ORMOND BEACH MUNICIPAL AIRPORT

AIRPORT MASTER PLAN UPDATE
2014 TO 2034

CITY OF ORMOND BEACH

DRAFT REPORT
OCTOBER 2015

Hoyle, Tanner & Associates, Inc.

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2014 TO 2034

CITY OF ORMOND BEACH

FLORIDA DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIP#: 3-12-0059-017-2014
HOYLE, TANNER PROJECT NO.: 307101

DRAFT REPORT
OCTOBER 2015

THE CONTENTS OF THIS AIRPORT MASTER PLAN REFLECT THE VIEWS OF THE CITY OF ORMOND BEACH, WHICH IS RESPONSIBLE FOR THE FACTS AND ACCURACY OF THE DATA PRESENTED. THE FAA ACCEPTANCE OF THIS MASTER PLAN DOES NOT REPRESENT A COMMITMENT TO PROVIDE FEDERAL FINANCIAL ASSISTANCE TO IMPLEMENT ANY DEVELOPMENT OR AIR NAVIGATION FACILITY SHOWN ON THE PLAN, NOR DOES IT MEAN THAT FAA FUNDING OF THE PROPOSED AIRPORT DEVELOPMENT IS JUSTIFIED. THE APPROVAL IS SUBJECT TO THE CONDITION THAT THE PROPOSED AIRPORT DEVELOPMENT REQUIRES ENVIRONMENTAL PROCESSING AND MAY NOT BE UNDERTAKEN WITHOUT FAA'S PRIOR WRITTEN ENVIRONMENTAL APPROVAL.

Hoyle, Tanner & Associates, Inc.

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CHAPTER 1: BACKGROUND

1.0 INTRODUCTION

This master plan update was commissioned by the City of Ormond Beach for the purpose of providing a comprehensive plan for the future development of the Ormond Beach Municipal Airport (OMN). The plan provides an assessment of existing and forecasted aviation demand and includes a description of the facilities required to meet that demand. **Table 1.1** summarizes key airport data which is further discussed in the following sections.

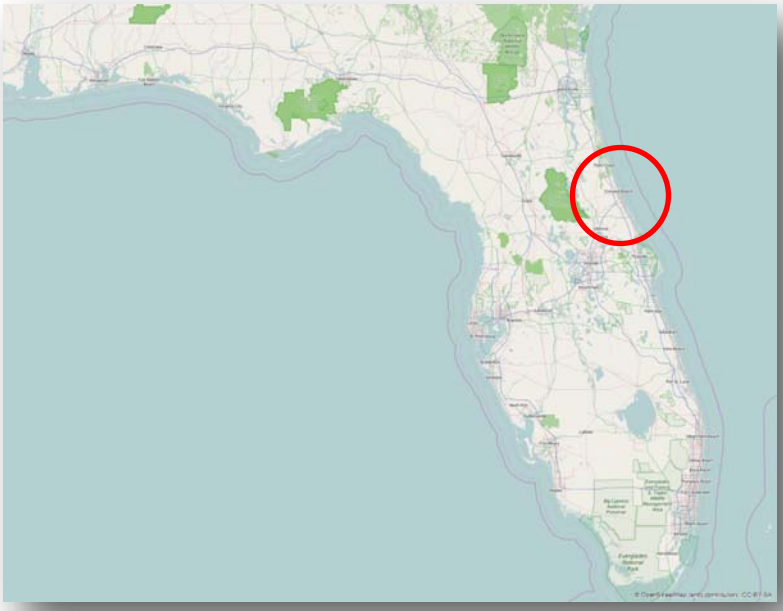
TABLE 1.1 – AIRPORT DATA

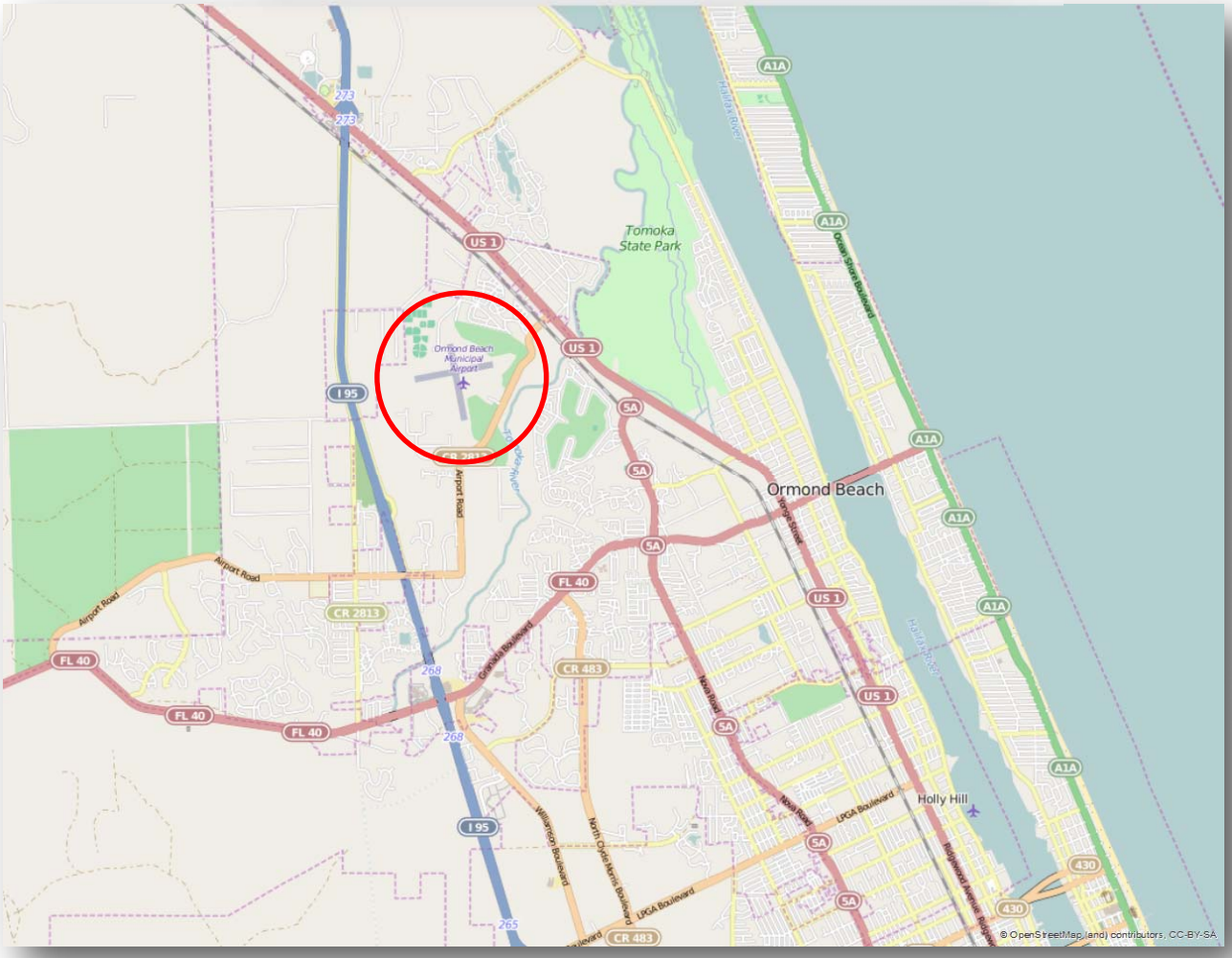
Airport Data	
Airport Name	Ormond Beach Municipal Airport
Owner	City of Ormond Beach
Identifier	OMN (KOMN)
FAA Site Number	03411.*A
FAA NPIAS Number	12-0059
NPIAS Service Level	Reliever
NPIAS General Aviation Category	Regional
Airport Reference Code	B-II
Airport Elevation	27.9 feet
Airport Reference Point Latitude	29^{0} 18' 04.1"N
Airport Reference Point Longitude	081^{0} 06' 49.7W

1.1 AIRPORT LOCATION

The City of Ormond Beach is located on the East Coast of North Central Florida. The City is situated approximately 85 miles south-southeast of Jacksonville and 5 miles north of Daytona Beach. The City of Ormond Beach encompasses approximately 30.74 square miles and lies within Volusia County, which encompasses approximately 1,432 square miles.

OMN is located 3 miles from the City of Ormond Beach on its north-western boundary, in the northeastern part of Volusia County. The Airport Vicinity Map, **Exhibit 1-1**, depicts the location of the airport in its regional setting. At 27.9 feet above Mean Sea Level (MSL), the Airport Reference Point (ARP) is situated on latitude of N29° 18’ 04.1” and a longitude of W81° 06’ 49.7”. The ARP is defined as the approximate geometric center of all useable runway surfaces.





Ormond Beach Municipal Airport
Airport Vicinity Map

EXHIBIT
1-1

The airport is comprised of 1,164 acres of land and is located east of Interstate 95, north of the Tomoka River, and west of Highway US 1.

1.2 ROLE OF THE AIRPORT IN THE COMMUNITY

OMN is major asset for the community and has the potential to become an economic engine for the City of Ormond Beach. In addition, OMN is an effective transportation tool used by some local businesses to increase the efficiency of their operations. The City's vision for the Airport's future is to provide a safe, first-class general aviation airport facility capable of becoming and remaining self-sustaining by attracting revenue producing aeronautical and non-aeronautical businesses.

The airport supports a large industrial park. The Airport Business Park consists of 176 acres, which contain 73 parcels. Fifty-seven parcels have been sold and twenty-nine businesses presently operate in excess of 731,900 square feet of light industrial space, with total employment of approximately 1,900 workers. The City's Economic Development Director actively promotes the development of the Business Park. According to the *2014 Florida Statewide Aviation Economic Impact Study Update*, Ormond Beach Municipal Airport visitor-related activities generate approximately $21 million in total economic output to the neighboring communities. The airport's visitor-related employment is responsible for 262 jobs resulting and approximately $6.5 million in payroll.

1.3 AERONAUTICAL ROLE

The aeronautical role of an airport defines its purpose within the national, regional, and local area. In its current role, the airport focuses entirely on serving the needs of general aviation. The airport accommodates two flight training facilities and envisions an increased role as a provider of flight training services. The airport does not currently focus on recreational activity, such as sky-diving or gliders, and it does not anticipate trying to attract additional users in this category in the future.

Fixed and rotary wing flight training is the primary driver of this airport's general aviation activity. Roughly 80 percent of the airport's annual operations are related to flight training activities from flight schools both on the field and from other area airports.

General aviation operations by corporate and business users are present at the airport. The airport estimates that four percent of its annual general aviation operations are business-related. Approximately two percent of the airport's based aircraft are owned by local businesses. The airport also attracts transient or visiting general aviation aircraft. While the airport does not have any based military aircraft, it does accommodate some transient military operations that account for a small amount of the total annual activity at the airport. There is significant interest in developing better facilities for itinerant traffic.

1.3.1 NATIONAL PLAN OF INTEGRATED AIRPORT SYSTEMS (NPIAS)

The Ormond Beach Municipal Airport is designated by the Federal Aviation Administration as a publicly owned, public-use facility. Under the Airport and Airways Improvement Act, the Secretary of Transportation is required to publish a national plan for the development of public-use Airports. This National Airport Development Plan is published through the National Plan of Integrated Airport Systems (NPIAS). The Ormond Beach Municipal Airport is included in the National Plan of Integrated Airport Systems (NPIAS). Congress bases an airport's eligibility for funding on that airport's Service Level and Role, as defined by the NPIAS.

Airports are divided into two categories that reflect the type of service provided the community. The service levels also represent statutory funding categories associated with the airport grant program.

A. Commercial Service Airports are publicly owned airports that enplane 2,500 or more passengers annually and receive scheduled passenger aircraft service. Commercial service airports are either:

(1) Primary - airport that enplanes more than 10,000 passengers annually; or

(2) Nonprimary - airport that enplanes between 2,500 and 10,000 passengers annually.

B. General Aviation Airports while not specifically defined are considered to be airports not classified as commercial service.[1]

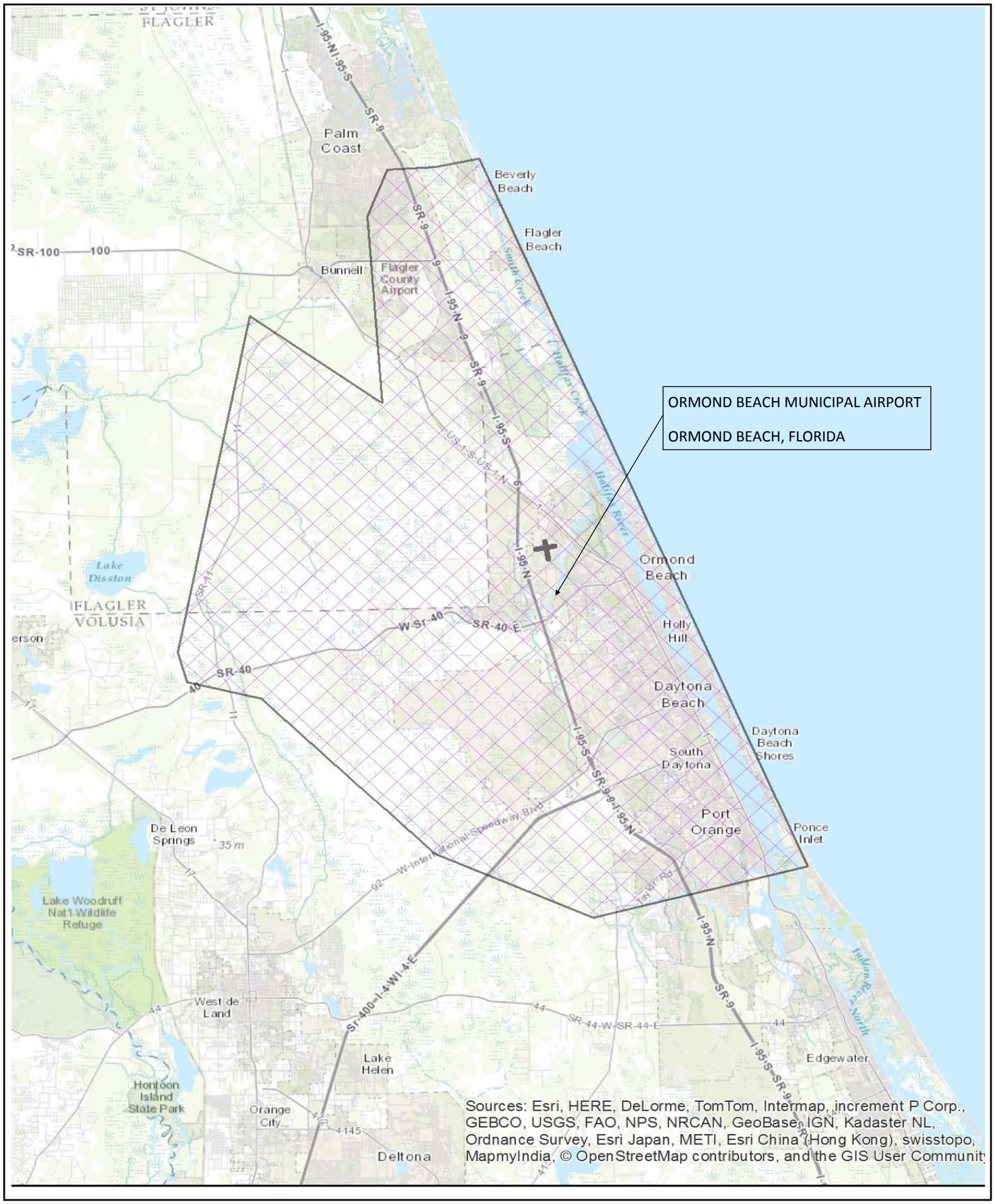
The Ormond Beach Municipal Airport's Service Level is defined as General Aviation (GA).

OMN is classified as a reliever airport because some corporate traffic destined for nearby Daytona Beach International Airport (DAB) could be diverted to OMN if necessary to relieve congestion at DAB. General aviation airports like OMN provide important, less regulated and less restrictive runway access to business aviation users as well as flight schools and recreational pilots.

The performance measure used in the NPIAS for access and location of airports at the national level uses 30 minutes for general aviation airports. The 30 minute airport service area for OMN includes the City of Ormond Beach as well as the communities of Flagler Beach and Beverly Beach to the north, Daytona Beach and Port Orange to the south and additional sections of Volusia County to the west. The airport service area is shown in 30 Minute Drive Time for GA Reliever Airport, **Exhibit 1-2**.

In cooperation with the aviation community, the FAA completed two top-down reviews of the existing network of general aviation facilities included in the NPIAS. The results of these efforts

[1] FAA Order 5090.3C Field Formulation of the National Plan of Integrated Airport Systems (NPIAS) Dec 4, 2000



CITY OF ORMOND BEACH FLORIDA	Ormond Beach Municipal Airport 30 Minute Drive Time for GA Reliever Airport	EXHIBIT 1-2

are contained in the May 2012 report entitled "General Aviation Airports: A National Asset" and the March 2014 report entitled "ASSET 2: In-Depth Review of 497 Unclassified Airports.

As part of these efforts, the FAA documented the important airport roles and aeronautical functions these facilities provide to their communities and the national airport system. These functions include emergency preparedness and response, direct transportation of people and freight, commercial applications such as agricultural spraying, aerial surveying and oil exploration, and many others. Many of these functions cannot be supported efficiently or economically at primary or commercial service airports.

General aviation facilities were divided into categories based on existing activity measures (e.g., the number and types of based aircraft and volume and types of flights). Of the general aviation facilities studied, 2,455 were grouped into four categories using existing activity, geographic factors, and public interest functions. The four categories are: national, regional, local, and basic.

The Ormond Beach Municipal Airport is classified as a public regional general aviation reliever airport. Regional general aviation airports support regional economies by connecting communities to regional and national markets. These types of airports have high levels of activity with some jets and multiengine propeller aircraft. Typically, these airports average about 90 total based aircraft, including a few jets.[2]

1.3.2 FLORIDA AVIATION SYSTEM PLAN

The Florida Aviation System Plan (FASP) 2025 is the Florida Department of Transportation's (FDOT's) strategic 20-year plan for developing the state's 129 public airports. The current FASP classifies OMN as a general aviation airport primarily serving the flight training, tourism, and recreational/sport aviation market segments.

1.4 OWNERSHIP AND MANAGEMENT

The Ormond Beach Municipal Airport is owned and operated by the City of Ormond Beach. An Airport Manager, working under the supervision of the City Economic Development Director and City Manager, manages the Airport. Additional airport staff is provided by the City to the airport on an as-needed basis.

1.5 DEVELOPMENT HISTORY

A Master Plan for the Ormond Beach Municipal Airport was completed in 1988. In 2004, the master plan was updated. **Table 1.2** shows the projects that have been completed since 1988.

[2] General Aviation Airports: A National Asset, 2012 DOT FAA Report

TABLE 1.2 – DEVELOPMENT HISTORY

Year Completed	Description of Development
1990	Ormond Beach Aviation develops 1,250 S.F. office & 2500 S.F. aircraft storage facilities
1995	Ormond Beach Aviation develops 7,900 S.F. office / admin. / training facility
	Ormond Beach Aviation develops 6,000 S.F aircraft main. / storage facility
1996	Sunrise Aviation develops 2,000 S.F. office facility
	Sunrise Aviation develops 5,000 S.F. training & main. Facility
1997	Hangars along Taxiway "B"
	Environmental Assessment for R/W 17/35 Extension
1998	Hangars along Taxiway "D"
2001	Security Fencing Project
2002	Taxiway "D" access road
2002	New AWOS
2005	Access road in Southeast Quad
2005	Taxilanes to T-Hangars (Hangars constructed by tenant)
2006-present	Several new hangars in Southeast Quad constructed by private tenants
2008	Runway 17/35 Rehabilitation
2010	MIRLS for Runway 17/35 and Airport Beacon
2010	Airfield electrical for Taxiway Echo MITL's, Runway 17/35 REIL's
2013	Taxiway "A" relocation to 300' offset from Runway 8/26
2013	Taxiway "E" realignment
2013	Taxiway "B" and Runway intersection reconstruction
2013	Taxiway "C" rehabilitation
2013	New Helipad
2013	Hold Aprons for Runway End 8 and 26
2014	Taxiway "G" (Design only)
2014	Access Road in Northwest Quad

1.6 MASTER PLAN UPDATE

A Master Plan Update provides details regarding the City of Ormond Beach's envisioned strategic development plan for the airport, the proposed development program and anticipated capital expenditure outlays. The FAA recommends that airport owners update their Airport Master Plans periodically (every 5 to 10 years) to document the existing and future operational capability of the airport, to enhance safety, or to identify needed facility and capital improvements. Both the FAA and Florida DOT requires airports to have FAA and FDOT reviewed and approved master plans and airport layout plans in order to be eligible for federal and state grant funding.

This update of the Master Plan covers a 20-year planning period that is presented in three separate planning horizons: Near-Term (0 to 5 years), Intermediate-Term (6 to 10 years), and Long-Term (10 to 20 years). The Intermediate and Long-Term planning periods are typically considered

strategic in nature and serve to identify future anticipated actions by the airport owner or airport development activities that would satisfy anticipated, but unquantifiable future levels of aviation activity, or associated commercial needs of the airport's users.

This Airport Master Plan Update Report documents the City's vision and overall plan for the airport; proposes an airport development program; and identifies anticipated capital expenditure outlays.

The update of this Master Plan and ALP Drawing Set takes a selective and targeted approach to airport planning that focuses on the identification of viable and prudent options that allow the City of Ormond Beach to attain the highest and best use of airport property.

1.7 AIRPORT LAYOUT PLAN (ALP) DRAWING SET UPDATE

One of the key products of a Master Plan is a collection of drawings that comprise the ALP Drawing Set that serves as a record of aeronautical requirements, both present and future, and as a reference for community deliberations on land use proposals and budget resource planning. The ALP creates a blueprint for airport development by depicting proposed facility improvements and provides a guideline by which the Airport Sponsor (the City of Ormond Beach) can ensure that development follows airport design standards and safety requirements, and is consistent with airport and community land use plans.

The primary drawing in this set is the Airport Layout Plan (ALP) that graphically depicts current and future airport facilities. The remaining drawings are considered supplemental and are appended to the ALP. The FAA-approved ALP enables the Airport Sponsor and the FAA to plan for facility improvements at the airport and to anticipate budgetary and procedural needs.

An airport must keep its ALP Drawing Set current and follow that plan, since those are grant assurance requirements of the Airport Improvement Program (AIP) and previous airport development programs, including the 1970 Airport Development Aid Program (ADAP) and Federal Aid Airports Program (FAAP) of 1946, as amended.

For AIP funding eligibility purposes, the FAA recommends that ALPs be updated:

- On an as-needed basis, or at least every 2 to 5 years
- After completion of a major construction project
- To identify new airport development projects
- To include potential future airport development projects that may be needed later

The approved ALP allows the FAA to protect the airspace required for facility or approach procedure improvements. A graphically-reduced version of the ALP Drawing Set is included in this Master Plan Report.

1.8 GOALS AND OBJECTIVES OF THE MASTER PLAN

The ultimate objective of this planning process is to provide a modern, safe, and efficient aviation facility for the citizens of the city and the users of the airport. The City's goals and objectives for this update of the Airport Master Plan and Airport Layout Plan are described in the following sections.

1.8.1 GOALS

The overall goals of this Airport Master Plan Update are:

- Improve the capability for the Ormond Beach Municipal Airport to safely accommodate a broader range of general aviation aircraft operations and increased levels of overall aircraft activity.
- Promote the orderly and efficient development of aviation related and non-aviation related facilities.
- Plan for airport facilities and services that meet customer needs.
- Enhance the airport's ability to self-sustain and serve as an economic generator within the local economy.

1.8.2 OBJECTIVES

The following are the global objectives of the Airport Master Plan Update:

- **Safety**: develop facilities according to FAA standards, creating no hazards to air navigation.
- **Efficiency**: maximize the development of space, consider airfield traffic flow, minimize conflicts between operations, and provide efficient ground access.
- **Economics**: provide a plan that takes into consideration benefits versus costs, reasonable construction costs, and a reasonable financing plan. The plan also considers opportunities for generating airport revenue, as well as generating healthy competition for businesses on the airport.
- **Expansion**: provide a development plan that anticipates expansion of facilities to accommodate growth.
- **Balance**: future airport facilities should be consistent with the Airplane Design Group and the runway/taxiway capability. In addition, the capacity of each facility should be in balance with that of other facilities as appropriate.
- **Consistency**: provide a development plan that is consistent with the airport vision, community goals and plans, the ALP, established minimum standards, and the FAA grant assurances.

The following are the specific objectives of the Airport Master Plan Update:

- Assess runway length needs.
- Define processes and key milestones required to develop and implement a runway extension program.
- Review and update the airport's overall facility development plan to allow the City to respond to existing and future airport facility needs and/or enhance revenue generation opportunities.
- Identify and prioritize airport development projects for the short-term given the limited availability of federal, state, and local funds.
- Evaluate facility layout alternatives that would serve to maximize the long-term development of aviation and industrial development facilities at the airport.

1.9 MASTER PLAN REVIEW AND APPROVAL

The recommendations contained in this master plan represent the views, policies, and development plans of the City of Ormond Beach, and Florida Department of Transportation (FDOT) and do not necessarily represent the views of the FAA.[3]

This master plan will be reviewed by the Airport, the public, FDOT and the FAA. Their comments will be incorporated into the narrative and plans. The City of Ormond Beach formally votes to approve and adopt the revised master plan at the completion of the review process.

Acceptance of the master plan by the FAA does not constitute a commitment on the part of the FAA to participate in any development depicted in the plan. The FAA reviews all elements of the master plan to ensure that sound planning techniques have been applied. However, the FAA only reviews and formally approves the following elements of the master plan: forecasts of demand, selection of the critical aircraft, and the Airport Layout Plan (ALP).

It is important to note that the FAA will perform these activities in close coordination with the FDOT Aviation Office. As such, the FAA also relies heavily on the FDOT Aviation Office to review the draft deliverables to ensure that they comply with FAA and state standards and guidelines. The master plan must also be compatible with the Florida Aviation System Plan (FASP). While the FAA only approves parts, the FDOT Aviation Office is in a position to provide comment and approve all elements of the airport master plan. This affords greater control of the process, ensuring a higher quality work product.

[3] Refer to Section 205 of Advisory Circular 150/5070-6B *Airport Master Plans*

CHAPTER 2: INVENTORY AND DESCRIPTION OF EXISTING FACILITIES

2.0 INTRODUCTION

The Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*, and the Florida Department of Transportation (FDOT) "*Guidebook for Airport Master Planning*," outline the steps in the development of an airport master plan. The initial step, Existing Conditions, is the collection of data pertinent to the airport and the area it serves. The objective of the inventory task at the Ormond Beach Municipal Airport (OMN) is to provide background information for subsequent phases of analysis.

The development of a master plan for OMN required the collection and evaluation of data relating to the airport and surrounding area and was obtained through on-site investigations of the airport; interviews with the airport management, fixed base operators, air traffic control, and representatives of the various City offices; and collection and analyses of previous reports and studies. A survey of tenants' facilities and future plans was conducted during the on-site interviews. Data was also obtained from secondary sources at the federal, state, and local level.

The data and information presented herein reflect information compiled in November 2014 when the Master Plan Update was initiated. Any material changes to the existing conditions will be updated and incorporated into the master planning process as necessary over the course of the project to ensure the accuracy of key findings and recommendations.

Information presented in this section serves as a resource for analyses contained in subsequent sections. The Existing Facilities Plan, **Exhibit 2-1,** shows the current layout of the airfield.

2.1 RUNWAYS

The airport has two hard surfaced runways: primary Runway 8/26 and crosswind Runway 17/35. **Table 2.1** summarizes relevant runway data and associated facilities.

Runway 8/26 is 4,004 feet long and 75 feet wide. The asphalt surface of Runway 8/26 can support aircraft with single wheel landing gear and maximum takeoff weight (MTOW) of 20,000 lbs., and dual wheel landing gear and MTOW of 40,000 lbs. The true bearing of Runway 8/26 is approximately 079^0 and the magnetic bearing is approximately 085^0. Runway 8/26 is equipped with Medium-Intensity Runway Edge Lights (MIRLS). Runway End Identifier Lights (REILs) are located at each runway end outboard of each landing threshold. Runway 8/26 has a full length parallel taxiway, Taxiway "A". In addition, there are two taxiway connectors, Taxiway "A1" and "A2", which serve as runway exits for landing aircraft.

ORMOND BEACH MUNICIPAL AIRPORT
EXISTING FACILITIES PLAN

MAG. N
DIP 24° W
2015

OPTIMISTIC MINI-PARK
SPORT COMPLEX AND ATHLETIC OFFICE

HOPE ST
TIMOTHY ST
HULL RD
BEAR FOOT TRAIL
BEAR CREEK PATH
AIRPORT RD

RUNWAY 17 END
ELEV: 25.2' (LOW)
N29° 18' 19.1390"
W81° 06' 52.5565"

RUNWAY 26 END
ELEV: 20.6' (LOW)
N29° 18' 10.5651"
W81° 06' 28.4165"

RUNWAY 8 END
ELEV: 27.5'
N29° 18' 03.1412"
W81° 07' 12.8448"

ELEV: 27.9' (HIGH)
N29° 18' 05.07"
W81° 07' 01.40"

EXISTING AIRPORT REFERENCE POINT
N29° 18' 04.1029"
W81° 06' 49.6752"

RUNWAY 35 END
ELEV: 25.9'
N29° 17' 43.1195"
W81° 06' 44.7281"

ATCT
REILs
VOR
2-LIGHT PAPI
35' TDG 2 W/ 10' SHOULDERS
100' X 3,704' W/ 40' SHOULDERS
75' X 4,005' W/ 10' SHOULDERS
FORMER RUNWAY TO BE REDEVELOPED
HELIPAD
AWOS-III
APRON 330,500 SF
AVIATION FUEL
AIRCRAFT TIE DOWNS
WINDCONE AND SEGMENTED CIRCLE
AIRPORT BEACON
HANGAR WAY
TOMOKA RIVER
APPROXIMATE AIRPORT PROPERTY LINE (TYP.)
TOWER CIR WEST
TOWER CIR EAST
SUNSHINE BLVD
AVIATION WAY

TW A
TW B
TW C
TW D
TW E
TW F

ID#	Description
1	Club House & Restaurant
2	Golf Maintenance Facility
3	Golf Cart Barn
4	Airport Lighting Vault
5	Ormond Aircraft / RAMS Hangar
6	Ormond Airport Hangars
7	Aquasun Hangar
8	BETNR Hangar
9	Hangar 7 Aviation
10	Endeavor Aire Hangar
11	Morrow Hangar
12	Tomlinson Hangar
13	Tomlinson Hangar
14	Cavalier Hangar
15	Cassata Hangar
16	Manne/Christmas Hangar
17	RYHH Hangar
18	Searle Hangar
19	Blue Sky Hangar
20	Sunrise Aviation
21	Sunrise Aviation
22	MAC Hangars Condo No.1
23	Civil Air Patrol
24	Golf Course Pump House
25	T Hangar
26	T Hangar
27	T Hangar
28	T Hangar
29	Nested T-Hangars
30	Nested T-Hangars
31	Nested T-Hangars
32	MAC Hangars Condo No.2
33	Nested T-Hangars
34	Nested T-Hangars
35	VOR
36	Shuffle Board Court
37	Airport Traffic Control Tower

LEGEND

EXISTING	DESCRIPTION
	AIRPORT REFERENCE POINT
	PROPERTY LINE
RVZ	RUNWAY VISIBILITY ZONE
RSA	RUNWAY SAFETY AREA
ROFA	RUNWAY OBJECT FREE AREA
ROFZ	RUNWAY OBJECT FREE ZONE
TOFA	TAXIWAY OBJECT FREE AREA
RPZ	RUNWAY PROTECTION ZONES
PART 77	34:1 PART 77 APPROACH SURFACE
TSS	20:1 THRESHOLD SITING SURFACE
DS	40:1 DEPARTURE SURFACE
BRL	35 FT BUILDING RESTRICTION LINE
20'	CONTOUR LINES
	PAVED AIRFIELD SURFACES
	PUBLIC ROADS
	FENCE
	ON-AIRPORT BUILDINGS
	THRESHOLD LIGHTS
	2 LIGHT PAPI
	RUNWAY END IDENTIFIER LIGHT (REIL)
	BUILDING IDENTIFICATION
	PAVEMENT CLOSED (EXIST)
	FWS DELINIATED WETLANDS

0 300 750 1500 FEET
1"=300'

EXHIBIT
2-1

Drawing name: H:\307101\dwg\Exhibit\Exhibit-Existing Facilities Plan.dwg Aug 10, 2015 - 11:35am

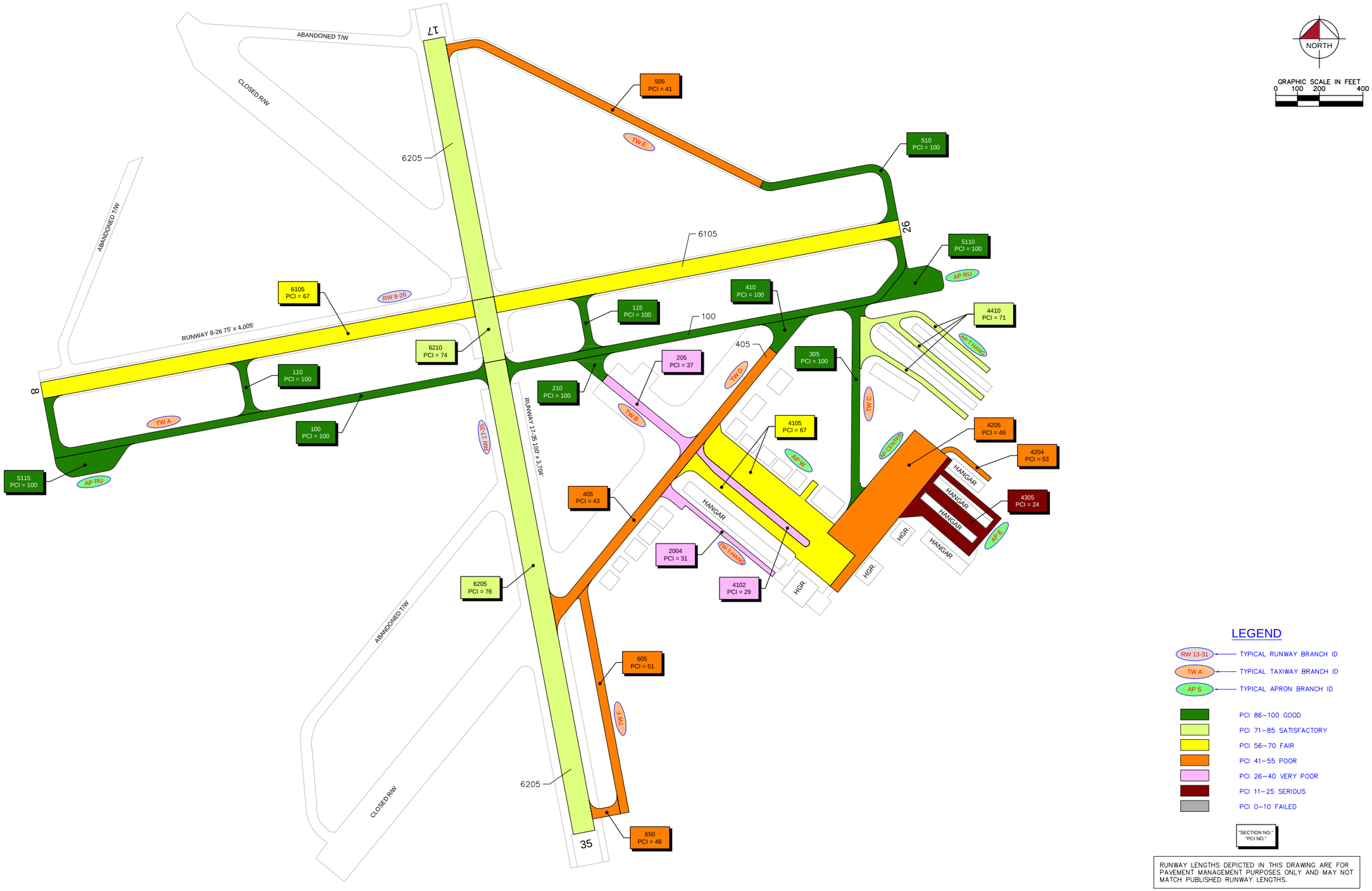
Runway 17/35 is 3,704 feet long and 100 feet wide. The asphalt surface of Runway 17/35 can support aircraft with single wheel landing gear and maximum takeoff weight of 20,000 lbs., and dual wheel landing gear and MTOW of 40,000 lbs. The true bearing of Runway 17/35 is approximately 169^0 and the magnetic bearing is approximately 174^0. Runway 17/35 is equipped with MIRLS. REILs are located at each runway end outboard of each landing threshold. Runway 17/35 does not have a full length parallel taxiway. However, design plans for Taxiway "G", a full length parallel taxiway for Runway 17/35 were underway at the time this report was written. In addition, Runway 17 end can be accessed via Taxiway "E" and Runway 35 end can be accessed via Taxiway "F". Blast pads are located at both ends of the runway.

The runways intersect at approximately 2,067 feet from the Runway 8 threshold and approximately 1,251 feet from the Runway 17 threshold.

TABLE 2.1 – RUNWAY DATA

Item	Runway 8/26	Runway 17/35
Runway Length (feet)	4,005	3,704
Runway Width (feet)	75	100
Displaced Threshold (feet)	None	None
Runway Design Code (RDC)	B-II-5000	B-II-5000
Critical Aircraft	King Air 200	King Air 200
Effective Gradient (percent)	0.18	0.04
True Bearing	079^0	169^0
Runway End Elevations (feet)	27.5 / 20.6	25.2 / 25.9
Pavement Strength	30,000 Single Wheel 40,000	30,000 Single Wheel 40,000
Pavement Surface	Asphalt	Asphalt
Pavement Condition	Good to Fair	Good to Fair
Runway Lighting	MIRL - Pilot Controlled	MIRL - Pilot Controlled
Runway Marking	Non-Precision Instrument	Non-Precision Instrument
Runway NAVAIDS	VORTAC, GPS, WAAS	VORTAC, GPS, WAAS
Runway Visual Approach Aids	PAPI, REIL	PAPI, REIL
Traffic Pattern	Left / Right	Right / Left

An FDOT Statewide Airfield Pavement Management Program report was published in June of 2015 that included a detailed Pavement Evaluation Report for OMN. The evaluation developed a Pavement Condition Index (PCI) to quantify the condition of the pavement based on the visible distresses on the surface. **Figure 2.1** shows the results of the airfield pavement. **Table 2.2** summarizes the results for both runways. Action required is triggered when a section within the branch facility falls below the FDOT minimum service level.



LEGEND

- RW 13-31 — TYPICAL RUNWAY BRANCH ID
- TW A — TYPICAL TAXIWAY BRANCH ID
- AP S — TYPICAL APRON BRANCH ID

- PCI 86–100 GOOD
- PCI 71–85 SATISFACTORY
- PCI 56–70 FAIR
- PCI 41–55 POOR
- PCI 26–40 VERY POOR
- PCI 11–25 SERIOUS
- PCI 0–10 FAILED

"SECTION NO."
"PCI NO."

RUNWAY LENGTHS DEPICTED IN THIS DRAWING ARE FOR PAVEMENT MANAGEMENT PURPOSES ONLY AND MAY NOT MATCH PUBLISHED RUNWAY LENGTHS.

NUMBER	DATE	REVISIONS

DESIGNED:	KHA	DRAWN:	KHA	CHECKED:	KHA	DATE:	2015

K:\DFB_Aviation\AIRPORTS\ORMOND BEACH MUNICIPAL AIRPORT\EXHIBITS\203-OMN-CONDITION.dwg PLOTTED: May 1, 2015 - 11:18 AM, BY: Steve, Art

FIGURE 2.1 PCI PAVEMENT RESULTS

OFFICE OF FREIGHT, LOGISTICS & PASSENGER OPERATIONS

FDOT

AIRFIELD PAVEMENT CONDITION INDEX RATING EXHIBIT

ORMOND BEACH MUNICIPAL AIRPORT
VOLUSIA COUNTY, FLORIDA

FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION AND SPACEPORT OFFICE

IDENTIFIER: OMN
FDOT DISTRICT: 5

TABLE 2.2 RUNWAY PAVEMENT CONDITION INDEX (PCI)

Element	Runway 8/26	Runway 17/35
Area Weighted PCI	67	75
PCI Range	67	74-76
Average Condition Rating	Fair	Satisfactory
FDOT Minimum Service Level	75	75
Action Required	Yes	Yes

June 2015 FDOT Statewide Airfield Pavement Management Program

The Pavement Classification Number (PCN) was developed to express the load carrying capacity of the pavement without specifying a specific aircraft or pavement structure. This system corresponds with an Aircraft Classification Number (ACN) the expresses the aircrafts effect on pavement structures. The idea behind this concept is that there are a lot of parameters that go into structural capacity. This system simplifies that by pre-determining the parameters and assigning a value to the structure and aircraft. If the ACN is less than the PCN, then the pavement has enough structural capacity to meet the requirements of the aircraft without excessive damage.

There are two ways to determine the PCN: the Using Method and the Technical Method. The Using Method determines the most demanding aircraft that is regularly using the airfield without causing significant damage to the pavement. It then queries the ACN for the particular aircraft and uses it as the PCN. The logic is that the pavement structure has enough capacity to handle all the aircraft with similar characteristics.

The Technical Method is a comprehensive investigation of each pavement structure and the subgrade characteristics. This changes throughout the airport over different pavement sections. It then calculates the individual aircraft's cumulative damage to the pavement structure based on a given fleet mix.

The PCN is reported in 5 parts. These parts are as follows:

- Numerical PCN
- Pavement Type (Flexible or Rigid)
- Subgrade Category (A-D)
- Allowable Tire Pressure (W-Z)
- Evaluation Method (Technical or Using)

The PCN for OMN was developed by utilizing the "Using" method. This number provides a universal expression of the load-carrying capacity of the airport without specifying a particular aircraft. By selecting the most demanding aircraft, the Cessna 550C, the PCN was determined to be 9/F/B/X/U. This stands for a PCN of 9; flexible pavement; medium subgrade; high tire pressure; and Using Method.

Holding bays provide a standing space for aircraft conducting pre-takeoff checks or awaiting ATCT clearance and to permit those aircraft already cleared to move to their runway takeoff position. Flight training operations generally require more time to complete the before takeoff checklists. Holding bays facilitate flight training operations by providing additional space for training aircraft to complete checklists and instruction without interrupting the flow of other aircraft. Runway 8/26 has been equipped with runway end holding bays at each end. Each holding bay provides standing space for three aircraft.

Medium intensity runway lights (MIRL) are the most common type of runway edge lighting at general aviation airports. These type of lights are used to support instrument approaches. At OMN, both runways are equipped with MIRLs.

2.2 HELIPAD

Helipads are designed specifically for rotary wing aircraft operations. The design standards for heliports and associated infrastructure are described in FAA AC 150/5390-2C, *Heliport Design*. The size of the touchdown and liftoff area (TLOF) is based on the rotor diameter of the design helicopter and is square in shape.

Figure 2.2 – Helipad Aerial View

A helipad is located near the intersection of Taxiway "A" and "D". The helipad is a concrete surface 86 feet long and 86 feet wide. The helipad markings indicate that it was designed to support helicopters with a maximum takeoff weight of 12,000 lbs. and an overall length of 48 feet. The helipad is equipped with perimeter lights.

2.3 TAXIWAYS

OMN is served by a system of parallel and connecting taxiways that provide access between the runways, the Fixed Base Operators (FBOs), aircraft tie-down areas, and hangars.

Taxiway "A" is a 35 feet wide full length taxiway located 300 feet (runway centerline-to-taxiway centerline) south of Runway 8/26. Taxiway "A1" is a 35 feet wide stub taxiway located at approximately 921 feet from Runway 8 threshold. Taxiway "A1" connects Runway 8/26 with Taxiway "A". Taxiway "A2" is a 35 feet wide stub taxiway located at approximately 2,505 feet from Runway 8 threshold. Taxiway "A2" connects Runway 8/26 with Taxiway "A". Taxiway "A2" is also part of a three-node intersection which connects Taxiway "A", "A2", and "B".

Taxiway "B" is 35 feet wide and connects with Taxiway "A", "A2, and "D". Taxiway "B" provides access to the general aviation apron and hangar area. Taxiway "C" is 35 feet wide and connects the general aviation apron and hangar area with Taxiway "A". Taxiway "D" is approximately 45 feet wide. Taxiway "D" connects with Taxiway "F" and Taxiway "A", and intersects with Taxiway "B". Taxiway "D" provides access to the corporate hangars located along its south side. Taxiway "D" also functions as an exit taxiway for aircraft arriving on Runway 17. Taxiway "E" connects Runway 26 and Runway 17 thresholds providing access to Runway 17 departing end, and exit taxiway for aircraft arriving on Runway 35. Taxiway "F" is approximately 40 feet wide. It extends from the intersection with Taxiway "D" to the Runway 35 threshold. Taxiway "G" is a proposed full length taxiway located 300 feet (runway centerline-to-taxiway centerline) west of Runway 17/35. Taxiway "G" was not constructed at the time this report was written. However, bidding plans for its construction were available. **Table 2.3** summarizes the Taxiway information.

TABLE 2.3 – TAXIWAY DATA

Taxiway	Length[(1)] (feet)	Width (feet)	Surface	Lighting	Marking
"A"	4,005	35	Asphalt	Yes	Yes
"A1"	245	35	Asphalt	Yes	Yes
"A2"	245	35	Asphalt	Yes	Yes
"B"	657	35	Asphalt	No	Yes
"C"	889	35	Asphalt	No	Yes
"D"	1,779	45	Asphalt	No	Yes
"E"	2,399	35	Asphalt	Yes	Yes
"F"	1,110	40	Asphalt	Yes	Yes

(1) Approximate length

The FDOT Statewide Airfield Pavement Management Program report included a detailed Pavement Evaluation Report for OMN. The evaluation developed a Pavement Condition Index (PCI) to quantify the condition of the pavement based on the visible distresses on the surface. **Table 2.4** summarizes the results for each taxiway. Action required is triggered when a section within the branch facility falls below the FDOT minimum service level.

TABLE 2.4 TAXIWAY PAVEMENT CONDITION INDEX (PCI)

Element	Area Weighted PCI	PCI Range	Average Condition Rating	FDOT Minimum Service Level	Action Required
Taxiway A	100	100	Good	65	No
Taxiway B	55	37-100	Poor	65	Yes
Taxiway C	100	100	Good	65	No
Taxiway D	52	43-100	Poor	65	Yes
Taxiway E	61	41-100	Fair	65	Yes
Taxiway F	50	48-51	Poor	65	Yes
Taxiway to T-hangars	31	31	Very Poor	65	Yes

June 2015 FDOT Statewide Airfield Pavement Management Program

2.4 AIRFIELD MARKINGS AND SIGNAGE

Runway marking schemes used for runways are a direct function of the approach category for each runway threshold and the existence of displaced thresholds. Both runways have non-precision instrument procedure markings. Lighted hold position signs and hold position markings are located at each and runway/taxiway intersection. Refer to the Existing Sign and Marking Plan, **Exhibit 2-2**.

ORMOND BEACH MUNICIPAL AIRPORT
EXISTING SIGN AND MARKING PLAN

EXHIBIT
2-2

MAG. N
08° 24' W
2015

HOPE ST
TIMOTHY ST
HULL RD
BEAR FOOT TRAIL
AIRPORT RD
ATCT
VOR
TW E
TW A
TW A1
TW A2
TW B
TW C
TW D
TW F
75' X 4,004' W/ 10' SHOULDERS
100' X 3,704' W/ 40' SHOULDRS
S10° 43' 49.13"E
TOWER CIR WEST
TOWER CIR EAST
SUNSHINE BLVD
AVIATION WAY
HANGAR WAY
TOMOKA RIVER
17-35
8-26

0 300 750 1500 FEET
1"=300'

Drawing name: H:\307101\dwg\Exhibit\Exhibit-Sign and Marking Plan.dwg Aug 10, 2015 - 12:31pm

2.5 ELECTRONIC, VISUAL, AND SATELLITE AIDS TO NAVIGATION

Lighting, signage, and navigation aids on an airport increase the utility of an airfield by increasing visibility and enhancing safety. Lighting is typically focused on the runways and taxiways and is usually paired with appropriate airfield signage.

NAVAID systems are visual and instrument-based. Pilots are responsible for interpreting and using such systems without Air Traffic Control (ATC) assistance during landing operations. On-airport ATC facilities are used by air traffic personnel to assist pilots during takeoff and landing and to safely guide aircraft within the terminal airspace, touch-down and surface movement areas on the runways and taxiways.

2.5.1 RUNWAY END IDENTIFIER LIGHT (REIL)

A Runway End Identifier Light (REIL) consists of a flashing white high-intensity light installed at each approach end corner of a runway. The lights are directed toward the approach zone, enabling the pilot to identify the runway threshold. These lights consist of two synchronized flashing unidirectional or omnidirectional (360 degree) lights, one on each side of the runway threshold.

The function of the REIL is to provide rapid and positive identification of the end of the runway. REIL systems are effective for identification of a runway surrounded by a preponderance of other lighting or lacking contrast with surrounding terrain. This system is usually installed at non-towered airports and can be activated by a specified radio frequency published on aeronautical charts. REILs are installed at the approach ends of Runway 8/26 and 17/35.

2.5.2 AIRPORT BEACON (ABN)

The airport beacon (ABN) helps pilots identify the airport at night. The beacon is operated from dusk to dawn, and is always on if the ceiling is less than 1,000 feet and/or the ground visibility is less than 3 statute miles. The beacon has a vertical light distribution to make it most effective from 1° to 10° above the horizon, although it can be seen well above or below this range. The beacon may be an omnidirectional capacitor discharge device, or it may rotate at a constant speed, which produces the visual effect of flashes at regular intervals. The combination of light colors from an airport beacon indicates the type of airport. Flashing white and green indicates a civilian land airport. A white/green rotating beacon is installed on the southeast apron near the public parking lot.

2.5.3 PRECISION APPROACH PATH INDICATOR (PAPI)

A Precision Approach Path Indicator (PAPI) is a light array positioned beside the runway. It normally consists of four equally spaced light units color-coded to provide a visual indication of an aircraft's position relative to the designated Glide Slope (GS) for the runway. An abbreviated system consisting of two light units can be used for some categories of aircraft operations. The

specific location depends on a number of factors including: obstruction clearance, Threshold Crossing Height (TCH), presence of an instrument generated glideslope, and type of aircraft using the runway. Two-light PAPI units are installed to the left side of the approach thresholds of Runway 8/26 and 17/35.

2.5.4 VHF OMNI−DIRECTIONAL RANGE/TACTICAL AIR NAVIGATION (VORTAC)

A combined VOR and TACAN system is called a VHF Omnidirectional Range/Tactical Aircraft Control (VORTAC). The FAA owns the VORTAC and plans a major renovation to the system within the next year according the airport manager. The OMN VORTAC includes a Tactical Air Navigation (TACAN) system. The TACAN is similar to a Distance Measuring Equipment (DME) because it provides distance information as well as bearings to pilots.

The OMN VORTAC is located in the northeast quadrant of the airport at 29° 18' 11.707 N / 081° 06' 45.706 W, at an elevation of 24.3 feet. It was aligned in 1965 with a magnetic variation 0°E. The OMN VORTAC is available 24 hours a day and its frequency is 112.60 MHz.

VOR facilities are classified according to their range into terminal, low altitude, and high altitude. The OMN VORTAC is also a high altitude VORTAC used not only for the terminal approach procedures, but also for the formation of low altitude Victor Airways and high altitude Jet Airways.

The OMN VORTAC is not usable within the following sectors: radials 147 to 155 beyond 12 nautical miles and below 2,000 feet and beyond 25 nautical miles below 3,000 feet. It is not usable between radials 243 to 253 beyond 25 nautical miles below 3,000 feet.

2.5.5 SEGMENTED CIRCLE AND WIND CONES

A wind cone visually indicates prevailing wind direction at a particular location on an airfield. There is a wind cone and segmented circle in the middle of the airfield and a supplemental wind cone near the heliport.

The segmented circle provides a visual indication of current airport operations such as active landing direction and traffic patterns. At OMN the segmented circle is located approximately 1,550 feet from Runway 35 threshold and 225 feet from Runway 17/35 centerline. The segmented circle indicates right traffic pattern for landing on Runways 17 and 26, and a left traffic pattern for landing on Runways 35 and 8.

2.6 AUTOMATED WEATHER OBSERVING SYSTEM (AWOS)

An AWOS is a computerized system that automatically measures one or more weather parameters, analyzes the data, prepares a weather observation that consists of the parameter(s) measured, provides dissemination of the observation and broadcasts the observation to pilots in the vicinity

of the airport, typically using an integral very high frequency (VHF) radio or an existing navigational aid (NAVAID), or Automatic Terminal Information Service (ATIS).

An AWOS III is installed at OMN. The AWOS III system measures and reports the following information: wind data (speed, direction, and gusts), temperature, dew point, altimeter, visibility, density altitude, and cloud height and sky condition.

Pilots can access the AWOS weather information via radio using the frequency 118.475 MHz or via phone at (386)-615-7084

2.7 AIRPORT TRAFFIC CONTROL TOWER (ATCT)

ATCT is a staffed facility that uses air/ground communications and other ATC systems to provide air traffic services on and in the vicinity of an airport. The ATCT must be located near active runways to give controllers adequate visibility of the surface movement area, takeoff and landing areas.

