




Asheville
REGIONAL AIRPORT
Master Plan

The preparation of this document was financed in part through a planning grant from the Federal Aviation Administration (FAA) as provided under Section 505 of the Airport and Airway Improvement Act, as amended. The contents do not necessarily reflect the official views of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein nor does it indicate the proposed development is environmentally acceptable in accordance with appropriate public laws.

Prepared By:



Delta Airport Consultants
1805 Sardis Road North, Suite 101
Charlotte, NC 28270



Mead & Hunt, Inc.
2605 Port Lansing Road
Lansing, MI 48906

Table of Contents

		Page
Chapter 1	Introduction	1-1
1.1	Purpose	1-1
1.2	Objectives	1-2
1.3	Master Planning Process	1-3
1.4	Stakeholder and Public Involvement.....	1-4
	1.4.a Master Plan Stakeholder Advisory Committee	1-4
	1.4.b Public Information Meetings and Outreach.....	1-5
1.5	Conclusion	1-6
Chapter 2	Inventory of Facilities	2-1
2.1	General Description and Location Information	2-2
2.2	History	2-6
2.3	Environment and Land Use	2-7
	2.3.a Environment.....	2-7
	2.3.b Land Use.....	2-9
2.4	Socioeconomic Data	2-14
2.5	Airport Management Structure.....	2-17
2.6	Existing Facilities.....	2-19
	2.6.a Runways	2-19
	2.6.b Taxiways	2-20
	2.6.c Aprons	2-20
	2.6.d Navigational Aids	2-21
	2.6.e Weather Equipment	2-25
	2.6.f Terminal Building	2-26
	2.6.g Fixed Base Operator	2-27
	2.6.h Hangars.....	2-28
	2.6.i Fuel Facilities	2-29
	2.6.j Air Cargo Facilities	2-30
	2.6.k Airport Maintenance Facility and Equipment	2-30
	2.6.l Aircraft Rescue and Fire Fighting (ARFF) and Public Safety Facility and Equipment.....	2-31
	2.6.m Airfield Electrical Vault & Generator.....	2-32
	2.6.n Airport Access Roads.....	2-32
	2.6.o Automobile Parking.....	2-33
	2.6.p Consolidated Rental Car Facility.....	2-34
2.7	Businesses and Tenants.....	2-34
2.8	Airspace, Air Traffic Control, and Approach/Departure Procedures.....	2-35
	2.8.a Airspace	2-35
	2.8.b Part 77 Surfaces	2-38
	2.8.c Runway Protection Zones	2-41
	2.8.d Air Traffic Control (ATC)	2-41
	2.8.e Approach/Departure Procedures	2-43
2.9	Summary.....	2-50
Chapter 3	Aviation Forecasts	3-1
3.1	Forecasting Approach	3-2
	3.1.a Time-Series Methodologies	3-2
	3.1.b Market Share Methodology.....	3-2
	3.1.c Socioeconomic Methodologies	3-3

