

1. Introduction/Overview

North Perry Airport (HWO or the Airport) is a public use, general aviation (GA) airport that plays a vital role for Broward County, south Florida, and in the regional transportation system. HWO is owned by Broward County and operated by the Broward County Aviation Department (BCAD). The Airport is classified as a “reliever airport” in the Federal Aviation Administration’s (FAA’s) National Plan of Integrated Airport Systems (NPIAS). Within this role, HWO serves GA aircraft that would otherwise utilize larger commercial service airports, such as Fort Lauderdale–Hollywood International Airport (FLL). This segregation of GA aircraft from larger air carrier and cargo aircraft enhances the efficiency and operational safety of the local air transportation system. HWO is further classified in the NPIAS as a “regional airport.” A regional airport is in a metropolitan area, supports a regional economy with interstate and long-distance flying, and has high levels of activity. In addition to aeronautical development, several other commercial, recreational, ground transportation, and public safety functions reside on Airport property.

In October 2015, BCAD initiated this Master Plan Update (MPU) for HWO. The MPU is one of the most important documents from an airport management and operations perspective, because it guides future Airport enhancements and new facility/infrastructure development. In addition to establishing the timing and need for future capital improvements, the aviation activity forecasts derived during the MPU process can support other business decisions and functions. The preparation of operational and staffing plans, revenue and cost projections, and scheduling of maintenance activities are aided by the activity forecasts. The accompanying Airport Layout Plan (ALP) and Capital Improvement Program (CIP) are essential for regulatory compliance and to support federal and state grant requests. While the CIP provides a phased approach for funding future capital expenditures, the FAA’s conditional approval of the ALP is required to secure funding through its Airport Improvement Program (AIP), as well as through the Florida Department of Transportation (FDOT). Future Airport development projects must also be depicted on the FAA-approved ALP prior to initiating federal environmental processing through the National Environmental Policy Act (NEPA).

1.1 Changes Since Last Master Plan

Since completion of the last Master Plan for HWO in 2009, significant economic and aviation industry changes have impacted needs at the Airport. The primary changes that have influenced HWO’s operational and capital needs since the last Master Plan include the following:

- Continued growth of the national, regional, and local economies after the financial crisis in 2008 has led to an increase in GA activity.

- Growing demand for commercial pilots and GA pilot training in both the United States and internationally has increased flight training activity at HWO.
- Growth in based aircraft, resulting in the need for additional aircraft storage and associated support services.
- Modified airfield design standards by the FAA, which are contained in Advisory Circular 150/5300-13A, *Airport Design*, to further enhance operational safety and efficiency.

1.2 Strategic Objectives and Goals

The strategic objectives and goals of the HWO MPU were created to ensure future airport improvement recommendations proposed by the MPU will meet specific aviation and tenant needs. At the start of the MPU process, BCAD identified the following broad strategic objectives to guide the development of subsequent deliverables:

- Justify the proposed development plan within the study area through technical, economic, and environmental investigation of concepts and alternatives.
- Provide a modern graphic presentation of the future development of the Airport and the anticipated land uses in the vicinity of the Airport.
- Establish a realistic schedule for the implementation of the development.
- Propose an achievable financial plan to support the implementation schedule.
- Provide the foundation for environmental evaluations that may be required prior to receiving project approval.
- Present a plan that adequately addresses the issues and satisfies the local, state, and federal regulations.
- Document policies and future aeronautical demand to support Broward County best practices on spending, debt, land use controls, and other policies necessary to preserve the integrity of the Airport and its surroundings.
- Set the stage and establish the framework for a continuing Airport planning process with a supporting public coordination and participation element.

To align the strategic objectives with the overall mission and vision of Broward County and BCAD, a Visioning Charette was conducted at the onset of the planning process. The goals and objectives for the MPU were discussed and subsequently refined to guide the planning process and to present these components during the various stakeholder engagement meetings. **Exhibit 1.2-1** presents the goals and objectives for the HWO MPU.

