



BZN Bozeman Yellowstone INTERNATIONAL AIRPORT

2020 MASTER PLAN UPDATE



2020 MASTER PLAN UPDATE:

EXECUTIVE SUMMARY

Introduction

The Gallatin Airport Authority started the 2020 Master Plan Update process in Fall of 2019 when they approved Morrison-Maierle, Inc. to provide an update to the 2008 Master Plan Update. The forecasts presented in the Master Plan Update were close to approval by the FAA upon the start of the COVID-19 pandemic in spring of 2020 which paused the update to determine the pandemic's long-term effect on the airport. By the end of 2021, enplanements had exceeded 2019 year-end numbers and the Master Plan Update was allowed to proceed. The update was funded with an AIP grant. The recommendations contained in the Master Plan Update represent the views, policies, and development plan of Gallatin Airport Authority and do not necessarily represent the views of the Federal Aviation Administration (FAA). The FAA reviews all elements of a master plan to ensure that sound planning techniques have been applied. Acceptance of a master plan by the FAA does not constitute a commitment on the part of the United States to participate in any development depicted in the plan, nor does it indicate that the proposed development is environmentally acceptable in accordance with appropriate public law.

The 2020 Master Plan Update follows the requirements of FAA Advisory Circular "Airport Master Plans" 150/5070-6C and is presented in seven chapters, covering the planning period from 2020 to 2040. The primary objective of the Master Plan Update is to provide the Gallatin Airport Authority with a long-term development plan which provides an efficient air transportation facility that meets the needs of the community. A new Airport Layout Plan was produced to display the development plan and is provided in Appendix 1.

Inventory

Bozeman Yellowstone International Airport (BZN) is located in Gallatin County in the southwest part of the State of Montana. Gallatin County is the most populated and fastest growing county in scenic southwest Montana. The County Seat is Bozeman, which, at large, encompasses over 50,000 people. Bozeman Yellowstone International Airport is one of twelve commercial service airports in Montana and one of three airports in Gallatin County. The Airport serves not only the local citizens of southwest Montana but also many tourists who visit southwest Montana for the multitude of outdoor activities.

The Civil Aeronautics Administration financed construction of Bozeman Yellowstone International in 1941 in order to provide a training school for pilots just prior to World War II. In 1941, the Airport had four runways. The 1940s heralded the beginning of the Airport's major construction era and included 5,200 feet of paved Runway 12-30, 5,100 feet of paved Runway 16-34, turf Runways 3-21 (4,700 feet) and 7-25 (4,700 feet), and Taxiways A and B. The apron and lighting on Runways 16-34, 12-30, and Taxiways A and B were also completed during the 1940s. A 35-foot by 75-foot quonset hut was built in 1947 as a temporary "depot" for Northwest Airlines, which began regular commercial service in June of that year. The Airport administration building was constructed in 1950 and served as the passenger terminal until 1977 when the existing terminal was constructed.

Bozeman Yellowstone International now has four runways, the commercial service Runway 12-30, the crosswind Runway 3-21, the general aviation Runway 11-29, and a turf Runway 11G-29G. The taxiways and taxilanes provide aircraft access to the Airport's four parking aprons, three fixed based operators, and over 160 private aircraft hangars.

Support facilities on the Airport include Aircraft Rescue and Fire Fighting (ARFF), airport maintenance and administration, and fuel storage. The commercial passenger facilities include the terminal building and parking facilities for passengers and employees. The existing terminal contains 290,000 square feet of space for airport administration, airlines, rental car companies, gift shop, ground transportation, restaurant and lounge, and TSA on two floors. Increased passenger numbers and security requirements have reduced the operating efficiency of the existing terminal. Since the 2008 Master Plan Update, passenger enplanements have increased 134% to 785,706 in 2019. Expansion of the terminal facilities is a top priority and one of the focuses of this Master Plan Update.

Forecasts

Forecasts of aviation, landside, and terminal activities are the foundation for decisions in airport planning. Projections help determine the need for new or expanded facilities. There are many variables that affect these forecasts. Major forces on aviation activity include both aviation related and outside factors at the local, regional, and national levels.