	Page
3.2	Enplaned Passengers 3-3
3.2.a	Enplanement History 3-3
3.2.b	Federal Aviation Administration Forecast 3-3
3.2.c	Enplanement Forecasts 3-5
3.3	Based Aircraft 3-10
3.4	Based Aircraft Fleet Mix 3-15
3.5	Commercial Aircraft Operations 3-15
3.5.a	Scheduled Commercial Passenger Operations Forecasts 3-16
3.5.b	Air Carrier Fleet Mix 3-17
3.5.c	Unscheduled Commercial Passenger Operations Forecasts 3-19
3.6	General Aviation Operations 3-20
3.7	Military Operations 3-24
3.8	Instrument Operations 3-25
3.9	Enplaned/Deplaned Cargo 3-26
3.9.a	Cargo Scenario 1 3-26
3.9.b	Cargo Scenario 2 3-27
3.10	Peak Passenger Activity and Operations 3-28
3.10.a	Peak Month Passenger Activity Forecasts 3-28
3.10.b	Peak Month Average Day Passenger Activity Forecasts 3-29
3.10.c	Peak Hourly Passenger Activity Forecasts 3-31
3.10.d	Passenger Activity Peaking Characteristics Summary 3-32
3.10.e	Peak Operations Forecasts 3-32
3.11	Forecast Summary and FAA TAF Comparison 3-33
Chapter 4	Facility Requirements 4-1
4.1	Airfield Demand/Capacity Analysis 4-1
4.2	Airfield Facility Requirements 4-3
4.2.a	Airfield Layout & Wind Coverage 4-4
4.2.b	Identification of Design Standards 4-5
4.2.c	Runway Length 4-8
4.2.d	Runway Width 4-13
4.2.e	Runway Pavement Strength 4-14
4.2.f	Runway Grade 4-14
4.2.g	Taxiway System 4-16
4.2.h	Airfield Safety Areas 4-20
4.2.i	FAR Part 77 Surfaces 4-25
4.2.j	Navigational Aids (NAVAIDs) and Weather Reporting Equipment 4-31
4.3	Terminal Area Requirements 4-40
4.3.a	Terminal Gate & Apron Requirements 4-40
4.3.b	Terminal Building Requirements 4-44
4.3.c	Landside Access Requirements 4-45
4.3.d	Vehicle Parking Requirements 4-47
4.4	General Aviation Facility Requirements 4-54
4.4.a	Itinerant Aircraft Apron Space 4-54
4.4.b	Based Aircraft Parking and Storage Areas 4-55
4.4.c	Apron Pavement Condition 4-59
4.4.d	Fixed Base Operators 4-60
4.5	Support Facility Requirements 4-61
4.5.a	Department of Public Safety (DPS) Facility/Aircraft Rescue and Fire Fighting (ARFF) 4-61
4.5.b	Airport Maintenance Facility 4-63
4.5.c	Aircraft Fueling Facilities 4-64
4.5.d	Vehicle Fuel Storage Facilities 4-68
4.6	Additional Facility Requirements 4-69