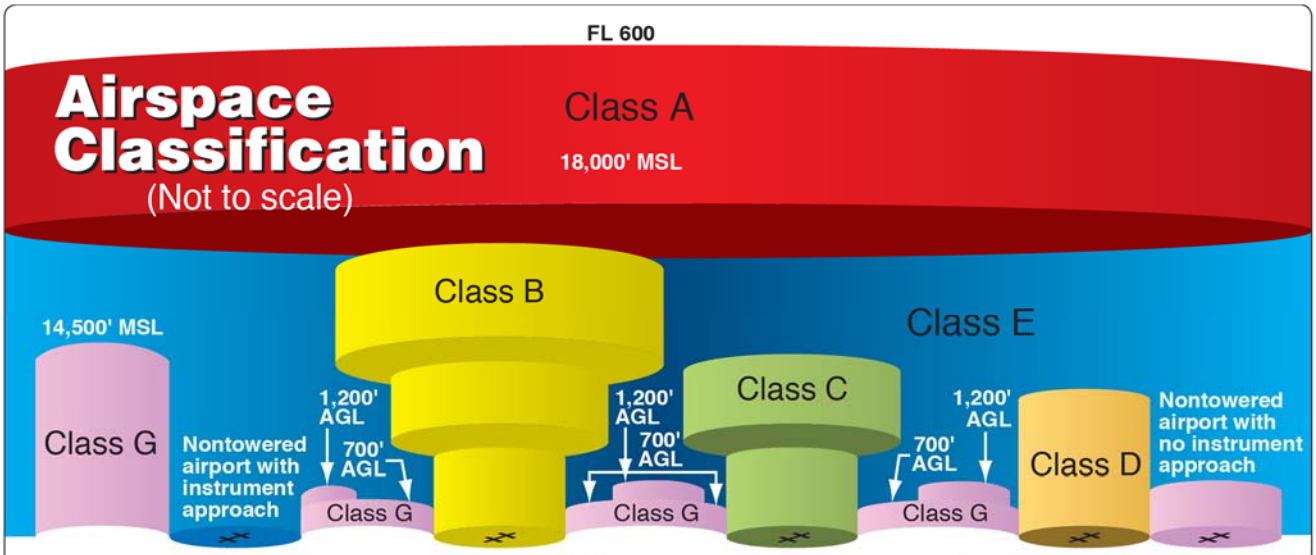
The ATCT at OMN was constructed and commissioned in 2004 and is operated under the FAA Federal Contract Tower Program. The ATCT is located in the northwest quadrant of the airport. The bottom of the cab is 42 feet above the ground (AGL). The ceiling of the cab is 52 feet AGL. The facility is operational from 7:00am to 7:00pm, 365 days a year.

2.8 EXISTING AIRSPACE

When the ATCT is in operation from 7:00am to 7:00pm local time, the airspace surrounding OMN is Class D airspace. Generally, Class D airspace extends from the surface to 2,500 feet above the airport elevation (charted in MSL). The configuration of each Class D airspace area is individually tailored and when instrument procedures are published, the airspace is normally designed to contain the procedures. Arrival extensions for instrument approach procedures (IAPs) may be Class D or Class E airspace.[1] At OMN the class D extends from the surface to below 1,200 MSL. **Exhibit 2-3** shows an illustration of the different classes of airspace and how they interact.

Above the OMN Class D airspace, the Daytona Beach Class C airspace extends from 1,200 MSL to 4,000 MSL. Just to the north and adjacent to the OMN Class D airspace there is a section of Class C airspace extending from the surface up to but not including 18,000 feet. When the Class E is designated as a surface area, the airspace is configured to contain instrument procedures.

[1] FAA Pilots Handbook of Aeronautical Knowledge, Chapter 14, Airspace



	Class A	Class B	Class C	Class D	Class E	Class G
Entry Requirements	ATC clearance	ATC clearance	Prior two-way communications	Prior two-way communications	Prior two-way communications*	None
Minimum Pilot Qualifications	Instrument Rating	Private or Student certification—local restrictions apply.	Student certificate	Student certificate	Student certificate	Student certificate
Two-Way Radio Communications	Yes	Yes	Yes	Yes	Yes, under IFR flight plan*	None
Special VFR Allowed	No	Yes	Yes	Yes	Yes	N/A
VFR Visibility Minimum	N/A	3 statute miles	3 statute miles	3 statute miles	3 statute miles**	1 statute mile†
VFR Minimum Distance from Clouds	N/A	Clear of clouds	500' below, 1,000' above, 2,000' horizontal	500' below, 1,000' above, 2,000' horizontal	500' below,** 1,000' above, 2,000' horizontal	Clear of clouds†
VFR Aircraft Separation	N/A	All	IFR aircraft	Runway operations	None	None
Traffic Advisories	Yes	Yes	Yes	Workload permitting	Workload permitting	Workload permitting
Airport Application	N/A	• Radar • Instrument approaches • Weather • Control tower • High density	• Radar • Instrument approaches • Weather • Control tower	• Instrument approaches • Weather • Control tower	• Instrument approaches • Weather	• Control tower

*Exception: temporary tower or control tower present
**True only below 10,000 feet
† True only during day at or below 1,200 feet AGL (see 14 CFR part 91)

AGL—above ground level
FL—flight level
MSL—mean sea level

Airspace Classification System

EXHIBIT
2-3

When the ATCT is not in operation, the airspace becomes uncontrolled or Class G from the surface to the base of the overlaying Class C airspace, which begins at 1200 feet and extends up to but not including 18,000 feet.

Special use airspace or special area of operations (SAO) is the designation for airspace in which certain activities must be confined, or where limitations may be imposed on aircraft operations that are not part of those activities. Special use airspace usually consists of: prohibited areas, restricted areas, warning areas, military operations areas (MOAs), alert areas, and controlled firing areas (CFAs). There are no special use airspace designations that would affect operations at OMN.

The previously described OMN VORTAC is part of a network of legacy ground based radio NAVAIDs used for instrument approaches to nearby airports and to establish instrument airways in the sky that pilots and air traffic controllers use during instrument weather conditions. These airways are established and depicted on low and high IFR aeronautical charts and are referred to as Victor airways for routes below 18,000 feet MSL and Jet airways from 18,000 feet and higher.

Table 2.5 lists the existing CFR Part 77 runway approach types and slopes as well as the visibility standards for the specific instrument or visual approaches serving each runway end. In addition, the slope that defines the threshold location and the instrument departure slope for each runway end is listed.

TABLE 2.5 – EXISTING AIRSPACE

Item	Runway 8/26	Runway 17/35
14 CFR Part 77	NPI / NPI 34:1 / 34:1	NPI / Visual 34:1 / 20:1
Visibility Categories	RWY 8 APV; RWY 26 NPA	RWY 17 APV; RWY 35 Visual
Instrument Procedures	RNAV(GPS) RWY 8 RNAV(GPS) RWY 26	RNAV(GPS) RWY 17 VOR RWY 17
Threshold Siting Surface	20:1 / 20:1	20:1 / 20:1
Departure Surface	40:1 / 40:1	40:1 / 40:1

2.8.1 VISIBILITY CATEGORIES

Runways provide maximum utility when they can be used in less than ideal weather conditions. For runways, weather conditions translate to visibility in terms of the distance to see and identify prominent unlighted objects by day and prominent lighted objects by night. In order to land during periods of limited visibility, pilots must be able to see the runway or associated lighting at a certain distance from the height above the runway. If the runway environment cannot be identified at the minimum visibility point on the approach, FAA regulations do not authorize pilots to land. The Runway Visibility Categories are shown in **Table 2.6**

TABLE 2.6 – RUNWAY VISIBILITY CATEGORIES

Runway End	Visibility Category
8	Approach Procedure with Vertical Guidance (APV)
26	Non-precision approach (NPA)
17	Approach Procedure with Vertical Guidance (APV)
35	Visual approach

2.8.2 LOCAL PROCEDURES AND VOLUNTARY NOISE ABATEMENT

OMN has established a voluntary noise abatement program. The noise abatement procedures are designed to minimize the exposure of residential areas to aircraft noise, while maintaining the safety of flight operations. Pilots are asked to become familiar with the noise sensitive areas and to follow the noise abatement procedures while maintaining operational safety. Noise abatement procedures are published on the airport's website and can also be obtained by contacting the airport manager. Copies of the local procedures and voluntary noise abatement program are located in **Appendix A.**

2.9 COMMERCIAL PASSENGER TERMINAL FACILITIES

There are no commercial passenger terminal facilities at OMN. Consistent with its role as a reliever airport, there are no plans to develop any commercial passenger terminal facilities within the planning horizon of this airport master plan update. Commercial passenger terminal facilities should not be confused with general aviation terminal facilities often provided by Fixed Base Operations (FBOs) or airport sponsors.

2.10 GENERAL AVIATION FACILITIES

General aviation aircraft require a wide array of services and facilities, often depending on aircraft, climate, and frequency and type of operation. These facilities include fuel, maintenance, bathrooms, storage hangars and similar services. Services and facilities are often provided by the airport owner, and some are provided by private businesses such as FBO's. The general aviation facilities at OMN are all provided by FBOs and are currently located in the southeast quadrant of the airport.

2.10.1 AIRCRAFT STORAGE FACILITIES

Generally aircraft owners prefer to have their aircraft stored in hangars for security and protection against wind and other adverse weather conditions. Aircraft hangars vary from open storage sun

shades (roof only) to full-service corporate hangars. The size of the hangar and door height determine the size of aircraft that can be accommodated.

Hangars are commonly classified into four groups: Conventional Hangar, T-Hangar, Executive Hangar, and Corporate Hangar.

A conventional hangar is a square or rectangular-shaped building capable of accommodating one or more aircraft. Conventional hangars are sometime referred to as "box hangars". T-Hangars on the other hand, are a grouping of hangars in a square or rectangular-shaped building. The floor plan of a T-Hangar bay is shaped as a tee with a wide space for the wing and a narrow space for the tail. T-Hangars are designed primarily for storing individual aircraft, where conventional hangars may also include other uses such as FBO, corporate hangars, or aircraft maintenance facility.

At OMN there are sixteen conventional hangars and eight T-Hangar buildings. The T-Hangars are subdivided into eighty seven units.

2.10.2 AIRCRAFT PARKING APRONS

The function of an apron is to accommodate aircraft during loading and unloading of passengers and/or cargo. Activities such as fueling, maintenance, and short/long term parking take place on an apron. The layout of the apron generally depends on aircraft parking positions and movement patterns between these parking positions, hangars, and support facilities.

2.10.3 GENERAL AVIATION TERMINAL FACILITIES

General aviation terminal buildings provide essential services for passengers and pilots, as well as a facility for transfer of passengers and flight crews to and from the aircraft. Buildings can range from a small room for flight planning and a bathroom to a large multi-room building that provides multiple uses. A terminal building or administrative building often provides the first impression of an airport to visitors.

At OMN there are currently three FBOs located at the airport that provide terminal services to some degree: Hangar Seven Aviation, Sunrise Aviation, and Tomlinson Aviation.

2.11 SUPPORT FACILITIES

Support facilities at OMN encompass a broad set of functions that facilitate smooth and efficient airport operations.

2.11.1 AIRCRAFT RESCUE AND FIREFIGHTING

OMN is not a 14 CFR Part 139 certificated airport. Therefore, on-airport aircraft rescue and firefighting (ARFF) services are not required.

OMN is under the jurisdictional responsibility of the Ormond Beach Fire Department. OMN is served primarily by Ormond Beach Fire Stations 93 and 94. Each station is staffed with a minimum of three personnel. The Ormond Beach Fire Department is an all-hazards trained fire department and has the capability of responding to emergencies at OMN.

TABLE 2.7 – AIRCRAFT RESCUE AND FIREFIGHTING

Firestation	Location	Distance from Airport
Volusia County Fire Service Station 13	15 Southland Rd	2.9 miles
Ormond Beach Fire Department Station 93	300 Wilmette Ave	3.4 miles
Ormond Beach Fire Department Station 94	2301 Airport Rd	3.8 miles
Ormond Beach Fire Department Station 92	189 S. Nova Rd	4.1 miles

2.11.2 AIRPORT MAINTENANCE

Airport maintenance is provided by the City of Ormond Beach Public Works Department and outside contractors. There are no maintenance facilities or equipment located on the airport property.

2.11.3 FUEL STORAGE

The availability of fuel is a major factor when aircraft owners decide where to base aircraft. At OMN there are a total of four above ground fuel storage tanks on the airfield and four fuel trucks. All the fuel storage facilities are owned and operated by Sunrise Aviation and Hangar Seven Aviation.

Airports have various ways to dispense the fuel from the tanks. At OMN one of the Aviation Gasoline (Avgas) fuel tanks is equipped with a credit card system for self-fueling. This provides 24/7 fuel service which is attractive to pilots who may need access to fueling services after normal business hours. The remaining tanks are used for fuel storage only. Fuel trucks are utilized to dispense AvGas and jet fuel directly to the aircraft.

TABLE 2.8 – FUEL STORAGE

Facility	Type of Fuel	Capacity	Ownership	Self-Service	Brand
Tank	AvGAS	12,000	Hangar 7 Aviation	No	Shell
Tank	AvGAS	12,000	Hangar 7 Aviation	No	Phillips 66
Tank	AvGAS	12,000	Hangar 7 Aviation	Yes	Phillips 66
Tank	Jet-A	10,000	Sunrise Aviation	No	Shell
Fuel Truck	AvGAS	1,000	Hangar 7 Aviation	--	Shell
Fuel Truck	AvGAS	1,000	Hangar 7 Aviation	--	Phillips 66
Fuel Truck	AvGAS	1,000	Hangar 7 Aviation	--	Phillips 66
Fuel Truck	Jet-A	2,200	Hangar 7 Aviation	--	Shell

Source: Sunrise Aviation

2.11.4 AIRCRAFT MAINTENANCE

There are seven (7) FBOs stationed at OMN that provide maintenance services. These services include aircraft engine, propeller and accessory maintenance along with interior aircraft renovations, aircraft refurbishing and painting.

2.12 ACCESS, CIRCULATION, AND PARKING

Airport Road and Hangar Way provide the primary vehicle access to OMN facilities located in the southeast quad. The northwest quad can be accessed via Hull Road. However, Hull Road does not provide access to the airport's public facilities. Hull Road provides access to the Airport Traffic Control Tower (ATCT).

2.13 AIRPORT FENCING AND ACCESS GATES

The primary purpose of airport fencing is to prevent intrusions by wildlife or people onto airport property. Airport fencing provides increased safety and security for the airport.

A perimeter security fence (6-foot chain link fence with three strands of barbed wire) is located along the airport boundary. There are 19 gates along the fence. Five of these gates are pedestrian gates. Gate #9 and Gate #13 are equipped with a programmable card reader and key pad access. The ATC Gate provides access to the ATCT and requires authorization from the ATCT manager.

2.14 UTILITIES

Electrical power service is provided by Florida Power and Light (FPL). Water and sewer utilities are provided by the City. Solid waste and recycling is provided by an outside contractor under contract with the City. Brighthouse has an access agreement with the City to provide their high-speed internet services to airport tenants and businesses who wish to contract with them. AT&T also provides telecommunications services to the airport and the business park.

2.15 NON-AERONAUTICAL FACILITIES

The Airport Sports Complex is located in the northwest quadrant of the airport. This facility includes multiple baseball and soccer fields. A City owned shuffleboard facility with multiple courts and amenities is located southwest of the ATCT. The River Bend Golf Club surrounds the northeast and southeast quadrants of the airport. These facilities have a non-aeronautical lease agreement with rent rates per acre established based upon an appraisal conducted in 2006, and adjusted annually based upon the Consumer Price index (CPI). They contribute to the non-aeronautical revenue flow at the airport.

CHAPTER 3 REGIONAL SETTING AND LAND USE

3.0 INTRODUCTION

The purpose of this chapter is to describe the regional setting of OMN and the land use patterns that surround it. This information is critical because the impact of airport planning decisions can extend beyond the airport property line. In addition, the surrounding political boundaries and jurisdictions, and well as established land uses and zoning restrictions can limit future proposed airport developments.

3.1 POLITICAL BOUNDARIES AND JURISDICTIONS

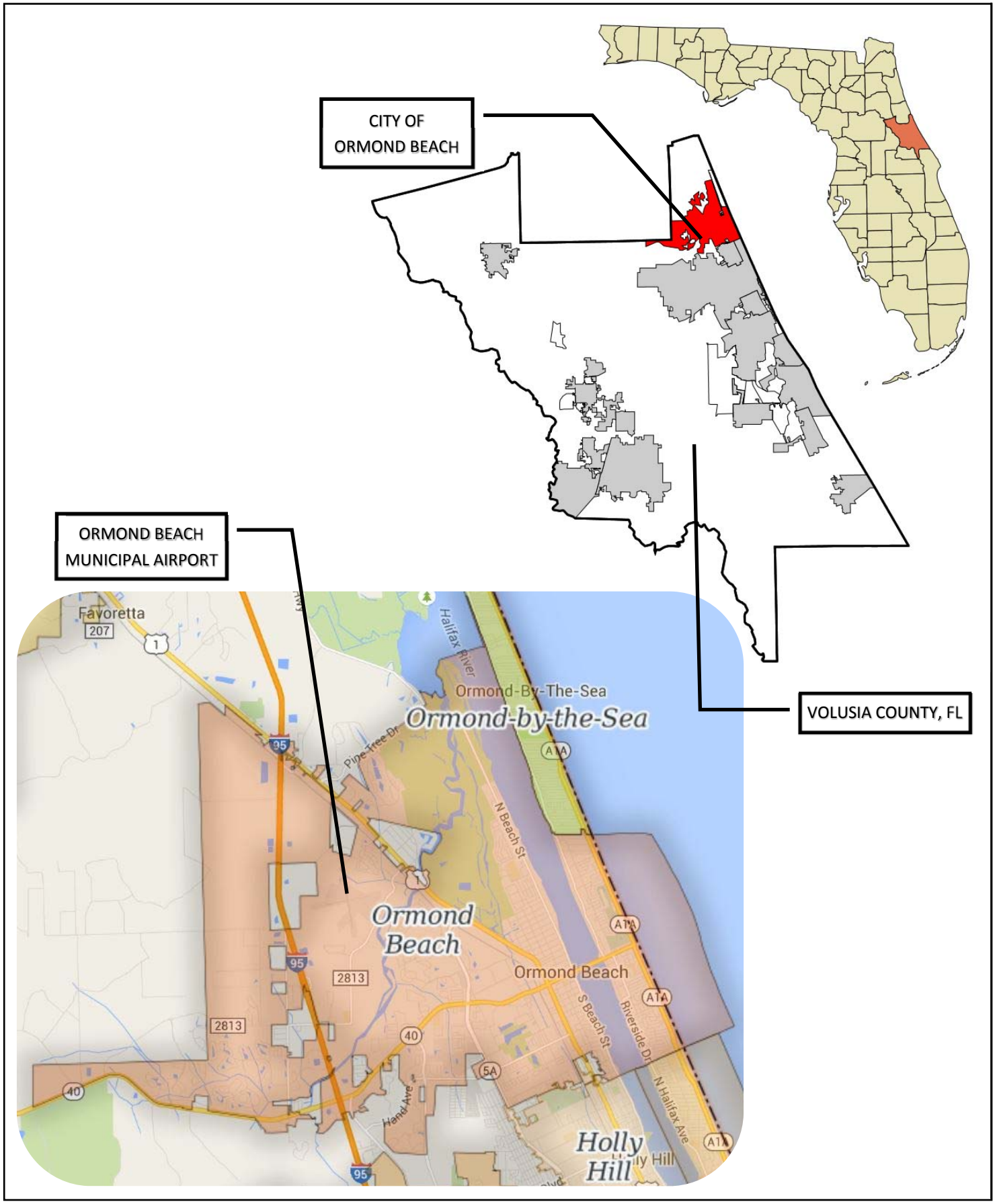
OMN is located within the boundaries and jurisdiction of the City of Ormond Beach, which is located in the northeast area of Volusia County. The City of Ormond Beach is also the owner and operator of OMN. The Political Boundaries and Jurisdictions Map, **Exhibit 3-1**, shows the existing Town and County limits within the Airport Vicinity.

3.2 ZONING AND LAND USE

The City of Ormond Beach is given the legislative authority to establish, amend, and enforce land development regulations by Florida Statute 163.3202, and the City's zoning classifications implement the land use policies and objectives in the City's comprehensive Plan. The zoning districts are utilized to promote land use compatibility as a means of protecting the health, safety, and general welfare of the City and its citizens.

The current zoning of the airport and the adjacent business park is designated as Light Industrial (I-1). The purpose of the I-1, Light Industrial Zoning District is to provide sites in appropriate locations for light industrial operations which do not generate objectionable on- or off-site impacts including odors; smoke; dust; refuse; electromagnetic interference; or noise (in excess of that customary to loading, unloading, and handling of goods and materials beyond the lot on which the facility is located); or which would have an adverse impact on the city's wastewater treatment system; or result in hazardous environments for workers or visitors. Consistent with the city's comprehensive plan, the I-1 zoning district is intended to implement comprehensive plan policies for managing light industrial land uses. This district is not intended to accommodate heavy industrial activities.

The adjacent golf course and sports complex are zoned Special Environmental (SE). The purpose of this zone is to protect persons and private property from the hazards of floodwater inundation and to conserve important natural, ecological, historic, or unique resources for the enjoyment and



Ormond Beach Municipal Airport
Political Boundaries and Jurisdictions Map

EXHIBIT
3-1

education of current and future residents, while providing for limited public or commercial outdoor activities and facilities such as equestrian trails, campgrounds, commercial recreation facilities and other centralized outdoor facilities. This classification is primarily intended to be applied to environmentally sensitive lands, public lands, lands held in trust for future open space use or lands held by nonprofit organizations or homeowners' associations and intended for open space uses.

Future land use categories are described in the City of Ormond Beach Year 2025 Comprehensive Plan, adopted December 7, 2010. According to the comprehensive plan, the airport property encompasses the following land uses: public/institutional, recreation/open space, and open space/conservation. The business park is designated as Industrial/Utilities. The Future Land Use Map, **Exhibit 3-2,** shows the land uses surrounding the airport.

Public Institutional: this land use category includes governmental and public uses. The City currently does not have a special zoning district for this land use category. Therefore, the current underlying public/institutional zoning district allows significant flexibility, provided that it is compatible with the surrounding zoning districts and the use of the parcel is consistent with the uses allowed in the district. This land use encompasses most of the land functioning as an airport.

Recreation/Open Space: provides land for public, semipublic, or privately-owned areas intended for active recreational use. This land encompasses the sports complex, and the golf course.

Open Space and Conservation: reserved for special environments including wetlands and other protected sensitive areas. This land encompasses the land adjacent to the Tomoka River.

Industrial/Utilities: corresponds to Light Industrial (I-1) and Planned Industrial Development zoning.

3.4 AIRPORT OVERLAY DISTRICT

The Airport Overlay District is described in City of Ormond Beach Land Development Code, *Section 2-72 of Chapter II: District and General Regulations, Article VI: Overlay Districts*. A copy of Section 2-72 is located in **Appendix B**. The purpose of the Airport Overlay District is to protect the public health, safety, and welfare in the vicinity of the airport, by minimizing the exposure to hazards and noise levels generated by aircraft operations. The Airport Overlay District Map, **Exhibit 3-3,** shows the orientation of the existing Airport Overlay District and its impacts on the surrounding community.

In general, the intent of the Airport Overlay District is to:

- Limit the creation of new residential or intensification of existing residential land uses that may be developed within the Airport Overlay District.

- Ensure that existing legal uses of land and existing zoning entitlements, whether the property is improved or unimproved (as of the date of adoption of this Airport Overlay District) are protected.
- Reduce noise and safety hazards.
- Encourage future development that protects the operations of the airport and that is consistent with the Airport Master Plan

DENSITY/INTENSITY RESTRICTIONS

PROJECT	LAND USE	ORD. #	RESTRICTION
1. Calvary Church	TC	2007-39	790 AADT
2. 1287 W Granda Blvd	OP	2008-22	900 AADT
3. Marshside	SLDR	2008-54	3.47 UPA
4. River Oaks	SLDR	2008-54	1.74 UPA

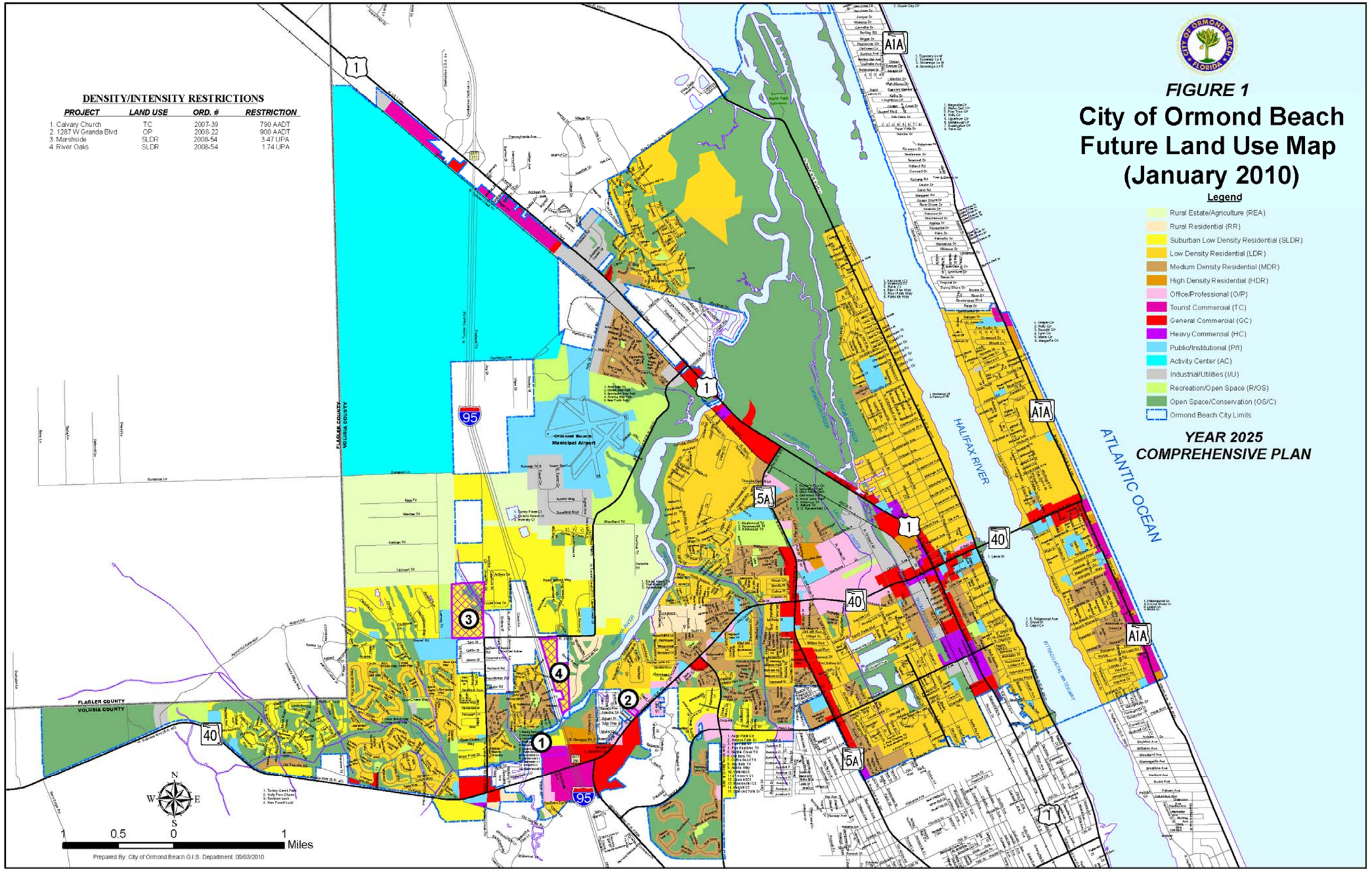
FIGURE 1

City of Ormond Beach Future Land Use Map (January 2010)

Legend

- Rural Estate/Agriculture (REA)
- Rural Residential (RR)
- Suburban Low Density Residential (SLDR)
- Low Density Residential (LDR)
- Medium Density Residential (MDR)
- High Density Residential (HDR)
- Office/Professional (O/P)
- Tourist Commercial (TC)
- General Commercial (GC)
- Heavy Commercial (HC)
- Public/Institutional (P/I)
- Activity Center (AC)
- Industrial/Utilities (I/U)
- Recreation/Open Space (R/OS)
- Open Space/Conservation (OS/C)
- Ormond Beach City Limits

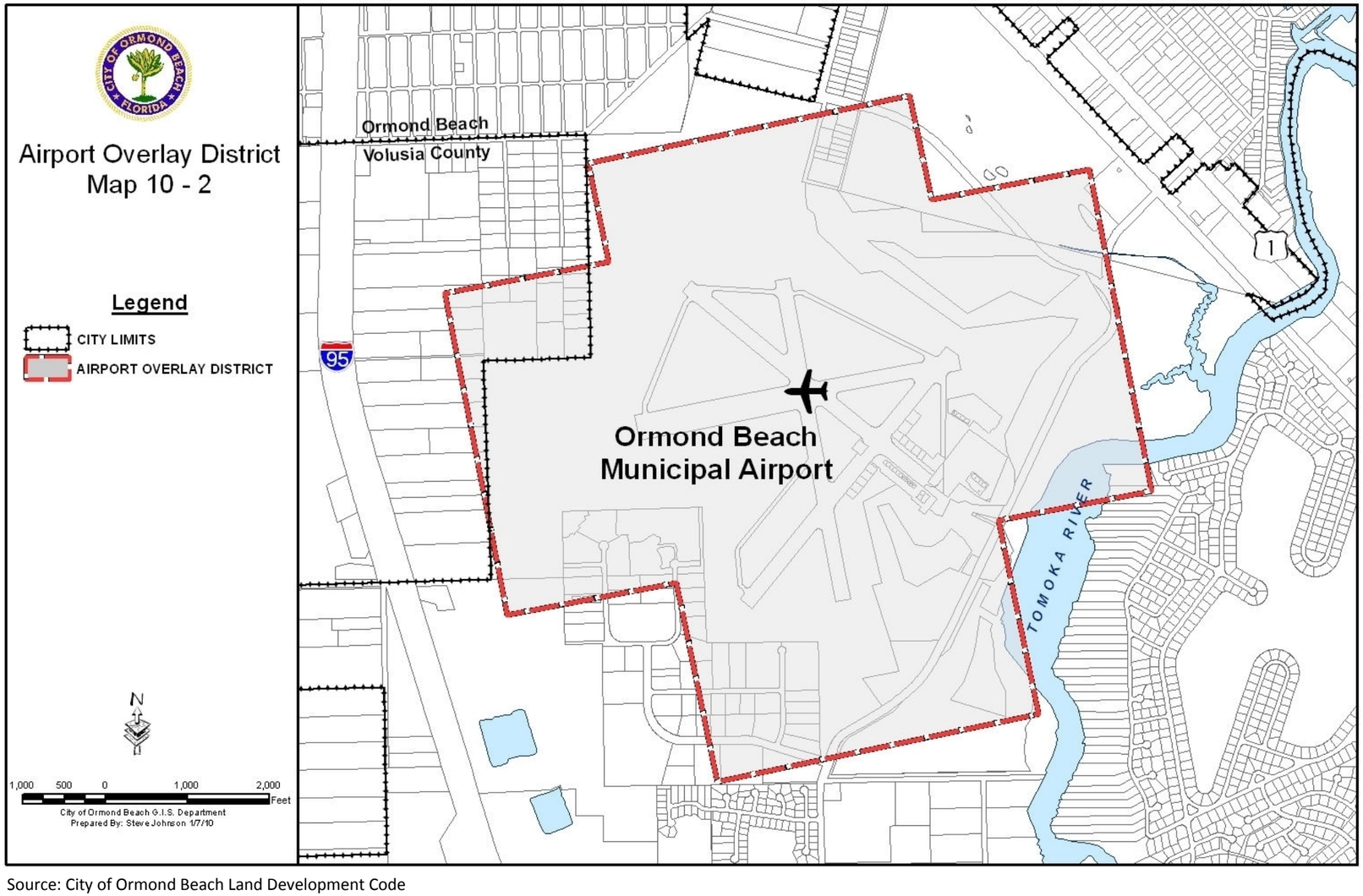
YEAR 2025 COMPREHENSIVE PLAN



Source: Adapted from the City of Ormond Beach Year 2025 Comprehensive Plan

Ormond Beach Municipal Airport
Future Land Use Map

EXHIBIT
3-2



Source: City of Ormond Beach Land Development Code

Ormond Beach Municipal Airport
Airport Overlay District Map

EXHIBIT
3-3

CHAPTER 4 ENVIRONMENTAL OVERVIEW

4.0 INTRODUCTION

The purpose of the environmental overview in the airport master plan is to assist the sponsor to thoroughly evaluate airport development alternatives and to provide information that will help expedite subsequent environmental processing. When considering environmental factors in the master planning process, not all twenty-three impact categories listed in FAA Order 5050.4 need to be addressed. Instead, FAA Order 5050.4 should be consulted as a guide to identify potential environmental impacts specific to the airport that should be considered as planning continues.

4.1 AIR QUALITY

Air pollution prevention and control is of critical importance, and must be considered as it relates to airport improvement projects. The primary laws that apply to air quality include the National Environmental Policy Act of 1969 (NEPA); the Clean Air Act (CAA), as amended; and Title 49 U.S.C. 47106 (c) (1) (B), as amended (formerly sections 509 (B) (5) and (B) (7) of the Airport and Airway Improvement Act of 1982, as amended, PL 97-248). Additionally, the EPA has adopted air quality standards that specify the maximum permissible short-term and long-term concentrations of various air pollutants. The Clean Air Act (CAA) established the National Ambient Air Quality Standards (NAAQS) consisting of primary and secondary standards for six pollutants, termed "criteria pollutants," that include the following: Carbon Monoxide (CO), Lead (Pb), Nitrogen Dioxide (NO2), Ozone (O3), Particulates (PM10 and PM2.5), and Sulfur Dioxide (SO2).

The CAA requires that each state adopt a plan (e.g. State Implementation Plan or SIP) to achieve the NAAQS for each pollutant within the timeframes established under CAA. In addition to satisfaction of NEPA analysis, the CAA 1990 Amendments required that the EPA issue rules that would ensure Federal actions conform to the appropriate SIP and requires that a general conformity determination to the SIP be made for all federally approved/funded projects which occur in a "non-attainment" area. Non-attainment means the area currently exceeds one or more of the NAAQS criteria pollutant thresholds. To determine whether conformity requirements apply to a proposed federal action, the following must be considered:

- Non-attainment or maintenance status of the area
- Type(s) of pollutant(s) or emission(s)
- Exemptions from conformity and presumptions to conform
- Project's emission levels
- Regional significance of the project's emissions

FAA actions are subject to the General Conformity Rule, which only applies in geographic areas that EPA has designated as non-attainment. Volusia County has been designated as an attainment area for all NAAQS criteria pollutants.

The FAA threshold that triggers an air quality analysis at a general aviation airport like OMN is 180,000 annual general aviation and air taxi operations. According to the approved forecast, the total number of operations at OMN, including general aviation and air taxi in 2034, is expected to be 152,575 operations. Therefore, a detailed air quality analysis will most likely not be required for future airport projects at OMN.

4.2 BIOTIC RESOURCES

Biotic resources include various types of flora (plants) and fauna (fish, birds, reptiles, amphibians, marine mammals, coral reefs, etc.) in a particular geographic area. The term also includes rivers, lakes, wetlands, forests, upland communities, and other habitat types supporting flora and aquatic and avian fauna.

FAA must evaluate the effect on biotic resources caused by any airport development action subject to FAA approval or funded under the Airport Improvement Program (AIP). In those instances, FAA must determine if the proposed action or its reasonable alternatives would significantly affect biotic resources. Typical airside actions that may cause impacts include: new or expanded terminals or hangar facilities; building new or extended runways or taxiways; installing navigational aids (NAVAIDS) or expanding those facilities. Landside actions may include new or relocated access roadways, on-airport remote parking facilities or rental car lots.

Wetlands are known to exist on OMN property, so at a minimum any proposed development will require analysis of the impacts to the wetlands as well as other biotic resources determined to be present.

4.3 COASTAL BARRIERS

Barrier islands are geologically unstable formations and cannot support development. They protect the mainland by buffering storm or hurricane-driven winds or waves. As a result, these islands protect fish, wildlife, human life, and property along coasts and shorelines. This impact category does not apply at OMN.

4.4 COASTAL ZONE MANAGEMENT

Coastal zones are those waters and their bordering areas in states along the coastlines of the Atlantic and Pacific Oceans and the Gulf of Mexico and the shorelines of the Great Lakes. These

zones include islands, beaches, transitional and intertidal areas, and salt marshes. The U.S. Congress recognized the importance of meeting the challenge of continued growth in the coastal zone by passing the Coastal Zone Management Act (CZMA) in 1972. This act, administered by NOAA, provides for the management of the nation's coastal resources, including the Great Lakes. The goal is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." The CZMA applies to a project that would directly affect coastal resources, even if it is not within a state's designated coastal zone.

The Florida Coastal Management Program was approved by NOAA in 1981, with the Florida Department of Environmental Protection serving as the lead agency. A network of eight state agencies and five water management districts together enforce 23 separate statutes. The Florida coastal zone is the entire state but is divided into two tiers.

4.5 COMPATIBLE LAND USE

Compatible uses around airports are primarily dictated through the use of adequate zoning and construction standards. Ideally the municipality where the airport is located will create airport specific development zones or zoning to encourage compatible aeronautical and non-aeronautical development on and abutting the airport. Typically residential uses are not considered compatible nor are schools, churches, libraries and other typically noise sensitive uses. Some communities have requirements that new residential construction within specified approach zones and distances from the airport be built with noise reduction technology that guarantees a minimum outside to inside decibel reduction.

4.6 CONSTRUCTION IMPACTS

Airport construction may cause various environmental effects primarily due to dust, heavy equipment emissions, storm water runoff containing sediment and/or spilled or leaking petroleum products, and noise. In most cases, these effects are subject to Federal, State, or local ordinances or regulations. While the long-term impacts of the proposed action are usually greater than construction impacts, sometimes construction may cause significant short-term impacts.

4.7 SECTION 4(f) RESOURCES

Section 4(f) of the Department of Transportation Act of 1966 is currently codified as 49 USC Section 303(c). Section 4(f) applies to projects that receive funding from or require approval by an agency of the U.S. Department of Transportation. The Secretary of Transportation (Secretary) must evaluate any transportation program or project requiring the use of publicly-owned land of a park, recreational area, or wildlife and waterfowl refuge of national, state, or local significance or land of a historic site of national, state, or local significance as determined by the official having

jurisdiction over those resources. Before approving a project that uses Section 4(f) property, FHWA must either (1) determine that the impacts are de minimis, or (2) undertake a Section 4(f) Evaluation. If the Section 4(f) Evaluation identifies a feasible and prudent alternative that completely avoids Section 4(f) properties, it must be selected. If there is no feasible and prudent alternative that avoids all Section 4(f) properties, FHWA has some discretion in selecting the alternative that causes the least overall harm. FHWA must also find that all possible planning to minimize harm to the Section 4(f) property has occurred.

4.8 ENDANGERED OR THREATENED SPECIES

To satisfy the Endangered Species Act of 1973, the FAA must determine if a proposed action under its purview would affect a Federally-listed species or it's identified critical habitat. Listed species can be designated as either endangered, threatened or critical, as defined below:

Endangered species are any species that either the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS) designates in danger of extinction throughout all or a significant portion of the species' range (16 USC Section 1532(6)). Threatened species are any species that either FWS or NMFS states is likely to become an endangered species within the foreseeable future throughout all or a significant portion of the species' range (16 USC Section 1532(20)).

Candidate species are any species that either FWS or NMFS is considering for listing as "endangered" or "threatened", but has not yet been the subject of a proposed rule. These species have no legal status and do not have protection under the ESA. However, their inclusion is intended to alert Federal agencies of potential proposals or listings.

Critical habitat is the designated area having physical and biological features essential to a listed species' survival. Examples include nesting grounds, migration routes, wintering grounds, or other areas needed to support a life history stage. A species need not occupy an area for it to be critical habitat.

4.9 ENERGY SUPPLIES, NATURAL RESOURCES, AND SUSTAINABLE DESIGN

FAA must evaluate any airport development action subject to FAA approval or funding under the Airport Improvement Program (AIP) to determine if the proposed action would cause significant impacts on energy supplies or natural resources. Typical actions that could cause such impacts include: airside/landside expansion (new or expanded terminal and hangar facilities, new or extended runways and taxiways, airfield lighting, navigational aids [NAVAIDS], etc.); land acquisition for aviation-related use, new or moved access roadways, remote parking facilities and rental car lots; significant changes in air traffic and airfield operations; and significant construction activity.

FAA should study how the sponsor proposes to conserve resources, use pollution prevention, minimize aesthetic effects, and address public (both local and traveling) sensitivity to these concerns.

4.10 ENVIRONMENTAL JUSTICE

Environmental justice analysis considers the potential of Federal actions to cause disproportionate and adverse effects on low-income or minority populations. Environmental justice ensures no low-income or minority population bears a disproportionate burden of effects resulting from Federal actions.

4.11 FARMLANDS

Important farmlands include all pasturelands, croplands, and forests (even if zoned for development) designated by the US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) as prime, unique, or statewide or locally important lands. Prime farmland is land having the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimal use of fuel, fertilizer, pesticides, or products. Unique farmland is land used for producing high-value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture necessary to produce high quality crops or high yields of them economically. Statewide and locally important farmland is land that has been designated as "important" by either a state government (State Secretary of Agriculture or higher office) or by county commissioners or an equivalent elected body. There are no prime or unique farmlands on or adjacent to OMN.

4.12 FLOODPLAINS

Floodplains or base floodplains are the lowlands and relatively flat areas adjoining inland and coastal waters that are prone to the 100-year flood. To determine if an action encroaches on the base floodplain, the applicable FEMA-developed Flood Insurance Rate Map (FIRM) or draft FIRM should be reviewed as the primary information source. FEMA publication No. 258, How to Use a Flood Map to Determine Flood Risk for a Property, provides information on interpreting FIRMs. According to the FEMA FIRM for Volusia County, **Exhibit 4-1**, The 100-year flood plain encumbers the airport property. The majority of the flood plain is adjacent to the Tomoka River. This land is located on the opposite side of Airport Road and is undeveloped. The zoning and future land use for this area is deemed open space/conservation. This land is not recommended for future development. The other sites are within the lease area for the golf course and explains the orientation of the fairways as they avoid the flood plain. There is additional flood plains classified as Zone A, meaning no base flood elevations have been established for this area. The

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988. Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Florida State Plane East zone (FIPS zone 0901). The **horizontal datum** was the North American Datum of 1983 (NAD 83), GRS1980 Spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland, 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov/.

Base Map information shown on this FIRM was provided in digital format by the Volusia County, Florida GIS Department at a scale of 1:12,000 or larger from photography dated 2006 or later.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain Boundary
- Floodway Boundary
- Zone D Boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Limit of Moderate Wave Action
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- (A)—(A) Cross section line
- (23)---(23) Transect line
- Culvert
- Bridge
- Footbridge
- 45° 02' 08", 93° 02' 12" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 4989000 mN — 1000-meter Universal Transverse Mercator grid ticks, zone 17
- 4989000FT — 5000-foot grid values: Florida State Plane coordinate system, East zone (FIPS Zone 0901), Lambert Conformal Conic
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
APRIL 15, 2002

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
February 19, 2014 - to update corporate limits, to reflect updated topographic information, to add and change Base Flood Elevations, to add floodways, to add and change Special Flood Hazard Areas, to incorporate previously issued Letters of Map Revision, and to change zone designations.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0211J

FIRM
FLOOD INSURANCE RATE MAP

VOLUSIA COUNTY, FLORIDA AND INCORPORATED AREAS

PANEL 211 OF 930
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ORMOND BEACH, CITY OF	125136	0211	J
VOLUSIA COUNTY	125155	0211	J

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 12127C0211J
MAP REVISED FEBRUARY 19, 2014

Federal Emergency Management Agency

ORMOND BEACH MUNICIPAL AIRPORT
FEMA 100—YEAR FLOOD RATE MAP

EXHIBIT
4-1

Drawing name: H:\307101\dwg\Exhibit\Exhibit-100 Flood Zone.dwg Aug 10, 2015 - 12:53pm

majority of these areas are located north of the sport complex. Although there are substantial presence of Zone A areas west of the runway 8 threshold. This may create an added cost to the Runway 8-26 extension if the alternative chosen impacts these areas.

4.13 HAZARDOUS MATERIALS

Hazardous materials - According to 49 CFR Part 172, Table 172.101, these are any substances or materials commercially transported that pose unreasonable risk to public health, safety, and property. They include hazardous wastes and hazardous substances as well as petroleum and natural gas substances and materials. Regulations developed pursuant to the Resource Conservation and Recovery Act (RCRA) at 40 CFR Part 261, Subpart C, define hazardous wastes as solid wastes that are ignitable, corrosive, reactive, or toxic (sometimes called "characteristic wastes"). In addition, Subpart D of the same Part contains a list of specific types of solid wastes that the EPA has deemed hazardous (sometimes called "listed wastes").

Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. § 9601(14)) defines hazardous substances to include hazardous waste, hazardous air pollutants, hazardous substances designated as such pursuant to the Clean Water Act and the Toxic Substances Control Act and elements, compounds, mixtures, solutions, or substances listed in 40 CFR Part 302 that pose substantial harm to human health or environmental resources. It should be noted that, pursuant to CERCLA, hazardous substances do not include any petroleum or natural gas substances and materials.

4.14 HISTORIC PROPERTIES

The State Historic Preservation Office (SHPO) must review proposed projects for their potential to affect significant historic and cultural resources under provisions of both Federal and State laws and regulations. These include: Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, the National Environmental Policy Act of 1969, and any applicable state regulations. An historic resource is, "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places (NRHP) maintained by the Secretary of the Interior" (36 CFR Section 800.16(l)). Properties or sites having traditional religious or cultural importance to Native American Tribes and Hawaiian organizations may qualify.

As part of the review process, the SHPO may request that archaeological investigations be conducted. These investigations range from Phase I (survey or site identification) to Phase II (evaluation) to Phase III (treatment). Phase I investigations are conducted for the purpose of identifying archaeological sites that may exist in a project area. Phase II projects are conducted to evaluate identified sites for their eligibility for listing in the National Register of Historic Places (National Register or NR). Eligible archaeological sites as well as those actually listed in the

National Register are referred to as archaeological historic properties. Phase II evaluation usually entails test unit excavation rather than shovel testing or other kinds of subsurface probing often conducted during Phase I survey. Phase III projects involve treatment of archaeological historic properties, typically involving "data recovery" (i.e., salvage excavation). Buildings on an airport constructed more than 50 years ago should be reviewed for eligibility based on the four criteria by a professional trained in such analysis.

4.15 INDUCED SOCIOECONOMIC IMPACTS

FAA must evaluate a proposed airport project to determine the project's potential to cause induced or secondary socioeconomic impacts on surrounding communities. When FAA determines a potential for such impacts exists, the environmental document should describe how the proposed project would affect communities by addressing the following factors, as needed.

- shifts in patterns of population movement and growth;
- public service demands;
- changes in business and economic activities; or
- other factors identified by the public.

4.16 LIGHT EMISSIONS AND VISUAL EFFECTS

Airport-related lighting facilities and activities could visually affect surrounding residents and other nearby light-sensitive areas such as homes, parks or recreational areas. If there is a potential for airport lighting to disturb these sensitive land uses, the responsible FAA official should ensure the environmental document examines those effects. If potential light emissions or visual effects exist, the official should evaluate measures to lessen those as well. This helps promote a "good-neighbor" policy while protecting the resource.

Visual, or aesthetic, effects are inherently more difficult to define and assess because they involve subjectivity. Visual effects deal broadly with the extent to which airport development contrasts with the existing environment, architecture, historic or cultural setting, or land use planning. It is important to determine if a community or a jurisdictional agency considers visual effects from the proposed action objectionable.

4.17 NOISE

When evaluating proposed airport projects, airport noise is often the most controversial environmental impact examined. Airport development actions that change airport runway configurations, aircraft operations and/or movements, aircraft types using the airport, or aircraft flight characteristics may affect existing and future noise levels. FAA's noise analysis primarily

focuses on how proposed airport actions would change the cumulative noise exposure of individuals to aircraft noise in areas surrounding the airport. The Ormond Beach Municipal Airport has a voluntary noise abatement program. The program is considered voluntary because OMN is a public-use general aviation facility, thus all flight activity is governed by the Federal Aviation Administration. City officials and staff members are not empowered to regulate or restrict flight activities in contravention of federal regulations. Airport Traffic Control Tower (ATCT) personnel support noise abatement measures whenever practicable. However, their priority and primary responsibility is to manage and maintain the safe separation of aircraft in flight over Ormond Beach. Noise abatement procedures are published to minimize the exposure of residential areas to aircraft noise, while ensuring the safety of flight operations. Pilots are asked to be aware that there are noise-sensitive residents and neighborhoods and to voluntarily follow these noise abatement procedures during flight operations in Ormond Beach.

4.18 SOCIAL IMPACTS

FAA must evaluate proposed airport development actions to determine if they would cause social impacts. This evaluation should include effects on health and safety risks to children, and socioeconomic impacts. Those impacts include moving homes or businesses; dividing or disrupting established communities; changing surface transportation patterns; disrupting orderly, planned development; or creating a notable change in employment.

4.19 SOLID WASTE

The Solid Waste Disposal Act notes the term "solid waste" includes garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or an air pollution control facility (42 USC Section 6903(27)). According to that Act, solid waste also includes solid, liquid, semisolid or contained gaseous material resulting from industrial, commercial, mining, agricultural, or community activities.

Construction, renovation, or demolition of most airside projects produces debris (e.g., dirt, concrete, asphalt) that must be disposed of properly. In addition, new or renovated terminal, cargo, or maintenance facilities may involve construction, renovation, or demolition that produces other types of solid waste (bricks, steel, wood, gypsum, glass). Therefore, airport sponsors should follow Federal, state, or local regulations that address solid waste. Doing so reduces the environmental effects of airport-related construction or operation. This chapter provides information on how alternatives under consideration could increase solid waste in an area. It also discusses how to address the effects of any increased waste volume and ways to mitigate those effects.

4.20 WATER QUALITY

Construction often causes sediment-laden runoff to enter waterways. Operations or maintenance are other activities that may affect water quality. Airport-related water quality impacts can occur from both point and non-point sources at airports. If not properly controlled, the resultant water quality impacts may adversely affect animal, plant, or human populations. Therefore, FAA must evaluate project-related discharges, especially those having the potential to affect navigable waterways, municipal drinking water supplies, important sole-source aquifers, or protected groundwater supplies.

Stormwater or other types of discharges from wastewater treatment plants, sanitary sewer systems, collection basins, or other water collection devices that flow through a conveyance (pipe) and discharge to a waterway are considered point source discharges. The states and the U.S. Environmental Protection Agency (EPA) issue National Pollutant Discharge Elimination System (NPDES) permits authorizing point source discharges into navigable waters of the United States under Section 402 of the Clean Water Act (CWA) (33 USC Section 1342).

Stormwater runoff from runways, taxiways, aprons, outdoor storage areas, or construction areas that do not flow through conveyance systems are considered non-point source discharges. Federal permits are not necessary for non-point source discharges, however, most states have regulations which state the use of Best Management Practices (BMPs) or other design controls to limit the effects of non-point source runoff into water bodies, especially those which are listed as impaired on the EPA 303(d) and 305(b) lists.

4.21 WETLANDS

Wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface (Cowardin, December 1979). Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors, including human disturbance.

For regulatory purposes under the Clean Water Act, the term wetlands means:

> *Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.*

Any proposed airport development action that involves wetlands must include discussions and accounting of the potential wetland impacts. Examples of airport actions that could cause wetland impacts include: airside development associated with new or expanded terminal and hangar

facilities; new or extended runways and taxiways; and installing navigational aids (NAVAIDS). Examples of landside activities include new or relocated airport access roadways or on-airport remote parking or rental car facilities.

An airport action affects a wetland if it:

- requires building a structure, facility, or other development in a wetland;
- requires dredging, filling, draining, channelizing, diking, impounding, or other direct effects on a wetland;
- requires disturbing the water table of an area in which a wetland is located; or
- indirectly affects a wetland because it impacts areas upstream or downstream of the wetland or it introduces secondary development that would affect a wetland.

Wetlands are protected by federal and state regulations, and impacts to jurisdictional wetlands require permitting via the US Army Corps of Engineers and the state regulatory authority, which in Florida is the Department of Environmental Protection (DEP).

Wetland have been located by the U.S. Fish and Wildlife National Wetlands Inventory (NWI). This mapping is approximate and should be verified by a licensed wetland scientist. The boundaries were supplemented by historic wetland delineation and aerial photography of recent development. The NWI indicates that there are wetlands west of the runway 8 threshold, and in the northwest and southwest quadrants. This data was severely outdated as it showed wetlands over buildings and pavement and did not account for the recent drainage infrastructure. Nevertheless, it would behoove the airport to anticipate wetlands in the vicinity of the undeveloped lands. Impacts to wetlands create additional permitting and mitigation requirements on a development project and in turn increase the overall cost.