Exhibit 1.2-1: Airport Master Plan Goals and Objectives

ENHANCE

Operational safety

INTEGRATE

With the surrounding community

RESPOND

To immediate and near-term needs

UPGRADE

Facilities to satisfy current and future demand

DIVERSIFY

Airport revenue base

PRESERVE

HWO's Role

- Regional Airport Asset
- Light GA Market
- Reliever Airport (to FLL)

SOURCE: Broward County Aviation Department, 2017.

PREPARED BY: Ricondo & Associates, Inc., February 2018.

In addition to the BCAD goals and objectives, the following FAA requirements are incorporated into the MPU:

- Prepare an FAA-approved activity forecast to support BCAD's capital and financial investments for HWO.
- Obtain aerial imagery and photogrammetrical surveys in accordance with the FAA's electronic Airport Layout Plan (eALP) standards and upload them through the Airports Geographical Information System web portal.
- Prepare a complete ALP drawing set, along with supporting documents in accordance with Standard Operating Procedure 2.00, *Standard Procedures for FAA Review and Approval of ALPs*.
- Formulate a CIP that outlines the project sequencing, justification, and funding eligibility for FAA and state grants.

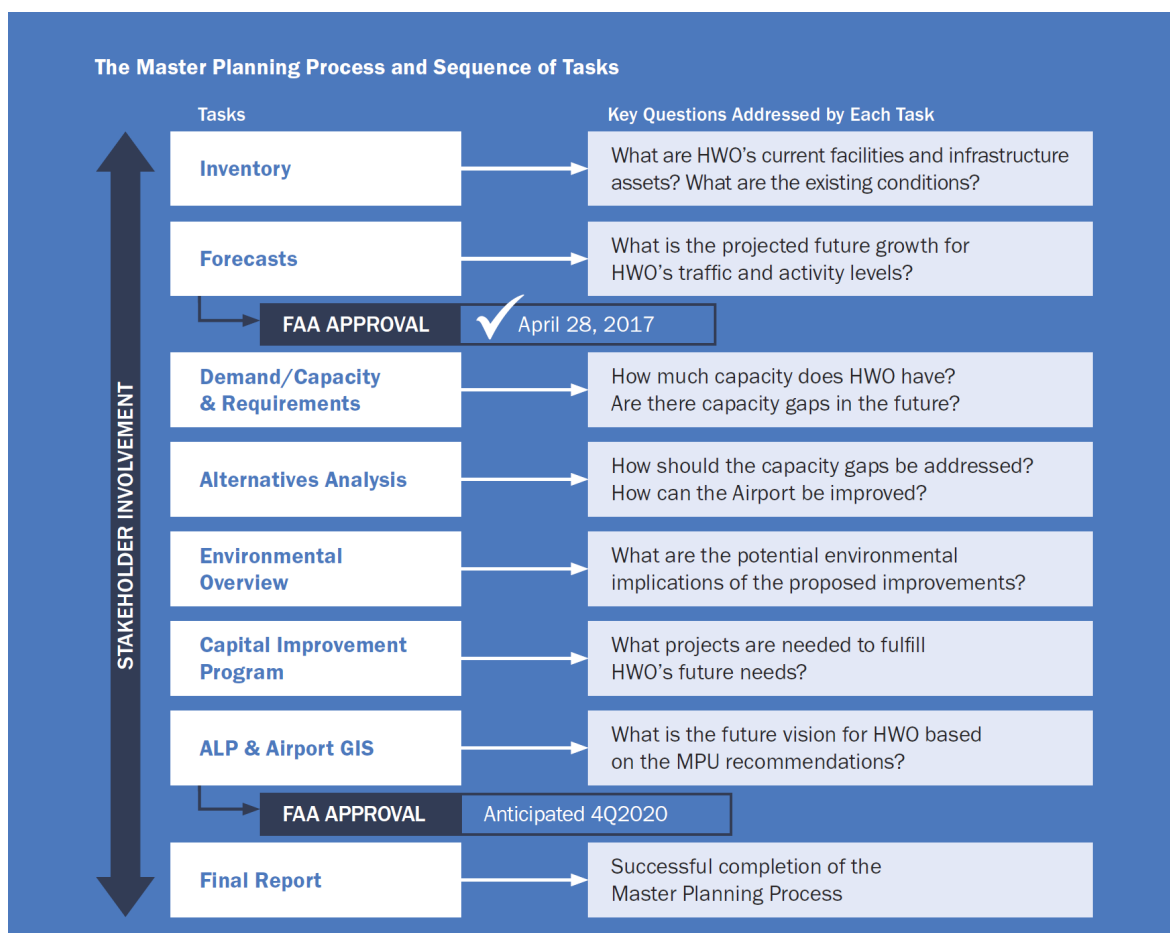
1.3 Overview of Master Plan Process and Deliverables

