

ABOUT THE AIRPORT

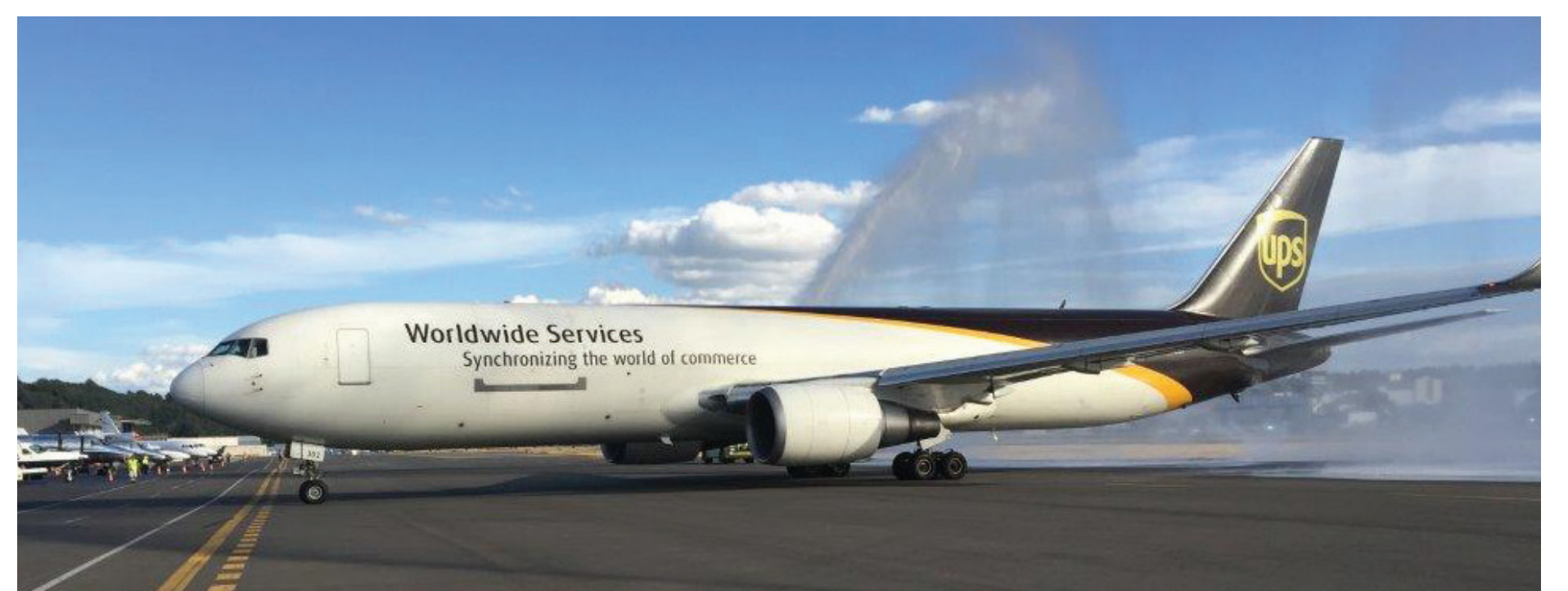
King County International Airport/Boeing Field: An Important Regional Resource

Boeing Field is an essential public facility that supports a diversity of activities, including:

- **Cargo Facilities/Operations (e.g., UPS)**
- **General Aviation Facilities/Operations (Commercial, Corporate, Training, Recreation)**
- **Military Operations**
- **Passenger Service, Facilities/Operations (e.g., Kenmore Air)**
- **Aviation Industrial Facilities (e.g., Boeing's Civilian & Military Aircraft Flight-Test, Maintenance, and 737 Delivery Programs)**
- **The Museum of Flight**
- **Airport Support Facilities (e.g., ATCT, ARFF, Fuel Storage, Maintenance)**

The airport has been named one of the "100 Most Needed Airports" by the National Air Transportation Association.

It is owned and managed by King County, financed by airport tenant and customer fees, and receives no general tax revenues.



The Airport by the Numbers:

\$ \$3.5 billion
local business sales supporting
over **16,000** direct and
indirect jobs across the region

150 tenants
directly supporting
over **5,000** jobs

Approximately
166,000
takeoffs and
landings each year

ABOUT THE MASTER PLAN UPDATE

What is an Airport Master Plan?