Wetlands are also indicated in similar locations correlating with the flood plains. This delineation is consistent with the assumption that these areas are inundated with water during large storm events. As stated before, these flood plain wetlands are located within the existing golf course.

4.22 WILD AND SCENIC RIVERS

"Wild and scenic rivers" are those rivers having remarkable scenic, recreational, geologic, fish, wildlife, historic, or cultural values. Federal land management agencies in the Departments of the Interior and Agriculture manage the Wild and Scenic Rivers Act. The National Park Service (NPS) has the primary role in maintaining the National Rivers Inventory. The Wild and Scenic Rivers "program" is more commonly referred to as the "National Wild and Scenic Rivers System" (WSRS). There are no designated wild and scenic rivers in the vicinity of OMN.

4.23 CUMULATIVE IMPACTS

Cumulative impacts are impacts the proposed action would have on a particular resource when added to impacts on that resource due to past, present, and reasonably foreseeable actions within a defined time and geographical area.

CHAPTER 5: FORECAST

5.0 INTRODUCTION

The purpose of this chapter is to establish and present the forecasted aviation activity, as well as the assumptions associated with developing the forecast.

Forecasts should be realistic, based upon the latest available data, and supported by information presented in the study. In addition, forecasts of aviation activity provide the basis of evaluating the adequacy of existing airport facilities and their capability to handle increased traffic levels or different types of traffic. Forecasts are the foundation for effective decisions in airport planning, such as if and when improvements are needed, the level of capital improvements, and the timing of the necessary investments. Therefore, the forecast should be adjusted periodically based on actual aviation activity and after a change in a driver of aviation activity.

The first step in aviation activity forecasting is to review existing forecasts and to modify them according to changed local conditions. The Federal Aviation Administration (FAA) Aerospace Forecast, Terminal Area Forecast (TAF), and the Florida Department of Transportation (FDOT) Florida Aviation System Plan were reviewed.

Year 2014 has been selected as the base year for all of the projections. However, based on the analysis of the available aviation activity data, it was determined that the data published in the FAA data systems for Fiscal Year (FY) 2014 is not representative of the typical aviation activity at the airport. Extraordinary circumstances during FY 2014 limited flight operations at the Ormond Beach Municipal Airport (OMN). A slightly larger percentage of Instrument Meteorological Conditions (IMC) limited normal flight training activities[1]. During a short period of time fuel availability was limited due to issues with an FBO beyond the sponsor's control. Closure of Euro American School of Aviation (EASA), which provided flight training for European pilot certification drastically reduced the number of training operations at OMN until Hangar Seven Aviation acquired the facilities and aircraft of EASA. FAA temporarily imposed a limitation on night instrument approaches at OMN due to tree penetrations of the approach surfaces. Therefore, based on local knowledge of the characteristics of aircraft operations at OMN, a more realistic or typical 2014 Base Year was established by substituting the FY 2013 annual operations (124,695 total operations) for the 2014 operations data and utilizing the composite baseline from which the growth rates are applied.

This chapter presents projections of aviation activity at OMN for three future time periods: near-term forecasts (2015-2019), intermediate-term forecasts (2020-2024), and long-term forecasts (2025-2034). Near-term forecasts (up to 5 years) justify near-term development and support

[1] Based on analysis of the National Climatic Data Center (NFDC) surface data and information provided by the tower manager.

operational planning and environmental improvement programs. Intermediate-term forecasts (from 6 to 10-years) are usually used in planning capital improvements. Long-term forecasts (beyond 10 years) provide information for general planning.[2] The purpose of this forecast is to estimate, with reasonable accuracy, future aviation activity at OMN for the period (2015-2034).

General Aviation (GA) airport forecasts are typically based on historical data and broadly accepted industry and governmental estimates of aviation activity, and the primary socio-economic drivers of GA activity.

5.1 NECESSITY OF NEW FORECASTS

General aviation activity is shaped largely by a number factors and is based on national, regional and local level trends:

National and Regional Trends

- Political
- Socio-economic
- and technological areas;

Local Level Trends

- Changes in population and income
- Numbers of pilots and aircraft
- Accessibility of airports
- Number of based aircraft at the airport
- the number of aircraft based at other airports in the area.[3]

Since the forecasts presented in the 2004 Ormond Beach Airport Master Plan (AMP), some of the factors have changed considerably. The aging of the GA pilot population, the increased costs associated with flying, including the significant rise in the cost of AVGAS, and the addition of new air traffic control towers at OMN and Flagler County Airport have a combined effect on the current OMN forecast. The previous 2004 AMP was developed in a very different environment that no longer exists.

5.2 FACTORS AFFECTING AVIATION ACTIVITY

Aviation activity at any given airport is dependent upon the economic, demographic, and geographic characteristics of the area surrounding the airport. Several studies have found

[2] FAA AC 150/5070-6B, July 29, 2005

[3] GRA, Inc. *Forecasting Aviation Activity by Airport*. Report prepared for FAA Office of Aviation Policy and Plans Statistics and Forecast Branch (APO-110), (July 2001).

statistically significant relationships between certain "local factors" and operations at general aviation airports.[4] These "local factors" include, but are not limited to:

- population
- per capita income
- employment
- airport prominence
- complexity of the airport's based aircraft
- presence of a certificated flight school
- and the region in which the airport is located.

Demographic characteristics of the population have an influence on the level, composition, and growth of aviation demand. Per capita disposable income has proven to be an indicator of general aviation aircraft purchase and use.[5] The "prominence" of an airport can be defined as the proportion of its based aircraft to the total based aircraft of the airport service area, or its "attractiveness" to pilots. A prominent airport usually has adequate support and service activities including Fixed Base Operators (FBOs), hangars, fuel services, airfield lighting, and instrument approach procedures that make the airport more attractive to local and transient users. The "complexity" of the airport's based aircraft is defined as the ratio of single engine piston based aircraft to all the based aircraft. Airports with instrument approaches and longer runways tend to provide services to owners of larger and more complex aircraft, such as high performance multi-engine airplanes. The presence of an FAR Part 141 certificated pilot training school at an airport, or at a nearby airport, is another factor that can significantly increase the number of local operations. Various destinations including military facilities, branches of regional, national or international businesses, air museums, national parks and theme parks in or near the airport service area are also a factor in forecasting aviation activity.

Major "point" attractions near Ormond Beach include the abutting airport industrial park, nearby Daytona International Speedway and the east Florida beaches. The desirability of the area for seasonal and retirement homes is a meaningful attractant in its own right. The Airport has a very strong and vocal group of pilots and aviation educators from nearby Embry-Riddle Aeronautical University known as the Ormond Beach Aviation Association. The Association encourages airport development with organic presentations and local support sessions within the City.

5.2.1 FLIGHT TRAINING ACTIVITY

Florida's mild climate provides good flying weather year round. The relatively uncongested airspace makes Florida an ideal location for flight training.

[4] GRA, Inc. Model for *Estimating General Aviation Operations at Non-towered Airports Using Towered and Non-towered Airport Data*. Report prepared for FAA Office of Aviation Policy and Plans Statistics and Forecast Branch (APO110), (July 2001).
[5] FAA AC 150/5070-6B, July 29, 2005

Flight training activity at OMN is most likely the primary driver of aircraft operations counts according to the air traffic control tower manager. This assumption is validated by the local traffic counts from the FAA's databases. There are currently two flight schools located at OMN representing approximately 25% of the based aircraft. OMN is used for practice instrument approaches, and practice touch-and-go operations by other flight schools in the vicinity, such as Embry-Riddle Aeronautical University (ERAU). More distant flight schools may use OMN as a destination or intermediate stop on cross country practice flights.

One of the flight schools located on OMN provides helicopter flight training services, from initial helicopter ratings through advanced ratings. The flight school uses a combination of piston and turbine helicopters. The other flight school provides airplane flight training services from initial pilot ratings through advanced multi-engine aircraft ratings. The majority of the training is performed in single engine piston aircraft. However, training in advanced, complex piston multiengine aircraft including the Piper PA-44 Seminole and turbine-powered multi-engine Beechcraft King Air 100 is also offered.

In aviation, visual meteorological conditions (VMC) refers to meteorological conditions in which aircraft operations under Visual Flight Rules (VFR) are permitted, that is, conditions in which pilots have sufficient visibility, cloud ceilings, and cloud clearances to maintain visual separation from terrain and other aircraft. When instrument meteorological conditions (IMC) exist, pilots may not be able to maintain adequate visual separation from terrain and other aircraft. During IMC conditions, pilots must adhere to Instrument Flight Rules (IFR). The boundary between VMC and IMC is defined by visibility, cloud ceilings, and cloud clearances. The exact requirements vary by type of airspace.

TABLE 5.1 – VMC VS. IMC

Fiscal Year	Visual Meteorological Conditions (VMC)	Instrument Meteorological Conditions (IMC)
2005	93%	7%
2006	94%	6%
2007	94%	6%
2008	93%	7%
2009	95%	5%
2010	95%	5%
2011	94%	6%
2012	95%	5%
2013	93%	7%
2014	90%	10%

Source: National Climatic Data Center (NCDC)
Station Ormond Beach Municipal Airport, USAF 722341, WBAN 92822

The vast majority of flight training operations occur during VMC. As shown in **Table 5.1**, VMC conditions prevail at OMN which makes OMN very attractive for initial flight training. More advanced training, such as training for instrument ratings is generally conducted in simulated conditions during VMC.

Table 5.1 shows a slight increase of the percentage of IMC observations when compared to the previous years. This is assumed to be the contributing factors that reduced the number of flight training operations during FY 2014.

In late 2013, the Euro American School of Aviation (EASA) closed after its certificate was suspended and then revoked by the European Aviation Agency. This affected the number of flight training operations at OMN. Hangar Seven Aviation purchased the facilities and aircraft from EASA. During this transition period, the number of flight training operations was affected.

5.2.2 ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS

The economic characteristics of the community surrounding an airport generally will affect the demand for aeronautical services. Regions with strong economic growth tend to have a stronger demand for aviation services. The City of Ormond Beach and surrounding area has a strong economy and steady demographic growth. However, based on statistical analysis, the economic and demographic characteristics of the region do not show a strong correlation with the aviation activity at the airport. Flight training of international and domestic pilots is the primary driver of operations at the airfield as previously noted by the ATCT manager. Local economics and demographics have little correlation with the foreign students attending Sunrise Flight School nor the domestic and foreign students from nearby ERAU and other flight training programs. Therefore, it was decided that a trend and statistical regression analysis forecast model would not be appropriate for forecasting aeronautical activity at OMN.

The City of Ormond Beach Economic Development Department is actively engaged in attracting businesses to the area, particularly to the Airport Business Park. The Ormond Beach Airport Business Park is situated on 176 acres and provides an attractive location for businesses of all kinds including manufacturing, assembly, back office, communication, and engineering. It is expected that continued economic development efforts may increase the demand for aeronautical services, particularly services associated with business jet aircraft. In addition, businesses providing aeronautical services such as aircraft maintenance have seen increased demand for services by operators of larger aircraft.

5.2.3 AVAILABILITY OF FACILITIES AND SERVICES

The availability of facilities at an airport that support, service, and maintain aircraft can have a major impact on the basing of aircraft and the use of the airport by itinerant travelers. A well-run FBO with adequate supplies of market priced fuel and friendly service develops a reputation that

encourages initial and repeat business from airport users. Likewise, an airport with a reputation for erratic or spotty service or high prices with less than easy access, tight parking, or an unwelcoming atmosphere will quickly become known among the public as a less than preferred alternative when services are needed. The City of Ormond Beach is continuously working with the airport's FBOs and businesses to improve the facilities and services at OMN.

5.2.4 AVIATION INDUSTRY TRENDS

Business activity, changes in the aviation industry, and local aviation actions can markedly affect the demand for airport services. Local actions may include the availability of FBO services, on-field pricing structure, airfield configuration, and noise abatement policies. General aviation saw a significant decrease in activity beginning in 2007 when a major recession began. The recession has abated but the economic damage that was done along with the spike in AVGAS prices has contributed to a lackluster rebound in the owner flown small piston market. Fortunately, the growth in the world market for qualified pilots has increased the demand for training schools and the flight schools at and around OMN have benefitted from the need to produce more pilots. In addition, business aviation has rebounded more quickly from the recession than the recreational flyer.

5.3 REVIEW OF AVIATION FORECASTS

The Federal Aviation Administration (FAA) Terminal Area Forecast (TAF), Aerospace Forecast, and the Florida Department of Transportation (FDOT) Florida Aviation System Plan (FASP) forecast were reviewed. The purpose of this review was to identify published aviation activity forecasts suitable for the development of a derived forecast of aviation activity for the OMN Master Plan.

5.3.1 FAA AEROSPACE FORECAST FISCAL YEARS 2014-2034

The FAA Aerospace Forecast contains projections of future aviation demand at the national level. This forecast publication provides a 21-year outlook and is updated every year in March. It is the official FAA view of the immediate future for aviation. The FAA Aerospace Forecast report examines future trends expected in the aerospace industry. The publication includes aggregate level forecasts of the following:

- Passenger enplanements, revenue passenger miles, fleet, and hours flown for large air carriers and regional/commuters;
- Cargo revenue ton miles and cargo fleet for large air carriers;
- Fleet, hours flown, and pilots for general aviation; and
- Activity forecasts for FAA and contract towers by major user category.

The FAA Aerospace Forecast also explores the economics of the aviation industry in general, as well as trends expected to affect the commercial and general aviation community. The FAA Aerospace Forecast was reviewed to ascertain the general health and prosperity of the general aviation industry as a whole and to provide a sense of future aviation activity growth that may occur at OMN throughout the 20-year Master Plan Update planning period.

In the FAA Aerospace Forecasts, the general aviation forecasts rely heavily on discussions with industry experts conducted at industry meetings, including four Transportation Research Board (TRB) meetings of Business Aviation and Civil Helicopter Subcommittees in May 2013 and January 2014 along with the results of the 2012 General Aviation and Part 135 Activity Survey. The General Aviation and Part 135 Activity Survey is conducted by the FAA to collect information on general aviation and on-demand Part 135 aircraft activity to monitor the general aviation fleet, anticipate and meet demand for National Airspace System facilities and service, evaluate the impact of safety initiatives and regulatory changes, and build more accurate measures of the safety of the general aviation community.

According to the FAA Aerospace Forecast, the general aviation industry continues its modest growth, with strong growth in rotorcraft, multi-engine piston aircraft, and the agricultural aircraft segment of the turboprop market, as well as moderate growth in the single-engine piston sector. Slow economic recovery and economic uncertainties continued to impact the turbojet market. Based upon the FAA Aerospace Forecast report regarding the manufacture and utilization of general aviation aircraft within the U.S., it can be assumed that the slow annual growth of general aviation activity at OMN will continue. The forecast assumes that OMN will experience continued growth in the number of locally-based aircraft and similar increases in local and itinerant aircraft operations.

The FAA Aerospace Forecast indicates that the numbers of single and multi-engine piston aircraft are expected to decline between 2013 and 2034 at a compound annual growth rate (CAGR) of -0.4 and -0.5 respectively. However, at OMN initial flight training is one of the major aeronautical activities at the airport. Single and multi-engine piston aircraft are generally used for initial flight training. Therefore, a decline in piston aircraft consistent with the FAA Aerospace Forecast is not expected at OMN.

In addition, the FAA Aerospace Forecast indicates a significant growth in experimental and light sport aircraft. Typically, these types of aircraft do not operate at general aviation reliever airports such as OMN. However, light sport aircraft (LSA) businesses have sought Florida locations to locate LSA manufacturing, sales and maintenance facilities. It is expected that these businesses could bring their clientele to the area.

5.3.2 FAA TERMINAL AREA FORECAST (TAF) FISCAL YEARS 2014-2040

The FAA Terminal Area Forecast (TAF) is a detailed FAA forecast planning database that the FAA Office of Aviation Policy and Plans (APO) produces each year covering airports in the

National Plan of Integrated Airport Systems (NPIAS). The TAF contains both historical and forecast data and is prepared to assist the FAA in meeting its planning, budgeting, and staffing requirements. The TAF forecasts are made at the individual airport level and are based in part on the national FAA Aviation Forecast. **Table 5-2** shows the historical and forecast aviation activity published in the TAF for OMN.

TABLE 5.2 - FAA TERMINAL AREA FORECAST

Fiscal Year	Itinerant					Local			Total Operations	Based Aircraft
	Air Carrier	Air Taxi	General Aviation	Military	Total	Civil	Military	Total		
2005	2	58	70,546	59	70,665	65,925	180	66,105	136,770	169
2006	728	20	81,046	307	82,101	61,757	128	61,885	143,986	169
2007	719	15	79,746	24	80,504	69,689	120	69,809	150,313	169
2008	0	5	72,987	2	72,994	74,068	2	74,070	147,064	107
2009	0	5	77,768	9	77,782	88,758	8	88,766	166,548	99
2010	31	6	68,352	13	68,402	55,246	28	55,274	123,676	99
2011	51	2	68,707	10	68,770	64,431	12	64,443	133,213	100
2012	0	0	66,603	12	66,615	54,771	10	54,781	121,396	100
2013	32	5	67,726	1	67,764	56,915	16	56,931	124,695	99
2014	0	3	58,436	5	58,444	50,999	4	51,003	109,447	103
2015	0	3	58,947	5	58,955	49,368	4	49,372	108,327	106
2016	0	3	59,241	5	59,249	49,615	4	49,619	108,868	111
2017	0	3	59,537	5	59,545	49,864	4	49,868	109,413	114
2018	0	3	59,835	5	59,843	50,113	4	50,117	109,960	118
2019	0	3	60,134	5	60,142	50,363	4	50,367	110,509	123
2020	0	3	60,434	5	60,442	50,614	4	50,618	111,060	126
2021	0	3	60,736	5	60,744	50,866	4	50,870	111,614	130
2022	0	3	61,040	5	61,048	51,120	4	51,124	112,172	134
2023	0	3	61,345	5	61,353	51,375	4	51,379	112,732	138
2024	0	3	61,651	5	61,659	51,632	4	51,636	113,295	142
2025	0	3	61,959	5	61,967	51,890	4	51,894	113,861	146
2026	0	3	62,269	5	62,277	52,150	4	52,154	114,431	149
2027	0	3	62,580	5	62,588	52,411	4	52,415	115,003	153
2028	0	3	62,892	5	62,900	52,673	4	52,677	115,577	156
2029	0	3	63,206	5	63,214	52,936	4	52,940	116,154	160
2030	0	3	63,522	5	63,530	53,201	4	53,205	116,735	164
2031	0	3	63,839	5	63,847	53,467	4	53,471	117,318	167
2032	0	3	64,158	5	64,166	53,735	4	53,739	117,905	171
2033	0	3	64,479	5	64,487	54,004	4	54,008	118,495	175
2034	0	3	64,801	5	64,809	54,275	4	54,279	119,088	178

Source: FAA Terminal Area Forecast (TAF) Fiscal Years 2014-2040

The TAF assumes a demand driven forecast for aviation services, based upon local and national economic conditions as well as conditions within the aviation industry. In other words, an airport's forecast is developed independent of the ability of the airport and the air traffic control system to furnish the capacity required to meet demand. However, if the airport historically functions under constrained conditions, the FAA forecast may reflect those constraints since they are embedded in historical data. In statistical terms, the relationships between economic growth data and data representing growth in aviation activity reflect those constraints.

Although updated and published each year to reflect annual changes in levels of aircraft operations and based aircraft counts, the TAF generally does not reflect accurate forecasts of future activity levels for many small, public use general aviation airports and airparks. However, since the construction of the airport traffic control tower in 2004, more accurate operational data for OMN is available via the FAA Operations and Performance Data Systems.

As shown in **Table 5.2**, for total operations and general aviation operations the TAF is very conservative, but reasonable. However, it is important to note the following:

- OMN is not a *Title 14 CFR – Part 139* certificated airport, therefore there are no air carrier operations and there are no plans to serve air carrier operations in the future.
- Local military operations are not expected except during an emergency condition such as a hurricane, when OMN may be used as a rescue operations staging field.
- The number of based aircraft is not accurate according to a based aircraft survey performed in November 2014.

5.3.3 FLORIDA AVIATION SYSTEM PLAN (FASP) 2025

The FDOT, in cooperation with the FAA and Florida's public airports, through the Continuing Florida Aviation System Planning Process (CFASPP), developed the FASP 2025. The FASP incorporates the traditional aviation system planning elements that are typically included in most state aviation system plans. The FASP forecast includes an analysis of the intermodal aspects of the state transportation system and a strategic planning element which identifies strategic goals, approaches, measurements, and recommendations to achieve these goals. The FASP also includes a statewide aviation database, called the Florida Aviation Database (FAD).

TABLE 5.3 – FDOT AVIATION SYSTEM PLAN (2012-2031)

Year	Based Aircraft	Aircraft Operations
2005	169	143,642
2006	169	148,987
2007	113	145,884
2008	99	162,352
2009	169	153,957
2010	169	127,000
2011	169	132,016
2012	171	134,155
2013	172	136,328
2014	174	138,536
2015	176	140,781
2019	182	150,127
2024	191	162,688
2034	212	191,052

Source: FDOT Aviation System Plan (2012-2031)
Note: 2034 was extrapolated form the available data

Each year, as part of the CFASPP, the FDOT Aviation Office develops and updates forecasts of based aircraft and operational activity levels for each Florida public-use airport or airpark. **Table 5.3** summarizes the FDOT FASP report of historical levels of based aircraft and aircraft operations data through 2012, and lists projections for based aircraft and annual aircraft operations at OMN through the year 2032. Year 2034 was extrapolated from the existing data. As shown in **Table 5.3**, the FASP is very optimistic.

5.3.4 PREVIOUS MASTER PLAN FORECASTS

The 2004 Airport Master Plan Update (AMPU) developed forecasts that spanned the typical twenty-year period starting with baseline data from 2001. **Table 5.4** shows the 2004 AMPU summary forecast approved by the FAA. A significant difference between the 2004 AMPU forecast and the current forecast update is the availability of aviation activity data available via the FAA Operations Network (OPSNET). This data is collected by airport traffic control towers and submitted monthly to an FAA database system. The OMN airport traffic control tower was open for only a portion of year 2004.

TABLE 5.4 – 2004 AIRPORT MASTER PLAN FORECAST

	Years			
	2001	**2006**	**2011**	**2021**
Based Aircraft				
Single Engine Piston	142	184	238	399
Multi Engine Piston	16	21	27	45
Multi Engine Turboprop	3	4	5	8
Jet	4	5	7	11
Rotorcraft	4	5	7	11
Total	**169**	**219**	**284**	**474**
Itinerant Operations				
Air Taxi	538	571	611	602
General Aviation	58,175	62,293	66,713	76,518
Military	52	55	58	67
Sub-Total	**58,765**	**62,919**	**67,382**	**77,187**
Local Operations				
General Aviation	68,235	72,981	78,159	89,645
Military	0	0	0	0
Sub-Total	**68,235**	**72,981**	**78,159**	**89,645**
Total Annual Operations	**127,000**	**136,011**	**145,663**	**167,069**
Total Annual Instrument Operations	**10,192**	**10,906**	**11,680**	**13,396**

Source: Adapted from the 2004 Ormond Beach Municipal Airport Master Plan

5.4 HISTORICAL BASED AIRCRAFT AND AVIATION ACTIVITY

A key factor in attempting to predict future trends affecting aircraft operations at OMN is understanding and analyzing current and past trends at the airport. This section examines and documents those trends and provides the basis for the forecasts presented in the following section. Historical data was obtained from airport management records, air traffic control records, and the Federal Aviation Administration (FAA).

5.4.1 HISTORICAL BASED AIRCRAFT

Historical based aircraft information is generally available through the FAA from the FAA Master Record 5010 form and the National Based Aircraft Inventory Program. After a review of the available data, it was determined the available data was inaccurate.

Therefore, in November 2014 airport management staff conducted a comprehensive survey of based aircraft. The results of this survey shown in **Table 5.5**, established the 2014 baseline of based aircraft at OMN from which the forecast was derived. The National Based Aircraft Inventory Program database has been updated to reflect these figures.

TABLE 5.5 – BASELINE BASED AIRCRAFT

	Baseline Based Aircraft				
Year	Single Engine	Multi Engine	Jet	Helicopter	Total
2014	126	26	2	9	163

Source: National Based Aircraft Inventory Program, as of December 2014

5.4.2 HISTORICAL ANNUAL AIRCRAFT OPERATIONS

Historical operations were obtained from the FAA Operations Network (OPSNET). The OPSNET is the official source of National Airspace System (NAS) air traffic operations and delay data. The data collected through OPSNET is used to analyze the performance of the FAA's air traffic control facilities. OPSNET data has been available for OMN since the installation of the Airport Traffic Control Tower (ATCT) in 2004. **Table 5.6, Table 5.7, Figure 5.1, and Figure 5.2** summarize the historical aviation activity on an annual, fiscal year basis.

The ATCT operates during a 12-hour time period from 7:00am to 7:00pm. Therefore, data captured in the OPSNET does not take into account operations that occur between 7:00pm and 7:00am. Based on local knowledge, flight training activity generally continues at a reduced operational pace in the time period from 7:00pm to 10:00pm, even though the ATCT is closed.

It was assumed that for planning purposes, operations between 7:00pm and 10:00pm would not affect the order of magnitude of the aviation activity on a fiscal year level. Therefore no attempt was made to adjust the OPSNET aircraft operations data.

TABLE 5.6 – HISTORICAL ITINERANT VS. LOCAL OPERATIONS

Fiscal Year	Itinerant					Local			Total Operations
	Air Carrier	Air Taxi	General Aviation	Military	Total	Civil	Military	Total	
2005	2	58	70,546	59	70,665	65,925	180	66,105	136,770
2006	728	20	81,046	307	82,101	61,757	128	61,885	143,986
2007	719	15	79,746	24	80,504	69,689	120	69,809	150,313
2008	0	5	72,987	2	72,994	74,068	2	74,070	147,064
2009	0	5	77,768	9	77,782	88,758	8	88,766	166,548
2010	31	6	68,352	13	68,402	55,246	28	55,274	123,676
2011	51	2	68,707	10	68,770	64,431	12	64,443	133,213
2012	0	0	66,603	12	66,615	54,771	10	54,781	121,396
2013	32	5	67,726	1	67,764	56,915	16	56,931	124,695
2014	0	3	58,436	5	58,444	50,999	4	51,003	109,447

Source: FAA Operations Network (OPSNET)

TABLE 5.7 – HISTORICAL IFR VS. VFR OPERATIONS

Fiscal Year	IFR Itinerant					VFR Itinerant				
	Air Carrier	Air Taxi	General Aviation	Military	Total	Air Carrier	Air Taxi	General Aviation	Military	Total
2005	0	18	7,479	4	7,501	2	40	63,067	55	63,164
2006	0	14	8,608	2	8,624	728	6	72,438	305	73,477
2007	0	11	9,331	3	9,345	719	4	70,415	21	71,159
2008	0	1	8,590	1	8,592	0	4	64,397	1	64,402
2009	0	5	8,919	7	8,931	0	0	68,849	2	68,851
2010	31	6	7,810	7	7,854	0	0	60,542	6	60,548
2011	0	2	7,864	5	7,871	51	0	60,843	5	60,899
2012	0	0	8,232	9	8,241	0	0	58,371	3	58,374
2013	32	5	7,121	0	7,158	0	0	60,605	1	60,606
2014	0	2	7,451	1	7,454	0	1	50,985	4	50,990

Source: FAA Operations Network (OPSNET)

Figure 5.1 shows that the number of local operations are significant. This is due to the flight training activity at the airport. **Figure 5.2** shows that the number of aircraft operations conducted under visual flight rules (VFR) is significantly greater than the aircraft operations conducted under instrument flight rules (IFR).

Figure 5.1 – Historical Itinerant vs. Local Operations

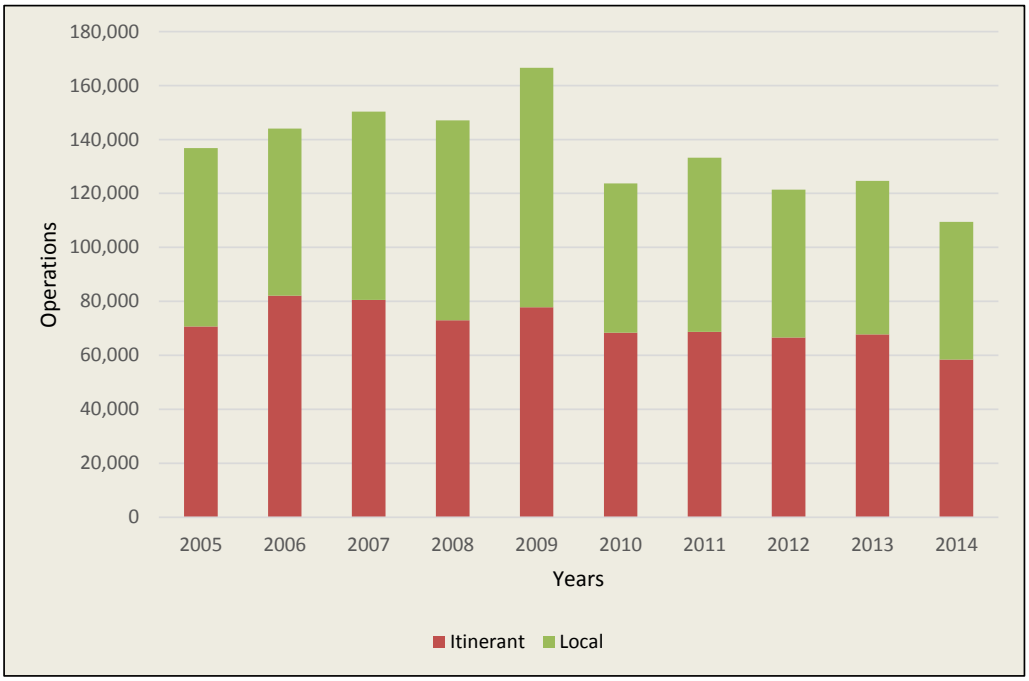


Figure 5.2 - Historical IFR vs. VFR Operations

Note: Visual Flight Rules (VFR); Instrument Flight Rules (IFR)

5.4.2.1 Air Carrier and Air Taxi

OMN is a public regional general aviation reliever airport. Within this role, OMN does not support air carrier operations as defined by *Title 14 CFR Part 139*, and there are no plans to support air carrier operations within the planning horizon of this master plan (2014-2034). **Table 5.6** shows air carrier operations. However, based on discussion with the ATCT staff, there are no air carrier operations at OMN.

In relation to air taxi operations, certain operations such as medical evacuation (MEDEVAC) may be classified as an air taxi. MEDEVAC aircraft may vary in size and type from small single engine airplanes to larger jet aircraft. In addition, at least two of the current FBO's offer periodic *Title 14 CFR – Part 135* charter operations. One of the FBO's is currently performing renovations to its facilities in order to support additional air taxi operations.

5.4.2.2 Cargo Operations

There are no air cargo aircraft operations at OMN, and there are no plans to support air cargo operations within the planning horizon of this master plan (2014-2034).

5.4.2.3 General Aviation Operations

General aviation includes all non-scheduled flights other than military conducted by non-commercial aircraft. General aviation covers local recreational flying to business transport that is not operating under the FAA regulations for commercial air carriers[6]. The vast majority of the operations at OMN are performed by smaller general aviation aircraft, turboprops, and business jets that are not operating under the FAA regulation for commercial air carriers or military aircraft.

5.4.2.4 Military

Military aircraft may occasionally stop at OMN. Military operations at OMN may occur due to the following reasons: re-fueling stop, practice instrument approach, or to support emergency operations. For example, Coast Guard helicopters may stop for refueling during normal patrolling operations along the coast. Tomlinson Aviation has provided limited maintenance services for U.S. Navy Helicopters.

5.5 FORECAST METHODOLOGIES

There are several appropriate methodologies for forecasting based aircraft and aviation activity at airports. The selection and application of appropriate methodologies and techniques requires

[6] FAA AC 150/5300-13A – Airport Design Section 102.ll

professional judgment. Typical forecasting methodologies include: regression analysis, trend analysis and extrapolation, market share analysis or ratio analysis, and smoothing. Even though these techniques are appropriate for certain airports where sufficient historical aviation activity and demographic data is available, after an evaluation of the reasonableness of the results it was determined that these methodologies were not appropriate for forecasting at OMN.

It is important to understand that the forecast methodologies do not take into account any drastic changes, such as opening or closure of a flight school, which would significantly change the number of based aircraft and number of operations. The preferred forecast also does not take into account any current capacity constraints, such as tie-down and hangar space. In addition, forecasts may be sensitive to the factors presented in Section 5.1. For example, the addition of a full service FBO catering to itinerant and business traffic may increase the attractiveness of the airport, hence increasing aviation activity.

The forecast methodology is based on the analysis and application of compound annual growth rates (CAGR) published in other accepted and published forecasts. A preferred or derived forecast is then developed based on historical and local knowledge of the characteristics of the aeronautical activity at OMN.

5.6 TERM OF AVIATION FORECASTS

Forecasts are prepared for near-, intermediate-, and long term periods. Near-term forecasts, for up to five years, are used to justify near-term development and support operational planning and environmental improvement programs. Intermediate-term forecasts over a 6 to 10 year time frame are typically used in planning capital improvements. Long-term forecasts over 11 to 20 years are used for general planning.

5.7 BASED AIRCRAFT FORECAST

Table 5.8 shows three scenarios for based aircraft. The low forecast is based on the FDOT FASP compound annual growth rate (CAGR) of approximately 0.96% over the 20-year time period. The based aircraft TAF forecast CAGR was estimated at 1.43%. The derived forecast was defined as the average between the FDOT growth rate and the FAA TAF growth rate. It was assumed that OMN would continue to support local flight schools which utilize primarily single engine aircraft. Therefore, the increase in based single engine aircraft and helicopters seems reasonable. As additional facilities are developed at OMN, jet and multi-engine based aircraft may increase at a higher rate than forecasted in **Table 5.8**. Therefore, the based aircraft forecast should be revised as construction design plans are developed.

TABLE 5.8 – BASED AIRCRAFT FORECAST

	Low Forecast - FDOT Growth Rate					Forecast - Derived					High Forecast - FAA TAF Growth Rate				
Fiscal Year	Single Engine	Multi Engine	Jet	Helo	Total	Single Engine	Multi Engine	Jet	Helo	Total	Single Engine	Multi Engine	Jet	Helo	Total
2015	127	26	2	9	164	128	26	2	9	165	128	26	2	9	165
2016	128	27	2	9	166	129	27	2	9	167	130	27	2	9	168
2017	130	27	2	9	168	130	27	3	9	169	131	27	2	9	169
2018	131	27	2	9	169	131	27	3	9	170	133	28	2	10	173
2019	132	27	2	9	170	132	28	4	10	174	135	28	2	10	175
2020	133	28	2	10	173	133	28	4	10	175	137	28	2	10	177
2021	135	28	2	10	175	135	28	4	10	177	139	29	2	10	180
2022	136	28	2	10	176	136	29	5	10	180	141	29	2	10	182
2023	137	28	2	10	177	136	29	6	10	181	143	30	2	10	185
2024	139	29	2	10	180	136	29	8	10	183	145	30	2	10	187
2025	140	29	2	10	181	138	30	8	10	186	147	30	2	11	190
2026	141	29	2	10	182	139	30	8	10	187	149	31	2	11	193
2027	143	29	2	10	184	140	30	9	11	190	152	31	2	11	196
2028	144	30	2	10	186	142	31	9	11	193	154	32	2	11	199
2029	145	30	2	10	187	143	31	10	11	195	156	32	2	11	201
2030	147	30	2	10	189	144	31	10	11	196	158	33	3	11	205
2031	148	31	2	11	192	146	32	10	11	199	160	33	3	11	207
2032	150	31	2	11	194	147	32	11	11	201	163	34	3	12	212
2033	151	31	2	11	195	150	33	11	11	205	165	34	3	12	214
2034	153	31	2	11	197	151	33	12	11	207	167	35	3	12	217

Source: Hoyle, Tanner, & Associates Derived Forecast

5.8 AIRCRAFT OPERATIONS FORECAST

The number of operations in FY 2014 are significantly lower than expected. The reasons for this include a slightly higher percentage of Instrument Meteorological Conditions (IMC) that limited normal visual flight training activities, a period of time when fuel availability was limited due to issues with an FBO beyond the sponsor's control, closure of one of the flight schools, and an FAA imposed limitation on night instrument approaches. Based on this, it is assumed that 109,447 operations in FY 2014 do not represent the typical or baseline number of operations at OMN. Therefore, FY 2014 will be assumed as a baseline year with 124,695 operations, the same as in FY 2013.

Table 5.9 and **Table 5.10** summarize the derived aircraft operations forecast. Three forecast scenarios were developed. The first scenario is based on the estimated 20-year FAA TAF CAGR of approximately 0.33%. The second scenario is based on the FDOT FASP CAGR of 1.62%. The third scenario was derived by estimating the average between the first two scenarios. The CAGR of the derived forecast was estimated at approximately 1% and it is considered a reasonable growth rate for total annual operations at OMN. It was also assumed that the distribution of itinerant vs. local and VFR vs. IFR would remain constant as in previous years.

Table 5.9 – Forecasted Itinerant vs. Local Operations

Fiscal Year	Itinerant					Local			Total Operations
	Air Carrier	Air Taxi	General Aviation	Military	Total	Civil	Military	Total	
2015	0	69	69,178	4	69,251	56,660	0	56,660	125,910
2016	0	70	69,855	4	69,929	57,215	0	57,215	127,144
2017	0	71	70,542	4	70,617	57,777	0	57,777	128,394
2018	0	71	71,239	4	71,314	58,348	0	58,348	129,661
2019	0	72	71,945	4	72,021	58,926	0	58,926	130,947
2020	0	87	72,647	4	72,738	59,513	0	59,513	132,251
2021	0	88	73,373	4	73,465	60,108	0	60,108	133,573
2022	0	89	74,109	4	74,203	60,711	0	60,711	134,914
2023	0	90	74,856	4	74,950	61,323	0	61,323	136,273
2024	0	91	75,614	4	75,709	61,944	0	61,944	137,653
2025	0	107	76,367	4	76,478	62,573	0	62,573	139,051
2026	0	108	77,146	4	77,259	63,212	0	63,212	140,470
2027	0	109	77,936	4	78,050	63,859	0	63,859	141,909
2028	0	110	78,738	4	78,853	64,516	0	64,516	143,368
2029	0	112	79,551	4	79,667	65,182	0	65,182	144,849
2030	0	121	80,368	4	80,493	65,858	0	65,858	146,350
2031	0	122	81,204	4	81,330	66,543	0	66,543	147,873
2032	0	123	82,052	4	82,180	67,238	0	67,238	149,418
2033	0	125	82,913	5	83,042	67,943	0	67,943	150,985
2034	0	126	83,786	5	83,916	68,659	0	68,659	152,575

Source: Hoyle, Tanner, & Associates Derived Forecast

TABLE 5.10 – FORECASTED IFR VS. VFR OPERATIONS

Fiscal Year	IFR Itinerant					VFR Itinerant					Total Itinerant
	Air Carrier	Air Taxi	General Aviation	Military	Total	Air Carrier	Air Taxi	General Aviation	Military	Total	
2015	0	55	6,918	3	6,976	0	14	62,260	1	62,274	69,251
2016	0	56	6,986	3	7,045	0	14	62,870	1	62,884	69,929
2017	0	56	7,054	3	7,114	0	14	63,488	1	63,503	70,617
2018	0	57	7,124	3	7,184	0	14	64,115	1	64,130	71,314
2019	0	58	7,194	3	7,255	0	14	64,750	1	64,766	72,021
2020	0	70	7,265	3	7,338	0	17	65,382	1	65,400	72,738
2021	0	71	7,337	3	7,411	0	18	66,036	1	66,054	73,465
2022	0	71	7,411	3	7,485	0	18	66,698	1	66,717	74,203
2023	0	72	7,486	3	7,561	0	18	67,371	1	67,390	74,950
2024	0	73	7,561	3	7,637	0	18	68,053	1	68,072	75,709
2025	0	86	7,637	3	7,726	0	21	68,730	1	68,753	76,478
2026	0	87	7,715	3	7,805	0	22	69,432	1	69,454	77,259
2027	0	87	7,794	3	7,884	0	22	70,143	1	70,165	78,050
2028	0	88	7,874	3	7,966	0	22	70,864	1	70,887	78,853
2029	0	89	7,955	3	8,048	0	22	71,596	1	71,619	79,667
2030	0	97	8,037	4	8,137	0	24	72,331	1	72,356	80,493
2031	0	98	8,120	4	8,222	0	24	73,084	1	73,109	81,330
2032	0	99	8,205	4	8,307	0	25	73,847	1	73,873	82,180
2033	0	100	8,291	4	8,395	0	25	74,622	1	74,647	83,042
2034	0	101	8,379	4	8,483	0	25	75,407	1	75,433	83,916

Source: Hoyle, Tanner, & Associates Derived Forecast

5.9 PEAK PERIOD FORECASTS

Forecasts of annual aircraft operations in some cases may not adequately describe the needs of individual airport facilities. Annual forecasts assume that aviation activity is evenly distributed over the hours, days, and months of a particular airport's facility operation. However, in some cases peak demand surpasses the average levels.

The baseline peak month, peak day, and peak hour data was provided by the ATCT manager. The future peak month, peak day, and peak hour were estimated by maintaining the proportion between the annual operations and each period constant. **Table 5.11** summarizes the peak period forecast.

TABLE 5.11 – PEAK PERIOD FORECAST

Year	Annual	Peak Month	Peak Day	Peak Hour
2014	124,695	13,240	624	110
2015	125,911	13,850	693	113
2016	127,144	13,986	699	114
2017	128,394	14,123	706	116
2018	129,661	14,263	713	117
2019	130,947	14,404	720	118
2020	132,251	14,548	727	119
2021	133,573	14,693	735	120
2022	134,914	14,841	742	121
2023	136,273	14,990	750	123
2024	137,653	15,142	757	124
2025	139,051	15,296	765	125
2026	140,470	15,452	773	126
2027	141,909	15,610	780	128
2028	143,368	15,771	789	129
2029	144,849	15,933	797	130
2030	146,350	16,099	805	132
2031	147,873	16,266	813	133
2032	149,418	16,436	822	134
2033	150,985	16,608	830	136
2034	152,575	16,783	839	137

Source: Hoyle, Tanner, & Associates Derived Forecast

5.10 CRITICAL AIRCRAFT FORECAST

Planning improvements to an existing airport requires the selection of one or more "design aircraft" or "critical aircraft".

The critical aircraft is the most demanding aircraft that will make substantial use of the airport. Substantial use means either 500 or more annual itinerant operations, or scheduled commercial

service.[7] The critical aircraft may be a single aircraft or a composite of the most demanding characteristics of several aircraft. The critical aircraft (or composite aircraft) is used to identify the appropriate Airport Reference Code for airport design criteria.

In most cases, the critical aircraft for the purposes of airport geometric design is a composite aircraft representing a collection of aircraft classified by three parameters: Aircraft Approach Category (AAC), Airplane Design Group (ADG), and Taxiway Design Group (TDG).

The existing Airport Layout Plan (ALP) drawing (i.e., the official ALP of record on file at the FAA - conditionally approved in 2004) lists the Beechcraft King Air 200 for the existing condition, and the Cessna Citation VI for the future condition as the airport's critical aircraft. The Beechcraft King Air 200 is representative of an Airport Reference Code (ARC) B-II, where the Cessna Citation VI represents an ARC C-II.

OMN, within its role as a general aviation reliever to the Daytona Beach International Airport (DAB) should plan to eventually service small to mid-size jets. With the exception of the single engine and light twin aircraft typically used for flight training, there is no aircraft model that currently meets the requirements of substantial use. However, a Cessna Citation 525 business jet is currently based at OMN.

Data from the FAA Enhanced Traffic Management System Counts (ETMSC) was used to review the existing fleet mix at OMN. The ETMSC provides information on traffic counts by airport for flights that operate under IFR and are captured by the FAA's enroute computers. Most VFR traffic is excluded from this system. In addition, a customized report was purchased from FlightAware™ which provides similar information to the ETMSC data. Based on the review of this data, the most demanding aircraft currently operating at OMN in terms of airfield geometry requirements are the Cessna Citation C525, C550, and C560.

With the runway/taxiway configuration improvements completed since the last master plan update in 2004, the existing runway and taxiway separation currently meets the design requirements of an Airport Reference Code (ARC) C-II. Future development of the business park and the southwest quadrant of the airport supports the need for C-II standards for the long term development of the airport. Therefore, it is recommended that near- and intermediate-term development continues to support B-II standards and the long-term development continues to support C-II design standards. **Table 5.12** shows the critical aircraft forecast.

[7] Order 5080.3C *Field Formulation of the National Plan of Integrated Airport Systems*, Section 3-4

TABLE 5.12 – CRITICAL AIRCRAFT FORECAST

Critical Aircraft	2015	2019	2024	2029	2034
Aircraft Approach Category (AAC)	B	B	B	B	C
Airplane Design Group (ADG)	II	II	II	II	II
Taxiway Design Group (TDG)	1B	1B	1B	1B	1B
Typical Aircraft	Cessna Citation 525	Cessna Citation 525	Cessna Citation 525	Cessna Citation 525	Gulfstream G150

Source: Hoyle, Tanner, & Associates Derived Forecast

5.11 FORECAST SUMMARY, REVIEW, AND APPROVAL

Table 5.13 presents the aviation demand elements required to be forecasted. Acceptable forecasting analysis and consistency with the TAF are the general requirements for FAA approval of the forecast.

At reliever airports, the FAA considers a forecast to be consistent with the TAF when:

- Forecasts differ by less than 10 percent in the 5-year forecast and less than 15 percent in the 10-year period, or
- Forecasts do not affect the timing or scale of an airport project, or
- Forecasts do not affect the role of the airport as defined in the current version of FAA Order 5090.3, *Field Formulation of the National Plan of Integrated Airport Systems*.

The FAA approved the forecasts on April 6, 2015. A copy of the FAA forecast approval letter is located in **Appendix C**.

TABLE 5.13 – FORECAST SUMMARY

		Years				
	Base yr	Base+1 yr	Base+5 yr	Base+10 yr	Base+15 yr	Base+20 yr
	2014(*)	2015	2019	2024	2029	2034
Based Aircraft						
Single Engine Piston	126	128	132	136	143	151
Multi Engine Piston	25	25	26	27	29	30
Multi Engine Turboprop	1	1	2	2	2	3
Jet	2	2	4	8	10	12
Rotorcraft	9	9	10	10	11	11
Total	**163**	**165**	**174**	**183**	**195**	**207**
CAGR %	--	1.23%	1.31%	1.16%	1.20%	1.20%
FAA TAF	103	106	123	142	160	178
Difference	36.8%	35.8%	29.3%	22.4%	17.9%	14.0%
Itinerant Operations						
Air Carrier	0	0	0	0	0	0
Air Taxi	5	69	72	91	112	126
General Aviation	67,754	69,178	71,945	75,614	79,551	83,786
Military	5	4	4	4	4	5
Sub-Total	**67,764**	**69,251**	**72,021**	**75,709**	**79,667**	**83,916**
CAGR %	--	2.19%	1.23%	1.11%	1.08%	1.07%
Local Operations						
General Aviation	56,931	56,660	58,926	61,944	65,182	68,659
Military	0	0	0	0	0	0
Sub-Total	**56,931**	**56,660**	**58,926**	**61,944**	**65,182**	**68,659**
CAGR %	--	-0.48%	0.69%	0.85%	0.91%	0.94%
Touch and Go	22,772	22,664	23,570	24,778	26,073	27,464
CAGR %	--	-0.48%	0.69%	0.85%	0.91%	0.94%
Total Annual Operations	**124,695**	**125,911**	**130,947**	**137,653**	**144,849**	**152,575**
CAGR %	--	0.98%	0.98%	0.99%	1.00%	1.01%
FAA TAF	109,447	108,327	110,509	113,295	116,154	119,088
Difference	12%	14%	16%	18%	20%	22%
Helicopter Operations	6,235	6,296	6,547	6,883	7,242	7,629
Operations per Based Aircraft (OPBA)	765	763	753	752	743	737
Peak Period						
Peak Month	13,240	13,850	14,404	15,142	15,933	16,783
Average Day Peak Month	624	693	720	757	797	839
Average Day Peak Hour	110	113	118	124	130	137
Annual Instrument Operations	**7,454**	**7,616**	**7,921**	**8,327**	**8,762**	**9,229**
CAGR %	--	2.17%	1.22%	1.11%	1.08%	1.07%
Critical Aircraft						
Aircraft Approach Category (AAC)	B	B	B	B	B	C
Airplane Design Group (ADG)	II	II	II	II	II	II
Taxiway Design Group (TGG)	1B	1B	1B	1B	1B	1B

Source: Hoyle, Tanner, & Associates Derived Forecast

Note: Compound Annual Growth Rate (CAGR) calculated from the base year 2014

(*) Assumed because FY 2014 actual OPSNET data is not representative of the typical aviation activity at OMN.

CHAPTER 6: FACILITY REQUIREMENTS

6.0 INTRODUCTION

This chapter of the Airport Master Plan Update evaluates the ability of the existing two-runway airfield system and landside facilities to safely and efficiently accommodate existing and future aviation activity at OMN.

6.1 EMERGING TRENDS

The National Airspace System (NAS) is being transformed by Next Generation Air Transportation System (NextGen) initiatives. NextGen is the FAA's plan for modernizing the national air transportation system. NextGen initiatives may affect airspace as well as on- and off-airport obstruction management requirements. The NextGen initiatives are based on GPS satellite navigation and enhanced communications systems that will improve efficient access to the airspace and airports of the National Airspace System.

Trends were evident at the local level when a well-attended Public meeting was held on 28 April 2015 where interested residents and airport users were asked to provide verbal and written recommendations and comments regarding the future use and needs of the airport. A review of the transcribed minutes from the meeting and on the forms provided for written public input can be summarized by infrastructure and operational improvements the public would like to see addressed. They are:

1. Increase the runway length to enhance and encourage corporate use.
2. Improve itinerant access to public facilities (bathrooms, taxi's, rental cars, etc.)
3. Improve existing or establish new FBO facilities or a GA terminal to better accommodate itinerant users.
4. Encourage high and compact flight patterns and voluntary noise abatement procedures to reduce noise from the repetitive flight training patterns flown by fixed and rotary wing aircraft.

6.2 DEMAND CAPACITY ANALYSIS

Airfield capacity is expressed in terms of the number of aircraft operations that can be conducted in a given period of time. Capacity is most often expressed as annual capacity (or annual service volume) and hourly capacity (or throughput capacity) for a particular runway and taxiway configuration.

The determination of airfield capacity is essential to the evaluation of the adequacy of the runway and taxiway system to meet existing and future airport activity demand levels. Hourly capacities under Visual Flight Rules (VFR) and Instrument Flight Rules (IFR), and the Annual Service Volume (ASV) for the airport were developed using methods specified in FAA Advisory Circular (AC) 150/5060-5, *Airport Capacity and Delay*.

A demand/capacity analysis for the existing airfield configuration was conducted using the methodology contained in Chapter 2 of the AC, commonly referred to as the FAA's "handbook methodology." This methodology uses a series of tables, graphs and equations to calculate an airfield's hourly and annual capacity. It is generally used in situations where airfield capacity is not a constraining factor. The following paragraphs provide a discussion of the handbook methodology and present the results of the analysis.

An airport's capacity is generally measured in terms of the number of aircraft operations (landings and takeoffs) the runway and taxiway system can accommodate on an hourly or annual basis. The calculation for airfield capacity is a function of the number of available runways and the specific runway/taxiway configuration for a given airport. Airfield capacity was determined using two principal measures, Annual Service Volume (ASV) and hourly capacity.

Calculation of an airfield's hourly capacity and ASV depends upon the following physical and operational factors:

- **Meteorological Conditions** - The percentage of time that the cloud ceiling or horizontal visibility are below certain minimums.
- **Aircraft Fleet Mix (Mix Index)** - The percentage of operations conducted by aircraft within certain weight, engine, and wake turbulence classifications.
- **Runway Use** - The percentage of time each runway use configuration is used.
- **Percent Touch-and-Go** - The percent of touch-and-go operations in relation to total aircraft operations.
- **Percent Arrivals** - The percent of arrivals in relation to departures.
- **Exit Taxiway Locations** - The number and locations of exit taxiways for landing aircraft

Hourly capacity is defined as the maximum number of aircraft operations that can be accommodated by the airfield system in one hour. It is used to assess the airfield's ability to accommodate peak hour operations.

ASV is defined as a reasonable estimate of an airport's annual capacity. As the number of annual operations increases and approaches the airport's ASV, the average delay incurred by each operation increases. When the number of annual aircraft operations exceeds the ASV, moderate to severe congestion will occur and average delay per aircraft operation will increase exponentially. ASV is used to assess the adequacy of the airfield design, including the number and orientation of runways.

Delay is typically expressed in minutes per aircraft operation. When annual operations are equal to the ASV, average delay per aircraft operation can be up to four minutes depending upon the fleet mix using the airport. Traditionally, one to four minutes of average delay per aircraft operation is used in ASV calculation. This can be considered as an acceptable level of delay. The FAA considers delays of 6 minutes or more to be significant. When the average annual delays per aircraft operation reaches four to six minutes, the airport is approaching its practical capacity and is generally considered congested.

Delay can be translated into hours of annual delay and easily converted into dollar estimates to be used as a basis for comparison. Aircraft operational delay costs or savings are often used as the measure for comparing various airfield development alternatives.

