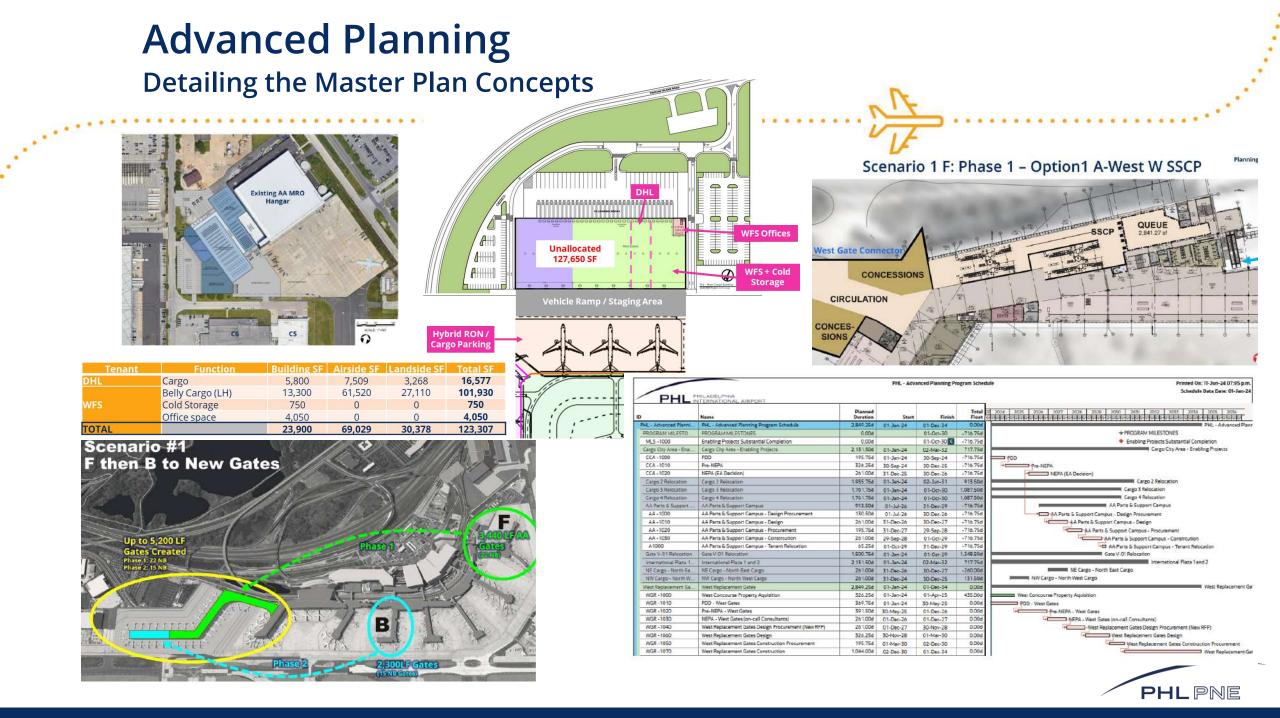
Advanced Planning

- Advanced Planning is a term that is commonly used to describe the process for refining a MPU recommendation to clarify detailed requirements for function, facilities being developed, and stakeholder engagement. The result of Advanced Planning is a PDD that can be used by designers to advance the design quickly.
- Program Development: As Advanced Planning defines the scope of the master plan projects, a Capital Improvement Plan is prepared to define the limits of a Capital Development Program.

Examples of some initial projects that are currently in the process of Advanced Planning for inclusion in the Airport's Capital Development Program:

- Enabling projects for West Gate Development.
 - Cargo Buildings C-2, C-3, & C-4
 - Gate V-01
 - MarketPlace/Centralized Concessions Distribution Center
 - IP1 & IP2 Relocation
- West Gate Development to establish swing space to rebuild existing terminal and concourses.
- Consolidated Rental Car Center.
- New parking decks, Ground Transportation Center, and a new hotel.
- Airfield Master Plan





Planning Unit Aspirations

- Build the planning unit with qualified airport planners led by a City Planning Manager.
- Develop Project Definition/Decision Documents in a timely fashion that guides and support Engineering Unit to design and construct new A-West-West Terminal





Thank You!

Thomas Joseph, PE, PMP, CM



City of Philadelphia, Department of Aviation



PHILADELPHIA INTERNATIONAL AIRPORT NORTHEAST PHILADELPHIA AIRPORT