Like any large airport, Boeing Field has a master plan that describes land use planning and capital projects to meet growing aviation demands while meeting the strictest aviation safety standards.

What are the Goals of the Master Plan Update?

It has been 12 years since the current master plan was adopted, and projects in that plan have largely been completed. The updated plan will serve as a 20-year roadmap for the layout and improvement of the airport's facilities.

Master Plan Update Outcomes

- **Ensure the airport's long-term viability and economic contribution to the regional economy**
- **Enhance airport safety**
- **Ensure that the airport can continue receiving federal funding through the Federal Aviation Administration (FAA)**
- **Further goals set out in the 2014 Airport Strategic Plan**

Other Plans that Guide this Effort

Airport Goals

from the Airport Strategic Plan (2014-2020)

**Support
economic vitality**

**Environmental
stewardship**

**Organization
development and
capacity**

**Communications
and community
partnerships**

**Maintain a world-
class facility**

**Financial
performance**

Guiding principles

from the King County Strategic Plan (2015)

Equitable and fair

Financially sustainable

Regionally collaborative

Quality local government

ABOUT THE MASTER PLAN UPDATE

The Master Plan Update Process

Airport Working Group

King County has assembled an Airport Working Group (AWG) representing diverse interests to review and discuss the working papers. AWG members include pilot and business tenant representatives, representatives from other aviation-related businesses, local labor, and economic development, environmental as well as community and neighborhood interests.



Public Involvement

Involving the public is an important part of this planning process. The airport is seeking community input throughout the plan development process and at key project milestones through a series of public meetings, including this open house. Stakeholder and community perspectives will inform the analysis and content of the Master Plan Update, prior to a final public hearing and King County Council's adoption of the plan.

Working Papers

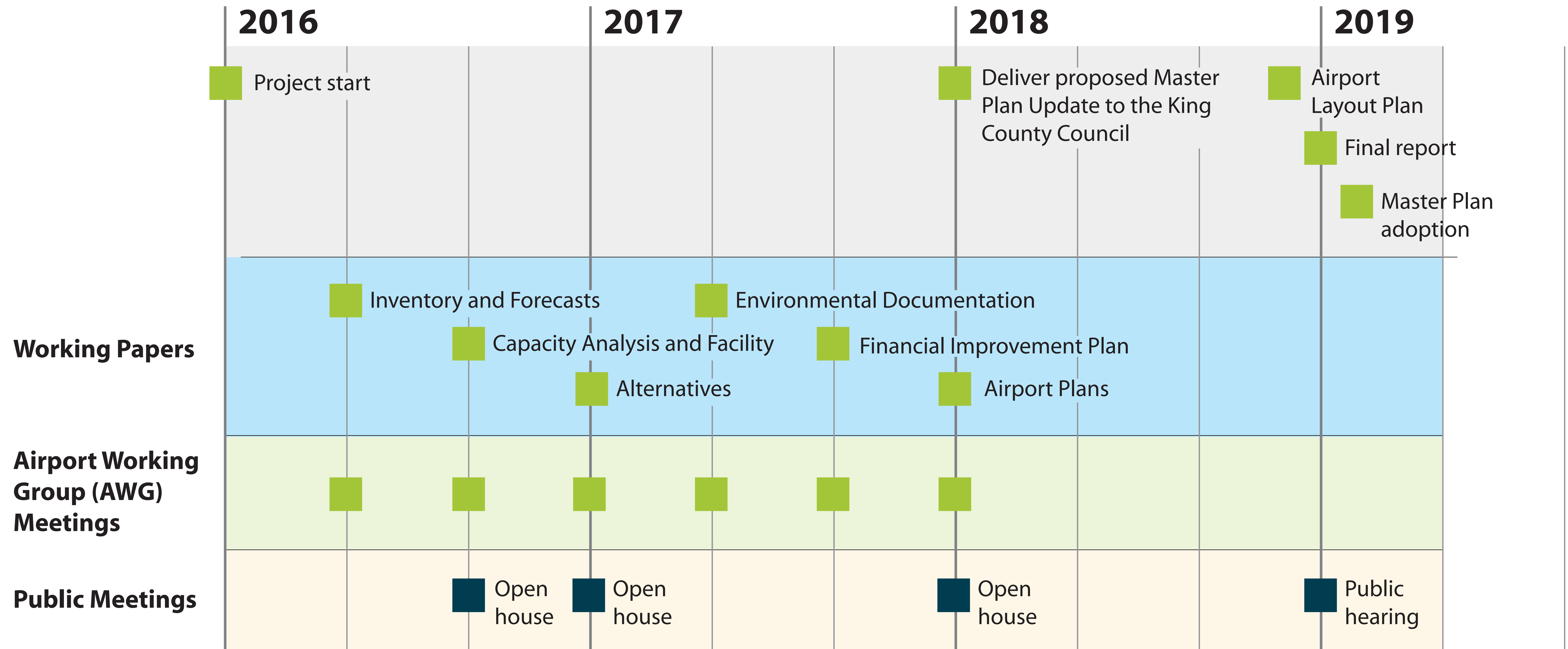
The update process centers around a series of five working papers researched and drafted by third-party experts.