Forecasts of aviation activity are projected through the year 2039 in five-year increments. As forecasts are estimates, it cannot be assured that the actual achievements will match the forecasts. Because of that, it is important that facilities be planned so construction can be phased when actual activity levels require the facilities.

Aviation forecasts included in the 2020 Master Plan Update cover the following areas:

- Commercial Service
 - Annual Enplaned Passengers,
 - Annual Operations,
 - Fleet Mix.
- Annual Instrument Approaches
- Fuel Usage
- General Aviation
 - Based Aircraft,
 - Local and Itinerant Operations.
- Air Taxi
- Air Cargo
- Military

Passenger activity was forecast taking national aeronautical trends into consideration and using a range of methods: time-series, population and market share trend analysis. A mid-range population-based forecast was selected as the preferred enplaned passenger forecast based on historic statistical reliability. Similar methodologies were applied to develop a range of forecasts for based aircraft and aircraft operations by type. A preferred recommended forecast was selected in each category. The recommended forecasts were reviewed and approved by the FAA.

The table below summarizes the preferred aviation demand forecasts of passenger enplanements, based aircraft and annual operations for the twenty-year planning period.

Aviation Demand Forecast Summary

	2019	2024	2029	2034	2039
Enplanements	785,706	1,033,679	1,295,763	1,565,899	1,836,063
Based Aircraft	344	386	434	484	533
Annual Operations					
Airline	17,580	21,547	25,740	30,386	35,426
Air Taxi	8,142	8,447	8,753	9,058	9,363
Military	665	682	698	715	732
General Aviation					
Local	34,253	35,557	39,962	44,502	49,043
Itinerant	37,227	39,274	41,322	43,369	45,417
Total Operations	97,867	105,507	116,475	128,030	139,980

Facility Requirements and Developments

Airside facility requirements included in the update looked at the essential facilities for the operation of aircraft. These essential facilities include runways, taxiways, navigational aids, and support facilities. Development alternatives have been displayed on the updated Airport Layout Plan (ALP) included in the Master Plan Update. Costs associated with the construction of the developments recommended are also included.

Significant airside facility developments that were not on the previous ALP include the following:

- Construction of the north side general aviation development,
- Construction of the extensions of Runway 11-29,
- Construction of a full length dual parallel taxiway between Runway 12-30 and 11-29,
- Construction of by-pass taxiways near the thresholds of Runway 12-30,

Terminal facility requirements are also presented in the Master Plan Update. These facilities were analyzed based on the forecast passenger demand levels. The space requirements for the terminal facilities were projected utilizing the forecast number of annual passengers and annual aircraft operations. The plan identifies the need to grow the terminal to 20 gates within the planning period with commensurate growth in ticketing, baggage claim, hold room and terminal support space. To accommodate this growth, two linear terminal expansion and remodels will be required during the planning period which will expand the terminal to the west and east.

Financial Plan

Evaluation of the airport development needs based on forecast activity and operational efficiency were used in the formation of a recommended capital improvement plan. The plan outlines the costs associated with each development item and provides a timeline when the items will likely be undertaken. One of the most important elements of the master planning process is the application of basic economic, financial, and management rationale to each development item so that feasibility of implementation can be achieved.

The financial plan examines the economic feasibility of developing the proposed improvements. Possible funding sources of the developments includes airport revenues, federal and state grant programs, Passenger Facility Charges (PFC), Car Rental Facility Charges (CFC), and bond financing. The plan expects the cost of the capital improvement and maintenance projects at Bozeman Yellowstone International Airport to total over \$420 million during the 20-year planning period. The plan recognizes that the terminal expansions and parking garages are a couple of the most pressing and costly developments currently facing Bozeman Yellowstone International Airport. The financial plan demonstrates that, if the terminal expansion can be appropriately phased, the recommended development projects could be completed by using PFC, CFC, local, and Airport Improvement Program (AIP) funds without issuing revenue bonds.

Land Use Compatibility

To assist in land use compatibility, the FAA, state aviation agencies, and local airport sponsors have expended significant funds in support of airport planning and land use compatibility planning. Compatible land use guides have been prepared for airport managers, local land use planners, developers, and elected and appointed public officials. The purpose is to provide information on FAA programs and sources of support and to promote an understanding of land use compatibility planning issues around airports that could result in improved compatibility in airport environments.