Aircraft separation significantly impacts both airfield and airspace capacity. Reduced separation typically increases airfield capacity since the resulting closer spacing between aircraft means more aircraft can use the airport during a specified time period. Conversely, increased separation typically reduces capacity. A variety of factors determine the required minimum aircraft separation, including prevailing weather conditions, flight rules, and the specific aircraft type.

The FAA's handbook methodology uses the term "Mix Index" to describe an airport's fleet mix. The FAA defines the Mix Index as the percentage of Weight Class C operations plus three times the percentage of Weight Class D operations.

Mix Index (%) = Class C Operations/Total + 3 x Class D Operations/Total

The aircraft mix is the relative percentage of operations conducted by each of the four classes of aircraft (A, B, C, and D) and their relationship to terms used in wake turbulence standards. **Table 6.1** describes the four classes of aircraft as used in ASV calculations.

TABLE 6.1 – AIRCRAFT MIX

Aircraft Class	Maximum Certficated Takeoff Weight	Number of Engines	Wake Turbulence Classification
A	12,500 or less	Single	Small
B		Multi	
C	12,500 - 300,000	Multi	Large
D	Over 300,000	Multi	Heavy

Source: AC 150/5060-5 Airport Capacity and Delay

Aircraft fleet mix at the Airport during 2014 was estimated using data from FlightAware™. Based on the data, it is estimated that Weight Class A and Class B comprise approximately 98% percent of aircraft operations, Weight Class C aircraft comprise 2% percent of aircraft operations, and Weight Class D aircraft do not operate at the Airport.

Based on the estimated mix index and OMN airfield configuration, it was determined that the ASV is approximately 230,000 annual operations. The hourly capacity of the airfield is 98 operations per hour in VFR conditions and 59 hourly operations in IFR conditions. Since the forecast for the airport indicates that the activity throughout the planning period will remain well below this level, the capacity of the existing airfield system will not be reached, and the airfield can meet operational demands without adverse effects to aircraft operations and without significant operational delay. Therefore, the facility requirements analysis will concentrate on developing the appropriate facilities to improve safety and service considerations rather than operational capacity of the airfield.

6.3 DIMENSIONAL CRITERIA STANDARDS

Airport design standards provide basic guidelines for a safe, efficient, and economic airport system. The Runway Design Code (RDC) provides the information needed to determine which standards apply to a specific element of the runway. The first element of the RDC is the Aircraft Approach Category (ACC) which is defined based on the aircraft's approach speed and describes the operational characteristics of the aircraft. **Table 6.2** describes the five approach speed categories as defined by the FAA.

TABLE 6.2 – AIRCRAFT APPROACH CATEGORY (ACC)

ACC	Approach Speed
A	Approach speed less than 91 knots
B	Approach speed 91 knots or more, but less than 121 knots
C	Approach speed 121 knots or more, but less than 141 knots
D	Approach speed 141 knots or more, but less than 166 knots
E	Approach speed 166 knots or more

Source: AC 150/5300-13A Change 1

The second element of the RDC is the Airplane Design Group (ADG) which is defined by the aircraft's wingspan and tail height. The ADG represents the basic physical characteristics of the aircraft. **Table 6.3** describes the six design group categories as defined by the FAA.

TABLE 6.3 – AIRPLANE DESIGN GROUP (ADG)

ADG	Tail Height (Feet)	Wingspan (Feet)
I	Less than 20	Less than 49
II	20 to less than 30	49 to less than 79
III	30 to less than 45	79 to less than 118
IV	45 to less than 60	118 to less than 171
V	60 to less than 66	171 to less than 214
VI	66 to less than 80	214 to less than 262

Source: AC 150/5300-13A Change 1

The third element of the RDC is the visibility minimums for the lowest instrument approach procedure developed for the airport. **Table 6.4** below depicts the instrument runway visibility minimums in feet and statute miles.

TABLE 6.4 – VISIBILITY MINIMUMS

RVR (Feet))	Visibility Minimums
5,000	Not lower than 1 mile
4,000	Lower than 1 mile but not lower than ¾ mile
2,400	Lower than ¾ mile but not lower than ½ mile
1,600	Lower than ½ mile but not lower than ¼ mile
1,200	Lower than ¼ mile

Source: AC 150/5300-13A Change 1

The Taxiway Design Group (TDG) is defined by the undercarriage dimensions of the aircraft. The TDG describe the ground operating characteristics of the aircraft. In addition, the Airport Reference Code (ARC) is defined by the highest RDC (without the visibility minimums).

The following sections describe the fundamental airfield design standards for safe, efficient, and economic aircraft operations. Airfield design standards are determined by a careful analysis of the aircraft characteristics for which the airfield will be designed. Airfield geometry designs based on only existing aircraft can severely limit the ability to expand the airport to meet future requirements for larger, more demanding aircraft. On the other hand, airfield designs that are based on large aircraft never likely to operate at the airport are not economical.

The current RDC is classified as B-II with visibility minimums of not lower than 1 mile. In **Table 6.5** the dimensional standards for B-II is outlined and compared with the current infrastructure at OMN.

TABLE 6.5 – RUNWAY DESIGN STANDARDS

Element	Standard	Runway 8/26	Runway 17/35
Runway Width (Feet)	75	75	100
Runway Shoulder Width (Feet)	10	10	40
Blast Pad Width (Feet)	95	None	120
Blast Pad Length (Feet)	150	None	150
Crosswind Component (Knots)	13	13	13

The current TDG is classified as TDG-1B. In **Table 6.6** the dimensional standards for TDG-2 is outlined and compared with the current infrastructure at OMN.

TABLE 6.6 – TAXIWAY DESIGN STANDARDS TDG 1B

Element	Standard	A, B, C, D, G*	E	F
Taxiway Width	25	35	35	40
Taxiway Shoulder Width	10	n/a	10	n/a
Taxiway Edge Safety Margin	5	n/a	n/a	n/a

**Taxiway G is a future full length parallel taxiway designed at TDG 2 standards for Runway 17-35.*

6.4 RUNWAY CLEAR AREAS AND SEPARATION STANDARDS

There are specific areas beyond the ends and off the sides of the runways that the FAA requires to be clear. The Runway Safety Area (RSA) is defined as the prepared and suitable ground surrounding the runway to reduce the risk of damage to aircraft in the event of an overshoot, undershoot or excursion from the runway.

The Runway Object Free Area (ROFA) and Taxiway Object Free Area (TOFA) is an area surrounding the centerline that restricts protruding objects that may damage the aircraft.

The Runway Protection Zone (RPZ) is an area beyond the runway ends that restricts the land use for the protection of people and property.

The size if these areas is defined by the RDC and the ADG. The size of the clear areas increases as the airport serves larger aircraft and/or the instrument approach procedures become more precise. **Table 6.7** lists the FAA standards for the specific clear areas.

TABLE 6.7 – CLEAR AREA AND SEPARATION STANDARDS

Element	Standard	Runway 8/26	Runway 17/35
RSA Length Beyond End	300	300	300
RSA Width	150	150	150
ROFA Length Beyond End	300	300	300
ROFA Width	500	500	500
RPZ Inner	500	500	500
RPZ Outer	700	700	700
RPZ Length	1000	1000	1000
Runway to Taxiway Separation	240	240	200

This Master Plan investigated the feasibility of increasing the RDC to C-II to encourage more operations by larger corporate jets with faster approach speeds. The idea behind encouraging more corporate jets is due to the economic development that would follow. The corporate jets are larger and faster so they require more fuel which increases spending at the airport. The owners tend to require hangar space to protect their investment from harsh environmental factors which would increase lease revenue at the airport. Larger jets are more expensive meaning higher cliental with more disposable income for the local tourism community. If a corporation was able to conveniently travel to their facility, they might be more likely to invest in the adjacent business park creating jobs for the community.

The following table shows the comparison in dimensional requirements between the two AACs.

TABLE 6.8 - B-II VS. C-II STANDARDS

Element	B-II	C-II
Runway Width	75	100
RSA Length Beyond End	300	1000
RSA Width	150	300
ROFA Length Beyond End	300	1000
ROFA Width	500	800
RPZ Inner	500	500
RPZ Outer	700	1010
RPZ Length	1000	1700
Runway to Taxiway Separation	240	300
Max Surface Gradient 1st ¼ of	0.02	0.008
Max Surface Gradient of RW	0.02	0.015

The C-II requirements would result in a widening of Runway 8-26 from 75 to 100 feet; clearing and construction of additional RSA length and width; and result in incompatible land use in the RPZ (public roads, golf courses, and residences) requiring significant additional land purchase and expensive shifting of roads. Table 6.9 shows the estimated costs associated with these improvements.

TABLE 6.9 – APPROXIMATE C-II IMPROVEMENT COSTS

Element	Apprx Cost
Runway Length, Width & Surface Gradient	
-Pavement, Lighting, Marking	$2,750,000
RSA, ROFA, RPZ, Approach Dimensions	
-Land Purchase, Improvments, Mitigation	$9,500,000
Runway to Taxiway Separation	.
-TW A & G already to C-II standards, Signage/Marking	$150,000
Total	$12,400,000

Note: Approximate cost is in additional to B-II improvements.

Due to the increased land requirements related to clear areas, and the current constraints of the airport, it was determined that the increase in Aircraft Approach Category is not financially feasible at this point in time.

6.5 RUNWAY REQUIREMENTS

Existing and potential runway configurations were examined with respect to dimensional criteria, orientation, length, width, and pavement design strength.

6.5.1 RUNWAY ORIENTATION

Local prevailing meteorological conditions such as wind direction, cloud ceiling heights and visibility have a direct influence on the development of an airport's single runway orientation, or an airport's system of runways. Ideally, any single runway should be aligned with the prevailing winds that, to varying degrees, have a direct effect on all aircraft. Generally, the smaller the aircraft, the more it is affected by the wind, particularly crosswind components. The crosswind component is the resultant vector of the runway direction and existing wind that acts at a right angle to the runway. Since surface winds usually cross the runway at an angle during landing and takeoffs, the wind exerts both headwind and crosswind components. For operational safety considerations, pilots desire to use runways that, to the greatest extent practicable, offer the greatest headwinds and least crosswinds. Each aircraft (by factory design) has a maximum recommended demonstrated crosswind velocity limit, which is the crosswind component for which adequate control of the airplane was demonstrated during takeoff and landing.

As a rule, most airplanes are limited to a crosswind component of 20 percent of the maximum certificated weight stall speed with recommended landing flaps. Runway wind coverage, as used in airport planning, measures the percent of time crosswind components are below maximum acceptable velocity limits. When measuring runway wind coverage, the most critically affected aircraft (aircraft having the smallest crosswind operational limit that will utilize the runway), must be considered.

FAA Advisory Circular (AC) 150/5300 13A, *Airport Design*, recommends that at least 95 percent crosswind coverage be provided by the runway system (one or more runways) at any airport. If the runway wind coverage is less than 95 percent, an additional runway(s) should be provided, with an orientation such that the combination of all runways provides 95 percent or better wind coverage. The most desirable runway orientation provides the greatest runway wind coverage with the least crosswind component.

The number of runways required at an airport depends upon factors such as wind coverage, capacity requirements, and occasionally environmental considerations. The following meteorological categories were used to provide information and guidance for the analysis of the operational impact of winds on the airport's existing and future runway system:

- **All Weather** - All observed ceiling heights and horizontal visibility reported.
- **Visual Meteorological Conditions (VMC)** - Observed local conditions when cloud base ceiling heights were reported to be greater than, or equal to, 1,000 feet above ground level (AGL) and horizontal visibility was reported to be greater than, or equal to, 3 statute miles. Flight operations during these conditions may be conducted under Visual Flight Rules (VFR).
- **Instrument Meteorological Conditions (IMC)** - Observed conditions when ceiling height was reported less than 1,000 feet AGL and/or horizontal visibility was reported to be less than 3 statute miles.

The surface observation data for OMN as used for this Airport Master Plan Update was obtained from the National Oceanic and Atmospheric Administration (NOAA), and the National Climatic Data Center (NCDC). The Ormond Beach Municipal weather station recorded a total of 37,234 surface observations for the 10-year period 2004 through December 2014 that were categorized as representing “All Weather Conditions." A total of 34,447 operations (approximately 93 percent) were reported for VMC. A total of 2,389 operations (approximately 3 percent) were reported for IMC. Approximately 398 observations had incomplete data and were classified as missing data.

Table 6.9 indicates that Runway 8/26 by itself provides wind coverage that exceeds the FAA requirement of 95 percent even with the most demanding crosswind component of 10.5 knots. Therefore, no additional runways are required on the basis of wind coverage.

TABLE 6.10 – RUNWAY CROSSWIND COVERAGE

Meteorological Condition	Observations	Runway	Wind Coverage Crosswind		
			10.5	13	16
All-Weather	36,836	8/26	95.40%	98.00%	99.72%
		17/35	92.30%	96.11%	99.28%
		Combined	99.40%	99.92%	99.98%
Visual Meteorological Conditions (VMC)	34,447	8/26	95.61%	98.15%	99.75%
		17/35	92.12%	96.05%	99.31%
		Combined	99.41%	99.93%	99.99%
Instrument Meteorological Conditions (IMC)	2,389	8/26	92.31%	95.76%	99.23%
		17/35	95.00%	96.93%	98.86%
		Combined	99.31%	99.82%	99.95%

Source: NCDC. Station Ormond Beach Municipal (722341), year 2004 to 2015. (Years 2004 and 2015 partial data)
Percentages generated with the FAA Wind Analysis Tool: https://airports-gis.faa.gov

6.5.2 RUNWAY LENGTH

Runway length requirements for the airport were determined using FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*. The principle parameters necessary to determine runway length are the airport elevation and the mean daily maximum temperature of the hottest month. The airport elevation is 27.9 feet mean sea level (MSL). Based on the NOAA's 1981-2010 Climate Normals, it was determined that the mean daily maximum temperature of the hottest month occurs in July and is 90.6 °F.

The results of the runway length analysis are shown in **Table 6.10**. It is clear that the existing runway length is satisfactory for aircraft below 12,500 pound maximum gross takeoff weight but even moderately loaded heavier aircraft require lengths exceeding those currently available.

TABLE 6.11 – RUNWAY LENGTH REQUIREMENTS

Percentage of the Fleet	Un-Adjusted	Takeoff Adjustment (1)	Landing Adjustment (2)
Small Aircraft (≤ 12,500 lbs)			
Less than 10 passenger seats			
95% of the Fleet	3,100	n/a	n/a
100 % of the Fleet	3,600	n/a	n/a
10 or more passenger seats	4,100	n/a	n/a
Aircraft with MTOW More than 12,500 up 60,000 lbs			
75 % of the fleet at 60% useful load	4,600 feet	4,673 feet	5,290 feet
75 % of the fleet at 90% useful load	6,700 feet	6,773 feet	7,000 feet
100 % of the fleet at 60% useful load	5,400 feet	5,473 feet	6,210 feet
100 % of the fleet at 90% useful load	8,400 feet	8,473 feet	9,660 feet

Estimated accoding to AC 150/5325-4B *Runway Length Requirements for Airport Design*

(1) Adjusted based on runway centerline high and low points. (2) Applicable to turbojet-powered airplanes only

Figure 6.1 is an extract from the Advisory circular that lists the airplanes that have a maximum gross takeoff weight between 12,500 pounds up to 60,000 pounds that are considered part of the 75% of the jet fleet used to determine runway length requirements. **Figure 6.2** lists the larger aircraft that make up the remaining 25% of the fleet of aircraft under 60,000 pounds used in the runway length calculations.

FIGURE 6.1 – AIRPLANES THAT MAKE UP 75 PERCENT OF THE FLEET

Manufacturer	Model
Aerospatiale	Sn-601 Corvette
Bae	125-700
Beech Jet	400A
Beech Jet	Premier I
Beech Jet	2000 Starship
Bombardier	Challenger 300
Cessna	500 Citation/501Citation Sp
Cessna	Citation I/II/III
Cessna	525A Citation II (CJ-2)
Cessna	550 Citation Bravo
Cessna	550 Citation II
Cessna	551 Citation II/Special
Cessna	552 Citation
Cessna	560 Citation Encore
Cessna	560/560 XL Citation Excel
Cessna	560 Citation V Ultra
Cessna	650 Citation VII
Cessna	680 Citation Sovereign

Manufacturer	Model
Dassault	Falcon 10
Dassault	Falcon 20
Dassault	Falcon 50/50 EX
Dassault	Falcon 900/900B
Israel Aircraft Industries (IAI)	Jet Commander 1121
IAI	Westwind 1123/1124
Learjet	20 Series
Learjet	31/31A/31A ER
Learjet	35/35A/36/36A
Learjet	40/45
Mitsubishi	Mu-300 Diamond
Raytheon	390 Premier
Raytheon Hawker	400/400 XP
Raytheon Hawker	600
Sabreliner	40/60
Sabreliner	75A
Sabreliner	80
Sabreliner	T-39

Source: AC 150/5325-4B Runway Length Requirements for Airport Design

FIGURE 6.2 – AIRPLANES THAT MAKE UP THE REMAINING 25 PERCENT OF THE FLEET

Manufacturer	Model
Bae	Corporate 800/1000
Bombardier	600 Challenger
Bombardier	601/601-3A/3ER Challenger
Bombardier	604 Challenger
Bombardier	BD-100 Continental
Cessna	S550 Citation S/II
Cessna	650 Citation III/IV
Cessna	750 Citation X
Dassault	Falcon 900C/900EX
Dassault	Falcon 2000/2000EX
Israel Aircraft Industries (IAI)	Astra 1125
IAI	Galaxy 1126
Learjet	45 XR
Learjet	55/55B/55C
Learjet	60
Raytheon/Hawker	Horizon
Raytheon/Hawker	800/800 XP
Raytheon/Hawker	1000
Sabreliner	65/75

Source: AC 150/5325-4B Runway Length Requirements for Airport Design

Currently Runway 8/26 and 17/35 accommodate all of the based aircraft at the airport and most of the itinerant aircraft using the airport with little or no operational restrictions, for example, take-off weight restrictions. However, there is a latent demand by some airport users operating larger aircraft to extend Runway 8/26 in order to reduce their operational restrictions or to allow larger general aviation aircraft use of the airport.

Preparation of this Airport Master Plan Update included a survey of users to determine runway length needs at OMN. The survey did not provide the level of documentation necessary to presently justify a runway extension and identify a definitive runway length based on FAA standards that require at least 500 annual operations by an aircraft requiring additional runway

length. However, the evaluation of the airport user survey indicates that a runway length of at least 5,000 feet would reduce operational restrictions on some of the airport's users.

A runway length of at least 5,000 feet would accommodate the turbine aircraft that use the airport and the types of aircraft that are anticipated to use the airport in the future. This length is commonly accepted as a minimum length for all-weather turbine aircraft operations among aircraft owners.

In addition, a longer runway will allow all departing aircraft to climb higher over airport owned or controlled property prior to making turns in the traffic pattern. Since aircraft produce the most noise during initial takeoff and high powered climb operations and then reduce the power (and hence noise) when reaching pattern altitude, the longer the runway, the higher the aircraft should be when turning crosswind in the traffic pattern. It is commonly accepted that the primary noise complaints come from the repetitive traffic patterns most often associated with extensive Florida flight training and less often from the arrival and departure of itinerant business aircraft. Any runway length addition that improves the existing voluntary noise abatement procedures will be welcomed by the airport and the residents of Ormond Beach.

Prevailing wind conditions and airspace constraints due to the Class C airspace at Daytona Beach International Airport (DAB) indicate that Runway 8/26 should be designated as the primary runway at OMN. Runway 17/35 should be designated as the crosswind runway to accommodate smaller aircraft with lower demonstrated crosswind components. Therefore, future extensions to Runway 17/35 are not considered in this Airport Master Plan Update.

Although a clear and substantiated length for a future runway extension was not identified in the runway length analysis and the user survey, it is recommended that the City of Ormond Beach maintain the capability to accommodate demand for increased runway take-off lengths in the future and that ALP drawings be developed to support a runway extension when the project is justified and receives FDOT and FAA approval.

6.5.3 RUNWAY WIDTH

The existing width of Runway 8/26 meets RDC B-II-5000 standards. However, Runway 17/35 exceeds the 75-foot requirement. The larger width of Runway 17/35 cannot be justified for reconstruction at the runway's end of life. Therefore, the width should be decreased to 75 feet and shown as such in the ALP drawings.

6.5.4 RUNWAY PAVEMENT DESIGN STRENGTH AND CONDITION

Pavement strength of runways and taxiways must be sufficient to support the repetitive landings, takeoffs, and movement of the design aircraft as well as the occasional use by heavier aircraft. Both runways at OMN are rated at 20,000 pound single wheel landing gear loading and 40,000 pound dual wheel loading. This load rating is adequate to service repetitive operations by all B-II

aircraft as well as many of the smaller and lighter C-II aircraft that make up the fleet mix in **Figures 6.1** and **6.2**.

6.5.5 RUNWAY LIGHTING

Both runways have MIRL that meet the current operational needs of the airport. Runway 17/35 lighting is in good condition. Runway 8/26 lighting should be updated at the same time the runway is rehabilitated.

6.5.6 RUNWAY MARKING AND SIGNAGE

A sign and marking plan sheet has been created as part of this master plan update. It provides the airport manager with an easily referenced graphical depiction of the signs and markings existing on the airport. This sheet can be posted on a website or provided to pilots to assist with familiarization of the airport layout. Pavement markings typically require repainting every 5-10 years in Florida and whenever rehabilitation or reconstruction of pavement occurs.

6.6 HELIPAD REQUIREMENTS

The helipad is in good condition and additional helipads are not required on the airport. Currently the area surrounding the helipad is unpaved and the helipad does not have a paved surface which would allow wheeled helicopters to taxi to and from the helipad, or for helicopters to be towed to and from the helipad, and aircraft access via Taxiway D should be provided. Public parking and access walkways should be constructed to complete the development of a public use heliport facility.

6.7 TAXIWAY REQUIREMENTS

Taxiway F, a partial parallel taxiway on the east side of Runway 17/35, is the only taxiway that does not meet the required runway separation standards. Taxiway D does not currently meet standard B-II OFA requirements due to the proximity of the adjacent hangars. Corrective action by shifting Taxiway D to the north to achieve standard OFA will be addressed in the CIP Chapter of this report. A new parallel taxiway, Taxiway G, has been designed along the west side of Runway 17/35 and will open access to the southwest and northwest quadrants for future aviation development.

6.8 ELECTRONIC, VISUAL, AND SATELLITE AIDS TO NAVIGATION

A number of electronic, visual, and more recently satellite aids exist to help pilots find the airport and land in less than perfect visual conditions and at night. These common tools are identified below.

6.8.1 RUNWAY END IDENTIFIER LIGHT (REIL)

Runway End Identifier Lights (REILs) are located at each end of both runways.

6.8.2 AIRPORT BEACON (ABN)

The green and white rotating airport beacon is located in the southern corner of the general aviation apron and signifies a civil airfield.

6.8.3 PRECISION APPROACH PATH INDICATOR (PAPI)

Two-light PAPIs are installed for the approach of each end of both runways. The airport's current Capital Improvement Plan (CIP) includes a project to replace the PAPI systems on all runways.

6.8.4 VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE (VORTAC)

The H-VORTAC located on the field at OMN and performs a significant role in the legacy Victor airway, Tactical Air Navigation and instrument approach procedures along the eastern coast of Florida. The H stands for high altitude as the power and range of the navigation capabilities of the transmitter extend to 1,000 feet AGL up to and including 14,500 feet AGL at radial distances out to 40 NM; from 14,500 AGL up to and including 18,000 feet at radial distances out to 100 NM; from 18,000 feet AGL up to and including 45,000 feet AGL at radial distances out to 130 NM; and from 45,000 feet AGL up to and including 60,000 feet at radial distances out to 100 NM. The OMN VORTAC may be maintained and remain operational as part of a reduced national backbone of ground based radio navigation systems as the primary method of airspace navigation is being rapidly transferred to satellite systems.

6.8.5 SEGMENTED CIRCLE AND WIND CONES

The OMN segmented circle draws the attention of the pilot to the primary windcone and serves to alert the pilot to the non-standard right traffic pattern associated with runways 26 and 17. Proposed construction of new aprons northwest of relocated Taxiway D will require relocation of the segmented circle and primary windcone to a less congested area where they will be more readily visible. Additional supplemental windcones should be located within a thousand feet of runway approach ends to aid pilots during landing.

6.8.6 AUTOMATED WEATHER OBSERVING SYSTEM (AWOS)

An AWOS-3 is currently located to the east of the intersection of Taxiways B and D, in an area of high rotary-wing activity. The AWOS system is not connected to the National Airspace Data Interchange Network (NADIN) systems, rather the automated collection system provides the local weather and the air traffic control tower operators upload it into the national system manually. AWOS transmittal services are disabled during those hours when the ATCT is in operation, because the ATCT are considered the primary source of local weather information during those times.

FAA *Order 6560.20B Siting Criteria for Automated Weather Observing Systems (AWOS)* establishes the siting criteria for AWOS installation at airports and heliports.

The AWOS sensors shall not violate runway or taxiway object free areas, runway or taxiway safety areas, obstacle free zones, or instrument flight procedures surfaces in AC 150/5300-13, *Airport Design*, or FAA Handbook 8260.3, TERPS.

According to FAA Order 6560.20B, at an airport with visual and/or non-precision instrument runways, the preferred siting of the AWOS cloud height, visibility, and wind sensors is adjacent to the primary runway 1,000 feet to 3,000 feet down the runway from the threshold. The primary runway is considered to be the runway with the lowest instrument approach minimums. Runway 8 is the runway with the lowest minimums. Therefore, relocating the AWOS to a location adjacent to Runway 8 and within 1,000 to 3,000 from the threshold is recommended.

6.9 AIRPORT TRAFFIC CONTROL TOWER (ATCT)

The ATCT is located in the northwest quadrant near the sports complex and is protected by a controlled access gate and fencing. The location is suitable for the tasks required but additional tree clearing and vegetation management will be required to maintain adequate line of site from the tower cab to the runway thresholds. The ALP graphically depicts the tower line of sight for the existing as well as a proposed future extension to Runway 8.

6.10 AIRSPACE REQUIREMENTS

The airspace around OMN is not anticipated to change during the planning period although improvements to instrument approaches can be expected as NextGen upgrades to the NAS continue to unfold.

6.11 GENERAL AVIATION FACILITY REQUIREMENTS

General aviation aircraft typically require a wide array of services and facilities. The particular facilities needed at an airport are dependent upon the type of aircraft, climate, and the frequency and type of operations. Some general aviation facilities are provided by the airport owner; and some are provided by private entities such as an FBO operator.

An FBO operator can provide a multitude of services and facilities. For example, aircraft fueling, parking, aircraft storage, aircraft maintenance, aircraft rental, and flight training.

General aviation encompasses a variety of users and activities. As a result, the variety of general aviation facilities needed include aircraft storage facilities, transient parking aprons, terminal facilities, automobile parking areas, and vehicle access from adjacent roads.

6.11.1 AIRCRAFT STORAGE FACILITIES

Demand for hangar space is driven by three primary factors: security, local climate, and the type of based aircraft. Typically, airports that frequently experience severe weather conditions have the highest demand for hangar facilities. Additionally, the desire to avoid prolonged direct exposure to the sun will increase hangar demand. The higher overall value of based aircraft also increases the demand for hangar storage.

Due to the frequency of hurricanes, severe thunderstorms resulting in damaging hail, and the relentless Florida sun, additional aircraft storage facilities are recommended at OMN. Storage facilities can generally be classified into four general categories: T-hangars, conventional hangar, executive box hangar, and corporate hangar.

Key issues related to future hangar development include the availability of buildable space and priority for accommodation. Development of future general aviation aircraft storage facilities should also take into account the various types of new general aviation aircraft; for example, very light jet and light sport aircraft. Aircraft storage facilities may also be provided for overnight or short-term storage of transient aircraft.

The northwest quadrant is a potential location for hangar development. A recently built road in the vicinity provides excellent access to the site. After performing a line of sight study for the existing Air Traffic Control Tower (ATCT), it was determined that corporate hangar developers will need to carefully coordinate construction plans with the airport manager to avoid penetrating sight lines from the tower cab to the approach end of Runway 8. Most T-hangars for Group I aircraft are less than 25 feet in height and may be ideal for the site.

The northeast quadrant is restricted due to the VORTAC critical area and no future development in the area is planned.

Taxiway C, located in the southeast quadrant, is the most ideal location for box or corporate hangar development in the immediate future, as all the necessary utility infrastructure requirements are nearby.

The southwest quadrant is adjacent to an existing industrial park, and is thus ideal for aviation related manufacturing or shipping services. Remaining infrastructure from the former paved areas of OMN provide level upland sites for redevelopment near the soon to be constructed Taxiway G.

Alternatives for development of storage facilities at OMN are discussed in Chapter 7.

6.11.2 TRANSIENT AIRCRAFT PARKING APRONS

Transient aircraft parking aprons provide parking for visiting aircraft. The transient aircraft parking apron should be visible from the airfield to assist the pilots in way finding and should be located near the amenities provided in a terminal facility. The size of the apron is generally based on the typical busy day. Pavement strength for the transient aprons should be designed to accommodate the largest or heaviest aircraft that could reasonably be expected to remain overnight.

6.11.3 TERMINAL FACILITIES

General aviation terminal facilities provide a "meet and greet" location on the airport. A single terminal building may serve as the terminal and also house various airport-related businesses. The general aviation terminal may also house the administrative functions of the airport.

The airport's tenants and users have identified the need and desire to have the city provide enhanced space for the public, airport administration and storage, meeting room space, as well as food and refreshments for pilots and passengers. The intent is to have the new general aviation terminal building be a modern and pleasing "gateway" into Ormond Beach, and not just a building that meets minimum general requirements. Knowing that incremental future expansion of a new general aviation terminal building over time would be costly, the terminal building should be initially developed to accommodate growth and activities anticipated over the 20-year planning period and beyond.

Of particular importance is the city's requirement that a new general aviation terminal building financially feasible. Such facilities are a low priority for grant funding purposes.

A new general aviation terminal building could provide multi-use space to conduct business at the airport. Currently the airport administration office is located in the airport traffic control tower (ATCT). This is a secured area and it does not provide adequate access to airport management staff. Therefore, the general aviation terminal building should also consider adequate office space for airport management staff, making it accessible to users, tenants, and general public during normal office hours.

Currently the existing FBO facilities including Sunrise Aviation, Tomlinson Aviation, and Hangar 7 Aviation serve to some extent as general aviation terminals. Each of these FBO facilities cater to their primary clientele, which in many cases is associated with flight training and not itinerant or transient aircraft. Because of the increased flight training activities at the FBOs, a separate stand-alone terminal building offering services to local and transient users is recommended. A recent Massachusetts DOT architectural study completed in April of 2014 titled *Massachusetts Department of Transportation, Aviation Division Strategic Master Plan for Administration Building Program at Massachusetts Airports* provides conceptual floorplan templates and current cost estimates for GA administration/terminal structures with total square footages of 3500, 4500, and 5500 square feet. An extract of the report showing the conceptual design of the larger 5500 square foot building is shown in **Appendix D**. The preliminary cost estimate for the building ranges from $3.5 to $3.9 million dollars depending upon the site. In Florida, these costs may be less or the square footage could be reduced to reduce the cost. GA terminal structures are FAA eligible for AIP funding and also eligible for Florida DOT cost sharing. If grant funds were available, the FAA and FDOT would provide 98% of the initial development cost. That leave 2%, approximately $78,000.00, of sponsor grant matching funds to construct the facility. As stated previously, FAA rates safety projects as a priority for their grant funds. A terminal building would be relatively low in completing for available funds.

Currently the airport administration office is located in the airport traffic control tower (ATCT). This is a secured area and it does not provide adequate access to airport management staff. Therefore, the general aviation terminal building should also consider adequate office space for airport management staff, making it accessible to users, tenants, and general public during normal office hours.

6.12 SUPPORT FACILITIES

Support facilities encompass a broad range of functions that ensure the smooth, efficient, and safe operation of the airport.

6.12.1 AIRCRAFT RESCUE AND FIREFIGHTING

Operators of Part 139 airports must provide aircraft rescue and firefighting (ARFF) services during air carrier operations that require a Part 139 certificate. ARFF is not required at general aviation airports. Due to the very significant costs associated with the facility, equipment, training, and personnel, an ARFF facility is not recommended for OMN. The Ormond Beach Fire Department currently provides emergency response services.

6.12.2 AIRPORT MAINTENANCE

Airport maintenance is provided by the City's public works department and outside contractors. There are no maintenance facilities or airport maintenance equipment requirements.

6.12.3 FUEL STORAGE

Currently the fuel storage is located at the intersection of Taxiway D and Taxiway B. This location helps alleviate the already congested apron; however, transient aircraft and the passengers within those aircraft tend to require the use of the facilities adjacent to the apron or landside. This results in multiple starting of engines and additional traverses of the apron to service the aircraft and its passengers. This master plan update suggests relocating the fuel farm closer to the FBO facilities, and relocating the existing parked aircraft to a new apron along Taxiway D.

6.12.4 AIRCRAFT MAINTENANCE

Aircraft maintenance is generally provided by an FBO or aeronautical businesses located on the airport. The types of services provided include, but are not limited to, airframe and powerplant repair by an FAA-certified repair station. There are multiple aircraft maintenance providers located at OMN.

The general requirements for aircraft maintenance facilities include the following:

- Aircraft maintenance hangar with sufficient work space for any aircraft upon which maintenance is being performed.
- Suitable storage and shop space for equipment and tools.
- Office space, customer lounge, restrooms, and telephone.
- Apron area with pavement type and strength adequate to support the expected aircraft fleet.
- Adequate automobile parking and access.
- Proximity to the engine run-up area to reduce taxiing times and fuel costs.

6.13 ACCESS, CIRCULATION, AND PARKING

Access to the Southeast Quadrant of the airport and most of the primary services are via US Highway 1 and Airport Road. Adequate parking exists in the lot nearest the rotating beacon but no services are available from that lot without accessing the airfield. Tomlinson Aviation is only accessible to the public via the airside or after accessing the field through controlled access gates. Personnel unfamiliar with airport operations must call ahead to the FBO to gain access and be escorted to the facility. The northwest quadrant is accessed via US Highway 1 and Hull Road. Currently there are no public aeronautical facilities in the northwest quadrant but it is the

designated area for a future GA terminal/administration building and aeronautical development in the form of additional corporate and nested T hangars.

6.14 UTILITIES

Existing infrastructure is sufficient to supply the needed utilities in the proposed development areas around the airport.

6.15 NON-AERONAUTICAL FACILITIES

Numerous compatible non-aeronautical revenue land use facilities surround the aeronautical uses at OMN and contribute to the airport's sustainability and revenue flow. The facilities include the River Bend golf course and the city-owned sports complex.

CHAPTER 7 AIRPORT DEVELOPMENT AND PLANNING

7.0 INTRODUCTION

This chapter of the Airport Master Plan Update describes the development of airport facilities and improvement projects, previously identified in Chapter 6 – Facility Requirements which are anticipated to be undertaken over the course of the 20-year airport master planning period. The potential facility developments and airport improvements are anticipated to be developed over time, and as demand dictates. Potential facility and airport improvements were identified based upon comments and suggestions offered by the public, airport users, and stakeholders through the Public Involvement Program.

An organized approach to identifying and evaluating alternative development options is essential for effective planning. The key elements of this process are:

- Identification of alternative ways to address the facility requirements identified in the previous chapter.
- Evaluation of the alternatives, individually, and collectively to gain a thorough understanding of the strengths, weaknesses, and other implications of each alternative.
- Selection of the best alternative.

7.1 EVALUATION OF ALTERNATIVES

In this chapter, the evaluation criteria of development alternatives has been divided into the following broad categories:

7.1.1 OPERATIONAL PERFORMANCE

Capacity – The forecast presented in Chapter 5 determined that there is little likelihood of exceeding the current runway capacity limitations at OMN over the planning period. Therefore capacity is not a factor when evaluating development alternatives.

Capability – The capability of the airport to meet the needs and desires of the flying public is at the core of the operational performance evaluations of the proposed development alternatives. The public involvement program has revealed a common theme whereby members of the flying and non-flying community believe the airport could and should have greater capability to provide better amenities and play a larger role in servicing the regional aviation community.

Efficiency – Operational performance is measured for an aircraft in a fashion similar to that of a business. Efficiency revolves around the question of whether an aircraft owner or operator can

plan a flight to OMN, land, easily find parking near an FBO or terminal that provides physical and business amenities including bathrooms, fuel, flight planning, rental cars, etc. and then just as easily file a flight plan, taxi, and depart from the field after staying for less than an hour or perhaps longer if the reason for travel requires it. Efficiency is measured against other airports from which the aircraft pilot has been able to successfully operate. If OMN does not measure up to the standards of capability and efficiency at competing airports, the aircraft owner or operator may go elsewhere and possible not utilize OMN again, and thus business opportunities and revenue will be lost.

7.1.2 BEST PLANNING TENETS

The common core or planning tenets that proposed development alternatives must meet are:

- Conforms to best practices for safety and security
- Conforms to the intent of applicable FAA design standards
- Provides for highest and best on- and off-airport land use
- Allows for forecast growth throughout the planning period
- Provides for growth beyond the planning horizon, as applicable
- Provides the flexibility to adjust to unforeseen changes
- Conforms to the airport sponsor's strategic vision
- Conforms to appropriate local, regional, and state transportation and other plans
- Technically feasible
- Socially and politically feasible
- Satisfies user needs

7.1.3 ENVIRONMENTAL FACTORS

Environmental constraints play a significant role in determining alternative development feasibility from a stewardship, aesthetic, and financial perspective. OMN has significant forests and wetlands that are buffers and important filters for stormwater. Additional environmental factors include development related impacts that may affect humans including noise, socioeconomics, public areas, disproportionate impacts, and how a specific project contributes to the cumulative total of impacts over time. All proposed developments must be closely examined during the planning phase to ensure Federal and State NEPA requirements are met and that impacts to any fourteen (14) environmental categories are avoided, minimized, or plans are made to mitigate. Specific projects will require different levels of NEPA review effort, provided extraordinary circumstances are absent, with the least impactful projects eligible to receive a Categorical Exclusion (CATEX) determination and more significant projects with more potential human environmental impacts requiring an Environmental Assessment (EA) or if warranted, an Environmental Impact Statement (EIS). The major development alternatives at OMN that are expected to trigger the NEPA review process and the anticipated level of review in accordance with the recently released FAA Order 1050.1F *Environmental Impacts: Policies and Procedures* include:

- Land or Easement Acquisition for Runway 8-26 extension RPZ – CATEX
- Runway 8-26 extension – EA depending upon alternative selected
- Taxiway A Extension - CATEX
- Hangar Construction - CATEX
- New Apron Construction - CATEX
- Shift of Taxiway D - CATEX
- Construct Terminal Building - CATEX
- Relocation of AWOS - CATEX
- Wildlife/Security Fence Relocation - EA
- Relocation of Fuel Farm - CATEX

7.1.4 FISCAL FACTORS

Airport development projects are expensive and must be adequately funded if they are to meet the capability and efficiency expectations of the City and the flying public. OMN, like many GA airports, receives revenue by collecting a per gallon fuel flowage fee from the FBO selling fuel and land lease revenue from private hangar development. Since the inception of the facility as a municipal airport, the city has not built hangars, rather the city leases airport land to private entities that then build hangars for personal or business use. In addition, the airport receives the majority of its funding from non-aeronautical land leases for a golf course and a city-owned sports complex. This financial flow works as a break-even business model but it provides minimal opportunity to accumulate the extra resources needed to fund maintenance and repair of existing pavement; and even less to apply towards additional facilities and capabilities determined desirable by the public input process.

The priority for funding must be to maintain existing pavement in safe and serviceable condition before expending scarce resources on alternative projects. The recent FDOT pavement study indicates a need for more than $8 million dollars of pavement rehabilitation or reconstruction at OMN, as shown in **Figure 7.1**, which is an excerpt of Table III from the pavement report.

Figure 7.1 Pavement Evaluation Report

Table III: Year-1 Major Rehabilitation Needs for Ormond Beach Municipal Airport

Branch ID	Section ID	Major Rehabilitation Costs	PCI Before M&R	Rehabilitation Activity	PCI After M&R
AP CENTER	4204	$ 88,980.00	52	Mill and Overlay	100
AP CENTER	4205	$ 2,358,399.00	45	Reconstruction	100
AP E	4305	$ 1,135,460.00	23	Reconstruction	100
AP W	4102	$ 445,100.00	28	Reconstruction	100
TW B	205	$ 426,100.00	36	Reconstruction	100
TW D	405	$ 1,404,336.00	42	Mill and Overlay	100
TW E	505	$ 1,127,032.00	40	Mill and Overlay	100
TW F	605	$ 625,410.00	50	Mill and Overlay	100
TW F	650	$ 102,469.00	47	Mill and Overlay	100
TW T-HANG	2004	$ 345,100.00	30	Reconstruction	100
	Total =	**$ 8,058,386.00**			

FDOT Statewide Airfield Pavement Management Program – OMN, June 2015

Pavement Section ID 4204, 4205, 4305 and 2004 are under lease to FBOs. Under the terms of the lease agreements the lessees are responsible for maintaining this pavement, not the city. This results in a city burden of approximately $4,460,447.00, nearly half the cost. The airport tenants and users should be aware of the significant burden of pavement rehabilitation. The tenants are responsible for approximately $4 million.

The airport has specific parcels of land that have been identified in this planning effort as excess to the future aeronautical needs of the airport. Releasing these parcels from FAA grant obligations and leasing or selling them could provide funds needed for future development. Additional funds will also be needed to match significant paving rehabilitation projects recommended for completion within the next few years.

In addition, future land leases and lease renewals could require the lessee to lease, construct, and maintain the non-AIP eligible paved aprons in front of a hangar that cannot be used for public parking or taxiing of aircraft. The minimum ineligible distance from the hangar face to edge of taxiway is shown in the **Table 7.1** and **Table 7.2**.

TABLE 7.1 INELIGIBLE PAVEMENT DISTANCE FOR ADG I

Taxiway Design Group	Taxilane Width	Taxilane ROFA	Ineligible
Group IA and IB	25	79	27
Group 2	35	79	22

Note: Ineligible distance is from edge of taxilane to face of hangar in feet

TABLE 7.2 INELIGIBLE PAVEMENT DISTANCE FOR ADG II

Taxiway Design Group	Taxilane Width	Taxilane ROFA	Ineligible
Group IA and IB	25	115	45
Group 2	35	115	40

Note: Ineligible distance is from edge of taxilane to face of hangar in feet

The AIP ineligible costs means FAA will not participate in funding private hangar access. The airport and the hangar owners will be responsible for these costs based on the terms of their lease. This will affect the hangars along Taxiway D and along the apron.

7.2 AIRPORT FACILITY PLANNING CONSIDERATIONS

A number of considerations impact facility development alternatives that would best utilize existing airport land. A very important consideration is the known environmental site constraints of the existing airport footprint. An equally important but less tangible consideration came from the feedback during the public information program. Airport users and local residents expressed a desire to improve the image of the airport and attract and accommodate more business activity, while at the same time supporting the existing aeronautical businesses, limiting additional aircraft noise, and promoting continued recreational and instructional use of the airport.

7.3 SITE CONSTRAINTS AND OPPORTUNITIES

Site constraints can been tangible such as existing structures and facilities or intangible such as politics, regulations or monetary funding. The major constraints for airport development at OMN are listed below:

- Environmental resources associated with Tomoka River
- Proximity of Airport Road
- Proximity of residential land uses and recreational facilities
- The VORTAC critical area
- The ATCT line of sight
- Limited local funding for capital improvements
- Off-airport structures

Although there are constraints, OMN also has several opportunities that provides the airport great potential for economic development. A list of these opportunities follow:

- There is a significant amount of land available in the northwest and southwest quadrants for additional aeronautical and non-aeronautical development and revenue generation.

- FAA and Florida DOT funding programs remain committed to support and encourage infrastructure improvement at Florida airports
- The airport industry is recovering from a lengthy economic slump and Florida is a highly desirable location for fair weather flying and flight training programs.

7.4 SELECTION OF THE RECOMMENDED ALTERNATIVES

The selection of the development alternatives is based upon how well the development meets the needs of the airport and users. According to Chapter 6, *Facility Requirements*, even moderately loaded heavier aircraft require runway lengths exceeding those currently available. This is based on the approved aircraft forecast found in Chapter 5. To meet the needs of 75% of the fleet at 60% of useful load, 4,673 feet is required for takeoff and 5,290 feet is required for landing when adjusted for runway grade and turbojet-powered airplanes with a MTOW of more than 12,500 lbs. There is a clear need for a longer runway to meet the landing and takeoff needs of the fleet mix at OMN.

In addition to meeting the needs, the alternative must have public support and be financially feasible. The desire for airport improvements was expressed during the public information gathering sessions. The estimate of probable development cost for each runway alternative will dictate which alternative is attainable and in what timeframe.

Environmental impacts are also a major component in the federal approval of development projects. These impacts will be discussed and their effect on the development will be represented in the estimate of probable costs, as permitting and mitigation can be significant if avoidance is not possible.

7.5 RUNWAY DEVELOPMENT ALTERNATIVES

Three runway development alternatives were selected for further analysis: No Build Alternative, Alternative 1, Alternative 2, and Alternative 3. The following sections describe each alternative in detail and explain their ability to meet the need of the airport and users.

Rehabilitation and reconstruction efforts are not considered in the development alternatives as this infrastructure already exists and the impacts of maintaining use are insignificant. Taxiway G is already programmed and will not be considered as a development alternative.

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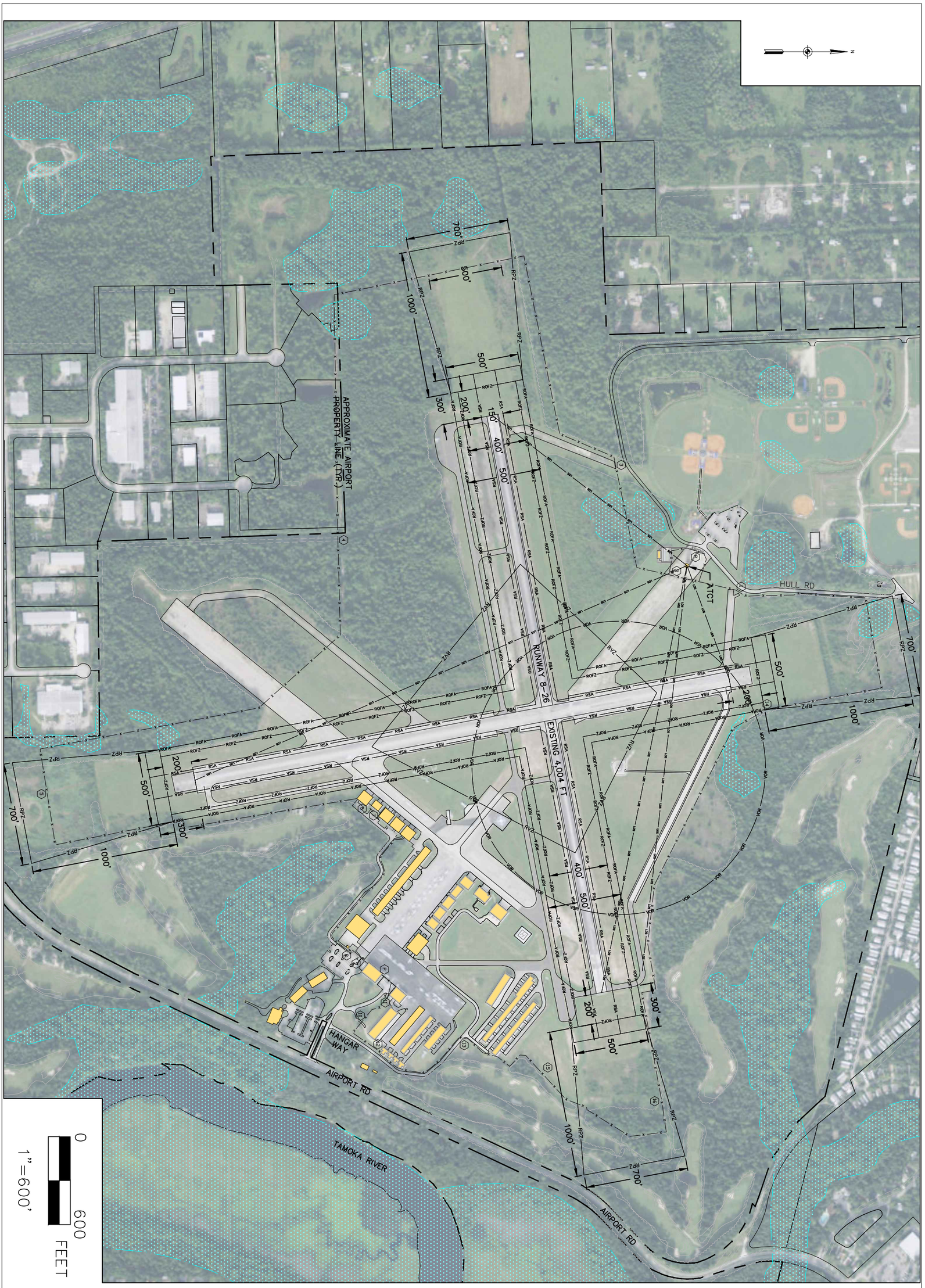


EXHIBIT 7-0

ORMOND BEACH MUNICIPAL AIRPORT
RUNWAY 8-26 EXTENSION
NO BUILD ALTERNATIVES

CITY OF ORMOND BEACH * FLORIDA *

PROPOSED 400 FT EXTENSION TO RUNWAY 26 END

RELOCATED REILs

PROPOSED 600 FT EXTENSION TO RUNWAY 8 END

RELOCATED REILs

RUNWAY 8-26 EXISTING 4,004 FT PROPOSED 5,006 FT

602'

0' 400' 500'

1000' 800' 500' 200'

700'

300'

1000'

300'

400'

200'

500' 800' 1000'

700'

1000'

EXTEND EXISTING PARALLEL TAXIWAY

MAINTAIN CLEAR FOR RUNWAY VISIBILITY ZONE

RELOCATE FUEL FARM

EXTEND EXISTING PARALLEL TAXIWAY; INSTALL BYPASS TAXIWAY; REMOVE EXISTING STUB TAXIWAY

APPROXIMATE AIRPORT PROPERTY LINE (TYP.)

AIRPORT RD

TOMOKA RIVER

RPZ

ROFZ

ROFA

RSA

TSS

DS

155

0 600 FEET

1"=600'

CITY OF ORMOND BEACH FLORIDA

ORMOND BEACH MUNICIPAL AIRPORT
RUNWAY 8-26 EXTENSION
ALTERNATIVE #1

EXHIBIT
7-1

Drawing name: H:\307101\dwg\Exhibit\Exhibit-Future RW-Alt #1.dwg Aug 06, 2015 - 1:49pm

7.5.1 NO BUILD ALTERNATIVE

The "No Build" does not propose any new changes to the existing runway configuration. Runway 8/26 would remain at 4,005 feet in length and 75 feet wide, and Runway 17/35 would remain at 3,704 feet in length and 100 feet wide.

There are no biotic resources impacted by this alternative, however it will have an effect on the future economic development of the airport and the surrounding community by limiting the size of aircraft that can utilize the facility. This alternative may limit the airport to minor growth or may result in a decline as businesses and users grow and expand they will relocate to facilities that meet their needs.