Working Paper Goals

- **Document and evaluate existing airport facilities**
- **Forecast future aviation demand**
- **Identify future capacity and facility requirements**
- **Identify potential alternatives and a Recommended Development Plan**
- **Prepare financial and capital improvement plans to implement the Recommended Development Plan**

ABOUT THE MASTER PLAN UPDATE

Project Schedule



RECENT FINDINGS FROM AIRPORT STUDIES

Existing Airport Inventory

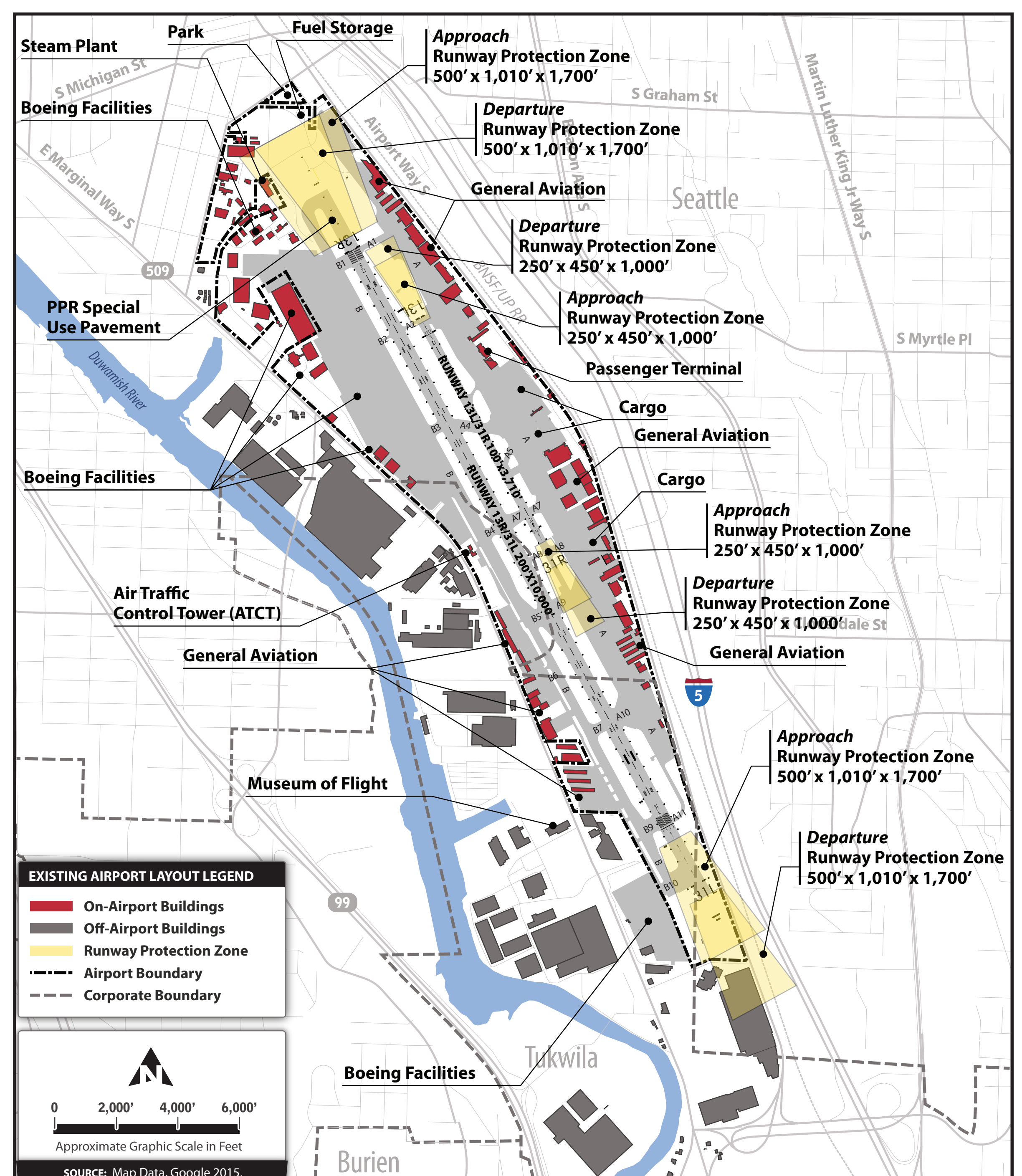
The first working paper, released in May 2016, included an inventory of existing airport facilities. An airport inventory helps to:

