

City of Monett, Missouri

# Airport Master Plan Update

for the Monett Municipal Airport

*Pride and Progress*



**BWR** | Right in the Center

# Monett Municipal Airport (HFJ) Master Plan Update

MoDOT Project Number: 08-098B-1



## MoDOT DISCLAIMER

The preparation of this document was financed, in part, through a State Block Planning Grant from the Missouri Department of Transportation (MoDOT), Aviation Section. The contents of this document do not necessarily reflect the views or policy of the MoDOT, Aviation Section or the U.S. Department of Transportation, Federal Aviation Administration (FAA). Acceptance of this document by the MoDOT, Aviation Section does not in any way constitute a commitment on the part of the State of Missouri to participate in any development concept depicted herein nor does it indicate that the proposed development is environmentally acceptable in accordance with applicable public laws.

1. Terwilliger, B. J. (Producer & Director). (2005). *One Six Right-The Romance of Flying* [DVD]. VNY Documentary, LLC.

2. Cover photo copyright & used with permission from Thomas and Connie Batie, Springdale, AR.

“The airport runway is the most important main street in any town.”

— Norm Crabtree, former aviation director of Ohio(!)



CHAPTER ONE – EXISTING CONDITIONS

INTRODUCTION	Page 1.1
BACKGROUND INFORMATION	Page 1.1
AIRFIELD FACILITIES	Page 1.4
TERMINAL AREA FACILITIES	Page 1.9
SUPPORT FACILITIES	Page 1.11
INTERMODAL ACCESS	Page 1.13
LOCAL AIRPORTS AND AIRSPACE CHARACTERISTICS	Page 1.14
AIRPORT ENVIRONS & LAND USE	Page 1.16
SOCIOECONOMIC CONDITIONS	Page 1.17
GENERAL AVIATION ACTIVITY	Page 1.20
CLIMATIC CONDITIONS	Page 1.22
WIND ANALYSIS	Page 1.23
AIRPORT ECONOMIC BENEFIT	Page 1.26
EXISTING CONDITIONS SUMMARY	Page 1.27

CHAPTER TWO – DEMAND FORECASTS

INTRODUCTION	Page 2.1
DATA SOURCES	Page 2.1
CONDITIONS AND ASSUMPTIONS	Page 2.2
DEMAND FORECAST APPROACH	Page 2.3
GENERAL AVIATION FORECASTS	Page 2.4
BASED AIRCRAFT FORECASTS	Page 2.5
PREFERRED BASED AIRCRAFT DEMAND AND FLEET MIX	Page 2.6
ANNUAL OPERATIONAL DEMAND	Page 2.8
OPERATIONAL FLEET MIX DEMAND	Page 2.10
ANNUAL INSTRUMENT APPROACH DEMAND	Page 2.12
ULTIMATE CRITICAL AIRCRAFT	Page 2.13
DEMAND FORECAST SUMMARY	Page 2.14

CHAPTER THREE – FACILITY REQUIREMENTS

INTRODUCTION	Page 3.1
PEAKING CHARACTERISTICS	Page 3.1
AIRFIELD AND AIRSPACE REQUIREMENTS	Page 3.3

# Table of Contents

AIRFIELD AND AIRSPACE FACILITY REQUIREMENTS SUMMARY	Page 3.9
TERMINAL AREA REQUIREMENTS	Page 3.10
TERMINAL AREA FACILITY REQUIREMENTS SUMMARY	Page 3.18
SUPPORT FACILITY REQUIREMENTS	Page 3.20
SUPPORT FACILITY REQUIREMENTS SUMMARY	Page 3.22
UTILITY REQUIREMENTS	Page 3.22
OTHER FACILITY REQUIREMENTS	Page 3.22
TRIGGER POINTS FOR FACILITY EXPANSION	Page 3.24

## CHAPTER FOUR – DEVELOPMENT ALTERNATIVES

INTRODUCTION	Page 4.1
GOALS AND OBJECTIVES FOR FUTURE DEVELOPMENT	Page 4.1
ALTERNATIVE DEVELOPMENT CONCEPTS	Page 4.2
AIRFIELD EXPANSION ALTERNATIVES	Page 4.5
TERMINAL AREA EXPANSION ALTERNATIVES	Page 4.9
DEVELOPMENT ALTERNATIVES SUMMARY	Page 4.13

## CHAPTER FIVE – ENVIRONMENTAL OVERVIEW

INTRODUCTION	Page 5.1
ENVIRONMENTAL IMPACT CATEGORIES	Page 5.1
ENVIRONMENTAL OVERVIEW SUMMARY	Page 5.13

## CHAPTER SIX – AIRPORT LAYOUT PLANS

INTRODUCTION	Page 6.1
AIRPORT LAYOUT DRAWING	Page 6.1
AIRSPACE DRAWING	Page 6.3
INNER PORTION OF THE APPROACH SURFACE DRAWING(S)	Page 6.4
RUNWAY CENTERLINE PROFILE DRAWING	Page 6.4
TERMINAL AREA DRAWING	Page 6.4
LAND USE DRAWING	Page 6.6
AIRPORT PROPERTY MAP	Page 6.6
40:1 DEPARTURE SURFACE DRAWING	Page 6.7

## CHAPTER SEVEN – CAPITAL IMPROVEMENT PROGRAM

INTRODUCTION	Page 7.1
--------------	----------

CAPITAL IMPROVEMENT PROGRAM PHASING	Page 7.1
PROJECT SCHEDULING	Page 7.1
MODOT CAPITAL IMPROVEMENT PROGRAM	Page 7.2
CAPITAL IMPROVEMENT PROGRAM COST ESTIMATES	Page 7.2
CAPITAL IMPROVEMENT PROGRAM SUMMARY	Page 7.5