This alternative does not meet the needs of the aircraft, however, it does provide the cheapest available option when considering capital improvement costs and not the potential economic impacts. This alternative allows the public to decide whether or not it is worth investing in this airport. Alternative 1 is depicted graphically in **Exhibit 7-0.**

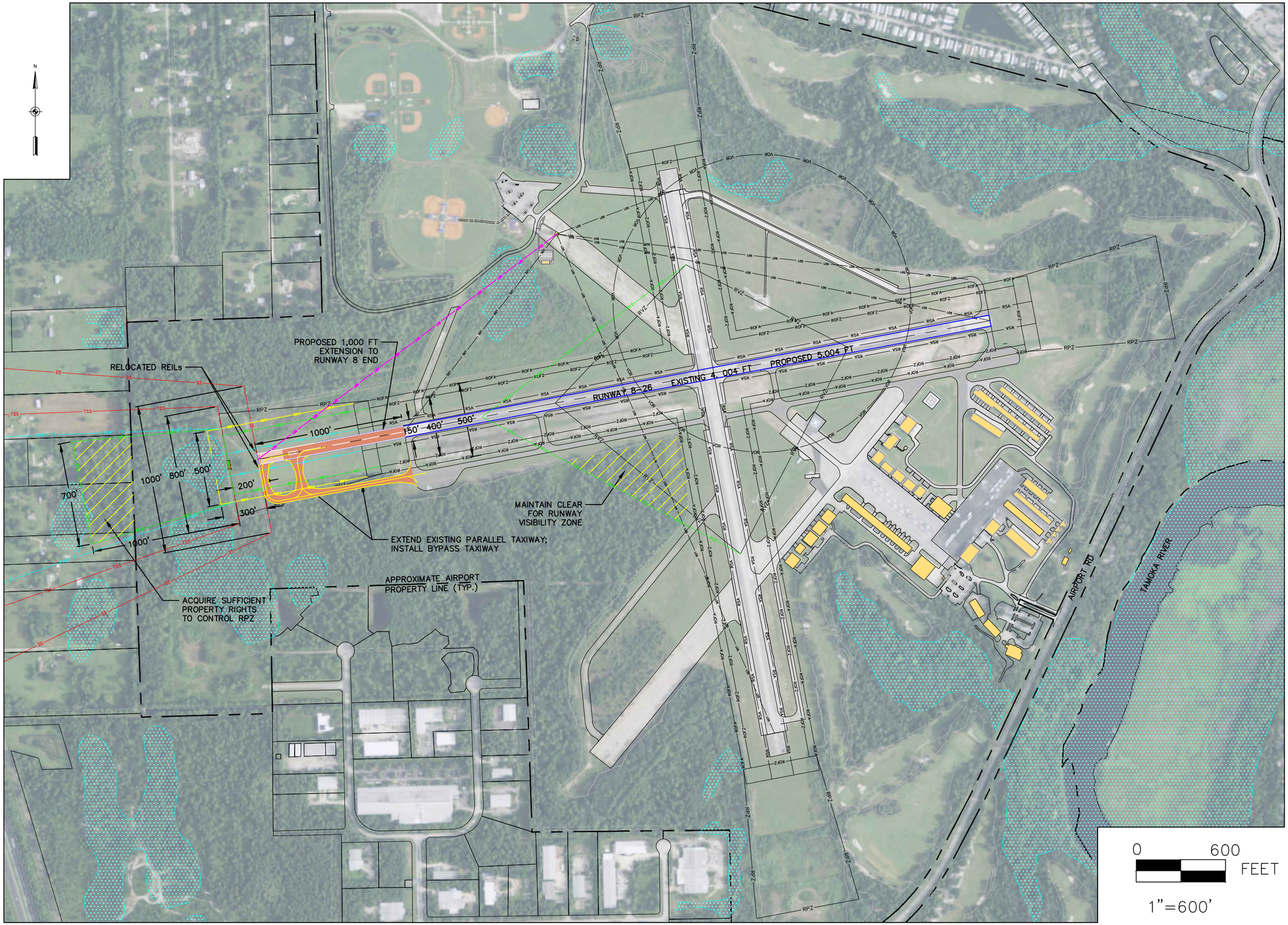
7.5.2 RUNWAY 8/26 EXTENSION ALTERNATIVE 1

Alternative 1 extends Runway 8/26 by 400 feet to the east and 600 feet to the west. The width of Runway 8/26 would remain the same at 75 feet. This would increase the runway length from 4,005 feet to 5,005 feet. Runway 17/35 would remain at 3,704 feet in length and 100 feet wide. This alternative expands the runway within the existing airport property limits. Alternative 1 is depicted graphically in **Exhibit 7-1.**

Runway 8 meets current FAA standards with minimal impacts to biotic resources. Vegetative clearing would be required for the new instrument approaches, which may require off-airport tree removal or obstruction lighting. This alternative will increase the development constraints caused by the ATCT line of sight and the Runway Visibility Zone (RVZ).

Runway 26 does not meet current FAA standards. Existing Runway Protection Zone (RPZ) land uses are exempt, however, once an RPZ is revised, the land uses forfeit the exemption. The RPZ for this alternative envelopes River Bend Golf Course and Airport Road which are classified by the FAA as non-conforming land uses. In order to make this alternative compliant, the golf course would have to abandon three holes. The Airport Road would need to be realigned around the RPZ which would have significant impacts to the 100-year flood plain and biotic resources associated with the Tomoka River.

The estimated probable costs of Alternative 1 is approximately $6.5 million. A breakdown of costs are shown in **Table 7.3**.



ORMOND BEACH MUNICIPAL AIRPORT
RUNWAY 8–26 EXTENSION
ALTERNATIVE #2

EXHIBIT
7-2

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TABLE 7.3 – ESTIMATED PROBABLE COST FOR ALTERNATIVE 1

Element	Apprx Cost
Extend Runway 8/26	$1,555,000.00
Extend Taxiway A	$1,696,000.00
Obstruction Removal	$ 274,000.00
Realign Airport Road	$2,966,000.00
Total	$6,491,000

This estimate accounts for the proposed development and does not include any resolutions to existing non-conformities or rehabilitation to existing infrastructure. Additional associated projects may include:

- Mill, overlay, and remark existing Runway 8/26 pavement
- Relocate AWOS within 1,000 feet of the Runway 8 approach threshold
- Relocation of golf course holes
- Possible Noise Mitigation for homes within the 65 DNL contour

7.5.3 RUNWAY 8/26 EXTENSION ALTERNATIVE 2

Alternative 2 extends Runway 8/26 by 1,000 feet to the west. The width of runway 8/26 would remain the same at 75 feet. This would increase the runway length from 4,005 feet to 5,005 feet. Runway 17/35 would remain at 3,704 feet in length and 100 feet wide. This alternative expands the runway without impacting the golf course or Airport Road. The RPZ does not stay within the existing airport property limits. Alternative 2 is depicted graphically in **Exhibit 7-2.**

Runway 8 meets current FAA standards with limited or insignificant impacts to biotic resources. Vegetative clearing would be required for any new approach, which may require off-airport tree removal or obstruction lighting. This alternative will increase the development constraints caused by the ATCT line of sight and the Runway Visibility Zone (RVZ).

Because the RPZ associated with runway 8 extends beyond airport property, FAA would require that the airport acquire necessary rights to control the land use beneath. This requirement could be met by purchasing the property in fee, or purchasing an avigation easement from the property owners. Currently the land use enveloped by the proposed RPZ would be compatible. This alternative requires negotiation with private property owners to acquire rights to approximately 5.5 acres of land in order to maintain control of the RPZ. The cost of an easement is significantly less expensive than acquiring the ownership of the property under the RPZ in fee. The estimated probable cost of acquiring an avigation easement is approximately $126,000; as opposed to an estimated of $745,000 if the properties are purchased in fee. These estimated costs were derived from the assessed value of the property. A fair market value appraisal would be required in negotiations.

ORMOND BEACH MUNICIPAL AIRPORT
RUNWAY 8–26 EXTENSION
ALTERNATIVE #3

RELOCATED REILs

PROPOSED 600 FT
EXTENSION TO
RUNWAY 8 END

RUNWAY 8-26 EXISTING 4,004 FT PROPOSED 5,006 FT

602'

1000' 800' 500' 200' 700' 300'

1000' 500' 800' 1000' 700' 300' 200'

MAINTAIN CLEAR
FOR RUNWAY
VISIBILITY ZONE

EXTEND EXISTING PARALLEL TAXIWAY;
INSTALL BYPASS TAXIWAY;
REMOVE EXISTING STUB TAXIWAY

RELOCATE
FUEL FARM

APPROXIMATE AIRPORT
PROPERTY LINE (TYP.)

AIRPORT RD

TAMOKA RIVER

0 600 FEET

1"=600'

EXHIBIT
7-3

Drawing name: H:\307101\dwg\Exhibit\Exhibit-Future RW-Alt #3.dwg Aug 04, 2015 - 9:36am

The estimated probable costs of Alternative 2 is approximately $3.6 million. A breakdown of costs are shown in **Table 7.4** as well as in Chapter 8.

TABLE 7.4 – ESTIMATED PROBABLE COST FOR ALTERNATIVE 2

Element	Apprx Cost
Extend Runway 8/26	$ 1,553,000.00
Extend Taxiway A	$ 1,535,000.00
Obstruction Removal	$ 376,000.00
Property Rights	$ 126,000.00
Total	$3,590,000

This estimate accounts for the proposed development and does not include any resolutions to existing non-conformities or rehabilitation to existing infrastructure. Additional associated projects may include:

- Mill, overlay, and remark existing Runway 8/26 pavement
- Relocate AWOS within 1,000 feet of the Runway 8 approach threshold
- Purchase of entire properties affected by the extension.
- Possible Noise Mitigation for homes within the 65 DNL contour

7.5.4 RUNWAY 8/26 EXTENSION ALTERNATIVE 3

Alternative 3 extends runway 8/26 by 600 feet to the west. The width of runway 8/26 would remain the same at 75 feet. This would increase the runway length from 4,005 feet to 4,605 feet. Runway 17/35 would remain at 3,704 feet in length and 100 feet wide. This alternative extends runway 8 and the associated RPZ to the west but remains within the existing airport property limits. Alternative 3 is depicted graphically in **Exhibit 7-3.**

This alternative would have the same impacts as depicted in Alternative 1, less the impacts to the east caused by existing Runway 26 towards the golf course.

The estimated probable costs of Alternative 3 is approximately $2.5 million. A breakdown of costs are shown in **Table 7.5**.

TABLE 7.5 – ESTIMATED PROBABLE COST FOR ALTERNATIVE 3

Element	Apprx Cost
Extend Runway 8/26	$ 934,000.00
Extend Taxiway A	$ 1,221,000.00
Obstruction Removal	$ 295,000.00
Total	$2,450,000

This estimate accounts for the proposed development and does not include any resolutions to existing non-conformities or rehabilitation to existing infrastructure. Additional associated projects may include:

- Mill, overlay, and remark existing Runway 8/26 pavement
- Relocate AWOS within 1,000 feet of the Runway 8 approach threshold
- Possible Noise Mitigation for homes within the 65 DNL contour

7. 6 PREFERRED RUNWAY 8/26 DEVELOPMENT ALTERNATIVE

As previously determined using FAA design guidelines, the runway length needed for 75% of the fleet at 60% of useful load is 4,673 feet for takeoff and 5,290 feet for landing when adjusted for runway grade and turbojet-powered airplanes with a MTOW of more than 12,500 lbs. None of the alternatives meets the needs of the heavier fleet mix for both takeoff and landing. Fortunately many of the corporate twin engine turboprops and lighter jets can operate efficiently with runway lengths between 4600 and 5000 feet. The No Build Alternative is the least expensive, but has future consequences to the economic development of the airport. Alternatives 1 and 2 provide an ultimate runway length of 5,005 feet. Alternative 1 meets the runway length needs for lighter aircraft but creates significant environmental impacts to the east of the airport and is the most expensive alternative. Alternative 2 provides the same runway length, but does so with limited environmental impacts and at less cost. Alternative 3 provides a 600 foot extension which will improve operational performance for charter and corporate turboprop and jet operators without requiring additional land or avigation easement acquisition to the west of the existing property boundaries.

The City Commissioners reached consensus at a public workshop on 6 October 2015 that Alternative 2 is the desirable proposed action. The Commissioners encouraged the Airport to revise the originally proposed CIP to expedite the Environmental Assessment required for Alternative 2 and to move the design and construction of the proposed action into the near term CIP from the Intermediate Term. This document reflects those changes.

7. 7 GENERAL AVIATION FACILITIES

The rehabilitation and reconstruction efforts described in the 2015 FDOT paving report clearly present the specific efforts required to maintain the safety and capability of the existing operational surfaces at OMN. The existing airfield configuration will not be changed, except for the construction of the programmed Taxiway G and the shifting of Taxiway D to correct an existing nonstandard separation from the taxiway centerline to fixed obstructions (TOFA).

Although Taxiway F has non-standard separation between the centerlines of the taxiway and Runway 17/35, the intent is to maintain it in its present location until the pavement degrades to the point of requiring full rehabilitation. At that point, an operational study will be performed to determine if the taxiway should be abandoned. Due to nonstandard separation, the Approach

MAG. N

HOPE ST

APPROXIMATE AIRPORT PROPERTY LINE (TYP.)

HULL RD

ATCT

FUTURE RESTAURANT

FUTURE TAXIWAY G

EXISTING SHUFFLE BOARD

FULLER RD

FUTURE FENCE

CORPORATE HANGARS

17

100' X 3,704' W/ 40' SHOULDRS

FUTURE AWOS

REMOVE EXIST. PAVEMENT (TYP.)

FUTURE TAXIWAY

TW A1

TW A

TW A2

ARP

RELOCATED WINDCONE AND SEGMENTED CIRCLE

RELOCATE WINDCONE AND SEGMENTED CIRCLE

APPROXIMATE AIRPORT PROPERTY LINE (TYP.)

0 150 375 750 FEET

1"=150'

Drawing name: H:\307101\dwg\Exhibit\Exhibit-NW-ALT2.dwg Sep 15, 2015 - 3:33pm

CITY OF ORMOND BEACH FLORIDA

ORMOND BEACH MUNICIPAL AIRPORT
DEVELOPMENT ALTERNATIVES
NORTHWEST QUAD ALT#2

EXHIBIT
7-5

MAG. N

08° 24' W
2015

HOPE ST

HULL RD

HULL RD

ATCT

EXISTING
SHUFFLE BOARD

CORPORATE
HANGARS

FUTURE
TERMINAL/
RESTAURANT

FUTURE
TAXIWAY G

VEHICLE
PARKING

BOX
HANGARS

FUTURE
FENCE

TERMINAL
APRON

17

100' X 3,704'
W/ 40' SHOULDRS

FUTURE APRON

T-HANGARS

REMOVE EXIST.
PAVEMENT (TYP.)

FUTURE
TAXIWAY

N79° 15' 45"

TW A1

TW A

REMOVE EXIST.
PAVEMENT (TYP.)

ARP

TW A2

RELOCATED
WINDCONE AND
SEGMENTED
CIRCLE

RELOCATE
WINDCONE
AND
SEGMENTED
CIRCLE

APPROXIMATE AIRPORT
PROPERTY LINE (TYP.)

0 150 375 750 FEET

1"=150'

Drawing name: H:\307101\dwg\Exhibit\Exhibit-NW-ALT1.dwg Sep 15, 2015 - 10:26am

CITY OF ORMOND BEACH FLORIDA

ORMOND BEACH MUNICIPAL AIRPORT
DEVELOPMENT ALTERNATIVES
NORTHWEST QUAD ALT#1

EXHIBIT
7-4

Reference Code (APRC) and Departure Reference Code (DPRC) will remain at B-I(S) for Runway 17/35. This means only small B-I category aircraft (or smaller) can safely operate from the runway unconstrained. Larger aircraft must be made aware of any aircraft on Taxiway F and how their presence on the taxiway may impact the use of that runway.

The rehabilitation projects and their estimated costs are depicted in Chapter 8. Specific projects identified in this master plan update include:

- Reconstruct TW B
- Shift, mill and overlay Taxiway D
- Mill and overlay Taxiways E, and F
- Reconstruct a portion of the Center Apron*
- Mill and overlay a portion of the Center Apron*
- Reconstruct the East* and West Apron
- Reconstruct the T-Hangar taxiway*
- Mill, overlay, and remark Runway 8/26
- Remark Runway 17/36
- Rehabilitate Runway 8/26 and Runway 17/35 lighting
- Construct Taxiway G
- Relocate fuel farm
- Remark closed and abandoned pavement

*maintenance items are included in lease agreements as tenants' responsibility.

7.7.1 GENERAL AVIATION TERMINAL

Planning general aviation terminals is unique and not directly comparable to planning approaches employed at larger commercial service airports. General aviation terminal buildings are typically multi-purpose and space requirements are not solely based on passenger enplanements or peak-hour passengers. There are several methods to estimate the space required for general aviation terminal facilities. The FDOT recommends 50 square feet per peak hour passenger and pilot.

The objective is to identify desired features, potential uses, and development considerations for evaluating a potential site layout and conceptual size of a general aviation terminal building. This effort would also guide later architectural planning, layout, and design of the building. Detailed architectural planning and design, including the development of floor plan layouts, space requirements, architectural plans and specifications, and graphic renderings are not part of this master planning effort, and would need to be prepared in subsequent studies at such time that funding becomes available for the a new general aviation terminal building.

This study reviewed the opportunities for aeronautical and non-aeronautical development in each of the four commonly recognized quadrants. A discussion of the proposed development and use in each quadrant along with a graphical extract from the ALP to orient the reader.

MAG. N

BOX HANGARS (TYP.)

FUTURE APRON

FUTURE APRON

FUTURE FENCE

APPROXIMATE AIRPORT PROPERTY LINE (TYP.)

TW A1

TW A

REMOVE EXIST. PAVEMENT (TYP.)

TW A2

RELOCATED WINDCONE AND SEGMENTED CIRCLE

FUTURE TAXIWAY G

RELOCATE WINDCONE AND SEGMENTED CIRCLE

FUTURE APRON

TW F

35

FUTURE ACCESS ROAD

FUTURE PARCEL TO BE RELEASED

TOWER CIR WEST

TOWER CIR EAST

E BLVD

FORMER RUNWAY TO BE REDEVELOPED

0 150 375 750 FEET

1"=150'

CITY OF ORMOND BEACH FLORIDA

ORMOND BEACH MUNICIPAL AIRPORT DEVELOPMENT ALTERNATIVES SOUTHWEST QUAD ALT#1

EXHIBIT

7-6

Drawing name: H:\307101\dwg\Exhibit\Exhibit-SW-ALT1.dwg Sep 30, 2015 - 11:23am

MAG. N

TW A1

TW A

TW A2

REMOVE EXIST. PAVEMENT (TYP.)

RELOCATED WINDCONE AND SEGMENTED CIRCLE

RELOCATE WINDCONE AND SEGMENTED CIRCLE

FUTURE TAXIWAY G

FUTURE FENCE

APPROXIMATE AIRPORT PROPERTY LINE (TYP.)

FUTURE DEVELOPMENT

FUTURE PARCEL TO BE RELEASED

FUTURE DEVELOPMENT

FUTURE 5 AC PARCEL TO BE RELEASED

TOWER CIR WEST

TOWER CIR EAST

E BLVD

TW F

35

0 150 375 750 FEET

1"=150'

ORMOND BEACH MUNICIPAL AIRPORT
DEVELOPMENT ALTERNATIVES
SOUTHWEST QUAD ALT#2

EXHIBIT

7-7

Drawing name: H:\307101\dwg\Exhibit\Exhibit-SW-ALT2.dwg Sep 30, 2015 - 11:29am

7.7.2 NORTHWEST QUADRANT

Alternatives were developed to illustrate the possible land uses for the future development of the northwest quadrant. **Exhibit 7-4** shows a possible full build out scenario. It was determined that showing this scenario may convey a planned development that might not appeal to potential developers. Therefore the developable land in the northwest quadrant, as depicted in **Exhibit 7-5**, has been reserved for future aeronautical developments, intended primarily for corporate and itinerant aviation. Developers will need to work closely with the airport to keep building heights below the line of sight (LOS) restrictions from the ATCT cab to the runway ends. The abandoned runway that ends at the ATCT will provide suitable subbase for redevelopment. An additional parallel taxiway (future Taxiway H) on the north side of Runway 8/26 along with the programmed construction of Taxiway G would provide access to the northwest quadrant. The airport tenants and users have expressed an interest in having a private developer or FBO construct a suitable building to support itinerant business and personal aircraft owners near the ATCT. One alternative would be to locate a restaurant in the northwest quadrant as an additional attraction to itinerant traffic and to increase land lease revenues. The restaurant would provide service to the airport's users as well as the significant number of local citizens, sports teams, fans and organizations using the nearby athletic fields.

7.7.3 SOUTHWEST QUADRANT

This area is ideally suited for mixture of aeronautical and non-aeronautical development. Alternatives were developed to illustrate the possible land uses for the future development of the southwest quadrant. **Exhibit 7-6** shows a possible full build out scenario of both non-aeronautical industrial/commercial lots adjacent to aeronautical uses. It was determined that showing this scenario may convey a planned development that might not appeal to potential developers. The southwest quadrant, as depicted in **Figure 7-7**, has been reserved for future aeronautical and non-aeronautical development. Abutting the airport industrial park on the west and bounded by the proposed Taxiway G on the east create opportunities for aviation related manufacturing or other manufacturers requiring just-in-time or perishable aerial delivery. The easy access to the industrial park ensures adequate utilities and high speed telecommunications will be available for whatever development is proposed. Demand for land adjacent to an airport and analysis of environmental impacts will determine the ultimate split between aeronautical and non-aeronautical use.

The former nursery parcel is separated from the airport by significant wetlands and flood zones that would create financial hardship and unnecessary environmental impacts to access from the airport to develop for aeronautical use. There is abundant area for aeronautical development with direct access to current or programmed taxiways that would out-compete for development. The parcel would serve better by providing a large sum of money to the airport that can then leverage grants to the tune of 200% - 5000% of its original value. This parcel has marketability to commercial/industrial entities due to its proximity to existing infrastructure serving these needs.

MAG. N

FUTURE TAXIWAY G

CLEAR VOR CRITICAL AREA

BEAR FOOT TRAIL

BEAR CREEK PATH

GOLF COURSE

TW E

REMOVE EXIST. PAVEMENT (TYP.)

100' X 3,704' W/ 40' SHOULDRS

RELOCATE T/W A2

RELOCATED T/W A2

RELOCATED AVIATION FUEL

TW A2

TW A

HELIPAD

RELOCATE WINDCONE AND SEGMENTED CIRCLE

AWOS-III

TW B

RELOCATE AVIATION FUEL

TW C

TW D

AIRPORT RD

0 150 375 750 FEET

1"=150'

ORMOND BEACH MUNICIPAL AIRPORT
DEVELOPMENT ALTERNATIVES
NORTHEAST QUAD ALT#1

EXHIBIT
7-8

Drawing name: H:\307101\dwg\Exhibit\Exhibit-NE-ALT1.dwg Aug 12, 2015 - 11:30am

MAG. N

RELOCATE T/W A2

RELOCATED T/W A2

26

EXISTING HELIPAD WITH FUTURE IMPROVEMENTS

RELOCATED AVIATION FUEL

REALIGN T/W D

TW A2

TW A

REMOVE EXIST. PAVEMENT (TYP.)

AWOS III

AERONAUTICAL REVENUE GENERATION

TW B

FUTURE APRON

TW D

TW C

FUTURE ITINERANT APRON

FUTURE VEHICLE PARKING

TW D

TW B

RELOCATE AVIATION FUEL

AIRCRAFT TIE DOWNS

RELOCATE WINDCONE AND SEGMENTED CIRCLE

AIRPORT BEACON

RELOCATED AVIATION FUEL

THANGAR WAY

TOMOKA RIVER

TW F

35

0 150 375 750 FEET

1"=150'

ORMOND BEACH MUNICIPAL AIRPORT
DEVELOPMENT ALTERNATIVES
SOUTHEAST QUAD ALT#1

EXHIBIT
7-9

Drawing name: H:\307101\dwg\Exhibit\Exhibit-SE-ALT1.dwg Sep 16, 2015 - 9:44am

This parcel should be released from its grant obligations as surplus property and sold for airport revenue generation.

A five acre parcel adjacent to Signal Avenue cul-de-sac is also proposed to be released for non-aeronautical revenue generation. The as stated prior, the parcel is excess to the aeronautical needs of the airport and could best benefit the airport through sale or long-term lease for revenue generation. This parcel is directly adjacent to necessary infrastructure that would make this parcel extremely marketable. This parcel could serve as the gateway to the development of southwest quadrant. The city continues to actively market the remainder of the southwest quadrant to interested manufacturing and aviation related developers.

7.7.4 NORTHEAST QUADRANT

The northeast quadrant, as depicted in **Exhibit 7-8**, is the most limited development area due primarily to the current location of the VORTAC and the 1000 foot obstruction critical area around it. At the present time the FAA has not determined whether the OMN will become part of the legacy ground based navigation beacon system that will remain when the NextGen satellite navigation system becomes fully operational and ground based NAVAIDS are phased out. Research at this time indicates that the TACAN portion of the VORTAC would remain regardless and it is assumed the 1000 foot critical area around it would remain in effect. The FAA is currently planning to rehabilitate the OMN VORTAC with construction expected to begin in September of 2015.

If at some future time the entire VORTAC was decommissioned, a future parallel taxiway on the north side of Runway 8/26 could be extended to access additional development areas in the northeast quadrant.

7.7.5 SOUTHEAST QUADRANT

The southeast quadrant, as depicted in **Figure 7-9**, is the most developed and busiest area of the airport. The proposed airport layout plan depicts a reconfiguration of apron A3, A4 and A5. A3 & A4 realigns the taxilanes to ensure standard separation for wingtip clearance for ADG II. This shifts the taxilane away from the hangars. Hangar access will be extended to connect to the new configuration, however, this cost is not eligible for reimbursement from the FAA. The spacing of the tie downs will require coordination with the users at the time of reconstruction to tailor to their existing and anticipated aircraft needs.

Apron A5 reconfigures the taxilane with standard separation for ADG II, but also displaces the existing tie down to make room for a transient apron. This apron will provide amenities from the FBO such as fuel, restrooms, vending machines, and access to landside service such as rental cars, parking, and other ground transportation needs.

Corporate box hangars are proposed along both sides of Taxiway C. Taxiway D is realigned to provide standard separation between the taxiway and hangars for ADG II wingtip clearance. Two new aprons with tie downs are proposed along Taxiway D to provide capacity for displaced aircraft and future growth at the airport.

Improvements near the Heliport are also planned to improve efficiency and capability.

CHAPTER 8: CAPITAL IMPROVEMENT PLAN

8.0 INTRODUCTION

The Capital Improvement Plan (CIP) represents a schedule and cost estimate for implementing the Development Plan, which has been recommended as a result of the analysis of data generated through the master plan process. Scheduling of improvements has been divided into three phases: near-term (2016-2020), intermediate-term (2021-2025) and long-term (2026-2035). The CIP must be viewed as a constantly evolving document. Additionally, planning for OMN should remain flexible and incorporate annually updated estimates of costs and priorities. This approach is consistent with the Joint Automated Capital Improvement Program (JACIP) planning process implemented by the Florida Department of Transportation (FDOT) and the Federal Aviation Administration (FAA). A copy of the airport's current JACIP Capital Improvement Plan Summary is provided in **Appendix E** and incorporated into the near-term implementation plan.

In general, the planning effort undertaken for the update of the Airport Master Plan indicates that priorities should be established as follows:

- Ensure that all existing airfield elements are adequate and provide for safe and efficient aircraft operations,
- Develop additional aviation facilities to meet anticipated aviation needs and demand, and
- Develop facilities that promote area economic growth and airport revenue generation.

Under this general priority list, and in consideration of the Airport Development and Planning presented in Chapter 7 of this Airport Master Plan Update, it is possible to prepare a recommended implementation plan for the airport. However, as stated previously, airport facilities should be developed on an as-needed basis, as demand dictates. This approach favors prudent fiscal planning. It should also be noted that unforeseen changes in project priorities or the availability of federal, state, and/or local funding would affect the implementation plan and proposed phasing in the CIP.

8.1 POTENTIAL FUNDING SOURCES

Typically funds for airport projects come primarily from federal (FAA) and state (FDOT) grants. The airport sponsor, in this case the City of Ormond Beach, provides local funds to supplement the federal and state grants. The sponsor provides the infrastructure and public pavement and then aviation facilities such as aircraft hangars are built with private funds from private developers. Sometimes other funds, such as economic development transportation grants, are available for airport development projects. There is strong support among airport tenants and users to seek additional funding for a variety of airport projects

8.1.1 FEDERAL AND STATE AIRPORT GRANTS

The CIP is structured in a manner that presents a logical sequence of improvements, while attempting to reflect available funding from the federal (FAA) and state (FDOT) levels. Those airport improvements, which are eligible for Airport Improvement Plan (AIP) funding, currently receive 90 percent funding from the FAA, 8 percent from FDOT, and the remaining 2 percent from the local sponsor, the City of Ormond Beach. AIP eligible projects our outlined within FAA Order 5100.38D, *Airport Improvement Program Handbook*. Projects typically AIP eligible are listed below:

- Airport master plans and system plans
- Runway, taxiway and apron projects
- Airfield marking, lighting and signage projects
- Navigational aids and weather reporting equipment installation
- Safety and security equipment
- Terminal building projects
- Roads and surface transportation projects
- Land projects
- Noise compatibility projects

Each project must meet 15 general requirements in order to be considered AIP eligible which range from meeting FAA standards to being financially feasible. In addition, an eligible project must be justified in order to be funded.

Each year the FAA allots entitlement funds based on the airport's classification that can be accrued over a four-year period. OMN is a general aviation airport without scheduled commercial air service and therefore the federal non-primary entitlement is currently $150,000 per year. If the accrued entitlement funds are not used after the four-year period, the funds expire and return to the general fund. The general fund provides additional discretionary funds to projects with costs exceeding the available entitlement funds. When no federal funding is available, projects eligible for state funding receive up to 80 percent of the total project costs. A summary of the of FAA/FDOT funded projects in the last 15 years is included in **Appendix E.**

Separate from the AIP, in an effort to promote economic development, the FDOT provides up to 50 percent of the costs to build on-airport, revenue-producing capital improvements such as industrial park facilities, maintenance hangars, and fuel farms at general aviation airports. FDOT coordinates the program funds with OMN using the Joint Airport Capital Improvement Program (JACIP). Additional details on eligibility of State funding for projects can be found in the Florida Aviation Project Handbook accessed here: http://www.dot.state.fl.us/aviation/flpub.shtm.

Projects not eligible for AIP or State funding must either be funded by the City of Ormond Beach or by private entities, such as airport businesses or private developers.

8.1.2 LOCAL FUNDING

The City of Ormond Beach has operated and developed the airport using a private enterprise business model since the property was acquired from the federal government. The city acts as a landlord by leasing airport property to private individuals and businesses. The city does not operate any airport businesses or otherwise provide aeronautical services, rather private businesses provide aeronautical services to the flying public. As the airport sponsor, the city develops airport operational infrastructure primarily with funds from the FAA and FDOT, using revenue from land leases and fuel flowage fees (the only sources of revenue for the airport) to pay for the airport operational expenses such as staff salary and benefits, liability insurance, utilities, contract mowing and maintenance, and other airport related expenditures. The balance of the budget between revenues and expenses along with any additional available funding make up the local share for such CIP projects. The goal is for the airport to be financially self-sustaining and to limit the burden on local communities to support capital improvement projects.

Currently the airport gains revenue through land leases and sales of surplus property. Land for hangars and apron area is leased to airport users. The sports complex and golf course also provide revenue for the airport by leasing land. The Airport Business Park was sold from the original airport property to help fund the airport.

The city's business model for the airport may limit proposed future infrastructure development projects. Even with 98% project funds from FAA and FDOT, it is difficult to raise and appropriate the supplemental funds needed for construction projects. The Airport Fund must typically borrow resources from the City's General Fund in order to pay the local cost share for CIP projects. The airport's current debt to the General Fund, as of the close of FY2014, is approximately $177,000. During the period from 2009 through 2015, the value realized from federal and state grants for airport improvements totaled more than $7.9 million dollars. Airport funds will be strained to meet the local shares needed for safety-related pavement rehabilitation and maintenance projects required to be completed to satisfy FAA grant assurances for the existing infrastructure. This will make it challenging to fund new infrastructure.

8.1.3 PRIVATE FUNDING

The City of Ormond Beach depends upon its aeronautical business tenants to build hangars and other facilities needed for aeronautical services. Private profit-driven FBO's may or may not see enough financial benefit to provide the types and levels of amenities desired by airport users. Significant financial concessions in the form of reduced land lease rates or fee structures may be needed to encourage the desired private amenities. Leasing concessions from the city would only exacerbate the local funds shortfall. FBO's that focus on providing specific or specialized FBO services may be unwilling to invest in the publically desired infrastructure or provide aeronautical amenities that do not directly contribute to their profitability. Amending the Airport's Minimum Standards for Commercial Aeronautical Activity is a way to improve the facilities provided by FBO's over time.

8.2 RECOMMENDED AIRPORT CAPITAL IMPROVEMENT PROGRAM

Scheduling of improvements has been divided into three phases: near-term (2016-2020), intermediate-term (2021-2025) and long-term (2026-2035). The near-term projects consist mainly of rehabilitation of existing infrastructure and programmed JACIP items. The intermediate-term projects continue with primarily pavement rehabilitation projects with some new improvements. The long-term projects includes items the city may select for inclusion in the JACIP and implement as priorities and funding allow.

Projects are presented in individual fiscal years based on their priority assuming an unconstrained, unlimited budget. Project costs are based upon the 2015 FDOT Pavement Evaluation Report, the current version of the JACIP, and an estimated probable cost. It is apparent that the construction and renovation identified in the pavement report cannot be completed in the timeframe outlined due to funding limitations at all levels. A more realistic rehabilitation and development plan will need to be coordinated and a new JACIP approved at the city, state and federal level.

Each CIP project moving forward needs to follow the proper planning and procurement procedures in accordance with the AIP Handbook in order to be considered FAA eligible. Proper design of the infrastructure may initially increase the cost, but is necessary in order to limit future maintenance and rehabilitation costs.

8.2.1 NEAR-TERM AIRPORT IMPLEMENTATION PLAN (2016-2020)

The near-term projects are based solely on immediate needs identified in the 2015 FDOT Pavement Evaluation Report for OMN augmented by the current JACIP. When an apron or taxiway is designated to be rehabilitated, it will be redesigned to meet the current standards as outlined in the future airport layout plan.

The financial priorities reflected in the 2015 FDOT Pavement Evaluation Report will limit the city's preferred near-term development opportunities as most available local matching funds will be required to meet the rehabilitation and reconstruction needs identified in the pavement report.

The projects are listed based on the condition of their pavement with worst pavement condition at the top. The east apron is classified as serious condition and therefore listed first. Although classified as very poor, the reconstruction of a section of the west apron utilized for tie downs should be combined with the rehabilitation of the rest of the west apron. Consolidating these projects will save on construction costs and reduce the disturbance to the tenants. Delay of this section of the west apron is appropriate due to low level of service and criticality.

Taxiway E was moved up from the order in which it was programmed in the current JACIP. Taxiway D is listed ahead of Taxiway E since the realignment of the taxiway will correct the current non-standard separation and this taxiway has a higher level of service and criticality than

Taxiway E. Taxiway F was eliminated from this list, since the pavement is intended to be abandoned once it reaches failure.

Although the runway pavement is in much better condition than listed taxiway and apron projects, it is already beneath the condition FDOT considers acceptable. Due to the criticality of the runway, this rehabilitation should be a higher priority than off-site development. The business park development, wildlife assessment and airfield pavement marking are already programmed in the JACIP. These items could be postposed if funds are not available.

No projects are proposed in 2018 to allow the airport to accrue additional funds. By 2019, the condition of the west apron will have degraded to the level where it requires rehabilitation. **Table 8.1** depicts the proposed airport improvements for the near-term improvements.

TABLE 8.1 – NEAR-TERM (2016-2020) POTENTIAL PROJECTS AND COSTS

Near-Term (2016-2020) Potential Project and Costs Estimates

Year	Project Description	Project Costs	Potential Funding Source: Federal	State	Local
2016	Reconstruct TW B	$ 426,100.00	$ 383,490.00	$ 34,088.00	$ 8,522.00
2016	Mill and Overlay TW D -Realign	$ 1,404,336.00	$ 1,263,902.40	$ 112,346.88	$ 28,086.72
2016	TWR Circle East & Signal Ave Extensions	$ 404,000.00		$ 340,000.00	$ 64,000.00
2016	Environmental Assessment - Runway 8/26	$ 200,000.00	$ 180,000.00	$ 16,000.00	$ 4,000.00
2016	Wildlife Hazard Assessment	$ 110,000.00	$ 99,000.00	$ 8,800.00	$ 2,200.00
2016	Airfield Pavement Marking	$ 89,183.00	$ -	$ 71,346.00	$ 17,837.00
	Subtotal	**$ 2,633,619.00**	**$ 1,926,392.40**	**$ 582,580.88**	**$ 124,645.72**
2017	Rehab and Extend Runway 8/26 (Design)	$ 300,000.00	$ 270,000.00	$ 24,000.00	$ 6,000.00
2017	Future Heliport Improvements	$ 280,000.00	$ 252,000.00	$ 22,400.00	$ 5,600.00
2017	Replace AWOS	$ 175,000.00	$ 157,500.00	$ 14,000.00	$ 3,500.00
	Subtotal	**$ 755,000.00**	**$ 679,500.00**	**$ 60,400.00**	**$ 15,100.00**
2018	Rehab and Extend Runway 8/26 (Construct)	$ 5,890,000.00	$ 5,301,000.00	$ 471,200.00	$ 117,800.00
2018	Rehab & Mark Taxiway E	$ 1,127,032.00	$ 1,014,328.80	$ 90,162.56	$ 22,540.64
	Subtotal	**$ 7,017,032.00**	**$ 6,315,328.80**	**$ 561,362.56**	**$ 140,340.64**
2019	Reconstruct West Apron	$ 1,600,000.00	$ 1,440,000.00	$ 128,000.00	$ 32,000.00
	Subtotal	**$ 1,600,000.00**	**$ 1,440,000.00**	**$ 128,000.00**	**$ 32,000.00**
	TOTAL	**$ 12,005,651.00**	**$ 10,361,221.20**	**$ 1,332,343.44**	**$ 312,086.36**

Project costs are based on the 2015 FDOT Pavement Evaluation Report, the most recent version of the JACIP, and Hoyle, Tanner & Associates estimated probable costs.

8.2.2 INTERMEDIATE-TERM AIRPORT IMPLEMENTATION PLAN (2021-2025)

The intermediate-term projects are based upon the needs identified in the 2015 FDOT Pavement Evaluation Report for OMN, the programmed projects within current JACIP, and development depicted on the future airport layout plan.

The pavement rehabilitation projects are proposed first as Runway 17/35 is critical and the airport is responsible to provide a level of service to the T-hangar tenants. Once these projects are completed the maintenance and repair of existing infrastructure and the future development begins to unfold. The improvements to the heliport, expansion of the apron adjacent to Taxiway D, and associated fuel tank relocation are programmed next to improve itinerant services, decongest the existing aprons and provide a better level of service to the heliport. The northwest access road and Taxiway India were programmed items in the JACIP. The access to the northwest will promote the growth of corporate development which is further justifies the need for a runway extension. **Table 8.2** depicts the proposed airport improvements for the intermediate-term improvements.

TABLE 8.2 - INTERMEDIATE-TERM (2021-2025) POTENTIAL PROJECTS AND COSTS

Intermediate Term (2021-2025) Project and Costs Estimates

Year	Project Description	Project Costs	Potential Funding Source: Federal	State	Local
2020	Pineland Trail Airport Access Roads (Design)	$ 195,000.00	$ -	$ 97,500.00	$ 97,500.00
	Subtotal	**$ 195,000.00**	**$ -**	**$ 97,500.00**	**$ 97,500.00**
2021	Pineland Trail Airport Access Roads (Construct)	$ 2,055,000.00	$ -	$ 1,027,500.00	$ 1,027,500.00
	Subtotal	**$ 2,055,000.00**	**$ -**	**$ 1,027,500.00**	**$ 1,027,500.00**
2022	Construct New General Aviation Apron	$ 2,840,925.00	$ 2,556,832.50	$ 227,274.00	$ 56,818.50
2022	Construct Additional Vehicle Parking	$ 130,000.00	$ -	$ 65,000.00	$ 65,000.00
2022	Relocate Fuel Farm	$ 150,000.00	$ -	$ 75,000.00	$ 75,000.00
	Subtotal	**$ 3,120,925.00**	**$ 2,556,832.50**	**$ 367,274.00**	**$ 196,818.50**
2023	Mill and Overlay Runway 17/35	$ 2,300,000.00	$ -	$ 1,150,000.00	$ 1,150,000.00
2023	Construct NW Access Road and Taxiway India	$ 2,000,000.00	$ -	$ 1,000,000.00	$ 1,000,000.00
	Subtotal	**$ 4,300,000.00**	**$ -**	**$ 2,150,000.00**	**$ 2,150,000.00**
2024	Re-Align Fence	$ 408,000.00	$ 367,200.00	$ 32,640.00	$ 8,160.00
	Subtotal	**$ 408,000.00**	**$ 367,200.00**	**$ 32,640.00**	**$ 8,160.00**
	TOTAL	**$ 10,078,925.00**	**$ 2,924,032.50**	**$ 3,674,914.00**	**$ 3,479,978.50**

Project costs are based on the 2015 FDOT Pavement Evaluation Report, the most recent version of the JACIP, and estimated probable costs.

8.2.3 LONG-TERM AIRPORT IMPLEMENTATION PLAN (2026-2035)

The long-term projects are depicted on the future airport layout plan. Because this section assumes an unconstrained budget, it is likely that the near-term and intermediate-term projects will be postponed or pushed due to available funding. At this point in time, the proposed developments in the northwest and southwest quadrant will be underway and the new airport tenants will have development ideas and proposed infrastructure. **Tables 8.3** depicts the proposed airport improvements for the long-term improvements.

TABLE 8.3 - LONG-TERM (2026-2035) POTENTIAL PROJECTS AND COSTS

Long Term (2026-2035) Project and Costs Estimates

Year	Project Description	Project Costs	Potential Funding Source: Federal	State	Local
2026	Construct GA Terminal and Parking	$ 3,000,000.00	$ -	$ 1,500,000.00	$ 1,500,000.00
	Subtotal	**$ 3,000,000.00**	**$ -**	**$ 1,500,000.00**	**$ 1,500,000.00**
2030	Future Tiedowns A1 and A2	$ 965,000.00	$ 868,500.00	$ 77,200.00	$ 19,300.00
	Subtotal	**$ 965,000.00**	**$ 868,500.00**	**$ 77,200.00**	**$ 19,300.00**
2035	Clear VORTAC Critical Area	$ 50,000.00	$ 45,000.00	$ 4,000.00	$ 1,000.00
	Subtotal	**$ 50,000.00**	**$ 45,000.00**	**$ 4,000.00**	**$ 1,000.00**
	TOTAL	**$ 4,015,000.00**	**$ 913,500.00**	**$ 1,581,200.00**	**$ 1,520,300.00**

Project costs are based on Hoyle, Tanner & Associates estimated probable costs.

CHAPTER 9 AIRPORT LAYOUT PLAN

9.0 INTRODUCTION

The Airport Layout Plan (ALP) is a scaled set of drawings that depict existing and proposed land and facilities necessary for the operation and future development of OMN. The ALP is a key communication and agreement document between the City of Ormond Beach, the Federal Aviation Administration (FAA), and the Florida Department of Transportation (FDOT). The drawings represent an understanding among these three parties regarding the current and future operation and development of the airport.

The five primary functions of the ALP may be summarized as follows:

1. An ALP creates a blueprint for airport development by depicting proposed facility improvements. The ALP provides a guideline by which the airport sponsor can ensure that development maintains airport design standards and safety requirements, and is consistent with airport and community land use plans.
2. The ALP is a public document that serves as a record of aeronautical requirements, both present and future, and as a reference for community deliberations on land use proposals and budget resource planning.
3. The approved ALP enables the airport sponsor and the FAA to plan for facility improvements at the airport. It also allows the FAA to anticipate budgetary and procedural needs. The approved ALP will also allow the FAA to protect the airspace required for facility or approach procedure improvements.
4. The ALP can be a working tool for the airport sponsor, including its development and maintenance staff.
5. An approved ALP is necessary for the airport to receive financial assistance under the terms of the Airport and Airway Improvement Act of 1982, as amended, and to be able to impose and use Passenger Facility Charges. An airport must keep its ALP current and follow that plan, in accordance with grant assurance requirements of the AIP and previous airport development programs, including the 1970 Airport Development Aid Program (ADAP) and Federal Aid Airports Program (FAAP) of 1946, as amended.

9.1 FAA REVIEW AND APPROVAL OF THE ALP

The ALP drawing set approval process may vary, depending on the requirements of the state aviation agency.

Conditional Approval – After review of draft documents using the FAA ALP SOP Checklist agreed to during the scoping for the project, and when satisfied with any necessary edits the FAA will conditionally approve the ALP drawing set. Approval typically comes in the form of a letter

stating that projects depicted will be subject to further environmental review and approvals prior to funding and implementation.

9.2 ALP SHEETS DESCRIPTION

There are 14 ALP drawing sheets that accompany this master plan update. They are described below and included at half scale in **Appendix E.**

9.2.1 TITLE SHEET

A separate cover sheet, with approval signature blocks, space for an FAA approval stamp, airport location maps, and other pertinent information as required by the local FAA Airports District Office (ADO).

9.2.2 DATA SHEET

A separate sheet containing airport and runway data tables.

9.2.3 EXISTING AIRPORT LAYOUT PLAN DRAWING

A separate drawing depicting the existing airport facilities.

9.2.4 FUTURE AIRPORT LAYOUT PLAN DRAWING

A drawing depicting the proposed ultimate airport facilities layout.

9.2.5 AIRPORT AIRSPACE DRAWING

Title 14 CFR Part 77, Objects Affecting Navigable Airspace, defines this as a drawing depicting obstacle identification surfaces for the full extent of all airport development. It should also depict airspace obstructions for the portions of the surfaces excluded from the Inner Portion of the Approach Surface Drawing.

9.2.6 AIRPORT APPROACH SURFACES PROFILES

This drawing depicts profile views of the CFR Part 77 obstacle identification surface, the threshold siting approach surface and the instrument departure surface for each runway end.

9.2.7 INNER PORTION OF THE APPROACH SURFACE DRAWINGS

Four drawings containing the plan and profile view of the inner portion of the approach surface to the end of each runway and a tabular listing of all surface penetrations. The drawings depict the

obstacle identification approach surfaces contained in 14 CFR Part 77, Objects Affecting Navigable Airspace. The drawings also depict other approach surfaces, including the threshold-siting surface, those surfaces associated with United States Standards for Instrument Procedures (TERPS), or those required by the local FAA office or state agency.

9.2.8 TERMINAL AREA PLAN

This plan consists of a drawing that present a large-scale depiction of areas with significant terminal facility development. Such a drawing is typically an enlargement of a portion of the ALP.

9.2.9 AIRPORT LAND USE DRAWING

A drawing depicting the land uses within the airport property boundary.

9.2.10 AIRPORT PROPERTY MAP

A drawing depicting the airport property boundary, the various tracts of land that were acquired to develop the airport, and the method of acquisition. This drawing is only required for those airports that have acquired land with Federal funds or through an FAA-administered land transfer program; however, it may be useful to all airport sponsors. If any obligations were incurred as a result of obtaining property or an interest therein, they should be noted. Obligations that stem from Federal grant or an FAA-administered land transfer program, such as surplus property programs, should also be noted. The drawing should also depict easements beyond the airport boundary. An airport property map is not a substitute for an Exhibit A unless it is prepared in accordance with AC 150/5100-17, Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects. An Exhibit A provides a detailed account of the property owned by the airport. It is a formal drawing required for submission of grants applications. A property map is a general overview depicting approximate limits of property bounds. It is far less intensive to verify and produce.

9.2.11 SIGN AND MARKING PLAN

This drawing is not required by current FAA planning guidelines. It is provided to the airport to assist with pilot and user orientation efforts. The plan indicates the existing markings as depicted in the field. It also shows the orientation and illustration of the airfield signage. This signage ranges from runway hold signs, taxiway directional signs, and noise abatement procedure signage.

APPENDIX A

Noise Abatement Program

Noise Abatement Procedures

- When the ATC tower is closed, Runway 17 is the designated calm wind runway.
- Runway 8 departures - turn 10 degrees left on departure as soon as safety permits, and cross the Tomoka River/US1 Bridge at a point equalizing the distance between the two communities to the north and south. The bend in the Tomoka River as it passes east of the bridge should be visible to the right (as depicted on the map).
- Fly the approved traffic patterns on Runway 26, 17, and 35, turning to the crosswind leg as soon as altitude and airspeed permit.
- Departures from the traffic pattern should depart at pattern altitude, to the north or to the west. Remain on tower frequency until departing the airport traffic area to the north or west.
- Pilots should avoid turning south or east over the local subdivisions (as depicted on the map).
- Departing aircraft should climb out at V_Y (best rate of climb). Reduce power after takeoff as soon as safe and practicable.
- Please fly high and tight patterns, remaining clear of the Class C airspace beginning at 1200' MSL. Extended patterns greatly impact noise sensitive areas.
- Left traffic on Runway 35 and Runway 8.
- Right traffic on Runway 26 and Runway 17.
- Please refrain from repetitive flight activities between the hours of 10:00 PM and 8:00 AM.

Tower Operations:	**7 AM to 7 PM**
ATIS:	**118.475**
AWOS:	**118.475**
VORTAC:	**112.6**
CTAF:	**119.075**
Ground Control:	**121.625**
Clearance Delivery:	**121.625**
DAB Approach:	**125.8**
UNICOM:	**123.05**
PIE FSS:	**122.4**
LAT:	**29.18.02 N**
LON:	**81.06.49 W**

For more information, visit our website at:

www.ormondbeach.org/Airport/ormondairport.htm

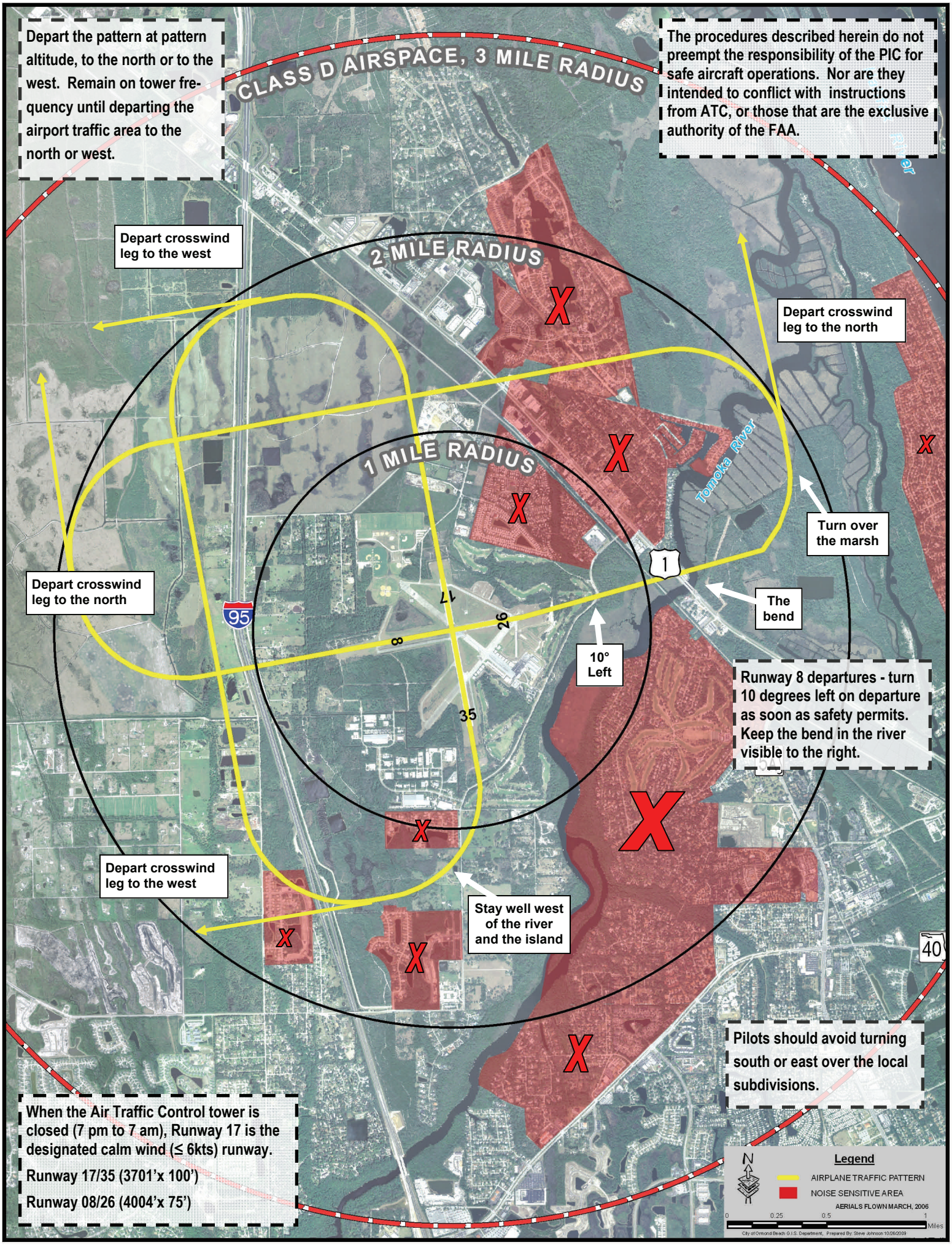
Ormond Beach
Municipal Airport

Voluntary Noise Abatement Procedures

PILOTS WORKING WITH COMMUNITIES

Airport Office

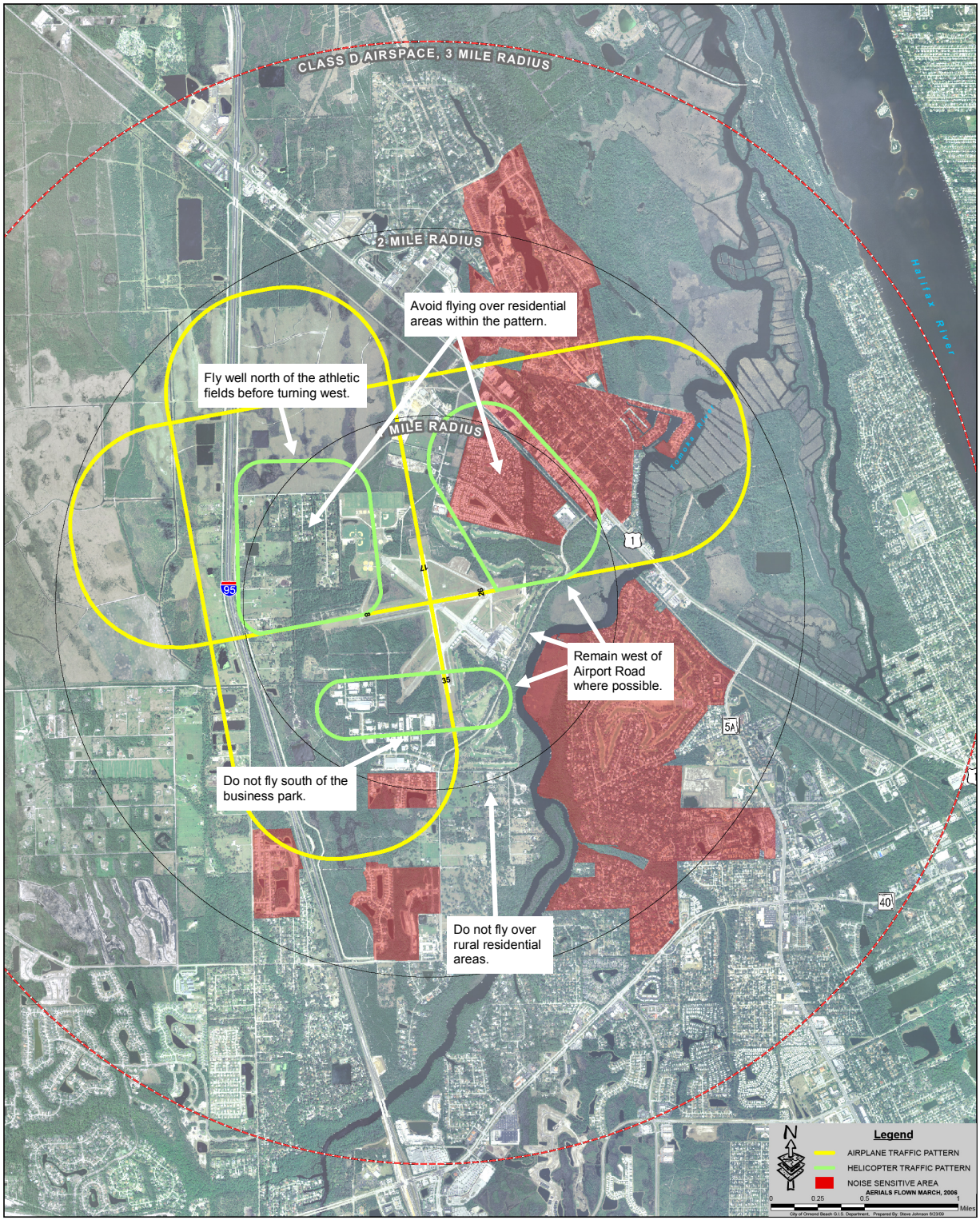
725 Hull Road
Ormond Beach, FL 32174
Phone 386-615-7019


Depart the pattern at pattern altitude, to the north or to the west. Remain on tower frequency until departing the airport traffic area to the north or west.
CLASS D AIRSPACE, 3 MILE RADIUS
The procedures described herein do not preempt the responsibility of the PIC for safe aircraft operations. Nor are they intended to conflict with instructions from ATC, or those that are the exclusive authority of the FAA.
2 MILE RADIUS
1 MILE RADIUS
Depart crosswind leg to the west
Depart crosswind leg to the north
Tomoka River
Turn over the marsh
Depart crosswind leg to the north
95
1
The bend
17
26
8
35
10° Left
Runway 8 departures - turn 10 degrees left on departure as soon as safety permits. Keep the bend in the river visible to the right.
Depart crosswind leg to the west
Stay well west of the river and the island
40
Pilots should avoid turning south or east over the local subdivisions.
When the Air Traffic Control tower is closed (7 pm to 7 am), Runway 17 is the designated calm wind (≤ 6kts) runway.
Runway 17/35 (3701'x 100')
Runway 08/26 (4004'x 75')
N
Legend
AIRPLANE TRAFFIC PATTERN
NOISE SENSITIVE AREA
AERIALS FLOWN MARCH, 2006
0 0.25 0.5 1 Miles
City of Ormond Beach G.I.S. Department, Prepared By: Steve Johnson 10/26/2009

Rotary Wing Traffic Patterns

Ormond Beach Municipal Airport - Ormond Beach, Florida

Please Observe These Patterns For Aircraft Noise Abatement



APPENDIX B

Airport Overlay District

SECTION 2-72: AIRPORT OVERLAY DISTRICT

A. **Purpose.** The purpose of the Airport Overlay District is to protect the public health, safety and welfare in the vicinity of the airport, by minimizing the exposure to hazards and noise levels generated by aircraft operations.