	Page
4.6.a Air Cargo Development.....	4-69
4.6.b Rental Car Service Facilities.....	4-70
4.7 Summary.....	4-71
Chapter 5 Alternatives Analysis.....	5-1
5.1 Methodology and Evaluation Criteria.....	5-2
5.2 Runway 16/34.....	5-3
5.2.a Alternative 1 – Relocate Runway 75 Feet To The West.....	5-3
5.2.b Alternative 2 – Relocate Taxiway A 75 Feet To The East.....	5-6
5.2.c Alternative 3 – Relocate Runway 250 Feet To The West.....	5-9
5.2.d Alternative 4 – West Side Parallel Taxiway/Relocate Runway 75 Feet To The West.....	5-12
5.2.e Runway/Parallel Taxiway Separation Preferred Alternative.....	5-15
5.2.f Alternative 5 – Extend Runway 1,300 Feet To The North.....	5-16
5.2.g Runway Extension Preferred Alternative.....	5-19
5.3 Taxiway System.....	5-19
5.3.a Alternative 6 – Taxiway System Improvements.....	5-20
5.3.b Taxiway System Improvements Preferred Alternative.....	5-23
5.4 Airport Traffic Control Tower (ATCT).....	5-23
5.4.a Alternative 7 – ATCT Site 1.....	5-25
5.4.b Alternative 7 – ATCT Site 2.....	5-26
5.4.c Alternative 7 – ATCT Site 3.....	5-27
5.4.d Airport Traffic Control Tower Preferred Alternative.....	5-28
5.5 Automated Surface Observation System (ASOS).....	5-29
5.5.a Alternative 8 – ASOS Site 1.....	5-29
5.5.b Alternative 8 – ASOS Site 2.....	5-31
5.5.c Alternative 8 – ASOS Site 3.....	5-32
5.5.d Automated Surface Observation System Preferred Alternative.....	5-34
5.6 Terminal Area.....	5-34
5.6.a Alternative 9 – Terminal Expansion Alternative 1a.....	5-34
5.6.b Alternative 10 – Terminal Expansion Alternative 1b.....	5-37
5.6.c Alternative 11 – Terminal Expansion Alternative 2a.....	5-39
5.6.d Alternative 12 – Terminal Expansion Alternative 2b.....	5-41
5.6.e Preferred Terminal Expansion Alternative.....	5-43
5.7 Terminal Curb Front.....	5-44
5.7.a Alternative 13 – Commercial Vehicle Curb and Traffic Lanes.....	5-44
5.7.b Terminal Commercial Curb Front Preferred Alternative.....	5-45
5.8 General Aviation Development.....	5-46
5.8.a Alternative 14 – General Aviation Expansion Alternative 1.....	5-46
5.8.b Alternative 15 – General Aviation Expansion Alternative 2a.....	5-48
5.8.c Alternative 16 – General Aviation Expansion Alternative 2b.....	5-50
5.8.d Alternative 17 – General Aviation Expansion Alternative 2c.....	5-52
5.8.e Alternative 18 – General Aviation Expansion Alternative 3.....	5-54
5.8.f General Aviation Expansion Recommended Alternative.....	5-56
5.8.g Alternative 19 – Northwest Development Area Expansion Alternative.....	5-56
5.9 Vehicle Parking.....	5-59
5.9.a Short-Term, Premium, and Rental Car Ready/Return Parking.....	5-59
5.9.b Options to Expand Long-Term Parking Infrastructure.....	5-60
5.9.c Alternative 20 – Shuttle Lot at Site 1.....	5-63
5.9.d Alternative 21 – Shuttle Lot at Site 2.....	5-63
5.9.e Alternative 22 – Parking Garage at Site 3.....	5-65
5.9.f Alternative 23 – Parking Garage at Site 4.....	5-67
5.9.g Alternative 24 – Parking Garage at Site 5.....	5-69
5.9.h Alternative 25 – Shuttle Lot at Site 6.....	5-71

	Page
5.9.i	Parking Expansion Alternative Financial Feasibility Analysis..... 5-72
5.9.j	Recommended Parking Alternative 5-73
5.10	Landside Access 5-75
5.10.a	Alternative 26 – Landside Access Alternative..... 5-75
5.11	Land Use 5-77
5.11.a	Alternative 27 – Land Use Plan 5-77
5.11.b	Alternative 28 – Air Cargo Development..... 5-79
5.12	Summary of Recommended Alternatives 5-81
Chapter 6	Environmental Overview 6-1
6.1	Air Quality..... 6-2
6.2	Compatible Land Use..... 6-4
6.2.a	Buncombe County..... 6-6
6.2.b	City of Asheville..... 6-7
6.2.c	Town of Fletcher 6-8
6.2.d	Town of Mills River..... 6-9
6.2.e	Future Considerations..... 6-9
6.3	Construction Impacts 6-11
6.4	Department of Transportation Act, Section 4(f) 6-11
6.5	Farmlands 6-13
6.6	Fish, Wildlife, and Plants..... 6-13
6.6.a	Endangered Species..... 6-14
6.6.b	Biotic Communities 6-14
6.7	Floodplains..... 6-15
6.8	Hazardous Materials, Pollution Prevention, and Solid Waste..... 6-17
6.9	Light Emissions and Visual Impacts 6-19
6.10	Natural Resources and Energy Supply..... 6-19
6.11	Noise 6-20
6.12	Secondary (Induced) Impacts 6-25
6.13	Socioeconomic Impacts, Environmental Justice, Children’s Environmental Health, and Safety Risks..... 6-25
6.14	Water Quality 6-26
6.14.a	Groundwater 6-26
6.14.b	Surface Water 6-27
6.14.c	Stormwater..... 6-30
6.15	Wetlands 6-30
6.15.a	Identification and Classification..... 6-31
6.15.b	Jurisdictional Streams..... 6-31
6.16	Summary..... 6-31
Chapter 7	Capital Improvement Plan 7-1
7.1	Capital Improvement Plans 7-1
7.2	Estimated Costs for Future Development..... 7-2
7.3	Funding Resources 7-4
7.3.a	Airport Improvement Program..... 7-4
7.3.b	State of North Carolina Funding Assistance..... 7-4
7.3.c	Passenger Facility Charges 7-5
7.3.d	Customer Facility Charges..... 7-5
7.3.e	Additional Airport Financing Sources..... 7-5
7.4	Summary..... 7-6
Chapter 8	Financial Analysis..... 8-1