- Document current airside and landside facilities
- Update airport facility and obstruction data mapping with new aerial photography and survey
- Document existing environmental conditions
- Update existing zoning and land use within airport environs

Inventory Highlights

- Airport Property @ 594 acres
- Two (2) Runways, Supporting Taxiway System, & Large Aprons
- Runway 13R/31L (Primary @ 200' x 10,000')
- Runway 13L/31R (Secondary @ 100' x 3,710')
- Five (5) IAPs/Congested Airspace
- Commercial Passenger Service/Terminal Area Facilities
- General Aviation Facilities (Commercial, Corporate, & Small GA)
- Aviation Industrial Facilities (Boeing)
- Air Cargo Facilities
- Aviation-Related Facilities (Museum of Flight)
- Airport Support Facilities (Air Traffic Control Tower, ARFF, Fuel Storage, etc.)

Existing Airport Layout



RECENT FINDINGS FROM AIRPORT STUDIES

Forecasts of Aviation Activity

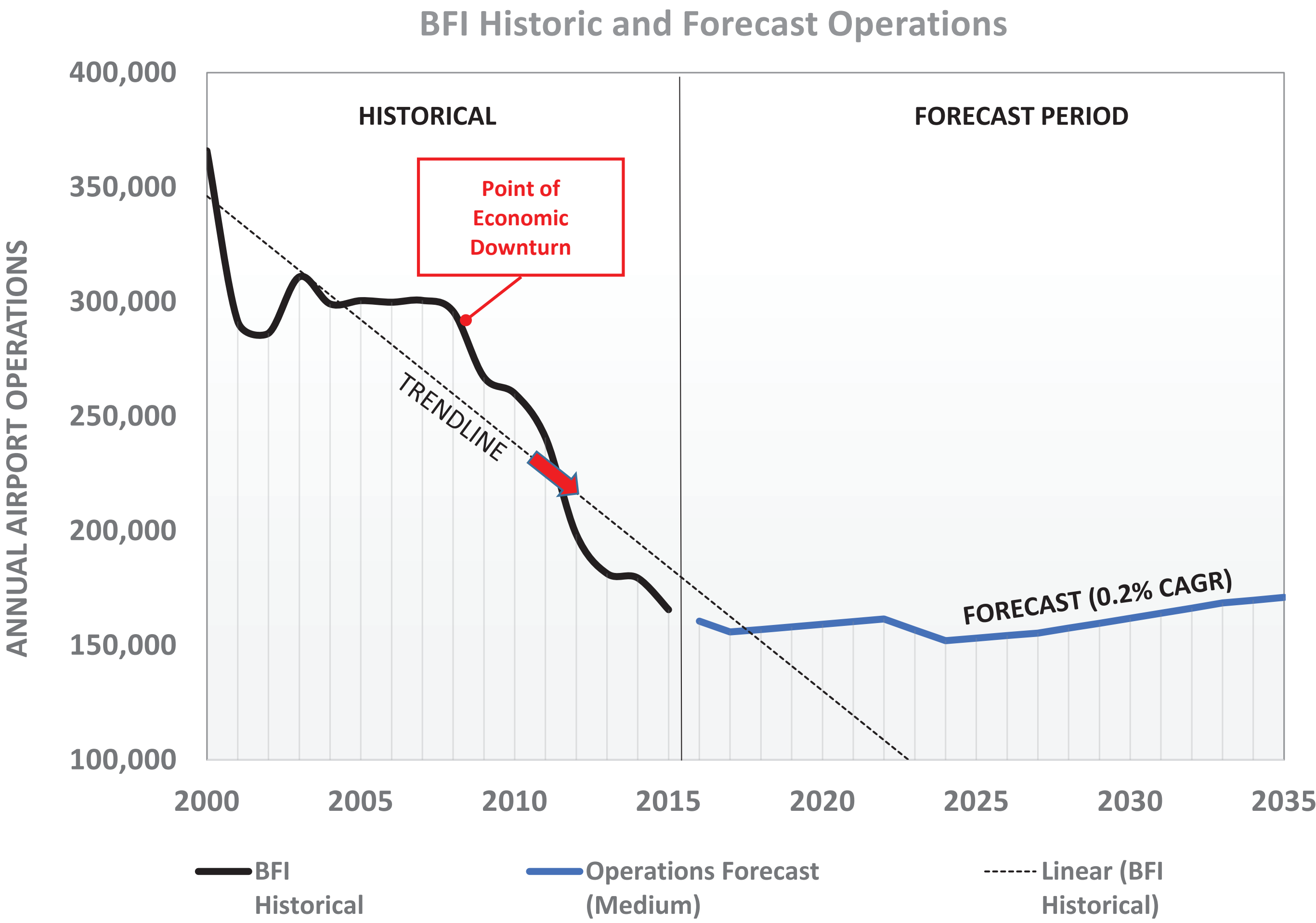
In addition to the airport inventory, the first working paper also analyzed trends in the airport’s aircraft activity over recent years and forecasted activity.