Ensuring compatible land use around the Airport is very important to future airport operations. In the past, this has been done primarily through land acquisition. The Gallatin Airport Authority currently owns 2,787 acres of land in fee title. They also control 1,279 acres of land through clear zone easements, development rights, and leases. In total, the Gallatin Airport Authority controls 4,066 acres of land surrounding the airport. Recommendations for airport land use planning are presented. The Master Plan Update also takes into account existing land planning efforts completed by the local governmental agencies to date and makes recommendations for off airport land use planning as well. Environmental factors were considered in land use planning to help the Gallatin Airport Authority thoroughly evaluate the airport development alternatives and to provide information that will help expedite subsequent environmental processing.

Public Involvement

Throughout the master planning process public involvement was solicited. This was done through a variety of methods. Public meetings were held for the pilots, airlines, on airport businesses, and the general public to comment on and provide input to the development alternatives. Additionally, the draft chapters of the Master Plan were posted on Bozeman Yellowstone International Airport's web site and reviewed at the Airports Public Board meetings as they were completed for the public to review. The Master Plan was also reviewed by Scott Eaton of the FAA Helena Airport District Office. The following is a summary of many of the meetings held by the consultant and airport staff throughout the master planning process:

- News letters to General Aviation pilots;
- Meet with Tower Chief;
- Meet with airlines;
- Meet with TSA;
- Meet with FBOs and commercial operators;
- Meet with cargo operators;
- Meet with ground transportation, rental car and parking concessionaires;
- Meet with terminal concessionaires;
- Airside public meeting;
- Landside public meeting;
- Terminal requirements public meeting;
- Monthly Airport Board Meetings as posted;
- Final Master Plan public meeting;
- Review Land Use Planning chapter to Belgrade and Gallatin County Planning Boards.

Conclusion

The 2020 Master Plan Update for Bozeman Yellowstone International provides a guide for future development. Numerous factors will influence future aviation activity at the airport. While the forecast activity levels may not be achieved by the estimated date, the recommended development schedule can be shifted up or back to meet the needs of the airport and its users. As planning is not a static event but a dynamic process, the Airport Authority is encouraged to revisit the recommendations included in the document periodically.

Morrison-Maierle, Inc. sincerely thanks the Gallatin Airport Authority Board members for giving us the opportunity to complete the update. Thank you to the board members and the airport staff for their assistance and input throughout the planning process.

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TABLE OF CONTENTS

Chapter One: Inventory	1-1
1.1 Introduction	1-1
1.1.1 Goals and Objectives	1-1
1.2 Airport Management	1-2
1.3 Airport History	1-2
1.4 Airport Setting	1-32
1.5 Climate	1-34
1.6 Airport System Planning Role	1-35
1.7 Airport Facility	1-35
1.7.1 Airside Facilities	1-35
1.8 Landside Facilities	1-47
1.8.1 Passenger Terminal Area	1-47
1.8.2 Terminal Building	1-47
1.9 Terminal Access, Circulation and Parking	1-51
1.10 Rental Car Facilities	1-52
1.11 General Aviation Facilities	1-53
1.12 Support Facilities	1-57
1.13 Airspace and Air Traffic Control	1-60
1.14 Airspace Structure	1-61
1.15 Enroute Navigational Aids	1-64
1.16 Instrument Approaches	1-64
1.17 Air Traffic Control Facilities	1-76
1.18 Regional Planning and Development	1-77
Chapter Two: Forecasts	2-1
2.1 Introduction	2-1
2.2 National Aviation Trends	2-1
2.3 Airport Service Area	2-7
2.4 Historical Enplaned Passengers	2-8
2.5 Enplanement Forecasts	2-11
2.6 Enplanement Forecast Summary	2-12
2.7 Based Aircraft Forecasts	2-15
2.8 Operations Forecasts	2-19
2.9 Instrument Operations	2-24
2.10 Air Cargo	2-24
2.11 Fuel Volume	2-25
2.12 Peaking Characteristics	2-26
2.13 Forecast Summary	2-28
2.14 Comparison with the TAF	2-29
2.15 Critical Aircraft and Airport Reference Code	2-30