	Page
8.1 Capital Improvement Plan.....	8-2
8.1.a Federal AIP Grants	8-4
8.1.b North Carolina Department of Transportation.....	8-5
8.1.c Passenger Facility Charge Revenue	8-5
8.1.d Airport Authority Funding	8-6
8.2 Funding Plan Analysis.....	8-6
8.3 Conclusions and Recommendations – Capital Plan.....	8-8
8.4 Financial Structure	8-8
8.4.a Historical and Projected Airport Revenues	8-9
8.4.b Historical and Projected Operating Expenses	8-16
8.5 Conclusion	8-22
Appendix A Airfield Demand/Capacity Analysis.....	A-1
A.1 Airfield Demand/Capacity Analysis	A-1
A.1.a Factors Affecting Runway Capacity	A-2
A.1.b Weather Conditions.....	A-2
A.1.c Touch and Go Operations.....	A-3
A.1.d Aircraft Mix Index	A-3
A.1.e Peak Hour Airfield Capacity	A-4
A.1.f Annual Service Volume.....	A-4
A.1.g Range of Delay	A-6
A.1.h Runway Demand/Capacity Summary	A-7
Appendix B Environmental Assessment Finding of No Significant Impact (FONSI).....	B-1

(THIS PAGE INTENTIONALLY LEFT BLANK)

Table of Figures

		Page
Chapter 1	Introduction	
	(none)	
Chapter 2	Inventory of Facilities	
Figure 2-1	Airport Regional Map	2-2
Figure 2-2	Nearby Public Use General Aviation Airports	2-3
Figure 2-3	Non-Stop Destinations from Asheville	2-4
Figure 2-4	Nearby Commercial Service Airports	2-5
Figure 2-5	Surrounding Land Uses	2-10
Figure 2-6	Buncombe County Zoning Districts	2-11
Figure 2-7	City of Asheville Zoning Districts	2-12
Figure 2-8	Town of Fletcher Zoning Districts	2-13
Figure 2-9	Town of Mills River Zoning Districts	2-14
Figure 2-10	Airport Service Area	2-15
Figure 2-11	Airport Authority Organizational Structure	2-18
Figure 2-12	Airport Taxiway Configuration	2-20
Figure 2-13	Airport Apron Locations	2-21
Figure 2-14	Terminal Building Layout	2-27
Figure 2-15	Landmark Aviation Facility	2-28
Figure 2-16	Airport Hangar Locations	2-29
Figure 2-17	Airport Access Roads	2-33
Figure 2-18	Classes of Airspace	2-37
Figure 2-19	Airspace Sectional Chart	2-37
Figure 2-20	FAR Part 77 Surfaces – Plan View	2-40
Figure 2-21	FAR Part 77 Surfaces – Isometric View	2-40
Figure 2-22	ILS or Localizer Approach to Runway 16	2-44
Figure 2-23	ILS or Localizer Approach to Runway 34	2-45
Figure 2-24	RNAV (GPS) Approach to Runway 16	2-46
Figure 2-25	RNAV (GPS) Approach to Runway 34	2-47
Figure 2-26	Asheville Three Departure from Runway 16-34	2-48
Figure 2-27	Asheville Three Departure Narrative	2-49
Chapter 3	Aviation Forecasts	
	(none)	
Chapter 4	Facility Requirements	
Figure 4-1	Recommended Critical Aircraft Types	4-8
Figure 4-2	Potential West Coast Non-Stop Markets	4-12
Figure 4-3	Runway 16/34 Longitudinal Grade	4-15
Figure 4-4	Proposed Taxiway Designations	4-16
Figure 4-5	Airfield Safety Areas	4-20
Figure 4-6	Runway Safety Area	4-21
Figure 4-7	Runway Object Free Area – Runway 16 & Runway 34	4-23
Figure 4-8	Runway 16 Runway Protection Zone	4-25
Figure 4-9	FAR Part 77 Standards	4-26
Figure 4-10	Airport Airspace Plan	4-29
Figure 4-11	Airport Airspace Plan (Continued)	4-30

