**NEW ISSUE — BOOK-ENTRY-ONLY** | **RATINGS: Moody's: Aa3**
**S&P: AA−**

**PRELIMINARY OFFICIAL STATEMENT DATED OCTOBER 17, 2018**

*In the opinion of Greenberg Traurig, LLP, Bond Counsel, assuming compliance with certain tax covenants, interest on the Series 2018 Bonds is excluded from gross income for federal income tax purposes under existing statutes, regulations, rulings and court decisions, except for interest on any Series 2018 Bonds for any period during which such Series 2018 Bond is owned by a person who is a substantial user of the Property (as defined herein) or any person considered to be related to such person (within the meaning of Section 147(a) of the Internal Revenue Code of 1986, as amended). Interest on the Series 2018 Bonds will be treated as an item of tax preference for purposes of the alternative minimum tax imposed on individuals. Bond Counsel is further of the opinion that assuming interest is so excludable for federal income tax purposes, the interest on the Series 2018 Bonds is exempt from income taxation under the laws of the State of Arizona. See "TAX EXEMPTION" herein for a description of the federal alternative minimum tax, including the federal alternative minimum tax on corporations for tax years beginning before January 1, 2018 and certain other federal tax consequences of ownership of the Series 2018 Bonds.*

# CITY OF PHOENIX CIVIC IMPROVEMENT CORPORATION

## $229,465,000*
## Senior Lien Airport Revenue Bonds, Series 2018 (AMT)

**Dated: Date of Delivery** | **Due: July 1, as shown on inside front cover**

The principal of and premium, if any, and interest on the Senior Lien Airport Revenue Bonds, Series 2018 (the *"Series 2018 Bonds"*) will be paid by U.S. Bank National Association, as trustee (the *"Trustee,"* also referred to herein as the *"Registrar,"* and the *"Paying Agent"*). The Series 2018 Bonds will be issued as fully registered bonds in amounts of $5,000 each or any integral multiple thereof of principal due on specified maturity dates. The Series 2018 Bonds, when issued, will be registered in the name of The Depository Trust Company (*"DTC"*) or its nominee and will be available to purchasers initially only through the book-entry-only system maintained by DTC. So long as the book-entry-only system is maintained, no physical delivery of the Series 2018 Bonds will be made to the ultimate purchasers thereof and all payments of principal of and premium, if any, and interest on the Series 2018 Bonds will be made to such purchasers through DTC. Interest on the Series 2018 Bonds is payable semiannually on January 1 and July 1 of each year, commencing January 1, 2019, by the Trustee. The Series 2018 Bonds are being issued pursuant to a Bond Indenture, dated as of November 1, 2018, between the City of Phoenix Civic Improvement Corporation (the *"Corporation"*) and the Trustee.

The Series 2018 Bonds are subject to redemption prior to maturity as described herein.

The Series 2018 Bonds are special revenue obligations of the Corporation and are payable solely from payments required to be paid by the City of Phoenix, Arizona (the *"City"*), to the Corporation pursuant to the City Purchase Agreement dated as of November 1, 2018 (the *"City Purchase Agreement"*) between the City and the Corporation. **The obligations of the City to make payments under the City Purchase Agreement are absolute and unconditional, but do not constitute a pledge of the full faith and credit or the ad valorem taxing power of the City.** Except to the extent the City appropriates other lawfully available funds for such payments, the City's payments under the City Purchase Agreement are payable solely from Net Airport Revenues (as defined herein) to be derived from operation of the City's Airport (as defined herein). The pledge of Net Airport Revenues to amounts due under the City Purchase Agreement is on a parity with amounts owed with respect to outstanding Senior Lien Obligations (as defined herein) and Senior Lien Obligations which may be issued in the future. See "SECURITY AND SOURCE OF PAYMENT" herein.

This cover page contains only a brief description of the Series 2018 Bonds and the security therefor, and is designed for quick reference only. This cover page is not a summary of all material information with respect to the Series 2018 Bonds or of investment risks involved with the purchase of the Series 2018 Bonds, and investors are advised to read this entire Official Statement, giving particular attention to the matters discussed under "CERTAIN BONDHOLDERS' RISKS," in order to obtain information essential to making an informed investment decision.

*The Series 2018 Bonds are offered when, as and if issued and received by the Underwriters, and subject to the legal opinion of Greenberg Traurig, LLP, Bond Counsel, as to validity and tax exemption. Certain legal matters will be passed upon for the Underwriters by Squire Patton Boggs (US) LLP, counsel to the Underwriters. It is expected that the Series 2018 Bonds will be available for delivery in book-entry-only form through the facilities of DTC on or about November , 2018.*

**Barclays**

**Citigroup** | **FTN Financial Capital Markets** | **Jefferies**

* Subject to change.

## MATURITY SCHEDULE
## CITY OF PHOENIX CIVIC IMPROVEMENT CORPORATION

### $229,465,000*
### Senior Lien Airport Revenue Bonds,
### Series 2018 (AMT)

| Maturity July 1 | Principal Amount | Interest Rate | Price or Yield |
|---|---|---|---|
| 2019 | $ 3,265,000 | | |
| 2020 | 3,425,000 | | |
| 2021 | 3,600,000 | | |
| 2022 | 3,780,000 | | |
| 2023 | 3,970,000 | | |
| 2024 | 4,170,000 | | |
| 2025 | 4,380,000 | | |
| 2026 | 4,595,000 | | |
| 2027 | 4,830,000 | | |
| 2028 | 5,065,000 | | |
| 2029 | 5,315,000 | | |
| 2030 | 5,585,000 | | |
| 2031 | 5,865,000 | | |
| 2032 | 6,155,000 | | |
| 2033 | 6,470,000 | | |
| 2034 | 6,790,000 | | |
| 2035 | 7,130,000 | | |
| 2036 | 7,485,000 | | |
| 2037 | 7,865,000 | | |
| 2038 | 8,250,000 | | |
| 2039 | 8,665,000 | | |
| 2040 | 9,100,000 | | |
| 2041 | 9,555,000 | | |
| 2042 | 10,030,000 | | |
| 2043 | 10,530,000 | | |
| 2044 | 11,055,000 | | |
| 2045 | 11,610,000 | | |
| 2046 | 12,190,000 | | |
| 2047 | 12,805,000 | | |
| 2048 | 25,935,000 | | |

**$ % Term Bonds due July 1, , Price %**

* Subject to change.

# CITY OF PHOENIX, ARIZONA
## CITY OF PHOENIX CIVIC IMPROVEMENT CORPORATION

Michael R. Davis
*President and Director*

Bruce Covill
*Vice President and Director*

James H. Lundy
*Secretary-Treasurer and Director*

Barbara Barone
*Director*

Rosellen Papp
*Director*

Marian Yim
*Director*

## CITY OF PHOENIX, ARIZONA
## CITY COUNCIL (a)

Thelda Williams, *Mayor Pro Tempore*

Thelda Williams, *Member*
District 1

Jim Waring, *Vice Mayor and Member*
District 2

Debra Stark, *Member*
District 3

Laura Pastor, *Member*
District 4

Vania Guevara, *Interim Member*
District 5

Sal DiCiccio, *Member*
District 6

Michael Nowakowski, *Member*
District 7

Felicita Mendoza, *Interim Member*
District 8

## ADMINISTRATIVE OFFICIALS

Ed Zuercher
*City Manager*

Milton Dohoney, Jr.
*Assistant City Manager*

Deanna Jonovich
*Deputy City Manager*

James E. Bennett
*Director of Aviation Services*

Denise M. Olson
*Chief Financial Officer*

Brad Holm
*City Attorney*

Elizabeth Martin Parker
*Acting City Clerk*

## SPECIAL SERVICES

GREENBERG TRAURIG, LLP
Phoenix, Arizona
*Bond Counsel*

FRASCA & ASSOCIATES, LLC
New York, New York
*Financial Advisor*

LEIGHFISHER INC.
Cincinnati, Ohio
*Airport Consultant*

U.S. BANK NATIONAL ASSOCIATION
Phoenix, Arizona
*Trustee, Bond Registrar, Paying Agent*

(a) On May 29, 2018, Greg Stanton resigned as Mayor to run for a U.S. Congressional seat. On June 11, 2018, Councilmember Thelda Williams was appointed Mayor Pro Tempore by the City Council to serve until a new Mayor is elected by the public. The election for Mayor will be held on November 6, 2018, with a possible run-off election to be held on March 12, 2019. Ms. Williams will continue to serve as the Councilmember from her district while serving as Mayor Pro Tempore.

Councilmembers Daniel Valenzuela and Kate Gallego resigned their council seats on July 18, 2018 and August 7, 2018, respectively, to run for the vacant mayoral position. The City Council appointed Vania Guevara to represent District 5 and Felicita Mendoza to represent District 8 as Interim Councilmembers until new Councilmembers are elected by the public. The election for the two council seats will be held on March 12, 2019, with a possible run-off election to be held on June 5, 2019.

This Official Statement does not constitute an offering of any security other than the original offering of the Series 2018 Bonds of the Corporation identified on the cover page hereof. No person has been authorized by the Corporation, the City, the Financial Advisor or the Underwriters to give any information or to make any representation other than as contained in this Official Statement, and if given or made, such other information or representation not so authorized should not be relied upon as having been given or authorized by the Corporation, the City, the Financial Advisor or the Underwriters. This Official Statement does not constitute an offer to sell or the solicitation of any offer to buy, and there shall not be any sale of the Series 2018 Bonds by any person in any jurisdiction in which it is unlawful to make such offer, solicitation or sale.

The information and expressions of opinion herein are subject to change without notice, and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, give rise to any implication that there has been no change in the affairs of the Corporation or the City since the date hereof. There is no obligation on the part of the City or the Corporation to provide any continuing secondary market disclosure other than as described herein under the heading "CONTINUING DISCLOSURE" and in "APPENDIX H — Form of Continuing Disclosure Undertaking."

Upon issuance, the Series 2018 Bonds will not be registered by the Corporation, the City or the Underwriters under the Securities Act of 1933, as amended, or any state securities law, and will not be listed on any stock or other securities exchange. Neither the Securities and Exchange Commission nor any other federal, state or other governmental entity or agency will have passed upon the accuracy or adequacy of this Official Statement or approved the Series 2018 Bonds for sale.

IN CONNECTION WITH THE OFFERING, THE UNDERWRITERS MAY OVERALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE SERIES 2018 BONDS OFFERED HEREBY AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

The City currently maintains an investor relations website, which includes information specific to the City's Aviation Department. However, unless specifically incorporated by reference herein, the information presented on the website is not part of this Official Statement and should not be relied upon in making an investment decision with respect to the Series 2018 Bonds.

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# OFFICIAL STATEMENT
RELATING TO

# CITY OF PHOENIX CIVIC IMPROVEMENT CORPORATION

## $229,465,000*
## Senior Lien Airport Revenue Bonds,
## Series 2018 (AMT)

## INTRODUCTION

The purpose of this Official Statement, which includes the cover page and the appendices attached hereto, is to set forth certain information concerning the City of Phoenix Civic Improvement Corporation (the *"Corporation"*), the City of Phoenix, Arizona (the *"City"*) and the captioned bonds (the *"Series 2018 Bonds"*). The offering of the Series 2018 Bonds is made only by way of this Official Statement, which supersedes any other information or materials used in connection with the offer or sale of the Series 2018 Bonds. Accordingly, prospective Series 2018 Bond purchasers should read this entire Official Statement before making their investment decision.

All financial and other information presented in this Official Statement has been provided by the City from its records, except for information expressly attributed to other sources. The Corporation and the City warrant that this Official Statement contains no untrue statements of a material fact and does not omit any material fact necessary to make such statements, in light of the circumstances under which this Official Statement is made, not misleading. The presentation of financial and other information is intended to show recent historical information and, except as expressly stated otherwise, is not intended to indicate future or continuing trends in the financial position or other affairs of the City. No representation is made that past experience, as is shown by the financial and other information, will necessarily continue or be repeated in the future.

References to provisions of Arizona law, whether codified in the Arizona Revised Statutes (A.R.S.) or uncodified, or to the Arizona Constitution, are references to current provisions. Those provisions may be amended, repealed or supplemented.

For the definitions of certain capitalized terms used in this Official Statement and for certain provisions of the Bond Indenture, dated as of November 1, 2018 (the *"Indenture"*) between the Corporation and U.S. Bank National Association, as trustee (the *"Trustee"* and also referred to herein as the *"Registrar"* and the *"Paying Agent"*), pursuant to which the Series 2018 Bonds are being issued and the City Purchase Agreement dated as of November 1, 2018 between the Corporation and the City (the *"City Purchase Agreement"*), see "APPENDIX F — Summary of Certain Provisions of Legal Documents — Certain Definitions." The City Purchase Agreement incorporates by reference covenants and agreements of Ordinance No. S-21974, adopted by the Mayor and Council of the City on April 20, 1994, as amended to date and as further supplemented and amended from time to time (the *"Airport Revenue Bond Ordinance"*) and are applicable to the Series 2018 Bonds. See "SECURITY AND SOURCES OF PAYMENT — Rate Covenants," "— Additional Senior Lien Obligations" and "— Additional Junior Lien Obligations" and "APPENDIX F — Summary of Certain Provisions of Legal Documents — The Airport Revenue Bond Ordinance."

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* Subject to change.

## THE AIRPORT

### General

The City owns and operates, through its Aviation Department, Phoenix-Sky Harbor International Airport (*"Sky Harbor"*) and two general aviation airports, Phoenix-Goodyear Airport and Phoenix-Deer Valley Airport (collectively, the *"Airport"*). The City has operated the Airport as a self-supporting enterprise since 1967.

Sky Harbor, located approximately four miles east of the downtown Phoenix area, was established in 1935. Sky Harbor is the only Arizona airport designated as a large hub by the Federal Aviation Administration (the *"FAA"*) and is the principal commercial service airport serving metropolitan Phoenix and most of the State's population. There is no other U.S. large-hub commercial service airport within a five-hour driving distance of Phoenix, with the closest being Las Vegas' McCarran International Airport (290 miles to the northwest). In fiscal year 2017-18, Sky Harbor served 22.2 million enplaned passengers. During fiscal year 2017-18 airline service at Sky Harbor was provided by Air Canada, Alaska, American, Boutique Air, British Airways, Condor, Jazz Aviation, Compass (Delta Connection), Delta, Frontier, Great Lakes, Hawaiian, JetBlue, Mesa (American Eagle and United Express), SkyWest (American Eagle, Delta Connection, and United Express), Southwest, Spirit, Sun Country, United, Volaris and WestJet. Sky Harbor served 430,923 commercial, general aviation and military aircraft operations in fiscal year 2017-18.

Sky Harbor currently has three passenger terminal buildings, Terminals 2, 3, and 4. Collectively, the three terminals provide a total of 101 passenger hold rooms and 101 associated aircraft parking positions (gates). Terminal 2 contains approximately 330,000 square feet and 10 gates. Terminal 3 contains approximately 639,000 square feet and 10 gates. Upon completion of the Terminal 3 Modernization project, it will contain approximately 710,000 square feet and 25 gates. Terminal 4 contains approximately 2.3 million square feet and 81 gates. American Airlines and Southwest Airlines, the two largest carriers at Sky Harbor, and all international carriers, operate exclusively from Terminal 4. As of August 2018, Sky Harbor had approximately 26,000 public and employee parking spaces. A consolidated rental car facility is located on a 141-acre site, with approximately 5,600 ready/return garage spaces and a 113,000 square foot customer service building (the *"Rental Car Center"*). Sky Harbor has three parallel air carrier runways supported by a network of taxiways, aprons, and hold areas.

The City also serves the area's general aviation traffic activity through the two reliever airports that it owns and operates. Phoenix-Deer Valley Airport is located in the northern part of the City and Phoenix-Goodyear Airport is located west of the City. These two general aviation facilities handled, in aggregate, 493,864 operations in fiscal year 2017-18. Phoenix-Deer Valley Airport and Phoenix-Goodyear Airport are part of the Airport System for the purpose of issuing obligations payable from Net Airport Revenues (as defined herein). Such obligations payable from Net Airport Revenues (*"Senior Lien Obligations"*), as well as obligations payable from Designated Revenues (as defined herein) (*"Junior Lien Obligations"*), and Junior Subordinate Lien Obligations (as defined herein) payable from Junior Subordinate Lien Revenues (as defined herein) can be issued for improvements at Sky Harbor, as well as Phoenix-Deer Valley Airport and Phoenix-Goodyear Airport. The revenues of these two reliever airports, along with the revenues of Sky Harbor, are Airport Revenues (as defined herein) which form the basis of determining Net Airport Revenues, which are pledged to the payment of principal of and interest on Senior Lien Obligations, Designated Revenues, which are pledged to the payment of principal of and interest on Junior Lien Obligations, and Junior Subordinate Lien Revenues, which are pledged to the payment of Junior Subordinate Lien Obligations.

In fiscal year 2006-07, the City entered into an intergovernmental agreement with the City of Mesa, the Town of Queen Creek, the Town of Gilbert and the Gila River Indian Community to become a voting member of the Phoenix-Mesa Gateway Airport Authority, which owns and operates Phoenix-Mesa Gateway Airport. Phoenix-Mesa Gateway Airport is located approximately 30 miles east of Sky Harbor and serves as a commercial reliever airport offering an average of 15 daily flights to 37 cities on Allegiant Air, California Pacific Airlines, Flair Air, Swoop and WestJet, as of June 2018. The revenues of Phoenix-Mesa Gateway Airport are not included in the definition of Airport Revenues and cannot be pledged for the payment of principal and interest on the Senior Lien Obligations, Junior Lien Obligations or Junior Subordinate Lien Obligations.

The City has engaged the firm of LeighFischer Inc. to prepare a traffic and earnings report in connection with the issuance of the Series 2018 Bonds. The report of LeighFischer Inc. is included as "APPENDIX A — Report of the Airport Consultant."

**Airport System Management**

Direct supervision of the Airport is exercised by the Aviation Department. Management of the Airport is led by the Director of Aviation Services with 892 full-time equivalent employees as of July 1, 2018. The Director of Aviation Services currently reports to a Deputy City Manager.

**Deanna Jonovich, Deputy City Manager,** has worked for the City since 2000. Ms. Jonovich previously served as the Human Services Director and has worked in a variety of management positions in the Human Services Department. Prior to joining the City, she was the Community Services Director for four years in Gila County where she assisted with the creation of the first Arizona Fuel Fund to assist low-income individuals and families with utility assistance. Ms. Jonovich has a master's degree in administration and an undergraduate Bachelor of Science in Business Administration, both from Northern Arizona University. Ms. Jonovich remains very active in the community and currently serves on the Arizona Coalition to End Homelessness, Valley of the Sun United Way Hunger Council, Build Arizona Steering Committee, Local Initiative Support Corporation, Maricopa Association of Governments Technical Committee, and Neighborhood Housing Services.

**James E. Bennett, Director of Aviation Services,** began his current role for the City in October 2015. In a career spanning nearly 35 years, Mr. Bennett has served as President and Chief Executive Officer of the Metropolitan Washington Airports Authority, operating Ronald Reagan Washington National and Washington Dulles International Airports. He also worked in private industry as chief executive officer for the Abu Dhabi Airports Company overseeing five airports within the Emirate of Abu Dhabi and as president of his own consulting firm providing consultation for both foreign and domestic transportation companies. From 1988 to 1996, Mr. Bennett was Phoenix's Assistant Aviation Director assisting with successful community discussions leading to a third runway at Sky Harbor, overseeing the construction and development of Sky Harbor's Terminal 4 and supervising the Airport's finance, engineering, planning and maintenance operations, among other duties. Mr. Bennett has a Bachelor's of Aviation Management degree from Auburn University and a Master of Public Administration degree from the University of Michigan. His numerous professional affiliations include being the former chairman of the American Association of Airport Executives and past president of the Arizona Airports Association. Mr. Bennett was recently honored by the American Association of Airport Executives' (AAAE) with its Distinguished Service Award. This award is presented to airport executives in honor of an exemplary career and contributions to the airport industry.

**Deborah Ostreicher, Assistant Aviation Director,** was appointed to this position in 2015 and has been with the Aviation Department since 1996. In her role as Assistant Aviation Director, she oversees Air Service Development, Human Resources, Contracts and Services, Technology, Planning, Environmental and Public Relations. Prior to joining the airport, Ms. Ostreicher spent a decade working in Europe and the Middle East, holding positions that included Marketing Director for MicroAge Computers Central Europe and Marketing Manager for Prince Charles in London. Ms. Ostreicher serves on a variety of community and industry boards and is currently the incoming Chair of the Arizona Lodging and Tourism Association, Chair of the Tempe Tourism Office and Emeritus board member of New Pathways for Youth. She earned her Bachelor of Science degree at the University of Maryland and her MBA in International Business from the American University in Washington, D.C.

**Charlene Reynolds, Assistant Aviation Director,** was appointed to this position in September 2017. In her current role she oversees the Business & Properties, Contracts & Services and Design & Construction divisions. Previously she was the Deputy Aviation Director for Contracts & Services. Prior to the Aviation Department, Ms. Reynolds served in various other positions with several City Departments including the Street Transportation Department, the Phoenix Convention Center, the Phoenix City Manager's Office and the Community and Economic Development Department. Before she began her employment with the City, Ms. Reynolds held positions at Entranco Engineers and Valley Metro. During her employment with the City, Ms. Reynolds has been awarded two Employee Excellence Awards for her work on the Take Back Your Neighborhood, Prevent Gun Violence and the Community and Engagement Task Force projects. In 2015, she was awarded the Jerome E. Miller Award which recognizes a single employee each year for their overall contributions to the City and their role as a mentor to others. Ms. Reynolds holds a bachelor's degree from the University of Phoenix and a Master of Business Administration degree from the Keller Graduate School of Management at DeVry University.

**Sarah Demory, Assistant Aviation Director,** was appointed to this position in November 2017. In this role, she oversees Operations, Public Safety Services, General Aviation, and Facilities and Services. Prior to joining the City, Ms. Demory served as Airport Deputy Director for Operations and Security at Boise Idaho Airport, and held positions in operations and emergency management at Seattle-Tacoma International Airport. Ms. Demory has a commercial pilot license and is an Accredited Airport Executive with the AAAE. She is also an AAAE Certified Member, Certified Airport Security Coordinator and Airport Certified Employee — Operations. Ms. Demory holds a Bachelor of Business Administration degree and a Master of Science in Aviation degree from the University of North Dakota.

### Finance Department Management

The City's Finance Department oversees the issuance of debt and performs certain accounting, financing, treasury and related functions for the Airport. The Finance Department is led by the Chief Financial Officer.

**Denise Olson, Chief Financial Officer,** was appointed Chief Financial Officer in November 2015. Ms. Olson began her career with the City in 1994 in the Finance Department, working as an economist in the Utilities Accounting Division and the Financial Accounting and Reporting Division. She became Deputy Finance Director in 2006, and was promoted to Assistant Finance Director in 2012. Throughout her career she has managed financial planning, financial systems applications and support, procurement, city controller functions, financial accounting and reporting and has been involved in the planning and issuances of debt to fund capital expenditures. Ms. Olson has a bachelor's degree in Business Administration with majors in Human Resources and Economics from New Mexico State University, and a Master of Public Administration degree from Arizona State University.

## PLAN OF FINANCE*

### Airport Improvements and Reserve Fund Deposit

A portion of the net proceeds of the Series 2018 Bonds remaining after deduction of issuance costs related to the Series 2018 Bonds and after deposit to the Senior Lien Parity Reserve Fund will be deposited to the Construction Fund established under the Airport Revenue Bond Ordinance and used to pay costs, or reimburse the City for costs, of various improvements at the Airport.

Monies held in the Construction Fund are not pledged as security for the Series 2018 Bonds or any other Senior Lien Obligation. For a more complete description of the Construction Fund, see "APPENDIX F — Summary of Certain Provisions of Legal Documents — The City Purchase Agreement," and "— The Airport Revenue Bond Ordinance."

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* Subject to change.

**Payment of Outstanding Amounts Under Revolving Credit Agreement**

The remaining portion of the net proceeds of the Series 2018 Bonds will be used to prepay $100,000,000 in principal amount of a loan extended on April 5, 2018 (the *"2018 Loan"*) under a Revolving Credit Agreement dated September 19, 2017 with the Bank of America, N.A. Such outstanding principal amount was used to refinance various Airport improvements. The City's obligations under the Revolving Credit Agreement constitute Junior Subordinate Lien Obligations. See "SECURITY AND SOURCES OF PAYMENT — Outstanding Junior Subordinate Lien Obligations."

## SOURCES AND APPLICATIONS OF FUNDS

| | |
|---|---|
| **Sources:** | |
| Par Amount of the Series 2018 Bonds | $ |
| Net Original Issue Premium (Discount) | |
| Total | $ |
| **Applications:** | |
| Construction Fund for Airport Improvements | $ |
| Prepayment of Junior Subordinate Lien Obligations (2018 Loan) | |
| Deposit to Senior Lien Parity Reserve Fund | |
| Costs of Issuance | |
| Underwriters' Discount | |
| Total | $ |

## SERIES 2018 BONDS

**Authorization and Purpose**

The Series 2018 Bonds are being issued by the Corporation under the terms of the Indenture for the purpose of (a) financing additional improvements to the Airport, (b) prepaying the 2018 Loan, (c) making a deposit to the Senior Lien Parity Reserve Fund and (d) paying the costs of issuance of the Series 2018 Bonds. The payments pursuant to the City Purchase Agreement (*"Purchase Payments"*) are scheduled to be sufficient to make payments on the Series 2018 Bonds and certain other expenses. To secure amounts due under the City Purchase Agreement with respect to all of the Series 2018 Bonds, the City has made a first lien pledge of the Net Airport Revenues (as defined herein). The City Purchase Agreement and the City's obligations thereunder constitute Parity Bonds under the Airport Revenue Bond Ordinance on a parity with other outstanding Senior Lien Obligations. See "SECURITY AND SOURCE OF PAYMENT."

**General Description**

The Series 2018 Bonds will be issued as fully registered bonds, without coupons, in book-entry-only form and will be registered to Cede & Co. as described below under "Book-Entry-Only System." AS LONG AS CEDE & CO. IS THE REGISTERED OWNER OF THE SERIES 2018 BONDS, AS NOMINEE OF THE DEPOSITORY TRUST COMPANY (*"DTC"*), REFERENCES HEREIN TO THE OWNERS OF THE SERIES 2018 BONDS (OTHER THAN UNDER THE CAPTION "TAX EXEMPTION") WILL MEAN CEDE & CO. AND WILL NOT MEAN THE BENEFICIAL OWNERS OF THE SERIES 2018 BONDS. PRINCIPAL, PREMIUM, IF ANY, AND INTEREST PAYMENTS ON THE SERIES 2018 BONDS ARE TO BE MADE TO DTC AND ALL SUCH PAYMENTS WILL BE VALID AND EFFECTIVE TO SATISFY FULLY AND TO DISCHARGE THE OBLIGATIONS OF THE CORPORATION AND THE CITY WITH RESPECT TO, AND TO THE EXTENT OF, THE AMOUNTS SO PAID.

The Series 2018 Bonds will be dated the date of initial authentication and delivery thereof, will bear interest payable semiannually on January 1 and July 1 of each year (each an *"Interest Payment Date"*), commencing January 1, 2019. The Series 2018 Bonds will bear interest at the rates and will mature on the dates and in the amounts set forth on the inside front cover of this Official Statement. The Series 2018 Bonds will be delivered in fully registered form in amounts of $5,000 each or any whole multiple thereof (but no Series 2018 Bond may represent installments of principal maturing on more than one date).

Subject to the provisions contained under the heading "Book-Entry-Only System" below, the principal of and premium, if any, and interest at maturity or redemption on each Series 2018 Bond will be payable upon presentation and surrender of such Series 2018 Bond at the designated corporate trust office of the Paying Agent. Interest on each Series 2018 Bond, other than that due at maturity or redemption, will be paid on each Interest Payment Date by check of said Paying Agent, mailed to the person shown on the bond register of the Corporation maintained by the Registrar as being the registered owner of such Series 2018 Bond (the *"Owner"*) as of the fifteenth day of the month immediately preceding such Interest Payment Date (the *"Regular Record Date"*) at the address appearing on said bond register or at such other address as is furnished to the Trustee in writing by such Owner before the fifteenth day of the month prior to such Interest Payment Date.

The Indenture provides that, with the approval of the Corporation, the Registrar and Paying Agent may enter into an agreement with any Owner of $1,000,000 or more in aggregate principal amount of Series 2018 Bonds, as applicable, providing for making all payments to that Owner of principal of and interest and any premium on those Series 2018 Bonds or any portion thereof (other than any payment of the entire unpaid principal amount thereof) at a place and in a manner other than as described above, without presentation or surrender of those Series 2018 Bonds, upon any conditions which shall be satisfactory to the Trustee and the Corporation; provided that without a special agreement or consent of the Corporation, payment of interest on the Series 2018 Bonds may be made by wire transfer to any Owner of $1,000,000 aggregate principal of Series 2018 Bonds, upon two days prior written notice to the Trustee specifying a wire transfer address of a bank or trust company in the United States.

If the Corporation fails to pay the interest due on any Interest Payment Date, that interest shall cease to be payable to the person who was the Owner as of the Regular Record Date. When monies become available for payment of the interest, the Registrar will establish a special record date (the *"Special Record Date"*) for such payment which will be not more than 15 nor fewer than 10 days prior to the date of the proposed payment and the interest will be payable to the persons who are Owners on the Special Record Date. The Registrar will mail notice of the proposed payment and of the Special Record Date to each Owner.

### Book-Entry-Only System

**The following information about the book-entry-only system applicable to the Series 2018 Bonds has been supplied by DTC. None of the Corporation, the City, the Trustee, the Underwriters or the Financial Advisor makes any representations, warranties or guarantees with respect to its accuracy or completeness.**

DTC, the world's largest depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants (*"Direct Participants"*) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (*"DTCC"*). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (*"Indirect Participants"* and together with Direct Participants, *"Participants"*). DTC has rating from Standard & Poor's of AA+. The DTC rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com and www.dtc.org.

Purchases of Series 2018 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2018 Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 2018 Bond (*"Beneficial Owner''*) is in turn to be recorded on the Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct Participant or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2018 Bonds are to be accomplished by entries made on the books of Direct Participants and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Series 2018 Bonds, except in the event that use of the book-entry system for the Series 2018 Bonds is discontinued.

To facilitate subsequent transfers, all Series 2018 Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co. or such other name as may be requested by an authorized representative of DTC. The deposit of Series 2018 Bonds with DTC and their registration in the name of Cede & Co. or such other nominee do not affect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2018 Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2018 Bonds are credited, which may or may not be the Beneficial Owners. The Direct Participants and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Series 2018 Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2018 Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Series 2018 Bond documents. For example, Beneficial Owners of Series 2018 Bonds may wish to ascertain that the nominee holding the Series 2018 Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the Trustee and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Series 2018 Bonds within a maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series 2018 Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Corporation as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts Series 2018 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption proceeds, principal and interest payments on the Series 2018 Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Corporation or the Trustee, on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC nor its nominee, the Corporation or the Trustee, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, principal and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Corporation or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct Participants and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Series 2018 Bonds at any time by giving reasonable notice to the Corporation or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, bond certificates are required to be printed and delivered.

The Corporation may decide to discontinue the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, bond certificates will be printed and delivered to DTC.

SO LONG AS CEDE & CO., AS NOMINEE FOR DTC, IS THE SOLE REGISTERED OWNER, THE CORPORATION AND THE TRUSTEE WILL TREAT CEDE & CO. AS THE ONLY OWNER OF THE SERIES 2018 BONDS FOR ALL PURPOSES UNDER THE INDENTURE, INCLUDING RECEIPT OF ALL PRINCIPAL OF, REDEMPTION PREMIUM, IF ANY, AND INTEREST ON THE SERIES 2018 BONDS, RECEIPT OF NOTICES, VOTING AND REQUESTING OR DIRECTING THE CORPORATION AND THE TRUSTEE TO TAKE OR NOT TO TAKE, OR CONSENTING TO, CERTAIN ACTIONS UNDER SUCH INDENTURE. THE CORPORATION AND THE TRUSTEE HAVE NO RESPONSIBILITY OR OBLIGATION TO THE PARTICIPANTS OR THE BENEFICIAL OWNERS WITH RESPECT TO (A) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC OR ANY PARTICIPANT; (B) THE PAYMENT BY DTC OR ANY PARTICIPANT OF ANY AMOUNT DUE TO ANY BENEFICIAL OWNER WITH RESPECT TO THE PRINCIPAL OF AND INTEREST ON THE SERIES 2018 BONDS; (C) THE DELIVERY OR TIMELINESS OF DELIVERY BY DTC OR ANY PARTICIPANT OF ANY NOTICE TO ANY BENEFICIAL OWNER WHICH IS REQUIRED OR PERMITTED UNDER THE TERMS OF THE INDENTURE TO BE GIVEN TO SERIES 2018 BONDHOLDERS; (D) THE SELECTION BY DTC OR ANY PARTICIPANT OR INDIRECT PARTICIPANT OF ANY BENEFICIAL OWNER TO RECEIVE PAYMENT IN THE EVENT OF A PARTIAL REDEMPTION OF THE SERIES 2018 BONDS; (E) CONSENTS OR OTHER ACTION TAKEN BY DTC OR CEDE & CO., AS REGISTERED OWNER OR (F) ANY OTHER MATTER.

**Redemption Provisions**

*Optional Redemption.* The Series 2018 Bonds maturing on or prior to July 1, are not subject to optional redemption prior to maturity. The Series 2018 Bonds maturing on and after July 1, are subject to redemption at the option of the Corporation, as directed by the City, on July 1, and thereafter, in whole or in part at any time, in increments of $5,000, in any order of maturity, as directed by the City and subject to the provisions contained under the heading "Book-Entry-Only System" above, by lot within a maturity, by payment of redemption price for each Series 2018 Bond called for redemption equal to the principal amount thereof plus accrued interest to the date fixed for redemption, without premium.

*Mandatory Sinking Fund Redemption.* The Series 2018 Bonds maturing on July 1, (the *"Term Bonds"*) are subject to mandatory redemption and will be redeemed on July 1 of the respective years set forth below (the *"Sinking Fund Retirement Dates"*) and in the amounts set forth below (the *"Sinking Fund Requirements"*), by payment of a redemption price of the principal amount of such Term Bonds called for redemption plus the interest accrued to the date fixed for redemption, but without premium, as follows:

**Term Bonds Maturing July 1,**

| Sinking Fund Retirement Date | Sinking Fund Requirements |
|---|---|
| * | * |

* Maturity

At the option of the Corporation, as directed by the City, whenever Term Bonds are purchased, redeemed (other than pursuant to the foregoing scheduled Sinking Fund Requirement) or delivered by the City or the Corporation to the Paying Agent for cancellation, the principal amount of such Term Bonds so retired will satisfy and be credited against the Sinking Fund Requirement (and the corresponding redemption requirements) relating to such Term Bonds of the same maturity as the Term Bond so purchased, redeemed or delivered in such manner as the City determines; *provided, however,* that following such reduction each Sinking Fund Requirement is an integral multiple of $5,000. Such option must be exercised on or before the 45th day preceding the applicable mandatory Sinking Fund Retirement Date, by furnishing the Paying Agent a certificate setting forth the extent of the credit to be applied with respect to the then current Sinking Fund Requirement. If the certificate is not timely furnished, the Sinking Fund Requirement (and the corresponding redemption requirement) will not be reduced.

*Notice of Redemption.* When redemption is authorized or required, the Trustee will give the Owners of the Series 2018 Bonds to be redeemed notice of the redemption of such Series 2018 Bonds. Such notice will specify (a) that the whole or part of the Series 2018 Bonds are to be redeemed and, if in part, the part to be redeemed; (b) the date of redemption; (c) the place or places where the redemption will be made; and (d) the redemption price to be paid. Any redemption of Series 2018 Bonds in part will be from such series and maturities as directed by the City and by lot within a maturity in any manner the Trustee deems fair. Notwithstanding the foregoing, no notice of redemption shall be sent unless (i) the Trustee has on deposit sufficient funds to effect such redemption or (ii) the redemption notice states that redemption is contingent upon receipt of such funds on or prior to the redemption date.

Notice of such redemption will be given by mailing a copy of the redemption notice not more than 60 days nor less than 30 days prior to such redemption date, to the Owner of each Series 2018 Bond subject to redemption in whole or in part at the Owner's address shown on the Register on the fifteenth day preceding that mailing. Neither failure to receive any such notice nor any defect therein will affect the sufficiency of the proceedings for the redemption of the Series 2018 Bonds with respect to which there is no such defect.

Notice having been given in the manner provided above, the Series 2018 Bonds or portions thereof called for redemption will become due and payable on the redemption date and if an amount of money sufficient to redeem all the Series 2018 Bonds and portions thereof called for redemption is held by the Trustee or any paying agent on the redemption date, then the Series 2018 Bonds or portions thereof to be redeemed will not be considered outstanding under the Indenture and will cease to bear interest from and after such redemption date.

## SECURITY AND SOURCES OF PAYMENT

### Pledge of Net Airport Revenues

*General*. The Series 2018 Bonds are special revenue obligations of the Corporation payable solely from payments received under the City Purchase Agreement. Under the terms of the City Purchase Agreement, the City is to make Purchase Payments to the Trustee in amounts sufficient to pay when due the principal of and interest on the Series 2018 Bonds, fees of the Trustee and all other expenses enumerated in the City Purchase Agreement.