Table of Contents – Continued

Chapter Three: Facility Requirements	3-1
3.1 Introduction	3-1
3.2 Demand / Capacity Analysis	3-2
3.2.1 Airfield Capacity	3-3
3.3 Airfield Requirements	3-12
3.3.1 Design Standards Concepts and Terminology	3-12
3.3.2 Airfield Marking, Lighting and Signage	3-38
3.3.3 Navigational and Approach Aids	3-39
3.4 Terminal Area Requirements	3-44
3.4.1 Aircraft Parking	3-44
3.4.2 Terminal Auto Parking	3-45
3.4.3 Terminal Curbside	3-46
3.4.4 Gate Capacity Requirements	3-47
3.4.5 Ticketing / Check-in Area	3-49
3.4.6 Airline Offices and Operational Spaces	3-52
3.4.7 Outbound Baggage Screening	3-52
3.4.8 Baggage Make-up	3-54
3.4.9 Passenger Security Screening	3-55
3.4.10 Passenger Holdrooms	3-56
3.4.11 Baggage Claim	3-57
3.4.12 Restrooms	3-59
3.5 Concessions	3-60
3.6 Rental Car Counters	3-61
3.7 Airport Administration	3-61
3.8 Terminal Requirements Summary	3-62
3.9 General Aviation Facilities	3-63
3.9.1 General Aviation Pilot Lounge	3-63
3.9.2 Hangars	3-63
3.9.3 Aircraft Parking Apron	3-63
3.10 Support Requirements and Facilities	3-64
3.11 Aircraft Rescue and Firefighting	3-64
3.12 Airport Maintenance and Snow Removal Facilities	3-65
3.13 Fuel Storage	3-66
3.14 Security	3-66

Table of Contents – Continued

Chapter Four: Alternatives	4-1
4.1 Introduction	4-1
4.2 Initial Considerations	4-1
4.3 Airfield Alternatives.....	4-2
4.3.1 Runways	4-2
4.3.2 Taxiways.....	4-10
4.3.3 Instrument Approaches, Lighting, Visual Approach Aids	4-18
4.4 Terminal	4-19
4.5 General Aviation Alternatives	4-28
Chapter Five: Recommended Concept	5-1
5.1 Introduction	5-1
5.2 Airport Design Standards	5-1
5.3 Recommended Master Plan Concept	5-3
5.4 Airside Recommendations	5-4
5.5 Landside Recommendations	5-8
5.6 Airport Layout Plan	5-14
Chapter Six: Land Use Compatibility	6-1
6.1 Introduction.....	6-1
6.2 Roles and Responsibility	6-3
6.3 Legislation and Federal Regulations Relating to Compatible Land Use Planning	6-4
6.4 Current Land Use Planning – BZN	6-14
Chapter Seven: Financial Analysis	7-1
7.1 Introduction	7-1
7.2 Airport Improvement Funding Sources	7-1
7.3 Federal Grants	7-1
7.4 Passenger Facility Charges	7-2
7.5 FAA Facilities and Equipment Program	7-3
7.6 State Aid to Airports	7-4
7.7 Local Funding	7-4
7.8 Airport Financial Structure	7-10
7.9 Airport Improvement Schedule and Cost Summaries	7-13
7.10 CIP Feasibility Analysis	7-22
7.11 Plan Implementation	7-27
Appendix 1: Airport Layout Plan (ALP)	