	Page
Figure 4-12	Terminal Apron Aircraft Layout 4-40
Figure 4-13	Air Carrier Ramp Chart 4-41
Chapter 5	Alternative Analysis
Figure 5-1	Alternative 1 – Relocate Runway 75 Feet to West 5-5
Figure 5-2	Alternative 2 – Relocate Taxiway A 75 Feet To The East 5-8
Figure 5-3	Alternative 3 – Relocate Runway 250 Feet To The West 5-11
Figure 5-4	Alternative 4 – West Side Parallel Taxiway/Relocate Runway 75 Feet To The West... 5-14
Figure 5-5	Alternative 5 – Extend Runway 1,300 Feet To The North 5-18
Figure 5-6	Alternative 6 – Taxiway System Improvements 5-22
Figure 5-7	Airport Traffic Control Tower Alternatives 5-24
Figure 5-8	Automated Surface Observation System Alternatives 5-30
Figure 5-9	Alternative 9 – Terminal Expansion Alternative 1a 5-36
Figure 5-10	Alternative 10 – Terminal Expansion Alternative 1b 5-38
Figure 5-11	Alternative 11 – Terminal Expansion Alternative 2a 5-40
Figure 5-12	Alternative 12 – Terminal Expansion Alternative 2b 5-42
Figure 5-13	Alternative 13 – Commercial Vehicle Curb and Traffic Lanes 5-45
Figure 5-14	Alternative 14 – General Aviation Expansion Alternative 1 5-47
Figure 5-15	Alternative 15 – General Aviation Expansion Alternative 2a 5-49
Figure 5-16	Alternative 16 – General Aviation Expansion Alternative 2b 5-51
Figure 5-17	Alternative 17 – General Aviation Expansion Alternative 2c 5-53
Figure 5-18	Alternative 18 – General Aviation Expansion Alternative 3 5-55
Figure 5-19	Alternative 19 – Northwest Development Area Expansion Alternative 5-58
Figure 5-20	Parking Alternative Sites 5-62
Figure 5-21	Alternative 20 – Shuttle Lot at Site 1 5-63
Figure 5-22	Alternative 21 – Shuttle Lot at Site 2 5-64
Figure 5-23	Alternative 22 – Parking Garage at Site 3 5-66
Figure 5-24	Alternative 23 – Parking Garage at Site 4 5-68
Figure 5-25	Alternative 24 – Parking Garage at Site 5 5-70
Figure 5-26	Alternative 25 – Shuttle Lot at Site 6 5-71
Figure 5-27	Alternative 26 – Landside Access Alternative 5-76
Figure 5-28	Alternative 27 – Land Use Plan 5-78
Figure 5-29	Alternative 28 – Air Cargo Development 5-80
Figure 5-30	Summary of Recommended Alternatives 5-83
Chapter 6	Environmental Overview
Figure 6-1	Land Use Influence Area 6-6
Figure 6-2	Airport Development Zone Map 6-10
Figure 6-3	Section 4(f) Properties 6-12
Figure 6-4	Wetlands, Streams, and Floodplains 6-16
Figure 6-5	Hazardous Sites 6-18
Figure 6-6	Noise Contours 6-24
Figure 6-7	Watershed Locations 6-28
Chapter 7	Capital Improvement Plan
(none)	
Chapter 8	Financial Analysis
(none)	