*Net Airport Revenues*. The Purchase Payments relating to all of the Series 2018 Bonds are secured by a pledge of the Net Airport Revenues. The City Purchase Agreement defines the term *"Net Airport Revenues"* to mean Airport Revenues, after provision for payment of all of the Cost of Maintenance and Operation and the term *"Designated Revenues"* to mean Net Airport Revenues, after payments required on any Senior Lien Obligations. Airport Revenues generally include all income and revenue received by the City directly or indirectly from the use and operation of the Airport, except for certain specifically excluded revenues. Airport Revenues also include, among other revenues, rentals, landing fees, use charges, income from sales of services, fuel oil and other supplies or commodities; fees from concessions and parking; fees from rental car, taxi and limousine services (other than customer facility charges (*"CFCs"*) such as those relating to Special Purpose Facilities, which are pledged to debt service on obligations incurred for such facilities, until released (to the extent available) to the Airport as Airport Revenues as reimbursement for eligible expenses (*"Recovered Revenue"*)); advertising revenues; and receipts derived from leases or other contractual agreements relating to the use of the Airport. Passenger Facility Charges (*"PFCs"*), federal subsidy payments related to the Series 2010B Junior Bonds (as defined herein) (*"2010 RZEDB Subsidy Payments"*), federal grants and special facility revenues (such as customer facility charges relating to Special Purpose Facilities which remain pledged to debt service on obligations incurred for such facilities and do not represent Recovered Revenues) are specifically excluded from Airport Revenues. For a discussion of the treatment of and application of Passenger Facility Charges see "Irrevocable Commitment of Passenger Facility Charge Revenues to Debt Service on Certain Junior Bonds." *"Cost of Maintenance and Operation"* generally includes all expenses (exclusive of depreciation and interest on money borrowed) which are necessary to the efficient maintenance and operation of the Airport. For complete definitions of Airport Revenues and Cost of Maintenance and Operation see "APPENDIX F — Summary of Certain Provisions of Legal Documents — Certain Definitions." The Purchase Payments to be made under the City Purchase Agreement will be secured by a first lien pledge of Net Airport Revenues (a) on a parity with Senior Lien Obligations presently outstanding in the aggregate principal amount of $554,005,000, (b) senior to Junior Lien Obligations presently outstanding in the aggregate principal amount of $669,935,000 and (c) senior to Junior Subordinate Lien Obligations presently outstanding in the aggregate principal amount of $100,000,000 and which are expected to be repaid with proceeds of Series 2018.

### Certain Covenants and Remedies

Covenants and agreements contained in the Airport Revenue Bond Ordinance are incorporated by reference in the City Purchase Agreement and are applicable to the Series 2018 Bonds. The Trustee and the Corporation, as their respective interests appear, have the right to enforce these covenants and agreements. The City may, but is not required to, pay amounts due under the City Purchase Agreement from unrestricted grant money and other monies available to the Airport, which are not included in the definition of Airport Revenues ("*Other Available Funds*"). For a discussion of certain financial covenants which the City has entered into with respect to the Airport, see "SECURITY AND SOURCES OF PAYMENT — Rate Covenants," "— Additional Senior Lien Obligations" and "— Additional Junior Lien Obligations" and "APPENDIX F — Summary of Certain Provisions of Legal Documents — The Airport Revenue Bond Ordinance."

During the term of the City Purchase Agreement, payments are to be made regardless of damage to the Airport or commercial frustration of purpose, without right of set-off or counterclaim, regardless of any contingencies and whether or not the City possesses or uses the Airport. The City's obligation to make Purchase

Payments will continue until all Purchase Payments and all other amounts due under the City Purchase Agreement have been paid or otherwise provided for.

**The obligation of the City to make Purchase Payments under the City Purchase Agreement does not constitute a debt or a pledge of the full faith and credit of the City, the State of Arizona or any other political subdivision thereof. The City has not pledged any form of ad valorem taxes to the payment of the Series 2018 Bonds. The Series 2018 Bonds are special revenue obligations of the Corporation secured only by the Purchase Payments which are to be paid from a first lien pledge of the Net Airport Revenues. The Purchase Payments are not secured by a lien of the Airport or any portion thereof. For a description of events of default and remedies under the City Purchase Agreement, see "APPENDIX F — Summary Of Certain Provisions Of Legal Documents."**

**Rate Covenants**

*Senior Lien Rate Covenant*. Pursuant to the Airport Revenue Bond Ordinance, the Senior Lien Obligation Documents and the City Purchase Agreement, the City has covenanted to continuously maintain the Airport in good condition and operate the same in a proper and economical manner and on a revenue-producing basis, and will in each Fiscal Year establish, maintain and enforce schedules of rates, fees and charges for the use of the Airport (i) sufficient to produce Net Airport Revenues at least equal to 125% of the annual debt service requirements of Senior Lien Obligations (net of Other Available Funds deposited in the Bond Fund in such Fiscal Year and net of any Passenger Facility Charge Credit applicable to Senior Lien Obligations, in such Fiscal Year) and (ii) sufficient to produce any required payments to any debt service reserve fund established for Senior Lien Obligations, including the Senior Lien Parity Reserve Fund (as defined herein), for such Fiscal Year. "*Passenger Facility Charge Credit*" means the amount of principal of and/or interest to come due on specified Senior Lien Obligations during any Fiscal Year to which Passenger Facility Charges, state and/or federal grants or other monies have received all required governmental approvals and have been irrevocably committed or are held in the Bond Fund or otherwise in trust by or on behalf of the Paying Agent and are to be set aside exclusively to be used to pay Interest Requirements and/or Principal Requirements on such specified Senior Lien Obligations, during the period of such commitment (unless such Passenger Facility Charges, state and/or federal grants or other monies are subsequently included in the definition of Airport Revenues). There are currently no Senior Lien Obligations to which Passenger Facility Charges have been irrevocably committed. See "APPENDIX F — Summary of Certain Provisions of Legal Documents — The Airport Revenue Bond Ordinance — Section 4.3 Rate Covenant" and " — The City Purchase Agreement."

*Junior Lien Rate Covenant*. Pursuant to the Airport Revenue Bond Ordinance and the Junior Lien Obligation Documents, the City has covenanted to continuously maintain the Airport in good condition and operate the same in a proper and economical manner and on a revenue-producing basis, and will in each Fiscal Year establish, maintain and enforce schedules of rates, fees and charges for the use of the Airport (a) sufficient to produce Designated Revenues at least equal to 110% of the annual debt service requirements of Junior Lien Obligations (net of Other Available Funds deposited in the Bond Fund in such Fiscal Year and net of any Junior Lien Passenger Facility Charge Credit applicable to such Fiscal Year) and (b) sufficient to produce any required payments to the Junior Lien Bond Reserve Fund or any separate reserve fund. "*Junior Lien Passenger Facility Charge Credit*" means the amount of principal of and/or interest to come due on specified Junior Lien Obligations during any Fiscal Year to which Passenger Facility Charges, state and/or federal grants or other monies have received all required governmental approvals and have been irrevocably committed or are held in the Junior Lien Bond Fund or otherwise in trust by or on behalf of the Paying Agent and are to be set aside exclusively to be used to pay Junior Lien Interest Requirements and/or Junior Lien Principal Requirements on such specified Junior Lien Obligations, during the period of such commitment (unless such Passenger Facility Charges, state and/or federal grants or other monies are subsequently included in the definition of Airport Revenues). The City has irrevocably committed the PFC Revenues (as defined herein) in the amounts and for the periods set forth in the Schedule of Outstanding Junior Bonds Supported by PFC Revenues below under the caption "Irrevocable Commitment of Passenger Facility Charge Revenues to Debt Service on Certain Junior

Bonds" to the extent received in any Fiscal Year ending prior to July 1, 2023. The City and the Corporation have irrevocably committed the 2010 RZEDB Subsidy Payments to the interest requirements of the Series 2010B Junior Bonds. Such irrevocable commitments constitute a Junior Lien Passenger Facility Charge Credit (collectively, the *"2010/2017 Junior Lien Passenger Facility Charge Credits"*). See "APPENDIX F — Summary of Certain Provisions of Legal Documents — The City Purchase Agreement."

**Irrevocable Commitment of Passenger Facility Charge Revenues to Debt Service on Certain Junior Bonds**

*Passenger Facility Charge Revenues*. Debt service on the Junior Lien Obligations set forth in the Schedule of Outstanding Junior Bonds Supported by PFC Revenues below is further secured by an irrevocable commitment of net proceeds of a passenger facility charge (*"Passenger Facility Charge"* or *"PFC"*) imposed by the City and collected on behalf of the City by non-exempt passenger air carriers at Sky Harbor in the amounts and for the periods set forth below. The Passenger Facility Charge is currently imposed at the rate of $4.50 per qualifying enplaned passenger, and is required to be remitted to the City less the compensation (i.e., any accrued interest prior to remittance and $0.11 per Passenger Facility Charge collected) that air carriers are permitted to deduct prior to remittance. Such remittances, to the extent received in each Fiscal Year plus interest thereon, are referred to herein as *"PFC Revenues."* See "FLOW OF FUNDS — Application of PFC Revenues." Any of the Junior Lien Obligations described below not paid on payment dates on or before July 1, 2023 by PFC Revenues received during the Commitment Period would then be payable from Designated Revenues on a parity with any Junior Lien Obligations which may be outstanding.

**Schedule of Outstanding Junior Bonds**
**Supported by PFC Revenues**

| Junior Series | Principal Amount Outstanding as of 08/01/18 | Percent of Debt Service Secured | Commitment Period End Date(1) |
|---|---|---|---|
| 2010A | $ 31,310,000 | 100% | June 30, 2023 |
| 2010B | 21,345,000 | 100 | June 30, 2023 |
| 2015A | 91,820,000 | 30 | June 30, 2023 |
| 2015B | 18,655,000 | 100 | June 30, 2023 |
| 2017D | 474,725,000 | 100 | June 30, 2023 |

(1) Unless extended by the City, in its discretion, by written direction to the Trustee, PFC Revenues received during this period may be applied to debt service due on or before July 1, 2023.

*Applicable Laws and the City's Passenger Facility Charge Program*. For a description of the laws relating to Passenger Facility Charges and the City's Passenger Facility Charge Program, see "AIRPORT FINANCIAL INFORMATION — Passenger Facility Charge Program," herein.

*Investment Considerations*. For a description of certain risks relating to the City's Passenger Facility Charge Program, see "CERTAIN BONDHOLDERS' RISKS — Certain Risks and Covenants Relating to the Amount and Timing of Receipt of Passenger Facility Charges."

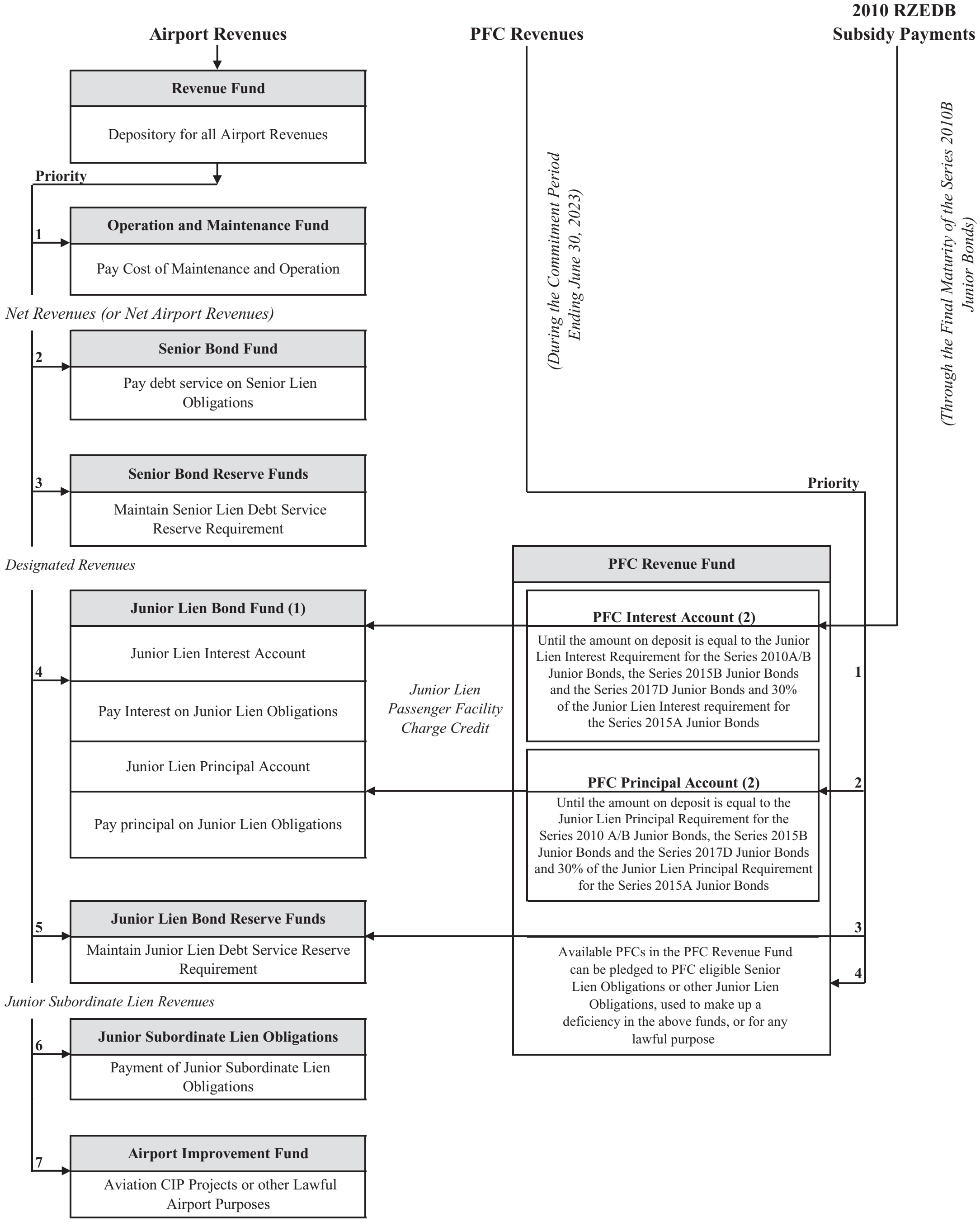
**Irrevocable Commitment of 2010 RZEDB Subsidy Payments to Interest on Certain Junior Bonds**

The interest requirements for the Corporation's Junior Lien Airport Revenue Bonds, Taxable Series 2010B (Recovery Zone Economic Development Bonds-Direct Payment) (the *"Series 2010B Junior Bonds"*) are further secured by an irrevocable commitment of the 2010 RZEDB Subsidy Payments through the final maturity of the Series 2010B Junior Bonds. The Corporation and the City expect to receive 2010 RZEDB Subsidy Payments rebating forty-five percent of the interest on the Series 2010B Junior Bonds subject to adjustments described below from the United States Treasury, provided that the Corporation and the City comply with certain Code requirements. Any such cash subsidy payments received by the Corporation or the City will be deposited directly to the Series 2010B Interest Subaccount of the 2010 PFC Interest Account of the PFC Revenue Fund and will not constitute Airport Revenues. Effective October 1, 2013, the federal government implemented certain automatic budget cuts known as the sequester, which resulted in a reduction of the federal subsidy payments over the past several years. The reduction is 6.6% for the federal government's fiscal year ending September 30, 2018 and 6.2% for the federal government's fiscal year ending September 30, 2019 (the *"Sequester Reductions"*). The City does not expect the Sequester Reductions, or a complete elimination of the 2010 RZEDB Subsidy Payments, to have a material adverse effect on its ability to make payments of interest on the Series 2010B Junior Bonds.

**Flow of Funds**

*General.* The application of Airport Revenues is governed by the Airport Revenue Bond Ordinance and the City Purchase Agreement. Such documents provide that so long as any Senior Lien Obligations or Junior Lien Obligations remain outstanding, all Airport Revenues shall be deposited as collected into a fund designated the *"Revenue Fund"* held by the City separate and apart from all other funds of the City. The following figure depicts the flow of funds under the Airport Revenue Bond Ordinance, the Senior Lien Obligation Documents and the Junior Lien Obligation Documents and the application of Airport Revenues, PFC Revenues and 2010 RZEDB Subsidy Payments:

**Application of Revenues, PFC Revenues and 2010 RZEDB Subsidy Payments Under Airport Revenue Bond Ordinance and City Purchase Agreement**




(1) PFC Revenues will be transferred to the 2010 Junior Lien Bond Reserve Fund, the Junior Lien Parity Reserve Fund and the 2015B Junior Lien Bond Reserve Fund to the extent amounts have been withdrawn to pay debt service on the Junior Lien Airport Revenue Bonds, Series 2010A (the *"Series 2010A Junior Bonds"*), the Series 2010B Junior Bonds, the Junior Lien Airport Revenue Bonds, Series 2015A (the *"Series 2015A Junior Bonds"*), the Junior Lien Airport Revenue Refunding Bonds, Series 2015B (the *"Series 2015B Junior Bonds"*) and the Junior Lien Airport Revenue Refunding Bonds, Series 2017D (the *"Series 2017D Junior Bonds"*), respectively.

(2) The PFC Interest Account and PFC Principal Account are accounts within the PFC Revenue Fund. Additionally there is a Series 2010B Interest Subaccount of the PFC Interest Account where 2010 RZEDB Subsidy Payments are deposited for payment of interest on the Series 2010B Junior Bonds.

As set forth in the figure above, all monies in the Revenue Fund are to be transferred by the City to the following funds in the order listed:

(a) From time to time to the Operation and Maintenance Fund sufficient monies to pay Cost of Maintenance and Operation;

(b) Monthly to the Senior Bond Fund, (i) into the Principal Account amounts equal to one-twelfth of the next succeeding principal requirement (whether at maturity or pursuant to a sinking fund redemption requirement) on all Senior Lien Obligations, and (ii) into the Interest Account amounts equal to one-sixth of the next succeeding interest requirement, on all Senior Lien Obligations. Monies in the Bond Fund are to be transferred by the City to the respective paying agents for Senior Lien Obligations, at least one business day before each debt service payment is required to be made on the Senior Lien Obligations.

(c) From time to time to each separate or parity bond reserve fund established for Senior Lien Obligations (each, a *"Senior Lien Obligation Bond Reserve Fund"),* amounts then required to be deposited to such Senior Lien Obligation Bond Reserve Funds; provided that such deposits may be transferred to a Credit Facility in order to reimburse such Credit Facility for amounts paid out under any insurance policy or surety bond securing any of the Senior Lien Obligations. See "BOND RESERVE FUNDS — Senior Lien Obligation Bond Reserve Funds" for a discussion of such funds.

(d) Monthly to the Junior Lien Bond Fund, (i) into the Junior Lien Principal Account amounts equal to one-twelfth of the next succeeding principal requirements (whether at maturity or pursuant to a mandatory sinking fund redemption requirement) for the next succeeding principal payment date for Junior Lien Obligations and (ii) into the Junior Lien Interest Account amounts equal to one-sixth of the interest requirements for the next succeeding interest payment date for Junior Lien Obligations, in each case less any amounts to which an irrevocable commitment from another funding source has been made.

(e) From time to time into any reserve fund established for Junior Lien Obligations (each, a *"Junior Lien Obligation Bond Reserve Fund"*), amounts then required to be deposited therein under the terms of the Junior Lien Obligation Documents, provided that such deposits may be transferred to a credit facility provider for Junior Lien Obligations in order to reimburse such credit facility provider for amounts paid out under any insurance policy or surety bond securing any of the Junior Lien Obligations and related costs. See "BOND RESERVE FUNDS — Junior Lien Obligation Bond Reserve Funds" for more details.

(f) From time to time to such funds, as and to the extent required with respect to Junior Subordinate Lien Obligations.

(g) From time to time to the Airport Improvement Fund such funds as the City chooses to deposit therein. Amounts in the Airport Improvement Fund may be used for any lawful airport purpose including, but not limited to, the payment of other obligations of the City relating to the Airport.

Each of the above-referenced funds is created as a separate fund and, other than the Senior Lien Obligation Reserve Funds and the Junior Lien Obligation Bond Reserve Funds, is held by the City.

For a more complete discussion of the general flow of funds see "APPENDIX F — Summary of Certain Provisions of Legal Documents — The Airport Revenue Bond Ordinance" and "— The City Purchase Agreement."

*2018 Senior Bond Fund.* Pursuant to the Indenture, the Trustee will create the 2018 Senior Bond Fund which will contain the 2018 Principal Account, the 2018 Interest Account and the 2018 Redemption Account. So long as any Series 2018 Bonds are outstanding, the Trustee will deposit the Purchase Payments transferred to it by the City from the Interest Account and Principal Account of the Bond Fund held by the City and established under the Airport Revenue Bond Ordinance into the 2018 Interest Account and the 2018 Principal Account, respectively, of the 2018 Senior Bond Fund held by the Trustee. The portion of the Purchase Payments deposited into the 2018 Principal Account will be used by the Trustee to pay the next succeeding principal payment (whether at maturity or pursuant to a sinking fund redemption requirement) on the Series 2018 Bonds and the portion of the Purchase Payments deposited in the 2018 Interest Account will be used by the Trustee to pay the next succeeding interest payment on the Series 2018 Bonds.

If all required deposits to the debt service funds for all Senior Lien Obligations and to all of the Senior Lien Obligation Bond Reserve Funds, as discussed below, have been made and the City makes an optional prepayment of its Purchase Payments to be used to purchase or redeem Series 2018 Bonds, such optional prepayment shall be deposited in the 2018 Redemption Account and promptly applied by the Trustee to retire Series 2018 Bonds by purchase, redemption or both in accordance with the City's direction. Any balance remaining in the 2018 Redemption Account after the purchase or redemption of the Series 2018 Bonds in accordance with the City's direction shall be transferred to the City.

For a more complete description of the 2018 Senior Bond Fund and the use thereof see "APPENDIX F — Summary of Certain Provisions of Legal Documents — The Indenture."

**Bond Reserve Funds**

*Senior Lien Obligation Bond Reserve Funds.* The Airport Revenue Bond Ordinance and the Senior Lien Obligation Documents require that the City establish a bond reserve fund with respect to each concurrent issuance of Senior Lien Obligations in an amount equal to the applicable Debt Service Reserve Requirement. The Debt Service Reserve Requirement for each series of Senior Lien Obligations may be satisfied by a deposit into a Senior Lien Parity Reserve Fund established by the Airport Revenue Bond Ordinance and the Senior Lien Obligation Documents, which may secure the payment of additional series of additional Senior Lien Obligations, or into a separate Senior Lien Obligation Bond Reserve Fund securing the payment of only the series of Senior Lien Obligations being issued or incurred. Bond Reserve Funds will have been established for Outstanding Senior Lien Obligation Bonds as set forth in the following table.

**Table 1**
**Senior Lien Obligation Bond Reserve Funds**

| Senior Lien Obligation Bond Series | Funding Type | Value Credited to the Debt Service Reserve Requirement |
|---|---|---|
| Series 2013(1) . . . . . . . . . . . . . . . . . . . . . . . . . . . . | Cash and Permitted Investments on Deposit with Trustee | $16,250,750 |
| Series 2017A, Series 2017B, Series 2017C and Series 2018 (Senior Lien Parity Reserve Fund)(2) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | Cash and Permitted Investments on Deposit with Trustee | $47,702,451* |

(1) Represents a separate 2013 Senior Lien Bond Reserve Fund securing the payment of only Series 2013 Senior Lien Obligations.

(2) Represents $29,456,194 funded from proceeds of the Series 2017A, 2017B and 2017C Bonds, and $18,246,257* to be funded from proceeds of the Series 2018 Bonds. At the direction of the City, without notice to or consent of the owners of the Series 2018 Bonds, the Senior Lien Parity Reserve Fund may secure additional Senior Obligations and the Senior Lien Parity Debt Service Reserve Requirement may be modified to the extent necessary to reflect on an aggregate basis the principal amount and annual debt service requirements of the Senior Lien Obligations to be secured by the Senior Lien Parity Reserve Fund. See "APPENDIX F — Summary of Certain Provisions of Legal Documents — The City Purchase Agreement" and " — The Indenture."

* Subject to change.

*Junior Lien Obligation Bond Reserve Funds.* The Airport Revenue Bond Ordinance permits the City to, and the Junior Lien Obligation Documents require that, the City establish a bond reserve fund with respect to each concurrent issuance of Junior Lien Obligations in an amount equal to the applicable Debt Service Reserve Requirement. The Debt Service Reserve Requirement for each series of Junior Lien Obligations may be satisfied by a deposit into a Junior Lien Parity Reserve Fund established by the Airport Revenue Bond Ordinance and the Junior Lien Obligation Documents, which may secure the payment of additional series of additional Junior Lien Obligations, or into a separate Junior Lien Obligation Bond Reserve Fund securing the payment of only the series of Junior Lien Obligations being issued or incurred. Bond reserve funds will have been established for Outstanding Junior Lien Obligations as set forth in the following table.

**Table 2**
**Junior Lien Obligation Bond Reserve Funds**

| Junior Lien Obligation Series | Funding Type | Value Credited to the Debt Service Reserve Requirement As of 08-01-18 |
|---|---|---|
| Series 2010A, Series 2010B, and Series 2010C(1) | Cash and Permitted Investments on Deposit with Trustee | $ 8,855,134 |
| Series 2015A and Series 2017D (Junior Lien Parity Reserve Fund)(2) | Cash and Permitted Investments on Deposit with Trustee | 43,673,107 |
| Series 2015B(3) | Cash and Permitted Investments on Deposit with Trustee | 1,865,500 |

(1) Represents a separate 2010 Junior Lien Obligation Bond Reserve Fund securing the payment of only such Series 2010A, Series 2010B and Series 2010C Junior Lien Obligations.

(2) The 2015A Bonds and the Series 2017D Junior Bonds are currently the only obligations secured by the Junior Lien Parity Reserve Fund. At the direction of the City, without notice to or consent of the owners of the 2015A Junior Bonds and the Series 2017D Junior Bonds, the Junior Lien Parity Reserve Fund may secure additional Junior Obligations and the Junior Lien Parity Debt Service Reserve Requirement may be modified to the extent necessary to reflect on an aggregate basis the principal amount and annual debt service requirements of the Junior Obligations to be secured by the Junior Lien Parity Reserve Fund.

(3) Represents a separate 2015B Junior Lien Obligation Bond Reserve Fund securing the payment of the Series 2015B Junior Bonds.

## Outstanding Senior Lien Obligations

As of August 1, 2018, $554,005,000 in principal amount of Corporation Senior Lien Airport Revenue Bonds are outstanding, as shown on the following table, and are on parity with the City's obligations under the City Purchase Agreement.

**Table 3**
**City of Phoenix Civic Improvement Corporation**
**Senior Lien Airport Revenue Bonds Outstanding**

| Issue Date | Original Issuance | Purpose | Maturity Dates | Average Interest Rate | Bonds Outstanding As of 08-01-18 |
|---|---|---|---|---|---|
| 03-15-13 | $196,600,000 | Airport Improvements Refunding | 07-01-14/32 | 4.99% | $160,825,000 |
| 11-21-17 | 190,930,000 | Airport Improvements | 07-01-18/47 | 5.00 | 189,130,000 |
| 11-21-17 | 173,440,000 | Airport Improvements Refunding | 07-01-21/38 | 5.00 | 173,440,000 |
| 11-21-17 | 35,745,000 | Airport Improvements Refunding | 07-01-18/21 | 1.99 | 30,610,000 |
| Total Senior Lien Airport Revenue Bonded Debt Outstanding | | | | | $554,005,000 |

**Schedule of Senior Lien Obligations Annual Debt Service Requirements(1)**

| Fiscal Year | Principal | Interest | Total |
|---|---|---|---|
| 2018-19 | $ 20,660,000 | $ 26,773,850 | $ 47,433,850 |
| 2019-20 | 28,175,000 | 26,040,218 | 54,215,218 |
| 2020-21 | 20,225,000 | 25,123,877 | 45,348,877 |
| 2021-22 | 21,105,000 | 24,247,250 | 45,352,250 |
| 2022-23 | 20,520,000 | 23,192,000 | 43,712,000 |
| 2023-24 | 21,550,000 | 22,166,000 | 43,716,000 |
| 2024-25 | 22,625,000 | 21,088,500 | 43,713,500 |
| 2025-26 | 23,765,000 | 19,957,250 | 43,722,250 |
| 2026-27 | 24,945,000 | 18,769,000 | 43,714,000 |
| 2027-28 | 26,200,000 | 17,521,750 | 43,721,750 |
| 2028-29 | 27,505,000 | 16,211,750 | 43,716,750 |
| 2029-30 | 28,880,000 | 14,836,500 | 43,716,500 |
| 2030-31 | 30,325,000 | 13,392,500 | 43,717,500 |
| 2031-32 | 31,845,000 | 11,876,250 | 43,721,250 |
| 2032-33 | 17,180,000 | 10,284,000 | 27,464,000 |
| 2033-34 | 18,050,000 | 9,425,000 | 27,475,000 |
| 2034-35 | 18,950,000 | 8,522,500 | 27,472,500 |
| 2035-36 | 19,895,000 | 7,575,000 | 27,470,000 |
| 2036-37 | 20,885,000 | 6,580,250 | 27,465,250 |
| 2037-38 | 21,935,000 | 5,536,000 | 27,471,000 |
| 2038-39 | 8,050,000 | 4,439,250 | 12,489,250 |
| 2039-40 | 8,455,000 | 4,036,750 | 12,491,750 |
| 2040-41 | 8,875,000 | 3,614,000 | 12,489,000 |
| 2041-42 | 9,320,000 | 3,170,250 | 12,490,250 |
| 2042-43 | 9,790,000 | 2,704,250 | 12,494,250 |
| 2043-44 | 10,280,000 | 2,214,750 | 12,494,750 |
| 2044-45 | 10,790,000 | 1,700,750 | 12,490,750 |
| 2045-46 | 11,330,000 | 1,161,250 | 12,491,250 |
| 2046-47 | 11,895,000 | 594,750 | 12,489,750 |
| | $554,005,000 | $352,755,445 | $906,760,445 |

(1) Excludes debt service on the Series 2018 Bonds offered herein.

**Additional Senior Lien Obligations**

The Airport Revenue Bond Ordinance and the City Purchase Agreement provide that additional Senior Lien Obligations may be issued if (1) an officer of the City shall certify that either the Net Airport Revenues of the most recently completed fiscal year for which audited financial statements are available or the Net Airport Revenues for 12 consecutive months out of the most recent 18 calendar months, in each case together with Other Available Funds deposited to the Bond Fund during such period (a) were equal to at least 125% of the actual debt service on outstanding Senior Lien Obligations during such period and (b) would have been at least equal to 120% of Maximum Annual Debt Service for all Senior Lien Obligations to be outstanding, including the obligations proposed to be issued, and (2) a Consultant provides a report which projects that Net Airport Revenues in each fiscal year will equal at least 125% of the debt service on Senior Lien Obligations to be outstanding, including the obligations proposed to be issued, which report addresses the period of time beginning with the first full fiscal year following the issuance of the Senior Lien Obligations through the later of (a) three fiscal years following the expected date of completion of the proposed project or (b) five fiscal years following the issuance of the Senior Lien Obligations. In making such projections, the Consultant's report may reduce assumed senior lien debt service by applying a Passenger Facility Charge Credit, if applicable. Under the City Purchase Agreement, Other Available Funds deposited to the Bond Fund are not taken into account for purposes of clause (1) in the preceding sentence. Additionally, Senior Lien Obligations may be issued for refunding purposes without compliance with any of the foregoing financial tests if Maximum Annual Debt Service immediately after issuance of the refunding obligations is not greater than 110% of Maximum Annual Debt Service immediately prior to such issuance. See "SECURITY AND SOURCE OF PAYMENT — Rate Covenants;" and "APPENDIX F — Summary of Certain Provisions of Legal Documents — The Airport Revenue Bond Ordinance."

For additional information on planned additional Senior Lien Obligations, see "AIRPORT FINANCIAL INFORMATION — Aviation Capital Improvement Program."

## Outstanding Junior Lien Obligations

As of August 1, 2018, there are $669,935,000 principal amount of the Junior Lien Obligations Revenue outstanding, as shown in the following table.

**Table 4**
**City of Phoenix Civic Improvement Corporation**
**Junior Lien Airport Revenue Bonds Outstanding**

| Issue Date | Original Issuance | Purpose | Maturity Dates | Average Interest Rate | Bonds Outstanding as of 08-01-18 |
|---|---|---|---|---|---|
| 09-01-10 | $642,680,000 | Airport Improvements | 07-01-13/40 | 4.99% | $ 31,310,000(1) |
| 09-01-10 | 21,345,000 | Airport Improvements | 07-01-40 | 6.60 | 21,345,000(1)(2) |
| 09-01-10 | 32,080,000 | Airport Refunding | 07-01-23/25 | 5.00 | 32,080,000 |
| 12-15-15 | 95,785,000 | Airport Improvements | 07-01-16/45 | 4.87 | 91,820,000(3) |
| 12-15-15 | 18,655,000 | Airport Refunding | 07-01-34 | 5.00 | 18,655,000(1) |
| 12-21-17 | 474,725,000 | Airport Refunding | 07-01-21/40 | 4.67 | 474,725,000(1) |
| Total Junior Lien Airport Revenue Bonded Debt Outstanding | | | | | $669,935,000 |

(1) 100% of Debt Service due on or before July 1, 2023 on these bonds is also currently secured by an irrevocable commitment of PFC Revenues.

(2) Subject to the City's compliance with certain requirements of the Code, the City expects to receive 2010 RZEDB Subsidy Payments rebating a portion of the interest on these bonds from the United States Treasury in an amount equal to 45% of the interest payable each respective interest payment date. Effective October 1, 2013, the federal government implemented certain automatic budget cuts known as the sequester, which has most recently resulted in a reduction of the federal subsidy payments by 6.6% for the federal government's fiscal year ending September 30, 2018 and 6.2% for the federal government's fiscal year ending September 30, 2019 (the *"Sequester Reductions"*). The City does not expect the Sequester Reductions to have a material adverse effect on its ability to make payments of interest on the Series 2010B Junior Bonds.

(3) 30% of Debt Service due on or before July 1, 2023 on these bonds is also secured by an irrevocable commitment of the PFC Revenues.

For additional information on planned additional Junior Lien Obligations, see "AIRPORT FINANCIAL INFORMATION — Aviation Capital Improvement Program."

**Schedule of Junior Lien Obligations Annual Debt Service Requirements**

| Fiscal Year | Principal | Interest | Total |
|---|---|---|---|
| 2018-19 | $ 16,980,000 | $ 32,594,051 | $ 49,574,051 |
| 2019-20 | 17,805,000 | 31,766,251 | 49,571,251 |
| 2020-21 | 17,545,000 | 30,917,776 | 48,462,776 |
| 2021-22 | 18,420,000 | 30,040,527 | 48,460,527 |
| 2022-23 | 29,515,000 | 29,119,526 | 58,634,526 |
| 2023-24 | 30,990,000 | 27,643,776 | 58,633,776 |
| 2024-25 | 32,545,000 | 26,094,276 | 58,639,276 |
| 2025-26 | 22,395,000 | 24,467,027 | 46,862,027 |
| 2026-27 | 23,510,000 | 23,347,276 | 46,857,276 |
| 2027-28 | 24,690,000 | 22,171,776 | 46,861,776 |
| 2028-29 | 25,920,000 | 20,937,276 | 46,857,276 |
| 2029-30 | 27,215,000 | 19,641,277 | 46,856,277 |
| 2030-31 | 28,570,000 | 18,280,526 | 46,850,526 |
| 2031-32 | 30,015,000 | 16,852,026 | 46,867,026 |
| 2032-33 | 31,510,000 | 15,351,276 | 46,861,276 |
| 2033-34 | 31,740,000 | 13,775,777 | 45,515,777 |
| 2034-35 | 34,565,000 | 12,368,120 | 46,933,120 |
| 2035-36 | 36,290,000 | 10,639,870 | 46,929,870 |
| 2036-37 | 38,090,000 | 8,843,820 | 46,933,820 |
| 2037-38 | 39,970,000 | 6,958,520 | 46,928,520 |
| 2038-39 | 41,595,000 | 5,337,320 | 46,932,320 |
| 2039-40 | 43,280,000 | 3,649,920 | 46,929,920 |
| 2040-41 | 4,845,000 | 1,339,000 | 6,184,000 |
| 2041-42 | 5,090,000 | 1,096,750 | 6,186,750 |
| 2042-43 | 5,345,000 | 842,250 | 6,187,250 |
| 2043-44 | 5,610,000 | 575,000 | 6,185,000 |
| 2044-45 | 5,890,000 | 294,500 | 6,184,500 |
| | $669,935,000 | $434,945,490 | $1,104,880,490 |

**Additional Junior Lien Obligations**

The Airport Revenue Bond Ordinance and the City Purchase Agreement provide that additional Junior Lien Obligations may be issued if either (1) an officer of the City shall certify that either the Designated Revenues of the most recently completed fiscal year for which audited financial statements are available or the Designated Revenues for 12 consecutive months out of the most recent 24 calendar months, (a) were equal to at least 110% of the actual debt service on outstanding Junior Lien Obligations during such period and (b) would have been at least equal to 110% of Maximum Annual Junior Lien Debt Service for all Junior Lien Obligations to be outstanding, including the obligations proposed to be issued, or (2) a Consultant provides a report which projects that Designated Revenues in each Fiscal Year will equal at least 110% of the debt service on Junior Lien Obligations to be outstanding, including the obligations proposed to be issued, which report addresses the period of time beginning with the first full fiscal year following the issuance of the Junior Lien Obligations through the later of (a) three fiscal years following the expected date of completion of the proposed project or (b) five fiscal years following the issuance of the Junior Lien Obligations. In making such projections, the Consultant's report may reduce assumed senior lien debt service and junior lien debt service by applying a Passenger Facility Charge Credit or a Junior Lien Passenger Facility Charge Credit, if applicable, including the 2010/2017 Junior Lien Passenger Facility Charge Credits. Additionally, Junior Lien Obligations may be issued for refunding purposes without compliance with any of the foregoing financial tests if certain other conditions are met. See "APPENDIX F — Summary of Certain Provisions of Legal Documents — The City Purchase Agreement."