B. **Intent**

The Airport Overlay District is intended to:

1. Limit the creation of new residential or intensification of existing residential land uses that may be developed within the Airport Overlay District;

2. Ensure that existing legal uses of land and existing zoning entitlements, whether the property is improved or unimproved (as of the date of adoption of this Airport Overlay District) are protected;

3. Reduce noise and safety hazards; and

4. Encourage future development that protects the operations of the Airport and that is consistent with the Airport Master Plan.

C. **Scope.** The Airport Overlay District applies to designated property in the vicinity of the City of Ormond Beach Municipal Airport. The district and zone boundaries are defined on Map 10-2 and the district regulations are imposed in addition to those of the underlying zoning districts. The boundaries are contiguous to the airport, measuring one-half the length of the longest runway on either side of, and at the end of, each runway centerline. The area resembles a large cross, which is centered over the existing runways.

D. **Principal, Conditional and Special Exception Uses**

None of the provisions in the Airport Overlay District shall be construed to prohibit the continuance of any existing legal land use within the district boundary. Non-residential uses and zoning performance standards are not further restricted by this policy. Existing residential uses are protected by this policy, as are existing zoning entitlements.

1. **Permitted Principal Uses and Structures**

Uses permitted in the underlying zoning districts as of the date of the adoption of this Airport Overlay District are permitted. The Airport Overlay District does not affect non-residential land uses and imposes no additional performance standards than the underlying zoning. No additional performance standards or lot size limitations are imposed for existing residential uses, whether the underlying land is improved or unimproved.

2. **Conditional Uses and Structures**

The underlying zoning governs the procedures and criteria for Conditional Uses established in Chapter 2, Article IV. The site plan for the Conditional Uses must be approved by the City, pursuant to the provisions of Chapter 4, Article I.

3. **Special Exceptions**

   The underlying zoning governs the procedures and criteria for Special Exceptions established in Chapter 2, Article IV. The site plan for the Special Exceptions must be approved by the City, pursuant to the provisions of Chapter 4, Article I.

4. **Prohibited Uses**

   a. Conversion of non-residential uses for residential purposes or for the uses listed in *b.* and *c.* of this section are prohibited. The intensification of existing residential uses or rezoning to permit residential intensification (smaller lots or multiple units) are prohibited. Garage apartments and accessory residential units are prohibited.

   b. Nursing Homes, nursing care facilities and residential retirement facilities are prohibited.

   c. Assisted Living Facilities are prohibited.

E. **Height Limitations.** Height shall be determined by the underlying district regulations and the Federal Aviation Authority clear zone requirements (whichever is the most restrictive). No structure shall be allowed to exceed a height determined to be unsafe for aircraft operations.

F. **Performance.** No uses in the Airport Overlay District shall:

   1. Cause interference with the operation of radio or electronic facilities at the airport or with radio or electronic communication between the airport and aircraft;

   2. Include any moving, pulsating, flashing, rotating, or oscillating light, other than navigational markings or lights marking potential obstructions in accordance with Federal Aviation Administration requirements.

   3. Include any lights which endanger or interfere with the landing, takeoff or maneuvering of aircraft intending to use the airport; or

   4. In any other way endanger aircraft operations.

G. **Nonconforming Uses and Structures.** The Airport Overlay District does not render existing legal uses, or residential uses that are legally permitted under the existing zoning (as of the date of the adoption of this Airport Overlay District), nonconforming. If a residential use (dwelling unit) is destroyed by any means, it shall be permitted to be reconstructed as provided for in the underlying zoning district. If multiple residential units are destroyed, they can be rebuilt, provided that there is no net increase in the number of units. If an existing use does not conform or a structure does not comply with the underlying zoning district provisions, then it shall be subject to the provisions of Chapter 2, Article V – Nonconformance.

H. **Development Approval and Permits.** All proposed development shall be reviewed, approved and permitted in the manner prescribed by this Code.

I. **Public Notification Requirements.** Public disclosure regarding proximity to the airport and potential aircraft operation and noise impacts shall only be required for residential lot splits or newly created residential lots within a subdivision plat.

   1. The following statement shall be recorded on all newly created residential lots (those created after the adoption of this Airport Overlay District): “This property is located within the Airport

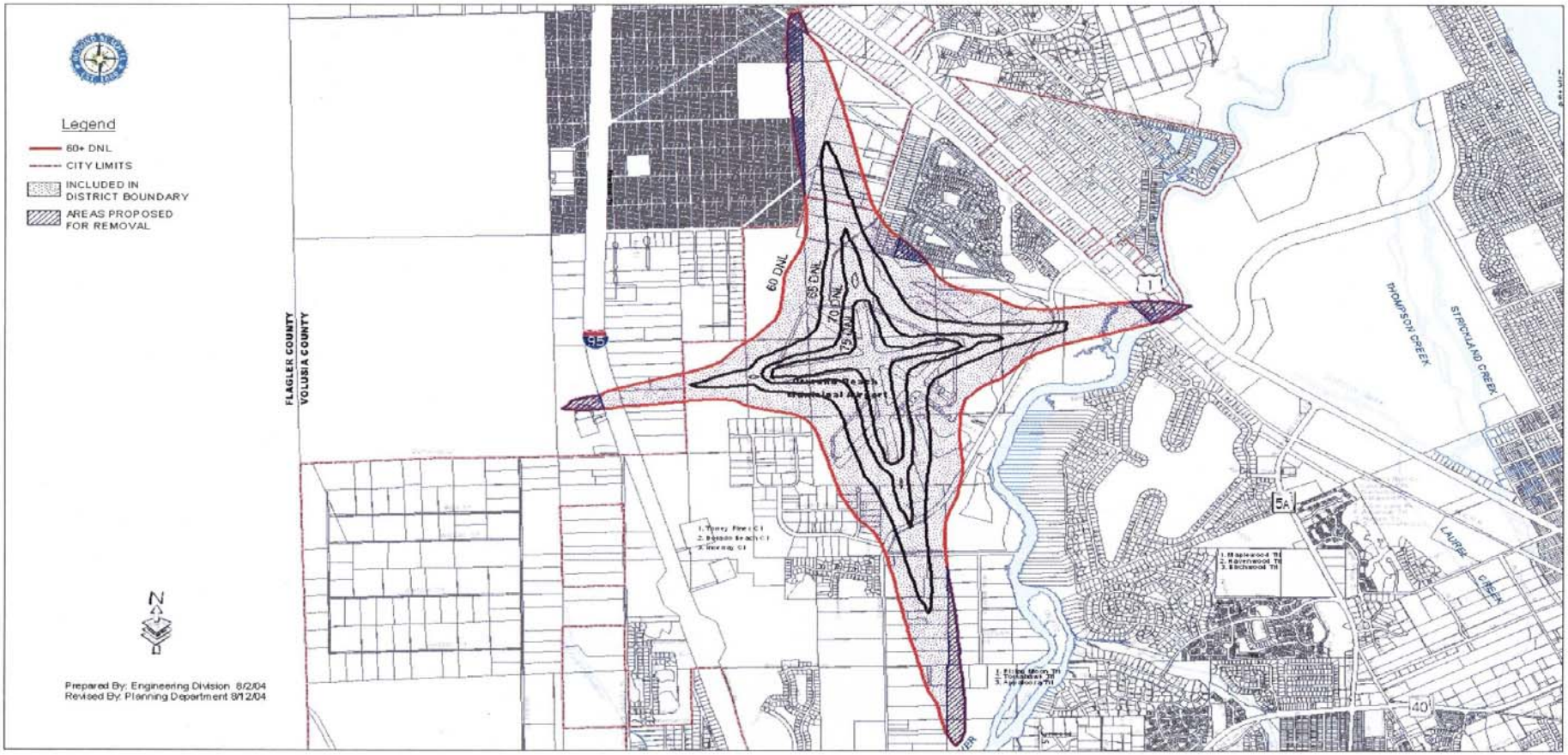
Overlay District and is subject to aircraft operations and aircraft noise that may be objectionable, dependent upon the specific location and varying weather conditions. Please contact the Planning Department for more information on potential impacts and to review the City's Airport Overlay District regulations."

2. In addition, the subdivision owner shall provide public notice to all prospective lot purchasers through a written disclosure statement.

3. This section shall not apply to the sale of residential sites that do not involve subdivision, or to projects for which a prospectus must be filed with the State of Florida under Chapter 743, F.S.

(Intentionally left blank.)

Airport Noise Overlay District
Map 10 - 2



APPENDIX C

FAA Forecast Approval Letter

U.S. Department
of Transportation
**Federal Aviation
Administration**

ORLANDO AIRPORTS DISTRICT OFFICE
5950 Hazeltine National Dr., Suite 400
Orlando, Florida 32822-5003
Phone: (407) 812-6331 Fax: (407) 812-6978

April 6, 2015

Mr. Steven R. Lichliter
Airport Manager
Ormond Beach Municipal Airport
22 South Beach Street
Ormond Beach, FL 32174

Dear Mr. Lichliter:

RE: Ormond Beach Municipal Airport, Ormond Beach, Florida
AIP 3-12-0059-017-2014
Approval of Airport Forecasts for Airport Master Plan Update

This letter responds to your submittal of the revised "Chapter 5: Forecast" for the Ormond Beach Municipal Airport dated April 2015. The based aircraft and operations forecasts shown in Table 5-13 of the report are approved to be used in your on-going master planning efforts.

If you have any questions, please feel free to contact me at (407) 812-6331, ext. 117.

Sincerely,

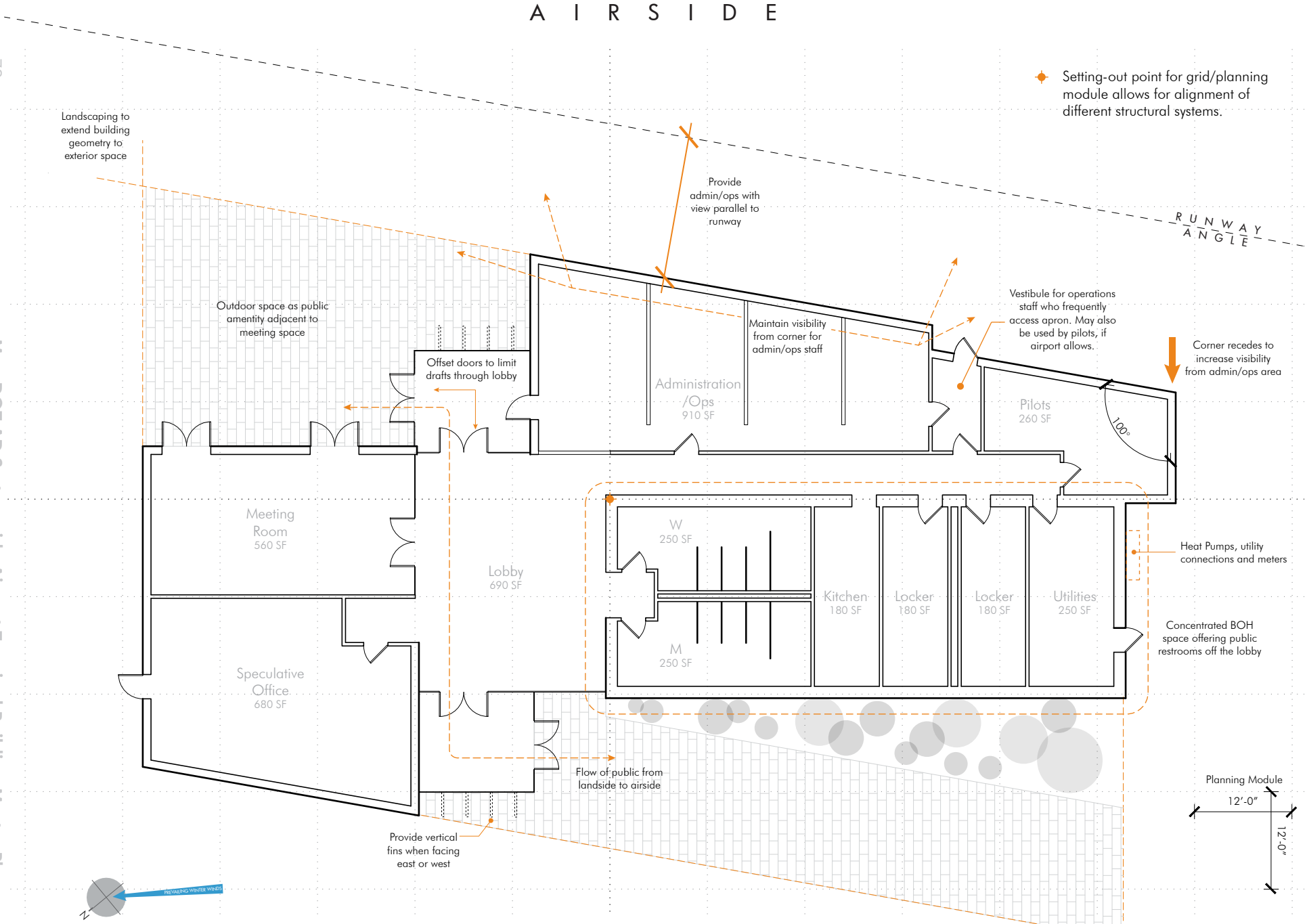
Original Signed By

Marisol C. Elliott
Program Manager/Community Planner

cc: Hans Dorries, Hoyle, Tanner & Associates, Inc.

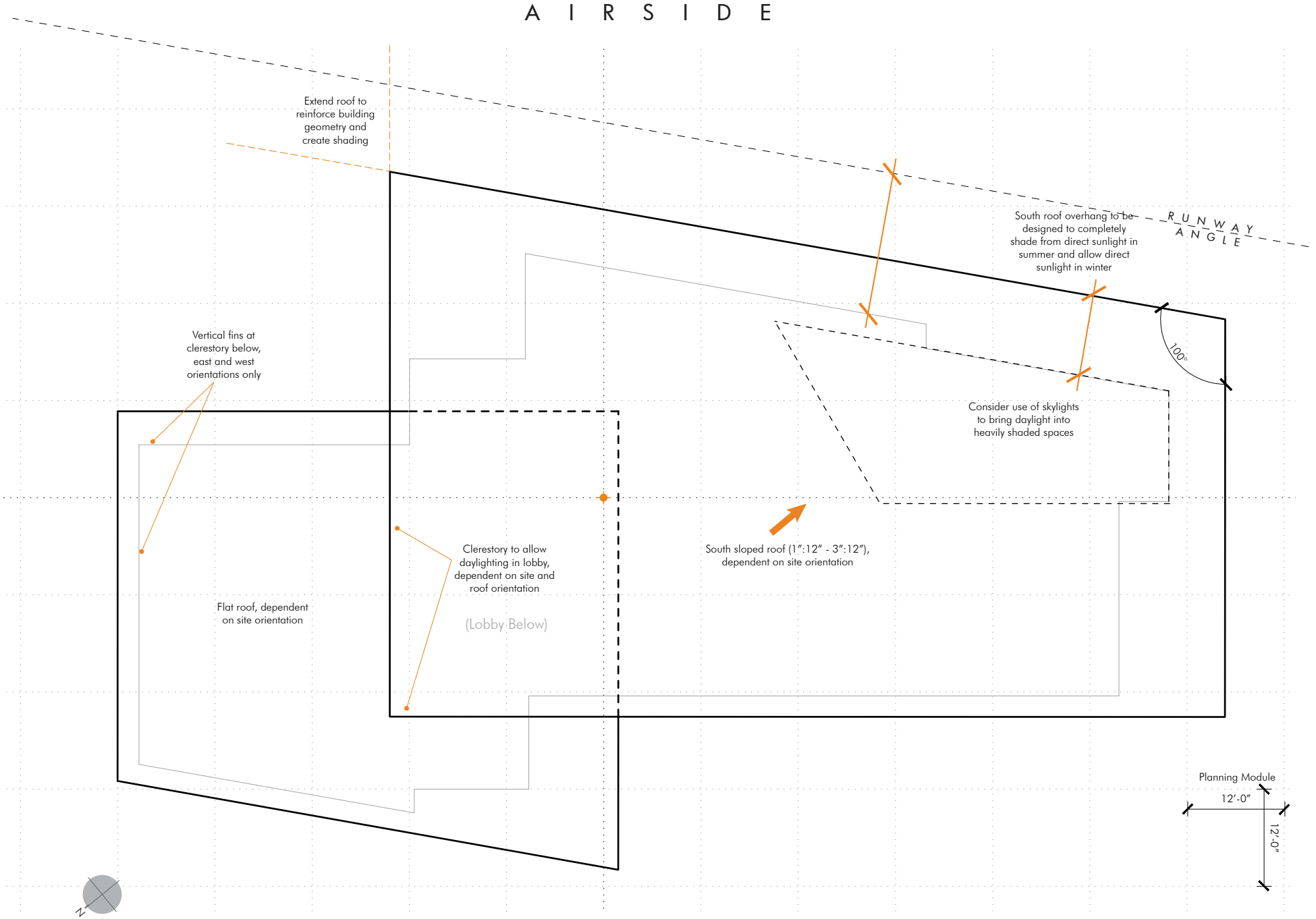
APPENDIX D

Terminal Building Conceptual Floor Plan



PROTOTYPICAL 5500 SF PLAN

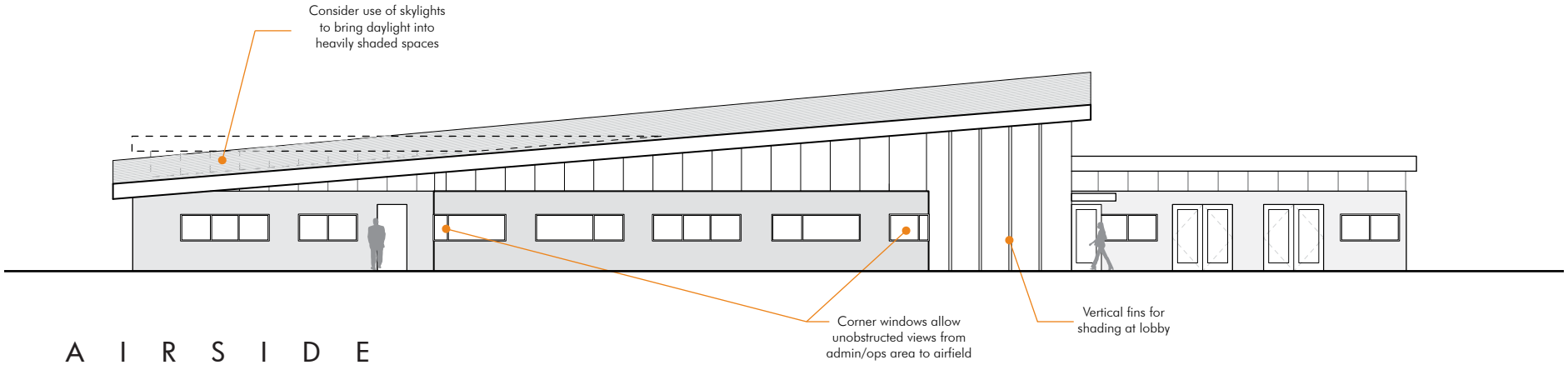
For Conceptual Design Purposes Only
NOT FOR CONSTRUCTION



PROTOTYPICAL 5500 SF ROOF PLAN

For Conceptual Design Purposes Only
NOT FOR CONSTRUCTION

L A N D S I D E



A I R S I D E

PROTOTYPICAL 5500 SF ELEVATION

For Conceptual Design Purposes Only
NOT FOR CONSTRUCTION

Landside View 1

Landside View 2

Airside View 1

Airside View 2

PROTOTYPICAL 5500 SF MASSING

For Conceptual Design Purposes Only
NOT FOR CONSTRUCTION

APPENDIX E

JACIP Capital Improvement Plan Summary

All Closed Projects For Ormond Beach Municipal Airport

FM No/Seq	Contract Number	Project Description	Start Date	Expiration		Funding
248334-1-84-01	AJ677	Construction and Relocation of Airport Perimeter Security Fencing Phase 2 and Includes Operational and Maintenance Costs IAW Chapter 2001-349, Laws of Florida (Flexible Funding).	1/8/2001	6/30/2003	State:	$40,000
					Local:	$100,000
					FAA:	$0
					Project Cost:	$140,000
404936-1-94-01	AJ599	Taxilane Construction	12/14/2000	11/15/2005	State:	$192,400
PFL0000584					Local:	$48,100
					FAA:	$0
					Project Cost:	$240,500
404940-1-94-01	AO061	Extend Utilities to Hangar Area, Design and Construct An FBO Access Road, Construction of Taxiways To T-Hangars and Taxilane Construction to Include the Markings of Runways 17-35 and 8-26.	4/28/2005	2/1/2006	State:	$5,396
PFL0001687					Local:	$5,396
					FAA:	$205,064
					Project Cost:	$215,856
407592-1-94-01	AN441	Purchase and Install Emergency Generator for the Air Traffic Control Tower to Include Planning, Engineering, Purchase and Installation Services	3/11/2003	10/1/2004	State:	$24,000
					Local:	$6,000
					FAA:	$0
					Project Cost:	$30,000
407593-1-94-01	AL511	Construct an Access Road to Taxiway 'D'	2/11/2002	10/1/2004	State:	$82,500
					Local:	$82,500
					FAA:	$0
					Project Cost:	$165,000
407594-1-94-01	AL512	Extend Utilities to Hangar Area	2/11/2002	11/15/2005	State:	$61,600
					Local:	$61,600
					FAA:	$0
					Project Cost:	$123,200
407625-1-94-01	AL547	Operational and Maintenance Costs to Comply With Enhanced Federal Security Requirements and to Address Related Economic Impacts from the Events of September 11, 2001 IAW Chapter 2001-349, Laws of Florida. (see project notes).	2/21/2002	6/30/2003	State:	$40,000
					Local:	$0
					FAA:	$0
					Project Cost:	$40,000
408470-1-94-01	AL444	Design and Construct an FBO Access Road	1/16/2002	11/15/2005	State:	$158,400
					Local:	$158,400
					FAA:	$0
					Project Cost:	$316,800

All Closed Projects For Ormond Beach Municipal Airport

FM No/Seq	Contract Number	Project Description	Start Date	Expiration	Funding	
414455-1-94-01 *PFL0001634*	ANT18	Obstruction Removal	12/1/2004	10/1/2007	State: Local: FAA: Project Cost:	$48,000 $12,000 $0 $60,000
415209-1-94-01 *PFL0001710*	ANB52	Rehabilitate Taxiway Lighting System on Taxiways "A", "B", "D" and "F", Upgrade Electrical Vault and Install Runway/Taxiway Signage, to Include Engineering, Design, and Construction/Installation Services	8/27/2003	2/1/2006	State: Local: FAA: Project Cost:	$27,892 $27,892 $509,923 $565,707
416326-1-94-01 *PFL0007794*	API37	Design and Construction of Perimeter Fencing and the Purchase and Installation of Security Cameras, in Accordance with Chapter 332.007 (8) F.S.	6/26/2009	2/1/2012	State: Local: FAA: Project Cost:	$167,750 $0 $0 $167,750
418463-1-94-01 *PFL0003888*	AP714	Airpark Development to Include Water and Sewer Utilities, Access Road and Site Cleanup	6/26/2008	10/1/2009	State: Local: FAA: Project Cost:	$181,500 $181,500 $0 $363,000
418464-1-94-01 *PFL0007791*	APY31	Design and Construction for the Relocation of TW "A", Rehabilitation of TW "C", Relocation of TW "E", Aircraft Hold Position Aprons for RWs 8 & 26 and Compass Rose, and the Construction of a Public-Use Heliport	6/3/2010	6/1/2013	State: Local: FAA: Project Cost:	$168,444 $42,111 $1,894,995 $2,105,550
418478-1-94-01 *PFL0003536*	AQH01	Obstacle Clearing to Include Tree Removal To Meet FAA and State Requirements for Runway and Taxiway Clearances	10/6/2011	2/1/2012	State: Local: FAA: Project Cost:	$6,000 $1,500 $0 $7,500
418479-1-94-01 *PFL0001614*	AOV63	Rehabilitate Runway 17-35	8/21/2007	6/1/2008	State: Local: FAA: Project Cost:	$37,504 $37,504 $1,425,160 $1,500,168
418858-1-94-01	ANY02	Oper./ Maint. Costs to Comply W/ Enhanced Fed. Security Requirements and to Address Related Economic Impacts from the Events of September 11, 2001 IAW Chapter 2003-286, Laws of Florida.	3/10/2005	6/1/2008	State: Local: FAA: Project Cost:	$139,300 $0 $0 $139,300

All Closed Projects For Ormond Beach Municipal Airport

FM No/Seq	Contract Number	Project Description	Start Date	Expiration	Funding	
420824-1-94-01 *PFL0004272*	APY33	Design and Construction for the Relocation of TW "A", Rehabilitation of TW "C", Relocation of TW "E", Aircraft Hold Position Aprons for RWs 8 & 26 and Compass Rose, and the Construction of a Public-Use Heliport to Include Security Lighting System Upgrades	6/3/2010	10/1/2013	State: Local: FAA: Project Cost:	$128,000 $18,569 $835,596 $982,165
420861-1-94-01 *PFL0007134*	APS43	Installation of Runway 17-35 lighting and signage, installation of Taxiway "E" lighting, replacement of rotating beacon, and installation of Runway End Identifier Lights (REILS) on runway 8-26 and 35.	12/8/2009	6/1/2010	State: Local: FAA: Project Cost:	$8,906 $8,906 $338,425 $356,237
420864-1-94-01 *PFL0010214*	ARI56	Obstruction Removal for Runways 8/26 and 17/35	6/25/2014	2/1/2015	State: Local: FAA: Project Cost:	$20,000 $5,000 $0 $25,000
420865-1-94-01 *PFL0010529*	ARI57	Focused Environmental Assessment for the Northwest and Southwest Development Areas	6/25/2014	10/1/2015	State: Local: FAA: Project Cost:	$61,008 $15,252 $0 $76,260
420971-1-94-01 *PFL0004251*	AOA12	Engineering and Design Services for the Rehabilitation of Runway 17-35	1/13/2006	10/1/2007	State: Local: FAA: Project Cost:	$2,500 $2,500 $95,000 $100,000
424765-1-94-01 *PFL0005676*	APA27	Design for the Rehabilitation of Runway 17-35 Lighting, The Installation of Taxiway "E" Lighting, And The Rehabilitation/Replacement of the Rotating Beacon.	9/18/2008	6/1/2009	State: Local: FAA: Project Cost:	$2,480 $2,480 $94,250 $99,210
431602-1-94-01 *PFL0004275*	AR958	Design for the Construction of Taxiway "G" and the Installation of PAPIs, a REIL, Taxiway "C" Lighting, and General Airfield Electrical Rehabilitations	12/10/2013	10/1/2014	State: Local: FAA: Project Cost:	$20,109 $5,027 $226,224 $251,360

WORK PROGRAM ONLINE - AIRPORT
CAPITAL IMPROVEMENT PLAN SUMMARY

Airport: Ormond Beach Municipal Airport **Local ID:** OMN **NPIAS No.:** 12-0059

Sponsor: City of Ormond Beach **Sponsor ID:** OMN **Site No.:** 03411.*A

Project Description:			Priority			Sponsor Requested Funding Breakdown			
			FAA	Sponsor	Sponsor Year	Federal	State	Local	
Construct Taxiway G, Install PAPI-4s and General Airfield Electrical Rehabilitations (Construction)									
UPIN: PFL0001638	**FDOT Item No.:**	433528 1	50	15-01	2014	$73,776	$0	$0	$73,776
Construct Taxiway G, Install PAPI-4s and General Airfield Electrical Rehabilitations (Design)									
UPIN: PFL0004275	**FDOT Item No.:**	431602 1	50	13-01	2014	$84,000	$0	$0	$84,000
Obstruction Removal - 20:1 Penetration Mitigation									
UPIN: PFL0010214	**FDOT Item No.:**	420864 1	95	14-02	2014	$0	$144,000	$36,000	$180,000
Focused Environmental Assessment									
UPIN: PFL0010529	**FDOT Item No.:**	420865 1	68	14-03	2014	$0	$61,008	$15,252	$76,260
Yearly Total 2014						$157,776	$205,008	$51,252	$414,036
Construct Taxiway G, Install PAPI-4s and General Airfield Electrical Rehabilitations (Construction)									
UPIN: PFL0001638	**FDOT Item No.:**	433528 1	50	15-01	2015	$3,773,877	$341,183	$86,334	$4,201,394
SW Quad Airport Access Roads (Design & Construction)									
UPIN: PFL0004276	**FDOT Item No.:**	437033 1	23	15-02	2015	$0	$202,000	$202,000	$404,000
Update Airport Master Plan and Develop Storm Water Master Plan									
UPIN: PFL0004339	**FDOT Item No.:**	436498 1	68	14-01	2015	$199,530	$17,736	$4,434	$221,700
Yearly Total 2015						$3,973,407	$560,919	$292,768	$4,827,094
Business Park Way Development (Design)									
UPIN: PFL0004279	**FDOT Item No.:**		23	16-03	2016	$0	$141,750	$141,750	$283,500
Wildlife Hazard Assessment									
UPIN: PFL0009022	**FDOT Item No.:**	420862 1	61	16-02	2016	$99,000	$8,800	$2,200	$110,000
Airfield Pavement Marking									
UPIN: PFL0010892	**FDOT Item No.:**		80	16-01	2016	$0	$71,346	$17,837	$89,183
Yearly Total 2016						$99,000	$221,896	$161,787	$482,683

Business Park Way Development (Construction)									
UPIN: PFL0001832	**FDOT Item No.:**		23	17-03	2017	$0	$803,250	$803,250	$1,606,500
Replace AWOS									
UPIN: PFL0007793	**FDOT Item No.:**	418481 1	47	17-01	2017	$157,500	$14,000	$3,500	$175,000
Yearly Total **2017**						$157,500	$817,250	$806,750	$1,781,500
Rehab & Mark Taxiway E (Design)									
UPIN: PFL0004262	**FDOT Item No.:**		68	18-01	2018	$135,000	$12,000	$3,000	$150,000
Yearly Total **2018**						$135,000	$12,000	$3,000	$150,000
Rehab & Mark Taxiway E (Construction)									
UPIN: PFL0001623	**FDOT Item No.:**		68	19-01	2019	$675,000	$60,000	$15,000	$750,000
Yearly Total **2019**						$675,000	$60,000	$15,000	$750,000
Construct Northwest Access Road and Taxiway India									
UPIN: PFL0005671	**FDOT Item No.:**		50	23-01	2023	$1,800,000	$160,000	$40,000	$2,000,000
Yearly Total **2023**						$1,800,000	$160,000	$40,000	$2,000,000

APPENDIX F
ALP Drawing Set

APPENDIX G

Public Participation Documents

CITY OF ORMOND BEACH MUNICIPAL AIRPORT

Airport Master Plan Update Public Meeting

April 28, 2015

PLEASE PRINT

Name	Address	Phone	E-mail
Bob Behnke	15 Malayan Sun Bear	386-677-6[illegible]5	
Neal Tomlinson	Ormond Airport	386-676-0512	
Steve Searle	72 Airport Hangar Way	386-795-6570	
Jay Cortright	91 Ridge Field Pl.	386-589-3879	
Gordon Arbeitman	" "	(386) 589-3877	
Eric Sanderson	302 River Bluff Dr.	3055220339	
Alan Jorczak	679 N. Beach	386-672-8889	
Philip Ellis	13 Tomoka View Dr.	386-256-7091	
Stewart Liebelt	204 River Bluff Dr	386 673-5557	
Bill Gallagher	123 Mariner Dr. Ormond Bch	(386)527-1435	
[illegible]	1[illegible] [illegible] Mill Ct	673-1274	
Ray Blastic	212 Riverbluff Dr	673-1949	
Kristen Miller	14 Brandy Hills Dr P.O	352-425-0545	

CITY OF ORMOND BEACH MUNICIPAL AIRPORT

Airport Master Plan Update Public Meeting

April 28, 2015

PLEASE PRINT

Name	Address	Phone	E-mail
Joseph Wisniewski	Ormond Bch 102 N. St Andrews Dr	386-235-4082	AA767CPT@AOL.COM
MICHAEL JILOTY	15 WINDING CREEK WAY OB	386-295-0816	mjiloty@mac.com
DAVID SLICK	15 SIGNAL O.B.	386-405-5801	DAVID SLICK @ COMMANDMEDICAL.COM
Pat Ellis	13 Tomoka View Dr	OB 256709	patsyrellis@bellsouthnet
STAN DRISCOLL	16 SANDALWOOD LANE	32179	
Mark A Sieg	72 Hunter Way	265-9636	
LARRY STOUT	677 N. BEACH ST	254 6875	
BRUCE MARINA	1531 DAIL FORCIT	679-9013	STUBBS0@AOL.COM
MARK BARKER	SUNRISE AVIATION	677-5724	
JEFF LEFEVER	SUNRISE AVIATION	677-5724	
Matthew Dye	14 Bloody Hills Dr.	352-286-3502	
m/m Robert Brown	4 Riverbluff Ct	386 236 8573	
R Collins	220 River Bluff	6738607	

CITY OF ORMOND BEACH MUNICIPAL AIRPORT

Airport Master Plan Update Public Meeting

April 28, 2015

PLEASE PRINT

Name	Address	Phone	E-mail
Peggy Farmer	4 Allenwood Loop		
Joyce Shanaha	City manager		
Jean Jos	86 Grey Dapple Way		
Ed Jos	"		
Dan Lusby			
Sam Hamilton	106 Rio Pine		
Don Willis	3719 Longford Cir.		

CITY OF ORMOND BEACH MUNICIPAL AIRPORT

Airport Master Plan Update Public Meeting

April 28, 2015

PLEASE PRINT

Name	Address	Phone	E-mail
Mary Schulten		386 615 1142	
Mark Rubin	N. Beach St, O.B.	386 673 3939	msrubin46@hotmail.com
Paul Schulten	1201 KIRKPATRICK	386 615 1142	PLSchulten@bellsouth.net
Shayne Adams	John Anderson OB	386 8521038	shayne@skcpas.com

Ormond Beach Airport Master Plan Update
Public Involvement Program
Identification of Airport Stakeholders and Key Issues Form
April 2015

Instructions

The City of Ormond Beach has started an master planning process for the future development of the Ormond Beach Airport. As part of the master planning process, a public involvement program has been established.

You have received this survey form because you are a valuable member of the community and you are a stakeholder in the airport master planning process. We believe that your input in the process is relevant to the future development of the airport.

Please answer the questions below as clear and concise as possible, and submit your responses according to the instructions on the back of this form.

1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

resident

2. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

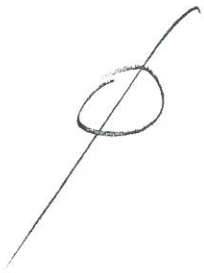
1) Safety
2) less noise
3) make necessary upgrades

3. Please list THREE changes you would LEAST like to see at Ormond Beach Airport (in descending priority)

1 air traffic

Continued on reverse side

4. Please list THREE things you would MOST like to see REMAIN THE SAME at Ormond Beach Airport (in descending priority)



5. Please provide any other RELEVANT COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

Don't want increased noise & air traffic over my home. It is annoying as it stands now

Your responses will be analyzed by the planning team and included in the airport master plan document.

Please submit this form to and any additional sheets via mail or electronic form to:

Steven Lichliter
Airport Manager
Address: P.O. Box 277, Ormond Beach, FL 32175
Email: steven.lichliter@ormondbeach.org

Ormond Beach Airport Master Plan Update
Public Involvement Program
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1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

resident

2. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

3. Please list THREE changes you would LEAST like to see at Ormond Beach Airport (in descending priority)

Continued on reverse side

4. Please list THREE things you would MOST like to see REMAIN THE SAME at Ormond Beach Airport (in descending priority)

5. Please provide any other RELEVANT COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

Enhancing the airport is vital to the economic growth of OB. If ormond Crossing is to attract corporate HQ's, industry, etc, we should be working towards enhancing the services at the airport.

A vital requirement should be restroom facilities available 24/7. This is a basic necessity that has been ignored. We can do better!

Your responses will be analyzed by the planning team and included in the airport master plan document.

Please submit this form to and any additional sheets via mail or electronic form to:

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Airport Manager
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Email: steven.lichliter@ormondbeach.org

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Please answer the questions below as clear and concise as possible, and submit your responses according to the instructions on the back of this form.

1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

Resident

2. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

1) FBO
2) FBO
3) Consistantly clean, well maintained runways taxiways and airport grounds

3. Please list THREE changes you would LEAST like to see at Ormond Beach Airport (in descending priority)

Continued on reverse side

4. Please list THREE things you would MOST like to see REMAIN THE SAME at Ormond Beach Airport (in descending priority)

5. Please provide any other RELEVANT COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

The Ormond Airport has great potential to improve the Ormond community and needs to be built up to show visitors the beautiful area Ormond is.

Your responses will be analyzed by the planning team and included in the airport master plan document.

Please submit this form to and any additional sheets via mail or electronic form to:

Steven Lichliter
Airport Manager
Address: P.O. Box 277, Ormond Beach, FL 32175
Email: steven.lichliter@ormondbeach.org

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Please answer the questions below as clear and concise as possible, and submit your responses according to the instructions on the back of this form.

1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.
Resident 302 River Bluff Dr. Eric Sanderson

2. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)
Enforcement of the flight plan for student pilots. (helicopters)

3. Please list THREE changes you would LEAST like to see at Ormond Beach Airport (in descending priority)

Continued on reverse side

4. Please list THREE things you would MOST like to see REMAIN THE SAME at Ormond Beach Airport (in descending priority)

5. Please provide any other RELEVANT COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

If a helicopter goes down on the East side of the river behind my house and starts a fire it would put many homes in danger. There is no battling a fire down a 22ft. bluff in knee deep mud. Enforce the Flight Path!

Your responses will be analyzed by the planning team and included in the airport master plan document.

Please submit this form to and any additional sheets via mail or electronic form to:

Steven Lichliter
Airport Manager
Address: P.O. Box 277, Ormond Beach, FL 32175
Email: steven.lichliter@ormondbeach.org

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Please answer the questions below as clear and concise as possible, and submit your responses according to the instructions on the back of this form.

1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

Resident TOMOKA OAKS

2. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

① With Any new Planning there must be FAA Oversight of flight Plans meaning Strict enforcement

② Training facilities Particularly helicopters do Now have a helped as part of the master Plan but do not abide by flight Rules.

3. Please list THREE changes you would LEAST like to see at Ormond Beach Airport (in descending priority)

Continued on reverse side

4. Please list THREE things you would MOST like to see REMAIN THE SAME at Ormond Beach Airport (in descending priority)

5. Please provide any other RELEVANT COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

Your responses will be analyzed by the planning team and included in the airport master plan document.

Please submit this form to and any additional sheets via mail or electronic form to:

Steven Lichliter
Airport Manager
Address: P.O. Box 277, Ormond Beach, FL 32175
Email: steven.lichliter@ormondbeach.org

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You have received this survey form because you are a valuable member of the community and you are a stakeholder in the airport master planning process. We believe that your input in the process is relevant to the future development of the airport.

Please answer the questions below as clear and concise as possible, and submit your responses according to the instructions on the back of this form.

1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

Property owner

2. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

1) Improve FBO Services
2) Have Airport Manager more Assessable
3) Encourage Corporate relocation by improving Airport.
4) Enforcement of flight paths & noise abatement so Airport is veiwed as a good neighbo

3. Please list THREE changes you would LEAST like to see at Ormond Beach Airport (in descending priority)

None - Major upgrades are needed to resident

Continued on reverse side

4. Please list THREE things you would MOST like to see REMAIN THE SAME at Ormond Beach Airport (in descending priority)

- None - Major upgrades are needed

5. Please provide any other RELEVANT COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

The Airport should be an asset and driver for economic development now and long term. It certainly isn't either currently and it hinders Ormond Beaches ability to be competitive in the recruitment of business and industry.

Your responses will be analyzed by the planning team and included in the airport master plan document.

Please submit this form to and any additional sheets via mail or electronic form to:

Steven Lichliter
Airport Manager
Address: P.O. Box 277, Ormond Beach, FL 32175
Email: steven.lichliter@ormondbeach.org

McDougal, Evan R.

From: Lichliter, Steven <Steven.Lichliter@ormondbeach.org>
Sent: Wednesday, April 29, 2015 11:56 AM
To: McDougal, Evan R.
Cc: Dorries, Hans M.; Norman, Doug; Mannarino, Joe
Subject: FW: Airport Master Plan

FYI…

From: Charles Russell [mailto:crussell@cfl.rr.com]
Sent: Wednesday, April 29, 2015 10:15 AM
To: Lichliter, Steven
Subject: Airport Master Plan

Mr. Lichliter:

Below please find my comments for the numbered items on the Ormond Beach Airport Master Plan Update.

Please let me know if this method of offering Master Plan comments is acceptable.

Thank you,

Charles G. Russell
14 Cotton Mill Court
Ormond Beach, FL 32174
386/673-1274
crussell@cfl.rr.com

1. **Stakeholder Group:** I belong in home owner group.

2. **Changes Desired:**
   A. Flight School Planes following flight paths. (They do not presently follow them)
   B. Flight School owners confronted and instructed to comply with their pledges to follow flight paths. (Offer consequences for violations)
   C. Ban Flight School plane flights before 8 AM and after 8 PM. (Flights presently sometimes begin as early as 6:30 AM and sometimes continue to near midnight)

3. **Changes Not Desired:**
   A. Extension of any runway.
   B. Extension of any runway.
   C. Extension of any runway.

4. **Things to keep the same:**
   A. Given that I find no value from the airport for at least 95% of Ormond Beach citizens, I know of nothing I would want to see remain the same. This airport serves the economic elite and brings aggravation to home owners living around the airport. The tax money from the 95% support a small economic elite group. That money could better serve the people who pay the taxes. Note that I have no problem with the private plane owners who simply take off and land. I have massive problems with the arrogant flight school owners who do not comply with their pledges to follow flight paths.

5. Additional Comments:

A. I heard nothing in the oral presentation last night about gathering feedback from the community about their complaints and concerns. Given that Ormond Beach citizens pay for the airport, surely a Master Plan should include scheduled questionnaires soliciting feedback from the people living around the airport. What happened to the plan to provide a feedback form on the airport website? Your comments about having pictures of flight school planes and other relevant information available on the website struck me as a good idea.

I want to ensure that the public record shows my concerns related to the daily disruption of our lives caused by flight school planes violating the flight paths the flight school owners pledged to follow. These planes fly sometimes as low as 200 - 300 feet over our homes, practice re-starting their engines over our homes, pass sometimes at 15 -30 second intervals and make conversation outside impossible because of the noise from the planes. In sum, flight school planes make the Ormond Beach Airport a liability for our community.

McDougal, Evan R.

From: Lichliter, Steven <Steven.Lichliter@ormondbeach.org>
Sent: Wednesday, April 29, 2015 11:55 AM
To: McDougal, Evan R.
Cc: Dorries, Hans M.; Norman, Doug; Mannarino, Joe
Subject: FW: Airport Master Plan Update

FYI…

From: Stan Driscoll [mailto:standrscl@aol.com]
Sent: Wednesday, April 29, 2015 10:17 AM
To: Lichliter, Steven
Subject: Airport Master Plan Update

Mr. Lichliter,

As a noise impacted resident, my concern regarding the Airport Master Plan are:

1. There needs to be a section in the Master Plan specifically addressing the noise impacts of the airport and what noise abatement procedures are enacted.

2. Any determination of airports expansion must include an assessment of the noise impacts and what mitigation measures must be taken.

Respectfully
Stan Driscoll
10 Sandalwood Lane
Ormond Beach, FL 32174
386-290-2700

Ormond Beach Airport - Tenant & User Survey

Please provide data for the years 2013 and 2014.

1. General Information

Company Name Mile High Aviation Partners, LLC

Product (s) or Service(s) _____

Contact Name Jim Weite Phone No. 386 679 9004

Email address jweite@aol.com

2. Aviation Activity

What area of aviation activity applies to your business at the Airport (please check all that apply)

X FBO/Air Taxi/Corporate Aviation

__ Air Freight Carrier

__ Government (FAA/Airport Management/Airport Proprietor

__ Other _____

3. **Aircraft employed** (if applicable)

Aircraft Type	Make and Model	Average Annual Departures
SEL Recip and Turbine		
ME Recip	PA31-350	40
ME Turbine < 12.5K MGTOW		
ME Turbine > 12.5K MGTOW		
Helo		

Typical Dry runway takeoff length required for most demanding aircraft you fly at MGTOW, ISA +15 4,200

Typical Wet runway takeoff length required for most demanding aircraft you fly at MGTOW, ISA +15 4,350

How often is payload or range limited by runway takeoff length requirements? 50 % of the flights

What aircraft would you use if a 1000 foot longer runway was available at OMN? PA31-350.

4. Employment

How many employees were employed by your company at the Airport?

____Full-time employees (in 2013). ____Part-time employees (in 2013). NONE

____Full-time employees (in 2014). ____Part-time employees (in 2014).

5. Company Expenditures

a.) How much salary was paid to these employees?

$_____(in 2013) $_____(in 2014). NONE

b.) How much did your company pay in property taxes at the Airport?

$_____(in 2013) $_____(in 2014).

c.) How much has your company spent for major Capital Improvements at Ormond Beach Municipal Airport over the past three years?

Year	Capital Improvements
2014	$_____ NONE
2013	$_____
2012	$_____

d.) Omitting the expenditure categories above (i.e.,payroll, taxes, capital improvements, how much did your company pay for all other operating expenses(incl, depreciation) at the Airport?

$_____(in 2013) $_____(in 2014). NONE

Please share other comments that you feel should be considered as the Airport Master Plan is updated.

Return survey to Steven Lichliter, Airport Manager or
Evan R. McDougal, Hoyle, Tanner & Associates, emcdougal@hoyletanner.com

Ormond Beach Airport - Tenant & User Survey

Please provide data for the years 2013 and 2014.

1. General Information

Company Name Daytona Beach Aero Club, INC.

Product (s) or Service(s) _____

Contact Name Jim Weite Phone No. 386 679 9004

Email address jweite@aol.com

2. Aviation Activity

What area of aviation activity applies to your business at the Airport (please check all that apply)

__FBO/Air Taxi/Corporate Aviation

__Air Freight Carrier

__Government (FAA/Airport Management/Airport Proprietor

X Other Flying Club

3. **Aircraft employed** (if applicable)

Aircraft Type	Make and Model	Average Annual Departures
SEL Recip and Turbine	C. 182	60
ME Recip		
ME Turbine < 12.5K MGTOW		
ME Turbine > 12.5K MGTOW		
Helo		

Typical Dry runway takeoff length required for most demanding aircraft you fly at MGTOW, ISA +15 2500

Typical Wet runway takeoff length required for most demanding aircraft you fly at MGTOW, ISA +15 2650

How often is payload or range limited by runway takeoff length requirements? 0 % of the flights

What aircraft would you use if a 1000 foot longer runway was available at OMN? C. 182 .

4. Employment

How many employees were employed by your company at the Airport?

____Full-time employees (in 2013). ____Part-time employees (in 2013). NONE

____Full-time employees (in 2014). ____Part-time employees (in 2014).

5. Company Expenditures

a.) How much salary was paid to these employees?

$_____(in 2013) $_____(in 2014). NONE

b.) How much did your company pay in property taxes at the Airport?

$_____(in 2013) $_____(in 2014).

c.) How much has your company spent for major Capital Improvements at Ormond Beach Municipal Airport over the past three years?

Year	Capital Improvements
2014	$_____ NONE
2013	$_____
2012	$_____

d.) Omitting the expenditure categories above (i.e.,payroll, taxes, capital improvements, how much did your company pay for all other operating expenses(incl, depreciation) at the Airport?

$_____(in 2013) $_____(in 2014). NONE

Please share other comments that you feel should be considered as the Airport Master Plan is updated.

Return survey to Steven Lichliter, Airport Manager or
Evan R. McDougal, Hoyle, Tanner & Associates, emcdougal@hoyletanner.com

Ormond Beach Airport - Tenant & User Survey

Please provide data for the years 2013 and 2014.

1. General Information

Company Name__Blue Sky Rental Inc._____

Product (s) or Service(s)__Hangar Rental_____

Contact Name_Jack Mendes_____Phone No.___386 405 7616_____

Email address __Jack@bobsspaceracers.com_____

2. Aviation Activity

What area of aviation activity applies to your business at the Airport (please check all that apply)

___FBO/Air Taxi/Corporate Aviation

___Air Freight Carrier

___Government (FAA/Airport Management/Airport Proprietor

__X_Other_Hangar Rental_____

3. **Aircraft employed** (if applicable)

Aircraft Type	Make and Model	Average Annual Departures
SEL Recip and Turbine		
ME Recip		
ME Turbine < 12.5K MGTOW		
ME Turbine > 12.5K MGTOW		
Helo		

Typical Dry runway takeoff length required for most demanding aircraft you fly at MGTOW, ISA +15 _____

Typical Wet runway takeoff length required for most demanding aircraft you fly at MGTOW, ISA +15 _____

How often is payload or range limited by runway takeoff length requirements? _____ % of the flights

What aircraft would you use if a 500 – 800 foot longer runway was available at OMN? _____ .

4. Employment

How many employees were employed by your company at the Airport?

____0_Full-time employees (in 2013). ____0_Part-time employees (in 2013).

_____0Full-time employees (in 2014). ____o_Part-time employees (in 2014).

5. Company Expenditures

a.) How much salary was paid to these employees?