A master plan provides a comprehensive study of an airport, focusing on addressing an airport's long-term (defined as a 20-year planning horizon) needs. The master plan typically represents a roadmap for incremental development to meet future demand, while reserving the flexibility necessary to respond to a continually evolving industry.

1.3.1 MASTER PLAN PROCESS

The HWO MPU was completed in accordance with federal and state guidelines found in FAA Advisory Circular (AC) 150/5070-6, *Airport Master Plans*, the FDOT *Guidebook for Airport Master Planning*, and the FDOT Procedure 725-040-100, *Airport Master Plans*. The MPU was tailored to HWO's specific needs. **Exhibit 1.3-1** illustrates the master plan process developed for HWO's MPU.

Exhibit 1.3-1: Airport Master Plan Process



NOTES: ALP – Airport Layout Plan, FAA – Federal Aviation Administration, GIS – Geographic Information System, MPU – Master Plan Update

SOURCES: Federal Aviation Administration, Advisory Circular 150/5070-6B, *Airport Master Plans*, January 27, 2015; Florida Department of Transportation, *Guidebook for Airport Master Planning*, 2017.

PREPARED BY: Ricondo & Associates, Inc., May 2016.

The MPU included the identification and analysis of improvements to the airfield, GA facilities, and non-aeronautical development opportunities. An environmental overview included as part of the MPU provides a preliminary identification of environmental factors with proposed future development. The CIP aided with the identification of funding sources that may be available for the various projects proposed by the MPU, and an ALP provided a graphical depiction of the future, proposed development or improvements.

The FAA recommends airport master plans be updated when significant changes to an airport occur. In this situation, HWO has experienced a substantial increase in GA activity, which warranted an update to the previous Master Plan from 2009. BCAD will continue to periodically update the plan to ensure its compatibility with aviation industry trends and local area changes.

1.3.2 MASTER PLAN DELIVERABLES

This MPU's documentation provides the sources of data collected, assumptions, technical analyses, findings, conclusions, and recommendations that form the basis for the preferred development program. The document is presented in the following sections and supporting appendices:

- Section 1: Introduction/Overview
- Section 2: Existing Condition Inventory
- Section 3: Aviation Activity Forecasts
- Section 4: Demand Capacity Assessment and Facility Requirements
- Section 5: Alternatives Definition and Evaluation
- Section 6: Environmental Overview
- Section 7: Capital Improvement Program Implementation Plan
- Section 8: Airport Layout Plan Set
- Appendix A: Stakeholder Engagement and Public Outreach Program
- Appendix B: Airfield Safety Enhancement and Geometry Study - Environmental Inventory
- Appendix C: Airfield Safety Enhancement and Geometry Study - Forecasts and FAA Approval Letter
- Appendix D: Wind Analysis Weather Data
- Appendix E: Airfield Safety Enhancement and Geometry Study - Runway and Taxiway Analysis
- Appendix F: Preliminary Conceptual Hangar and Apron Layouts
- Appendix G: Capital Improvement Program Project Sheets
- Appendix H: Airport Layout Plan Review Checklist
- Appendix I: Aeronautical Market Assessment

1.3.3 RELATED STUDIES

HWO's last Master Plan recommended a variety of airfield improvements. The recommended airfield improvements were based on FAA airfield design standards in effect at the time. Since then, the FAA revised its airfield design standards. The FAA's new airfield design standards, which focus on measures to avoid aircraft from inadvertently entering the runway environment, necessitated BCAD to re-evaluate the airfield improvements that were recommended during the previous HWO Master Plan.