For information on planned additional Junior Lien Obligations see "AIRPORT FINANCIAL INFORMATION — Aviation Capital Improvement Program."

### Outstanding Junior Subordinate Lien Obligations

The City entered into a Revolving Credit Agreement dated September 19, 2017 (the "*Revolving Credit Agreement*") with the Bank of America, N.A. (the "*Credit Agreement Provider*") in order to refinance certain airport commercial paper notes. The initial loan extended under the Revolving Credit Agreement was refinanced with proceeds of the Corporation's Senior Lien Airport Revenue Bonds, Series 2017A. The City obtained a subsequent loan described in the table below. The Revolving Credit Agreement provides for a three-year loan period, ending on September 18, 2020 (the "*Credit Commitment Period*"), during which the City may borrow, repay and re-borrow amounts, but not exceeding $200,000,000 outstanding in the aggregate at any one time (each a "*Loan*"). Loans made under the Revolving Credit Agreement (such loans, together with any obligations on a parity there, the "*Junior Subordinate Lien Obligations*") will be payable from Designated Revenues, junior and subordinate to the Junior Lien Obligations ("*Junior Subordinate Lien Revenues*"). Upon application of the proceeds of the Series 2018 Bonds, there will be no amounts outstanding under the Revolving Credit Agreement or any other Junior Subordinate Lien Obligations outstanding. If the City elects to borrow additional amounts under the Revolving Credit Agreement that are outstanding at the end of the Credit Commitment Period, the City can, subject to certain conditions, convert the borrowing to a three-year term loan payable in twelve equal quarterly principal installments ending on September 18, 2023.

**City of Phoenix Civic Improvement Corporation**
**Junior Subordinate Lien**
**Airport Revolving Credit Facility Loans Outstanding**

| Issue Date | Original Issuance | Purpose | Loans Outstanding As of 08-01-18 |
|---|---|---|---|
| 04-05-18 | $100,000,000 | Airport Improvements | $100,000,000(1) |

(1) Represents loans to be prepaid by the Series 2018 Bonds offered herein.

For more information on planned additional Junior Subordinate Lien Obligations to finance additional Airport improvements, see "AIRPORT FINANCIAL INFORMATION — Aviation Capital Improvement Plan."

Upon an event of default under the Revolving Credit Agreement, the Credit Agreement Provider may declare all amounts due (collectively, "*Payment Obligations*") immediately due and payable. Events of default include, but are not limited to, failure to pay amounts to the Credit Agreement Provider by the applicable grace period, failure to perform certain covenants such as issuance of obligations in violation of additional bonds tests, sale of Airport property in violation of the Airport Revenue Bond Ordinance, acceleration of other obligations payable from Airport Revenues on any basis of lien in an amount of at least $5,000,000, certain litigation, bankruptcy and insolvency events related to the Airport and certain downgrades of Senior Lien Obligations. If Payment Obligations were to be accelerated, Airport Revenues would continue to be transferred to the extent available from the Revenue Fund to the Senior Bond Fund and the Junior Bond Fund on a monthly basis prior to payment of Payment Obligations as described under the caption "SECURITY AND SOURCE OF PAYMENT — Flow of Funds."

## AIRPORT FINANCIAL INFORMATION

### Aviation Department Financial Policies

The Aviation Department is focused on maintaining sound financial performance and has adopted specific financial and debt management policies to assist with the financial management of the Airport, including:

*Debt Service Coverage.* Management seeks to maintain a minimum debt service coverage for the Senior Lien Obligations between 1.75x-2.00x. Estimated fiscal year 2017-18 coverage of 2.10x was above the target range. Fiscal year 2016-17 debt service coverage of 2.58x was also above targeted coverage. Management seeks to maintain aggregate debt service coverage (coverage of Senior Lien Obligation debt service and Junior Lien Obligation debt service) of at least 1.50x. The City's aggregate debt service coverage is estimated to be 2.01x in fiscal year 2017-18 and was 2.30x in fiscal year 2016-17.

*PFC Leveraging.* Management has established a PFC leverage target of no greater than 65%-75% of annual collections in order to preserve PFC pay-as-you-go capacity and program flexibility. For fiscal year 2017-18, PFC revenues were 53% leveraged, well below the maximum target, and down slightly from 55% in fiscal year 2017-18.

*Cash & Liquidity.* Management has established a target of at least 475 days cash on hand to support extraordinary operating and capital needs. In fiscal year 2017-18 and fiscal year 2016-17, management exceeded the target and achieved 586 and 544 days of cash, respectively. Furthermore, management has a $200,000,000 Revolving Credit Agreement to provide liquidity and support short-term capital needs.

*Cost Per Enplanement* (*"CPE"*). The Airport maintains one of the industry's lowest CPE figures for similarly-sized U.S. airports. Management has the flexibility to increase CPE to maintain financial metrics and develop facilities. CPE is estimated at $6.39 for fiscal year 2017-18 and was $6.12 in fiscal year 2016-17.

### Debt Service Requirements

The following two schedules set forth the estimated annual principal and interest requirements on the Series 2018 Bonds offered herein and the debt service requirements on outstanding Senior Lien Obligations to be outstanding after the issuance of the Series 2018 Bonds.

**Schedule of Estimated Payments**
**Under the City Purchase Agreement(1)***

The City Purchase Agreement requires semi-annual Purchase Payments by the City to the Corporation in an amount equal to the annual principal of and interest on the Series 2018 Bonds, which payments have been assigned to the Trustee under the Indenture in addition to certain other amounts payable thereunder. The Purchase Payments are due in immediately available funds on each December 31 and June 30 commencing December 31, 2018 and ending June 30, 2048. The Indenture requires that the Trustee deposit the Purchase Payments received from the City from Net Airport Revenues in the 2018 Senior Bond Fund and use such amounts to pay the principal of and interest on the Series 2018 Bonds due on the following day. Set forth below is a schedule of the estimated annual Purchase Payments with respect to the Series 2018 Bonds:

| | Series 2018 Senior Bonds | | |
|---|---|---|---|
| **Fiscal Year** | **Principal** | **Interest(1)** | **Total** |
| 2018-19 | $ 3,265,000 | $ 6,788,340 | $ 10,053,340 |
| 2019-20 | 3,425,000 | 11,310,000 | 14,735,000 |
| 2020-21 | 3,600,000 | 11,138,750 | 14,738,750 |
| 2021-22 | 3,780,000 | 10,958,750 | 14,738,750 |
| 2022-23 | 3,970,000 | 10,769,750 | 14,739,750 |
| 2023-24 | 4,170,000 | 10,571,250 | 14,741,250 |
| 2024-25 | 4,380,000 | 10,362,750 | 14,742,750 |
| 2025-26 | 4,595,000 | 10,143,750 | 14,738,750 |
| 2026-27 | 4,830,000 | 9,914,000 | 14,744,000 |
| 2027-28 | 5,065,000 | 9,672,500 | 14,737,500 |
| 2028-29 | 5,315,000 | 9,419,250 | 14,734,250 |
| 2029-30 | 5,585,000 | 9,153,500 | 14,738,500 |
| 2030-31 | 5,865,000 | 8,874,250 | 14,739,250 |
| 2031-32 | 6,155,000 | 8,581,000 | 14,736,000 |
| 2032-33 | 6,470,000 | 8,273,250 | 14,743,250 |
| 2033-34 | 6,790,000 | 7,949,750 | 14,739,750 |
| 2034-35 | 7,130,000 | 7,610,250 | 14,740,250 |
| 2035-36 | 7,485,000 | 7,253,750 | 14,738,750 |
| 2036-37 | 7,865,000 | 6,879,500 | 14,744,500 |
| 2037-38 | 8,250,000 | 6,486,250 | 14,736,250 |
| 2038-39 | 8,665,000 | 6,073,750 | 14,738,750 |
| 2039-40 | 9,100,000 | 5,640,500 | 14,740,500 |
| 2040-41 | 9,555,000 | 5,185,500 | 14,740,500 |
| 2041-42 | 10,030,000 | 4,707,750 | 14,737,750 |
| 2042-43 | 10,530,000 | 4,206,250 | 14,736,250 |
| 2043-44 | 11,055,000 | 3,679,750 | 14,734,750 |
| 2044-45 | 11,610,000 | 3,127,000 | 14,737,000 |
| 2045-46 | 12,190,000 | 2,546,500 | 14,736,500 |
| 2046-47 | 12,805,000 | 1,937,000 | 14,742,000 |
| 2047-48 | 25,935,000 | 1,296,750 | 27,231,750 |
| | $229,465,000 | $220,511,340 | $449,976,340 |

(1) Represents estimated debt service requirements on the Series 2018 Bonds offered herein. Interest is estimated at an average rate of 5.00% for the Series 2018 Bonds.

* Subject to change.

**Schedule of Estimated Senior Lien Airport Revenue Bond Debt Service Requirements***

| Fiscal Year | Outstanding Senior Lien Airport Revenue Bonds Debt Service(1) | Estimated Series 2018 Bonds Debt Service(2) | Estimated Total Senior Lien Airport Revenue Bonds Debt Service |
|---|---|---|---|
| 2018-19 | $ 47,433,850 | $ 10,053,340 | $ 57,487,190 |
| 2019-20 | 54,215,218 | 14,735,000 | 68,950,218 |
| 2020-21 | 45,348,877 | 14,738,750 | 60,087,627 |
| 2021-22 | 45,352,250 | 14,738,750 | 60,091,000 |
| 2022-23 | 43,712,000 | 14,739,750 | 58,451,750 |
| 2023-24 | 43,716,000 | 14,741,250 | 58,457,250 |
| 2024-25 | 43,713,500 | 14,742,750 | 58,456,250 |
| 2025-26 | 43,722,250 | 14,738,750 | 58,461,000 |
| 2026-27 | 43,714,000 | 14,744,000 | 58,458,000 |
| 2027-28 | 43,721,750 | 14,737,500 | 58,459,250 |
| 2028-29 | 43,716,750 | 14,734,250 | 58,451,000 |
| 2029-30 | 43,716,500 | 14,738,500 | 58,455,000 |
| 2030-31 | 43,717,500 | 14,739,250 | 58,456,750 |
| 2031-32 | 43,721,250 | 14,736,000 | 58,457,250 |
| 2032-33 | 27,464,000 | 14,743,250 | 42,207,250 |
| 2033-34 | 27,475,000 | 14,739,750 | 42,214,750 |
| 2034-35 | 27,472,500 | 14,740,250 | 42,212,750 |
| 2035-36 | 27,470,000 | 14,738,750 | 42,208,750 |
| 2036-37 | 27,465,250 | 14,744,500 | 42,209,750 |
| 2037-38 | 27,471,000 | 14,736,250 | 42,207,250 |
| 2038-39 | 12,489,250 | 14,738,750 | 27,228,000 |
| 2039-40 | 12,491,750 | 14,740,500 | 27,232,250 |
| 2040-41 | 12,489,000 | 14,740,500 | 27,229,500 |
| 2041-42 | 12,490,250 | 14,737,750 | 27,228,000 |
| 2042-43 | 12,494,250 | 14,736,250 | 27,230,500 |
| 2043-44 | 12,494,750 | 14,734,750 | 27,229,500 |
| 2044-45 | 12,490,750 | 14,737,000 | 27,227,750 |
| 2045-46 | 12,491,250 | 14,736,500 | 27,227,750 |
| 2046-47 | 12,489,750 | 14,742,000 | 27,231,750 |
| 2047-48 | — | 27,231,750 | 27,231,750 |
| | $906,760,445 | $449,976,340 | $1,356,736,785 |

(1) Does not include the Series 2018 Bonds offered herein.

(2) Represents the estimated debt service on the Series 2018 Bonds offered herein. For estimated Senior Lien Obligation Debt Service Coverage see Exhibit H of "APPENDIX A — Report of the Airport Consultant — LeighFisher Inc."

* Subject to change.

**Historical Revenues, Expenditures and Changes in Fund Balances**

Table 5 "CITY OF PHOENIX, AVIATION DEPARTMENT ENTERPRISE FUND COMPARATIVE SCHEDULE OF REVENUES, EXPENDITURES, HISTORICAL DEBT SERVICE COVERAGE AND CHANGES IN FUND BALANCES" presents historical results of the Airport on a budgetary basis for the last five fiscal years. This schedule is consistent with the City's Comprehensive Annual Financial Report (*"CAFR"*) Exhibit E-4.

In fiscal year 2017-18, revenues for Sky Harbor increased by 9.0%. This increase is primarily due to increases in airline fees, as well as increases in parking, car rentals and ground transportation. Passenger enplanements increased by 2.0% from fiscal year 2016-17 to fiscal year 2017-18, while originating passengers increased an estimated 6.0%, which contributed to increased terminal area and ground transportation revenues. Airline landing fees for fiscal year 2016-17 increased to $1.99 per 1,000 pounds from $1.98 in fiscal year 2016-17.

In fiscal year 2017-18, operating expenditures increased by 2.0%. This increase is primarily due to increases in personal services related to salaries and employees benefits and contractual services.

**Table 5**
**City of Phoenix, Aviation Department Enterprise Fund**
**Comparative Schedule of Revenues, Expenditures,**
**Historical Debt Service Coverage and**
**Coverage and Changes In Fund Balances**
**(non-GAAP)**
**(In Expense Priority Established by the Airport Bond Ordinance)**
**(Fiscal Years; in thousands)**

| | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18(1) |
|---|---|---|---|---|---|
| REVENUES | | | | | |
| Landing Area | $ 46,674 | $ 52,082 | $ 54,954 | $ 51,301 | $ 52,218 |
| Terminal Area | 130,489 | 127,641 | 129,242 | 136,064 | 147,184 |
| Ground Transportation | 121,250 | 127,039 | 130,764 | 132,477 | 139,866 |
| Other | 29,704 | 31,129 | 27,274 | 30,632 | 39,601 |
| Interest | 1,807 | 1,842 | 3,092 | 4,177 | 7,019 |
| Total Revenues before Reimbursement | 329,924 | 339,733 | 345,326 | 354,651 | 385,888 |
| Transportation O&M Expense Reimbursement(2) | 13,626 | 14,488 | 14,837 | 16,190 | 15,309 |
| Total Revenues | 343,550 | 354,221 | 360,163 | 370,841 | 401,197 |
| EXPENDITURES AND ENCUMBRANCES | | | | | |
| Cost of Maintenance and Operation | | | | | |
| Personal Services | 104,683 | 105,760 | 105,591 | 116,353 | 121,218 |
| Contractual Services | 105,687 | 105,198 | 108,376 | 113,745 | 113,318 |
| Supplies | 11,159 | 11,092 | 11,686 | 12,070 | 11,216 |
| Equipment/Minor Improvements | 3,034 | 4,115 | 4,583 | 2,948 | 3,861 |
| Total Cost of Maintenance and Operation(2) | 224,563 | 226,165 | 230,236 | 245,116 | 249,613 |
| Net Airport Revenue Available for Revenue Bond Debt Service (Net Airport Revenues) | 118,987 | 128,056 | 129,927 | 125,725 | 151,584 |
| Total Senior Lien Airport Revenue Bond Debt Service | 50,030 | 48,732 | 48,775 | 48,797 | 55,180 |
| Senior Lien Revenue Bond Debt Service Coverage | 2.38x | 2.63x | 2.66x | 2.58x | 2.75x |
| Net Airport Revenue Available After Senior Lien Revenue Bond Debt Service (Designated Revenues) | 68,957 | 79,324 | 81,152 | 76,928 | 96,404 |
| Total Junior Lien Airport Revenue Bonds Debt Service(3) | 1,604 | 1,604 | 3,962 | 5,933 | 5,935 |
| Junior Lien Revenue Bond Debt Service Coverage | 42.99x | 49.45x | 20.48x | 12.97x | 16.24x |
| Net Airport Revenue Available after Senior and Junior Lien Revenue Bond Debt Service | 67,353 | 77,720 | 77,190 | 70,995 | 90,469 |
| Other Expenditures | | | | | |
| Capital Improvements | 23,614 | 17,719 | 54,493 | 42,693 | 57,596 |
| General Obligation Bond Debt Service | 859 | 206 | 197 | 197 | 197 |
| Early Defeasance of Bonds | — | — | — | — | 13,377 |
| Interest on Short-Term Debt | — | — | — | — | 810 |
| Total Other Expenditures | 24,473 | 17,925 | 54,690 | 42,890 | 71,980 |
| Total Expenditures and Encumbrances | 300,670 | 294,426 | 337,663 | 342,736 | 382,708 |
| Excess of Revenues Over Expenditures and Encumbrances | 42,880 | 59,795 | 22,500 | 28,105 | 18,489 |
| OTHER FINANCING SOURCES (USES) | | | | | |
| Recovery of Prior Years Expenditures | 2,334 | 2,368 | 1,192 | 1,498 | 3,363 |
| Transfer to General Fund: Staff and Administrative — Central Service | (7,262) | (7,969) | (7,716) | (8,373) | (9,141) |
| Transfers (to) from Other Funds | | | | | |
| Transfers to Other Funds | (29,420) | (46,599) | (17,233) | (15,921) | (5,698) |
| Transfers from Other Funds | 773 | 533 | 3 | 2,769 | 12,876 |
| Net Transfers (to) from Other Funds | (28,647) | (46,066) | (17,230) | (13,152) | 7,178 |
| Total Other Financing Sources (Uses) | (33,575) | (51,667) | (23,754) | (20,027) | 1,400 |
| Net Increase in Fund Balance | 9,305 | 8,128 | (1,254) | 8,078 | 19,889 |
| FUND BALANCE, JULY 1 | 309,854 | 319,159 | 327,287 | 326,033 | 334,111 |
| FUND BALANCE, JUNE 30 | 319,159 | 327,287 | 326,033 | 334,111 | 354,000 |
| Non-Cash Budgetary Transactions(4) | (6,350) | (426) | 49,578 | 31,341 | 46,673 |
| Total Airport Cash on Hand, June 30 | $312,809 | $326,861 | $375,611 | $365,452 | $400,673 |

(1) Fiscal Year 2017-18 data is preliminary and unaudited.

(2) Rental Car Center Transportation O&M Expenses as defined in the documents relating to the 2004 CFC Bonds are included as a Cost of Maintenance and Operation. Amounts reimbursed to the City by the CFC trustee to pay the rental car busing service expenses (included as a Cost of Maintenance and Operation) are included as Revenues. The CAFR Exhibit E-5 provides a presentation of expenditures that are subsequently reimbursed as revenues.

(3) Debt service is net of the 2010/2017 Junior Lien Passenger Facility Charge Credits and 2010 RZEDB Subsidy Payments.

(4) Consists of budgetary encumbrances, revenue recoveries and other timing differences.

**Enplaned Passenger Activity**

The ten largest U.S. passenger airlines provide regular service at Sky Harbor. As of June, 2018, airlines at Sky Harbor provided nonstop passenger service to 113 airports, including 98 U.S. airports and 15 international airports located primarily in Mexico and Canada. According to Airports Council International (*"ACI"*) statistics for calendar year 2017, Sky Harbor was the fourteenth largest airport in North America as measured by total passengers. Sky Harbor is a major connecting hub airport in the route network of American Airlines and one of the largest "focus city" airports in the route network of Southwest Airlines. The inland location of Sky Harbor allows connections that minimize circuity between the southwestern U.S. and points eastward. The following table sets forth the passenger and air cargo airlines that provided service at Sky Harbor during fiscal year 2017-18.

**Table 6**
**Airlines Reporting Enplaned Passengers and Air Cargo**
**Phoenix Sky Harbor International Airport**

**Major/National**
Alaska
American
Delta
Elite Airways
Frontier
Hawaiian
JetBlue
Southwest
Spirit
Sun Country
United

**Regional/Commuter**
Boutique Air
Compass (Delta Connection)
Great Lakes
Mesa (American Eagle, United Express)
SkyWest (American Eagle, Delta Connection, United Express)

**Foreign-Flag**
Air Canada
British Airways
Condor
Jazz Aviation (Air Canada Express)
Volaris
WestJet

**All-Cargo**
ABX Air
Air Cargo Carriers
Air Transport International
Ameriflight
Atlas Air (DHL)
Empire
FedEx
Kalitta Air
UPS

Source: City of Phoenix Aviation Department.

Table 7 presents total historical enplaned passengers by airline at Sky Harbor. More than 80% of all passengers enplaned at Sky Harbor in fiscal year 2017-18 boarded flights operated by either American Airlines (and its commuter affiliates) or Southwest Airlines. Delta and United ranked as the next largest airlines by enplaned passengers in fiscal year 2017-18, respectively.

**Table 7**
**Total Enplaned Passengers by Airline**
**Phoenix Sky Harbor International Airport**

| | Fiscal Years | | | | |
|---|---|---|---|---|---|
| **Published Airline** | **2013-14** | **2014-15** | **2015-16** | **2016-17** | **2017-18** |
| Enplaned Passengers | | | | | |
| American(1) | 10,734,648 | 10,978,341 | 10,962,440 | 10,129,895 | 10,360,041 |
| Southwest(2) | 6,305,923 | 6,750,373 | 7,149,550 | 7,382,859 | 7,546,946 |
| Delta | 1,262,548 | 1,325,051 | 1,401,639 | 1,388,510 | 1,438,843 |
| United | 960,710 | 981,702 | 1,080,742 | 1,131,315 | 1,164,730 |
| Alaska | 339,086 | 370,801 | 376,264 | 420,940 | 432,478 |
| Frontier | 207,590 | 279,517 | 235,602 | 459,477 | 388,761 |
| WestJet | 179,257 | 214,812 | 219,614 | 229,727 | 234,570 |
| Air Canada | 81,683 | 101,417 | 104,995 | 117,966 | 140,171 |
| British Airways | 99,380 | 103,408 | 105,173 | 108,487 | 111,514 |
| Spirit | 106,036 | 148,673 | 165,376 | 146,760 | 96,545 |
| JetBlue | 87,332 | 90,195 | 91,947 | 92,321 | 92,201 |
| Hawaiian | 83,715 | 85,368 | 87,094 | 88,388 | 86,558 |
| All Other | 70,840 | 58,911 | 75,471 | 123,741 | 125,557 |
| Total | 20,518,748 | 21,488,569 | 22,055,907 | 21,820,386 | 22,218,915 |
| **Share of Total** | | | | | |
| American(1) | 52.3% | 51.1% | 49.7% | 46.4% | 46.7% |
| Southwest(2) | 30.7 | 31.4 | 32.4 | 33.8 | 34.0 |
| Delta | 6.2 | 6.2 | 6.4 | 6.4 | 6.5 |
| United | 4.7 | 4.6 | 4.9 | 5.2 | 5.2 |
| Alaska | 1.7 | 1.7 | 1.7 | 1.9 | 1.9 |
| Frontier | 1.0 | 1.3 | 1.1 | 2.1 | 1.7 |
| WestJet | 0.9 | 1.0 | 1.0 | 1.1 | 1.1 |
| Air Canada | 0.4 | 0.5 | 0.5 | 0.5 | 0.6 |
| British Airways | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Spirit | 0.5 | 0.7 | 0.7 | 0.7 | 0.4 |
| JetBlue | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Hawaiian | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| All Other | 0.3 | 0.2 | 0.3 | 0.6 | 0.6 |
| Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

Notes: Passengers reported by regional affiliates have been grouped with their respective code-sharing partners.

(1) Includes US Airways. American Airlines and US Airways merged on December 9, 2013. The two airlines operated separately until a single operating certificate was obtained on April 8, 2015.

(2) Includes AirTran Airways, which merged with Southwest in December 2014, for all years shown.

Source: City of Phoenix Aviation Department.

The total number of enplaned passengers at Sky Harbor increased an average of 1.8% per year from fiscal year 2008-09 through fiscal year 2017-18, as shown in Table 8. Origin-destination passengers accounted for the majority of the passenger growth in fiscal year 2017-18 compared to fiscal year 2016-17, increasing an average of 4.3% per year compared to a 2.9% decrease for connecting passengers. Total passenger enplanements at Sky Harbor increased 1.8% in fiscal year 2017-18 compared to fiscal year 2016-17.

**Table 8**
**Historical Passenger Enplanements(1)**
**Phoenix Sky Harbor International Airport**
**(passengers in thousands)**

| | By Destination | | By Type of Origin-Designation (O&D) Passenger | | | | |
|---|---|---|---|---|---|---|---|
| **Fiscal Year** | **Domestic** | **International** | **Resident** | **Visitor** | **Total O&D** | **Connecting** | **Total** |
| 2008-09 | 17,980 | 932 | 5,143 | 6,180 | 11,323 | 7,589 | 18,912 |
| 2009-10 | 18,095 | 1,001 | 5,045 | 6,162 | 11,207 | 7,889 | 19,096 |
| 2010-11 | 18,593 | 1,088 | 5,127 | 6,161 | 11,288 | 8,393 | 19,681 |
| 2011-12 | 19,134 | 1,144 | 5,442 | 6,501 | 11,943 | 8,335 | 20,278 |
| 2012-13 | 19,094 | 1,142 | 5,513 | 6,462 | 11,975 | 8,261 | 20,236 |
| 2013-14 | 19,404 | 1,115 | 5,518 | 6,637 | 12,155 | 8,364 | 20,519 |
| 2014-15 | 20,349 | 1,140 | 5,751 | 6,987 | 12,738 | 8,751 | 21,489 |
| 2015-16 | 20,984 | 1,072 | 6,147 | 7,391 | 13,538 | 8,518 | 22,056 |
| 2016-17 | 20,812 | 1,008 | 6,558 | 7,827 | 14,385 | 7,435 | 21,820 |
| 2017-18(2) | 21,178 | 1,041 | 6,853 | 8,146 | 14,999 | 7,220 | 22,219 |
| Compound annual growth rate: | | | | | | | |
| 2008-09 to 2017-18 | 1.8% | 1.2% | 3.2% | 3.1% | 3.2% | (0.6)% | 1.8% |
| 2016-17 to 2017-18 | 1.8% | 3.3% | 4.5% | 4.1% | 4.3% | (2.9)% | 1.8% |

(1) Historical resident, visitor and connecting numbers were restated to reflect methodological improvements in the compilation of DOT O&D Survey sample data by Data Base Products (a third-party vendor) and are believed to be more accurate.

(2) Domestic and international subtotals for 2017-18 reflect actual results; originating and connecting subtotals are estimated based on three quarters of actual data.

Sources: City of Phoenix Aviation Department; U.S. DOT, Air Passenger Origin-Destination Survey, reconciled to Schedules T100 and 298C T1.

**Sky Harbor's Role as a Connecting Hub**

As discussed above under "Enplaned Passenger Activity," Sky Harbor serves as a major connecting hub in the route system of American Airlines and is also one of the major "focus cities" in Southwest Airlines' system. For the 12 months ended March 31, 2018 (the most recent data available), American Airlines and Southwest Airlines (including AirTran) combined to account for 80.4% of total enplaned passengers at Sky Harbor and 98.8% of the connecting passengers at Sky Harbor. American Airlines (including its regional affiliates) accounted for 46.5% of the total enplaned passengers at Sky Harbor and 70.4% of the connecting traffic, and Southwest Airlines accounted for 33.9% of total enplanements and 28.4% of the connecting traffic. US Airways, prior to its merger with American Airlines had a long history at Sky Harbor, as America West Airlines (America West merged with US Airways in September 2005), located its headquarters in Tempe and began commercial service in 1983. Southwest Airlines also has a long history at Sky Harbor, as it began service at Sky Harbor in 1982. As of June 2018, Southwest Airlines offers more seats at Sky Harbor than at all but five airports in its system — Chicago Midway International Airport, Baltimore Washington International Thurgood Marshall

Airport, Las Vegas McCarran International Airport, Denver International Airport and Dallas-Love Field Airport. For a description of recent trends, see “CERTAIN BONDHOLDERS’ RISKS — Activity Level and Financial Condition of Airlines Serving the Airport.”

**Aviation Capital Improvement Program**

Table 9 “AVIATION CAPITAL IMPROVEMENT PROGRAM THROUGH FISCAL YEAR 2022-23 (the “Aviation CIP”) provides for $2,033,091,000 in capital improvements for Phoenix-Sky Harbor International Airport, Phoenix-Goodyear Airport and Phoenix-Deer Valley Airport. This amount represents the total approved for the projects, some of which has been spent in prior years. The Aviation CIP is expected to be funded from $299,591,000 in airport operating funds, $271,865,000 in pay-as-you-go PFC revenues, $342,000,000 in PFC-backed future revenue bonds, $277,125,000 in CFC pay-as-you-go and CFC-backed future revenue bonds, $672,000,000 in non-PFC-backed future revenue bonds and $170,511,000 in capital grants.

The Aviation CIP is reevaluated annually and the scope and phasing of projects may be modified by considering financial capacity, government regulations, current needs and other relevant factors. The City has a long-standing practice of updating the five-year Aviation CIP and financial forecast each year for review by the City Council as part of the financial planning process.

Major projects of the Aviation CIP include the Terminal 3 Modernization, a new Terminal 4 concourse and Stage 2 of the PHX Sky Train. The Terminal 3 Modernization project is a multiyear program to enhance the customer experience and provide a more efficient terminal for passengers. Major features of the project include a consolidated security checkpoint (completed fall 2016), new common use ticket counters (completed fall 2016), additional baggage processing capacity, baggage carousels, replacement of gates, and expanded passenger drop-off curb. The multi-phase, design-build project includes three major components: the Terminal Processor, the South Concourse, and the North Concourse. The project is expected to be completed in 2020.

The Terminal 3 Modernization project includes a gate replacement and infrastructure upgrade that will allow Sky Harbor to close an aging Terminal 2 and relocate airlines to Terminal 3. Terminal 2 and Terminal 3 rely on systems that are over 30 years old and have capacity deficiencies or operational inefficiencies that will be significantly improved by the renewal of these systems. The upgrades are expected to lower operating costs, raise the level of service, and increase system reliability. Greater efficiency will be achieved by converting to common use ticket counters and gates that increase utilization though technology. The project is expected to be constructed to a LEED Silver standard and will move passengers to their gate in a way that is faster, more pleasant, and in a fashion that drives increased revenue through food, beverage, and retail concessions.

The PHX Sky Train is an automated people mover system that will connect all of the Airport’s terminals and parking facilities to VALLEY METRO Light Rail (regional public transit system) and the Rental Car Center (*“RCC”*). The train is an integral part of the airport’s transportation infrastructure plan and an important link to the regional transportation system. It is designed to be a long-term solution to growing traffic congestion in and around the Airport. The project will be completed in three stages (Stage 1, Stage 1a, and Stage 2). The first two stages are complete and in service, connecting the light rail system and the Airport’s largest parking facility to Terminals 3 and 4, with a walkway to Terminal 2. These two project stages were finished on schedule and nearly $45 million under the combined budget of $884 million. By mid 2022, Stage 2 will link Stage 1 and Stage 1a with the future West Ground Transportation Center and the RCC. The PHX Sky Train’s electric train cars run twenty-four hours a day arriving at a station approximately every three minutes during peak periods, delivering passengers to their destinations within five minutes after boarding. Since its opening in April 2013, the PHX Sky Train has carried over 20 million passengers and replaced busing as the mode of transportation between terminals and parking facilities.

On March 8, 2017, Southwest President Tom Nealon announced that Southwest Airlines would be increasing service to the Phoenix area. This announcement came with the request for the Airport to construct the final concourse at Terminal 4 and a commitment to occupy the associated gates upon its completion. The future S1 concourse, expected to be completed in early 2022, will be located on the southwest corner of Terminal 4. With approximately eight planned gates, the S1 concourse will provide Southwest with the additional capacity the airline needs to continue to grow in the Phoenix market. The project scope will also include a second bridge connector from the south concourses at Terminal 4 to the north. This connection will enable greater security efficiency and flexibility as passengers will be able to access any of the north or south gates from any one of the terminal's 4 security checkpoints.

**Table 9**
**Aviation Capital Improvement Program Through Fiscal Year 2022-23**
**City of Phoenix Aviation Department**
**(in thousands)**

| | | Funding Sources | | | | | |
|---|---|---|---|---|---|---|---|
| | Total | Capital Grants | PFC Pay-as-you-go | PFC Future Bonds | CFC Pay-as-you-go and Future Bonds | Non-PFC Future Bonds | Airport Operating Funds |
| **Major Capital Projects** | | | | | | | |
| Terminal 3 Modernization | $ 580,000 | $ — | $ 68,000 | $ — | $ — | $432,000 | $ 80,000 |
| Terminal 4 Concourse S1 | 310,000 | — | — | — | — | 240,000 | 70,000 |
| PHX Sky Train Stage 2 | 745,000 | — | 130,000 | 342,000 | 273,000 | — | — |
| Subtotal Major Capital Projects | $1,635,000 | $ — | $198,000 | $342,000 | $273,000 | $672,000 | $150,000 |
| **Other Capital Projects** | | | | | | | |
| Air Cargo | $ 5,154 | $ 3,608 | $ 1,392 | — | $ — | $ — | 155 |
| Development Studies | 5,327 | — | 613 | — | — | — | 4,714 |
| General Aviation | 9,983 | 6,131 | — | — | — | — | 3,852 |
| Infrastructure | 4,502 | 1,177 | — | — | — | — | 3,325 |
| Land Acquisition | 3,915 | — | — | — | — | — | 3,915 |
| Parking Facilities | 14,436 | — | — | — | 4,097 | — | 10,339 |
| Roadways | 3,680 | — | — | — | — | — | 3,680 |
| Runway and Taxiway Improvements | 117,003 | 80,280 | 31,775 | — | — | — | 4,948 |
| Security Facilities | 3,704 | 1,859 | 1,205 | — | — | — | 640 |
| Terminal 3 | 593 | 415 | — | — | — | — | 178 |
| Terminal 4 | 29,603 | — | 11,754 | — | — | — | 17,849 |
| Deer Valley Airport | 49,986 | 42,442 | — | — | — | — | 7,543 |
| Goodyear Airport | 36,869 | 31,644 | — | — | — | — | 5,226 |
| Phoenix-Mesa Gateway Airport | 5,200 | — | — | — | — | — | 5,200 |
| Other Miscellaneous and Contingency | 33,136 | 2,956 | 2,126 | — | 28 | — | 28,026 |
| Subtotal Other Capital Projects | $ 323,091 | $170,511 | $ 48,865 | $ — | $ 4,125 | $ — | $ 99,590 |
| **Other Miscellaneous and Contingency** | $ 75,000 | $ — | $ 25,000 | $ — | $ — | $ — | $ 50,000 |
| **Total Capital Projects** | $2,033,091 | $170,511 | $271,865 | $342,000 | $277,125 | $672,000 | $299,591 |

Source: City of Phoenix Aviation Department.

## Airport Rates and Charges

In 1981, the Mayor and Council of the City formally adopted a compensatory (cost of services) rate-setting policy which provides (1) that charges to aviation users be established on the basis of the costs to provide, maintain and operate Airport facilities and services and (2) that these costs be recovered from aviation users on a basis not to exceed their proportional use thereof. Under this compensatory rate-setting methodology, the City bears the risk of any revenue shortfall and retains any surplus revenue for its own discretionary expenditures. Rates and charges are typically adjusted at the beginning of each Fiscal Year after the City has reviewed proposed rate changes and capital expenditures with airline representatives. However, the City retains its proprietary right to adjust fees and to determine its capital expenditures without airline approval, and the City has the unilateral right to adjust terminal rates and landing fees at any time to reflect changes in cost. Any such adjustment is subject to federal law and regulations. On December 13, 2017, the City Council authorized the Aviation Director to set airport rates and charges, provided the resulting cost per enplanement falls below the large hub airport median CPE as reported by the FAA. In establishing any new schedule of rates, fees and charges for the use of the Airport, the City intends to comply with federal law and regulations.

The City uses short-term (month-to-month) Letters of Authorization (each, a *"LOA")* for airline space within its terminal facilities. Such LOA can be terminated by either party upon 30-days' notice, providing the City with the flexibility to maximize the use of its terminal facilities.

The following table provides the historical average airline cost per enplaned passenger.

