Welcome!
• This session is being recorded.
• Put your questions in the ‘Chat’.
• Only the panelists’ cameras and microphones will be on.
• We will ask you to take a poll near the end of the session. Please respond!
Introductions
Introductions of Session Presenters

Api Appulingam, PE  
Deputy Director of Aviation, Capital Development  
City of Philadelphia, Division of Aviation

James Clarkin  
City Planner III  
City of Philadelphia, Division of Aviation

Christine Knapp  
Director  
City of Philadelphia, Office of Sustainability
Sustainability at the Airport
Capital Development Program

- Architecture
- Engineering
- Environmental
- Planning
- Sustainability
## Sustainability Focuses: RENEW

<table>
<thead>
<tr>
<th>Focus</th>
<th>Description</th>
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<tbody>
<tr>
<td>Recycling</td>
<td>Reduce waste generation and increase diversion from landfills</td>
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<tr>
<td>Energy</td>
<td>Improve energy efficiency, increase use of renewable energy</td>
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<tr>
<td>Noise</td>
<td>Consider and reduce noise impacts to community</td>
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<tr>
<td>Emissions</td>
<td>Protect air quality and adapt to climate change</td>
</tr>
<tr>
<td>Water</td>
<td>Encourage water conservation and protect water resources</td>
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</table>
Airports Council International – North America defines airport sustainability as a holistic approach to managing an airport so as to ensure Economic viability, Operational efficiency, Natural resource conservation and Social responsibility.

Innovating together toward a sustainable, resilient future
Glimpse of our projects
Airfield Projects

Remain Overnight Apron
- First enabling project that will allow for expansion of cargo operations as part of the West Cargo Development
- 58,000 SF of new aircraft apron
- Use of Ultra-Lightweight Foamed Glass Aggregate (UL-FGA) to mitigate settlement of pavement

PNE Runway 6-24 Reconstruction
- The project involves full depth reconstruction phased over three years
- Subgrade stabilization method used to save time and cost resulting in a better product
- Installation of runway and taxiway edge lights and conversion from incandescent to LEDs
Terminal Projects

Restroom Renovation Program
• Airport complex is served by 48 sets of passenger-facing restrooms
• Renovation of these restrooms are undertaken on a phased approach
  – Upgrading to modern standards
  – Improving quality & comfort
  – Accommodating more passengers
  – Focus on sustainability

PBB Pre-conditioned Air Upgrades
• Upgrading 11 PCAs at Terminals D & E
• Received $2.8M Voluntary Airport Low Emission (VALE) grant from the Federal Aviation Administration (FAA)
Other Projects

PNE Solar Farm
• Entering a Power Purchase Agreement for the installation, maintenance, and operation of photovoltaic panels to offset electric costs at PNE over the long term
• 6-acre site designated for this development

eGSE Charging Stations
• Installed 13 dual-port electric charging stations
• Southwest Airlines will be replacing petroleum-based ground support equipment with electric GSE
• Received $1M Voluntary Airport Low Emission (VALE) grant from the Federal Aviation Administration (FAA)
What’s new?
REQUEST FOR PROPOSALS (RFP)

For
ON CALL MECHANICAL, ELECTRICAL, PLUMBING, ENGINEERING & CONSULTING SERVICES
Philadelphia International Airport & Northeast Philadelphia Airport

Issued by:
CITY OF PHILADELPHIA
Department of Commerce, Division of Aviation

All proposals must be submitted electronically to the correct contract opportunity established for this RFP (identified by opportunity number), through the eContract Philly online application process at www.phillyurb.com/contract. Choose eContract Philly. Applicants who have failed to file complete applications through the eContract Philly online application process will not be considered for the contract.

Proposals must be received no later than 3:00 p.m., Philadelphia, PA, local time, on OCTOBER 12, 2020.

An optional pre-proposal Conference will be held VIRTUALLY via Microsoft Teams (no in-person attendance) on SEPTEMBER 17, 2020 at 3:00 PM

James Kenney, Mayor
City of Philadelphia

Rodrigo Camacho, Chief Executive Officer
Philadelphia International Airport

Sustainability and Resiliency Integration

Consistent with the City of Philadelphia’s and Aviator’s climate adaptation and sustainability plans, policies, and guidelines, including Aviation’s Architectural and Engineering Standards, it is the intent of Aviation to develop projects in a manner that is environmentally responsible, energy efficient, and resilient to climate change impacts.