Table of Figures

Chapter One: Inventory

Figure 1-1: Location	1-33
Figure 1-2: Vicinity	1-33
Figure 1-3: Airport Layout.....	1-36
Figure 1-4: Commercial Apron.....	1-44
Figure 1-5: General Aviation Aprons.....	1-45
Figure 1-6: East Ramp	1-46
Figure 1-7: Terminal Area.....	1-48
Figure 1-8: Terminal Floor Plan – First Level	1-49
Figure 1-9: Terminal Floor Plan – Second Level	1-50
Figure 1-10: General Aviation Area Hangars.....	1-55
Figure 1-11: East Ramp Area Hangars.....	1-56
Figure 1-12: Airspace Classification.....	1-62
Figure 1-13: Sectional Chart.....	1-63
Figure 1-14: ILS or LOC Approach Runway 12.....	1-66
Figure 1-15: RNAV (RNP) Z Runway 12	1-67
Figure 1-16: RNAV (GPS) Y Runway 12	1-68
Figure 1-17: VOR Approach Runway 12.....	1-69
Figure 1-18: RNAV (RNP) RWY 30.....	1-70
Figure 1-19: RNAV (GPS) – A.....	1-71
Figure 1-20: BOBKT FOUR (RNAV) Departure.....	1-72
Figure 1-21: TEERX FOUR (RNAV) Departure.....	1-73
Figure 1-22: WHITEHALL FIVE Departure	1-74
Figure 1-23: BOZEMAN SIX (OBSTACLE) Departure.....	1-75
Figure 1-24: City of Belgrade Planning Jurisdiction	1-80
Figure 1-25: City of Belgrade Zoning	1-81
Figure 1-26: Exhibit A Property Map	1-82
Figure 1-27: AIA and Existing Noise Contours	1-83
Figure 1-28: Avigation Easement Area	1-84

Chapter Two: Forecasts

Figure 2-1: U.S. Regional / Commuter Enplanements Forecasts	2-3
Figure 2-2: U.S. Regional / Commuter Aircraft Forecasts	2-4
Figure 2-3: U.S. General Aviation Aircraft Forecasts	2-5
Figure 2-4: U.S. General Aviation Aircraft Hours Flown	2-6
Figure 2-5: Historical Enplaned Passengers	2-10
Figure 2-6: Passenger Enplanement Forecasts	2-14
Figure 2-7: Based Aircraft Forecasts	2-18
Figure 2-8: Operations Forecasts	2-23
Figure 2-9: Taxiway Design Groups	2-32

Table of Figures – Continued

Chapter Three: Facility Requirements

Figure 3-1: Runway Configuration – Capacity and Delay AC 150/5060-5	3-4
Figure 3-2: Hourly Capacity of Runway Use Parallel Runway Airports with one Runway Restricted to Use by Small Aircraft in VFR Conditions	3-5
Figure 3-3: Hourly Capacity of Runway Use Single Runway in IFR Conditions (figure 4-15)	3-6
Figure 3-4: Hourly Capacity of Runway Use Parallel Runways in VFR Conditions (AC Figure 3-9)	3-8
Figure 3-5: Hourly Capacity of Runway Use Parallel Runways with Inoperative Nav aids in IFR Conditions (Figure 4-16)	3-9
Figure 3-6: Hourly Capacity of Runway Use Parallel Runways in VFR Conditions (AC Figure 3-9)	3-10
Figure 3-7: Parallel Runways in IFR Conditions (Figure 3-44)	3-11
Figure 3-8: Airport Reference Codes	3-13
Figure 3-9: Typical Civil Aircraft Imaginary Surfaces Detail	3-15
Figure 3-10: Taxiway Design Groups	3-16
Figure 3-11: AC 150/5325-4B: Small Airplanes with Fewer than 10 Passenger Sets 95 or 100 percent Useful Load	3-19
Figure 3-12: AC 150-5325-4B: Large Airplanes Over 12,500 Pounds 75 Percent of Fleet at 60 or 90 percent Useful Load	3-20
Figure 3-13: AC 150/5325-4B: Large Airplanes Over 12,500 Pounds 100 Percent of Fleet at 60 or 90 percent Useful Load	3-21
Figure 3-14: Density Altitude for BZN Average Maximum Temperature	3-24
Figure 3-15: Pavement Condition Index Map	3-32
Figure 3-16: Airfield Facility Requirements	3-43
Figure 3-17: Linear Counter	3-51
Figure 3-18: Typical Single Gate Holdroom Parameters	3-56