	Historic activity (2000-2015)	Forecasted activity (2015-2035)*
Total Operations	359,626 → 165,571	165,571 → 170,956 +0.2%
Passenger Enplanements	4,343 → 20,214	20,214 → 39,186 +3.37%
General Aviation Operations	299,234 → 143,783	148,783 → 142,039 -0.06%
Cargo Operations	4,802** → 12,336	12,336 → 15,052 +1.0%
Based Aircraft	478 → 380	380 → 372 -0.1%

*Percentages refer to Compound Annual Growth Rates (CAGR)

** From 2003

Source: FAA Terminal Area Forecast



Key Takeaway: While general aviation activity has significantly decreased over the last 15 years, the corporate and business-use sector of general aviation is projected to increase through 2035.

RECENT FINDINGS FROM AIRPORT STUDIES

How Does This Airport Compare to National Trends?

Here are data that show historic average rates of change in the different categories of airport operations over the last 15 years.

Comparison of historic trends (2000-2015) between King County International Airport/Boeing Field and the National Average*

	King County International Airport/ Boeing Field	National Average
Total Operations	- 5.04%	- 1.47%
Passenger Enplanements	+ 10.80%	+ 0.68%
General Aviation Operations	- 4.77%	- 1.61%
Air Cargo Weight	+ 0.93%	- 0.42%
Based Aircraft	- 1.52%	- 0.31%

*Percentages refer to Compound Annual Growth Rates (CAGR)

Sources: FAA Terminal Area
Forecast and Air Carrier Activity
Information System (ACAIS)

RECENT FINDINGS FROM AIRPORT STUDIES

Airport Capacity

The second working paper, released in September 2016, studied airport capacity. Capacity of an airport refers to the number of aircraft operations that a facility can accommodate on either an hourly or yearly basis.

Airport capacity is influenced by a number of factors, including:

- **Meteorological Conditions**
- **VFR vs IFR**
- **Wind Coverage**
- **Airfield Configuration**
- **Runway & Taxiway Utilization**
- **Operational Demand/Peaking Characteristics**
- **Instrument Approach Capability**
- **Airspace Considerations**

Airport Capacity Summary, 2015-2035

Year	Annual operations	Hourly Capacity	Annual Capacity
2015	165,571	61	243,247
2020	159,239	60	237,843
2025	153,148	59	232,622
2035	170,956	61	251,158

Source: Mead & Hunt using FAA AC 150/5060-5, Airport Capacity and Delay, September 2005.

Key Takeaway: The airport’s capacity is adequate to accommodate forecasted operations over the next 20 years, however there are some potential landside capacity considerations related to vehicular access that will be evaluated in the alternatives analysis.