Appendix A Airfield Demand/Capacity Analysis

(none)

Appendix B Environmental Assessment Finding of No Significant Impact (FONSI)

(none)

(THIS PAGE INTENTIONALLY LEFT BLANK)

Table of Tables

		Page
Chapter 1	Introduction	
	(none)	
Chapter 2	Inventory of Facilities	
Table 2-1	Commercial Airline Service	2-4
Table 2-2	Runway 16/34 Wind Coverage In All Weather Conditions	2-8
Table 2-3	Runway 16/34 Wind Coverage In VFR Weather Conditions	2-9
Table 2-4	Runway 16/34 Wind Coverage In IFR Weather Conditions.....	2-9
Table 2-5	Historical Population of Airport Service Area	2-15
Table 2-6	2010 Age Demographics of Airport Service Area	2-16
Table 2-7	Mean Household Total Personal Income of Airport Service Area	2-16
Table 2-8	Runway 16/34 Data.....	2-20
Table 2-9	Airport Hangars	2-29
Table 2-10	Airport Maintenance Vehicles	2-31
Table 2-11	Airport Allocated Parking Spaces	2-34
Table 2-12	Runway Protection Zone Dimensions.....	2-41
Table 2-13	Airport Communication Frequencies.....	2-42
Chapter 3	Aviation Forecasts	
Table 3-1	Historical Enplanements	3-4
Table 3-2	Enplanement Forecast – FAA Terminal Area Forecast (TAF).....	3-4
Table 3-3	Enplanement Forecasts – Trend Line & Growth Rate Methodologies	3-6
Table 3-4	Enplanement Forecasts – Market Share Methodologies	3-7
Table 3-5	Enplanement Forecasts – Socioeconomic Methodologies	3-8
Table 3-6	Enplanement Forecasts Summary.....	3-9
Table 3-7	Based Aircraft Forecasts – TAF, Trend Line, & Growth Rate Methodologies	3-11
Table 3-8	Based Aircraft Forecast – Market Share Methodology	3-12
Table 3-9	Based Aircraft Forecasts – Socioeconomic Methodologies.....	3-13
Table 3-10	Based Aircraft Forecasts Summary	3-14
Table 3-11	Based Aircraft Fleet Mix Forecast.....	3-15
Table 3-12	Scheduled Commercial Average Seats/Departure and Load Factor.....	3-16
Table 3-13	Scheduled Commercial Operations Forecasts	3-17
Table 3-14	World Fleet Growth Forecast – 2010 to 2030.....	3-18
Table 3-15	Scheduled Commercial Operations Fleet Mix Forecast	3-19
Table 3-16	Air Carrier and Air Taxi Operations Forecasts	3-19
Table 3-17	GA Operations Forecasts – TAF, Trend Line, & Growth Rate Methodologies	3-20
Table 3-18	GA Operations Forecasts – Operations per Based Aircraft & Market Share	3-21
Table 3-19	GA Operations Forecasts Summary	3-22
Table 3-20	Local/Itinerant General Aviation Operations Forecast.....	3-23
Table 3-21	Military Operations Forecast	3-24
Table 3-22	Military Operations Fleet Mix	3-25
Table 3-23	Instrument Operations Forecast	3-26
Table 3-24	Air Cargo Scenario 1 (Baseline)	3-27
Table 3-25	Air Cargo Scenario 2 (High Growth)	3-28
Table 3-26	Peak Month Passenger Activity Forecasts	3-29
Table 3-27	Peak Month Average Day Passenger Activity Forecasts	3-30
Table 3-28	Peak Hour Passenger Activity Forecasts.....	3-31
Table 3-29	Passenger Activity Peaking Characteristics Summary	3-32