$ _____0_____(in 2013) $ _____0_____(in 2014).

b.) How much did your company pay in property taxes at the Airport?

$ _____0_____(in 2013) $ _____0_____(in 2014).

c.) How much has your company spent for major Capital Improvements at Ormond Beach Municipal Airport over the past three years?

Year	Capital Improvements
2014	$___0_____
2013	$____0_____
2012	$____0_____

d.) Omitting the expenditure categories above (i.e.,payroll, taxes, capital improvements, how much did your company pay for all other operating expenses(incl, depreciation) at the Airport?

$ _____31,509.___(in 2013) $ ____28,334._____(est. in 2014).

Please share other comments that you feel should be considered as the Airport Master Plan is updated.

Return survey to Steven Lichliter, Airport Manager or
Evan R. McDougal, Hoyle, Tanner & Associates, emcdougal@hoyletanner.com

MINUTES
CITY OF ORMOND BEACH
AIRPORT MASTER PLAN UPDATE PUBLIC MEETING

April 28, 2015	**6:00 p.m.**	**City Commission Chambers**

I. Welcome and Introductions

Present were Airport Manager Steven Lichliter, Economic Development Director Joe Mannarino, and City Manager Joyce Shanahan, Senior Vice President of Hoyle, Tanner & Associates, Inc. Doug Norman, Hoyle, Tanner & Associates Inc. Airport Planning Manager Evan McDougal, and Hoyle, Tanner & Associates Inc. Senior Airport Planner Hans Dorries.

The meeting began at 6:00 p.m.

Mr. Steven Lichliter, Airport Manager, thanked those in attendance for coming to the meeting. He stated that the public participation process for the Airport Master Plan was extremely important. He introduced the members of the planning team as City Manager Joyce Shanahan, Economic Development Director Joe Mannarino and from Hoyle, Tanner & Associates, Inc.: Senior Vice President Doug Norman, Airport Planning Manager Evan McDougal, and Senior Airport Planner Hans Dorries.

Mr. Lichliter stated that the planning team would explain the master planning process and the objectives of the master plan. He noted that they would also speak about the public involvement program. He stated that findings of the existing inventory conditions at the airport would also be presented along with the Federal Aviation Administration (FAA) approved forecast for the airport. He explained that they would detail how that information was used to determine future facility requirements at the airport and explain the public comment forms. He noted that public comment forms could be found in the rear of the Commission Chambers. He explained that the comment forms were there in order to record any questions or comments made by the public in order to make them a part of the master plan. He noted that at the end of the meeting they would answer questions from the public about the inventory and forecast.

Mr. Lichliter explained that because this was a public meeting there were some ground rules to abide by. He requested that all public comments and questions be made in writing on the supplied public comment forms and include the respondent's name and address. He explained that after the presentation, speakers would be able to speak for two minutes each and asked that their comments and questions be specific and relevant to items on the agenda. He stated that all submitted forms would be compiled and included in the Master Plan Report. He displayed a listing of the capital improvements made at the airport from 2009 to 2015. He noted that this would be a starting point for the next phase in capital improvements. He explained that the product of the master plan would be a new capital improvement program for the airport.

Mr. Evan McDougal, Airport Planning Manager, Hoyle, Tanner & Associates, Inc., asked the audience to raise their hand if they lived within five miles of the airport. He then asked any pilots in attendance to raise their hands. He explained that he wanted to get an idea of who the audience was comprised of. He explained that he

wanted to provide a little background on his team. He stated that Mr. Doug Norman was a Senior Vice President at Hoyle, Tanner & Associates, Inc. in their Oviedo office, which he also managed, and was the engineering representative for the master plan update. He stated that Mr. Hans Dorries was a former Florida Institute of Technology instructor, who held a couple of master's degrees in aviation and aviation planning and had worked on master plans throughout the south. He explained that Mr. Dorries was also a specialist in noise and performed a lot of noise analysis. He introduced himself and stated that he was a retired Coast Guard and Army helicopter and airplane driver with various certifications.

II. Goals and Objectives of the Master Plan Update

Mr. McDougal stated that the goals and objectives of the master plan update were to improve overall safety and capacity of the airport, promote orderly and efficient development, plan for facilities and services to meet customer needs and to enhance the airport's ability to be self-sustaining and serve as an economic generator within the local economy. He noted that improving the safety and capacity of the airport was a top priority for the FAA. He stated that the airport's ability to be self-sustaining meant a lot to the local taxpaying communities, who often had to support their airport to some degree. He stated that it was important to try and have the airport pay for itself.

Mr. McDougal noted that one of the outcomes of this process would be a set of drawings called an airport layout plan, and he explained that any future project requesting FAA funds would need to be on that layout plan. He further explained that there were only two components of the airport master plan which the FAA would sign off on, one of which was the forecast, which was already completed, and the second being the airport layout plan, which would have a number of proposed development options on it. He explained that those options were not approved, but that the concept would be approved by the FAA signing that document. He explained that the FAA had to approve those two items in order for the city to seek funding for the airport. He stated that an objective of the plan was consistency, noting that safety would always be a top objective. He stated that the objective for the community was balance, and he noted that a community could not, and did not want to, spend all of their money on the airport. He stated that ideally the economics would support itself and an expansion if it was needed.

III. The Airport Master Planning Process

Mr. McDougal stated that the FAA required a public involvement program to be a part of the airport master planning process. He encouraged audience members to fill out and submit the comment forms provided. He explained that they wanted all of the comments in writing so that they could be addressed. He stated that the other steps in the planning process were the inventory of existing conditions, facility requirements, aviation forecasts, the development and evaluation of alternatives, environmental considerations, airport layout plan drawings set, facilities implementation plan, and financial considerations. He noted that the inventory of existing conditions, facility requirements, and aviation forecast steps had already been completed and that alternative development and evaluation would be next. He noted that there were some obvious needs presently at the airport.

Mr. McDougal stated that the documents primarily used in their planning guidance were the FAA Advisory Circulars (AC) 150/5070-6B Airport Master Plans (Change 2)

and 150/5300-13A Airport Design (Change 1), the Florida Department of Transportation (FDOT) Guidebook for Airport Master Planning and the Airport Cooperative Research Program (ACRP) Guidebook for General Aviation Facility Planning (Report 113). He noted that all of these documents would be available on the airport's website.

IV. Public Involvement Program

Mr. McDougal stated that evening they would be identifying the stakeholders, i.e., those impacted by the airport and its operations and the key issues. He explained that they would also be making the public aware and providing public input forms.

V. Summary of Inventory of Existing Conditions

Mr. McDougal stated that the airport was one of over 3,000 airports in the National Plan of Integrated Airport Systems (NPIAS). He explained that the NPIAS, which was published by the FAA every two years, categorized different airports. He noted that presently the Ormond Beach Municipal Airport was considered a public-owned airport, a general aviation reliever airport, and an airport with a regional role. He explained that a general aviation reliever airport meant that if Daytona Beach Regional Airport was overcrowded, the extra airplanes could go to Ormond Beach Municipal Airport.

Mr. McDougal stated that they would discuss the airfield facilities and infrastructure and how those were determined. He noted that dimensional standards were predicated on a few factors. He explained that one factor was the aircraft approach category (AAC), which was the speed in which the aircraft was approaching. He further explained that in this case it was a "B" aircraft that was being considered as the critical aircraft, which meant that it had an approach speed of about 91 knots, or 100 miles per hour. He displayed an AAC chart and noted that as you moved through the alphabet the approach speeds rose. He displayed photographs of traditional "B" aircraft, a Beechcraft Baron B58 and a Cessna Citation 550. He noted that aircraft were improving and were able to come in slower than before and their noise level had dropped by 75% over the last 30 years.

Mr. McDougal stated that another dimensional standard was the airplane design group (ADG). He explained that the ADG was based on the wingspan and how the width needed on the side of taxiways was determined. He stated that the current ADG was "II," which described an aircraft with a 20 to 30 foot tail height and a wingspan between 49 and 79 feet. He displayed photographs of ADG "II" type aircraft, a Beechcraft King Air and a Cessna Citation 550. He noted that the airport satisfied those airplanes although they would likely see more Cessna 172s and 150s there than those he displayed. He stated that the third dimensional standard would be the instrument flight visibility category in runway visual range (RVR) values. He explained that for all runways the current instrument visibility category was "5,000 RVR feet," which was about one statute mile. He noted that this was the third item used in a runway design code (RDC). He stated that this was the standard that would be used to build runways at Ormond Beach Municipal Airport presently. He stated that all the runways would be an RDC B-II-5000. He noted that there was an interactive table in the FAA advisory circular online where you could enter the RDC type and it would list all of the different dimensions.

Mr. McDougal displayed aerial photographs of the airport's existing runways. He stated that Runway 8/26 was 4,005 feet in length and 75 feet in width, and that Runway 17/35 was 3,705 feet in length and 100 feet in width. He explained that runway safety areas (RSA) were surfaces surrounding the runway prepared or suitable for reducing the risk of damage to an aircraft in the event of an undershoot, or excursion from the runway. He stated that another area was the runway object free area (ROFA) and explained that area was centered on the ground on a runway centerline to enhance the safety of aircraft operations by having the area remain clear of objects, except for objects required for air navigation or aircraft ground operations. He also identified the runway obstacle free zone (ROFZ) and explained that it was a three dimensional airspace along the runway that extended the runway centerline and was required to be clear of obstacles for protection of aircraft landing or take off from the runway, and for missed approaches.

Mr. McDougal further identified the runway protection zone (RPZ) and explained that it was an area at the ground level prior to the threshold or beyond the runway end, to enhance the safety and protection of people and property on the ground. He noted that the FAA encouraged it to be on your property and stated that there was a land use component to it where they did not want assemblies of people in those areas in case an airplane landed short or overran the runway. He explained that the RPZs changed size based on the size of the aircraft which was why they were so important.

Mr. McDougal stated that threshold siting surfaces were also present for both approach and departure surfaces. He stated that approach surfaces were designed to protect the use of the runway in both visual and instrument meteorological conditions near the airport. He noted that the approach should be clear of obstacles. He explained that for every 20 feet there was a foot increase in elevation on a slope. He noted that because there were non-precision approaches, they were all 20 to 1 approaches. He noted that trees, towers and buildings could not penetrate that 20 to 1 slope. He noted that in the past month the airport performed some tree cutting because trees had been penetrating that area. He explained that if anything was penetrating that area, the FAA would decline to allow instrument approaches at night because they would assume that a pilot coming in would not be able to see an obstruction in that area.

Mr. McDougal stated that threshold siting departure surfaces, when cleared of obstacles, allowed pilots to follow standard departure procedures in instrument meteorological conditions. He noted that this slope was 40 to 1, which was very shallow. He stated that he hardly knew of any places that could keep that slope clear. He explained that penetrations required non-standard climb rates or higher departure minimums. He noted that the airport could designate which runways would have these departure surfaces. He stated that the FAA would perform an analysis and if it was not clear, it would issue a non-standard instrument departure. He noted that most pilots were familiar with those.

Mr. McDougal spoke about electronic, visual, and satellite navigational aides (NAVAIDS). He stated that the airport had a very high frequency omnidirectional range and tactical air (VORTAC), which made airways for low and high altitude very high frequency omnidirectional range routes. He noted that VORTAC were being used much less around the country as the global positioning system (GPS) became the primary source of navigation. He stated that there was also an airport beacon, which rotated and was used less and less due to GPS. He explained that pilots used

to figure out where they were at night by going from beacon to beacon. He stated that the airport had runway end identifier lights (REIL), which were bright flashing strobe lights at the end of the runway to help a pilot locate the end of the runway. He also noted precision approach path indications (PAPI). He explained that pilots used the PAPIs as a glide path to make their approach to the end of the runway and explained that PAPIs kept them clear from known obstructions.

Mr. McDougal stated that there were RNAV GPS Instrument Approaches, which were getting better and better as GPS was being more widely used. He stated that the last NAVAID he would mention were the segmented circle and wind cones. He asked if anyone knew the official reason for a segmented circle. He stated that the reason was to draw the pilot's attention to the wind cone in the center of it. He noted that it would also let you know if there was a non-standard pattern. He stated that it was always a challenge to maintain segmented circles.

Mr. McDougal stated that the airport's Airport Traffic Control Tower (ATCT) was constructed and commissioned in 2004. He explained that the ATCT assisted a lot in forecasting as they could use real data instead of guessing. He stated that the ATCT was operated under the FAA Contract Tower Program, which meant that the FAA funded it, but it was privately run. He stated that the tower was operational from 7:00 a.m. to 7:00 p.m. 365 days a year. He noted that the airport had an Automated Weather Observing System (AWOS) as its weather reporting facility. He further noted that it specifically was an AWOS III. He stated that the system provided pilots information on a discrete radio frequency about wind speed, direction and gusts, temperature, dew point, altimeter, density altitude, precipitation accumulation, and cloud height as they were approaching the airport.

Mr. McDougal spoke about the existing taxiways and taxi lanes. He explained that taxiways were defined paths established for the taxiing of aircraft from one part of an airport to another and that a taxi lane was a taxiway for low speed and precise taxiing, located generally outside the movement area to provide access from taxiways to parking areas. He displayed an aerial photograph highlighting the different taxiways at the airport. He then displayed an aerial photograph highlighting the different taxi lanes at the airport.

Mr. McDougal spoke about the general aviation facilities at the airport. He stated that those facilities were hangars, terminal buildings, fuel farms, aircraft parking aprons, fixed base operators, flight schools, and a helipad. He stated that every airport needed support facilities. He explained that Ormond Beach Municipal Airport was under the jurisdictional responsibility of the Ormond Beach Fire Department and was primarily served by Ormond Beach Fire Stations 93 and 94. He stated that there was no aircraft rescue and firefighting requirement on a general aviation airport such as the Ormond Beach Municipal Airport. He explained that when passengers were being carried on airplanes with more than 9 seats, they would be required to have an Aircraft Rescue and Firefighting (ARF) Building and firefighting services standing by for commercial passenger carrying aircraft.

Mr. McDougal noted the fuel storage capacities for the different tanks at the airport as follows: three 12,000 gallon AvGAS tanks, one 10,000 gallon Jet-A tank, three 1,000 gallon fuel trucks, and one 2,200 gallon Jet-A truck.

Mr. McDougal stated that one of the recent changes to the master plan documentation was to look at the access, circulation, and parking for people that

were trying to find their way to the airport or into the airport. He cited examples of a cab driver knowing where to pick up a passenger. He asked if there was a communication medium on the gate at the airport.

Mr. Lichliter replied that there was an entry pad with a list provided to identify the facility the person wanted to go to. He explained that the person would then call that facility who could press a number on their phone to open the gate, if necessary.

Mr. McDougal noted that the circulation would be reviewed as the planning process went on, and they would try and determine if there were any ways to improve it in the future, particularly with respect to roadways. He noted that the airport owned two non-aeronautical facilities and leased the land with the revenue coming back to the airport. He explained that it was an FAA requirement that if revenue was generated on airport obligated land that all proceeds flow to the airport as opposed to the General Fund. He stated that those two facilities were the Ormond Beach Sports Complex, which was 113 acres, and the River Bend Golf Course, which was 172 acres.

VI. FAA Approved Aviation Activity Forecast

Mr. Hans Dorries, Senior Airport Planner, Hoyle, Tanner & Associates, Inc., displayed the approved forecast and a letter from the FAA stating that they had reviewed the forecast and thought it was reasonable to be used in the master plan. He stated that the first step was a survey of the existing based aircraft. He noted that the aircraft at the airport were counted and that there were 163 based aircraft as of December 2014. He stated that the next step was to look at different forecasts and explained that the FAA put out a forecast called a Terminal Area Forecast (TAF) and an aerospace forecast, which was a national look at the entire aviation system. He explained that the TAF was specific to each airport. He explained that they looked at all of those forecasts and tried to determine what reasonable growth rates would be. He displayed those growth rates on a chart and noted that the base aircraft increased from 163 in 2014 to a forecasted 207 in 2034.

Mr. Dorries noted that the same predicting was done with operations, explaining that an operation was either the takeoff or landing of an aircraft. He explained that they started with a baseline for total annual operations and used the TAF, the tower opinion, and FAA data systems to determine their total. He stated that they determined that 124,695 would be the baseline for 2014. He displayed a graph showing that the forecasted total annual operations changed from 124,685 in 2014 to 152,575 in 2034. He noted that the next step was to break operations down into two types: itinerant and local. He explained that itinerant meant that these were operations that came to the airport and then left the airport. He noted that those would be aircraft based in other airports which came to Ormond Beach for a specific reason. He displayed a graph with the itinerant operations forecast and noted that they anticipated an increase from the baseline of 67,764 in 2014 to 83,916 in 2034.

Mr. Dorries stated that local operations comprised the aircraft that operated within the tower control and comprised most of the flight training actions at the airport. He explained that flight students would fly and come back to the same airport to practice or practice landings and takeoffs. He displayed a graph with the local operations showing 56,931 in 2014 and 68,659 in 2034. He noted that there were also helicopter operations at the airport and that the base in 2014 was 6,235 and 7,629 were forecasted for 2034. He stated that they also looked at instrument operations

and explained that those were the aircraft that were flown by instrument procedures and were mostly itinerant operations. He displayed a graph with the instrument operations projections and noted it was forecasted to rise from 7,454 in 2014 to 9,229 in 2034.

Mr. Dorries noted that they had spoken to the ATCT to get estimates on the peak periods. He noted that they determined that summer was usually the time for peak activity and that the average day during the peak month would have 624 operations and could get as many as 110 operations in an hour. He explained that the peak months had 13,240 operations in 2014. He noted that an operation could be either a takeoff or landing of an aircraft. He explained that a "touch and go," or takeoff and landing, or landing and takeoff, was normally counted as two operations.

Mr. Dorries stated that the last part in the forecast table was the critical aircraft forecast. He noted that the AAG was "B" and the ADG was "II," as previously mentioned by Mr. McDougal. He stated that the Taxiway Design Group (TDG) was 1B. He explained that the TDG depended on the aircraft's requirements to taxi around the airport. He noted on a graph that the airport was currently a B-II with a 1B TDG and was forecasted to remain so in the future until 2034, where it was forecasted to be a C-II with a 1B TDG. He stated that they thought it was a possibility in 20 years that larger aircraft may want to operate at the airport, but he noted that it was not a certainty. He noted that C-II was not the designation for large commercial aircraft and that designation did not change the dimension of the airplane; but as Mr. McDougal had explained the designation, it had to do with the speed of the approach.

VII. How to Determine Future Facility Requirements

Mr. Dorries stated that first they calculated the annual service volume (ASV). He explained that they looked at the geometry of the runway configuration. He stated that the FAA provided guidance in the form of FAA Advisory Circular (AC) 150/5060-5 Airport Capacity and Delay. He noted that was a very theoretical methodology for estimating the capacity of an airport. He stated that for the existing runway configuration, the ASV was 230,000 annual operations, which was what it was estimated that the airport could handle under no constraints. He stated that the forecast was for operations to be at about 66% of capacity in 2034, noting that a lot of capacity would remain. He explained that if they were at 80% of capacity, they would perform additional calculations in order to look at delay.

Mr. Doug Norman, Senior Vice President, Hoyle, Tanner & Associates, Inc., stated that Ormond Beach was classified as a B-II which meant that the FAA took into account the size of aircraft utilizing the airport and that there were at least 500 operations. He explained that the dimensional standards in the taxiways and runways would all be designed to meet that classification. He stated that every three years the FDOT performed an evaluation of all of the airports in Florida. He explained that they performed a pavement condition index (PCI) on the pavement. He stated that the study he would be referencing was performed in 2011 and while the pavement had been recently inspected again in 2014, the data had not yet been made available. He noted that because of that it did not show Taxiway A, Taxiway C, and the realignment portion of Taxiway E, and the Taxiway B intersection. He explained that those had all been redone and were therefore in good condition. He noted that the only pavement in poor condition was Taxiway D and Taxiway B, Taxiway E, and Taxiway F were in fair condition.

A member of the public in attendance noted that he was not a pilot and asked Mr. Norman to explain the taxiways.

Mr. Norman used the laser pointer to point out the taxiways on the overhead projection screen which displayed a PowerPoint slide of an overhead map of the airport taxiways. He stated that Taxiway A was the parallel to Runway 8/26. He identified Taxiway C, Taxiway B, Taxiway E, and Taxiway D. He explained that every runway was classified by the direction in which it ran. He cited Runway 8/26 as an example and noted that it ran in a 360 degree pattern, 80 degrees and 260 degrees. He noted that Runway 17/35's pavement was in good condition, but its runway markings were faded. He stated that Runway 8/26's pavement was in fair condition and its runway markings were also faded. He stated that the FAA took this criteria and made recommendations on when the runways and taxiways needed to be rehabilitated. He noted that he did not have that data present, but in the future those pavements would have to be reconditioned, milled, and overlaid. He stated that the runways were in relatively good condition and that the facilities overall were in very good condition. He cited Taxiway D and Taxiway E as those likely needing attention in the near future.

Mr. Dorries stated that there were runway length requirements. He stated that the FAA provided guidance in Advisory Circular (AC) 150/5325-4B Runway Length Requirements for Airport Design. He explained that the AC provided how a runway length was to be estimated for airport purposes. He stated that the factors that governed the suitability of runway length included airport elevation, temperature, wind velocity, airplane operating weights, takeoff and landing flap settings, runway surface conditions (dry or wet), effective runway gradient and obstructions, and noise abatement procedures. He displayed tables showing different types of aircraft. He explained that up to 75% of the fleet was in the first table, while 25% were in the second table.

Mr. Dorries explained that they took those figures and looked at what the hottest month would be and what the mean daily maximum temperature would be in the hottest month. He noted that the estimate was that the hottest month for the airport was July and that the mean daily maximum temperature was 90.6 degrees Fahrenheit. He stated that if they wanted to have the ability to offer the runway to 75% of the fleet, which constituted the aircraft varieties in the first table shown, at 90% useful load, they would need a runway length of 6,700 feet. He noted that if they wished to limit the useful load to 60%, then they would only need a runway length of 4,600 feet. He stated that if they wanted to have the ability to offer the runway to 100% of the fleet, which constituted the aircraft varieties in both of the tables shown at 90% useful load, then they would need a runway length of 8,400 feet. He noted that if they wished to limit the useful load to 60%, then they would only need a runway length of 5,400 feet.

Mr. Dorries stated that the overall apron area, where the airplanes were parked, was insufficient, and there were too many airplanes parked too closely together. He explained that the existing apron pavement condition also needed to be improved and that the aircraft circulation provided by the current taxi lanes was insufficient. He noted that they did not want to have airplanes running into each other or into a building. He stated that fixed base operators (FBO) were operators who offered services to the airport. He noted that there were currently limited FBO services for itinerant traffic. He explained that this was a problem because of the apron area and

that if a jet wanted to come in they would have to call in ahead of time and reserve the space as things would have to be moved around to accommodate them.

Mr. Dorries stated that the airport manager's office was currently located in the ATCT, which was an area restricted to public access. He noted that it would be nice to have it located in an area that was more accessible to the public. He stated that there were two fuel farms located at the intersection of Taxiway B and Taxiway D, which was a convenient location for aircraft refueling. He noted that they were thinking about possible different locations for those fuel farms as many pilots who wanted to refuel may also want to exit the aircraft and use restroom facilities or FBO services in order to take a break.

VIII. Public Comments

Mr. McDougal asked members of the public who wished to speak to please give their name and address at the start of their comments and explained that they would each have two minutes to speak. He requested that comments be kept to items on the agenda, which included the airport inventory and the forecast that was presented. He requested that comments and questions be provided in writing on the comment forms provided. He noted that not all comments and questions could be answered that evening and that additional answers and updates could be provided on the airport website. He stated that the intent was for the public to have an opportunity to make their comments, and he explained that if a brief answer could be provided after their question, they would try and answer it at that time; but otherwise the answer would be provided at a later date.

Mr. Lichliter explained that there was an airport webpage that could be found at www.ormondbeach.org and on that webpage there would be a dedicated subpage for the 2015 Airport Master Plan Update. He noted that this presentation would be available on that subpage.

Mr. Paul Schulten, 1201 Kirkpatrick Circle, presented a theoretical scenario where he was a businessman and a pilot who owned an airplane and wanted to visit sunny Florida. He noted that this theoretical pilot had heard about Ormond Crossings and was considering having a business in the area and moving his family to Ormond Beach. He stated that this pilot would load up his wife in his airplane and fly to the Ormond Beach Municipal Airport. He asked where this theoretical pilot would park as there was no place to put his airplane. He noted that there was no place for the pilot's wife to use the restroom if she exited the airplane. He asked where he would buy fuel. He noted that if the tower was closed he would not know what to do or where to go. He stated that this pilot and his wife might want to go into the city to eat and explore the area. He stated that it would not happen because there was no place to put their airplane. He noted that the wife would not want to come back since she could not use the restroom at the airport.

Mr. Schulten stated that he did have an airplane which was based out of the airport. He noted that it was not a very open and hospitable airport, which was a shame as it was a wonderful facility and located in sunny Florida where everyone wanted to be. He noted that Ormond Crossings and other business developments in the area would want airplane access, but he reiterated that there was nowhere for them to go at the airport. He explained that presently someone coming in would land and just get gas and leave. He noted that his observation as a pilot flying into the airport was

that it was a dead end. He stated that it would be great if something could be done as the airport had great facilities and great businesses.

Mr. Stan Driscoll, 10 Sandalwood Lane, stated that his home was located directly under the north-south runway on the Tomoka River. He noted that in the objectives for the plan it had listed airport expansion. He stated that he did not see anything in the presentation about noise abatement. He asked what the airport's plans for noise abatement were. He stated that he had presently been informed by airport management that when the tower was operating it could not see the aircraft when they were out over the Tomoka River. He noted that if the airport tower could not see aircraft, then it could not control them. He stated that the Ormond Beach Municipal Airport was primarily a flight school operation and did not have many transient aircraft. He explained that student pilots were coming into the airport flying very low and slow and pushing outside the recommended flight pattern. He further explained that there was a recommended flight path to remain west of the river, but he noted that the student pilots did not follow it.

Mr. Driscoll stated that he would like to see a specific section on noise abatement in the master plan report. He noted that one of the slides in the presentation discussed FAA requirements for airport length and that one of the considerations was noise abatement procedures. He asked what the noise abatement procedures were for the airport and asked what would be done to make sure that planes remained to the west of the river and did not fly in over the predominately residential areas on the east side of the river.

Ms. Peggy Farmer, 4 Allenwood Look, stated that she lived within the five mile range of the airport. She noted that she did not have a business at the airport but explained that she was very concerned about the economic prosperity of Ormond Beach. She stated that she had been waiting patiently for Ormond Crossings, which was the greatest possibility for the city's future. She noted that she and others were working diligently to enhance the beauty of the North US1 corridor, which was located in front of Ormond Crossings. She explained that Ormond Crossings went further back by the airport and that for Ormond Crossings to attract good corporate businesses and industry they needed the airport to improve. She stated that it was the little airport that could, but it now needed to become the little airport that did. She explained that the airport was an embarrassment and that she had heard repeatedly that planes landed there and their occupants could not go to the restroom. She stated that the community could do better than that. She explained that she felt that in the budget and long-range planning there should be plans to improve the airport so that it would welcome people to the wonderful community. She stated that economic prosperity had to be protected.

Mr. David Slick, 322 John Anderson Drive, stated that he had lived in Ormond Beach since 1986 and had specifically moved to the city because of the airport. He stated that he owned Command Medical Products which now had a payroll of about $4.5 to $5 million, and employed about 125 people, which had a tremendous impact on the community. He noted that his business was located in the Airport Industrial Park specifically because of the airport. He stated that the airport should be an economic development engine. He mentioned that Ormond Crossings was just starting to blossom again due to the national economy. He explained that the businesses coming down to look at Ormond Crossings would go through the same scouting process as he did, and he noted that he also looked at Deland, Daytona Beach, and New Smyrna Beach before landing in Ormond Beach. He explained that he came to Ormond Beach because he loved the community and not because the airport was

the best around. He stated that there was now an opportunity to get some things in the airport master plan which would make it enticing for those coming looking to build buildings and businesses in the new Ormond Crossings. He stated that he hoped that the city would start working diligently on a city-run FBO, an extension of the runway, and other things that would really help make the airport viable for the next 20 to 30 years. He explained that new airplanes would require extensions of the runway.

Mr. Mike Jiloty, 15 Winding Creek Way, stated that he owned a small business in Ormond Beach. He explained that he just wanted to underscore the thought that the Ormond Beach Municipal Airport was a port of entry for the community. He stated that he started flying in the late 1980s and flew in and out of airports throughout the state of Florida. He noted that he was specifically thinking about airports in Naples, Lakeland, and Tallahassee. He explained that during that time those airports had gone though major makeovers and a renaissance of sorts so that they were now very presentable, welcoming for the business community, and also very much a part of their own communities. He stated that those were the types of things he would like to see for the Ormond Beach Municipal Airport. He stated that the airport would be a driver for economic development in Ormond Crossings, and he thought that it was vital that as many improvements were included in the master plan as possible so that in the decades ahead the airport could be made an even more important part of the community.

Mr. Al Jorczak, 679 N. Beach Street, stated that he would like to echo some of Mr. Slick's comments as he also had a business in the Airport Industrial Park. He stated that he relocated from Connecticut to Ormond Beach because he wanted to be close to an airport. He noted that he had lived in the city for almost 25 years and felt that the progress made on the previous master plan for the airport had not gone terribly well in terms of capitalizing on projects. He stated that the airport was sadly deficient as compared to surrounding airports in other communities. He explained that it was not a business friendly airport for those who might want to come and relocate to the area. He stated that Ormond Crossings could be a huge economic driver, located just north of the airport, but only if the city was to take the asset of the airport and use it effectively. He noted that presently it was not being used very effectively. He explained that projects and improvements took a very long time to develop and just because they were in the master plan it did not necessarily mean that they were going to get done. He stated that he thought the objective should be to look to maximizing the capability of what could be developed in the plan. He noted that if something was not in the plan it could not be done, so they should consider what should be in the plan and then look at it from a capital budgeting standpoint. He stated that the airport needed to be improved upon if it was going to attract businesses.

Mr. Charles Russell, 14 Cotton Mill Court, asked what, if anything, in the master plan would look at the citizens who were harassed daily by flight school planes. He explained that there had been a long process previously that had elicited pledges of abiding by the flight path, but he stated that it was routinely being violated. He stated that the community should be polled on it. He stated that flight schools had to be told that they were offensive to those that lived there. He noted that pledges and promises had been made but were broken every day. He asked if flight school operators were required to have liability insurance. He noted that the FAA did not require liability insurance for planes.

Mr. Lichliter stated that he could not answer that question as he did not run a flight school. He stated that he would find out for Mr. Russell and see if he could get some specific information about what the flight schools did or did not carry for insurance. He noted that he would find the answer and contact Mr. Russell.

An individual in the audience asked Mr. Lichliter when the comment forms had to be turned in; whereby, Mr. Lichliter replied that he would prefer to receive them that evening, but that they could also be emailed or mailed to him at a later date, if that was not possible.

Ms. Mary Schulten noted that she was under 18 years old and would therefore not disclose her address. She stated that she was part of the Ormond Aircraft Group and President of the Volusia Teenage Republicans and had interned for both Florida State Representative Paul Renner and Florida Senator Travis Hutson and as such had the greater good of the community in mind. She stated that she thought that the airport was a wonderful asset to the community, but it needed to be utilized better. She noted that a good FBO would have an impact. She explained that she herself was a student pilot and wanted to return to locations she flew to that had great FBOs. She stated that she thought that Ormond Beach's options and potential were limited by not having somewhere where pilots could use the restrooms and get a drink after they landed. She noted that another problem was that fuel was not available all of the time. She stated that she would like to see those improvements be made.

Mr. Eric Sanderson, 302 River Bluff Drive, stated that he lived in the big pocket near the north and south runway. He explained that he did not know anything about the student flight plans or helicopters and was not too worried about the noise but noted that the flight students flew right above his home. He stated that he was formerly a firefighter and paramedic. He explained that his home butted up against the woods and if anything were to happen there would be no stopping a brush fire coming up to the woods. He noted that there had never been a controlled burn in that location. He stated that two fire stations would not be able to handle it if something were to happen. He asked about the flight plan and noted that helicopters also flew over his home.

Mr. Lichliter stated that the practice patterns for the helicopters were part of the published noise abatement procedures. He explained that the helicopters should not be flying on the other side of Airport Road over by Tomoka Oaks and the Trails. He stated that they would continue to work with the helicopter operators to make them do so. He explained that student pilots and other transitory pilots may not always realize that those flight plans were in effect, but it was something that they could keep working on with them. He noted that the pattern was supposed to keep them on the airport side of Airport Road.

Mr. Schulten stated that he was sympathetic to those living around the airport. He noted that he saw a lot of flight schools not abiding by the set out procedures. He explained that it made him feel bad as he was a pilot, too. He noted that many students performed very shallow approaches, and he was not sure what they were being taught as airlines did not fly like that. He stated that it was unsafe. He stated that it would be easy to fix the issue of the flight path over the river as flyers could be given to different flight schools to instruct them on the proper flight paths. He offered his assistance. He stated that every airport around the world was unique. He stated that there was no reason that the students could not move their flight patterns 500

feet in the other direction. He noted that it was actually good practice and that there was no reason that their flight instructors could not teach them to do a minimum three degree glide slope, which was what airliners did.

A member of the audience began to interject and the presenters reiterated that any comments needed to be made into the microphone and on the record.

Mr. Driscoll stated that there was a specific published flight plan where the flights were supposed to remain west of the river and not come by Tomoka Oaks or Hidden Hills. He stated that the flight plan was not being enforced. He explained that he was told that the tower could not see the flights that far out because the radar that they were looking at was Daytona Beach's radar. He stated that he did not know whether it was airport management or the tower control that was deficient.

Mr. Lichliter stated that there were voluntary noise abatement procedures and published flight patterns for the airport. He explained that the issue was that the tower's primary function was to maintain safe separation of aircraft and that they did not have the perspective to necessarily tell which spot on the ground the plane was over as they were primarily concerned with their location in the air. He further explained that the city did not have any authority to enforce noise abatement procedures as that was the sole purview of the FAA. He noted that it was a challenge and very frustrating. He stated that they could not go further than voluntary procedures, but he noted that they did communicate with the flights schools and were open to developing new voluntary procedures. He explained that the flight schools did need to work on being professional as they were holding themselves out as a place to train professional pilots. He noted that it was frustrating for him, as well as the residents impacted by it; but he explained that the city was doing what it could to help the situation. He reiterated that the tower was concerned with safe separation of aircraft. He requested that the discussion focus on the master plan and asked for any other speakers who had comments on the master plan.

Mr. Jorczak stated that he currently served on the city's Planning Board and had previously served on the Aviation Advisory Board. He noted that he had a technical question with respect to the forecasting procedure that had been determined in conjunction with the FAA. He asked what the long-term plans were with respect to what was anticipated to be done with the industrial segment of Ormond Crossings, and the other added segment, which would be wholesale retail and housing. He noted that Ormond Crossings would be a huge development located on the north side of the airport. He asked how the potential for the time span in which Ormond Crossings' development would take place was factored into the projection for the usage of the airport and how it would impact those numbers. He explained that as companies started to come in to fill the industrial park and more business class aircraft began to utilize the airport, it would have an impact on how those numbers changed. He noted that while they were forecasting today, they were really looking out 10 or 15 years in terms of what that development structure would be. He stated that this was where it was critical with respect to how much could be packed into the plan to even achieve the funding necessary for segments of the plan to be accomplished. He stated that if those numbers should not be based on some formula that did not look at the specific circumstances in Ormond Beach. He again noted that if a project was not in the plan they could not get funding for it.

Mr. McDougal stated that this formula and forecast had been approved by the FAA. He noted that while it was a long-term forecast, the first five years were the most

accurate. He stated that the first five years showed a slow and steady growth which was what they anticipated to happen. He explained that the FAA and FDOT had based aircraft at a certain level, and then Mr. Lichliter did an inventory and the based aircraft figure was much higher. He noted that as those things changed the master plan would change. He explained that if they had to do a revision to the forecast because of an increase in activity they could do so and seek a new forecast approval. He noted that they would show that growth was occurring and that it was not staying with the forecast. He stated that FDOT and FAA forecasts were right part of the time over time. He noted that the economics would change and it would affect the forecast. He stated that it was important to look at the forecast three to five years in the future and to see where there were increases and changes.

IX. Final Comments and Meeting Adjournment

Mr. McDougal stated that the next steps would be to look at the alternatives. He explained that some of the alternatives would be coming from the comment form suggestions. He stated that they would look at how those ideas could happen at the airport and look at things such as where an FBO or a General Aviation (GA) Terminal could be located. He noted that an FBO was normally a private business selling services to pilots. He stated that a GA Terminal could provide facilities such as a restaurant, restrooms, and water. He noted that those things were important. He explained that they would review the alternatives and then evaluate them against things like environmental constraints, airspace constraints, and ground space constraints. He stated that they would create alternatives and then propose likely alternatives which would be brought back to see what would work the best for the community.

Mr. McDougal stated that he anticipated that the next meeting would take place at the end of July or in early August. He thanked those in attendance for participating and encouraged them to complete the comment forms provided and return them to Mr. Lichliter.

Mr. Lichliter stated that the comment forms had been provided previously and that he had received a lot of responses, but he encouraged those in attendance to complete it if they had not already and noted that they could use a new form to elaborate or provide additional details to existing comments made. He noted that the comment forms would be used to develop the new master plan. He stated that the form would be available on the website along with the PowerPoint presentation shown that evening. He thanked those in attendance for coming and participating.

The meeting ended at 7:21 p.m.

Transcribed by: Colby Cilento

Airport Master Plan Update Meeting - April 28, 2015
Public Comments

Paul Schulten: Mentioned Ormond Crossings, no place to put his airplane and buy fuel, no rest rooms. No information on where to go in Ormond Beach. Recommended investment in an FBO facility.

Stan Driscoll: His home is in the flight area of Runway 17/35. He wants the master plan to address noise abatement, not just expansion. Observed planes too low and outside the recommended patterns.

Peggy Farmer: Ormond Crossings will drive a need for more airport facilities. Airport is an embarrassment, no rest rooms.

David Slick: He located his business, Command Medical, because of the proximity to the airport. Mentioned Ormond Crossings. City should work to build a full-service FBO.

Mike Jiloty: Mentioned Ormond Crossings. Mentioned Naples, Lakeland, Tallahassee.

Al Jorczak: He located his business because of the airport. Ormond Airport is deficient compared to other community airports. Mentioned Ormond Crossings.

Charles Russell: Concerned about flight training and flight patterns that impact residential properties. Flight schools violated flight paths. Flight schools should carry liability insurance.

Mary Schulten: Recommended that the City build a full service FBO. Need rest rooms at the airport. Fuel should be easier to obtain.

Eric Sanderson: Concerned about fire safety near his home, which is located near Runway 17/35.

Summary of Written Comments from the Public Meeting

1.) Resident: Changes Wanted – Safety, less noise, upgrades. Changes Not Wanted – More air traffic, no more noise.
2.) Resident: Recommends more services at airport to serve current airport users and projected users from Ormond Crossings.
3.) Resident: Wants full service FBO, better maintained runways, taxiways and airport grounds.
4.) Eric Sanderson: Enforcement of flight paths for planes and helicopters.
5.) Resident: Need more FAA oversight of flight paths
6.) Resident: Improve FBO services, Airport Manager more accessible. More upgrades for business recruitment, enforcement of noise abatement.
7.) Resident: Ormond has not undergone significant upgrades compared to the other local airports. Clean runways, taxi lanes and taxiways. Improve appearance of FBOs. Extend 8/26 and 17/35. Prohibit expansion of Sports Complex. Don't sell airport land. More and better landscaping, way-finding signage for pilots, IFR to runways. Provide a one-page summary of aviation terms at public meetings.
8.) Resident (Pilot): Need 24/7 FBO, pavement improvements, 24/7 fuel. Make airport tower accessible.

Ormond Beach Airport - Tenant & User Survey

Please provide data for the years 2013 and 2014.

1. General Information

Company Name Mile High Aviation Partners, LLC

Product (s) or Service(s) _____

Contact Name Jim Weite Phone No. 386 679 9004

Email address jweite@aol.com

2. Aviation Activity

What area of aviation activity applies to your business at the Airport (please check all that apply)

X FBO/Air Taxi/Corporate Aviation

__ Air Freight Carrier

__ Government (FAA/Airport Management/Airport Proprietor

__ Other _____

3. **Aircraft employed** (if applicable)

Aircraft Type	Make and Model	Average Annual Departures
SEL Recip and Turbine		
ME Recip	PA31-350	40
ME Turbine < 12.5K MGTOW		
ME Turbine > 12.5K MGTOW		
Helo		

Typical Dry runway takeoff length required for most demanding aircraft you fly at MGTOW, ISA +15 4,200

Typical Wet runway takeoff length required for most demanding aircraft you fly at MGTOW, ISA +15 4,350

How often is payload or range limited by runway takeoff length requirements? 50 % of the flights

What aircraft would you use if a 1000 foot longer runway was available at OMN? PA31-350.

4. Employment

How many employees were employed by your company at the Airport?

____Full-time employees (in 2013). ____Part-time employees (in 2013). NONE

____Full-time employees (in 2014). ____Part-time employees (in 2014).

5. Company Expenditures

a.) How much salary was paid to these employees?

$_____(in 2013) $_____(in 2014). NONE

b.) How much did your company pay in property taxes at the Airport?

$_____(in 2013) $_____(in 2014).

c.) How much has your company spent for major Capital Improvements at Ormond Beach Municipal Airport over the past three years?

Year	Capital Improvements
2014	$_____ NONE
2013	$_____
2012	$_____

d.) Omitting the expenditure categories above (i.e.,payroll, taxes, capital improvements, how much did your company pay for all other operating expenses(incl, depreciation) at the Airport?

$_____(in 2013) $_____(in 2014). NONE

Please share other comments that you feel should be considered as the Airport Master Plan is updated.

Return survey to Steven Lichliter, Airport Manager or
Evan R. McDougal, Hoyle, Tanner & Associates, emcdougal@hoyletanner.com

Ormond Beach Airport Master Plan Update
Public Involvement Program
Alternatives and CIP Meeting
Aug 24, 2015

Instructions

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Please answer the questions below as clear and concise as possible, and submit your responses according to the instructions on the back of this form.

1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

pilot and hanger owner
future plans to open medical facility to provide FAA and EASA medical exams to pilots

2. Please provide a written statement indicating your preference for the runway alternatives based on the presentation provided at tonight's public meeting. The alternatives are: No build, Alt 1 , 5004 feet — 600 on west end and 400 on east, Alt 2, 5004 feet — 1000 feet on west end, and Alt 3, 4604 feet — 600 feet on west end.

Alternate 2 - based on costs that are less than alternate 1 but consider extending west by 200± feet to avoid costs of changing airport road and lessen costs of land acquisition to the west.

3. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

① Runway extension as above
② establish working, itinerant friendly FBO
③ repair existing apron and taxiways

Continued on reverse side

4. Please list THREE things you would LEAST like to see at Ormond Beach Airport (in descending priority)

5. Please provide any other COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

I am a medical examiner for the FAA and the European EASA. I have plans to move My medical facility to the airport. At present, my pilot patients fly in from around the entire east coast and find no facility to accomodate them. A terminal or FBO is essential to attract both business and itinerant traffic

Your responses will be analyzed by the planning team and included in the airport master plan document.

Please submit this form to and any additional sheets via mail or electronic form to:

Steven Lichliter
Airport Manager
Address: P.O. Box 277, Ormond Beach, FL 32175
Email: steven.lichliter@ormondbeach.org

Robert McCabe
113 Three Bears Trl
Ormond Beach, FL

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1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

Resident (neighboring community)

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I would support Alt 2 an extension to the west with either acquisition of property or, preferably, an easement.
I would oppose Alt. 1 and see limited benefit in Alt 3.

3. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

(1) Maintenance of existing runways to comply with FDOT recommendations.
(2) Development of some non-aeronautical assets near existing business park. Accentuate the lease of this property rather than selling airport real-estate.
(3) Small terminal may be worth considering.

Continued on reverse side

4. Please list THREE things you would LEAST like to see at Ormond Beach Airport (in descending priority)

(1) Runway extension to east and any relocation of Airport Rd for that purpose.

(2) Would prefer not to see aircraft greater than B II category in the master plan. Reserve that for future plan with much greater opportunity for public input based on capabilities of aircraft at that time.

(3) Construction of restaurant may not be necessary if development along US1 comes with airport improvements and greater control of US1 north to the I-95 intersection and beyond (as is currently being done). Transportation to ~~near~~ potential new restaurants in that area should be ~~more~~ adequate.

5. Please provide any other COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

Thank you for today's presentation and the opportunity to provide inputs.

Your responses will be analyzed by the planning team and included in the airport master plan document.

Please submit this form to and any additional sheets via mail or electronic form to:

Steven Lichliter
Airport Manager
Address: P.O. Box 277, Ormond Beach, FL 32175
Email: steven.lichliter@ormondbeach.org

Caroline McCabe
113 Three Bears Tr
Ormond Bch
32174

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1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

resident nearby

2. Please provide a written statement indicating your preference for the runway alternatives based on the presentation provided at tonight's public meeting. The alternatives are: No build, Alt 1 , 5004 feet — 600 on west end and 400 on east, Alt 2, 5004 feet — 1000 feet on west end, and Alt 3, 4604 feet — 600 feet on west end.

My preference is Alt. 2

3. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

repairing runways

Continued on reverse side

4. Please list THREE things you would LEAST like to see at Ormond Beach Airport (in descending priority)

A H. 1 – w/ extension on East side.

5. Please provide any other COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

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1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

CAP

2. Please provide a written statement indicating your preference for the runway alternatives based on the presentation provided at tonight's public meeting. The alternatives are: No build, Alt 1 , 5004 feet — 600 on west end and 400 on east, Alt 2, 5004 feet — 1000 feet on west end, and Alt 3, 4604 feet — 600 feet on west end.

ALT 2, 5004 FEET 1000 FEET WEST END ONLY

3. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

1 ADD 1000 FEET ON West END OF (8-26) ONLY
2 ADD TAXEY TO West SIDE OF NORTH SOUTH RUNWAY FULL LENGTH OF RUNWAY. (17-35)
3 BETTER FUEL SERVICE

Continued on reverse side

4. Please list THREE things you would LEAST like to see at Ormond Beach Airport (in descending priority)

DO NOT SALE OFF AIRPORT LAND

5. Please provide any other COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

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1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

Resident, aviation enthusiast

2. Please provide a written statement indicating your preference for the runway alternatives based on the presentation provided at tonight's public meeting. The alternatives are: No build, Alt 1 , 5004 feet — 600 on west end and 400 on east, Alt 2, 5004 feet — 1000 feet on west end, and Alt 3, 4604 feet — 600 feet on west end.

Alternative 2

3. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

1. Runway extensions
2. Land development for aeronautical use
3. Resurface controlled surfaces

Continued on reverse side

4. Please list THREE things you would LEAST like to see at Ormond Beach Airport (in descending priority)

1. more stringent noise abatement policies
2. No - build Alternative

5. Please provide any other COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

I strongly support continued growth of aviation business and private activities at the airport.

Your responses will be analyzed by the planning team and included in the airport master plan document.

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Steven Lichliter
Airport Manager
Address: P.O. Box 277, Ormond Beach, FL 32175
Email: steven.lichliter@ormondbeach.org

Peggy Kramer

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1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

resident

2. Please provide a written statement indicating your preference for the runway alternatives based on the presentation provided at tonight's public meeting. The alternatives are: No build, Alt 1 , 5004 feet — 600 on west end and 400 on east, Alt 2, 5004 feet — 1000 feet on west end, and Alt 3, 4604 feet — 600 feet on west end.

(4600' to 5200')

alt 2 or alt 3) depending on $$

3. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

Runway to accomodate corporate jets
Respectable FBO - under paving -
No objective reasons leaving airport as it is - we must upgrade to meet the economic challenges of the time!

Continued on reverse side

4. Please list THREE things you would LEAST like to see at Ormond Beach Airport (in descending priority)

5. Please provide any other COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

Decisions should be based on facts, not emotions. Example - if a longer runway doesn't > noise, in fact, may < noise, this should be clearly explained.

St Simons

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Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

Pilot - Business owner / industrial Park

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Alt 2 -

3. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

Runway Length -
FBO -
fuel -

Continued on reverse side

4. Please list THREE things you would LEAST like to see at Ormond Beach Airport (in descending priority)

No Action on Runway ext.

5. Please provide any other COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

DAVID SLICK
322 John Anderson Dr
ORM
386-677-7775

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1. In what particular airport stakeholder groups do you consider yourself?
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PILOT

2. Please provide a written statement indicating your preference for the runway alternatives based on the presentation provided at tonight's public meeting. The alternatives are: No build, Alt 1 , 5004 feet — 600 on west end and 400 on east, Alt 2, 5004 feet — 1000 feet on west end, and Alt 3, 4604 feet — 600 feet on west end.

ALT 2 - MOVING OPS TO THE WEST END MAKES SENSE!

3. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

1. TERMINAL W RESTROOMS / LOUNGE
2. RUNWAY LENGTHENING (ALT 2)
3. A NEAR FBO/TERMINAL, CHOICES FOR FUEL

Continued on reverse side

4. Please list THREE things you would LEAST like to see at Ormond Beach Airport (in descending priority)

1. STATUS QUO – allowing the "FBO" we (don't) have to CONTINUE to serve as an "FBO"
2. LESS FLIGHT TRAINING, more corporate!
3. DON'T GIVE AWAY ANY more AIRPORT PROPERTY to NON-AVIATION (SW Quad)

5. Please provide any other COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

Relative to most other GA Fields, OMN is a disgrace. Petty Squabbles, [redacted] LACK of competition (fuel), NO FBO (JUST TRY FINDING A RESTROOM – NO SIGNAGE ON ANYTHING) NO TERMINAL/LOUNGE – ITS VERY UNWELCOMING. Where do I PARK? I Promise you inside of a few minutes Someone is going to yell at you about where you parked! Its dysfunctional. WHY SHOULD I come TO OMN?? I'll GO TO FLAGLER – restaurant, cheap gas, restrooms .....

Your responses will be analyzed by the planning team and included in the airport master plan document.

Please submit this form to and any additional sheets via mail or electronic form to:

Steven Lichliter
Airport Manager
Address: P.O. Box 277, Ormond Beach, FL 32175
Email: steven.lichliter@ormondbeach.org

FLT TRNG SW Quad

Ormond Beach Airport Master Plan Update
Public Involvement Program
Alternatives and CIP Meeting
Aug 24, 2015

Instructions for Public Meeting Attendees

The City of Ormond Beach is conducting a master planning process for the future development of the Ormond Beach Airport. As part of the master planning process, a public involvement program has been established.

You have received this survey form because you are a valuable member of the community and you are a stakeholder in the airport master planning process. We believe that your input in the process is relevant to the future development of the airport.

Please answer the questions below as clear and concise as possible, and submit your responses according to the instructions on the back of this form.

1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

PILOT & BUSINESS OWNER

2. Please provide a written statement indicating your preference for the runway alternatives based on the presentation provided at tonight's public meeting. The alternatives are: No build, Alt 1 , 5004 feet — 600 on west end and 400 on east, Alt 2, 5004 feet — 1000 feet on west end, and Alt 3, 4604 feet — 600 feet on west end.

ALT#2

3. Please list (in descending priority) THREE improvements you would MOST like to see at the Ormond Beach Municipal Airport.

1. MAXOUT BOTH RUNWAYS
2. BUILD A CITY FBO & CORPORA TE HANGERS
3. LINK NORTH & SOUTH SIDES OF FIELD
4. ISOLATE "CORPORA TE" SIDE FROM OTHER FLIGHT SCHOOL ACTIVITIES

Continued on reverse side

4. Please provide any other COMMENTS regarding the future development of the Ormond Beach Municipal Airport.

LEAST like to see at Ormond Beach Airport:

1. SELLING OFF EXISTING PROPERTY
2. PUSHING OUT RUNWAY EXTENSION TIME
3. PUSHING OUT MUNICIPAL FBO CONSTRUCTION TIME

Your responses will be analyzed by the planning team and included in the airport master plan document.

Please provide your name and address below, and submit this form to City Staff at the conclusion of the public meeting.

Name: Alan D. Jorczak

Address: 8 W. Tower Circle

Ormond Beach, FL 32174

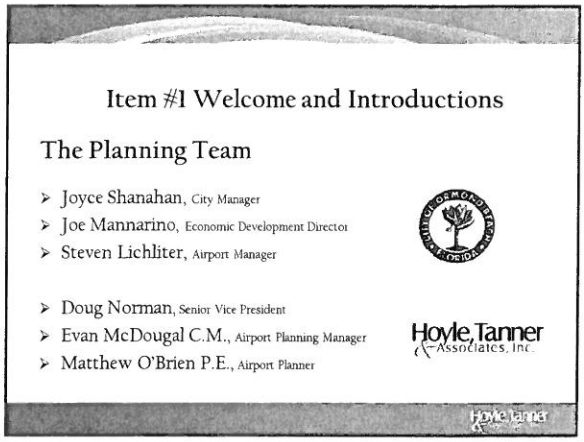
386-677-9075
Lee Fannell
182 Bear Foot
Ormond Beach FL 32174 Bellsouth.net

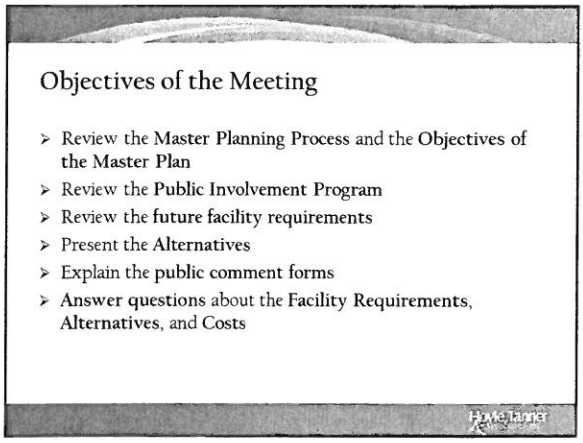
Dough.