BCAD commissioned an Airfield Safety Enhancement and Geometry (ASEG) Study, which commenced concurrently with the MPU and was completed in April 2017. The Study included information that was also relevant to the MPU, including the preparation of Airport activity forecasts for HWO and a reassessment of HWO's airfield improvements proposed in the 2009 MPU. Therefore, to avoid duplication of planning analyses between the ASEG Study and the HWO MPU, the Airport activity forecasts were adopted for use in the HWO MPU. Furthermore, the airfield improvements recommended by the ASEG Study were reviewed and validated during the MPU process, and many projects, particularly the ASEG's proposed taxiway modifications, were incorporated into this MPU.

1.4 Stakeholder Engagement Strategy and Public Outreach Program

The purpose of the stakeholder engagement strategy and public outreach program is to obtain meaningful input from key stakeholder groups or members of the public that may be impacted by or have a vested interest in the outcomes of the HWO MPU. A copy of the stakeholder engagement and public outreach program document is included in **Appendix A**. The outreach program is designed to be inclusive and to create an environment that promotes meaningful dialogue and opportunities for stakeholders and the public to actively participate in the master plan process. The public outreach program had the following key objectives:

- Engage with key stakeholders so that significant issues are identified, and participants can provide input and comments.
- Enhance decision-making and build business and public confidence in the process and recommendations.
- Disseminate accurate, timely, and concise information to assist stakeholders in reaching and expressing informed opinions about the Airport development options being considered by the Board of County Commissioners (BOCC).

The stakeholder engagement strategy and public outreach program consisted of the following elements:

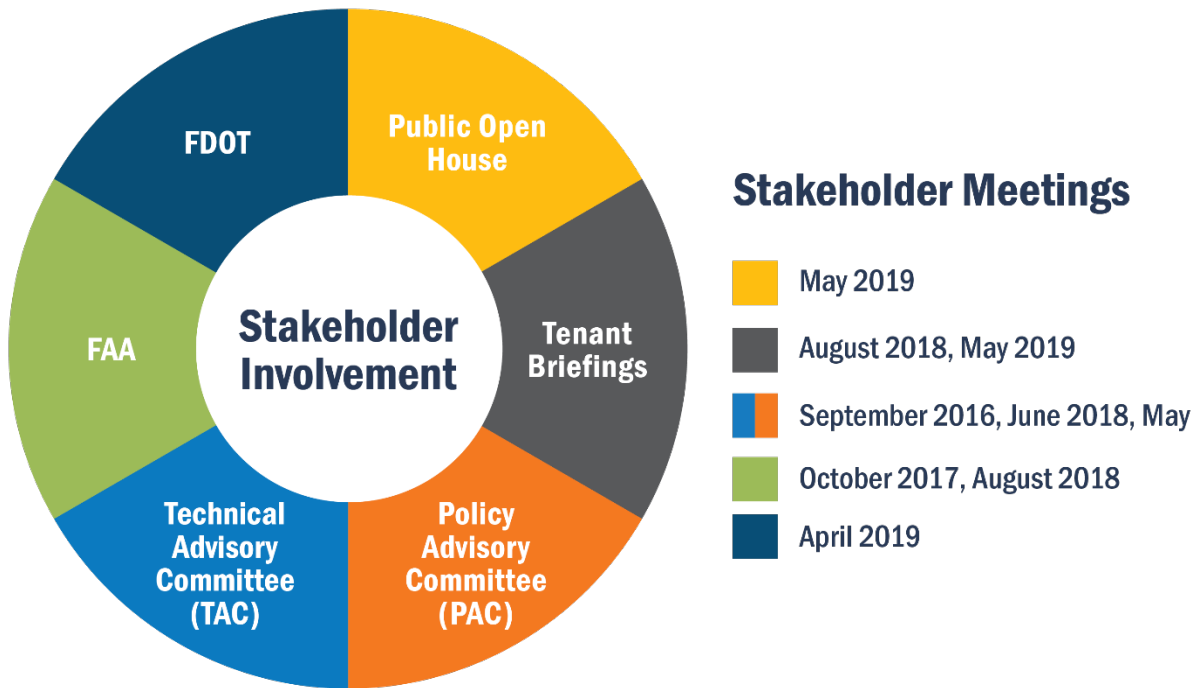
- **Project Webpage:** A project webpage linked from HWO's Airport website was active throughout the MPU process to provide notifications of upcoming meetings, past meeting details, electronic resources and presentations, master plan chapters, and contact information.
- **Master Plan Visioning Charrette:** As previously mentioned, a meeting took place at the onset of the MPU process with Airport and County leadership to establish goals and objectives for the planning process.
- **Advisory Committees:** Two advisory committees were established to present detailed master planning information, to engage committee members in discussions regarding analysis and conclusions, and to