	Page
Table 3-30	Peak Month, Average Day, and Peak Hour Operations Projections 3-33
Table 3-31	Summary of Annual Activity Forecasts 3-34
Table 3-32	FAA Template for Summary of Forecasts and Growth Rates 3-35
Table 3-33	FAA Template for Summary of Forecasts Compared to FAA TAF 3-36
Chapter 4	Facility Requirements
Table 4-1	Ratio of Demand to ASV and Delay 4-2
Table 4-2	FAA Estimated Delay Ranges 4-3
Table 4-3	Airplane Design Groups 4-6
Table 4-4	Airfield Design Standards 4-7
Table 4-5	Commercial Aircraft Required Runway Lengths 4-9
Table 4-6	Airline Service by Aircraft Type & Destination 4-10
Table 4-7	Maximum Aircraft Ranges From 8,001-Foot Runway at Full Passenger Loads 4-11
Table 4-8	Runway Length Required for Non-stop West Coast Service 4-12
Table 4-9	Runway 16/34 Longitudinal Slope by Quarter 4-15
Table 4-10	Existing & Proposed Runway 16/34 NAVAIDs 4-31
Table 4-11	Precision Instrument Approach Categories and Criteria 4-32
Table 4-12	2000-2009 Weather Condition Analysis 4-33
Table 4-13	ILS Category II and III Infrastructure and Operational Requirements 4-33
Table 4-14	SMGCS Plan Requirements For Operations Below 1,200 RVR 4-34
Table 4-15	Aircraft Parking by Gate / Position 4-41
Table 4-16	Projected RON Aircraft Parking Demand 4-42
Table 4-17	Projected Peak Hour Aircraft Gate Demand 4-43
Table 4-18	Projected Terminal Building Space Needs 4-44
Table 4-19	Projected Airport Vehicle Traffic Calculations 4-46
Table 4-20	Existing Parking Supply 4-48
Table 4-21	Occupancy of the Public Parking Lots 4-49
Table 4-22	Public Parking Demand Projections 4-50
Table 4-23	Estimated Occupancy of Employee Lots 4-51
Table 4-24	Employee Parking Demand Projections 4-51
Table 4-25	Rental Car Ready/Return Parking Demand Projections 4-52
Table 4-26	Parking Supply/Demand Summary 4-53
Table 4-27	Apron Needs for Transient Aircraft 4-54
Table 4-28	Based Aircraft Fleet Mix Projections Summary 4-55
Table 4-29	Based Aircraft Parking Locations 4-56
Table 4-30	Available Based Aircraft Parking Summary 4-56
Table 4-31	Projected Based Aircraft Apron Parking and Hangar Demand by Fleet Mix 4-57
Table 4-32	Typical Parking Area Sizes for Based Aircraft 4-57
Table 4-33	Projected Hangar and Apron Area Requirements 4-58
Table 4-34	Projected Hangar and Apron Area Needed Capacity 4-59
Table 4-35	2008-2011 Aviation Fuel Sales (In Gallons) 4-65
Table 4-36	Historical Commercial Airline Jet-A Fuel Demand 4-65
Table 4-37	Projected Commercial Airline Jet-A Fuel Demand 4-66
Table 4-38	Historical GA Jet-A Fuel Demand 4-66
Table 4-39	Projected GA Jet-A Fuel Demand 4-66
Table 4-40	Historical 100LL Fuel Demand 4-67
Table 4-41	Projected 100LL Fuel Demand 4-67
Table 4-42	Projected Demand and Fuel Storage Requirements 4-67
Table 4-43	Summary of 2011 Rental Car Agency Fuel Deliveries 4-68
Table 4-44	Air Cargo Facility Size Requirements 4-70