8/24/2015

Lets talk about Safety
what Fire fighting equipment
is on hand is it manned?

I look forward to examine
advantages that can be
related for us.





Lichliter, Steven

From: Charles Russell [crussell@cfl.rr.com]
Sent: Tuesday, August 25, 2015 2:13 PM
To: Lichliter, Steven
Subject: Airport Master Plan Update

Mr. Lichliter:

Please let me know if the below email response to your request for comments on the OB Airport Master Plan Update is acceptable.

Item 1: I belong in the homeowner category. We own a home at 14 Cotton Mill Court, Ormond Beach, FL

Item 2: My preferences for the runway alternatives offered are that **NO RUNWAY EXTENSIONS BE ALLOWED.** I stand with the 1,000 or so Ormond Beach citizens that showed up to protest a proposed runway extension a few years ago in very clear terms that evidently contributed to a decision to terminate the planned extension. I urge you and all OB decision makers to recall and honor that evidence of citizen displeasure with extending OB Airport runways.

Item 3: Changes I would most like to see at the OB Airport would be to find legal ways to have consequences for flight school pilots who violate the specified traffic patterns.

A second desired change would be offer citizens a complete accounting of each and every expense associated with operation of the OB Airport. Airport expenditures serve less than 5% of OB citizens and yet require the other 95% to pay for airport operation. Present budget reports do not meet this need. Citizens have a right to know if their tax dollars meet the needs of the many, or if they only serve the few.

A third desired change would be to have flight school operators pay their fair share of operating expenses for the OB Airport.

Item 4: Things I would <u>least like to see</u> at the OB Airport are:

1. Increased flight school activity
2. Increased flight school operators
3. Increased corporate jet activity

Item 5: Comments regarding future development of OB Airport.

Appoint citizens to all planning and operating bodies having anything to do with the OB Airport. Allowing only city and/or airport personnel to serve on these boards prevents OB citizens from having a voice on matters that impact their lives. These appointed citizens should not be in any way associated with or have affiliations with the aircraft industry/community. Allowing only people associated with and/or using the OB Airport ensures their interests are protected, but also ensures that citizens subjected to airport traffic have no voice. The "non-aircraft appointees" should at least equal in number the "aircraft appointees". Inviting citizen feedback "after the fact" does not meet this need.

Public comments during the Master Plan meeting suggest to me that concerns about public rest rooms for the "economic elite" visiting the OB Airport have priority over citizen concerns about noise. (**Note:** I do not contend that anyone specifically said this) If visitors to the greater Daytona area beaches can manage without complaint "Port-A-Potties," then surely the visiting "economic elite" can also make do with something less than "palatial restrooms". I do understand the desire to impress visitors with our city. I also understand that tax money from the many supporting luxuries for the few generates resentment.

I urge city officials to recognize that FAA and state grants do not amount to "free money". That money represents our tax dollars that could support many much needed services. The amounts OB would be obligated to pay for proposed changes represents money that could easily support services that the vast majority of citizens would benefit from rather than benefiting a very small minority of citizens.

Any future development of the OB Airport should be initiated only after a citizen survey soliciting views about the perceived need for changes/improvements is conducted and published.

Charles G. Russell

crussell@cfl.rr.com

Ormond Beach Airport Master Plan Update
Public Involvement Program
Alternatives and CIP Meeting
Aug 24, 2015

Instructions

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Please answer the questions below as clear and concise as possible, and submit your responses according to the instructions on the back of this form.

1. In what particular airport stakeholder groups do you consider yourself?
Examples: resident, business owner, aircraft owner, aircraft pilot, pilot/users group, etc.

2. Please provide a written statement indicating your preference for the runway alternatives based on the presentation provided at tonight's public meeting. The alternatives are: No build, Alt 1 , 5004 feet — 600 on west end and 400 on east, Alt 2, 5004 feet — 1000 feet on west end, and Alt 3, 4604 feet — 600 feet on west end.

3. Please list THREE changes you would MOST like to see at Ormond Beach Airport (in descending priority)

Continued on reverse side

4. Please list THREE things you would LEAST like to see at Ormond Beach Airport (in descending priority)

I INCREASED BURDEN ON TAXPAYER

II INFLUENCE OF SPECIAL INTERET GROUPS

III UNSCHEDULED LANDING & TAKEOFF NIGHT & EARLY HOURS

5. Please provide any other COMMENTS regarding the future development of Ormond Beach Airport (Please attach other sheets if there is not enough blank space for your response)

I THINK THE PEOPLE OF ORMOND BEACH HAS LITTLE OR NO INTEREST IN AIRPORT LIKE THE SPECIAL INTEREST OF AIRPORT

THANK YOU

ARTHUR T CASCIO
194 BEAR FOOT TRL
ORMOND BEACH FL
32174

Your responses will be analyzed by the planning team and included in the airport master plan document.

Please submit this form to and any additional sheets via mail or electronic form to:

Steven Lichliter
Airport Manager
Address: P.O. Box 277, Ormond Beach, FL 32175
Email: steven.lichliter@ormondbeach.org

Airport Master Plan Update Meeting – August 24, 2015
Public Comments

Paul Schulten: What types of approaches are being considered for the airport? Also asked about obstruction clearance planning, displaced thresholds and declared distances.

Charles Russell: Why are there no members of the community on the master planning committee? Why are there no members of the community participating in this process? Is there anything built into this master plan to monitor public awareness and satisfaction or dissatisfaction with what's going on at the airport?

Dave Allen: How many towers are there now, and do you plan to build any more? What are the hours of operation? Expressed concern about uncontrolled field operations when the tower is closed.

Steve Searle: What is the difference in the matching cost to the city between building the 600' west extension versus the 1000' west extension? Also mentioned the noise reduction benefits of the west extension, and suggested that the 1000' extension would be of the most benefit to all concerned.

Mike Jiloty: Stated that the no-build alternative is not an option. Talked the importance of GA airports and advocated for the 1000' westerly extension. Asked about the proposed terminal facility and the types of business amenities that could be made available.

Lee Fannell: Is there something that needs to be done, other than extending the runway, to make the airport safer?

Chris Weichert: Asked for more information about the economic benefits to the community that come from maintaining and developing the airport.

David Slick: Airport Industrial Park and Ormond Crossings will drive demand for the airport, and will benefit immensely from a longer runway. The airport is an economic driver.

Peggy Farmer: Missed the boat 10 years ago on RWY 17/35. Noise level of corporate planes is much less, longer runway could help noise issue. The airport should be a gateway for the community.

Al Jorczak: Draft report should have been distributed earlier. Talked about competing airfields in the area with longer runways than OMN. Noticed that the AMPU does not look at also extending 17/35. Encouraged total maximization of airport facilities. Discouraged sale of airport lands. Talked about a bond issue to fund airport development. Talked about the 17/35 extension plan that was removed. OMN needs to support corporate aircraft, airport is currently sub-standard. Need to move up the priority of the runway extension and other improvements.

Larry Stout: Is there a plan to include restrooms or some form of city office facility at the airport? Talked about basic restrooms and facilities for itinerant flight crews.

Mike Cavallo: Supports the master plan, wants the runway extended sooner than later, wants the master plan to include a terminal facility. Asked if FDOT would fund a terminal.

Steven D'Incognito: New resident, commented about the lack of terminal facilities, and that Sunrise Aviation appeared to be run-down and possibly closed. Would not bring friends to the airport.

Bill Gallagher: Wants to see Ormond Beach become a destination. Need to attract businesses and families.

Art Cassio: Asked about the cost of support facilities that may be needed if the proposed improvements are constructed, such as police and fire services.

Summary of Written Comments from the Public Meeting

1.) Mark Rubin: RWY Alt2. Three most – runway extension, itinerant friendly FBO, repair existing aprons and taxiways. Three least – none. Commented that a terminal or FBO is essential to attract both business and itinerant traffic.
2.) Robert McCabe: RWY Alt2. Three most – maintenance of existing runways, development of non-aeronautical assets near existing business park, small terminal facility. Three least – runway extension to the east and relocation of Airport Road, aircraft larger than BII, restaurant.
3.) Caroline McCabe: RWY Alt2. Three most – repair runways. Three least – runway extension to the east.
4.) Resident: RWY Alt2. Three most – runway extension, TWY "G" construction, better fuel service. Three least – sale of airport land.
5.) Resident: RWY Alt2. Three most – runway extension, land development for aeronautical use, resurface movement areas. Three least – more stringent noise abatement policies, no build alternative. Comment: Strongly supports continued growth of aviation business and private activity at the airport.
6.) Peggy Farmer: RWY Alt2 or Alt3, depending on $$$. Three most – runway extension for corporate aircraft, respectable FBO, upgrades to meet current economic challenges. Three least – none. Comment: Decision should be based on facts, not emotions. Example – if a longer runway doesn't increase noise, but in fact may reduce noise, this should be clearly explained.
7.) David Slick: RWY Alt2. Three most – runway extension, FBO, better fuel service. Three least – no action on runway extension.
8.) Resident: RWY Alt2. Three most – terminal w/ restrooms and lounge, extend runway, a real FBO/terminal with choices for fuel. Three least – maintain FBO status quo, less flight training and more corporate operations, sale of SW Quad airport land. Commented that OMN is a disgrace compared to most other GA fields.
9.) Alan Jorczak: RWY Alt2. Three most –max out both runways, build city FBO and t hangars, link north and south sides of field, isolate corporate side from flight school activities. Three least – selling off existing property, pushing out runway extension time, pushing out municipal FBO construction time.
10.) Lee Fannell: Comment about safety and firefighting equipment. Looking forward to the economic advantages that can be realized.
11.) Charles Russell: RWY No-Build. Three most –legal consequences for pilots who violate flight patterns, complete accounting of airport operating expenses, flight school operators should pay their fair share of airport operating expenses. Three least – increased flight school activity, increased flight school operators, increased corporate jet activity. Comments too extensive to summarize – see PDF of original message.

12.) Arthur T. Cascio: Three least – increased burden on tax payer, influence of special interest groups, unscheduled landing and takeoff at night and early hours. Comment that the people of Ormond Beach have little or no interest in the airport like the special interests.

MINUTES
CITY OF ORMOND BEACH
AIRPORT MASTER PLAN UPDATE PUBLIC MEETING

August 24, 2015	6:00 p.m.	City Commission Chambers

I. Welcome and Introductions / Agenda Overview

Present were Airport Manager Steven Lichliter, Economic Development Director Joe Mannarino, and City Manager Joyce Shanahan, Senior Vice President of Hoyle, Tanner & Associates, Inc. Doug Norman, and Hoyle, Tanner & Associates Inc. Airport Planning Manager Evan McDougal.

The meeting began at 6:00 p.m.

Mr. Steven Lichliter, Airport Manager, thanked those in attendance for coming to the second public meeting for the Airport Master Plan Update. He stated that the public participation process for the Airport Master Plan was extremely important. He introduced the members of the planning team as himself, City Manager Joyce Shanahan, Economic Development Director Joe Mannarino and from Hoyle, Tanner & Associates, Inc.: Senior Vice President Doug Norman and Airport Planning Manager Evan McDougal.

Mr. Lichliter explained that the master planning process the objectives of the master plan would be reviewed that evening. He noted that they would also review the public involvement process and the future facility requirements, as well as present the alternatives that had been developed thus far. He pointed out the location of the public comment forms in the Commission Chambers. He explained that public comments and questions needed to be submitted on the public comment forms. He noted that public involvement in the process was important. He explained that in order to incorporate the comments received into the next draft of the report it was important for those comments to be on the record. He invited audience members to fill out the public comment forms so that their thoughts could be captured accurately and included in the report. He stated that after the presentation there would be an opportunity for public comments to be made. He explained that in line with the city's public meeting procedures speakers would be limited to three minutes per speaker. He requested that all comments made be about items on the agenda and that any questions be directed to the moderator.

II. Review of the Master Planning Process

Mr. Evan McDougal, Airport Planning Manager, Hoyle, Tanner & Associates, Inc., introduced himself and stated that he was a retired Army and Coast Guard helicopter pilot and co-owned a Cessna 172, which he flew regularly. He introduced Mr. Doug Norman, Senior Vice President at Hoyle, Tanner & Associates, Inc. and stated that Mr. Norman worked in the company's Orlando office. He stated that he had been with Hoyle, Tanner & Associates, Inc. for about eight years and had served as the Airport Manager for the fourth largest airport in Maine.

Mr. McDougal stated that the objectives of the master planning process were to improve the overall safety and capacity of the airport, to promote orderly and efficient development, to plan for facilities and services that meet customer needs, and to

enhance the airport's ability to be self-sustaining and serve as an economic generator within the local economy. He explained that the master plan contained large drawings, one of which had to be approved by the Florida Department of Transportation (FDOT) and signed by the Federal Aviation Administration (FAA). He further explained that any projects proposed in the plan had to be on the airport layout plan in order to be eligible for FDOT or FAA funding. He noted that that was the reason that alternatives were looked at and considered in order when coming up with a proposal. He explained that the plan would be taken to the community and then the local sponsor authorities for approval, which in the city's case meant the City Commission.

Mr. McDougal stated that it was important to encourage the airport's ability to be self-sustaining. He noted that the airport had a number of FAA grant assurances that they agreed to every time they utilized federal dollars. He explained that one of those assurances was to attempt to be as self-sustaining as possible based on the circumstances. He stated that if airports were working correctly they should break even. He noted that they did not want to take money from the taxpayers if they did not have to. He stated that the revenues at the airport should pay for the improvements and maintenance at the airport. He stated that airports were economic generators for the entire community. He noted that depending on the type of market being served there every airport would be a little different, whether that market was flight instruction or corporately utilized aviation.

Mr. McDougal displayed a chart outlining the master planning process. He explained that members of the public were encouraged to provide feedback and ask questions. He noted that all comments would be appended to the appendix of the master plan document. He stated that that would show that the public had been heard and that their comments were being incorporated as best as they could be. He noted that the public community was affected by the airport. He stated that at the previous public meeting the inventory of existing conditions and aviation forecasts had been reviewed. He noted that the forecast was for just under a one percent combined average growth rate. He stated that that was not a fast growth rate by any means but there was a predicted slow and steady growth over the next 20 years. He noted that that forecast had to be sent to the FAA for their review and approval. He stated that it was approved and noted that a copy of the letter of approval had been provided at the previous meeting.

Mr. McDougal stated that they also looked at facility requirements. He explained that based on the forecast, the existing conditions and the development of aviation worldwide, they looked at what the airport needed that it did not currently have. He stated that that included looking at what should be improved and what facilities might need to be updated. He stated that the next phases dealt with alternatives development and evaluation and environmental considerations. He noted that there were many wetlands in Florida and that they were expensive to mitigate. He stated that once all of the approvals were received, the subsequent step would be to move forward with the airport layout plan drawings set, which included land use around the airport, zoning, and plan and profile views. He stated that after that a facilities implementation plan would be put together, which would detail how and when things could be built based on the known financial considerations. He noted that the entire draft to the current point was available on the city's website under the airport.

III. Review of Public Involvement Program

Mr. McDougal stated that they tried to identify the stakeholders in the airport. He explained that the stakeholders were usually the airport tenants and users, including business owners and pilots, and airport neighbors. He noted that neighbors were always affected by airports and should communicate what they felt that the airport should be doing differently. He summarized the key issues from the prior public meeting as follows: runway length, itinerant facilities, and noise abatement. He stated that that information was on the public comment forms that had been returned from that meeting. He noted that the public comment forms available that night for the current meeting had different questions on them. He explained that the issues raised with the previous comments had been regarding if the runway was long enough and if facilities were readily available in good condition for itinerant traffic. He noted that his wife wanted to utilize a restroom when they landed their aircraft and those types of facilities were needed, and needed close by an itinerant ramp. He stated that noise issues also came up multiple times during the previous public meeting and on the comment forms received. He explained that noise abatement procedures were in place but noted that it was an operational issue controlled by FAA and the tower. He stated that there was only so much airspace and only so many recommendations that could be made.

IV. Review of Facility Requirements

Mr. McDougal stated that there had been a review of the facility requirements based on the FAA approved forecast. He noted that the FAA had sent a letter indicating that the forecast provided was within reason and that they could use that moving forward in their analysis during the master planning process. He stated that initially they wanted to look at dimensional standards, explaining that that meant what the FAA's dimensional standards were for an airport like Ormond Beach's. He noted he would speak about the runways, heliport and the taxiways. He stated that one standard reviewed was the aircraft approach category (AAC), which denoted how fast an aircraft came into the airport. He explained that typically the faster the aircraft came in the more the safety area would be, depending on the instrument approach. He stated that generally the faster the aircraft came in the longer the runway would need to be.

Mr. McDougal stated that it was determined that the current and immediate future AAC was "B", which was aircraft with an approach speed of 91 knots or more but less than 121 knots. He displayed photographs of a Beechcraft Baron B58 and a Cessna Citation 550 aircraft, which were examples of typical AAC "B" aircraft. He stated that these aircraft could come in at under 121 knots and land on the current runway. He noted that landing was not usually the problem and that it was generally the take-off that was an issue. He explained that the accelerate stop distance from full throttle to rotation speed with an engine loss would create an issue if there was not still enough available room on the runway to stop and land. He noted that weight was also an issue. He explained that it mattered whether an aircraft could take off with a payload of enough fuel and people to make the travel worth it, explaining that the alternative would be to take off with people and then have to refuel somewhere else with a longer runway within an hour of their departure, in order to be able to carry the load needed to fly further.

Mr. McDougal stated that another dimensional standard was airplane design group (ADG). He stated that the wingspan and tail height determined how much room there

needed to be between items on the ground between the runway center lines, taxiway center lines, buildings and other immovable objects. He stated that the current and future ADG was "II", which included aircraft with a wingspan from 49 feet to less than 79 feet and tail height from 20 feet to less than 30 feet. He displayed photographs of Beechcraft King Air and Cessna Citation 550 aircraft, which were examples of ADG "II" aircraft. He displayed a runway design standards table for a "B - II". He noted that the table came from the FAA Advisory Circular and explained that that served as the design manual used by planners and engineers.

Mr. McDougal stated that the heliport at the airport was designed for an aircraft that was 12,000 pounds and 48 feet long. He noted that something else could land there but that was what it was designed for. He explained that the same provision applied to the runway in that a larger aircraft could land on a "B-II" runway but noted that the pilot would have to be cautious, realize his risks and possibly need some ground handling guidance as he taxied in because the obstruction clearances would not be as wide as would be desired for a larger aircraft. He displayed a critical aircraft chart. He explained that the "B–II" category was kept until 2034 in the master plan, at which point it would switch to a "C–II". He noted that his gut feeling was that there would be another master plan before it got to that point. He explained that a "C–II" would have a little faster approach speed and noted that an aircraft such as the Gulfstream G150 had an approach speed of a little over 121 knots.

Mr. McDougal stated that a significant runway extension was not justified. He explained that a survey of users had been conducted to determine the runway length needs at the airport and that the survey did not provide the level of documentation necessary to presently justify a runway extension. He noted that they did not receive letters from companies indicating that if a 5,000 or 5,500 foot runway was created that they would bring their new airplane to the airport. He stated that a lot of comments received stated that it would be better, safer and preferable to have a longer runway however. He noted that as a pilot he understood that longer runways were desired. He explained that small aircraft, weighing less than 12,500 pounds, needed a runway about 4,100 feet in length. He noted that that was the size of the airport's runway. He stated that aircraft that were more than 12,500 pounds, up to 60,000 pounds, were often corporate jets or business related aircraft. He explained that 75% of that fleet at 60% useful load needed between 4,600 feet and 5,290 feet. He stated that that was the figure selected for inclusion in the master plan.

V. Proposed Development Alternatives

Mr. McDougal stated that there were proposed development alternatives based on those runway lengths as well as based on items that were not currently in compliance with FAA standards. He noted that there were four length alternatives. He explained that any changes to the runway length would trigger an environmental assessment, which would take an in-depth look at everything from animals and biotic resources, to noise, and would also require public participation. He stated that facilities development for the southwest quadrant (SW Quad), northwest quadrant (NW Quad) and southeast quadrant (SE Quad) would also be highlighted. He explained that the northeast quadrant (NE Quad) was left out as they were not proposing to do much there as it was the location of the VORTAC (VHF omnidirectional range and tactical air navigation system). He further explained that the VORTAC had a critical area around it which was unable to be developed.

Mr. McDougal stated that presently the airport had all of the alternatives listed in the No Build Option. He stated that the runway was 4,004 feet in length. He stated that Alternative I proposed to add 400 feet on the 26 end and 600 feet on the 08 end of the runway, for a runway totaling 5,004 feet. He stated that Alternative 2 would add nothing to the 26 end and push 1,000 feet on the 08 end, for a total of 5,004 feet. He noted that there were some constraints which he would detail later. He stated that Alternative 3 proposed adding 600 feet to the 08 end for a total of 4,604 feet.

Mr. McDougal displayed the Alternative 1 Option. He explained that this option proposed to be 400 feet on the 26 end and 600 feet on the 08 end in order to have the runway length at 5,004 feet. He noted that this option was a challenge. He explained that the current requirement for runway protection zones did not allow for roads, highways or golf courses to be inside of it. He stated that the landing threshold was moved; the FAA would most likely require it to be compliant and built to standard. He noted that it currently was grandfathered in it its current state but that if it were to be changed, it would have to be brought into compliance. He explained that they proposed to put the runway protection zone right on the corner of the property, so that it would not go outside the border of the property and not require any easements or land acquisition. He noted that there was some water located in that area but explained that that was allowed in a runway protection zone. He clarified that a runway protection zone could not have assemblies of people in it. He stated that the cost of the Alternative 1 Option would be $6,621,000. He noted that the big ticket item was to realign Airport Road out of the runway protection zone for compliance purposes.

Mr. McDougal displayed the Alternative 2 Option. He stated that this option extended the runway by 1,000 feet on the 08 end only. He noted that the FAA required that the airport sponsor have enough control over the property to make sure that someone did not build an elevated structure in the runway protection zone area. He explained that therefore either an easement or the acquisition of the property in the expanded area was needed to allow the sponsor to control what occurred on the property. He stated that there could not be obstructions to the approach surfaces. He noted that things like a bike path could be built there as there would not have a large assembly of people there and that those that were there would pass through the area rather quickly. He noted that residences were not allowed. He stated that this option was estimated to cost $3,590,000. He noted that the proposed property rights cost listed was to obtain an easement and not to acquire the land. He explained that an easement could usually be purchased for a tenth of the amount of a parcel purchase.

Mr. McDougal displayed the Alternative 3 Option. He explained that this alternative did not expand to the east because of the impacts associated with the golf course and the road. He stated that this alternative expanded the runway on the 08 end only by 600 feet. He explained that this alternative kept the expansion within the airport's current property lines. He stated that the runway would then be at about a total of 4,606 feet. He stated that this option was less expensive and had an estimated cost of $2,450,000.

Mr. McDougal stated that there were many options when developing conceptual designs for airport quadrants or any interior airport space. He explained that it had to be done in such a way that it stayed within the design standards for the taxiway dimensions. He displayed a figure of the SW Quad. He noted that airports needed funds to operate. He explained that in the case of Ormond Beach's airport the only revenue was fuel flowage and land leases. He explained that they were proposing to

take a large area and call it a mixed use aeronautical and non-aeronautical revenue generator. He stated that the new taxiway, once built, would provide access so that additional hangars could be built. He noted that it was costly to build hangars but more costly to build the aprons and pavement that lead to a hangar. He explained that it was best to try and find more places that were fairly close to the taxiway in order to reduce the length of additional pavement required. He noted the airport business park. He explained that all revenue from airport land used for non-aeronautical revenue generation had to be utilized to support the airport. He noted that the airport would need some revenue in order to take care of some of the costs they were discussing and that non-aeronautical revenue was just as important as hangars.

Mr. McDougal displayed a figure of the NW Quad. He noted a section that was suitable for future hangar development. He explained that there were some restrictions, such as the line of sight from the tower. He further explained that the tower had to be able to see the ends of the runway. He stated that if an extension occurred it had to be low enough to not impact the tower or the tower would have to be raised. He stated that the proposal for this area was hangar development, taxiways and apron areas. He noted that there was also a future restaurant site depicted. He explained that that was mentioned during the previous public meeting. He noted that there might be some sort of terminal associated with that.

Mr. McDougal displayed a figure of the SE Quad. He noted that they encountered issues with this quadrant. He stated that the center apron was crowded and insufficient. He stated that Taxiway Delta was located too close to the hangars for a B-II taxiway and as such it needed to be pushed over a little bit. He explained that to do that one set of fuel tanks would need to be moved. He stated that it was challenging to find a place for itinerant users but that such a location would support business aircraft. He noted that additional hangars were shown as being built along Taxiway Charlie and an addition to Tomlinson Aviation was also shown. He noted improvement to the helipad being shown as well. He stated that they proposed additional fuel tanks and parking in wetland swale areas and explained that those would have to be made up elsewhere if they did so. He stated that the existing apron pavement was in fair to serious condition, as noted previously at the last public meeting. He stated that aircraft circulation provided by the current taxilane was insufficient. He noted that currently there were limited FBO (fixed base operator) facilities to serve itinerant aircraft passengers and explained that that was mentioned repeatedly in the comments at the last public meeting.

Mr. McDougal displayed a chart detailing the airport capital improvements from 2009 to 2015. He stated that FAA and FDOT were huge supporters and funders of Florida airports. He explained that he recently learned at a conference that FDOT put more money into Florida airports than the FAA did. He noted that they were contributing $325 million to Florida airports this year. He stated that Florida airports were a huge economic generator for the state. He explained that some of the projects on the list were not completed or not started yet. He noted that the total investment in a six year period was $8.1 million. He stated that a significant amount of those funds were FAA, some of it was FDOT and the rest was from the airport sponsor, the city.

Mr. McDougal stated that FDOT just performed a 2015 pavement condition study for the airport. He displayed a graphic showing the results. He noted that FDOT predicted when the different pavement areas needed to renovated or repaired and how much that would cost. He stated that existing facilities needed to be maintained

and improved. He noted that they had to be safe. He explained that on the graphic displayed that the more red or orange a color was the lesser the condition was for that area of pavement. He noted an area that was currently under lease and explained that the lessor and not the city had to maintain that area. He displayed the pavement condition index, noting that it was the condition before maintenance repair or major rehabilitation. He explained that it identified the piece of pavement and the cost for repair. He noted that it was $8 million to repair what was presently needed.

Mr. McDougal stated that at the end of the master plan there would be a short or near term, intermediate term, and long term capital improvement program (CIP). He explained that short term was one to five years, intermediate term was six to ten years and that long term was 11 to 20 years. He noted that some items may be pushed to subsequent years. He displayed the near term, 2016 to 2020, potential project and costs estimates. He noted that the chart displayed the federal, state and local share of costs. He explained that most of the projects listed came out of the FDOT paving study. He noted that the projects were also ordered based on FDOT's recommendations. He stated that as a non-entitlement reliever airport that the airport would receive a minimum of $150,000 for projects and could receive additional funding through discretionary sources working with FDOT and the FAA. He noted that the chart was incorrect in its listing of the project costs for the business park/airport access roads construction. He stated that it should be closer to $2.6 million, not $1.8 million. He noted that most of the projects listed were required to maintain the structures presently at the airport.

Mr. McDougal displayed a chart with the intermediate term, 2021 to 2025, project and costs estimates. He noted that the 2021 proposed projects were also from the paving study. He stated that the future heliport improvements, new general aviation apron, relocation of the fuel farm and additional vehicle parking projects would happen in 2022. He noted that 2025 was when money would possibly be available to extend the runway in one of the alternative methods discussed earlier. He explained that that was about as early as that could be addressed based upon existing funding conditions. He noted that that was also the reason the airport looked at releasing some parcels for non-aeronautical use and explained that the development of non-aeronautical revenue streams from other sources would help to pay the city's match money. He displayed a chart with the long term, 2026 to 2035, project and costs estimates. He noted that the two projects listed were the construction of a restaurant and parking and also clearing the VORTAC critical area.

VI. Public Comments

Mr. McDougal stated that he would serve as the moderator for the public comment portion of the meeting. He explained that each speaker needed to speak into the microphone at the podium and begin their comments stating their full name and address. He noted that each speaker would have three minutes to speak. He asked that comments and questions be kept to items on the agenda for this public meeting, including the alternatives and the capital improvement plan. He asked that speakers complete the comment forms provided. He noted that if someone had multiple questions they might not be able to answer them all that evening but if they were on the comment forms he would try his best to eventually. He noted that the comments from the audience members would be included in the Airport Master Plan. He stated that if an audience member did not wish to speak but wished to have their comments included and addressed they could complete a comment form. He reminded any speakers to direct their questions to the moderator and not have a dialogue back and

forth with the audience during their comments. He stated that after everyone who wished to speak had done so then those who had already spoken could speak one more time if they desired to.

Mr. Paul Schulten, 1201 Kirkpatrick Circle, asked what type of instrument approaches were being looked at for the airport, and more specifically, if they were precision or non-precision; whereby, Mr. McDougal replied that they would be non-precision approaches. He stated that currently the airport had LP (localizer performance) or LPV (localizer performance with vertical guidance) and that the FAA was not putting in any more ILS (instrument landing system) in.

Mr. Schulten stated that he thought there might be some wiggle room in the planning. He stated that the term he would refer to was obstruction clearance plane, which was a clear zone for the airplane coming in at a low approach on either side for an instrument approach. He asked if a displaced threshold had been considered. He explained that that would possibly need less land for the obstruction clearance plane and also would also have the runway needed for take-off.

Mr. McDougal stated that that could be looked at. He noted that they had looked at declared distances but declared distances were typically turbine powered equipment only.

Mr. Schulten stated that the approaches that Mr. McDougal was talking about would also not need much in the way of facilities on the ground such as lighting; whereby, Mr. McDougal explained that they would not gain much by the addition of any type of additional approach lighting system. He stated that LPVs were great but they would not get any better than a one mile visibility on the instrument approach.

Mr. Doug Norman, Senior Vice President, Hoyle, Tanner & Associates, Inc., stated that the FAA rarely funded a runway extension that included a displaced threshold. He explained that that would be something that they would have to work really hard with the FAA with to justify needing. He noted that he had not seen that done in a long time.

Mr. Charles Russell, 14 Cotton Mill Court, asked why there were no members of the community on the master plan committee. He stated that the community was paying for it and he felt there should be members of the community involved. He noted that there were once a thousand people at the city upset over plans to extend the runways and bring in more businesses. He asked why members of the community were not participating in the process.

Mr. Lichliter replied that the public meetings were being held in order to receive public input. He noted that he was not sure what Mr. Russell meant by the master plan committee. He stated that the Aviation Advisory Board commented on the master plan and was comprised of members of the community. He noted that the master plan would also be discussed at a City Commission workshop and considered for approval at a City Commission meeting, both of which were public meetings. He reiterated that he was a bit confused about Mr. Russell's comments.

Mr. Russell stated that this kind of meeting was for the public to make comments on what had already happened. He stated that he thought that members of the community should have been involved in the process of putting the plan together.

Mr. Lichliter explained that to some extent that was correct as one public meeting had already been held and the comments and suggestions from that were incorporated into the draft report for this meeting. He noted that the comments from this meeting would be incorporated into the next draft which would next be discussed at the City Commission workshop. He explained that they were discussing what had already happened but were creating new information based on what was happening now. He stated that all of the public participation was taken very seriously.

Mr. Russell stated that he supposed that he and Mr. Lichliter would agree to disagree. He asked if there was anything built in the master plan to monitor public satisfaction or dissatisfaction with what went on at the airport.

Mr. Lichliter stated that the master plan did not but that they would continue to explore creating better contact routes for the public so that it was easier to express concerns when they arose. He explained that the master plan dealt more with airport infrastructure and that what Mr. Russell spoke about dealt more with operational and procedural issues that staff could address. He noted that he would be happy to explore that with Mr. Russell.

Mr. David Allen, 198 Bear Foot Trail, asked how many existing towers were at the airport and how many additional towers were planned. He asked whether the towers would be manned and if so, how often they would be manned. He noted that he heard rumors that the existing towers were not manned all of the time and that as such planes landed visually rather than with tower assistance.

Mr. McDougal replied that there was presently one air traffic control tower at the airport. He stated that it was manned certain hours of the day but not continuously manned 24 hours a day. He noted that there were many airports with no towers at all and that pilots did just fine self announcing on the radio, as they were trained to do. He stated that there were would no more than one tower at the airport. He explained that it was a contract tower and that the hours of operation were to be determined by the operational needs of the community with agreement by the FAA. He noted that there was not close to enough traffic at the airport at night to necessitate tower operators overnight.

Mr. Steve Searle, 72 Hangar Way, stated that he had a business at the airport. He asked what the difference in cost was between the 600 feet and 1,000 feet extensions of the runway on the west end; whereby, Mr. McDougal stated that he would have to look it up and do the math.

Mr. Searle asked what the cost to the city would be to put the additional 1,000 feet on the west end as opposed to the 600 feet. He noted that it felt it was likely very minimal; whereby, Mr. McDougal replied that it would be a little over $20,000 from the city for their match.

Mr. Searle stated that extending on the west end would keep the noise further away. He noted that that $20,000 would improve the runway and make it compatible for all businesses at the field.

Mr. McDougal explained that the city was responsible for 2%, which would be about $20,000. He explained that that was based on acquiring sufficient rights through an easement so that the city could control what happened on the parcel in the runway protection zone.

Mr. Searle stated that the 1,000 feet, with the easement, would be a “home run” for everyone, from a noise and business standpoint.

Mr. Mike Jiloty, 15 Winding Creek Way, stated that one of the key things cited under the objectives was the goal of having the airport become self-sustaining and more of an economic engine for the community. He stated that the importance of general aviation was well documented in airports throughout the country. He explained that from his perspective the only option that should not be an option was the No Build Option. He stated that he would advocate for the 1,000 foot extension of the runway, even though he understood that it may cause the road to be relocated. He stated that future growth needed to be prepared for. He explained that he believed that that extension would help accommodate business class and equivalent aircraft. He asked if there was any specificity in the plan with regard to business class amenities to serve the itinerant travelers.

Mr. McDougal explained that the intent that evening was to show the alternatives. He noted that Mr. Jiloty mentioned one. He addressed the amenities and noted that they had forecasted aviation use in the NW Quad. He noted that that area could very easily have a general aviation terminal or FBO. He stated that the ramp where Sunrise Aviation was located in the SE Quad could also be an FBO ramp. He stated that in the draft document there were other ways to make improvements such as making revisions to the minimum standards to require improvements. He stated that such improvements would depend on who was paying for them. He explained that if there was no revenue to be generated by providing such improvements it could sometimes be difficult to find funding for them. He stated that sometimes a general aviation terminal, with a staff member managing it, might be the better way to go. He noted that the desire was for the itinerant traffic to be able to get in, do their business and park for the day or overnight, fuel up, use the amenities, and be on their way. He stated that some of those improvements were needed to be able to market the airport.

Mr. Lee Fannell, 182 Bear Foot Trail, asked what was not safe at the airport. He noted that it was mentioned that several things needed to be done at the airport and safety was noted as a reason. He stated that he thought that the airport did a good job regarding safety. He asked if there was something that needed to be done to make it safer. He stated that by extending the runway another class of aircraft would be brought in that would need extra room. He referenced extending the runway and disturbing Airport Road and noted that the master plan for that road called for it to be built out into a four lane highway. He asked if that had been taken into consideration.

Mr. McDougal clarified that another class of aircraft was not being brought in. He explained that the suggestion was that the current B-II aircraft, which the airport was designated for, would be able to be loaded with both fuel and people and utilize the longer runway in order to get them out on the same flight instead of having to leave either light on fuel or light on people. He noted that one of the runways in the airport layout plan was proposed to be narrowed from its current 100 foot width down to a 75 foot width because a B-II aircraft did not need the runway to be 100 feet wide. He noted that it cost more to maintain the runway at 100 feet wide. He explained that with regards to safety, the improvements were about improving efficiency of the existing aircraft to use the airport to its maximum ability. He noted that it was not a safety issue. He stated that at the last meeting they had heard that the desire was to

attract more business aircraft into the airport and one way to do that was to be able to allow them to come in with both fuel and people onboard.

Mr. McDougal addressed the Airport Road question and stated that looking at the cost and environmental impacts of extending to the runway to the east would make that an unfavorable alternative. He explained that they would be pushing roads out into conserved wetlands and it would not make a lot of sense. He explained that they were trying to show alternatives that could be done if the cost and environmental impacts were not exorbitant.

Mr. Chris Weichert, 164 Bear Foot Trail, stated that he was not a member of the general aviation community and as such would show and confess his ignorance. He stated that as a citizen of Ormond Beach and the United States of America he did not have an understanding of the benefits of there being so many airports. He stated that he would like to see some more information about the economic benefits to the community to support what existed at the airport and the improvements that were planned.

Mr. McDougal stated that FDOT recently performed an economic impact analysis with regards to airports. He stated that he was unsure if the benefits of making specific improvements could be quantified. He noted that he could not say for certain whether a new apron would allow someone to hire three more employees.

Mr. Weichert asked if the economic benefit was employment; whereby, Mr. McDougal replied that it was employment and noted that Florida had a huge flight training industry. He noted that there was a pilot shortage as it became much more difficult to be able to become an airline pilot due to rule changes and the amount of flight hours needed. He explained that that Florida and Arizona were popular for flight training as they had many airports and relatively clear weather. He stated that they would see if they could add more economic impact items in.

Mr. David Slick, 322 John Anderson Drive, stated that he came to the area in 1986 and started his company in the Ormond Beach Airport Industrial Park. He noted that at the time they had about seven employees and now had 140 employees, and would be adding around another 30 or 40 in the next 18 months. He stated that his company's payroll was around $4 million a year and their economic impact was approaching $28 million. He noted that all of the discussion that evening revolved around economic questions because the airport was an economic driver. He stated that the new planned Ormond Crossings Industrial Park would benefit immensely from a longer runway and from improved services. He noted that Warren Buffet was one of the richest men in the world. He stated that 20 years ago Mr. Buffet was unimpressed with business aviation and thought of business aircraft as toys. He explained that shortly after that Mr. Buffet went out and purchased an airplane and named it "indefensible" as he did not think that it was. He stated that a year later Mr. Buffet changed the name of the airplane to "indispensible".

Mr. Slick stated that flying took people from his company to his northeast customer base in a very short period of time. He explained that his management team did not have to take their shoes off, wait in airport lines and get to the airport two hours early. He stated that they could take people to their customer base and be back the same day. He noted that they had a facility in Nicaragua and would be able to get down there with a larger plane on the same day and come back, rather than taking three days as it did now. He stated that the airport could be an immense economic

driver and he certainly hoped that the city would go forward with the plans. He stated that the airport should see more business aircraft and less training aircraft. He noted that if individuals did not like all of the aircraft noise they would prefer business aircraft.

Mr. McDougal noted that Mr. Buffett just purchased a huge airplane part supplier.

Ms. Peggy Farmer, 4 Allenwood Look, stated that she was just a resident and not a pilot. She noted that she did not even fly as she had a fear of flying but was very passionate about economic prosperity in Ormond Beach. She explained that she did think that the city missed the boat ten years prior by letting emotions instead of facts play a role in some of the decisions that were made regarding the airport. She stated that she believed that there was another opportunity now and that times had changed. She stated that the airport needed to come up with the times, noting that corporate aircraft had changed. She noted that she heard mentioned that a longer runway could assist in decreasing some of the noise. She asked why the city would want to thwart the possibility of Ormond Crossings finally becoming a reality after ten years. She noted that having what corporate business needed at the airport may jumpstart that development.

Ms. Farmer stated that she had spent the weekend at St. Simons Island in Georgia, which had its airport located in the middle of their small island. She explained that she watched the planes there as she was curious how the community was so supportive of their airport being in the middle of the town. She stated that their runway was 5,400 feet in length and there was no tower. She noted however that they did have an FBO with pilot showers, a kitchen and a business center, as well as parking. She stated that they called themselves the gateway to gold coast aviation. She stated that Ormond Beach should be a gateway in its aviation. She noted that she was amazed at how quiet the planes were and stated that the corporate jets were different now. She explained that she was outside at an art show and it was not a distraction at all to hear the jets landing and taking off.

Mr. Alan Jorczak, 679 N. Beach Street, stated that he was curious how many audience members were able to read through the draft master plan document before the meeting. He noted that he wished it was distributed more than a week prior so that he could have read it more thoroughly and asked more intelligent questions. He stated that there were a couple things that concerned him about the plan. He noted that it was a positive that corporate aircraft was finally being discussed but explained that there were competing airfields all around the city, including Deland, Flagler and New Smyrna Beach, which all had at least 5,000 foot runways. He noted that Deland had 6,000 feet and Flagler planned to go to 7,000 feet. He noted that Ormond Beach had a limited airport footprint within which to work. He stated that it would behoove the airport to look at maximizing what they could and getting as many federal dollars as they possibly could within the scope of what might be possible. He noted that runway 17/35 was not addressed at all in the plan. He stated that he thought that it would be a mistake to not look at total utilization of runway. He explained that the capability of 17/35 would be limited in the future by dropping it from 100 feet wide to 75 feet wide.

Mr. Jorczak stated that he was a little disturbed about trying to sell what airport land the city had to try and fund other airport activity. He noted that there was such a small amount of land available. He stated that a good portion of the SW Quad had significant wetlands in it and as such development for any purposes in that area

might be hypothetical. He stated that losing that would be a long term mistake. He explained that if the amount of money that might be able to be obtained through a bond issue could be advanced, then they could look at how that could accelerate the schedule for the airport. He stated that totaling up everything in the plan amounted to a city contribution of a little less than 4% of the total cost of $31 million.

Mr. McDougal stated that runway 08/26 was the primary runway and satisfied the wind requirements. He stated that runway 17/35 was the crosswind runway. He explained that Ormond Beach was a B-II airport, with a forecast to remain in that category, and as such the design standards supported a 75 foot wide runway on both runways. He noted that those were the design standards that the FAA had adopted and set. He explained that it would be very challenging to ask the FAA for more and also noted that a wider runway would cost more every time paving improvements were needed. He explained that it could not be thought of in terms of strictly the city's contribution. He stated that there were a lot of airports in Florida and elsewhere competing for those discretionary funds. He explained that for Ormond Beach to request to keep their runway wider or make it longer, without justifying why, would be a challenge. He noted that not many B-II airports needed more than 5,000 feet in runway length. He stated that it did not appear in the forecast.

Mr. McDougal encouraged everyone to read the report online. He noted that he was unable to get it on the website two weeks prior to the meeting as they were working to get it into its current state. He noted that it was still a draft and would be modified based on input from the community at the meeting and also from the City Commission. He encouraged everyone to complete the comment forms if they had input to provide. He noted that it was easy for him to suggest coming up with the money for projects but it was difficult to make that a reality. He stated that Ormond Beach would compete for those funds like everyone else did. He explained that if you had a strong enough argument you would receive what was justifiable based on the master plan and anymore than that would be hard to argue for. He noted that he personally would love to see 6,000 foot runways as a standard everywhere. He explained that he had worked on a number of runway length analysis projects and noted that invariably everyone desired longer runways. He further explained that in order to justify a longer runway the aircraft that needed the longer runway needed to be present. He noted that 98% of the aircraft at the airport presently was A-I, light single engine aircraft. He stated that B-II was what was being pushed for.

Mr. Larry Stout, 677 N. Beach Street, noted that he did not see any plan for inclusion of restrooms, either for itinerant or local airport users. He stated that public restrooms and public facilities, whether it be on a small scale or in the near or intermediate term, needed to be addressed somewhere in the plan.

Mr. McDougal noted that every airport was different. He stated that at the Ormond Beach Municipal Airport the FBOs provided the facilities. He explained that after the last meeting he was contacted by one of the city's FBO owners who indicated that they had three public restrooms that satisfied the minimum standards in Ormond Beach. He stated that he also understood that Tomlinson Aviation was planning to make improvements and he hoped there would be public restrooms there as well. He noted that he could not mandate facilities but stated that he did not want to land at the fuel farm and have a port-a-potty there.

Mr. Mike Cavallo, 97 Dawn Drive, stated that he supported the general concept of the master plan. He stated that he would like to see the runways extended sooner

rather than later. He noted that he did not see plans for a terminal. He explained that he thought that the city should start to think of a terminal for the airport as it would certainly be something that fit in a general aviation airport. He noted that it could be small and stated that he did not know why an airport terminal would not be included in the master plan for the future. He stated that the airports at New Smyrna Beach, Flagler Beach and Palatka had small terminals. He noted that the terminal at Palatka was beautiful and unique to that airport. He asked if FDOT would subsidize a terminal.

Mr. McDougal noted that he observed the FDOT representative in the audience nodding in response.

Mr. Cavallo stated that he did not see why a terminal would not be factored into the master plan then. He noted that a master plan did not mean that everything in it had to be built but was full of ideas for the future. He explained that he thought a terminal was a future idea that would satisfy some of the needs mentioned, such as the gateway concept, the lack of restrooms and other facilities and would also serve as a welcome into Ormond Beach.

Mr. McDougal noted that Ms. Allison McCuddy was in the audience and was the city's FDOT representative. He stated that a gateway was very important. He explained that the first thing someone flying into the airport would look at was where they landed and where they parked. He noted that a general aviation terminal or an FBO facility would be what individuals utilizing the airport remembered and would serve as the gateway to the city for those individuals.

Mr. McDougal asked if any other audience members wished to speak. He noted that no new speakers wished to be heard and invited those who had already spoken previously to do so again, if they so desired.

Mr. Jorczak stated that ten years ago the extension of runway 17/35 would have increased the length of that runway by a little over 1,400 feet. He noted that that was approved and in the master plan. He explained that at the City Commission meeting where the second adopting vote was to be taken enough residents had shown up complaining about airport noise to have it subsequently be voted down. He noted that Daytona Beach would prefer to see runway 08/26 lengthened because of their traffic patterns. He stated that 17/35 had already been in the schedule and over $100,000 was likely spent doing the analysis, engineering and design work for that extension before that vote. He noted that he thought that it was important to look at lengthening runway 08/26 relative to the overall length of the airport's runways compared to competing airports. He explained that he thought that lengthening 17/35 should be revisited and that they should look into what it would take to update the original plan to do so. He stated that that would work towards the overall objective of maximizing the ability of the airport to handle traffic in both directions depending on the wind.

Mr. Jorczak noted that everyone knew he was a firm believer in attracting corporate aircraft. He stated that it was a deficiency that the airport presently had. He stated that he had probably visited 35 to 40 airfields in a five state area in the southeast. He stated that in regards to ranking the Ormond Beach Municipal Airport to those other airports, Ormond Beach would be lucky to receive a four. He noted that the city and Ms. Farmer's group had put in a lot of work to improve the gateway into the city from north U.S. 1 and to have an airport that was substandard would affect getting the

industrial segment of the economy moving. He stated that the business park needed an improved airport to move its progress more rapidly. He stated that facilities were needed to attract light industry and were needed sooner than ten or fifteen years in the future. He stated that it needed to become a priority immediately as it would take four or five years to get it, even if it was in the plan now. He stated that these were important elements for the overall economic development in the city.

Mr. McDougal stated that Mr. Jorczak would hear no argument from him. He explained that runway 17/35 was not in the scope of work to examine closely primarily because on the north end of the 17 approach a number of fixed obstructions were now present. He noted that his scope of work did not ask him to look at anything besides the possibility of expanding 08/26. He stated that 08/26 satisfied the wind requirements for most operations at the Ormond Beach Municipal Airport. He noted that that was why 17/35 was looked at as a crosswind runway and as less important than 08/26. He stated that he agreed that corporate aviation was the way to go.

Mr. Steven DeIncognito, 2605 N. Oleander Avenue, Daytona Beach, stated that he came to visit Florida a few weeks prior and wound up with a teaching job in the city. He noted that one his interests was aviation and he was curious about the airport. He stated that he made his way down Airport Road to visit the airport and turned in by a golf course as there was a little sign there. He noted that he was in a pilot family and liked traveling. He stated that he had visited a lot of places that catered to the type of aircraft mentioned, that he had flown that type of aircraft and that he had visited some nice places in his travels doing so. He explained that he drove into the airport and went left thinking he would be taken to a terminal building but instead went to a dead end. He stated that he then turned around and came back and went by Sunrise Aviation. He stated that he went to the fence there and looked around, observing that it looked run down and closed for remodeling. He explained that he went in the gate and looked at a couple of the hangars but saw no one. He stated that this was not general aviation that he knew of in most of the country. He explained that his observation as a visitor was that it would be a little bit embarrassing to bring someone into this airport. He noted that he would probably bring them into Daytona Beach or another of the local airports.

Mr. McDougal stated that that was a very important observation.

Mr. Bill Gallagher, 123 Mariner Drive, stated that several of the comments made had been great, including what Ms. Farmer had said. He stated that he had flown all over and landed in many airports. He explained that he wanted to see his hometown of Ormond Beach become a destination. He noted that it was not presently and that Mr. DeIncognito portrayed it accurately. He explained that businesses and families needed to be attracted. He stated that U.S. 1 was improving and the airport was embarrassing. He stated that now was the chance to turn that around.

Mr. McDougal stated that he took the opportunity that morning to drive around the city's ball fields. He noted that that was an incredible facility. He stated that that was what it should look like when visitors came to the airport. He stated that they should also be able to drive around it and be impressed.

Mr. Art Cascio, 194 Bear Foot Trail, asked if anyone factored in what the cost to the city would be in supporting these plans and facilities if they were to come to fruition.

He noted that specifically he wondered about extended fire protection and police department resources.

Mr. McDougal explained that until passenger aircraft were utilizing the airport there would never be a requirement for an on-site rescue and firefighting facility. He stated that the current fire resources would satisfy the need. He explained that a short runway extension or additional quadrant development would not require any additional support. He noted that there were two fire stations located within a few miles of the airport.

VII. Final Comments, Next Steps and Meeting Adjournment

Mr. Lichliter thanked the audience for participating in the process. He explained that the comments received on the comment forms would be incorporated into a further draft of the master plan document. He stated that the next occasion to visit the document in a public meeting would be at a City Commission workshop scheduled for October 6, 2015. He noted that specific details about the workshop would be available online.

Ms. Joyce Shanahan, City Manager, noted that the workshop was the opportunity for the Commission to have their own discussion on the master plan draft and review the comments made from the community during the two public meetings held for them.

Mr. Lichliter noted that the workshop was a public meeting which was open to all to attend but that it was the City Commission's chance to discuss and comment on the plan and as such there was not usually an opportunity for audience members to comment. He stated that the plan would be before the City Commission at a City Commission meeting for adoption and the public would have a chance to comment there.

The meeting ended at 7:46 p.m.

Transcribed by: Colby Cilento

From:	yovinny57@aol.com
To:	Lichliter, Steven; Kelley, Ed; Stowers, James; Shanahan, Joyce
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Subject:	RE: Ormond Beach Airport Master Plan
Date:	Wednesday, September 30, 2015 5:02:31 PM

Hello Steven -

Due to a recent emergent family issue, I have been called upon to be of service to a family member. So I apologize for the tardy response to community request for feed back on the planning process for the future development of the Ormond Beach Airport - of which a meeting was held on August 24, 2015.

As you know I am both a business owner in Ormond Beach and a resident in the Ormond Lakes community.

In any case, I did want to offer my input regarding the planning process in particular as it relates to the runway alternatives.

Several years back when we both served on the Ormond Beach Airport Noise Abatement Task Force - it was made clear by you personally, and indeed most, if not all of the Ormond Beach city council and city management that were present and involved; that notwithstanding the current challenges that citizens were experiencing as a result of the flight training going on at the airport - nobody wanted to see increased flight training at the airport, moreover, what was being espoused was attracting other businesses and support industries to the airport and flight training businesses currently there.

I have read more than one newspaper article recently that continues to suggest that the airport and city management do not want more flight training activity at this airport.

Yet, over the years it has been made abundantly clear that nobody (not the airport manager, city manager, mayor, city council) can ultimately control flight training or for that matter any itinerant flight activity taking place at the airport - that only the FAA can mandate what ultimately can and cannot be done in this regard.

That being said, when I see proposals to lengthen the airport runways under the premise of allowing larger aircraft (purportedly to attract corporate/business interests) - what I actually envision is longer taxiways which would ultimately allow for more flight training aircraft to get in line to run their training sorties.

What I sense will happen is something to the effect of "if you build it - they will come", and since we know that even if the intentions are to lengthen these runways for

anything but increased flight training, if and when it ends up that that's what will happen - there will be nothing anyone can do about it. Therefore my input is for NO BUILD.

In closing I wish to add that I feel that you and the entire city commission, the city manager, planning director, and attorney are doing a very good job at running the city of Ormond Beach - it is truly a great place to be and live! However, I think we must always keep our eyes on balancing growth with quality of life issues, and my sense is that for some time the activities at the Ormond Airport have been out of balance - skewed toward the interests of other than the citizens that actually live here.

Thank you all again for all you do for our community.

Kindest regards,

Vince Kinsler