RECENT FINDINGS FROM AIRPORT STUDIES

Facility Requirements

The second working paper included a study of facility requirements at the airport. The analysis examined airport components such as:

Airside

- **Airside Dimensional Criteria**
(e.g., runway safety area, runway object free area, runway protection zone, etc.)
- **Runway Length**
- **Taxiway Geometry**
- **Instrument Approach Procedures**
- **NAVAIDS**
- **Land Use Compatibility and Zoning**

Landside

- **Commercial Aviation Development Areas**
(e.g., Air Cargo, Scheduled/Non-Scheduled Passengers, Fixed Base Operators, and Aviation Services)
- **General Aviation Development Areas**
(e.g., Corporate, Training, and Recreation)
- **Aviation Industrial** (e.g., Boeing flight tests, maintenance, and aircraft delivery)
- **Airport Support Facilities** (air traffic control tower, ARFF, fuel storage, and maintenance)
- **Land Use Compatibility and Zoning**
- **Land/Easement Acquisition**
- **Vehicular Access & Parking**
- **Airfield access**

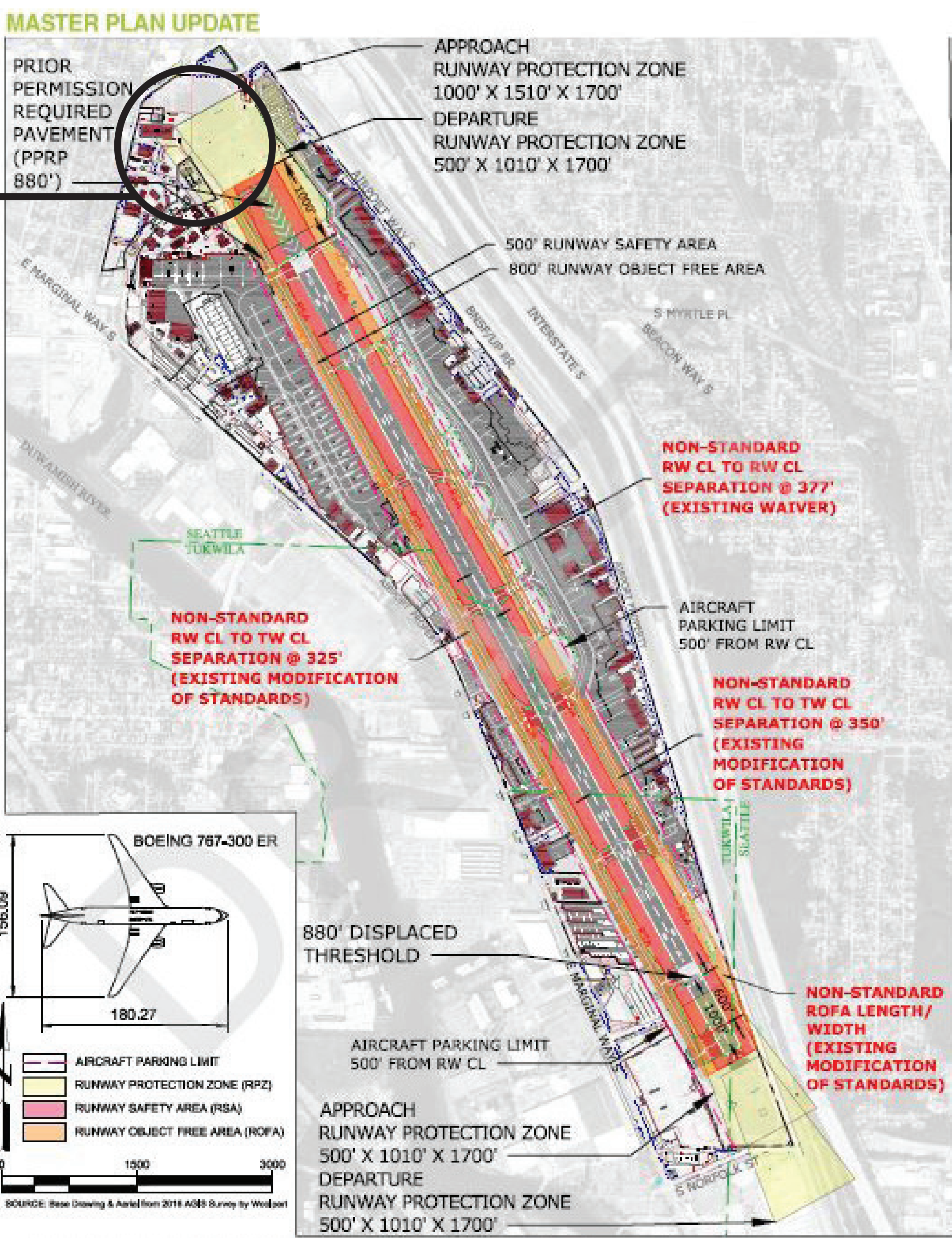
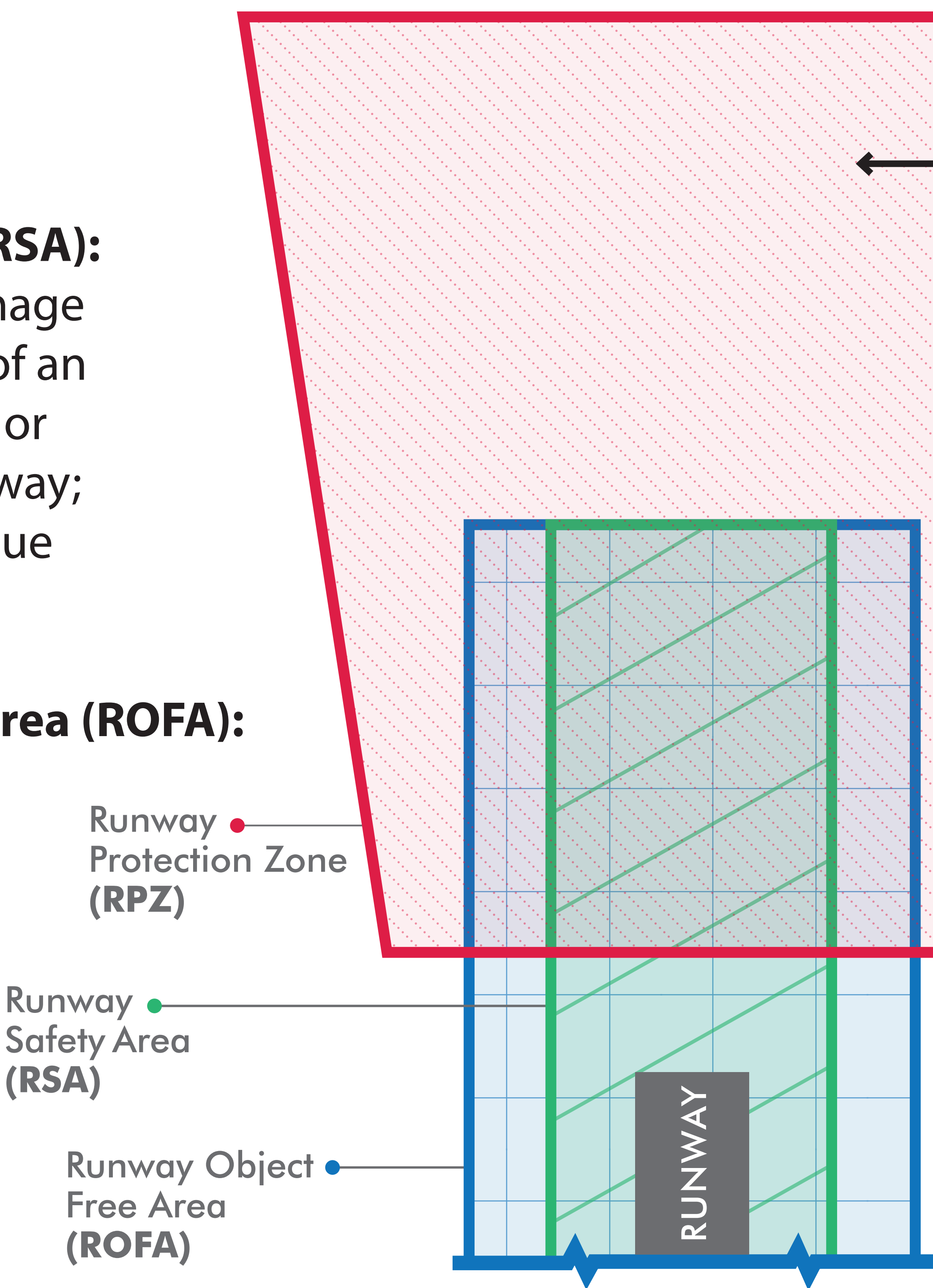
Evaluation of airside facilities is based on aircraft that currently use the airport or that are anticipated to use the airport in the future.