Chapter Four: Alternatives

Figure 4-1: Airport Road Relocation / Runway 30 Extension	4-4
Figure 4-2: Runway 12-30 Extension	4-5
Figure 4-3: Runway 11-29 Northwest Extension, VOR Relocation	4-7
Figure 4-4: Runway 11-29 Southeast Extension	4-7
Figure 4-5: Runway 3-21 Extension Phase 1, Phase 2	4-9
Figure 4-6: Bypass Taxiways Runway 12-30 / Taxiway A	4-11
Figure 4-7: Taxiway A, Secondary Parallel Taxiway and High Speed Exits	4-12
Figure 4-8: Increase Separation of Runway 11-29 and Taxiway C to 400 feet	4-13
Figure 4-9: Runway 3-21 “Hammerhead” Taxiway Removal	4-14
Figure 4-10: Current Airfield Layout	4-15
Figure 4-11: Recommended Future Airfield Layout	4-16
Figure 4-12: Recommended Ultimate Airfield Layout	4-17
Figure 4-13: Terminal Area	4-21
Figure 4-14: Terminal Lower Level (1 of 3)	4-22

Table of Figures – Continued

Figure 4-15: Terminal Lower Level (2 of 3)	4-23
Figure 4-16: Terminal Lower Level (3 of 3)	4-24
Figure 4-17: Terminal Upper Level (1 of 3)	4-25
Figure 4-18: Terminal Upper Level (2 of 3)	4-26
Figure 4-19: Terminal Upper Level (3 of 3)	4-27
Figure 4-20: West GA Area	4-29
Figure 4-21: East GA Area – Alternative 1	4-30
Figure 4-22: East GA Area – Alternative 2	4-31
Figure 4-23: East GA Area – Alternative 3	4-32
Figure 4-24: North GA Area	4-33

Chapter Five: Recommended Concept

Figure 5-1: Recommended Master Plan Concept – Airside	5-7
Figure 5-2: Recommended Alternative Passenger Terminal Complex	5-9
Figure 5-3: Recommended Alternative Historic General Aviation Area	5-11
Figure 5-4: Recommended Alternative East Ramp Area	5-12
Figure 5-5: Recommended Alternative North General Aviation Area	5-13

Chapter Six: Land Use Compatibility

Figure 6-1: Exhibit A Property Map	6-15
Figure 6-2: AIA Boundary with Original 1979 Noise Contours	6-18
Figure 6-3: AIA Boundary with Existing and Original Noise Contours	6-19
Figure 6-4: Avigation Easement Area	6-21
Figure 6-5: BZN FAR Part 77 Surfaces	6-22
Figure 6-6: City of Belgrade Zoning	6-28
Figure 6-7: Belgrade Growth Policy Future Land Use Map	6-30
Figure 6-8: Belgrade Growth Policy Future Land Use Map	6-31
Figure 6-9: East Gallatin Zoning District	6-35
Figure 6-10: Area Gravel Pits	6-36
Figure 6-11: Land Use Planning Boundaries	6-37
Figure 6-12: Land Use Planning on Airport	6-38

Chapter Seven: Financial Analysis

(No Figures)

Table of Tables

Chapter One: Inventory

Table 1-1: Airport Development Projects 2008-2019 Major Projects Including AIP & Non-AIP	1-30
Table 1-2: Bozeman Climate Data	1-34
Table 1-3: Runway Characteristics	1-39
Table 1-4: Taxiway & Taxilane Characteristics	1-42
Table 1-5: Apron Areas	1-43
Table 1-6: Parking Space Allocation	1-51
Table 1-7: Airport Support Equipment	1-59
Table 1-8: Fuel Farm Storage (Gallons)	1-60