gather feedback from committee members. Copies of the meeting minutes from each of the advisory committee meetings are included in Appendix A.

- *Policy Advisory Committee (PAC)*: The PAC consisted of BCAD senior management staff, as well as key members of other business and economic development agencies, governmental and community groups, and policy-makers. This committee provided input to the planning team on macro-level policy issues, considerations, near-term and long-range aviation goals of the County, and other factors that shape or affect the role of each airport in the County, as well as facility or operational needs that will affect the diversity and breadth of analyses undertaken in the master planning process. It also provided valuable input regarding community issues and concerns relating to the Airport and the relationship to the overall community and nearby municipalities.
- *Technical Advisory Committee (TAC)*: The TAC focused on review of the MPU analyses and the various related tasks from a technical perspective. This committee included BCAD staff from various divisions, as well as representatives from the FDOT, the Metropolitan Planning Organization (MPO), City and County community and transportation planning agencies, the FAA, the HWO Air Traffic Control Tower, and other key Airport users. This committee reviewed and commented on the technical and operational analyses and recommendations developed throughout the master planning process.
- **Tenant Briefings**: The MPU team collaborated with the tenants to discuss current and future needs and to obtain feedback on master planning analysis and alternatives development. A copy of the meeting minutes from the tenant briefings is included in Appendix A.
- **Broward County BOCC**: Presentations and workshops were used to brief the BOCC on the status of the MPU and to gather feedback at key milestones. BOCC approval of the MPU was required for submission to the FAA and for final acceptance of the MPU.
- **Public Workshop**: A public open house was held to outline the master planning process, to share preliminary analysis and findings, and to present draft recommendations. The workshop provided an opportunity for input and feedback, as well as to facilitate interactions between BCAD, the public, and the MPU team. A copy of the public workshop sign-in sheets and comment cards is included in Appendix A.
- **FAA Coordination Meetings**: Several meetings were held with the FAA to provide updates on the MPU at key milestones and to gain the FAA's feedback on proposed future development.
- **FDOT Coordination Meetings**: Presentations were made to the FDOT during the MPU process to illustrate the proposed future development and to gain the FDOT's insight on the relationship between HWO and the state transportation system.
- **Broward MPO Meetings**: The Broward MPO is tasked with developing a long-range transportation plan for Broward County. Two presentations were made to the MPO to ensure HWO's future proposed development aligns with or enhances Broward County's future transportation plan.

Exhibit 1.4-1 depicts the MPU stakeholder engagement and public outreach briefing dates.

Exhibit 1.4-1: Airport Master Plan Stakeholder Involvement



NOTES:

FAA – Federal Aviation Administration

FDOT – Florida Department of Transportation

SOURCE: Ricondo & Associates, Inc., July 2019.

PREPARED BY: Ricondo & Associates, Inc., July 2019.