City Of Phoenix Aviation Department Facilities & Services

IFMA Airports Council October 15, 2019
Phoenix Sky Harbor International Airport (PHX)

- 44,943,686 Passengers 2018
- 120,000 passengers per day
- 434,252 Operations 2018
- 3 Airports - PHX, DVT & GYR
- 3 Runways & 12 taxiways
- 3 Terminals
- City of Phoenix Department
- America’s Friendliest Airport
PHX Facilities
Fun Facts

- 412 employees
- 12 Sections
- $102 Million Operating budget
- >$80 Million CIP budget
- 24/7/365 Coverage
Facilities & Services Organizational Chart

Sobble Field
Deputy Aviation Director

Alice Rimer
Specials Projects Administrator

- Daniel Bustamante
  - Lock Shop
- Cynthia Parker
  - Sustainability Coordinator
- Dan Guick
  - Administrative Manager
  - (Vacant)
  - Project Manager

- Gabriel Nevarez
  - Support Services Aviation Superintendent
- Jennifer Maples
  - Planning Aviation Superintendent
- Ken Cook
  - Building Services Aviation Superintendent
- Gary Lougren
  - Systems Aviation Superintendent

- Modesto Valdez
  - Vertical Transportation
- Gary Jacobsen
  - Fleet Services
- Anthony Dobbs
  - Sign Shop
- Pete Taylor
  - Airstrip Maintenance
- Steve Perez
  - Building Maintenance – F4
- Jon Budd
  - Building Maintenance – F3
- Victor Lopez
  - In-Line EG

- Eddy Amareta
  - RCC Equipment Manager and Weld Shop Generators
- Carmen Naeer
  - Terminal Services
- Todd Baik
  - Recycling Coordinator
- Kim Keith
  - Landscape Maintenance
- Victor Lopez
  - In-Line EG

- Patrick Razan (Acting)
  - Aviation Supply
- Matthew Martinez
  - Landscape Maintenance

- Jerry Costes
  - Mechanical Maintenance
- Chet Fruegard
  - Mechanical Maintenance
- Ken McKinney
  - Airside Electrical
- Joe Rossillo
  - Landscape Electrical
- Dan Schuch
  - Energy Systems
Airfield Maintenance

3 Runways, 12 taxiways, ramps, streets & surface parking

- 31 million sq. feet asphalt
- 26 million sq. feet concrete
- 22,000 gallons of paint
- 30 miles of fencing
- 600 acres weed/soil stabilization
Airfield Maintenance

- 90,000 pounds crack seal
- 300 gallons of joint seal material
- 150,000 linear feet markings
- Rubber removal
Airfield Maintenance

Weed control & vegetation removal
Building Maintenance

- Maintains infrastructure for 10.5 million square feet including:
  - 9.5 million sf of roofs
  - 400,000+ sf of carpet

- Preventative & stealth maintenance
  - Plumbing, carpentry, tile setting, painting, flooring, roofing, masonry work
Baggage Handling Systems-EDS

- Maintains all inbound and outbound BHS
  - 7 outbound systems, 3 terminals & 19 inbound carousels
- O&M - 7.3 miles of conveyor sections & 14.6 miles of belts
- 29 L3 Explosive Detection machines, 8 screening matrices
- Contract for O&M on outbound systems except controls (handled by City staff)
- Central Control Room - Tracking up to 1M bags per month
Electrical Maintenance

- LED’s - Airside and Landside-retrofit and new fixtures
- Lighting controls for airfield & interior
- Lamps and fixtures both interior and exterior - dozens of styles used-big push toward LED retrofits
- SES maintenance and PM’s, ARC Flash Studies
Electrical - Airfield Lighting

- 7400 Total light fixtures and signs on the airfield
- 350 miles of underground cabling
- LED Conversions
Energy Management & Fire Prevention

- Fire alarm automation and monitoring
- Facility Access Control System
- Monitor energy use including solar installations - 5.4 Megawatts
- Install and maintain VFD’s
- T4 Retro Commissioning
- Next: Plant optimization and predictive maintenance
Fleet Equipment

• Repair and PM Programs for 900+ vehicles & pieces of equipment

• Oversee daily operation of onsite fueling stations dispensing an average of 1,200 gallons daily of B20, E54, UNL & CNG fuels.