Primary FAA Design Standards

Runway Safety Area (RSA):
Reduces the risk of damage to aircraft in the event of an undershoot, overshoot, or excursion from the runway; provides access for rescue equipment

Runway Object Free Area (ROFA):
Must be clear of objects non-essential to air or ground navigation

Runway Protection Zone (RPZ): Enhances the protection of people and adjacent property



An example of a facility requirement map in Working Paper #2

Key Takeaway: The analysis confirmed that the airport’s existing parallel runway configuration will be maintained, with some taxiway geometry improvements to enhance safety, and will include FAA’s reevaluation of existing approved Modification of Standards (MOS) to airfield dimensional criteria and potential update to instrument approach/departure procedures. In addition, the airport also has limited property to accommodate future airside or landside expansion development.

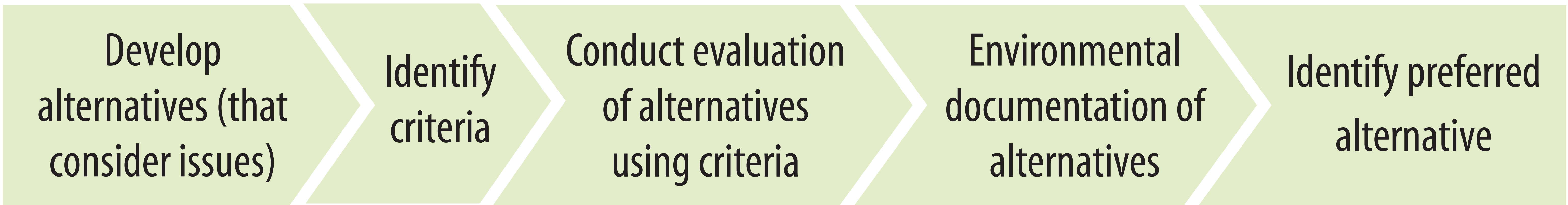
ALTERNATIVES: ISSUES AND CRITERIA

Alternatives Analysis

Now that we have an understanding of the airport’s inventory, forecast, capacity, and facility requirements, the next step in the process is to conduct an alternatives analysis.

An alternatives analysis evaluates the different choices available for achieving airport goals. The Master Plan Update process will use this type of analysis to compare different land-use options available over the next 20 years and to select a preferred alternative.

Analysis Process



Key Issues We’ve Heard So Far

The alternatives will be informed by key issues or concerns that are important to airport tenants, users, and the public.

Community Issues

- Noise and sound mitigation for residences
- Air quality
- Increased traffic (land and air)
- Environmental justice and disproportionate impacts
- Environmental impacts
- Economic development opportunities for surrounding neighborhoods

On-Airport Issues

- Long-term commercial capacity
- Maintaining facilities for general aviation
- Financial sustainability, including lease rates
- Airside improvements
- Hangar preservation and expansion
- Accommodating Boeing’s additional large aircraft



We want your feedback

Feel free to use the flip chart provided to tell us about other key issues important to you that should be addressed in the Master Plan Update. If your issue is tied to a specific location, you can place the sticky note on the maps provided.



ALTERNATIVES: ISSUES AND CRITERIA

Analyzing Alternatives with the Right Criteria

Central to the alternatives analysis is identifying the right criteria to evaluate the different available options. The goals and guiding principles of the Airport and King County strategic plans will help drive this evaluation.



We want your feedback

Listed below are some draft criteria. Which criteria are most important to you? Are there criteria that you think are missing but that should also be considered? Use the flip chart provided to provide your input.

<div>ECONOMIC</div> <div>Construction cost Maintenance cost Land acquisition</div>	<div>SOCIAL</div> <div>Noise change Recreation/parks</div>	<div>ON-AIRPORT OPERATIONS</div> <div>Airport operations FAA Design Standards (e.g., Runway Protection Zone standards) Instrument Approach Procedure Improvements</div>
<div>ENVIRONMENTAL, CULTURAL, AND NATURAL RESOURCES</div> <div>Energy costs Impervious surface and stormwater impacts Subsistence resource impacts</div>	<div>OFF-AIRPORT OPERATIONS</div> <div>Land acquisition considerations</div>	



NEXT STEPS

- Airport staff review comments submitted through the open house and other community meetings
- Independent experts prepare an analysis of alternatives for the Master Plan Update, accommodating community issues
- The Airport Working Group reviews the alternatives analysis
- The public reviews outcomes at the next open house

Stay Involved

- Visit our website
- Get the latest news from the Centerline Blog
- Contact the project team

Join us for our next
open house in January 2017