	Page
Chapter 5	Alternatives Analysis
Table 5-1	Alternative 1 Summary 5-5
Table 5-2	Alternative 2 Summary 5-8
Table 5-3	Alternative 3 Summary 5-11
Table 5-4	Alternative 4 Summary 5-14
Table 5-5	Alternative 5 Summary 5-18
Table 5-6	Alternative 6 Summary 5-22
Table 5-7	Alternative 7 – ATCT Site 1 Summary 5-25
Table 5-8	Alternative 7 – ATCT Site 2 Summary 5-26
Table 5-9	Alternative 7 – ATCT Site 3 Summary 5-28
Table 5-10	Alternative 8 – ASOS Site 1 Summary 5-31
Table 5-11	Alternative 8 – ASOS Site 2 Summary 5-32
Table 5-12	Alternative 8 – ASOS Site 3 Summary 5-33
Table 5-13	Alternative 9 Summary 5-36
Table 5-14	Alternative 10 Summary 5-38
Table 5-15	Alternative 11 Summary 5-40
Table 5-16	Alternative 12 Summary 5-42
Table 5-17	Alternative 13 Summary 5-45
Table 5-18	Alternative 14 Summary 5-47
Table 5-19	Alternative 15 Summary 5-49
Table 5-20	Alternative 16 Summary 5-51
Table 5-21	Alternative 17 Summary 5-53
Table 5-22	Alternative 18 Summary 5-55
Table 5-23	Alternative 19 Summary 5-58
Table 5-24	Parking Supply/Demand Summary 5-59
Table 5-25	Alternative 20 Summary 5-63
Table 5-26	Alternative 21 Summary 5-64
Table 5-27	Site 3 Parking Garage Capacity Projections 5-65
Table 5-28	Alternative 22 Summary 5-66
Table 5-29	Site 4 Parking Garage Capacity Projections 5-67
Table 5-30	Alternative 23 Summary 5-69
Table 5-31	Site 5 Parking Garage Capacity Projections 5-69
Table 5-32	Alternative 24 Summary 5-71
Table 5-33	Alternative 25 Summary 5-72
Table 5-34	Alternative 26 Summary 5-77
Table 5-35	Alternative 28 Summary 5-80
Chapter 6	Environmental Overview
Table 6-1	Impact Categories Not Present in Study Area 6-2
Table 6-2	National Ambient Air Quality Standards 6-3
Table 6-3	Upland Communities 6-14
Table 6-4	Potential Hazardous Material Sites 6-17
Table 6-5	14 CFR Sound Exposure/Land Use Compatibility Guidelines 6-21
Table 6-6	Summary of INM Inputs for Airport Noise Analysis 6-23
Table 6-7	2010 Section 303(d) Impaired Waters 6-29
Chapter 7	Capital Improvement Plan
Table 7-1	Capital Improvement Plan Summary 7-3

	Page
Chapter 8	Financial Analysis
Table 8-1	Short-Term CIP Proposed Funding Sources 8-1
Table 8-2	Capital Improvement Plan..... 8-3
Table 8-3	Projected Airport Entitlement Funds 8-5
Table 8-4	Capital Improvement Plan Funding Analysis 8-7
Table 8-5	Historic Airport Revenue 8-11
Table 8-6	Projected Airport Revenue 8-13
Table 8-7	Historical Airport Operating Expenses 8-18
Table 8-8	Projected Airport Operating Expenses..... 8-20
Table 8-9	Airport Cash Flow From Operating Expenses 8-22
Appendix A	Airfield Demand/Capacity Analysis
Table A-1	Aircraft Categories A-3
Table A-2	Operations by Aircraft Category..... A-4
Table A-3	Ratio of Demand to ASV and Delay..... A-6
Table A-4	FAA Estimated Delay Ranges A-7
Appendix B	Environmental Assessment Finding of No Significant Impact (FONSI)
(none)	