The Proposal shall describe the proposed approach to Sustainable Design and Construction. This approach should demonstrate integration of sustainability and resiliency into all phases of the planning, design and construction process whenever practically feasible. At a minimum, the Proposal should include a description of the approach to:

- evaluation and integration of sustainable practices that lead to energy, waste, or water efficiency improvements to the greatest extent possible;
- utilization of energy modeling and other tools to assess and evaluate options for building systems, thermal plants, and other MEP systems beyond code requirements;
- energy/water cost savings analysis, life cycle cost analysis or other acceptable sustainability (triple bottom line) cost-benefit analysis;
- resource conservation and reuse technologies (water, energy, waste, food, coolants, soil and others);
- consideration of innovative sanitary, plumbing, graywater, electrical, and mechanical systems and equipment that improve building performance in the areas of energy and water consumption;
- protection of indoor and outdoor air quality, including efforts to reduce greenhouse gas emissions;
- adaptability to anticipated climate change impacts (including sea level rise, flooding, extreme heat, and extreme storm events), including consideration of flexibility, redundancy, operational resiliency, and increased self-reliant approaches such as on site energy generation and recovery, microgrids, closed loop systems; and other sustainable best practices;
- compliance with local, state and federal environmental regulations and guidance, including the City of Philadelphia’s building energy policy requirements (§ 5-3404).

The proposal approach shall also demonstrate how the prime Applicants and subconsultants conduct and/or promote sustainable operating practices within their own organizations, such as environmentally preferable purchasing, sustainable travel, and waste minimization.
Design Standards

- DOA updating our design standards to capture more PHL projects to be LEED or Envision Certified
- This will help DOA and the City of Philadelphia meet its carbon neutrality goal by 2050
- Envision will allow flat infrastructure projects like RWYs and TWYs be more sustainable, have long term savings, and longer life of assets
Sustainability & Climate Plans

• Sustainability Management Plan Phase 2
  • Revise and update PHL’s sustainability goals for the coming decade
  • Resource tool for Capital Development to be more sustainable

• Climate Adaptation and Resiliency Plan Phase 2
  • Document all of PHL’s major assets and their vulnerability to climate stressors
  • Assist PHL in prioritizing the most critical assets to protect or mitigate from climate stressors most likely to impact PHL assets
  • Guide Capital Development projects with resiliency and mitigation incorporated into design.
Building Energy Performance

• Division of Aviation decided to pursue a Level 2 ASHRAE audit to comply with City’s BEPP ordinance

• Currently looking at Energy Conservation Measures that have a payback of 3 years or less to implement at PHL in the coming years.

• Continue upgrades of PHL’s HVAC, thermal plant, and lighting systems to improve energy performance.
Airport Carbon Accreditation

The program provides a framework for airports to reduce carbon emissions through four levels of accreditation.

- Applied to ACA for Level 1 Airport Carbon Accreditation
- Used 2019 as our Year 0 or base year
- Will consider upgrading to Level 2 in future years

1. Mapping
Determine Scope 1 and 2 carbon footprint and have it verified by a third party

2. Reduction
Provide evidence of effective carbon management and show that targets have been achieved

3. Optimization
Add Scope 3 emissions and engage third parties in sustainability

4. Neutrality
Offset remaining emissions over which airport has control to achieve carbon neutrality
About the Office of Sustainability
Greenworks Vision at a Glance

**VISION 01**
All Philadelphians have access to healthy, affordable, and sustainable food and drinking water

**VISION 02**
All Philadelphians breathe healthy air inside and outside

**VISION 03**
All Philadelphians efficiently use clean energy that they can afford

**VISION 04**
All Philadelphians are prepared for climate change and reduce carbon pollution

**VISION 05**
Philadelphians benefit from parks, trees, stormwater management, and healthy waterways

**VISION 06**
All Philadelphians have access to safe, affordable, and low-carbon transportation

**VISION 07**
All Philadelphians waste less and keep our neighborhoods clean

**VISION 08**
All Philadelphians benefit from sustainability education, employment, and business opportunities
Climate Action Playbook