CHAPTER EIGHT – FINANCIAL PROGRAM

INTRODUCTION	Page 8.1
CAPITAL IMPROVEMENT FUNDING SOURCES	Page 8.1
AIRPORT REVENUE SOURCES TO FUND CAPITAL IMPROVEMENTS	Page 8.4
CASH FLOW ANALYSIS	Page 8.7
CASH FLOW RECOMMENDATIONS	Page 8.8

TABLES

Table 1.1 – Published IAPs	Page 1.8
Table 1.2 – Airfield Facilities Summary	Page 1.8
Table 1.3 – Hangar Facilities	Page 1.11
Table 1.4 – Fuel Farm Facilities	Page 1.12
Table 1.5 – Utilities and Service Providers	Page 1.13
Table 1.6 – Local Airports	Page 1.14
Table 1.7 – Historic Population Statistics	Page 1.18
Table 1.8 – Projected Population Statistics	Page 1.18
Table 1.9 – Per Capita and Median Household Income	Page 1.19
Table 1.10 – Labor Force Statistics	Page 1.20
Table 1.11 – Operational Activity Summary	Page 1.21
Table 1.12 – Existing Critical Aircraft- Cessna Citation ‘Encore’ (560 Series)	Page 1.22
Table 1.13 – All-Weather, VFR and IFR Wind Coverage	Page 1.24
Table 1.14 – HFJ Economic Benefits Summary	Page 1.26
Table 2.1 – Forecast of Based Aircraft Summary, 2009-2029	Page 2.5
Table 2.2 – Preferred Total Based Aircraft and Fleet Mix Summary, 2009-2029	Page 2.7
Table 2.3 – Annual Operational Summary, 2009-2029	Page 2.8
Table 2.4 – Air Taxi Operations, 2009-2029	Page 2.9

# Table of Contents

Table 2.5 – Operational Fleet Mix Summary, 2009-2029	Page 2.10
Table 2.6 – Annual Instrument Approaches, 2009-2029	Page 2.12
Table 2.7 – Ultimate Critical Aircraft- Cessna Citation X (750 Series)	Page 2.13
Table 2.8 – Demand Forecast Summary, 2009-2029	Page 2.14
Table 3.1 – PMAD Operational Demand, 2009-2029	Page 3.2
Table 3.2 – Peak Hour Passenger Demand, 2009-2029	Page 3.2
Table 3.3 – Existing and Ultimate Runway Dimensional Standards	Page 3.4
Table 3.4 – Runway Length Requirements, 2009-2029	Page 3.5
Table 3.5 – Airfield/Airspace Facility Requirements Summary, 2009-2029	Page 3.10
Table 3.6 – Terminal Building Requirements, 2009-2029	Page 3.13
Table 3.7 – Auto Parking Requirements, 2009-2029	Page 3.14
Table 3.8 – T-Hangar Requirements, 2009-2029	Page 3.15
Table 3.9 – Clear Span Hangar Requirements, 2009-2029	Page 3.17
Table 3.10 – Public Apron Area/Tie-Down Requirements, 2009-2029	Page 3.19
Table 3.11 – Terminal Area Facility Requirements Summary, 2009-2029	Page 3.20
Table 3.12 – Fuel Storage Requirements, 2009-2029	Page 3.21
Table 3.13 – Support Facility Requirements Summary, 2009-2029	Page 3.23
Table 3.14 – Facility Development Trigger Point Summary, 2009-2029	Page 3.25
Table 5.1 – Environmental Impact Categories Summary	Page 5.13
Table 7.1 – Phase I (0-5 Year) ACIP Cost Summary	Page 7.3
Table 7.2 – Phase II & Phase III ACIP Cost Summary	Page 7.4
Table 7.3 – 20-Year ACIP Total Development Costs	Page 7.5
Table 8.1 – AIP Eligible and Ineligible Projects	Page 8.2
Table 8.2 – Revenue and Expenditures Summary, FY2005-FY2009	Page 8.9
<b>EXHIBITS</b>	
<hr/>	
Exhibit 1.1 – HFJ Location & Vicinity	Page 1.2
Exhibit 1.2 – Airfield Facilities and Airport Layout	Page 1.5
Exhibit 1.3 – Terminal Area Facilities	Page 1.10
Exhibit 1.4 – Local Airports & Airspace Characteristics	Page 1.15

Exhibit 1.5 – All Weather Windrose	Page 1.25
Exhibit 2.1 – Preferred Based Aircraft Projections (2009-2029)	Page 2.7
Exhibit 2.2 – Annual Operational Summary (2009-2029)	Page 2.8
Exhibit 2.3 – Air Taxi Operational Summary (2009-2029)	Page 2.9
Exhibit 2.4 – Operational Fleet Mix Summary (2009-2029)	Page 2.11
Exhibit 3.1 – Part 77 Imaginary Airspace Surfaces	Page 3.11
Exhibit 3.2 – IMC Windrose	Page 3.12
Exhibit 4.1 – Preferred Airfield Alternative	Page 4.8
Exhibit 4.2 – Interim Airfield Alternative	Page 4.10
Exhibit 4.3 – Preferred Terminal Area Alternative	Page 4.12
Exhibit 5.1 – Preferred Airfield Alternative- Noise Exposure Map (2029)	Page 5.3
Exhibit 7.1 – Airport Layout Drawing- Phased Development Plan	Page 7.7

APPENDICES

Appendix A – Environmental Overview Agency Responses