**Table 10**
**Historical Average Cost Per Enplanement**
**Phoenix Sky Harbor International Airport**
**Fiscal Years**

| | Fiscal Years | | |
|---|---|---|---|
| | **2015-16** | **2016-17** | **2017-18** |
| Total Airline Revenues (000's) | $127,708 | $133,581 | $141,932 |
| Enplanements (000's) | 22,056 | 21,820 | 22,219 |
| Cost per Enplanement | $ 5.79 | $ 6.12 | $ 6.39 |

## Passenger Facility Charge Program

*Authorization for the Passenger Facility Charge.* The PFC is currently collected by non-exempt air carriers using Sky Harbor and remitted to the City pursuant to Section 1113(e) of the Federal Aviation Act, as amended, and the regulations promulgated thereunder (collectively, the *"PFC Laws").* The PFC Laws empower the FAA to authorize a public agency that controls an airport to impose a passenger facility charge of $1.00, $2.00, $3.00, $4.00 or $4.50 (the current maximum level) for each enplaned passenger at such airport, subject to certain exceptions described below. Proceeds of an authorized PFC may be used only to pay "allowable costs" of specific airport projects approved by the FAA, including debt service and other financing costs on bonds issued to finance such specific projects. Projects for which the FAA may authorize a PFC must (i) preserve or enhance safety, security or capacity of the national air transportation system, (ii) reduce noise or mitigate noise impacts resulting from an airport or (iii) furnish opportunities for enhanced competition between or among air carriers.

Under the PFC Laws, substantially all air carriers serving an airport for which the FAA has authorized the collection of a PFC must collect such PFC at the time they sell an airline ticket to a passenger to be enplaned at the airport. Passenger enplanements subject to the charge include passengers originating their travel itineraries on departing flights out of the collecting airport or connecting passengers at the collecting airport whose itineraries originated in other cities, provided the airport is among the first two or last two airports collecting a PFC on such connecting passenger's itinerary. An authorized PFC may only be collected for "revenue passengers" enplaned at a collecting airport, including passengers using scheduled and non-scheduled airline service. "Revenue passengers" do not include passengers who do not pay for the air transportation which resulted in their enplanement, including passengers using frequent flyer awards.

Under the PFC Laws, the air carriers collecting a PFC on behalf of a public agency must remit the proceeds of the PFC to the public agency on a monthly basis, not later than the last day of the month following the month in which such proceeds were collected or the first business day thereafter. Prior to such remittance, however, collecting air carriers are entitled to retain any interest accrued on the investment of the proceeds of the PFC they collect, as well as $0.11 of each PFC collected as compensation for administering the collection process.

Under the PFC Laws, the FAA may terminate a public agency's ability to impose, collect and apply the proceeds of a previously authorized PFC if the FAA finds that the public agency has violated the PFC Laws, including a violation of the agency's obligation under the PFC Laws to expend proceeds of its authorized PFC only on FAA-approved projects. A public agency's ability to impose, collect and apply the proceeds of a previously authorized PFC may also be terminated by the FAA if the agency is found to have violated the Airport Noise and Capacity Act of 1990 or its implementing regulations (collectively, the *"Noise Law").* Both the PFC Laws and the Noise Law contain a variety of procedural safeguards, including an informal resolution procedure, and in the case of the PFC Laws, a public hearing, which would apply before a public agency's PFC program could be terminated. Under the PFC Laws and the Noise Law, termination proceedings would include a period of time to allow the airport agency to correct any violation identified by the FAA or otherwise settle any alleged violation. The public agency would also subject certain other of its funds, including federal airport improvement grants, to termination by violating the PFC Laws or the Noise Law. While the City is not aware of any action by the FAA to terminate its ability to impose, collect and apply the proceeds of its PFC program, there can be no assurance that the FAA will not terminate the PFC program in the future.

*The City's Passenger Facility Charge Program.* From January 26, 1996, when the City initiated the collection of the Passenger Facility Charge at the Airport, through June 30, 2018, the City's Passenger Facility Charge collections when measured on a cash basis, is estimated to be $1,615.1 billion (excluding interest). The City's most recent application, PFC 8, was approved by the FAA in the amount of $70.0 million in February 2018. PFC 8 provides approval for various PFC eligible projects including construction related to the Terminal 3 Modernization project. Nonscheduled on-demand carriers and carriers with fewer than 7,500 enplanements annually are exempted.

Table 11 shows PFC collections at Sky Harbor in fiscal year 2015-16 through fiscal year 2017-18.

**Table 11**
**Historical PFC Collections**
**Phoenix Sky Harbor International Airport**
**Fiscal Years**

| | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|
| PFC Rate | $ 4.50 | $ 4.50 | $ 4.50 |
| Airline Administrative Fee | $ 0.11 | $ 0.11 | $ 0.11 |
| Net PFC Rate | $ 4.39 | $ 4.39 | $ 4.39 |
| Total Enplanements (000's) | 22,056 | 21,820 | 22,219 |
| PFC Eligible Enplanements | 86.3% | 87.3% | 86.0% |
| Total PFC Collections (000's) | $83,595 | $83,600 | $83,917 |

Source: City of Phoenix Aviation Department

Table 12 shows active and closed PFC approvals and the remaining collection authority. Table 13 shows the various projects approved for funding in the three active PFC approvals.

**Table 12**
**PFC Approvals and Revenues**
**Phoenix Sky Harbor International Airport**
**(as of June 30, 2018; in millions)**

| | Approval Amount | PFC Revenues Collected | Remaining Authority |
|---|---|---|---|
| Closed PFC Approvals(1) | $ 875.2 | $ 875.2 | $ — |
| Active PFC Approvals(2) PFC 6, PFC 7 and PFC 8 | 2,124.6 | 739.9 | 1,384.7 |
| Total All PFC Approvals | $2,999.8 | $1,615.1 | $1,384.7 |

(1) PFC 1, PFC 2, PFC 3, PFC 4 and PFC 5 are closed and no longer active.

(2) PFC 8 application was approved on February 23, 2018. As of February 23, 2018, active PFC approvals include PFC 6 applications 09-09-C-00-PHX ($1,858.6 million), 09-09-C-01-PHX ($81.9 million), and 09-09-C-02-PHX ($31.9 million), PFC 7 application 15-10-C-00-PHX ($82.2 million) and PFC 8 application 18-11-C-00-PHX ($170.0 million).

Source: Federal Aviation Administration and City of Phoenix Aviation Department.

**Table 13**
**Active PFC Approvals by Project**
**Phoenix Sky Harbor International Airport**
**(as of June 30, 2018; in millions)**

| | |
|---|---|
| PFC 6 | |
| PHX Sky Train | $1,788.6 |
| Community Noise Reduction Program | 120.2 |
| Terminal 4 Rehabilitation | 15.1 |
| Airfield Lighting and Runway Sign Relocation | 2.1 |
| Terminal Capacity Improvements | 37.8 |
| South Infield Paving | 8.6 |
| Subtotal PFC 6 | $1,972.4 |
| PFC 7 | |
| East Air Cargo and Apron Reconstruction | $ 0.7 |
| Perimeter Gates Security Enhancements | 1.5 |
| T3 NE Transition Ramp Reconstruction | 1.2 |
| Terminal 4 North Apron Reconstruction | 13.5 |
| Terminal 4 South Apron Reconstruction | 4.6 |
| Terminal 4 TSA EDS Enhancements | 0.7 |
| Taxiway A Reconstruction (Phase I and II) | 3.4 |
| Taxiway Connector G5 Construction | 1.3 |
| Terminal Window Glazing | 1.2 |
| West Hold Bay Reconstruction | 0.8 |
| Airfield Lighting Enhancements | 1.5 |
| Terminal 4 International Facility Improvements | 20.0 |
| Jetbridge Enhancements | 2.9 |
| Terminal Development Concept Design | 26.9 |
| Airport Conpatible Land Rescue Plan | 2.0 |
| Subtotal PFC 7 | $ 82.2 |
| PFC 8 | |
| Utility Vault Upgrade and Infield Paving | $ 7.5 |
| Runway 8-26 Keel Reconstruction | 2.6 |
| Reconstruct Terminal 3 South Transition Apron and Section of Taxiway D | 2.3 |
| Terminal 3 North Inner PCCP Ramp Reconstruction | 4.4 |
| Airport Compatible Land Redevelopment Program | 1.3 |
| Conduct Runway Incursion Mitigation (RIM) Analysis | 0.3 |
| Conduct Airport Master Plan Study | 1.1 |
| Terminal 3 Modernization and Expansion - Construction | 46.1 |
| Perimeter Gates Security Enhancements - Phase II | 1.0 |
| Security Master Plan | 1.1 |
| Update Airport AGIS Survey and Airspace Analysis | 0.3 |
| PIPS Replacement and Installation of Checkpoint Wait Time System | 1.8 |
| Subtotal PFC 8 | $ 70.0 |
| Total PFC Approval Amount(1) | $2,124.5 |
| Less PFC 6, 7, and 8 Revenues Collected as of June 30, 2018 | (739.9) |
| Remaining Authority | $1,384.6 |

(1) Includes PFC approval for $561.5 million pay-as-you-go, $772.6 million bond funds, and $790.5 million interest.

Sources: Federal Aviation Administration and City of Phoenix Aviation Department

## REPORT OF THE AIRPORT CONSULTANT

The Report of the Airport Consultant (the "*Report*") prepared by LeighFisher Inc. is included herein as Appendix A. The Report presents certain enplaned passenger and financial forecasts for Fiscal Years 2019 through 2023 and sets forth the assumptions upon which the forecasts are based. The financial forecasts are based on assumptions that were provided by, or reviewed with and adopted by, the Aviation Department of the City. The Report should be read in its entirety for an understanding of the forecasts and the underlying assumptions contained therein. As noted in the Report, any forecast is subject to uncertainties. Inevitably, some assumptions used to develop the forecasts will not be realized, and unanticipated events and circumstances may occur. Therefore, the actual results achieved during the forecast period may vary, and the variations may be material. See "CERTAIN BONDHOLDERS' RISKS — Report of the Airport Consultant."

## CERTAIN BONDHOLDERS' RISKS

Investment in the Series 2018 Bonds involves risk. The City's ability to generate Net Airport Revenues to pay debt service on the Series 2018 Bonds, as well as to generate other funds important to the operation of the Airport depends upon many factors, most of which are not under the control of the City. This section describes some of the risks associated with investing in the Series 2018 Bonds; however, prospective purchasers of the Series 2018 Bonds should give careful consideration to all of the information in this Official Statement.

### Certain Factors Affecting the Air Transportation Industry and the Airport

*General.* No assurance can be given with respect to the levels of aviation activity that will be achieved at the Airport in future fiscal years. Traffic at the Airport is sensitive to a variety of factors including (1) the growth in the population and economy of the Air Service Area served by the Airport, (2) national and international economic conditions, (3) air carrier economics and air fares, (4) the availability and price of aviation fuel, (5) air carrier service and route networks, (6) the capacity of the air traffic control system, (7) the capacity of the Airport/airways system, and (8) safety concerns arising from international conflicts and the possibility of additional terrorist attacks. Since early 2000, several factors including slow or negative traffic growth in certain areas, increased fuel, labor, equipment and other costs, health concerns such as Severe Acute Respiratory Syndrome (SARS) and Ebola, costs of compliance with new security regulations and requirements, threat of possible future terrorist attacks and an increase in the cost of debt, have reduced profits and caused significant losses for all but a few air carriers.

*Aviation Security Requirements and Related Costs.* The FAA, as a result of the events of September 11, 2001, instituted numerous safety and security measures for all U.S. airports including Sky Harbor. The provision of and cost of airport security was transferred to and now is administered by the federal government through the Transportation Security Administration (the "*TSA*") instead of private companies. Like many other airport operators, Sky Harbor experienced increased operating costs due to compliance with the new federally mandated security and operating requirements. Sky Harbor is currently in compliance with all federally mandated security requirements.

The City cannot predict the effect of any future government-required security measures on passenger activity at Sky Harbor. Nor can the City predict how the government will staff security screening functions or the effect on passenger activity of government decisions regarding its staffing levels.

*Aviation Safety Concerns, International Conflict and the Threat of Terrorism.* Concerns about the safety of airline travel and the effectiveness of security precautions, particularly in the context of potential international hostilities and terrorist attacks, may influence passenger travel behavior and air travel demand. These concerns intensified in the aftermath of the events of September 11, 2001 and again in 2014 following the high profile disappearance of Malaysia Airlines Flight 370 and the crash of Malaysia Airlines Flight 17. Travel behavior may be affected by anxieties about the safety of flying and by the inconveniences and delays associated with more stringent security screening procedures, both of which may give rise to the avoidance of air travel generally and the switching from air to surface travel modes.

Although the U.S. government, airlines and airport operators have upgraded security measures to guard against terrorist incidents and maintain confidence in the safety of airline travel since the attacks of September 11, 2001, no assurance can be given that these precautions will be successful. The possibility of intensified international hostilities and further terrorist attacks involving or affecting commercial aviation are a continuing concern that may affect future travel behavior and airline passenger demand.

Further, future enhanced securities procedures may significantly increase inconvenience and delays at airports, including Sky Harbor, again impacting passenger demand for air travel.

*Cyber Security*. Computer networks and data transmission and collection are vital to the efficient operation of the airline industry. Air travel industry participants, including airlines, the FAA, the TSA, the City, concessionaires and others collect and store sensitive data, including intellectual property, proprietary business information, information regarding customers, suppliers and business partners, and personally identifiable information of customers and employees. The secure processing, maintenance and transmission of this information is critical to air travel industry operations. Despite security measures, information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Any such breach could compromise networks and the information stored there could be disrupted, accessed, publicly disclosed, lost or stolen. Any such disruption, access, disclosure or other loss of information could result in disruptions in the efficiency of the air travel industry, legal claims or proceedings, liability under laws that protect the privacy of personal information, regulatory penalties, operations and the services provided, and cause a loss of confidence in the air travel industry, which could ultimately adversely affect Net Airport Revenues.

*Capacity of National Air Traffic Control and Airport Systems.* Demands on the nation's air traffic control system continue to cause aircraft delays and restrictions, both on the number of aircraft movements in certain air traffic routes and on the number of landings and takeoffs at certain airports. These restrictions affect airline schedules and passenger traffic nationwide. In addition, increasing demands on the national air traffic control and airport systems could cause increased delays and restrictions in the future.

**Cost and Availability of Aviation Fuel**

Airline earnings are significantly affected by the price of aviation fuel. According to Airlines for America, fuel is the largest single cost component for most airline operations, and therefore an important and uncertain determinant of an air carrier's operating economics. There has been no shortage of aviation fuel since the "fuel crisis" of 1974, but there have been significant increases and fluctuations in the price of fuel.

Any increase in fuel prices causes an increase in airline operating costs. Fuel prices continue to be susceptible to, among other factors, political unrest in various parts of the world, Organization of Petroleum Exporting Countries' policy, increased demand for fuel caused by rapid growth of economics such as China and India, the levels of fuel inventory maintained by certain industries the amounts of reserves maintained by governments, currency fluctuations, disruptions to production and refining facilities and weather. In recent years, the cost of aviation fuel has fluctuated in response to changes in demand for and supply of oil worldwide. Significant fluctuations and prolonged increases in the cost of aviation fuel may result in an adverse impact on air transportation industry profitability, causing airlines to reduce capacity, fleet and personnel as well as to increase airfares and institute fuel, checked baggage and other extra surcharges, all of which may decrease demand for air travel.

**Economic Conditions**

Historically, the financial performance of the air transportation industry has correlated with the state of the national and global economies. Following significant and dramatic changes which occurred in the financial markets in September 2008, the U.S. economy experienced a recession followed by weak growth. As a result of concerns about the U.S. government's ability to resolve long-term deficits, S&P downgraded the credit rating of the U.S. sovereign debt in August 2011 from AAA to AA+. While the rate of national and global economic growth has since strengthened, it is not known at this time whether such growth will persist beyond 2018. There can be no assurances that future weaker economic conditions, the U.S. federal government's credit rating, or other national and international fiscal concerns will not have an adverse effect on the air transportation industry.

**Activity Level and Financial Condition of Airlines Serving the Airport**

The Airport derives a substantial portion of its operating revenues from landing and facility rental fees. The financial strength and stability of the airlines using Sky Harbor, together with numerous other factors, influence the level of aviation activity at, and the revenues of, the Airport. Individual airline decisions regarding level of service also affect total enplanements. Financial or operational difficulties of any of the airlines operating at Sky Harbor will have an adverse impact, directly or indirectly on Net Airport Revenues, Airport operations and PFC Revenues. In some cases, such an impact may be material.

The operating revenues from the landing and facility fees of American Airlines and Southwest Airlines are especially important to the Airport. For the fiscal year ended June 30, 2018, American Airlines and Southwest Airlines represented approximately 46.6% and 34.0%, respectively, of the total enplaned passengers at Sky Harbor. No other airline represented over 6.5% of Sky Harbor's enplaned passengers. American Airlines continues to maintain 51 of the Airport's 101 current gates and enplanements for Sky Harbor's largest carrier increased by 230,146 in fiscal year 2018. Similarly Southwest Airlines enplanements increased by 164,087. While Frontier and Spirit recorded enplanement declines of 70,716 and 50,215, respectively, the Airport recorded an overall net gain for the fiscal year of 398,529 enplanements, an increase of 1.8%. Southwest Airlines President, Tom Nealon, announced on March 8, 2017 that his airline would require 8 additional gates at Sky Harbor to accommodate their plans for continued growth in Phoenix. No assurance can be given that American Airlines will continue its hubbing operations at Sky Harbor or that Southwest Airlines will continue to allocate a significant portion of its system capacity to Sky Harbor. In the event American Airlines discontinues or reduces its hubbing operations at Sky Harbor or Southwest Airlines discontinues or reduces the current allocation of its system capacity, other carriers may not step in to maintain the current level of activity at Sky Harbor. It is reasonable to assume that any significant financial or operational difficulties incurred by American Airlines or Southwest Airlines could have a material adverse effect on the Airport.

**Airline Consolidations, Bankruptcy and Financial Considerations**

Since September 11, 2001, substantially all domestic airlines were downgraded by the rating agencies, and a number of them have filed for bankruptcy, including, but not limited to, American, United, US Airways, Delta, Northwest, Frontier, Hawaiian, Mesa, Sun Country and Air Canada. By 2008, all major and regional airlines that had filed for Chapter 11 of the U.S. Bankruptcy Code had emerged from bankruptcy. Certain other airlines including ATA, Aloha, Midway, Vanguard and Skybus have ceased operations. None of the airlines that ceased operations had significant enplanement levels at Sky Harbor. Additional bankruptcies, liquidations or major restructurings of other airlines could occur. However, it is not possible to predict the potential impact on Sky Harbor of any of these future events at this time.

In response to competitive pressures, the U.S. airline industry has continued to consolidate. In 2008, Delta and Northwest merged. In 2010, United and Continental completed the merger of the two airlines. In 2011, Southwest Airlines completed its acquisition of AirTran Airways. In 2013, US Airways and American Airlines completed the merger of the two airlines. Further airline consolidation is possible and could continue to change airline service patterns, particularly at the connecting hub airports of the merged airlines. The City cannot predict what impact, if any, such consolidation will have on airline traffic at Sky Harbor.

*Letters of Authorization.* To date, all airlines that have filed for bankruptcy protection have remitted all material payments due to the Airport for use of terminal facilities under their respective LOA. In the event a bankruptcy case is filed by an airline in the future, under current law the bankruptcy court could terminate the LOA at the expiration of its 30-day term. In such event, the City would be permitted to remove such airline from use and occupancy of the terminal and provide the premises to another airline. In such circumstances, while passenger demand may not be affected, revenue collections could be affected until other airlines absorb the unmet demand of the departing airline. The City cannot make any assurance regarding how a bankruptcy court will interpret the LOA.

*Passenger Facility Charges.* PFC Revenues do not secure the Series 2018 Bonds. However, PFC Revenues are important in the overall funding of the Airport CIP. The PFC Laws provide that PFCs collected by the airlines constitute a trust fund held for the beneficial interest of the eligible agency (i.e., the Airport) imposing the PFCs except for any handling fee or retention of interest collected on unremitted proceeds. In addition, federal regulations require airlines to account for PFC collections separately and to disclose the existence and amount of funds regarded as trust funds for financial statements. Airlines are permitted to commingle PFC collections with other revenues. Airlines that have filed for Chapter 7 or 11 bankruptcy protection, however, are required to segregate PFC revenue in a separate account for the benefit of the applicable airport and cannot grant a third party any security or other interest in PFC revenue. PFCs collected by those airlines are required by the bankruptcy court to be placed in accounts separate from other airline revenue accounts and paid to airports monthly in accordance with the PFC regulations. However, the City cannot predict whether an airline that files for bankruptcy protection will properly account for the PFC whether the bankruptcy estate will have sufficient monies to pay the Airport in full for the PFCs owed by such airline. The airlines are entitled to retain interest earned collections on PFCs until such PFCs collections are remitted.

**Airline Agreements and Federal Regulation Regarding Rates and Charges**

The current form of month-to-month LOA for the exclusive use of space at Sky Harbor gives the Airport great flexibility in adjusting to the varying demands of the airlines. It also means that the airlines can seek to increase or decrease their space on a monthly basis. The City cannot offer any assurance that airlines will be willing to maintain their use of Airport space on terms that are similar to their existing terms of use.

The FAA Authorization Act of 1994 establishes that airline rates and charges set by airports be "reasonable" and mandates an expedited administrative process by which the Secretary of Transportation (the *"Secretary"*) shall review rates and charges complaints that are not under an agreement with the carriers. An affected air carrier may file a written complaint requesting a determination of the Secretary as to reasonableness within 60 days after such carrier receives written notice of the establishment or increase of such fee. During the pendency of the review, the airlines must pay the disputed portion of the fee to the airport under protest, subject to refund to the extent such fees are found to be unreasonable by the Secretary. The airport must obtain a letter of credit, surety bond or other suitable credit facility equal to the amount in dispute unless the airport and the complaining carriers agree otherwise.

**Competition, Travel Alternatives and Other Issues**

Sky Harbor has no significant competition in the Phoenix-Mesa-Scottsdale Metropolitan Statistical Area. Phoenix-Mesa Gateway Airport provides limited passenger service and is not expected to provide significant competition in the foreseeable future. However, teleconference, video-conference and web-based meetings continue to improve in quality and price and are often considered a satisfactory alternative to face-to-face business meetings. While the effects of these developments cannot be quantified, it is possible that business travel to and from Sky Harbor may be adversely affected as a result.

**Delays and Cost Increases to Capital Improvement Program**

The ability of the Airport to complete its on-going Aviation CIP may be adversely affected by various factors including: (1) incorrect assumptions made to complete the Aviation CIP, (2) design and engineering oversights, (3) changes to the scope of the projects, including changes to federal security regulations, (4) delays in contract awards, (5) material and/ or labor shortages, (6) unforeseen site conditions, (7) adverse weather conditions and other force majeure events, (8) contractor defaults, (9) labor disputes, (10) unanticipated economic events such as inflation and (11) environmental issues. No assurance can be made that the projects will not exceed the currently budgeted amounts. Any schedule delays or cost increases could result in the need to issue additional indebtedness and may result in increased costs per enplaned passenger to the airlines, increased parking rates, or other rate increases.

**Uncertainties of Projections, Forecasts and Assumptions**

This Official Statement, and particularly the information contained in the Report incorporated by reference herein, contain statements relating to future results that are "forward looking statements" as defined in the Private Securities Litigation Reform Act of 1995. When used in this Official Statement and its appendices, the words "estimate," "budget," "forecast," "intend," "expect," "projected," and similar expressions identify forward looking statements. Such statements are subject to risks and uncertainties that could cause actual results to differ materially from those contemplated in such forward looking statements. Among many factors that may cause projected revenues and expenditures to be materially different from those anticipated include an inability to incur debt at assumed interest rates, construction delays, increases in construction costs, general economic downturns, factors affecting the airline industry in general or specific airlines, federal, state or local legislation and/or regulations, changes in the Airport's operational plans and procedures, and regulatory and other restrictions, including but not limited to those that may affect the ability to undertake, the timing or the costs of certain projects or operations. Any forecast is subject to such uncertainties. Therefore, there are likely to be differences between forecasts and actual results, and those differences may be material.

**Report of the Airport Consultant**

The Report included as Appendix A to this Official Statement contains certain assumptions and forecasts. The Report should be read in its entirety for a discussion of historical and forecast results of the Airport and the assumptions and rationale underlying the forecasts. As noted in the Report, any forecast is subject to uncertainties. There will usually be differences between actual and forecast results because not all events and circumstances occur as expected, and those differences may be material.

Accordingly, the projections contained in the Report or that may be contained in any future certificate of the City or a consultant are not necessarily indicative of future performance, and neither the Airport Consultant nor the City assumes any responsibility for the failure to meet such projections. In addition, certain assumptions with respect to future business and financing decisions of the Airport are subject to change. No representation is made or intended, nor should any representation be inferred, with respect to the likely existence of any particular future set of facts or circumstances, and prospective purchasers of the Series 2018 Bonds are cautioned not to place undue reliance upon the Report or upon any projections or requirements for projections. If actual results are less favorable than the results projected or if the assumptions used in preparing such projections prove to be incorrect, the amount of Net Airport Revenues may be materially less than expected and consequently, the ability of the City to make timely payment of the principal of and interest on the Series 2018 Bonds may be materially adversely affected.

Neither the City's independent auditors, nor any other independent accountants have compiled, examined or performed any procedures with respect to the Net Airport Revenues forecast in the Report, nor have they expressed any opinion or any form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, the Net Airport Revenues forecast in the Report, nor have they expressed any opinion or any form of assurance on such information or its achievability.

**Limitation of Rights and Remedies**

The Airport Revenue Bond Ordinance, the City Purchase Agreement and the Indenture provide limited remedies for Owners if defaults occur relating to the Series 2018 Bonds the most significant of which is specific performance. Such documents and agreements do not provide for acceleration prior to maturity. The availability of those remedies may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws affecting creditors' rights generally; the application of equitable principles and the exercise of judicial discretion in appropriate cases; common law and statutes affecting the enforceability of contractual obligations generally; principles of public policy concerning, affecting or limiting the enforcement of rights or remedies against governmental entities such as the City. The City cannot assure Owners that the remedies provided in the Airport Revenue Bond Ordinance, City Purchase Agreement and the Indenture will be available or effective to make Owners whole if a default occurs.

**Future Legislation and Regulation**

The operation of the Airport and the ability of the City to generate Net Airport Revenues sufficient to pay the Series 2018 Bonds may be adversely affected by future federal, state or local legislation that affects the Airport directly, or activities at the Airport. Federal legislation that could adversely affect the Net Airport Revenues and PFC Revenues includes, but is not limited to, legislation limiting the use of Airport properties, legislation imposing additional liabilities or restrictions on the operation of the Airport or the airlines and other persons using the Airport, changes in environmental laws, reductions in federal funding for the Airport, elimination or reduction of the ability of the City to impose fees and charges for use of Airport products or services and legislation or executive orders imposing travel restrictions on foreign passengers. In addition, the United States Congress could enact legislation making interest earned on the Series 2018 Bonds includable in a bondholder's gross income for federal income tax purposes or limit the tax benefits associated with ownership of the Series 2018 Bonds. See "TAX EXEMPTION — General" herein. No assurance can be given that the PFC Laws will not be modified or restricted by the FAA or the U.S. Congress so as to reduce the amount of PFC Revenues available to the City. Further, even if the City takes all reasonably necessary action to cause the collection and remittance of PFC Revenues, there can be no assurance that the FAA will not terminate the City's PFC program.

With respect to an airline in bankruptcy proceedings in a foreign country, the City is unable to predict what types of orders and/or relief could be issued by foreign bankruptcy tribunals, or the extent to which any such orders would be enforceable in the United States.

**Growth of Transportation Network Companies**

Transportation network companies (*"TNCs"*), such as Uber Technologies, Inc. and Lyft, Inc., connect paying passengers with drivers who provide the transportation using their own commercial and non-commercial vehicles. The popularity of this type of ride-sourcing has increased because of the convenience of requesting a ride through a mobile application, the ability to pay for this service without providing cash or other payment to the hired driver and competitive pricing.

As described in the Report, effective June 2016, the City eliminated collection of permit fees at the Airport, and implemented a per trip fee structure in which a fee is collected for each revenue-producing trip. The City plans to monitor all modes of ground transportation to assess the potential impacts from TNCs, however, at this time, the City cannot predict what impact, adverse or otherwise, those operations will have on other ground transportation services, parking at the Airport and the impact on Net Airport Revenues. One option the City is considering to mitigate the potential risk to parking revenues posed by TNCs is to enter into a long-term lease of Airport parking facilities to one or more private operators. The City has qualified four respondents to a recent Request for Qualifications from whom it will solicit proposals during fiscal year 2018-19. The City expects that any long-term lease agreements or other privatization arrangements with private parties would not be pursued if they were not in the best economic interests of the Airport, but in any event, the City would not enter into a lease or other arrangement that would materially adversely affect bondholders.

## AIRLINE INFORMATION

The major and national airlines serving Sky Harbor or their respective parent corporations are subject to the periodic reporting requirements of the Securities Exchange Act of 1934 and, in accordance therewith, file reports and other information with the Securities and Exchange Commission (the *"Commission").* Certain information, including financial information, as of particular dates concerning such airlines or their respective parent corporations is disclosed in certain reports and statements filed with the Commission. Such reports and statements can be inspected and copied at the public reference facilities maintained by the Commission, which can be located by calling the Commission at 1-800-SEC-0330 or from the Commission's EDGAR database on the internet. In addition, each airline is required to file periodic reports of financial and operating statistics with the U.S. Department of Transportation. Such reports of financial operating statistics can be obtained from the Office of Airline Information, Bureau of Transportation Statistics, Department of Transportation, Room 4201, 400 7th Street, S.W., Washington D.C. 20590 and copies of such reports can be obtained at prescribed rates. The foreign airlines also provide certain information concerning their operations and financial affairs, which may be obtained from the respective airlines. None of the Corporation, the City, the Financial Advisor or the Underwriters make any representation with respect to, and assume no responsibility for, the accuracy or completeness of, any information filed or provided by the airlines.

The City undertakes no responsibility for and makes no representation as to the accuracy or completeness of (i) any reports and statements filed with the SEC or U.S. Department of Transportation as described in this section or (ii) any material contained on the SEC's website as described in this section, including, but not limited to, updated information on the SEC website or links to other Internet sites accessed through the SEC's website. Any such information is not part of this Official Statement nor has such information been incorporated by reference herein, and such information should not be relied upon in deciding whether to invest in the Series 2018 Bonds.

## THE CITY

The City is a municipal corporation duly organized and validly existing under the laws of the State of Arizona. Pursuant to the City Purchase Agreement, the City will agree to make payments sufficient to pay amounts due on the Series 2018 Bonds. Detailed information on the City and the Airport is set forth in Appendices A through E.

## THE CORPORATION

The Corporation is a nonprofit corporation organized under the laws of the State of Arizona for the purpose of assisting the City in the acquisition and financing of municipal property and equipment.

The Corporation will enter into the City Purchase Agreement and the Indenture to facilitate the funding of the Airport improvements and the prepayment of the 2018 Loan. The Corporation is not financially liable for the payment of the principal of or interest on the Series 2018 Bonds and the Owners will have no right to look to the Corporation for payment of the Series 2018 Bonds except to the extent of the payments received from the City under the City Purchase Agreement.

## LITIGATION

The City is contingently liable in respect to lawsuits and other claims incidental to the ordinary course of its operations. The City Attorney has advised City management of the nature and extent of pending and threatened claims against the City. In the opinion of City management, such matters will not have a materially adverse effect on the City's ability to comply with the requirements of the City Purchase Agreement.

To the knowledge of the City Attorney, no pending or threatened litigation or administrative action or proceeding has (i) restrained or enjoined the City from entering into the City Purchase Agreement or approving the issuance and delivery of the Series 2018 Bonds or (ii) contested or questioned the validity of the Series 2018 Bonds or the proceedings and authority under which the Series 2018 Bonds have been authorized and are to be issued, secured, sold, executed or delivered. Certificates of the City to that effect will be delivered at the time of delivery of the Series 2018 Bonds.

To the knowledge of counsel to the Corporation, no pending or threatened litigation or administrative action or proceeding has (i) restrained or enjoined the Corporation from entering into the Indenture or the City Purchase Agreement or approving the issuance and delivery of the Series 2018 Bonds or (ii) contested or questioned the validity of the Series 2018 Bonds or the proceedings and authority under which the Series 2018 Bonds have been authorized and are to be issued, secured, sold, executed or delivered. Certificates of the Corporation to that effect will be delivered at the time of delivery of the Series 2018 Bonds.

*Notice of Litigation Relating to CFC Revenues.* On August 30, 2017, the City received a Notice of Claim requesting a class-action refund for Customer Facility Charges ("*CFCs*") paid under Phoenix City Code Sec. 4-79 by rental car customers during the past year (approximately $45 million), and going forward. On June 12, 2018, the plaintiff individually, and on behalf of a putative class (the "*Plaintiffs*"), commenced litigation in the Arizona Tax Court, demanding a refund of the CFCs collected from July 17, 2016 to the present. The Plaintiffs allege that the CFCs violates the Arizona Constitution because these are vehicle-use revenues not used entirely for road or highway expenses. On August 1, 2018, in accordance with a stipulation of the City and Plaintiffs, the Tax Court placed the CFC litigation on hold pending resolution of a related appeal interpreting the same provisions of the Arizona Constitution relied upon by Plaintiffs. While CFC Revenues are not included in Airport Revenues and are not security for the Series 2018 Bonds, the City has covenanted to apply amounts in the Airport Improvement Fund to remedy deficiencies in a transportation maintenance reserve fund to the extent CFC revenues or other pledged revenues are not sufficient. In addition to having meritorious procedural and legal defenses to the claim, the City has contractual remedies available. Specifically, the City entered into leases with the rental car companies that will be operating from the Rental Car Center. The leases define the obligations of the City and rental car companies and establish the process for addressing shortfalls in, and the complete or partial elimination of, the CFC. Consequently, even if the City were obligated to make a refund payment, such payment would be a one-time payment for past collections with any future amounts to be addressed with the rental car companies going forward. The City intends to vigorously oppose this claim and although damages are not covered by insurance does not believe it will have a material adverse impact on its ability to pay obligations related to the Series 2018 Bonds.

## TAX EXEMPTION

### General

The Code includes requirements which the Corporation and the City must continue to meet after the issuance of the Series 2018 Bonds in order that interest thereon be and remain excludable from gross income of the holders thereof for federal income tax purposes. The Corporation's or the City's failure to meet these requirements may cause the interest on the Series 2018 Bonds to be included in gross income for federal income tax purposes retroactively to the date of issuance of the Series 2018 Bonds. The Corporation and the City have covenanted in the City Purchase Agreement to take the actions required by the Code in order to maintain the excludability from gross income for federal income tax purposes of interest on the Series 2018 Bonds and not to take any actions that would adversely affect that excludability.

In the opinion of Bond Counsel, assuming continuing compliance by the Corporation and the City with the tax covenants referred to above and the accuracy of certain representations of the Corporation and the City, under existing statutes, regulations, rulings and court decisions, interest on the Series 2018 Bonds will be excludable from gross income for federal income tax purposes, except for interest on any Series 2018 Bond for any period during which such Series 2018 Bond is owned by a person who is a substantial user of the property financed or refinanced with proceeds of the Series 2018 Bonds (the *"Property"*) or any person considered to be related to such person (within the meaning of Section 147(a) of the Code). Interest on the Series 2018 Bonds will be treated as an item of tax preference for purposes of the federal alternative minimum tax imposed on individuals. Federal legislation enacted in 2017 eliminates alternative minimum tax for corporations for taxable years beginning after December 31, 2017. For taxable years beginning before January 1, 2018, corporations should consult their tax advisor regarding alternative minimum tax implications of owning the Series 2018 Bonds. Bond Counsel is further of the opinion that assuming interest on the Series 2018 Bonds is excludable from gross income for federal income tax purposes, interest on the Series 2018 Bonds will be exempt from income taxation under the laws of the State of Arizona.

Except as described above, Bond Counsel will express no opinion regarding the federal income tax consequences resulting from the receipt or accrual of interest on the Series 2018 Bonds or the ownership or disposition of the Series 2018 Bonds. Prospective purchasers of Series 2018 Bonds should be aware that the ownership of Series 2018 Bonds may result in other collateral federal tax consequences, including (i) the denial of a deduction for interest on indebtedness incurred or continued to purchase or carry Series 2018 Bonds or, in the case of a financial institution, that portion of the owner's interest expense allocable to interest on the Series 2018 Bonds, (ii) the reduction of the loss reserve deduction for property and casualty insurance companies by the applicable statutory percentage of certain items, including interest on the Series 2018 Bonds, (iii) the inclusion of interest on the Series 2018 Bonds in the earnings of certain foreign corporations doing business in the United States for purposes of a branch profits tax, (iv) the inclusion of interest on the Series 2018 Bonds in the passive income subject to federal income taxation of certain Subchapter S corporations with Subchapter C earnings and profits at the close of the taxable year, and (v) to any other tax consequences regarding the Series 2018 Bonds. Prospective purchasers of the Series 2018 Bonds should consult their own tax advisors as to the status of interest on the Series 2018 Bonds under the tax laws of any state other than the State.

**Changes in Federal and State Tax Law**

From time to time, there are legislative proposals in Congress or in the State legislature which, if enacted, could alter or amend one or more of the federal income tax matters or state tax matters, respectively, described above or adversely affect the market value of the Series 2018 Bonds. It cannot be predicted whether or in what form any such proposal might be enacted or whether, if enacted, it would apply to obligations (such as the Series 2018 Bonds), executed and delivered prior to enactment.