Chapter Two: Forecasts

Table 2-1: BZN Service Area Population Projection for 2018	2-7
Table 2-2: BZN Service Area Population Projections	2-8
Table 2-3: Historical Enplaned Passengers	2-9
Table 2-4: Historical Passenger Enplanements and Market Shares	2-12
Table 2-5: Summary of Passenger Enplanement Forecasts	2-13
Table 2-6: Historic Based Aircraft	2-15
Table 2-7: FAA Terminal Area Forecast*	2-16
Table 2-8: Based Aircraft Projections Based on 2010 to 2019 Linear Trend	2-16
Table 2-9: Based Aircraft Projections Based on 2015 to 2019 Linear Trend	2-17
Table 2-10: Based Aircraft Projections Based on Forecast Population Growth	2-17
Table 2-11: Historic Scheduled Airline Fleet Mix and Operations	2-19
Table 2-12: Scheduled Airline Fleet Mix and Operations Forecast.....	2-20
Table 2-13: Operations Scenario 1: Low Forecast	2-22
Table 2-14: Operations Scenario 2: Mid-Range Forecast	2-22
Table 2-15: Operations Scenario 3: High Forecast	2-22
Table 2-16: Annual Instrument Operations	2-24
Table 2-17: Historic Annual Air Cargo (Pounds)	2-25
Table 2-18: Air Cargo Forecast (Pounds)	2-25
Table 2-19: Historic Fuel Usage (Gallons)	2-26
Table 2-20: Forecast Fuel Usage (Gallons)	2-26
Table 2-21: BZN Peaking Characteristics	2-28
Table 2-22: Aviation Demand Forecast Summary	2-29
Table 2-23: Comparison of Master Plan and TAF Forecasts	2-30
Table 2-24: Airfield Classification Systems	2-31
Table 2-25: Aircraft Weight Classifications	2-31
Table 2-26: AAC C & D Aircraft Filing Instrument Flight Plans – BZN	2-33
Table 2-27: Instrument Flight Plans by Type BZN – 2019	2-34

Table of Tables – Continued

Chapter Three: Facility Requirements

Table 3-1: Planning Horizon Activity Levels	3-1
Table 3-2: VFR Mix Index	3-3
Table 3-3: Annual Service Volume Comparison – Current Runway Configuration ...	3-7
Table 3-4: Annual Service Volume Parallel Runways Serving Large Aircraft no Radar / ILS	3-9
Table 3-5: Annual Service Volume Parallel Runways Serving Large Aircraft with Radar / ILS	3-11
Table 3-6: Aircraft Approach Categories	3-12
Table 3-7: Airplane Design Groups	3-12
Table 3-8: Runway Visual Range	3-14
Table 3-9: Facility Classifications	3-18
Table 3-10: FAA Runway Lengths	3-22
Table 3-11: Aircraft by Destination Served and Haul Length	3-25
Table 3-12: Recommended Runway Lengths	3-26
Table 3-13: Wind Coverage Summary	3-29
Table 3-14: Airfield Pavement Maintenance	3-33
Table 3-15: FAA Design Standards	3-36
Table 3-16: Public Parking Requirements – BZN	3-46
Table 3-17: Curbside Requirements	3-47
Table 3-18: Airline Gate Demand Forecast – Enplanements per Gate	3-48
Table 3-19: Airline Gate Demand Forecast – Departures per Gate.....	3-48
Table 3-20: Airline Gate Demand Forecast – Average of Enplanements per Gate and Departures per Gate Approaches	3-49
Table 3-21: Equivalent Aircraft (EQA) Index.....	3-49
Table 3-22: Check in / Ticketing Lobby Requirements	3-51
Table 3-23: Airline Ticketing Office	3-52
Table 3-24: Outbound Bag Screening	3-53
Table 3-25: Baggage Makeup	3-54
Table 3-26: Security Screening Checkpoint	3-55
Table 3-27: Passenger Holdrooms	3-57
Table 3-28: Baggage Claim Demand Requirements	3-58
Table 3-29: Current Terminal and Concourse Fixtures	3-59
Table 3-30: Restroom Requirements	3-60
Table 3-31: Concessions	3-61
Table 3-32: Rental Car Space	3-61
Table 3-33: Airport Administration	3-62
Table 3-34: Terminal Requirements by Functional Area BZN	3-62
Table 3-35: Aircraft Parking Apron Requirements	3-64

Table of Tables – Continued

Chapter Four: Alternatives

Table 4-1: Facility Classifications	4-2
---	-----

Chapter Five: Recommended Concept

Table 5-1: Airfield Planning Design Standards	5-2
---	-----

Chapter Six: Land Use Compatibility

(No Tables)

Chapter Seven: Financial Analysis

Table 7-1: BZN Statements of Revenues, Expenses, and Changes in Net Position ...	7-11
Table 7-2: BZN Statements of Cash Flows	7-12
Table 7-3: BZN Capital Improvement Program	7-17
Table 7-4: BZN Budget Summary & Cash Flow Analysis	7-23