The Playbook outlines climate actions in three areas:

1. Reducing our Contribution to Climate Change
   Actions to reduce carbon pollution.

2. Utilizing Nature as a Solution to Climate Pollution
   Actions to remove carbon pollution from the atmosphere.

3. Adapting to a Changing Climate
   Actions to prepare Philadelphia for a hotter, wetter future.
Reducing Philadelphia’s Carbon Footprint

- Energy benchmarking and Building Energy Performance program
- Commercial Property Assessed Clean Energy
- PECO Smart Ideas and PGW Energysense programs
- Solar power purchase agreement
- Solarize Philly
- Bright Solar Futures
- PGW diversification study
- Bike lane installations
- Indego bikeshare
- Direct bus service and bus only lanes
- Bus map remapping
- Recycling program
- Community composting program and city compost project
- Plastic bag ban
- Municipal waste audit
- Zero Waste Partnership

Built environment = 72% of local carbon emissions
Transportation = 25% of local carbon emissions
Waste = 3% of local carbon emissions
Municipal Energy Master Plan

Reduce greenhouse gas emissions from the City's built environment 50 percent by 2030

Reduce the City's built environment energy use 20 percent by 2030

Generate or purchase 100 percent of all electricity for the City's built environment from renewable resources by 2030

Maintain or reduce the City's built environment cost of energy

Nonstop PHL - MOVING FORWARD TOGETHER
Municipal Energy Master Plan

Use Less Energy:
• Improve Operation Practices
• Energy Performance Contracts
• LED Street Lighting Conversion
• Capital and Rebuild Projects
• Greenworks Sustainability Fund
• SmartCityPHL Energy projects

Use Cleaner Energy:
• Purchase Clean Energy
• On-Site Clean Energy Generation

Nonstop PHL - Moving Forward Together
Building Energy Performance Policy

- Builds off the success of the City’s 2012 Energy Benchmarking ordinance
- Requires non-commercial buildings over 50,000 square feet to demonstrate achievement of a high performance building standard or to perform a tune-up on their building every five years
- Estimated to cut carbon emissions by 200,000 metric tons and create 600 local jobs
- First compliance period in 2022
Municipal Clean Fleet Plan

- Sets new goals to create a pathway to zero emissions
- Institutes a clean fleet procurement policy
- Establishes a Clean Fleet Committee to oversee infrastructure issues and track goals
- Develops funding programs to connect capital procurement and fuel cost/operational savings
- Optimizes alternative fueling and EVSE infrastructure
Climate Adaptation and Resilience
Philadelphia is projected to experience four to 10 times as many days per year above 95°F, and as many as 16 days a year above 100°F by the end of the century. More of these hot days may arrive as heat waves, increasing the risk of residents experiencing heat-related health problems.

Philadelphia is projected to experience more frequent and intense storms—with the largest increase during winter months. Rising seas affect water levels in the Delaware and Schuylkill Rivers which will increase the depth and extent of flooding.
Building Urban Resilience
Upcoming Opportunities
Professional Services

- On-Call Sustainability Consulting Services
  - Assistance with the Sustainability program & planning efforts
  - Assistance with ongoing implementation of goals, targets, and initiatives
  - Establishment of baseline metrics and projections for PHL and PNE
  - Involvement with comprehensive management programs related to waste, energy, air emissions, climate change, noise, wetlands, social/economic components, etc.

- RFP - Q2 2022
Professional Services

On-Call Federal Project Management  
Related service for Philadelphia International and Northeast Airport’s federally funded projects.

Construction Management/Construction Inspections  
Services related to the relocation of Tinicum Island Road to the perimeter of the West Cargo Expansion Area to maximize the future development area.

Construction Management/Construction Inspections  
Wetland Mitigation efforts at FDR park in South Philadelphia

Visit www.phl.org/about/cdp/opportunities
Questions and Answers

- Questions and Answers
  - On the Breakout Sessions tab, put your questions in the ‘Chat’

- Polling
  - Please click into the Poll tab and answer 3 short questions
Thank you

- When instructed, click the link on the left of your screen for the Main Ballroom to meet the PHL Management Team for a Q&A Session.
- Answer “Yes” to Leave and return to the Main Ballroom.