• 45 generators campus wide-maintenance and replacement programs
Landscape Maintenance Highlights:
• 270 acres at 3 Airports; PHX, DVT, GYR
• Maintains 50,000+ plants and 6,000+ trees
• Staff of 32
Landside Maintenance

- Sweep and scrub runways/taxiways and roadways.
- Power clean exterior airport surfaces while maintaining surface integrity.
- Collect and dispose of waste and recyclable materials.
- Clean escalators and moving walkways.
- Remove debris caused by storms and inclement weather.

10 million pounds of recycle material collected annually
Mechanical Maintenance

- 7,000 pieces of mechanical equipment
- 7 chilled water plants - 14,750 tons of cooling!
- Cooling system at T4 could cool 1,900 homes (4 chillers)
- 200 Automatic doors
Security Gates, Fencing and Barriers

- Nearly 14 miles of hardened perimeter fence.

- Poured in place jersey style barriers, K-12 cabling, various fencing types employed.
Mechanical Maintenance

Green Cooling Tower Project

- Installed a water softening tank system to remove scale and mineral accumulation in T4 cooling equipment.

- Installed a MIOX generator that controls bacterial growth without hazardous chemicals.

- Dramatic reduction of scale build-up in the cooling system.

- Life cycle expectancy from 10 to 20 years.

- Approx. savings of $200,000 annually in water conservation and conditioning chemicals.
Weld Shop & Lock Shop

Weld Shop
- Repairs airport fence, gates, airport automotive equipment, and supports all sections

Lock Shop
- Mechanical and electronic lock systems for all 3 airports
- 1500+ trilogy locks
- 500 keys,
- 1500 users
- $250,000+ inventory
Recycling Program

- Versatile Collection Stations
- Liquid Collection Stations
- Bottle Filling Stations
- Back of House Compost Program
- Enhanced Program Signage
Sign Program

Signage Master Plan
- Implemented in 2012
- Created standards and branding
- Leader in LED Edge Lit Signage
  - Plug-and-Play technology
- Dynamic Signage in key locations

Sign Standards - over 10,000 signs
- 50+ Regulatory Sign Types
  - Exceed MUTCD in most cases
- 50+ Wayfinding Sign Types
  - Change over 300 signs with every new airline
Sustainability

- Sustainability Plan Update
- Water Conservation
  - Turf Removal & T4 Cooling Tower Treatment Program
- Waste Diversion - 40% by 2020
- Voluntary Airport Low Emissions (VALE) Grant
- Solar & Bio-Fuels - Renewable Energy
- Strategic Energy Management Plan - Energy Control Measures
- Carbon Footprint - Greenhouse Gas Reduction
Terminal Services
Custodial & Window Cleaning

- Oversee contractors that provide custodial services, regulated garbage handling, odor control services, window cleaning services, and janitorial supplies.
- 1.7 million square feet
- 150 Restrooms
Vertical Transportation

• Coordinate and oversee all repair, preventative maintenance, new installation, replacement and inspection of all conveyance equipment.

• Approximate annual budget $6.7 million dollars.

• Total of 235 units combined.
Planning & Projects

- $2B Capital Program: T3 Mod, Sky Train Phase 2, T4S1
  - Design Standards
  - Engagement: Program Definition to Completion
  - O&M Budget Development for new facilities
  - Design Review & Feedback at 30/60/90%
  - Submittal and RFI Review & Feedback
  - Project Closeout - Punch Walks, Commissioning, Attic Stock, Warranties, O&M Manuals, Training
  - ORAT
- Tenant Improvements
- T4 Infrastructure Renewal
- Facility Condition Assessments
F&S Key Performance Indicators

- Employee wrench time - 70%
- Maintain a 95% response time for Priority 1 (within 1 hour) and Priority 2 (within 24 hours) work orders
- Maintain a discrepancy-free FAA Part 139 Inspection
- Zero OSHA Violations per year
- Baggage Handling
  - System reliability 99%
  - Respond to bag jams within 3 minutes
  - Sortation Accuracy - 95% to proper make up device
More F&S Key Performance Indicators

- **Vertical Transportation**
  - Respond to entrapments and restarts within 15 minutes 95% of the time

- **Terminal Services**
  - Ensure Contractor responds to trouble calls within 30 minutes 100% of time

- **Sustainability**
  - Reduce Carbon Footprint & water use by 10% by 2020
  - Reduce Energy use by 20% by 2020
  - Increase Waste Diversion Rate to 40% by 2020
Survey other airports to determine facilities maintenance costs compared to our peers.
Questions?
Thank You!

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