**Information Reporting and Backup Withholding**

Interest paid on tax-exempt obligations such as the Series 2018 Bonds is subject to information reporting to the Internal Revenue Service in a manner similar to interest paid on taxable obligations. This reporting requirement does not affect the excludability of interest on the Series 2018 Bonds from gross income for federal income tax purposes. However, in conjunction with that information reporting requirement, the Code subjects certain non-corporate owners of Series 2018 Bonds, under certain circumstances, to "backup withholding" at the rates set forth in the Code, with respect to payments on the Series 2018 Bonds and proceeds from the sale of Series 2018 Bonds. Any amount so withheld would be refunded or allowed as a credit against the federal income tax of such owner of Series 2018 Bonds. This withholding generally applies if the owner of Series 2018 Bonds (i) fails to furnish the payor such owner's social security number or other taxpayer identification number (*"TIN"*), (ii) furnished the payor an incorrect TIN, (iii) fails to properly report interest, dividends, or other "reportable payments" as defined in the Code, or (iv) under certain circumstances, fails to provide the payor or such owner's securities broker with a certified statement, signed under penalty of perjury, that the TIN provided is correct and that such owner is not subject to backup withholding. Prospective purchasers of the Series 2018 Bonds may also wish to consult with their tax advisors with respect to the need to furnish certain taxpayer information in order to avoid backup withholding.

**Original Issue Discount and Original Issue Premium**

Certain of the Series 2018 Bonds, as indicated on the inside front cover page of this Official Statement (*"Discount Bonds"*), were offered and will be sold to the public at an original issue discount (*"Original Issue Discount"*). Original Issue Discount is the excess of the stated redemption price at maturity (the principal amount) over the "issue price" of a Discount Bond. The issue price of a Discount Bond is the initial offering price to the public (other than to bond houses, brokers or similar persons acting in the capacity of underwriters or wholesalers) at which a substantial amount of the Discount Bonds of the same maturity will be sold pursuant to that offering. For federal income tax purposes, Original Issue Discount accrues to the owner of a Discount Bond over the period to maturity based on the constant yield method, compounded semiannually (or over a shorter permitted compounding interval selected by the owner). The portion of Original Issue Discount that accrues during the period of ownership of a Discount Bond (i) will be interest excludable from the owner's gross income for federal income tax purposes to the same extent, and subject to the same considerations discussed above, as interest on the Series 2018 Bonds, and (ii) will be added to the owner's tax basis for purposes of determining gain or loss on the maturity, prior sale or other disposition of that Discount Bond. A purchaser of a Discount Bond in the initial public offering at the price for that Discount Bond stated on the inside front cover of this Official Statement who holds that Discount Bond to maturity will realize no gain or loss upon the retirement of that Discount Bond.

Certain of the Series 2018 Bonds, as indicated on the inside front cover page of this Official Statement (the *"Premium Bonds"*), were offered and will be sold to the public at a price in excess of their stated redemption price at maturity. That excess constitutes bond premium. For federal income tax purposes, bond premium is amortized over the period to the maturity of a Premium Bond, based on the yield to the maturity date of that Premium Bond, compounded semiannually (or over a shorter permitted compounding interval selected by the owner). No portion of that bond premium is deductible by the owner of a Premium Bond. For purposes of determining the owner's gain or loss on the sale, redemption (including redemption at maturity) or other disposition of a Premium Bond, the owner's tax basis in the Premium Bond is reduced by the amount of bond premium that accrues during the period of ownership. As a result, an owner may realize taxable gain for federal income tax purposes from the sale or other disposition of a Premium Bond for an amount equal to or less than the amount paid by the owner for that Premium Bond. A purchaser of a Premium Bond in the initial public offering at the price for that Premium Bond stated on the inside front cover of this Official Statement who holds that Premium Bond to maturity will realize no gain or loss upon the retirement of that Premium Bond.

Owners of Discount Bonds and Premium Bonds should consult their own tax advisors as to the determination for federal income tax purposes of the amount of Original Issue Discount or bond premium properly accruable in any period with respect to the Discount Bond or Premium Bond and as to other federal tax consequences, and the treatment of Original Issue Discount and bond premium for purposes of state and local taxes on, or based on, income.

## LEGAL MATTERS

Legal matters incident to the issuance of the Series 2018 Bonds and with regard to the tax-exempt status of the interest thereon (see "TAX EXEMPTION — General") are subject to the legal opinion of Greenberg Traurig, LLP, Phoenix, Arizona, Bond Counsel, who has been retained by, and is acting as Bond Counsel to the Corporation and the City. Signed copies of the opinion, dated and speaking only as of the date of delivery of the Series 2018 Bonds, will be delivered to the Underwriters.

The text of the proposed legal opinion is set forth as Appendix G. The actual legal opinion to be delivered may vary from that text if necessary to reflect facts and law on the date of delivery. The opinion will speak only as of its date, and subsequent distribution of it by recirculation of the Official Statement or otherwise shall create no implication that Bond Counsel has reviewed or expresses any opinion concerning any of the matters referred to in the opinion subsequent to its date.

Certain legal matters will be passed upon for the Underwriters by Squire Patton Boggs (US) LLP, Phoenix, Arizona, as Counsel to the Underwriters.

## RATINGS

Moody's Investors Service, Inc. (*"Moody's"*) has assigned a rating of "Aa3" to the Series 2018 Bonds. S&P Global Ratings, a division of Standard & Poor's Financial Services LLC (*"S&P"*) has assigned a rating of "AA−" to the Series 2018 Bonds. No application has been made to any other rating service for the purpose of obtaining ratings on the Series 2018 Bonds. The City furnished these rating agencies with certain information and materials with respect to the Series 2018 Bonds. The ratings will reflect only the views of the rating services. An explanation of the significance of the ratings may be obtained from Moody's at 7 World Trade Center, 250 Greenwich Street, 23rd Floor, New York, New York 10007 and from S&P at 55 Water Street, New York, New York 10041. There is no assurance that such ratings will continue for any given period of time or that the ratings will not be revised downward or withdrawn entirely by Moody's or S&P if, in their judgment, circumstances so warrant. Any such downward revision or withdrawal of such ratings by Moody's or S&P may have an adverse effect on the market price of the Series 2018 Bonds.

## UNDERWRITING

The Series 2018 Bonds are being purchased for reoffering by Barclays Capital Inc. and the other underwriters shown on the cover (the *"Underwriters"*). The Underwriters have agreed to purchase the Series 2018 Bonds, subject to certain conditions, at an aggregate underwriting discount of $          . If the Series 2018 Bonds are sold to produce the yields shown on the inside front cover hereof, the underwriters' compensation will be $          .

The Underwriters are committed to purchase all of the Series 2018 Bonds if any are purchased. The Series 2018 Bonds are offered for sale initially at the approximate yields set forth on the inside front cover of this Official Statement, which yields may be changed, from time to time, by the Underwriters. The Series 2018 Bonds may be sold to certain dealers (including underwriters and dealers depositing the Series 2018 Bonds into investment trusts) at prices lower than the public offering price.

## CONTINUING DISCLOSURE

The City will enter into a Continuing Disclosure Undertaking (the *"Undertaking"*) with respect to the Series 2018 Bonds for the benefit of the beneficial owners of such Series 2018 Bonds to send certain information annually and to provide notice of certain events to the Municipal Securities Rulemaking Board through the Electronic Municipal Market Access (EMMA) system pursuant to the requirements of Section (b)(5) of Rule 15c2-12 (the *"Rule"*) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934. The specific nature of the information to be provided on an annual basis, the events which will be noticed on an occurrence basis and other terms of the Undertaking, are set forth in "APPENDIX H — Form of Continuing Disclosure Undertaking."

The City has represented that during the last five years it is in compliance in all material respects with each and every undertaking previously entered into by it pursuant to the Rule. A failure by the City to comply with the Undertaking will not constitute a default under the City Purchase Agreement or the Indenture and beneficial owners of the Series 2018 Bonds are limited to the remedies described in the Undertaking. See "APPENDIX H - Form of Continuing Disclosure Undertaking." A failure by the City to comply with the Undertaking must be reported in accordance with the Rule and must be considered by any broker, dealer or municipal securities dealer before recommending the purchase or sale of the Series 2018 Bonds in the secondary market. Consequently, such a failure may adversely affect the transferability and liquidity of the Series 2018 Bonds and their market price.

## INDEPENDENT AUDITORS AND INCORPORATION BY REFERENCE OF CITY'S COMPREHENSIVE ANNUAL FINANCIAL REPORT

The financial statements of the City as of June 30, 2017 for its fiscal year then ended have been audited by BKD, LLP, independent auditors, as stated in their report. The financial statements and auditor's report are part of the City's comprehensive annual financial report (the *"CAFR"*), which may be obtained from EMMA, free of charge at http://emma.msrb.org or from the City, free of charge, at the following location: 251 West Washington Street, 9th Floor, Phoenix, Arizona 85003, Attention: Finance Department, Telephone: (602) 262-7166. The CAFR may also be downloaded from the City's website at www.phoenix.gov under Departments-Finance-Comprehensive Annual Financial Report. The CAFR so filed with EMMA as part of the City's continuing disclosure undertakings pursuant to the Rule is hereby incorporated by reference.

## MISCELLANEOUS

Any statements in this Official Statement involving matters of opinion, whether or not expressly so stated, are intended as such and not as representations of fact. This Official Statement is not to be construed as a contract or agreement between the Corporation, the City or the Underwriters and the purchasers or holders of any of the Series 2018 Bonds.

This Official Statement has been approved, executed and delivered by the Corporation and the City.

CITY OF PHOENIX CIVIC IMPROVEMENT CORPORATION

By ____________________________________
President

CITY OF PHOENIX, ARIZONA

By ____________________________________
Chief Financial Officer

Appendix A

# REPORT OF THE AIRPORT CONSULTANT

on the proposed issuance of

CITY OF PHOENIX CIVIC IMPROVEMENT CORPORATION

SENIOR LIEN AIRPORT REVENUE BONDS, SERIES 2018

Prepared for

City of Phoenix Aviation Department
Phoenix, Arizona

Prepared by
LeighFisher
Cincinnati, Ohio

October 17, 2018

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Leigh|Fisher

October 17, 2018

Mr. James E. Bennett, A.A.E.
Director of Aviation Services
City of Phoenix
Aviation Department
Phoenix Sky Harbor International Airport
3400 Sky Harbor Boulevard
Phoenix, Arizona 85034

**Re: Report of the Airport Consultant on behalf of the City of Phoenix, Arizona, concerning the issuance of Senior Lien Airport Revenue Bonds, Series 2018**

Dear Mr. Bennett:

We are pleased to submit this Report of the Airport Consultant (Report) on certain aspects of the proposed issuance of Senior Lien Airport Revenue Bonds, Series 2018 (2018 Senior Bonds). The Series 2018 Senior Bonds are to be issued by the City of Phoenix Civic Improvement Corporation (CIC) of the City of Phoenix, Arizona (the City), for and on behalf of its Aviation Department (the Aviation Department).* This letter and the accompanying attachment and exhibits constitute our Report.

The purpose of the Report is to evaluate the ability of the City to satisfy the requirements of the Rate Covenant and the Junior Lien Rate Covenant during the Forecast Period taking into account the proposed 2018 Senior Bonds, planned future bonds, and outstanding Senior and Junior Lien Bonds. The forecast covers the fiscal year ending June 30, 2019 (FY 2019) through FY 2023, inclusive (the Forecast Period).

The City owns and, through the Aviation Department, operates Phoenix Sky Harbor International Airport (Sky Harbor), which is the primary air carrier airport serving the Phoenix region and the State of Arizona. The City also owns and operates Phoenix-Deer Valley and Phoenix-Goodyear general aviation airports (collectively with Sky Harbor, the Airport) and is a member of the Phoenix-Mesa Gateway Airport Authority, which owns and operates Phoenix-Mesa Gateway Airport.

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*Capitalized terms not otherwise defined in this Report have the meanings given in the Bond Ordinance, City Purchase Agreements, Senior Lien Obligation Documents, Junior Lien Obligation Documents, or the Official Statement to which this Report is attached.

## AVIATION CAPITAL IMPROVEMENT PROGRAM

The Aviation Department has developed an Aviation Capital Improvement Program (Aviation CIP)* through FY 2023 with project costs totaling $2.0 Billion. For purposes of this Report, an additional $75.0 million of contingency spending is included during the Forecast Period. The Improvement Bonds will be used to repay the Short-Term Financing Program as well as fund ongoing expenditures related to the Terminal 3 Modernization project. The largest projects in the Aviation CIP are the PHX Sky Train Stage 2, the Terminal 3 Modernization, and the Terminal 4 Concourse S1, which are estimated to cost $745 million, $580 million, and $310 million, respectively. Additionally, the City has completed a Terminal 4 International Facility Improvements project and will be embarking on a West Ground Transportation Center (GTC) Station.

The Aviation Department plans to fund certain project costs of the Aviation CIP through Airport Improvement Program (AIP) grants administered by the Federal Aviation Administration (FAA), state grants, Passenger Facility Charge (PFC) revenues, Customer Facility Charge (CFC) revenues, Airport Improvement Funds (or local funds), and the proceeds of bonds. The City uses a Short-Term Financing Program to provide interim funding for large Aviation CIP projects including the Terminal 3 Modernization, Terminal 4 Concourse S1, and PHX Sky Train Stage 2 projects, and plans to issue additional bonds during the Forecast Period.

## 2018 SENIOR BONDS – PLAN OF FINANCE

The City intends to issue the 2018 Senior Bonds, in the par amount of $229,465,000.** Proceeds from the 2018 Senior Bonds are expected to be used for the following purposes:

- Repay $100 million of Short-Term Financing Program funds used for portions of the Terminal 3 Modernization project.
- Fund an additional $127 million of ongoing expenditures, primarily in FY 2019, for the Terminal 3 Modernization project.
- Fund the required bond fund reserves.
- Pay the costs of issuing the 2018 Senior Bonds, including underwriters' discount and financing, legal, and other costs.

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*The Aviation Department has developed an Aviation Capital Improvement Program (Aviation CIP) through FY 2023 with project costs totaling $2.0 billion. For purposes of this Report, the major projects (PHX Sky Train Stage 2, Terminal 3 Modernization, and Terminal 4 Concourse S1 Improvements) were adjusted to be represented on a cash flow basis rather than a budgetary basis.

**Preliminary and subject to change.

## FUTURE BONDS

For the purposes of this Report, additional Senior Lien and Junior Lien Obligations are assumed to be issued during the Forecast Period.

- The Senior Lien Obligations are assumed in FY 2021 (Series 2020 Senior Improvement Bonds) to fund portions of Terminal 4 Concourse S1.

- The Junior Lien Obligations are assumed in FY 2020 (Series 2019 Junior Improvement Bonds) to fund portions of the PHX Sky Train Stage 2.

No other projects in the Aviation CIP assume funding from additional bonds.

## MAJOR PROJECTS IN THE AVIATION CIP

### Terminal 3 Modernization

The Terminal 3 Modernization project is a multiyear program to enhance the customer experience and provide a more efficient terminal for passengers. Major features of the project include a consolidated security checkpoint (completed fall 2016), new common use ticket counters (completed fall 2016), additional baggage processing capacity, baggage carousels, replacement of gates, and expanded passenger drop-off curb. The multi-phase, design-build project includes three major components: Terminal Processor, South Concourse, and North Concourse. The project is expected to be complete in 2020.

Additionally, the Terminal 3 Modernization project includes a gate replacement and infrastructure upgrade that will allow Sky Harbor to close an aging Terminal 2 and relocate airlines to Terminal 3. Terminal 2 and Terminal 3 rely on systems that are over 30 years old and have capacity deficiencies or operational inefficiencies that will be significantly improved by the renewal of these systems. The upgrades are expected to lower operating costs, raise the level of service, and increase system reliability. Greater efficiency will be achieved by converting to common use ticket counters and gates that increase utilization though technology. The project is expected to be delivered to a LEED Silver standard and will move passengers to their gate in a way that is faster, more pleasant, and in a fashion that drives increased revenue through food, beverage, and retail concessions.

**TERMINAL 3 MODERNIZATION PROJECT**
**SCHEDULE OF DELIVERABLES**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport

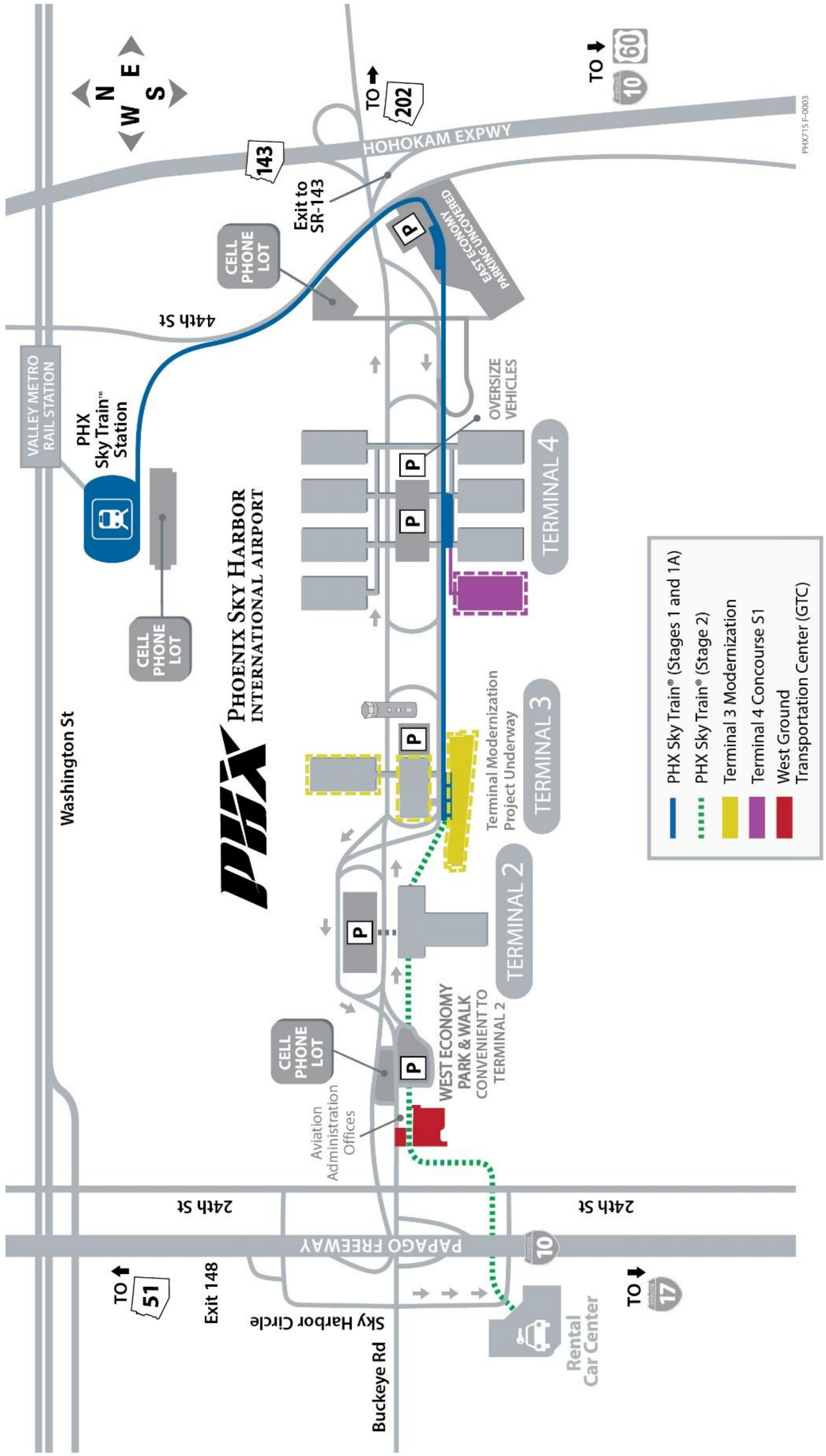
| | Anticipated Completion |
|---|---|
| New Ticket Hall, new Security Checkpoint, new Vertical Circulation Cores, Consolidated Campus Building | Completed, Fall 2016 |
| New Baggage Area and Circulation, completion of Terminal Processor, additional Concession and Airline Space | In progress, Spring 2019 |
| Construct New South Concourse – 10 Gates | In progress, Spring 2019 |
| Renovate North Concourse – 10 Gates | Fall 2020 |
| Addition to South Concourse – 5 Gates | Fall 2020 |

Source: City of Phoenix Aviation Department.

## PHX Sky Train

The PHX Sky Train is an automated people mover system that will connect all terminals and parking facilities to VALLEY METRO Light Rail (regional public transit system) and the Consolidated Rental Car Center (RCC). The train is an integral part of the airport's transportation infrastructure plan and an important link to the regional transportation system. It is designed to be a long-term solution to growing traffic congestion in and around Sky Harbor. The project will be completed in three stages (Stage 1, Stage 1a, and Stage 2). The first two stages are complete and in service, connecting the light rail system and Sky Harbor's largest parking facility to Terminals 3 and 4, with a walkway to Terminal 2. These two project stages were finished on schedule and nearly $45 million under the combined budget of $884 million. By mid 2022, Stage 2 will link Stage 1 and Stage 1a with the future West GTC and the RCC.

The PHX Sky Train's electric train cars run twenty-four hours a day arriving at a station approximately every three minutes during peak periods, delivering passengers to their destinations within five minutes after boarding. Since its opening in April 2013, the PHX Sky Train has carried over 20 million passengers and replaced busing as the mode of transportation between terminals and parking facilities.


PHX
Phoenix Sky Harbor
International Airport
N
E
S
W
Washington St
Valley Metro Rail Station
PHX Sky Train™ Station
Cell Phone Lot
44th St
Exit to SR-143
143
Hohokam Expwy
TO 202
TO 10 60
East Economy Parking Uncovered
Oversize Vehicles
Terminal 4
Terminal 3
Terminal Modernization Project Underway
Terminal 2
West Economy Park & Walk
Convenient to Terminal 2
Aviation Administration Offices
24th St
Papago Freeway
10
TO 51
Exit 148
Sky Harbor Circle
Buckeye Rd
TO 17
Rental Car Center
PHX Sky Train® (Stages 1 and 1A)
PHX Sky Train® (Stage 2)
Terminal 3 Modernization
Terminal 4 Concourse S1
West Ground Transportation Center (GTC)
PHX715 F-0003

### Terminal 4 Concourse S1

On March 8, 2017, Southwest President Tom Nealon announced that Southwest Airlines would be increasing service to the Phoenix area. This announcement came with the request to construct the final concourse at Terminal 4 and a commitment to occupy the associated gates upon its completion. The future S1 concourse will be located on the southwestern corner of Terminal 4 when it is completed in early 2022. With approximately 8 planned gates, the S1 concourse will allow Southwest the additional capacity the airline needs to continue to grow in the Phoenix market. The project scope will also include a second bridge connector from the south concourses at Terminal 4 to the north. This connection will enable greater security efficiency and flexibility as passengers will be able to access any of the north or south gates from any one of the terminal's 4 security checkpoints.

### West GTC Station

The West GTC Station is planned to be an approximately 20-acre commercial development, potentially featuring a mix of hotel, commercial office building, and parking garage uses. The development will be located on airport property with direct access to a PHX Sky Train station. The West GTC Station will be at the center of the future development. The completed 5-mile train system is expected to transport a total of more than 80,000 passengers per day when the Rental Car Center extension opens in 2022. The Airport issued a Request for Qualifications from interested developers of which four have been qualified to submit development concepts to be evaluated and potentially pursued through a future procurement during FY 2019. The City's investment in the West GTC Station is included in the PHX Sky Train budget.

Ancillary developments described (e.g., hotel, commercial, parking) may be delivered using public-private-partnerships and therefore are not included in the Aviation CIP. Potential revenues from such ancillary developments (i.e., land lease or 3rd party payments) are not reflected in the forecast of Net Revenues contained in this Report. The City plans to advance with said developments only in circumstances where Net Revenues are enhanced above and beyond baseline conditions assuming no ancillary developments advance.

## LEGAL FRAMEWORK

### Bonds and Other Obligations

Outstanding Airport Bonds consist of Senior Bonds, Junior Bonds, and Other Airport Bond Obligations. The Airport also has outstanding the Rental Car Facility Charge Revenue Bonds, Series 2004, that are special revenue obligations.

The City has utilized the City of Phoenix Civic Improvement Corporation (CIC) to issue airport bonds on its behalf. The CIC enters into a Bond Indenture with the Bond Trustee; however, the City is obligated to make payments to the CIC through a City Purchase Agreement with the CIC. The payment obligations are limited to: (1) with respect to Senior Bonds, certain available Net Airport Revenues, Passenger Facility Charges, to the extent irrevocably committed, and Other Available Funds, and

(2) with respect to Junior Bonds, certain available Designated Revenues*, 2010 Recovery Zone Economic Development Bonds (RZEDB) Subsidy Payments (Series 2010B Junior Bonds only), and Passenger Facility Charges, to the extent irrevocably committed, and Other Available Funds. There is no obligation or pledge of the full faith and credit or the ad valorem taxing powers of the City.

### Senior Lien Obligations

All outstanding Bonds and Parity Bonds (or Senior Lien Obligations), including the 2018 Senior Bonds, are issued under (1) City Ordinance No. S-21974, as amended (the Bond Ordinance), (2) Bond Indentures between the CIC and the Bond Trustee, and (3) the respective City Purchase Agreements between the City and the CIC. Bonds are secured by a pledge of Net Airport Revenues.

In Section 4.3 of the Bond Ordinance (and Section 4.6(a) of the Junior Lien City Purchase Agreement) (the Rate Covenant) the City covenants that:

> it will in each Fiscal Year establish, maintain and enforce schedules of rates, fees and charges for the use of the Airport (i) sufficient to produce Net Revenues at least equal to 125% of the amount required to be paid into the Bond Fund from the Revenue Fund, after subtracting Other Available Funds* deposited in the Bond Fund, in such Fiscal Year and after subtracting any Passenger Facility Charge Credit applicable to such Fiscal Year…and (ii) sufficient to [fund the required bond fund reserves].

To issue additional Senior Lien Obligations for other than refunding purposes, the City is required under Section 3.3 of the Bond Ordinance to meet an historical and a prospective test (together, the Additional Bonds Test):

> An officer of the City shall certify that either the Net Revenues for the most recently completed Fiscal Year for which audited financial statements** are available or the Net [Airport] Revenues for 12 consecutive months out of the most recent 18 calendar months, in each case together with Other Available Funds deposited in the Bond Fund during such period, (i) were sufficient to satisfy the rate covenant set forth in Section 4.3 and (ii) would have been at least equal to 120% of Maximum Annual Debt Service for all Bonds to be Outstanding, including the Parity Bonds [i.e., Senior Lien Obligations] proposed to be issued; and
>
> A Consultant provides a report which projects that Net [Airport] Revenues will be sufficient to satisfy the rate covenant set forth in Section 4.3 (including any Parity Bonds [i.e., Senior Lien Obligations] to be issued) in each Fiscal Year after subtracting from the amount required to be paid into the Bond Fund from the Revenue Fund any applicable

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*The term Other Available Funds means unrestricted grant money and other moneys available to the Airport which are not included in the definition of Revenues or Airport Revenues. Under the City Purchase Agreements for the Junior Lien obligations, no credit is allowed for Other Available Funds so deposited.

**Also known as Comprehensive Annual Financial Report (CAFR).

> Passenger Facility Charge Credit*, which report addresses the period of time beginning with the first full Fiscal Year following the issuance of the Parity Bonds [i.e., Senior Lien Obligations] through the later of (i) three Fiscal Years following the expected date of completion (as provided to the Consultant by an officer of the City) of any construction projects to be financed at the Airport with the proceeds of the relevant Parity Bonds [i.e., Senior Lien Obligations] or (ii) five Fiscal Years following the issuance of the Parity Bonds [i.e., Senior Lien Obligations].

Senior Lien Obligations may be issued for refunding purposes without meeting the Additional Bonds Test described above, if the following conditions are met: an officer of the City certifies "that the Maximum Annual Debt Service…of all series to be Outstanding immediately after the date of…delivery of such refunding bonds is not greater than 110% of the Maximum Annual Debt Service…prior to…delivery of such refunding bonds…" and, the "bonds being refunded will no longer be Outstanding upon issuance of the refunding bonds."

The City reserved the right in the Bond Ordinance to provide for the issuance of obligations payable from Net Airport Revenues on a basis subordinate to the Senior Lien Obligations (i.e., Junior Lien Obligations and other Airport obligations as described below), but the Bond Ordinance does not specify terms and conditions applicable to such subordinate obligations other than to recognize that the flow of funds set forth therein may be altered to allow for payments to be made on a subordinate basis to the Bonds.

### Junior Lien Obligations

Through the issuance of the 2010 Junior Bonds, the City re-established a Junior Lien, with the terms and conditions of the Junior Lien defined in (1) Bond Indentures between the CIC and the Bond Trustee, and (2) a Junior Lien City Purchase Agreement dated August 1, 2010, (2010 Junior Lien City Purchase Agreement), a Junior Lien City Purchase Agreement dated December 1, 2015 (2015 Junior Lien City Purchase Agreement), and a Junior Lien City Purchase Agreement dated December 1, 2017 (2017 Junior Lien City Purchase Agreement), each between the City and the CIC (Junior Lien City Purchase Agreements). The Junior Bonds are secured by a pledge of Designated Revenues.

In Section 4.6(b) of the Junior Lien City Purchase Agreement (the Junior Lien Rate Covenant) the City covenants that, in addition to meeting the terms and conditions of the Rate Covenant pertaining to Senior Bonds, it will in each Fiscal Year establish, maintain, and enforce schedules of rates, fees, and charges for the use of the Airport (i) sufficient to produce Designated Revenues at least equal to 110% of the annual debt service requirements of the Junior Lien Obligations (net of Other Available Funds deposited into the Bond Fund in such Fiscal Year and after subtracting any Passenger Facility Charge Credit applicable to such Fiscal Year), and (ii) sufficient to fund the required bond fund reserves.

---

*The Passenger Facility Charge Credit is defined to be "the amount of principal of and/or interest to come due on specified Bonds during any Fiscal Year to which Passenger Facility Charges…have received all required governmental approvals and have been irrevocably committed…to be used to pay [Debt Service] on such specified Bonds…unless such Passenger Facility Charges…are subsequently included in the definition of Airport Revenues."

To issue additional Junior Lien Obligations for other than refunding purposes, the City is required under Section 4.3 of the Junior Lien City Purchase Agreement to meet an historical or a prospective test (together, the Junior Lien Additional Bonds Test):

> An officer of the City shall certify that either the Designated Revenues for the most recently completed Fiscal Year for which audited financial statements are available or the Designated Revenues for any 12 consecutive months out of the most recent 24 calendar months were sufficient to satisfy the rate covenant set forth in Section 4.6(b) hereof and would have been at least equal to 110% of the Maximum Annual Junior Lien Debt Service for all Junior Lien Obligations to be Outstanding, including the Junior Lien Obligations proposed to be issued; or
>
> A Consultant provides a report which projects that Designated Revenues will be sufficient to satisfy the rate covenant set forth in Section 4.6(b) (including any Junior Lien Obligations to be issued) in each Fiscal Year after subtracting from the amount required to be paid into the Junior Lien Bond Fund from the Revenue Fund any applicable Passenger Facility Charge Credit, which report addresses the period of time beginning with the first full Fiscal Year following the issuance of the Junior Lien Obligations through the later of (i) three Fiscal Years following the expected date of completion (as provided to the Consultant by an officer of the City) of any construction projects to be financed at the Airport with the proceeds of the relevant Junior Lien Obligations or (ii) five Fiscal Years following the issuance of the Junior Lien Obligations.

Junior Lien Obligations may be issued for refunding purposes without meeting the Junior Lien Additional Bonds Test described above, if certain conditions are met.

### Other Airport Obligations

Other Airport obligations are subordinate to the Senior Lien Obligations and Junior Lien Obligations and currently consist of general obligation bonds and the lender under Short-Term Financing Program.

- Airport general obligation bonds are general obligations of the City, but no Airport Revenues are formally pledged to such bonds. Although the City's payment obligations are secured by its full faith and credit, the City has historically paid the principal and interest on these obligations from the Airport Improvement Fund, consistent with the provisions of the Bond Ordinance pertaining to the priority of payments from Net Airport Revenues.

- The City has a $200 million Short-Term Financing Program under a revolving credit agreement (Short-Term Financing Program). The Short-Term Financing Program previously utilized commercial paper and may do so in the future. The Short-Term Financing Program is supported by Net Airport Revenues on a basis subordinate to the Senior Lien Obligations and the Junior Lien Obligations, consistent with the provisions of the Bond Ordinance pertaining to the priority of payments from Net Airport Revenues. As of the date of this Report, the City's outstanding principal balance on draws was $100 million for the Terminal 3 Modernization project (to be repaid with proceeds from the 2018 Senior Bonds). The City intends to continue the Short-Term Financing Program and use it to fund the major projects in the Aviation CIP on an interim basis.

## Special Revenue Obligations

The City is the obligor with respect to one issue of special revenue obligations that relates to Special Purpose Facilities, which is the Rental Car Facility Charge Revenue Bonds, Series 2004, issued to fund construction of the RCC. These obligations are not secured by Net Airport Revenues and are payable solely from Customer Facility Charges related to the operational activity at the RCC. Debt service relating to special revenue obligations is excluded from annual debt service.

## AIRLINE RATES AND CHARGES

The Phoenix City Code defines the terms and conditions by which airlines at Sky Harbor may use the airfield in common with other users and may occupy and use exclusive, joint, and common space in the terminal buildings. The City does not have long-term lease agreements with the airlines governing the use and occupancy of terminal space or the airfield at Sky Harbor. The terms are formalized in letters from the City authorizing month-to-month occupancy until otherwise terminated.

Additionally, Sky Harbor does not have a formal agreement with the airlines governing the rates and charges methodology for landing, terminal, and other fees. The Phoenix City Code provides that airline rents, fees, and charges be calculated pursuant to a compensatory rate-setting methodology. The City bears the risk of any shortfall in non-airline revenues and retains the benefit of any surplus in non-airline revenues for its own discretionary Airport-related use. The Director of Aviation Services has the authority, within certain limits, to adjust airline fees pursuant to Ordinance G-6394.

Airline Revenues consist of landing fees, terminal rentals, and other charges paid to the City by airlines for use and occupancy of the Airport. For the purpose of the Report, it is assumed that the City will annually calculate and adjust airline fees during the Forecast Period using a compensatory rate-setting methodology, and that airlines at Sky Harbor would pay such fees.

**FORECAST COST PER ENPLANED PASSENGER (CPE)**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(Fiscal Years ending June 30; in thousands except CPE)

| | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| Total Airline Revenues (a) | $ 150,004 | $ 164,732 | $ 153,576 | $ 170,509 | $ 183,311 |
| Enplaned Passengers | 22,525 | 22,800 | 23,075 | 23,350 | 23,625 |
| CPE | $ 6.66 | $ 7.23 | $ 6.66 | $ 7.30 | $ 7.76 |

*(a)* Excludes cargo landing fees.

Source: City of Phoenix Aviation Department and LeighFisher.

## SCOPE OF REPORT

This Report was prepared to evaluate the ability of the City to satisfy the requirements of the Rate Covenant and the Junior Lien Rate Covenant during the Forecast Period. In preparing this Report, we analyzed:

- The status and estimated costs of the Aviation CIP, including the facilities expected to be provided, and the estimated completion dates of the projects in the CIP.
- Forecast airline traffic demand at Sky Harbor, giving consideration to the demographic and economic characteristics of Sky Harbor's service region, historical trends in airline traffic, recent airline service developments and airfares, and other key factors that may affect future airline traffic.
- Estimated sources and uses of funds for the Aviation CIP, the annual Debt Service Requirements for the proposed 2018 Senior Bonds and the estimated annual debt service for the planned future bonds, provided by the City's Financial Advisor, Frasca & Associates, LLC.
- Historical relationships among Airport Revenues, Cost of Maintenance and Operation (Expenses), airline traffic, and other factors that may affect future Airport Revenues and Expenses.
- Historical Expense trends using the City's budgetary actual results from FY 2015-2018 using the Aviation Department's audited Comprehensive Annual Financial Report (CAFR), Schedule 1, as adjusted to comply with the Bond Ordinance* and the City's budget of Expenses for FY 2019.
- Historical trends in Airport Revenues from FY 2015-2018 using the Aviation Department's audited CAFR, Schedule 1, as adjusted to comply with the Bond Ordinance.**
- The City's policies and contractual agreements relating to use of the Airport; calculation and adjustment of airline rentals, fees, and charges; operation of public automobile parking and other concession and service privileges; and leasing of buildings and grounds.
- The historical and estimated future PFC Revenues and the City's intended use of PFC Revenues during the Forecast Period for funding portions of the Aviation CIP on a pay-as-you-go basis and as a source for repayment of the 2018 Senior Improvement Bonds.

We also identified key factors upon which the future financial results of the Airport may depend and formulated assumptions about those factors with the City. On the basis of those assumptions, we assembled the financial forecasts presented in the accompanying exhibits provided at the end of this Report and summarized in this letter.

---

*As of the date of this Report, Airport Revenues for the most recent fiscal year 2018 were unaudited. See the Official Statement, Airport Financial Information, Historical Revenues, Expenditures and Changes in Fund Balances and accompanying Table 5 for more information.

## FORECAST DEBT SERVICE COVERAGE

Exhibit H and the table below summarize forecasts of Net Airport Revenues, Debt Service Requirements, and debt service coverage, taking into consideration debt service on outstanding Senior Lien Obligations, Junior Lien Obligations, debt service on the proposed 2018 Senior Bonds, and estimated debt service on future obligations.

The calculation of debt service coverage through the Forecast Period indicates compliance with the Rate Covenant of the Bond Ordinance and the Junior Lien Rate Covenant in each year of the Forecast Period.

**FORECAST DEBT SERVICE COVERAGE**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(Fiscal Years ending June 30; in thousands except coverage ratios)

| | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| SENIOR LIEN OBLIGATIONS | | | | | |
| Net Revenues and Other Available Funds | $ 138,706 | $ 150,567 | $ 140,271 | $ 151,444 | $ 157,960 |
| Senior Lien Debt Service Requirements | | | | | |
| Existing Senior Lien Debt Service | $ 47,434 | $ 54,215 | $ 45,349 | $ 45,352 | $ 43,712 |
| Plus: Future Senior Improvement Bonds (Series 2018 and Series 2020) | 10,053 | 14,735 | 14,739 | 24,664 | 34,591 |
| Existing and Future Senior Lien Debt Service | $ 57,487 | $ 68,950 | $ 60,088 | $ 70,016 | $ 78,303 |
| Senior Lien Debt Service Coverage Ratios (on Net Revenues and Other Available Funds) | | | | | |
| Coverage including Future Senior Improvement Bonds (Series 2019, and Series 2020) | 2.41 | 2.18 | 2.33 | 2.16 | 2.02 |
| JUNIOR LIEN OBLIGATIONS | | | | | |
| Designated Revenues | $ 81,219 | $ 81,617 | $ 80,184 | $ 81,429 | $ 79,657 |
| Junior Lien Debt Service Requirements | | | | | |
| Existing Junior Lien Debt Service | $ 49,574 | $ 49,571 | $ 48,463 | $ 48,461 | $ 58,635 |
| Series 2019 Junior Improvement Bonds | - | 18,976 | 18,976 | 18,976 | 18,976 |
| Less: Junior Lien Passenger Facility Charge Credit | (43,045) | (62,018) | (60,909) | (60,909) | (60,907) |
| Less: 2010 RZEDB Subsidy Payment | (595) | (595) | (595) | (595) | (595) |
| Existing and Future Net Junior Lien Debt Service | $ 5,934 | $ 5,934 | $ 5,935 | $ 5,933 | $ 16,109 |
| Junior Lien Debt Service Coverage Ratios (on Designated Revenues) | | | | | |
| Existing and Future Net Junior Lien Debt Service Coverage | 13.69 | 13.75 | 13.51 | 13.73 | 4.94 |
| AGGREGATE | | | | | |
| Net Revenues and Other Available Funds | $ 138,706 | $ 150,567 | $ 140,271 | $ 151,444 | $ 157,960 |
| Aggregate Senior Lien and Junior Lien Net Debt Service | 63,421 | 74,885 | 66,023 | 75,948 | 94,412 |
| Aggregate Debt Service Coverage Ratios (on Net Revenues and Other Available Funds) | | | | | |
| Total Aggregate Net Debt Service Coverage | 2.19 | 2.01 | 2.12 | 1.99 | 1.67 |

Source: City of Phoenix Aviation Department and LeighFisher.

## ASSUMPTIONS UNDERLYING THE FINANCIAL FORECASTS

The forecasts in this Report are based on information and assumptions that were provided by or reviewed with and agreed to by the City. The forecasts reflect the City's expected course of action during the Forecast Period and, in the City's judgment, present fairly the expected financial results of the Aviation Department. Those key factors and assumptions that are significant to the forecasts are set forth in the attachment, "Background, Assumptions, and Rationale for the Financial Forecasts." The attachment should be read in its entirety for an understanding of the forecasts and the underlying assumptions.

In our opinion, the underlying assumptions provide a reasonable basis for the forecasts. However, any forecast is subject to uncertainties. Inevitably, some assumptions will not be realized and unanticipated events and circumstances may occur. Therefore, there will be differences between the forecast and actual results, and those differences may be material. Neither LeighFisher nor any person acting on our behalf makes any warranty, expressed or implied, with respect to the information, assumptions, forecasts, opinions, or conclusions disclosed in the Report. We have no responsibility to update this Report to reflect events and circumstances occurring after the date of the Report.

* * * * *

We appreciate the opportunity to serve as the Airport Consultant in connection with this proposed financing.

Respectfully submitted,

LeighFisher

LeighFisher

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Attachment

**BACKGROUND, ASSUMPTIONS, AND RATIONALE FOR THE FINANCIAL FORECASTS**

City of Phoenix, Arizona

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## AIRLINE PASSENGER DEMAND

This section presents a review of: (1) Sky Harbor facilities; (2) the Sky Harbor service region; (3) the demographic and economic profile of the region, including demographic trends, economic trends, tourism, attractions, and conventions, all of which contribute to air travel demand; (4) the economic outlook for the nation and the Phoenix-Mesa-Scottsdale Metropolitan Statistical Area (MSA); (5) Sky Harbor rankings and roles; (6) historical passenger and airline activity at Sky Harbor; (7) air cargo trends at Sky Harbor; (8) key factors affecting the future of airline traffic at Sky Harbor; and (9) forecasts of airline traffic at Sky Harbor through FY 2023, including enplaned passengers, aircraft operations, and landed weight.

### SKY HARBOR FACILITIES

The City of Phoenix (the City or Phoenix) owns and operates, through its Aviation Department, Sky Harbor and two general aviation airports, Phoenix-Deer Valley Airport and Phoenix-Goodyear Airport (collectively, with Sky Harbor, the Airport). Sky Harbor is the only Arizona airport classified as a large hub by the FAA and is the principal commercial service airport serving metropolitan Phoenix and surrounding areas. Sky Harbor occupies approximately 3,000 acres of land located entirely within the City and is accessible within 10-15 minutes from the central business district.

Sky Harbor has three parallel air carrier runways (8/26 is 11,490 feet in length, 7L/25R is 10,300 feet in length, and 7R/25L is 7,800 feet in length) supported by a network of taxiways, aprons, and hold areas. Sky Harbor airfield facilities are capable of accommodating the operations of all commercial jet aircraft currently in use, while Sky Harbor jetbridges can accommodate all but FAA Airplane Design Group VI (e.g., A380) aircraft.

Sky Harbor has three passenger terminal buildings, Terminals 2, 3, and 4*. The terminals are located on Sky Harbor Boulevard, which forms an east-west spine through the middle of Sky Harbor connecting with 24th Street and Interstate 10 (I-10) on the west and the Hohokam Expressway (SR 143) and the Red Mountain Freeway (SR 202) on the east.

Collectively, Terminals 2, 3, and 4 provide a total of 101 passenger holdrooms and associated aircraft parking positions (gates). Terminal 2, opened in 1962, is situated south of Sky Harbor Boulevard, and contains approximately 330,000 square feet and 10 gates. Terminal 3, opened in 1979, is situated in the center of Sky Harbor Boulevard with a concourse on either side of the roadway, and currently contains approximately 639,000 square feet and 10 gates. Upon completion of the Terminal 3 Modernization project, Terminal 3 will contain approximately 710,000 square feet and 25 gates, and Terminal 2 will be closed. Terminal 4, opened in 1990, is situated in the center of Sky Harbor Boulevard with four concourses extending north of the roadway and three concourses extending south of the roadway, and contains approximately 2.3 million square feet and 81 gates.* Southwest Airlines, American Airlines, and all international airlines operate exclusively from Terminal 4. The Terminal 4 Concourse S1 project will add approximately 8 new gates when it is completed in early 2022. Table 1 shows the current distribution and use of gates by airline.

---

*After the opening of Terminal 4 in November 1990, Terminal 1 was vacated and later razed.

*Terminal 4 was opened with four concourses and three additional concourses were added in 1994, 1998, and 2004. An additional concourse is expected to be completed in early 2022.

Table 1
**Gate Distribution and Use by Airline**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(June 2018)

| | | Average daily departures | | Average daily departing seats | |
|---|---|---|---|---|---|
| | Gates *(a)* | Number | Per gate | Number | Per departure |
| **Terminal 2** | | | | | |
| Alaska | 2 | 6.1 | 3.0 | 1,054 | 174 |
| Spirit | 1 | 1.0 | 1.0 | 182 | 182 |
| United | 6 | 24.2 | 4.0 | 3,408 | 141 |
| Common Use/Sun Country | 1 | - | | - | |
| **Terminal 2** | **10** | **31.2** | **3.1** | **4,644** | **149** |
| **Terminal 3** | | | | | |
| Delta | 6 | 31.5 | 5.3 | 4,594 | 146 |
| Frontier | 1 | 5.0 | 5.0 | 922 | 186 |
| Hawaiian | 1 | 1.0 | 1.0 | 259 | 259 |
| JetBlue | 1 | 2.0 | 2.0 | 300 | 150 |
| Common Use | 1 | - | | - | |
| **Terminal 3** | **10** | **39.5** | **3.9** | **6,075** | **154** |
| **Terminal 4** | | | | | |
| American | 51 | 260.8 | 5.1 | 34,143 | 131 |
| Southwest | 24 | 172.3 | 7.2 | 26,096 | 151 |
| Common Use/Foreign-flag | 6 | 6.7 | 1.1 | 1,174 | 175 |
| **Terminal 4** | **81** | **439.8** | **5.4** | **61,414** | **140** |
| **SKY HARBOR TOTAL** | **101** | **510.5** | **5.1** | **72,132** | **141** |

Notes: Departures and departing seats include those by regional affiliate airlines. Numbers may not add to totals shown because of rounding. Boutique Air makes use of a remote parking position near Terminal 2 and is not included in this table.

*(a)* Gate assignments as of August 2018.

Sources: City of Phoenix Aviation Department; OAG Aviation Worldwide Ltd, OAG Analyser database, accessed June 2018.

Sky Harbor provides approximately 26,000 public and employee parking spaces in garages adjacent to or above the terminal buildings, in an economy lot west of the terminal buildings, and in economy lots and garages east of the terminal buildings. A consolidated Rental Car Center (RCC) is on a 141-acre site, west of the terminals, with approximately 5,600 ready/return garage spaces and a 113,000-square-foot customer service building.

The PHX Sky Train, which began service in 2013, is an automated people mover system that will connect all of the Airport's terminals and parking facilities to VALLEY METRO Light Rail (regional public transit system) and the RCC. The Sky Train connects the light rail system and the Airport's largest parking facility to Terminals 3 and 4, with a walkway to Terminal 2. When complete, Stage 2 will link the Sky Train with the future West Ground Transportation Center (GTC) and the RCC. The Sky Train's electric train cars run twenty-four hours a day arriving at a station approximately every three minutes during peak periods, delivering passengers to their destinations within five minutes after boarding.

## AIRPORT SERVICE REGION

The primary region served by Sky Harbor is the Phoenix-Mesa-Scottsdale MSA, a large population center in south-central Arizona. Arizona is located in the southwestern region of the continental United States, bordering Mexico. As shown in Figure 1, there are no other U.S. large-hub commercial service airports within a 5-hour driving distance from Phoenix, with the closest being Las Vegas McCarran International Airport (292 miles to the northwest). The only other commercial service airport located within the Airport service region is Phoenix-Mesa Gateway Airport, a small-hub airport discussed in the later section "Sky Harbor and Phoenix-Mesa Gateway Airport."

The MSA comprises Maricopa and Pinal counties and contains Phoenix and the cities of Chandler, Glendale, Mesa, Scottsdale, and Tempe, among others. The MSA also includes Sun City, a major retirement community in unincorporated Maricopa County, and the Gila River and Salt River Pima-Maricopa Indian communities.

The MSA ranks as the 11th most populous metropolitan area in the United States with an estimated 2017 population of 4,737,000, accounting for two-thirds of Arizona's population. The Bureau of the Census reports an estimated 2017 Phoenix population of 1,626,000, making it the fifth largest city in the United States, as well as the largest U.S. state capital in terms of population. Despite Arizona's reputation as a retirement destination, Bureau of the Census statistics indicate that the MSA has no higher concentration of individuals aged 65 and older than the nation overall.

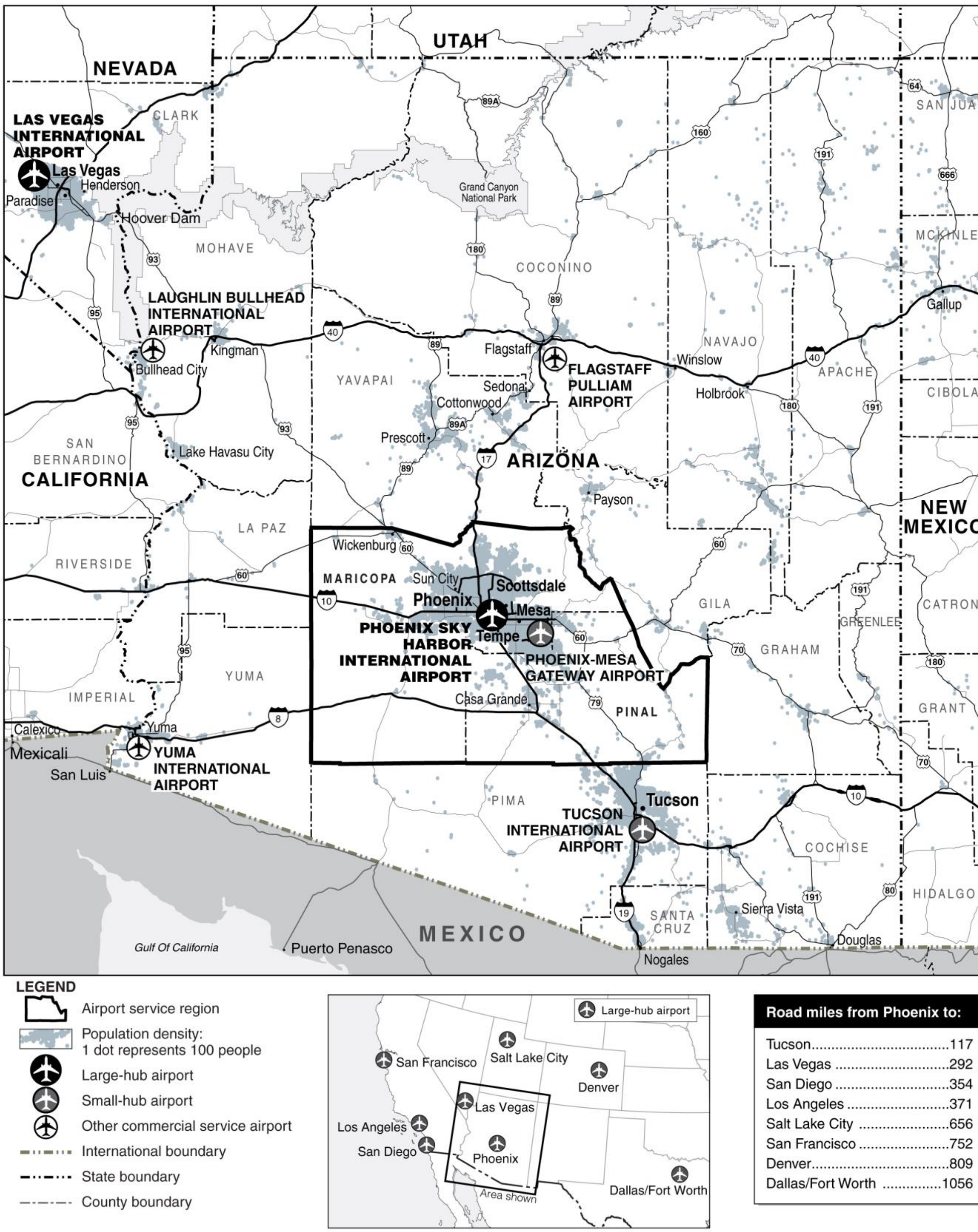
Historically, growth in air travel demand to and from the Airport service region has been fostered by strong population growth, the economic health and expansion of the MSA, and the attractiveness of the area as a business and leisure destination.

## DEMOGRAPHIC AND ECONOMIC PROFILE

The level of air travel demand is highly correlated with the economic profile of an airport's service region, particularly with socioeconomic trends and tourism appeal. The demographic variables with the strongest influence on airline travel demand are the MSA population, employment, and per capita income. In addition to these factors, tourism has a significant role in generating visitor airline travel demand to the MSA.

Growth in employment and income, along with an expanding population base, generate demand for airline travel to and from the MSA. Similarly, unique natural resources and cultural attractions make the MSA and the rest of Arizona popular travel destinations.

Figure 1
**Airport Service Region**
Phoenix Sky Harbor International Airport



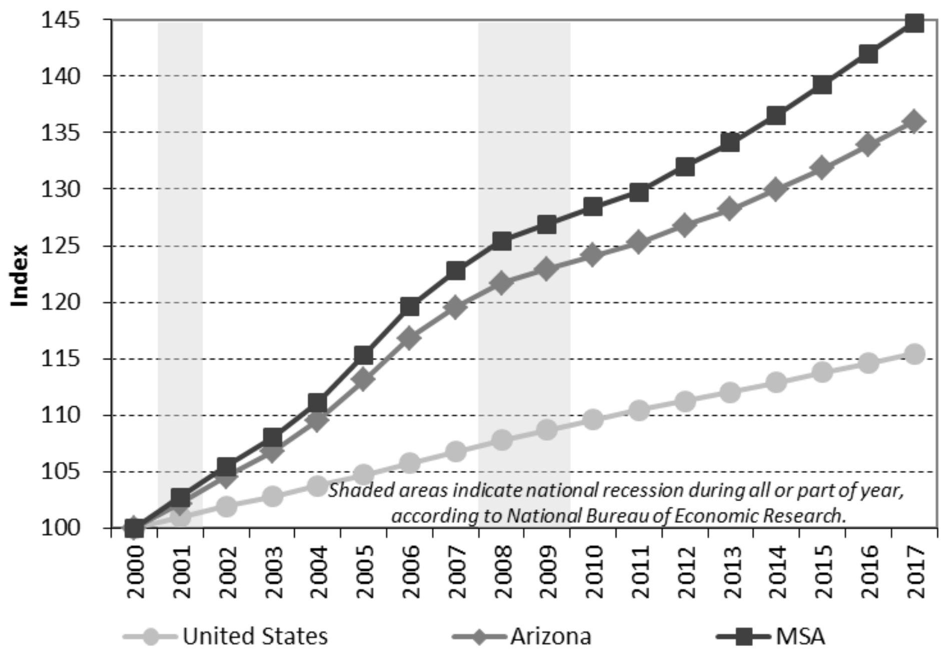

| Road miles from Phoenix to: | |
|---|---|
| Tucson | 117 |
| Las Vegas | 292 |
| San Diego | 354 |
| Los Angeles | 371 |
| Salt Lake City | 656 |
| San Francisco | 752 |
| Denver | 809 |
| Dallas/Fort Worth | 1056 |

Source: 2010 U.S. Census data.

## Population

Figure 2 shows that the population of the MSA increased an average of 2.2% annually between 2000 and 2017, compared with a 1.8% average annual increase for Arizona as a whole and a 0.8% increase for the nation. Since 1980, the population of the MSA has tripled, driven primarily by domestic in-migration. This rate of growth was three times the national rate of growth over the same period. The MSA was the fourth fastest growing among the nation's 20 most populous MSAs between 2010 and 2017, and the second fastest from 2016 to 2017.

Figure 2
**Comparative Index of Population Trends**
(2000 = 100)




| Population | 2000 | 2007 | 2010 | 2017 |
|---|---|---|---|---|
| United States | 282,162,411 | 301,231,207 | 309,338,421 | 325,719,178 |
| Arizona | 5,160,586 | 6,167,681 | 6,407,002 | 7,016,270 |
| MSA | 3,273,477 | 4,018,128 | 4,204,148 | 4,737,270 |
| **Average annual percent increase (decrease)** | **2000-2007** | **2007-2010** | **2010-2017** | **2000-2017** |
| United States | 0.9% | 0.9% | 0.7% | 0.8% |
| Arizona | 2.6 | 1.3 | 1.3 | 1.8 |
| MSA | 3.0 | 1.5 | 1.7 | 2.2 |

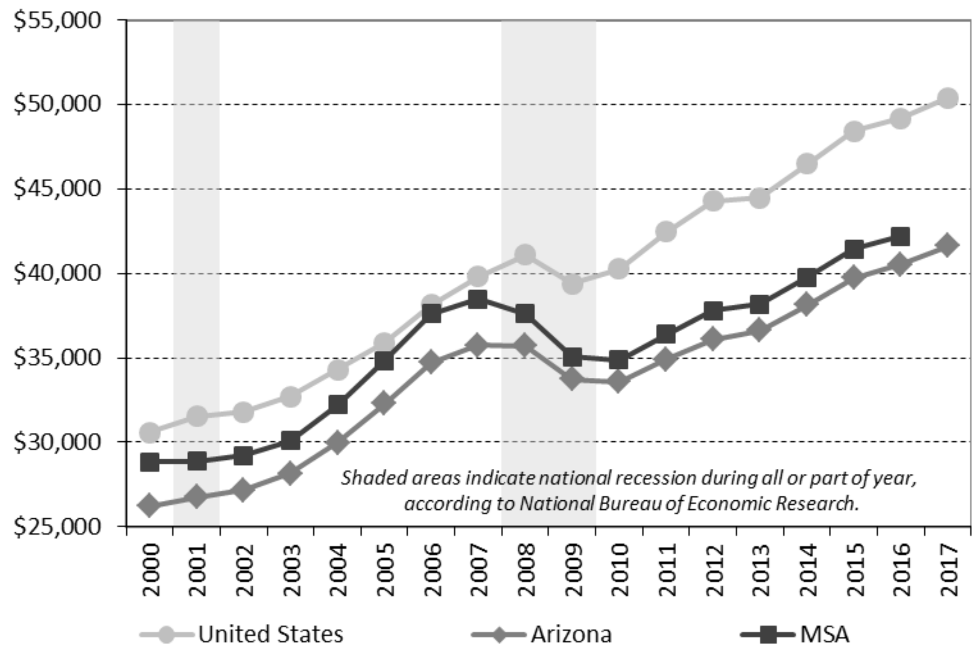
Note: Values represent July 1 population estimates.

Source: U.S. Department of Commerce, Bureau of the Census website, www.census.gov, accessed June 2018.

## Per Capita Income

Figure 3 shows that per capita income trends in the MSA have generally mirrored nationwide trends since 2000, albeit at a somewhat lower level. Additionally, the 2008-2009 recession had a more substantial impact on per capita income in Arizona and the MSA than in the nation overall, due in part to the effects of a substantial downturn in the local housing market. In 2016 (the most recent year for which MSA income data was available), per capita income in the MSA was 4% higher than in Arizona, but 14% lower than the national average. It is worth noting, however, that the MSA has a lower cost of living than the national average according to the American Chamber of Commerce Research Association (ACCRA) Cost of Living Index.

Figure 3
**Per Capita Personal Income**




| Per Capita Personal Income | 2000 | 2007 | 2010 | 2017 *(a)* |
|---|---|---|---|---|
| United States | $30,602 | $39,821 | $40,278 | $50,392 |
| Arizona | 26,232 | 35,751 | 33,565 | 41,633 |
| MSA | 28,847 | 38,478 | 34,867 | 42,218 |
| **Average annual percent increase (decrease)** | **2000-2007** | **2007-2010** | **2010-2017** *(b)* | **2000-2017** *(c)* |
| United States | 3.8% | 0.4% | 3.3% | 3.0% |
| Arizona | 4.5 | (2.1) | 3.1 | 2.8 |
| MSA | 4.2 | (3.2) | 3.2 | 2.4 |

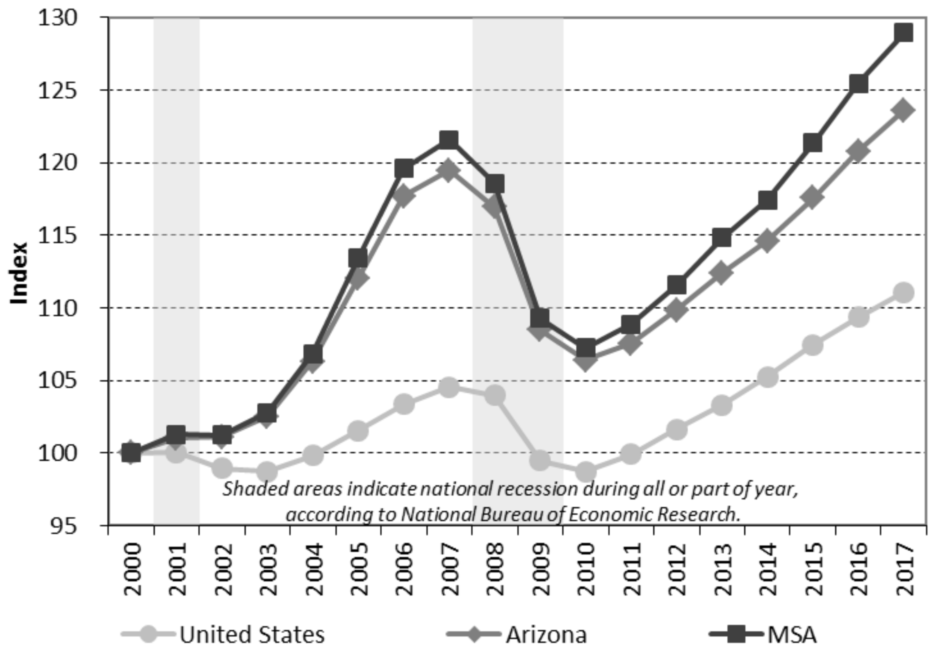
*(a)* Per capita personal income for the MSA is for 2016, the most recent data available.
*(b)* The percentage shown for the MSA is for 2010-2016.
*(c)* The percentage shown for the MSA is for 2000-2016.

Source: U.S. Department of Commerce, Bureau of Economic Analysis website, www.bea.gov, accessed June 2018.

## Employment

Figure 4 shows that employment in the MSA increased at a rate more than double that of the nation between 2000 and 2017. In 2008 and 2009, employment in the MSA declined to a much greater extent than the nation as a whole, reflecting a more substantial impact from the housing and real estate decline and related construction slowdown. By 2016, however, employment in the MSA had rebounded to exceed its 2007 peak. In terms of employment growth, the MSA was the fifth fastest growing among the nation's 20 most populous MSAs between 2010 and 2017, and the second fastest from 2016 to 2017.

Figure 4
**Comparative Index of Total Non-Agricultural Employment**
(2000 = 100)




| Employment | 2000 | 2007 | 2010 | 2017 |
|---|---|---|---|---|
| United States | 132,024 | 137,999 | 130,362 | 144,352 |
| Arizona | 2,243 | 2,679 | 2,386 | 2,709 |
| MSA | 1,578 | 1,918 | 1,692 | 1,979 |
| **Average annual percent increase (decrease)** | **2000-2007** | **2007-2010** | **2010-2017** | **2000-2017** |
| United States | 0.6% | (1.9%) | 1.5% | 0.5% |
| Arizona | 2.6 | (3.8) | 1.8 | 1.1 |
| MSA | 2.8 | (4.1) | 2.3 | 1.3 |

Source: U.S. Department of Labor, Bureau of Labor Statistics website, Current Employment Statistics survey, www.bls.gov, accessed June 2018.

Table 2 shows shares of employment by industry sector in the MSA, Arizona, and the United States. The MSA has a higher percentage of jobs in trade, transportation, and utilities; professional and business services; financial activities; and construction than the United States overall, and a lower percentage in government; manufacturing; education and health services; other services; and mining and logging. Sector shares for leisure and hospitality services and information for the MSA are similar to those for the nation. Employment growth of the MSA outpaced U.S. employment growth from 2000 through 2017 in every sector except construction.

Table 2
**Average Annual Nonagricultural Employment Growth, 2000-2017, and Employment Share by Industry, 2017**

| | Average annual percent increase (decrease) 2000-2017 | | | 2017 percent share *(a)* | | |
|---|---|---|---|---|---|---|
| Industry | MSA | Arizona | United States | MSA | Arizona | United States |
| Trade, transportation, and utilities | 1.2% | 1.1% | 0.3% | 19.4% | 18.9% | 18.8% |
| Professional and business services | 1.6 | 1.5 | 1.2 | 17.0 | 15.2 | 14.0 |
| Education and health services | 4.8 | 4.2 | 2.5 | 15.1 | 15.4 | 15.8 |
| Government | 1.2 | 0.7 | 0.4 | 11.7 | 14.9 | 15.2 |
| Leisure and hospitality | 2.4 | 2.0 | 1.8 | 10.9 | 11.5 | 10.9 |
| Financial activities | 2.3 | 2.1 | 0.5 | 9.2 | 7.7 | 5.8 |
| Manufacturing | (1.6) | (1.4) | (1.9) | 6.1 | 5.9 | 8.5 |
| Construction | (0.5) | (0.8) | 0.1 | 5.6 | 5.2 | 4.7 |
| Other Services | 1.1 | 0.8 | 0.7 | 3.2 | 3.2 | 3.9 |
| Information | (0.9) | (1.1) | (1.5) | 1.8 | 1.6 | 1.9 |
| Mining and Logging | 1.7 | 1.0 | 0.7 | 0.2 | 0.4 | 0.5 |
| TOTAL | 1.5% | 1.3% | 0.6% | 100.0% | 100.0% | 100.0% |

*(a)* Columns may not add to totals shown because of rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics website, Current Employment Statistics survey, www.bls.gov, accessed June 2018.

Table 3 shows the top 25 private-sector employers in Arizona. Thirteen of the companies listed are on the *Fortune* 500 list of largest U.S. companies, including American Airlines—the largest provider of passenger air service at Sky Harbor.

Table 3
**Major Private-Sector Employers in Arizona**
(ranked by number of employees)

| Company | Employment | Type of business |
|---|---|---|
| Banner Health | 34,780 | Health care |
| Wal-Mart Stores *(a)* | 34,090 | Retail |
| Wells Fargo *(a)* | 14,820 | Financial services |
| Honor Health | 11,300 | Health care |
| Dignity Health | 11,180 | Health care |
| Intel Corp. *(a)* | 11,000 | Technology |
| JPMorgan Chase & Co. *(a)* | 10,600 | Financial services |
| Bank of America *(a)* | 10,000 | Financial services |
| American Airlines Group Inc. *(a)* | 8,060 | Airline |
| Honeywell *(a)* | 7,920 | Aerospace |
| Freeport-McMoRan Inc. *(a)* | 7,630 | Mining |
| American Express Co. *(a)* | 7,320 | Financial services |
| United Healthcare of Arizona *(a)* | 7,080 | Health care |
| Mayo Clinic | 6,800 | Health care |
| Verizon *(a)* | 6,420 | Technology |
| Fry's Food Stores | 6,290 | Retail |
| Arizona Public Service Co. | 5,990 | Utilities |
| Salt River Project | 5,240 | Utilities |
| Basha's Family of Stores | 4,520 | Retail |
| The Boeing Co. *(a)* | 3,700 | Aerospace |
| Charles Schwab & Co. *(a)* | 3,700 | Financial services |
| Grand Canyon University | 3,580 | Education |
| Abrazo Community Health Network | 3,400 | Health care |
| Cox Communications Arizona | 3,220 | Telecommunications |
| W.L. Gore & Associates - Medical Division | 3,000 | Manufacturing |

*(a)* Ranked in 2018 Fortune 500 list of largest U.S. companies (based on 2017 revenue).

Source: Phoenix Business Journal, *2017-18 Book of Lists*.

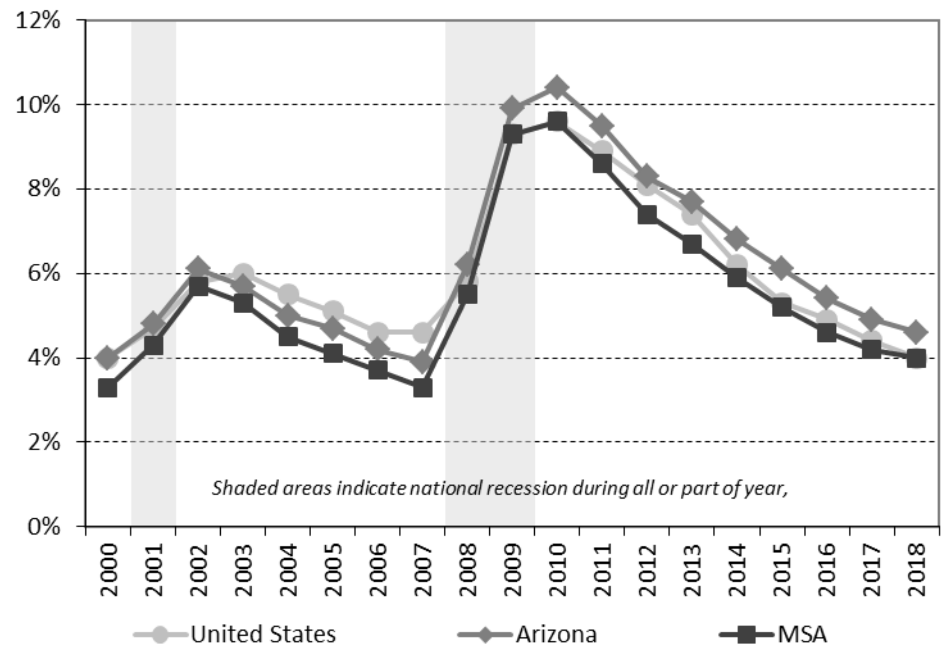
The MSA is the headquarters location for six Fortune 500 companies (Avnet, Freeport-McMoRan, Republic Services, Insight Enterprises, Magellan Health, and ON Semiconductor). In addition, Mesa Airlines is headquartered in the MSA. Mesa is the largest regional affiliate of American Airlines, as measured by enplaned passengers, serving Sky Harbor.

## Unemployment Rate

Figure 5 shows that unemployment in the MSA has been equal to or lower than in the United States in almost every year since 2000. In the first five months of 2018, unemployment in the MSA and the nation was 4.0%, compared with 4.6% in Arizona as a whole.

Figure 5

**Civilian Unemployment Rate**




| Unemployment Rate | 2000 | 2007 | 2010 | 2018 *(a)* |
|---|---|---|---|---|
| United States | 4.0% | 4.6% | 9.6% | 4.0% |
| Arizona | 4.0 | 3.9 | 10.4 | 4.6 |
| MSA | 3.3 | 3.3 | 9.6 | 4.0 |

Note: Values represent seasonally unadjusted unemployment rates.

*(a)* 2018 data represents the average for January-May 2018.

Source: U.S. Department of Labor, Bureau of Labor Statistics website, Current Population Survey and Local Area Unemployment Statistics, www.bls.gov, accessed July 2018.

## Tourism, Attractions, and Conventions

Demand for air service at Sky Harbor is driven not only by the demographic and economic characteristics of the local population, but also by the appeal of the Airport service region and the rest of Arizona as a business and tourism destination. Phoenix and its surrounding cities constitute an area known as the Valley of the Sun, an area with attractions including resorts, spas, professional sports, shopping, and golf, located in the Sonoran Desert. The Airport service region also offers museums, galleries, sporting events, Old West and Native American history, and outdoor recreation with more than 300 days of sunshine per year. According to Visit Phoenix, the region's convention and visitors bureau, the Airport service region has more than 450 hotels which collectively offer more than 62,000 guest rooms.

In addition to the attractions within the Airport service region, the northern part of Arizona is home to Grand Canyon National Park, Red Rock Country of Sedona, the Painted Desert, the Petrified Forest, Meteor Crater, ancient Native American ruins, and the Navajo and Hopi reservations. Many visitors to these world-renowned destinations utilize Sky Harbor as the most convenient large airport servicing the region.

Total direct travel spending in Arizona was approximately $21.2 billion in 2016, 16% above a pre-recessionary peak of $18.2 billion in 2007, according to the Arizona Office of Tourism. Nearly two-thirds of all travel spending in Arizona occurs in the Airport service region. The Arizona Office of Tourism estimates that the State hosted 43 million visitors in 2016 (37.4 million domestic and 5.6 million international), arriving via all modes of travel.

Major sporting events also draw tourists to the Airport service region. For example, the MSA has been a three-time host (1996, 2008, and 2015) of the Super Bowl, the National Football League's championship game, and hosted the 2016 College Football Playoff (CFP) National Championship game and 2017 National Collegiate Athletic Association (NCAA) Division I Men's Basketball Final Four and Championship games. The Airport service region is also the location of the annual Fiesta Bowl and Cactus Bowl college football bowl games and the annual Waste Management Phoenix Open PGA golf tournament.

The Airport service region is home to five major league professional sports teams: (1) Arizona Diamondbacks Major League Baseball team, (2) Arizona Cardinals National Football League team, (3) Phoenix Suns National Basketball Association team, (4) Phoenix Mercury Women's National Basketball Association team, and (5) Arizona Coyotes National Hockey League team. At the college level, the Arizona State University Sun Devils compete within the Pac-12 Conference in a number of sports, including baseball, basketball, and football.

The favorable Arizona climate brings 15 Major League Baseball teams, collectively known as the Cactus League, to the Airport service region each February and March for spring training and preseason play. Spring training events generate $600 million in economic impact annually for the state of Arizona, according to the league's website. The teams include the Arizona Diamondbacks, Chicago Cubs, Chicago White Sox, Cincinnati Reds, Cleveland Indians, Colorado Rockies, Kansas City Royals, Los Angeles Angels, Los Angeles Dodgers, Milwaukee Brewers, Oakland Athletics, San Diego Padres, San Francisco Giants, Seattle Mariners, and Texas Rangers.

ISM Raceway, formerly the Phoenix International Raceway, is a National Association for Stock Car Auto Racing (NASCAR) venue hosting several auto racing events annually, two of which involve distances of 500 kilometers: the TicketGuardian 500, held in March, and Can-Am 500, held in November.

Convention visitors are another important component of tourism in the Airport service region. The Phoenix Convention Center offers 900,000 square feet of meeting and event space. In 2017, the Phoenix Convention Center hosted 67 events with a combined attendance of approximately 240,000.

## ECONOMIC OUTLOOK

### Outlook for the U.S. Economy

Following real (inflation-adjusted) gross domestic product (GDP) growth of 2.4% in 2014, 2.6% in 2015, 1.5% in 2016, and 2.3% in 2017, the Congressional Budget Office forecasts real GDP growth of 3.0% in 2018, 2.9% in 2019, and an average of 1.7% per year thereafter.

Continued U.S. economic growth will depend on, among other factors, stable financial and credit markets, a stable value of the U.S. dollar versus other currencies, stable energy and other commodity prices, the ability of the federal government to reduce historically high fiscal deficits, inflation remaining within the range targeted by the Federal Reserve, and growth in the economies of foreign trading partners.

### Outlook for the Arizona and MSA Economies

The economic outlook for Arizona and the MSA generally depends on the same factors as those for the nation, although population inflows will have a relatively greater effect on economic growth and employment. Population growth in the MSA is a key variable influencing local demand for residential and commercial construction, and demand for goods and services in general which, in turn, drives employment.

In its June 2018 publication, *Arizona's Economy*, the University of Arizona noted that the State is continuing its recovery, adding residents and jobs at rates faster than the nation in 2017 and so far in 2018. A forecast of continued national growth also sets the stage for Arizona to continue expanding, adding jobs, residents, and income next year at a pace similar to recent results. Scottsdale-based economic consulting firm Elliott D. Pollack & Company expressed similar sentiments in a recent article, attributing the rapid growth in Maricopa and Pinal counties to promising job availability and a strong recovery in the housing market and stating "both Maricopa County and Pinal County are doing exceptionally well in growth because they are the economic bases for the state. Employment growth generally runs population growth, and the rapid amount of job openings in Phoenix and across the Valley has been incredibly attractive for people willing to move." David Plane, a regional science and population professor at the University of Arizona, expects growth to continue in the coming years. "Historically speaking, we have always seen people gravitate towards large metropolitan areas, and Maricopa County is no exception," Plane said. "Once a place begins to grow, it's going to continue to take off and expand." *

Table 4 shows socioeconomic forecasts for Arizona and the MSA as developed by the University of Arizona's Eller College of Management. Projections of the same variables for the United States are

*Cronkite News, Arizona PBS, *Maricopa County again leads nation's counties in population growth*, March 21, 2018.

presented for comparative purposes. Growth in population, employment, and personal income in both Arizona and the MSA is forecast to exceed national rates.

Table 4
**Socioeconomic Projections**
(Phoenix-Mesa-Scottsdale MSA, Arizona, and the United States)

| | Average annual percent increase (decrease) | |
|---|---|---|
| | Historical 2000-2017 | Projected 2017-2022 |
| Population | | |
| MSA | 2.2% | 1.8% |
| Arizona | 1.8 | 1.6 |
| United States | 0.8 | 0.7 |
| Non-agricultural employment | | |
| MSA | 1.5% | 2.6% |
| Arizona | 1.3 | 2.2 |
| United States | 0.6 | 0.7 |
| Per capita personal income | | |
| MSA | 2.4% (a) | 4.4% |
| Arizona | 2.8 | 4.1 |
| United States | 3.0 | 3.8 |

*(a)* The percentage shown is for 2000-2016, the most recent data available.

Sources: Historical—U.S. Department of Commerce, Bureau of the Census website, www.census.gov; U.S. Department of Labor, Bureau of Labor Statistics website, Current Employment Statistics survey, www.bls.gov; U.S. Department of Commerce Bureau of Economic Analysis website, www.bea.gov.

Projection—MSA, Arizona: University of Arizona, Eller College of Management, Economic & Business Research Center, June 2018

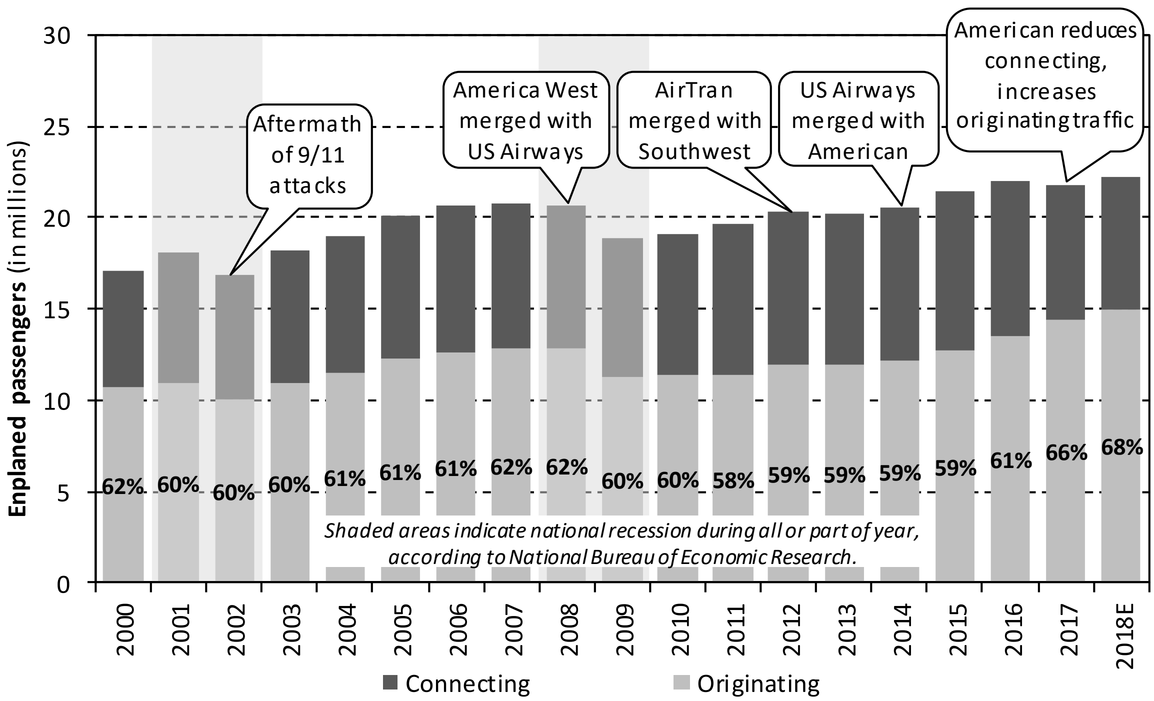
United States: U.S. Department of Commerce, Bureau of the Census website, *2017 National Population Projections,* March 2018; U.S. Department of Labor, Bureau of Labor Statistics website, *Employment Projections: 2016-2026*, October 2017.

Arizona State University's W.P. Carey School of Business prepares the Greater Phoenix Blue Chip Forecast, an aggregation of 2-year demographic and economic projections developed by twelve different organizations. The latest Blue Chip Forecast, based upon fourth quarter 2017 data, reflects projections for the MSA generally in line with those shown in Table 4.

## AIRLINE TRAFFIC ANALYSIS

Sky Harbor serves one of the nation's largest metropolitan areas, with a substantial base of originating passenger traffic. The Airport is also a connecting hub airport in the route network of American Airlines and is one of the largest "focus city" airports in the route network of Southwest Airlines.* The geographic location of Sky Harbor allows connecting trip routings that minimize circuity between the southwestern United States and points eastward.

Figure 6
**Historical Enplaned Passengers**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(Fiscal Years ended June 30)




Notes: Originating and connecting split for 2018 was estimated based on 3 quarters of actual data. Percentages reflect O&D passengers as a percent of total enplaned passengers.

Sources: City of Phoenix Aviation Department; U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedules T100 and 298C T1.

*In all discussions of historical airline service and passenger traffic by airline in this Report, unless otherwise noted, data for merged airlines are accounted for with the surviving airline (i.e., America West Airlines, Trans World Airlines, and US Airways with American Airlines; Northwest Airlines with Delta Air Lines; Continental Airlines with United Airlines; Midwest Airlines with Frontier Airlines; AirTran Airways with Southwest Airlines; and Virgin America with Alaska Airlines).

Figure 6 shows that 22.2 million passengers enplaned at Sky Harbor in FY 2018. Between FY 2000 and FY 2018, the number of enplaned passengers increased at a 1.5% average annual growth rate. Following shifts in American's network strategy initiated in FY 2017, which reflected an increased focus on stimulating originating passenger demand as opposed to filling available seat capacity with less profitable connecting passengers, Sky Harbor's share of originating passengers increased to a record high of approximately 68% in FY 2018.

## Airline Roles at Sky Harbor

Table 5 shows the composition of enplaned passengers at Sky Harbor for the 12 months ended March 31, 2018 (the most recent data available), summarizing the types of traffic accommodated by the primary airline groups.

Table 5
**Composition of Enplaned Passengers, by Airline Group**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(for the 12 months ended March 31, 2018; passengers in thousands)

| | Enplaned passengers | | | | Distribution by airline | | | |
|---|---|---|---|---|---|---|---|---|
| | American | Southwest | All other airlines | Total—all airlines | American | Southwest | All other airlines | Total—all airlines |
| **Total** | **10,311** | **7,506** | **4,339** | **22,156** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |
| By sector: | | | | | | | | |
| Domestic | 9,782 | 7,506 | 3,826 | 21,114 | 94.9% | 100.0% | 88.2% | 95.3% |
| International | 529 | - | 512 | 1,041 | 5.1 | -- | 11.8 | 4.7 |
| By type of passenger: | | | | | | | | |
| Originating | 5,140 | 5,420 | 4,255 | 14,814 | 49.8% | 72.2% | 98.1% | 66.9% |
| *Resident (a)* | *2,513* | *2,573* | *1,641* | *6,727* | *24.4* | *34.3* | *37.8* | *30.4* |
| *Visitor (b)* | *2,627* | *2,846* | *2,614* | *8,087* | *25.5* | *37.9* | *60.2* | *36.5* |
| Connecting | 5,171 | 2,086 | 84 | 7,341 | 50.2 | 27.8 | 1.9 | 33.1 |
| Airline share of Sky Harbor total: | | | | | | | | |
| Total | 46.5% | 33.9% | 19.6% | 100.0% | | | | |
| Originating | 34.7 | 36.6 | 28.7 | 100.0 | | | | |
| Connecting | 70.4 | 28.4 | 1.1 | 100.0 | | | | |

Notes: Figures may not add to totals shown because of rounding.

*(a)* Resident passengers are defined as those passengers whose flight itineraries began at Phoenix.
*(b)* Visitor passengers are defined as those passengers whose flight itineraries began at airports other than Phoenix.

Sources: U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100; City of Phoenix Aviation Department.

Although American accounted for 46.5% of total enplaned passengers at Sky Harbor, the airline accommodated most (70.4%) of the connecting traffic (50.2% of American's enplaned passengers were connecting whereas 49.8% were originating). Southwest, by comparison, accounted for 33.9% of total enplaned passengers and 28.4% of total connecting passengers (27.8% of Southwest's enplaned passengers were connecting whereas 72.2% were originating). The other airlines together accommodated the remaining 19.6% of total enplaned passengers but boarded only 1.1% of Sky Harbor's connecting passengers. In addition to the enplaned passenger numbers shown in Table 5, for the 12 months ended March 31, 2018, Southwest carried approximately 240,000 transit passengers (i.e., passengers on through flights who did not deplane or enplane at Sky Harbor during the stopover).

### Ranking Among Other U.S. Airports

Table 6 shows the 30 largest U.S. airports ranked by enplaned passengers. By this measure, in 2017, Sky Harbor ranked 13th. The number of enplaned passengers increased 9.0% (1.7 million) at Sky Harbor between 2008 and 2017.

Table 7 shows the 30 largest U.S. airports ranked by enplaned originating passengers. By this measure, in 2017, Sky Harbor ranked 13th. The number of originating passengers increased 16.3% (1.9 million) at Sky Harbor between 2008 and 2017.

Table 8 shows the 30 largest U.S. airports ranked by connecting passengers. By this measure, in 2017, Sky Harbor ranked 9th. The number of connecting passengers decreased 2.4% (200,000) at Sky Harbor between 2008 and 2017.

Table 9 shows the 30 largest U.S. gateway airports ranked by international enplaned passengers. By this measure, in 2017, Sky Harbor ranked 23rd. The number of international enplaned passengers increased 12.1% (100,000) at Sky Harbor between 2008 and 2017.

Table 6
**Enplaned Passengers at Top-Ranking U.S. Airports**
(calendar years)

| 2017 Rank | City (airport) | Enplaned passengers (millions) 2008 | 2013 | 2017 | Percent increase (decrease) 2008-2017 | Increase (decrease) 2008-2017 (millions) |
|---|---|---|---|---|---|---|
| 1 | Atlanta | 43.6 | 45.3 | 50.3 | 15.2% | 6.6 |
| 2 | Los Angeles (International) | 28.7 | 32.4 | 41.2 | 43.6 | 12.5 |
| 3 | Chicago (O'Hare) | 33.7 | 32.3 | 38.6 | 14.6 | 4.9 |
| 4 | Dallas/Fort Worth | 27.2 | 29.0 | 31.8 | 17.1 | 4.7 |
| 5 | Denver | 24.3 | 25.5 | 29.8 | 22.8 | 5.5 |
| 6 | New York (Kennedy) | 23.6 | 25.0 | 29.5 | 24.9 | 5.9 |
| 7 | San Francisco | 18.1 | 21.7 | 26.9 | 48.7 | 8.8 |
| 8 | Las Vegas | 20.9 | 19.9 | 23.2 | 11.1 | 2.3 |
| 9 | Seattle | 15.8 | 16.7 | 22.6 | 43.0 | 6.8 |
| 10 | Charlotte | 17.3 | 21.3 | 22.0 | 27.4 | 4.7 |
| 11 | Newark | 17.6 | 17.5 | 21.6 | 22.6 | 4.0 |
| 12 | Orlando (International) | 17.3 | 16.9 | 21.6 | 24.6 | 4.3 |
| **13** | **Phoenix (Sky Harbor)** | **19.4** | **19.5** | **21.2** | **9.0** | **1.7** |
| 14 | Miami | 16.4 | 19.5 | 20.7 | 26.2 | 4.3 |
| 15 | Houston (Bush) | 20.1 | 19.0 | 19.6 | (2.3) | (0.5) |
| 16 | Boston | 12.8 | 14.8 | 18.8 | 46.4 | 5.9 |
| 17 | Minneapolis-St. Paul | 16.4 | 16.3 | 18.4 | 12.5 | 2.0 |
| 18 | Detroit | 17.0 | 15.7 | 17.0 | 0.3 | 0.0 |
| 19 | Fort Lauderdale | 11.0 | 11.5 | 15.8 | 43.5 | 4.8 |
| 20 | New York (LaGuardia) | 11.6 | 13.4 | 14.6 | 26.3 | 3.0 |
| 21 | Philadelphia | 15.6 | 14.7 | 14.3 | (8.4) | (1.3) |
| 22 | Baltimore | 10.2 | 11.1 | 12.9 | 27.4 | 2.8 |
| 23 | Salt Lake City | 9.9 | 9.7 | 11.6 | 17.2 | 1.7 |
| 24 | Washington DC (Reagan) | 8.7 | 9.8 | 11.5 | 32.2 | 2.8 |
| 25 | San Diego | 9.0 | 8.9 | 11.1 | 23.7 | 2.1 |
| 26 | Washington DC (Dulles) | 11.4 | 10.6 | 11.0 | (3.5) | (0.4) |
| 27 | Chicago (Midway) | 8.0 | 9.9 | 10.9 | 36.1 | 2.9 |
| 28 | Honolulu | 9.0 | 9.5 | 9.7 | 8.0 | 0.7 |
| 29 | Tampa | 8.9 | 8.3 | 9.5 | 7.6 | 0.7 |
| 30 | Portland, Oregon | 7.1 | 7.5 | 9.4 | 33.3 | 2.4 |
| | Total—top 30 airports | 510.5 | 533.1 | 617.4 | 20.9% | 106.8 |

Notes: Airports shown are the top 30 U.S. airports ranked by number of passengers for 2017. Percentages were calculated using unrounded numbers.

Source: U.S. DOT, Schedule T100.

Table 7
**Originating Passengers at Top-Ranking U.S. Airports**
(calendar years)

| 2017 Rank | City (airport) | Originating passengers (millions) 2008 | 2013 | 2017 | Percent increase (decrease) 2008-2017 | Increase (decrease) 2008-2017 (millions) |
|---|---|---|---|---|---|---|
| 1 | Los Angeles (International) | 22.6 | 24.6 | 33.3 | 47.3% | 10.7 |
| 2 | New York (Kennedy) | 18.5 | 19.8 | 24.6 | 33.4 | 6.2 |
| 3 | Chicago (O'Hare) | 16.9 | 16.6 | 21.9 | 29.9 | 5.0 |
| 4 | San Francisco | 13.8 | 17.0 | 20.9 | 51.1 | 7.1 |
| 5 | Orlando (International) | 16.4 | 16.2 | 20.5 | 25.2 | 4.1 |
| 6 | Las Vegas | 17.3 | 16.8 | 20.2 | 16.5 | 2.9 |
| 7 | Denver | 12.8 | 14.3 | 18.8 | 46.4 | 6.0 |
| 8 | Atlanta | 14.4 | 14.3 | 18.4 | 28.3 | 4.1 |
| 9 | Boston | 12.2 | 13.9 | 17.7 | 45.2 | 5.5 |
| 10 | Newark | 13.3 | 12.2 | 16.9 | 27.2 | 3.6 |
| 11 | Seattle | 11.7 | 12.0 | 15.8 | 34.8 | 4.1 |
| 12 | Dallas/Fort Worth | 11.6 | 12.0 | 14.3 | 23.3 | 2.7 |
| **13** | **Phoenix (Sky Harbor)** | **11.8** | **11.2** | **13.8** | **16.3** | **1.9** |
| 14 | Miami | 9.4 | 11.2 | 13.8 | 46.9 | 4.4 |
| 15 | Fort Lauderdale | 10.2 | 10.5 | 13.7 | 34.3 | 3.5 |
| 16 | New York (LaGuardia) | 10.6 | 12.0 | 13.2 | 24.4 | 2.6 |
| 17 | Minneapolis-St. Paul | 8.1 | 8.5 | 10.7 | 32.4 | 2.6 |
| 18 | San Diego | 8.6 | 8.4 | 10.5 | 21.6 | 1.9 |
| 19 | Washington DC (Reagan) | 7.0 | 8.0 | 10.1 | 44.6 | 3.1 |
| 20 | Houston (Bush) | 8.8 | 8.4 | 10.0 | 12.9 | 1.1 |
| 21 | Philadelphia | 9.5 | 8.6 | 9.9 | 4.5 | 0.4 |
| 22 | Detroit | 8.5 | 7.7 | 9.6 | 13.9 | 1.2 |
| 23 | Tampa | 8.3 | 7.8 | 9.2 | 10.1 | 0.8 |
| 24 | Baltimore | 8.3 | 8.0 | 9.2 | 10.5 | 0.9 |
| 25 | Portland, Oregon | 6.0 | 6.2 | 8.3 | 36.9 | 2.2 |
| 26 | Honolulu | 7.3 | 7.6 | 7.9 | 8.4 | 0.6 |
| 27 | Washington DC (Dulles) | 6.9 | 6.2 | 7.5 | 8.8 | 0.6 |
| 28 | Chicago (Midway) | 5.6 | 6.1 | 7.1 | 26.0 | 1.5 |
| 29 | Salt Lake City | 5.4 | 5.2 | 7.0 | 28.4 | 1.5 |
| 30 | Charlotte | 4.8 | 5.5 | 6.5 | 36.0 | 1.7 |
| | Total—top 30 airports | 326.7 | 336.9 | 421.3 | 28.9% | 94.5 |

Notes: Airports shown are the top 30 U.S. airports ranked by number of originating passengers for 2017.
Percentages were calculated using unrounded numbers.
Includes a small number of passengers on foreign-flag airlines making connections between international flights.

Sources: U.S. DOT, Schedule T100; U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100.

Table 8

**Connecting Passengers at Top-Ranking U.S. Airports**

(calendar years)

| 2017 Rank | City (airport) | Connecting passengers (millions) 2008 | 2013 | 2017 | Percent increase (decrease) 2008-2017 | Increase (decrease) 2008-2017 (millions) |
|---|---|---|---|---|---|---|
| 1 | Atlanta | 29.3 | 31.0 | 31.8 | 8.7% | 2.6 |
| 2 | Dallas/Fort Worth | 15.6 | 17.0 | 17.5 | 12.6 | 2.0 |
| 3 | Chicago (O'Hare) | 16.8 | 15.7 | 16.7 | (0.9) | (0.1) |
| 4 | Charlotte | 12.5 | 15.8 | 15.5 | 24.1 | 3.0 |
| 5 | Denver | 11.4 | 11.2 | 11.0 | (3.6) | (0.4) |
| 6 | Houston (Bush) | 11.2 | 10.5 | 9.6 | (14.2) | (1.6) |
| 7 | Los Angeles (International) | 6.1 | 7.8 | 7.9 | 29.9 | 1.8 |
| 8 | Minneapolis-St. Paul | 8.2 | 7.8 | 7.7 | (7.1) | (0.6) |
| **9** | **Phoenix (Sky Harbor)** | **7.6** | **8.3** | **7.4** | **(2.4)** | **(0.2)** |
| 10 | Detroit | 8.5 | 8.0 | 7.4 | (13.2) | (1.1) |
| 11 | Miami | 7.0 | 8.3 | 6.9 | (1.3) | (0.1) |
| 12 | Seattle | 4.1 | 4.6 | 6.8 | 66.5 | 2.7 |
| 13 | San Francisco | 4.2 | 4.7 | 6.0 | 40.6 | 1.7 |
| 14 | New York (Kennedy) | 5.2 | 5.3 | 4.9 | (5.0) | (0.3) |
| 15 | Newark | 4.4 | 5.3 | 4.7 | 8.4 | 0.4 |
| 16 | Salt Lake City | 4.5 | 4.5 | 4.6 | 3.6 | 0.2 |
| 17 | Philadelphia | 6.1 | 6.2 | 4.4 | (28.5) | (1.7) |
| 18 | Chicago (Midway) | 2.4 | 3.8 | 3.8 | 60.0 | 1.4 |
| 19 | Baltimore | 1.9 | 3.0 | 3.8 | 102.0 | 1.9 |
| 20 | Washington DC (Dulles) | 4.5 | 4.4 | 3.5 | (22.0) | (1.0) |
| 21 | Las Vegas | 3.6 | 3.1 | 3.0 | (15.2) | (0.5) |
| 22 | Dallas (Love) | 1.1 | 1.2 | 2.4 | 130.9 | 1.4 |
| 23 | Houston (Hobby) | 1.0 | 1.7 | 2.2 | 131.4 | 1.3 |
| 24 | Fort Lauderdale | 0.8 | 1.0 | 2.1 | 161.9 | 1.3 |
| 25 | Honolulu | 1.7 | 1.9 | 1.8 | 6.3 | 0.1 |
| 26 | St. Louis | 1.3 | 1.1 | 1.7 | 31.9 | 0.4 |
| 27 | Washington DC (Reagan) | 1.7 | 1.9 | 1.4 | (18.3) | (0.3) |
| 28 | New York (LaGuardia) | 0.9 | 1.3 | 1.4 | 47.2 | 0.4 |
| 29 | Portland, Oregon | 1.0 | 1.2 | 1.2 | 12.8 | 0.1 |
| 30 | Boston | 0.6 | 0.8 | 1.1 | 70.5 | 0.4 |
| | Total—top 30 airports | 185.3 | 198.5 | 200.4 | 8.2% | 15.1 |

Notes: Airports shown are the top 30 U.S. airports ranked by number of connecting passengers for 2017.
Percentages were calculated using unrounded numbers.
Excludes a small number of passengers on foreign-flag airlines making connections between international flights.

Sources: U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100.

Table 9

**International Passengers at Top-Ranking U.S. Airports**

(calendar years)

| 2017 Rank | City (airport) | Enplaned international passengers (millions) 2008 | 2013 | 2017 | Percent increase (decrease) 2008-2017 | Increase (decrease) 2008-2017 (millions) |
|---|---|---|---|---|---|---|
| 1 | New York (Kennedy) | 11.06 | 13.07 | 16.11 | 45.7% | 5.05 |
| 2 | Los Angeles (International) | 8.07 | 8.59 | 12.05 | 49.3 | 3.98 |
| 3 | Miami | 8.05 | 10.20 | 10.44 | 29.6 | 2.39 |
| 4 | San Francisco | 4.16 | 4.73 | 6.46 | 55.3 | 2.30 |
| 5 | Chicago (O'Hare) | 5.50 | 5.35 | 6.39 | 16.1 | 0.88 |
| 6 | Newark | 5.47 | 5.62 | 6.30 | 15.3 | 0.84 |
| 7 | Atlanta | 4.59 | 4.95 | 5.88 | 28.0 | 1.29 |
| 8 | Houston (Bush) | 3.88 | 4.38 | 5.06 | 30.3 | 1.18 |
| 9 | Dallas/Fort Worth | 2.45 | 3.21 | 4.06 | 65.5 | 1.61 |
| 10 | Washington DC (Dulles) | 2.96 | 3.37 | 3.76 | 27.0 | 0.80 |
| 11 | Fort Lauderdale | 1.53 | 1.83 | 3.51 | 128.7 | 1.97 |
| 12 | Boston | 1.78 | 2.05 | 3.43 | 92.2 | 1.64 |
| 13 | Orlando (International) | 1.30 | 1.98 | 2.85 | 118.2 | 1.54 |
| 14 | Seattle | 1.42 | 1.69 | 2.47 | 74.3 | 1.05 |
| 15 | Honolulu | 1.72 | 2.41 | 2.32 | 34.6 | 0.60 |
| 16 | Philadelphia | 1.83 | 1.96 | 1.76 | (3.4) | (0.06) |
| 17 | Las Vegas | 1.13 | 1.44 | 1.76 | 55.5 | 0.63 |
| 18 | Detroit | 1.90 | 1.61 | 1.74 | (8.5) | (0.16) |
| 19 | Charlotte | 1.14 | 1.50 | 1.50 | 31.5 | 0.36 |
| 20 | Minneapolis-St. Paul | 1.28 | 1.14 | 1.45 | 12.9 | 0.17 |
| 21 | Denver | 1.10 | 0.97 | 1.28 | 16.8 | 0.18 |
| 22 | New York (LaGuardia) | 0.58 | 0.85 | 1.08 | 84.1 | 0.49 |
| **23** | **Phoenix (Sky Harbor)** | **0.91** | **1.09** | **1.02** | **12.1** | **0.11** |
| 24 | Baltimore | 0.19 | 0.34 | 0.54 | 188.3 | 0.35 |
| 25 | Salt Lake City | 0.26 | 0.18 | 0.45 | 74.6 | 0.19 |
| 26 | Houston (Hobby) | 0.00 | 0.00 | 0.45 | n.a. | 0.45 |
| 27 | Tampa | 0.19 | 0.26 | 0.45 | 139.2 | 0.26 |
| 28 | San Diego | 0.11 | 0.31 | 0.44 | 292.4 | 0.33 |
| 29 | San Jose | 0.07 | 0.15 | 0.42 | 531.2 | 0.35 |
| 30 | Chicago (Midway) | 0.02 | 0.26 | 0.40 | 1862.0 | 0.38 |
| | Total—top 30 airports | 74.67 | 85.51 | 105.82 | 41.7% | 31.15 |

Notes: Airports shown are the top 30 U.S. airports (excluding airports in Puerto Rico, the islands of the Pacific Trust, and the U.S. Virgin Islands) ranked by number of international passengers for 2017.

Percentages were calculated using unrounded numbers. n.a. = not applicable.

Source: U.S. DOT, Schedule T100.

## Sky Harbor and Phoenix-Mesa Gateway Airport

The only other airport with commercial service located within the Airport service region is Phoenix-Mesa Gateway Airport (Gateway), located approximately 30 miles southeast of Sky Harbor. Gateway enplanes just 3% of the passenger volume of Sky Harbor, through a single 106,000 square foot terminal (roughly one-third the size of Sky Harbor's smallest terminal) and 10 aircraft parking positions (compared with Sky Harbor's 101).

Allegiant Air began scheduled service at Gateway in 2007. In June 2018, Gateway was the 5th-ranked airport in the Allegiant system as measured by departing seats (after Orlando-Sanford, St. Pete-Clearwater, Las Vegas, and Punta Gorda). Allegiant's business model focuses on providing leisure travelers with less-than-daily, point-to-point service from communities in the northern and Midwest U.S. to popular Sunbelt vacation destinations. This business model results in a relatively high number of destinations served nonstop, but lower average numbers of daily flights and seats. Due to the leisure-oriented focus of most passengers using Gateway, it has somewhat greater seasonal variation in activity relative to Sky Harbor.

WestJet began scheduled service at Gateway in January 2017, operating seasonal service to Calgary and Edmonton. By comparison, WestJet offers year-round service from Sky Harbor to Calgary and seasonal service to seven other Canadian destinations. Canadian airline Swoop (a low-cost subsidiary of WestJet) has announced that it plans to launch twice-weekly service from Gateway to Edmonton beginning in late October 2018, replacing once-weekly WestJet service from Gateway to Edmonton.

Table 10 compares the number of cities served nonstop, average daily aircraft departures, and average daily departing seats at Sky Harbor and Gateway in June 2018. Of the total domestic capacity in the combined Phoenix market at that time, Sky Harbor accounted for 96% and Gateway for the remaining 4%.

Table 10

**Domestic Airline Service**

Phoenix Sky Harbor International and Phoenix-Mesa Gateway Airports

(as scheduled for June 2018)

| | Number of cities served nonstop *(a)* | Average daily aircraft departures | Average daily departing seats |
|---|---|---|---|
| **By airport** | | | |
| Sky Harbor | 84 | 495 | 69,175 |
| Mesa-Gateway | 37 | 15 | 2,518 |
| **By airline type** | | | |
| Low-cost carriers | | | |
| Sky Harbor | 48 | 180 | 27,500 |
| Mesa-Gateway | 37 | 15 | 2,518 |
| All other airlines | | | |
| Sky Harbor | 72 | 315 | 41,675 |
| Mesa-Gateway | -- | -- | -- |
| **By aircraft type** | | | |
| Large jet | | | |
| Sky Harbor | 57 | 392 | 61,844 |
| Mesa-Gateway | 37 | 15 | 2,518 |
| Regional jet | | | |
| Sky Harbor | 36 | 99 | 7,297 |
| Mesa-Gateway | -- | -- | -- |
| Turboprop | | | |
| Sky Harbor | 3 | 4 | 35 |
| Mesa-Gateway | -- | -- | -- |

*(a)* Some cities are served by more than one airport and some airports are served by more than one airline type or aircraft type. Not every city is served daily.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed June 2018.

## Role in American's System

America West Airlines, which was headquartered just east of Sky Harbor in Tempe, began commercial service in 1983 and established its primary hub at Sky Harbor. In September 2005, America West merged with US Airways and, although the merged airline adopted the US Airways name, the company kept its corporate headquarters in the Airport service region. In December 2013, US Airways merged with American and the airline began operating as American under a single operating certificate in April 2015.

Table 11 shows that in June 2018, Sky Harbor was the sixth-largest of American's ten hub airports in terms of departing seats (5.3% of its total systemwide capacity). American and its regional code-sharing affiliates accounted for 46.4% of enplaned passengers at Sky Harbor in FY 2018—the largest share of any airline. American's Oneworld alliance and joint venture partner, British Airways, also serves Sky Harbor and accounted for 10.7% of its international enplaned passengers in FY 2018. Over the past 10 years, the number of passengers enplaned on American at Sky Harbor decreased an average of 0.1% per year, while American's average load factor has increased from 78% to 86%.

Table 11
**Scheduled Departing Seats on American**
Top U.S. Airports in the American Airlines System
(as scheduled for the month of June)

| | | 2008 | | 2013 | | 2018 | |
|---|---|---|---|---|---|---|---|
| Rank | Airport | Seats | % of total | Seats | % of total | Seats | % of total |
| 1 | Dallas/Fort Worth | 2,708,573 | 12.8% | 2,564,055 | 13.6% | 2,877,778 | 14.4% |
| 2 | Charlotte | 1,613,787 | 7.6 | 1,950,722 | 10.3 | 2,150,165 | 10.7 |
| 3 | Miami | 1,218,995 | 5.7 | 1,342,998 | 7.1 | 1,478,359 | 7.4 |
| 4 | Chicago-O'Hare | 1,530,315 | 7.2 | 1,307,941 | 6.9 | 1,462,297 | 7.3 |
| 5 | Philadelphia | 1,238,573 | 5.8 | 1,291,946 | 6.8 | 1,118,996 | 5.6 |
| **6** | **Phoenix** | **1,091,460** | **5.1** | **1,059,543** | **5.6** | **1,059,327** | **5.3** |
| 7 | Los Angeles | 644,126 | 3.0 | 633,553 | 3.3 | 851,315 | 4.3 |
| 8 | Washington-Reagan | 628,036 | 3.0 | 632,316 | 3.3 | 622,414 | 3.1 |
| 9 | New York-LaGuardia | 667,255 | 3.1 | 548,758 | 2.9 | 451,928 | 2.3 |
| 10 | New York-Kennedy | 455,663 | 2.1 | 435,213 | 2.3 | 398,175 | 2.0 |
| | All other | 9,438,180 | 44.4 | 7,150,664 | 37.8 | 7,556,095 | 37.7 |
| | Total—U.S. system | 21,234,963 | 100.0% | 18,917,709 | 100.0% | 20,026,849 | 100.0% |

Note: Represents seats on scheduled domestic and international flights and includes regional code-sharing affiliates.

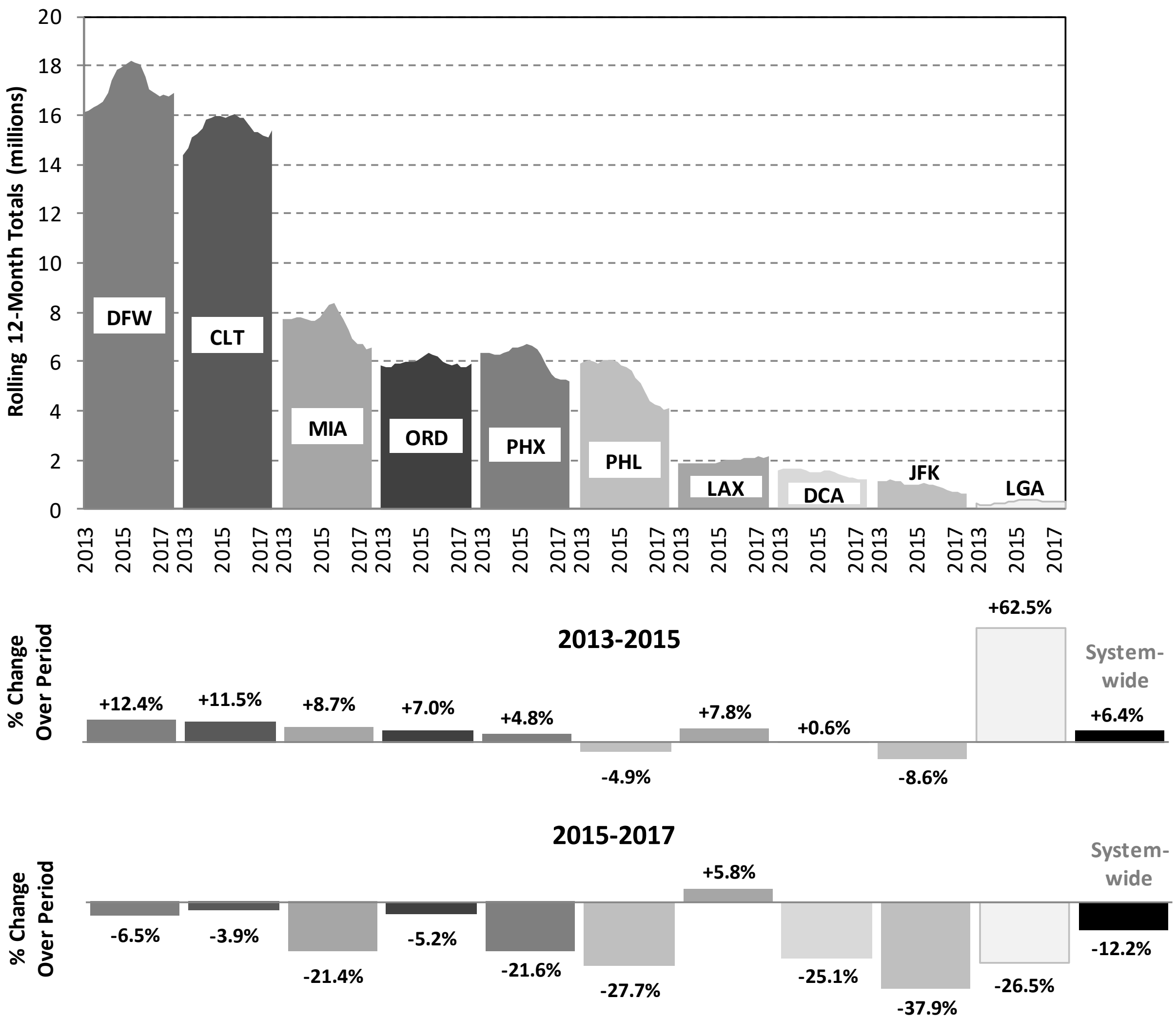
Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed June 2018.

American's connecting passenger flows at Sky Harbor are governed by its geographic location. Of passengers connecting between domestic flights on American at Sky Harbor, 78% are traveling between the Northeastern, Southern, and Midwestern U.S. on the one hand, and the Southwestern U.S. and Hawaii on the other. An additional 14% are connecting between the Southwestern U.S. and Hawaii, or on itineraries within the Southwestern U.S. Among American's hub airports, Sky Harbor competes most directly with Dallas/Fort Worth International Airport (DFW) for connecting flow. Sky Harbor is the more optimal connecting location for routes between Southern California and the

Northeast United States, and Sky Harbor and DFW accommodate connections between Southern California and the Southeast United States equally well. However, DFW's more easterly location makes it the more optimal connecting point for routes between the central United States and the East Coast.

Since 2015, American has focused on allotting more seat capacity to more profitable originating passengers than to less profitable connecting traffic across its route network. At Sky Harbor, this strategic shift resulted in American's connecting passengers decreasing 21.6% between 2015 and 2017, while its originating passengers increased 10.5%. Figure 7 shows that, between 2015 and 2017, five other American hub airports recorded decreases in connecting passengers approximately equal to or greater than that recorded at Sky Harbor, in percentage terms. In absolute terms, Miami and Philadelphia both recorded greater decreases than Sky Harbor.

Figure 7
**Connecting Passengers on American Airlines**
at American's U.S. Hub Airports




Source: U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100.

## Role in Southwest's System

Table 12 shows that in June 2018, Sky Harbor was the sixth-largest airport in Southwest's system in terms of departing seats (4.4% of its total systemwide capacity). Southwest accounted for 34.0% of enplaned passengers at Sky Harbor in FY 2018, ranking second to American. Over the past 10 years, the number of passengers enplaned on Southwest at Sky Harbor increased an average of 2.0% per year, while Southwest's average enplaned passenger load factor has increased from 64% to 82%. The inclusion of transit passengers (who do not deplane or enplane) would add an estimated additional 2.5 percentage points of seat occupancy to Southwest's FY 2018 load factor at Sky Harbor.

Table 12
**Scheduled Departing Seats on Southwest Airlines**
Top U.S. Airports in the Southwest System
(as scheduled for the month of June)

| | | 2008 | | 2013 | | 2018 | |
|---|---|---|---|---|---|---|---|
| Rank | Airport | Seats | % of total | Seats | % of total | Seats | % of total |
| 1 | Chicago-Midway | 950,076 | 5.7% | 1,117,360 | 7.0% | 1,140,669 | 6.4% |
| 2 | Baltimore | 846,614 | 5.1 | 962,528 | 6.1 | 1,009,130 | 5.7 |
| 3 | Las Vegas | 1,012,515 | 6.1 | 969,012 | 6.1 | 957,680 | 5.4 |
| 4 | Denver | 350,858 | 2.1 | 719,360 | 4.5 | 941,347 | 5.3 |
| 5 | Dallas-Love Field | 530,564 | 3.2 | 486,536 | 3.1 | 788,264 | 4.5 |
| **6** | **Phoenix** | **794,215** | **4.8** | **711,405** | **4.5** | **782,894** | **4.4** |
| 7 | Houston-Hobby | 573,530 | 3.5 | 612,978 | 3.9 | 742,030 | 4.2 |
| 8 | Orlando | 677,608 | 4.1 | 554,695 | 3.5 | 579,707 | 3.3 |
| 9 | Los Angeles | 540,177 | 3.3 | 481,728 | 3.0 | 547,843 | 3.1 |
| 10 | Atlanta | 971,976 | 5.8 | 679,154 | 4.3 | 533,468 | 3.0 |
| | All other | 9,371,341 | 56.4 | 8,602,480 | 54.1 | 9,672,948 | 54.7 |
| | Total—U.S. system | 16,619,474 | 100.0% | 15,897,236 | 100.0% | 17,695,980 | 100.0% |

Note: Represents seats on scheduled domestic and international flights.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed June 2018.

Sky Harbor serves much the same role in Southwest's route network as it does in the route network of American. Of passengers connecting on Southwest at Sky Harbor, 81% are traveling between the Northeastern, Southern, and Midwestern U.S. on the one hand, and the Southwestern U.S. and Hawaii on the other. An additional 13% are connecting on itineraries within the Southwestern U.S. Among Southwest's top airports, Sky Harbor competes most directly with Denver International Airport (DEN) for connecting flow. Sky Harbor and DEN accommodate connections between Southern California and the Northeast United States equally well, and Sky Harbor is the more optimal connecting location for routes between Southern California and the Southeast United States. However, DEN is the more optimal connecting location for routes between the Northwest United States and the East Coast, as well as for routes between the central United States and the East Coast.

## HISTORICAL AIRLINE SERVICE AND TRAFFIC

Table 13 lists the passenger and cargo airlines that provided service at Sky Harbor in FY 2018.

Table 13
**Airlines Serving the Airport**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(Fiscal Year 2018)

**Major/national**
- Alaska
- American
- Delta
- Frontier
- Hawaiian
- JetBlue
- Southwest
- Spirit
- Sun Country
- United

**Regional/commuter**
- Boutique Air *(b)*
- Compass (Delta Connection)
- Great Lakes *(b)*
- Mesa (American Eagle, United Express)
- SkyWest (American Eagle, Delta Connection, United Express)

**Foreign-flag**
- Air Canada
- British Airways
- Condor
- Jazz Aviation *(a)*
- Volaris
- WestJet

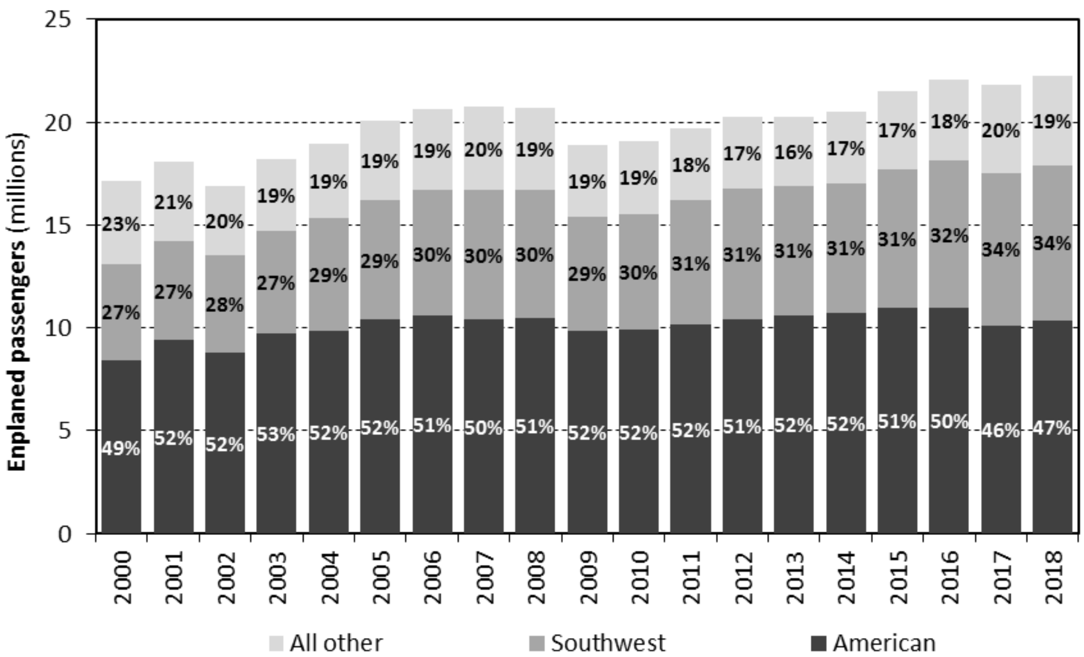
**All-cargo airlines**
- ABX Air
- Air Cargo Carriers
- Air Transport International
- Ameriflight
- DHL
- Empire
- FedEx
- Kalitta Air (DHL)
- UPS

*(a)* Operating for Air Canada.
*(b)* Provider of Essential Air Service.

Source: City of Phoenix Aviation Department.

Figure 8 shows the airline passenger shares at Sky Harbor since FY 2000. Over the 18 years, Southwest gained 7 percentage points of market share, while both American and all other airlines, considered together, lost market share.

Figure 8
**Total Enplaned Passengers by Airline Grouping**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(Fiscal Years ended June 30)




Source: City of Phoenix Aviation Department.

## Domestic Service

Figure 9 shows the U.S. airports served by scheduled daily nonstop roundtrip flights from Sky Harbor in June 2018.

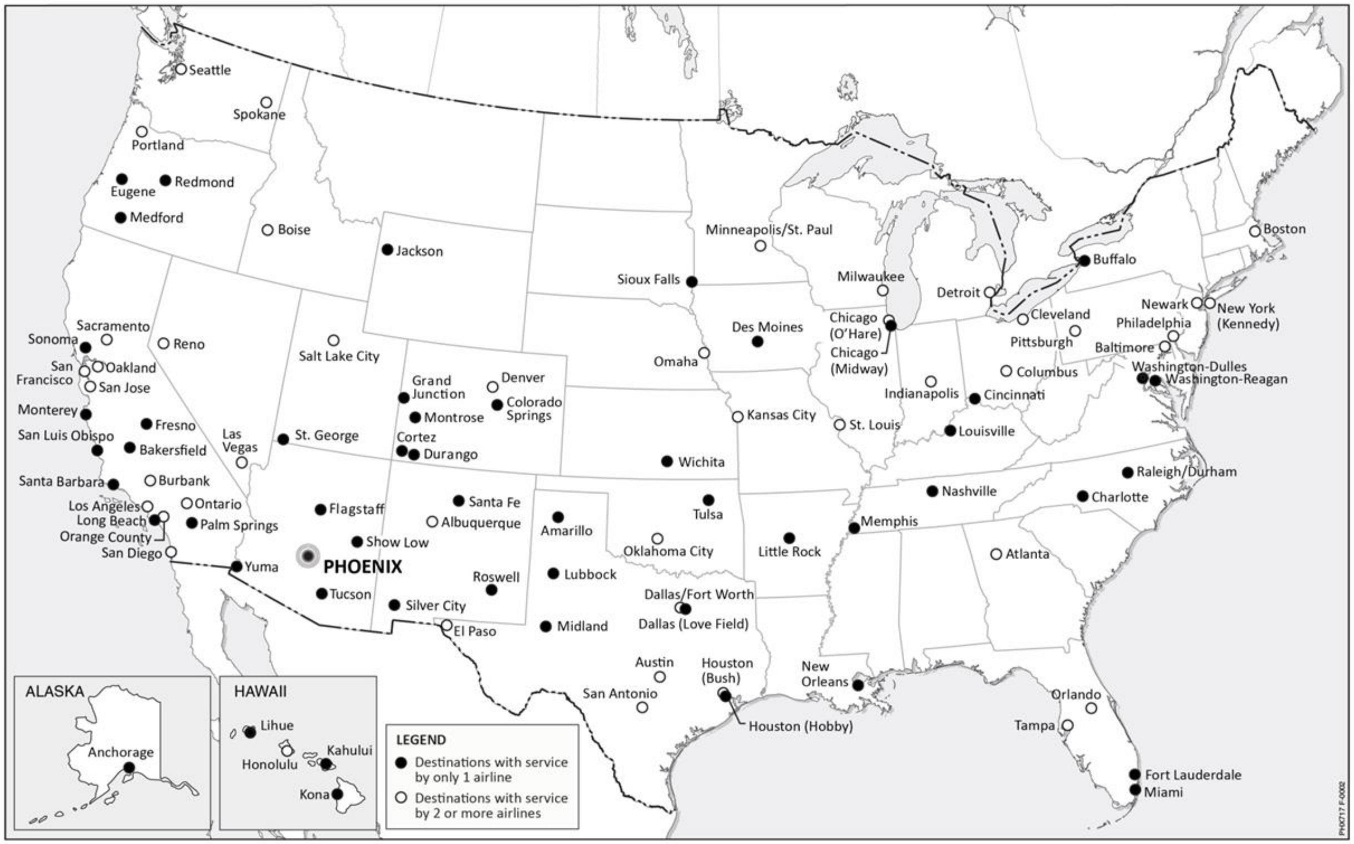
Figure 9

**U.S. Airports Served by Daily Scheduled Nonstop Roundtrip Passenger Flights**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(as scheduled for June 2018)




Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed June 2018.

Table 14 shows the number of cities served nonstop at Sky Harbor increased from 78 to 84 between 2008 and 2018, while the numbers of average daily departing flights and scheduled seats decreased over the same period. The increase in the number of cities served nonstop was largely attributable to the launch of service by American to several smaller communities in the West (e.g., Jackson, Wyoming; St. George, Utah; Montrose, Colorado; Redmond, Oregon; and Sonoma County, California). Lower volume markets such as these typically rely on connecting feed through a hub such as Sky Harbor to maximize aircraft load factors.

Numbers of flights and seats on regional jet aircraft increased between 2008 and 2018, partially offsetting decreases in mainline jet and turboprop activity. The types of routes offered at Sky Harbor shifted over the 10-year period as well, with the total number of daily scheduled seats decreasing on short-haul routes but increasing on medium- and long-haul routes.

Table 15 shows how airline service has changed over the past 10 years in the top 15 domestic originating city-pair markets for Sky Harbor. The top 15 routes accounted for 55% of all scheduled flight departures at Sky Harbor in June 2018. Competing nonstop service was offered in all of the top 15 markets in June 2018, with 5 markets served by 4 or more airlines and another 8 markets served by 3 airlines. Nonstop service was provided in all of Sky Harbor's top 15 originating passenger markets by both American and Southwest.

Table 14

**Daily Scheduled Domestic Passenger Service**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(as scheduled for the month of June)

| | 2008 | 2013 | 2018 |
|---|---|---|---|
| **NUMBER OF CITIES SERVED NONSTOP** *(a)* | **78** | **69** | **84** |
| Change from previous year shown | | (9) | 15 |
| **By aircraft type:** | | | |
| Total jet | 70 | 65 | 81 |
| *Mainline jet* | *58* | *54* | *57* |
| *Regional jet* | *28* | *24* | *36* |
| Turboprop | 11 | 4 | 3 |
| **By stage length:** | | | |
| Short-haul (<600 mi.) | 22 | 21 | 28 |
| Medium-short haul (600-1200 mi.) | 21 | 18 | 25 |
| Medium-long haul (1200-1800 mi.) | 17 | 15 | 16 |
| Long-haul (>1800 mi.) | 18 | 15 | 15 |
| **AVERAGE DAILY DEPARTING FLIGHTS** | **579** | **517** | **495** |
| Change from previous year shown | | (62) | (22) |
| **By aircraft type:** | | | |
| Total jet | 552 | 510 | 490 |
| *Mainline jet* | *460* | *400* | *392* |
| *Regional jet* | *92* | *110* | *99* |
| Turboprop | 26 | 7 | 4 |
| **By stage length:** | | | |
| Short-haul (<600 mi.) | 240 | 204 | 176 |
| Medium-short haul (600-1200 mi.) | 184 | 167 | 172 |
| Medium-long haul (1200-1800 mi.) | 96 | 88 | 88 |
| Long-haul (>1800 mi.) | 59 | 57 | 58 |
| **AVERAGE DAILY SCHEDULED SEATS** | **71,327** | **66,537** | **69,175** |
| Change from previous year shown | | (4,790) | 2,638 |
| **By aircraft type:** | | | |
| Total jet | 70,477 | 66,404 | 69,141 |
| *Mainline jet* | *64,091* | *59,303* | *61,844* |
| *Regional jet* | *6,385* | *7,101* | *7,297* |
| Turboprop | 851 | 133 | 35 |
| **By stage length:** | | | |
| Short-haul (<600 mi.) | 25,339 | 21,658 | 20,009 |
| Medium-short haul (600-1200 mi.) | 23,506 | 21,983 | 24,580 |
| Medium-long haul (1200-1800 mi.) | 13,546 | 13,644 | 14,522 |
| Long-haul (>1800 mi.) | 8,936 | 9,253 | 10,064 |

Note: Columns may not add to totals shown because of rounding.

*(a)* Some cities are served by more than one airport and some airports are served by more than one airline type or aircraft type.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed June 2018.

Table 15
**Comparison of Nonstop Service in the**
**Top 15 Domestic Originating Passenger Markets**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(as scheduled for the month of June)

| Rank *(a)* | City market / *Airport* | Nonstop mileage | Airlines offering nonstop service *(b)* | Number of carriers serving *(c)* 2008 | 2013 | 2018 | Daily scheduled flight departures 2008 | 2013 | 2018 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Los Angeles | 350 | AA,DL,UA,WN | 4 | 4 | 4 | 77 | 67 | 59 |
| | *Los Angeles* | | *AA,DL,UA,WN* | *4* | *4* | *4* | *28* | *27* | *23* |
| | *Orange County* | | *AA,WN* | *2* | *2* | *2* | *15* | *14* | *12* |
| | *Burbank* | | *AA,WN* | *2* | *2* | *2* | *13* | *11* | *9* |
| | *Ontario* | | *AA,WN* | *2* | *2* | *2* | *16* | *11* | *11* |
| | *Long Beach* | | *AA* | *1* | *1* | *1* | *5* | *5* | *3* |
| 2 | Chicago *(d)* | 1,438 | AA,F9,UA,WN | 3 | 3 | 4 | 23 | 18 | 21 |
| 3 | San Francisco *(e)* | 638 | AA,UA,WN | 3 | 3 | 3 | 38 | 35 | 34 |
| 4 | Denver | 600 | AA,F9,UA,WN | 4 | 4 | 4 | 22 | 21 | 19 |
| 5 | New York *(f)* | 2,137 | AA,B6,DL,UA,WN | 4 | 5 | 5 | 14 | 13 | 15 |
| 6 | Seattle | 1,105 | AA,AS,DL,WN | 3 | 3 | 4 | 14 | 15 | 17 |
| 7 | Minneapolis-St Paul | 1,273 | AA,DL,WN | 3 | 3 | 3 | 10 | 12 | 11 |
| 8 | Dallas/Ft. Worth *(g)* | 871 | AA,NK,WN | 1 | 1 | 3 | 15 | 13 | 18 |
| 9 | Washington DC/Baltimore *(h)* | 1,972 | AA,UA,WN | 3 | 3 | 3 | 11 | 10 | 9 |
| 10 | Las Vegas | 254 | AA,WN | 2 | 2 | 2 | 29 | 19 | 15 |
| 11 | Portland | 1,008 | AA,AS,WN | 3 | 3 | 3 | 11 | 11 | 9 |
| 12 | San Diego | 303 | AA,WN | 3 | 2 | 2 | 22 | 18 | 15 |
| 13 | Salt Lake City | 507 | AA,DL,WN | 3 | 3 | 3 | 22 | 17 | 14 |
| 14 | Detroit | 1,666 | AA,DL,WN | 3 | 3 | 3 | 9 | 10 | 8 |
| 15 | Atlanta | 1,583 | AA,DL,WN | 3 | 3 | 3 | 13 | 12 | 10 |
| | Total—top 15 markets | | | 8 | 7 | 8 | 328 | 291 | 274 |
| | All other markets | | | 7 | 7 | 7 | 251 | 226 | 221 |
| | Total—all markets | | | 10 | 9 | 10 | 579 | 517 | 495 |

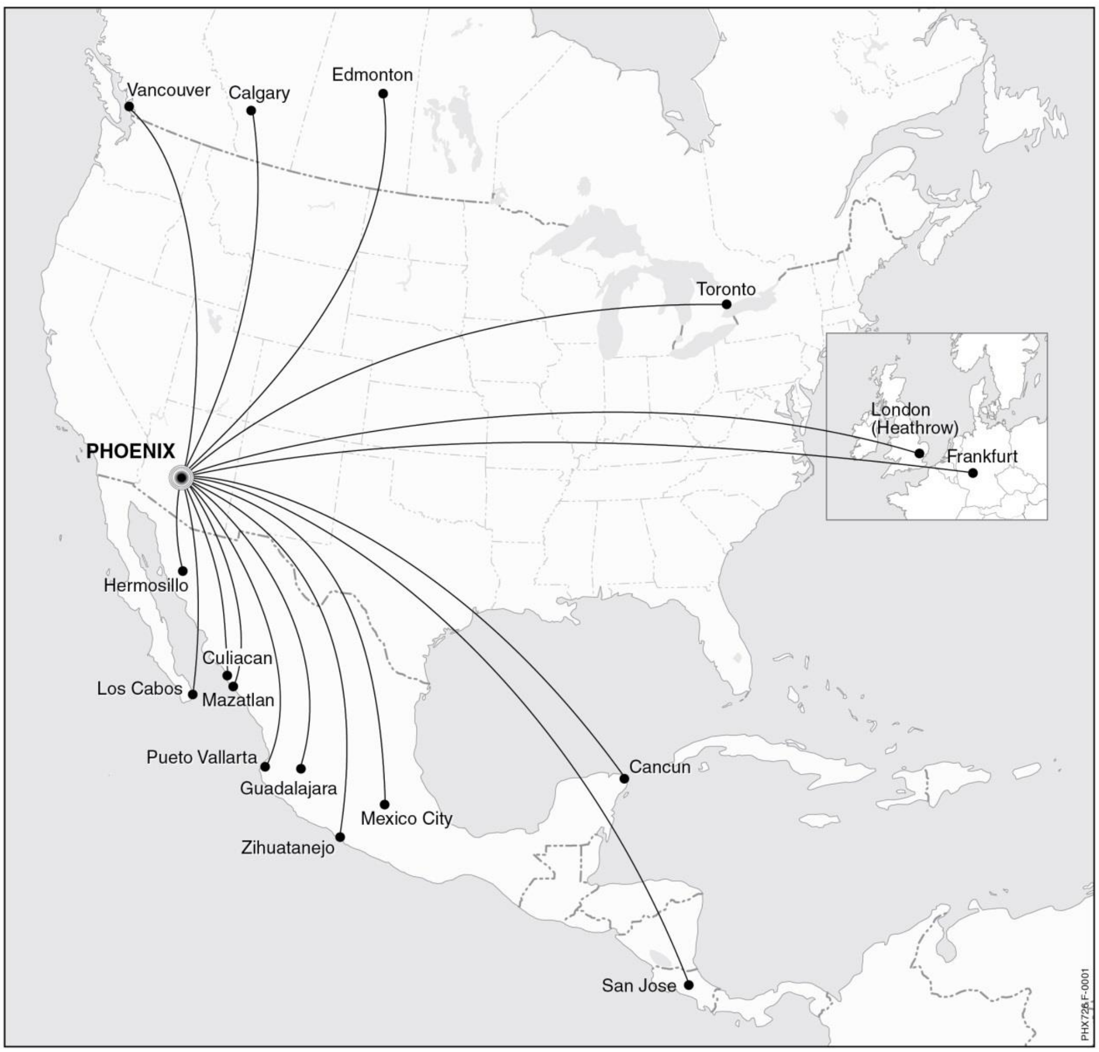
*(a)* Top 15 city markets ranked by domestic outbound originating passengers for the 12 months ended March 31, 2018.
*(b)* For June 2018. Carrier legend: AA = American, AS = Alaska, B6 = JetBlue, DL = Delta, F9 = Frontier, NK = Spirit, UA = United, WN = Southwest.
*(c)* Each mainline carrier and its regional code-sharing affiliates were counted as one airline.
*(d)* Market includes O'Hare and Midway airports.
*(e)* Market includes San Francisco, Oakland, and San Jose airports.
*(f)* Market includes LaGuardia, Newark, and Kennedy airports.
*(g)* Market includes Dallas/Fort Worth Airport and Love Field.
*(h)* Market includes Dulles, Reagan, and Baltimore airports.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed June 2018.

## International Service

Figure 10 shows the international destinations with nonstop service from Sky Harbor in June 2018. American, Air Canada, British Airways, Volaris, and WestJet operate such service to 16 destinations in Canada, Mexico, Costa Rica, the United Kingdom, and Germany. Competing service is offered to three of the destinations (Calgary, Guadalajara, and Vancouver) year-round and an additional two (Edmonton and Toronto) seasonally. Additionally, American has announced seasonal service to London, its first nonstop service to Europe from Sky Harbor, scheduled to begin in March 2019.

Figure 10
**International Destinations Served by Scheduled Roundtrip Passenger Flights**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(as scheduled for June 2018)




Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed June 2018.

## Passenger Traffic by Segment

Table 16 shows historical enplaned passenger numbers at Sky Harbor by originating and connecting components. Between FY 2007 and FY 2009, the numbers of both originating and connecting passengers decreased as the economic recession dampened travel demand. Between FY 2009 and FY 2015, the number of originating passengers nearly recovered to its pre-recessionary level while the number of connecting passengers reached a record high level. Between FY 2015 and FY 2018 (since the American-US Airways merger), an estimated 2.3 million increase in the number of originating passengers more than offset an estimated 1.5 million decrease in the number of connecting passengers. The recent decrease in the number of connecting passengers at Sky Harbor is primarily attributable to American Airlines, as described earlier.

Originating passengers represent an estimated 67.5% of total enplaned passengers at Sky Harbor in FY 2018, up from 62.0% in FY 2008. Table 16 shows that domestic passengers account for most of the originating passengers. The other passenger segment at Sky Harbor—connecting passengers—represent an estimated 32.5% of total enplaned passengers in FY 2018. Connecting passengers are categorized into two groups: (1) connections from one domestic flight to another and (2) connections between a domestic flight and an international flight. In FY 2018, domestic-domestic connections account for an estimated 90% of all connecting passengers at Sky Harbor, while domestic-international connections account for the remaining 10%.

Table 16

**Historical Enplaned Passengers by Component**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(Fiscal Years ended June 30; passengers in thousands)

| | Originating passengers | | | Connecting passengers | | | **Total** |
|---|---|---|---|---|---|---|---|
| Year | Domestic | International | **Total** | Domestic-domestic | Domestic-international *(a)* | **Total** | **Total enplaned passengers** |
| 2008 | 11,866 | 942 | **12,808** | 7,008 | 852 | **7,860** | **20,668** |
| 2009 | 10,395 | 928 | **11,323** | 6,734 | 856 | **7,589** | **18,912** |
| 2010 | 10,436 | 958 | **11,394** | 6,728 | 975 | **7,703** | **19,097** |
| 2011 | 10,356 | 1,005 | **11,361** | 7,223 | 1,098 | **8,321** | **19,681** |
| 2012 | 10,854 | 1,089 | **11,943** | 7,300 | 1,035 | **8,335** | **20,278** |
| 2013 | 10,860 | 1,115 | **11,975** | 7,263 | 998 | **8,261** | **20,236** |
| 2014 | 11,012 | 1,143 | **12,155** | 7,465 | 898 | **8,363** | **20,519** |
| 2015 | 11,572 | 1,166 | **12,738** | 7,877 | 873 | **8,751** | **21,489** |
| 2016 | 12,401 | 1,138 | **13,538** | 7,678 | 839 | **8,517** | **22,056** |
| 2017 | 13,232 | 1,154 | **14,385** | 6,702 | 733 | **7,435** | **21,820** |
| 2018E | 13,798 | 1,201 | **14,999** | 6,510 | 710 | **7,220** | **22,219** |
| | Average annual percent increase (decrease) | | | | | | |
| 2008-2013 | (1.8%) | 3.4% | **(1.3%)** | 0.7% | 3.2% | **1.0%** | **(0.4%)** |
| 2013-2018 | 4.9 | 1.5 | **4.6** | (2.2) | (6.6) | **(2.7)** | **1.9** |
| 2008-2018 | 1.5 | 2.5 | **1.6** | (0.7) | (1.8) | **(0.8)** | **0.7** |
| | Annual percent increase (decrease) | | | | | | |
| 2013-2014 | 1.4% | 2.5% | **1.5%** | 2.8% | (10.0%) | **1.2%** | **1.4%** |
| 2014-2015 | 5.1 | 2.0 | **4.8** | 5.5 | (2.8) | **4.6** | **4.7** |
| 2015-2016 | 7.2 | (2.4) | **6.3** | (2.5) | (4.0) | **(2.7)** | **2.6** |
| 2016-2017 | 6.7 | 1.4 | **6.3** | (12.7) | (12.6) | **(12.7)** | **(1.1)** |
| 2017-2018 | 4.3 | 4.1 | **4.3** | (2.9) | (3.1) | **(2.9)** | **1.8** |
| | Share of Airport total | | | | | | |
| 2008 | 57.4% | 4.6% | **62.0%** | 33.9% | 4.1% | **38.0%** | **100.0%** |
| 2013 | 53.7 | 5.5 | **59.2** | 35.9 | 4.9 | **40.8** | **100.0** |
| 2018 | 62.1 | 5.4 | **67.5** | 29.3 | 3.2 | **32.5** | **100.0** |

Notes: A=Actual; E = Estimated.
Domestic and international subtotals for FY 2018 reflect actual results; originating and connecting subtotals are estimated on the basis of 3 quarters of U.S. DOT O&D Survey data.
Rows may not add to totals shown because of rounding.

*(a)* Passengers connecting from domestic flights to international flights, and vice versa.

Sources: City of Phoenix Aviation Department; U.S. DOT, *Air Passenger Origin-Destination* Survey, reconciled to Schedule T100.

Table 17 shows that the number of passengers departing Sky Harbor on international flights has increased since FY 2008. The gain was entirely attributable to increases in passengers bound for Canada and the United Kingdom. Passengers to Mexico and elsewhere decreased, primarily due to reductions in service by American.

Table 17
**Departing Passengers by Major International Passenger Market**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(Fiscal Years ended June 30; passengers in thousands)

| | | | | Average annual percent increase (decrease) | | |
|---|---|---|---|---|---|---|
| International market area | 2008 | 2013 | 2017 | 2008-2013 | 2013-2017 | 2008-2017 |
| Mexico | 521 | 553 | 461 | 1.2% | (4.5%) | (1.3%) |
| Canada | 299 | 463 | 429 | 9.2% | (1.9%) | 4.1% |
| United Kingdom | 79 | 89 | 105 | 2.4% | 4.3% | 3.3% |
| Other *(a)* | 15 | 14 | 10 | (1.3%) | (7.7%) | (4.2%) |
| Total | 913 | 1,119 | 1,006 | 4.2% | (2.6%) | 1.1% |

Notes: Columns may not add to totals shown because of rounding.
Includes both originating and connecting passengers departing from Sky Harbor on scheduled and non-scheduled international flights.

*(a)* Mostly passengers to Costa Rica.

Source: U.S. DOT, Schedule T100.

## Passenger Traffic by Airline

Table 18 shows that 80.6% of all passengers enplaned at Sky Harbor in FY 2018 boarded flights operated by either American (including its regional affiliates) or Southwest, a smaller share than in FY 2013 (83.6%) but essentially the same as in FY 2008 (80.7%). Delta and United were the third and fourth ranking airlines in FY 2018, enplaning 6.5% and 5.2% of Sky Harbor's passengers, respectively. In FY 2018, the number of enplaned passengers at Sky Harbor increased 1.8%, year-over-year (400,000 passengers). American and Southwest accounted for most of the increase, increasing 2.3% and 2.2% year-over-year, respectively. Frontier and Spirit, by contrast, experienced decreases of 14.4% (71,000 passengers) and 34.2% (50,000 passengers), respectively, as both airlines reduced service to Sky Harbor.

Table 18

**Airline Shares of Total Enplaned Passengers**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(Fiscal Years ended June 30; listed in descending order for FY 2018)

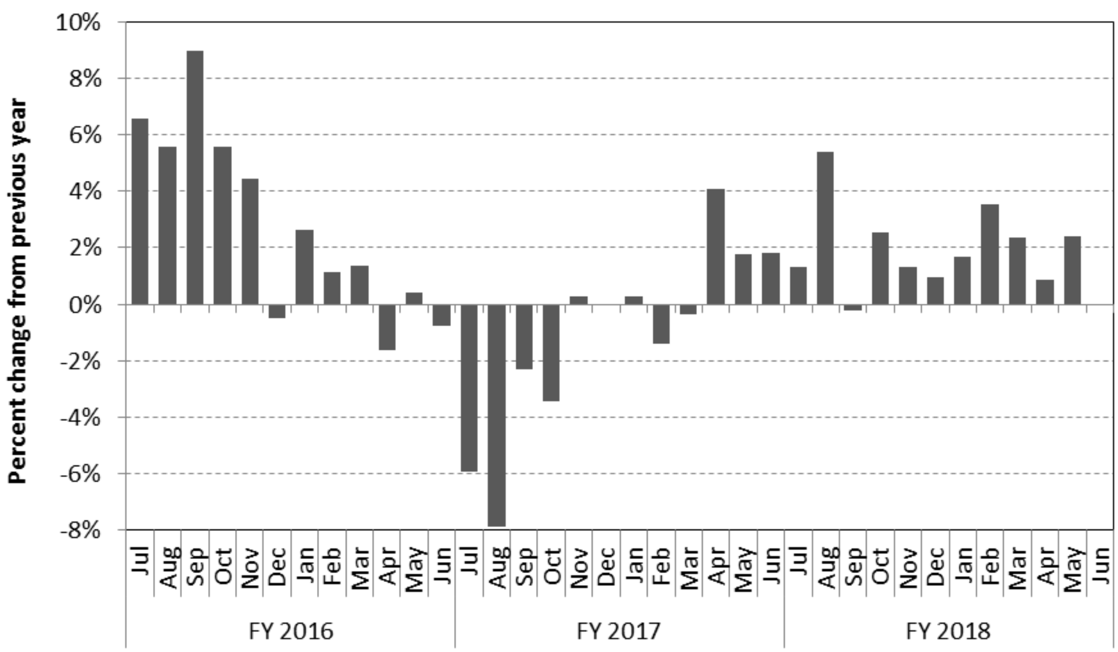
| | Fiscal Years | | | |
|---|---|---|---|---|
| Airline | 2008 | 2013 | 2017 | 2018 |
| American | 10,485,695 | 10,620,512 | 10,129,895 | 10,360,041 |
| Southwest | 6,200,672 | 6,294,553 | 7,382,859 | 7,546,946 |
| Delta | 1,340,302 | 1,240,735 | 1,388,510 | 1,438,843 |
| United | 1,386,791 | 984,130 | 1,131,353 | 1,164,730 |
| Alaska | 382,930 | 324,218 | 420,940 | 432,478 |
| Frontier | 309,091 | 218,072 | 459,477 | 388,761 |
| WestJet | 50,748 | 163,247 | 229,727 | 234,570 |
| Air Canada | 51,082 | 78,611 | 117,966 | 140,171 |
| British Airways | 87,041 | 91,609 | 108,487 | 111,514 |
| Spirit | -- | -- | 146,760 | 96,545 |
| JetBlue | 85,395 | 90,743 | 92,321 | 92,201 |
| Hawaiian | 86,755 | 85,553 | 88,388 | 86,558 |
| Sun Country | 56,435 | 22,915 | 77,946 | 80,518 |
| All Other | 144,593 | 20,890 | 45,757 | 45,039 |
| Total | 20,667,530 | 20,235,788 | 21,820,386 | 22,218,915 |
| | Share of total | | | |
| American | 50.7% | 52.5% | 46.4% | 46.6% |
| Southwest | 30.0 | 31.1 | 33.8 | 34.0 |
| Delta | 6.5 | 6.1 | 6.4 | 6.5 |
| United | 6.7 | 4.9 | 5.2 | 5.2 |
| Alaska | 1.9 | 1.6 | 1.9 | 1.9 |
| Frontier | 1.5 | 1.1 | 2.1 | 1.7 |
| WestJet | 0.2 | 0.8 | 1.1 | 1.1 |
| Air Canada | 0.2 | 0.4 | 0.5 | 0.6 |
| British Airways | 0.4 | 0.5 | 0.5 | 0.5 |
| Spirit | -- | -- | 0.7 | 0.4 |
| JetBlue | 0.4 | 0.4 | 0.4 | 0.4 |
| Hawaiian | 0.4 | 0.4 | 0.4 | 0.4 |
| Sun Country | 0.3 | 0.1 | 0.4 | 0.4 |
| All Other | 0.7 | 0.1 | 0.2 | 0.2 |
| Total | 100.0% | 100.0% | 100.0% | 100.0% |

Notes: Passengers reported by regional affiliates are grouped with their respective code-sharing partners.
Columns may not add to totals shown because of rounding.

Source: City of Phoenix Aviation Department.

Figure 11 shows that, following decreases in passengers in early FY 2017, increases in passengers resumed in late FY 2017 and generally continued throughout FY 2018.

Figure 11
**Percent Change in Monthly Enplaned Passengers**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport



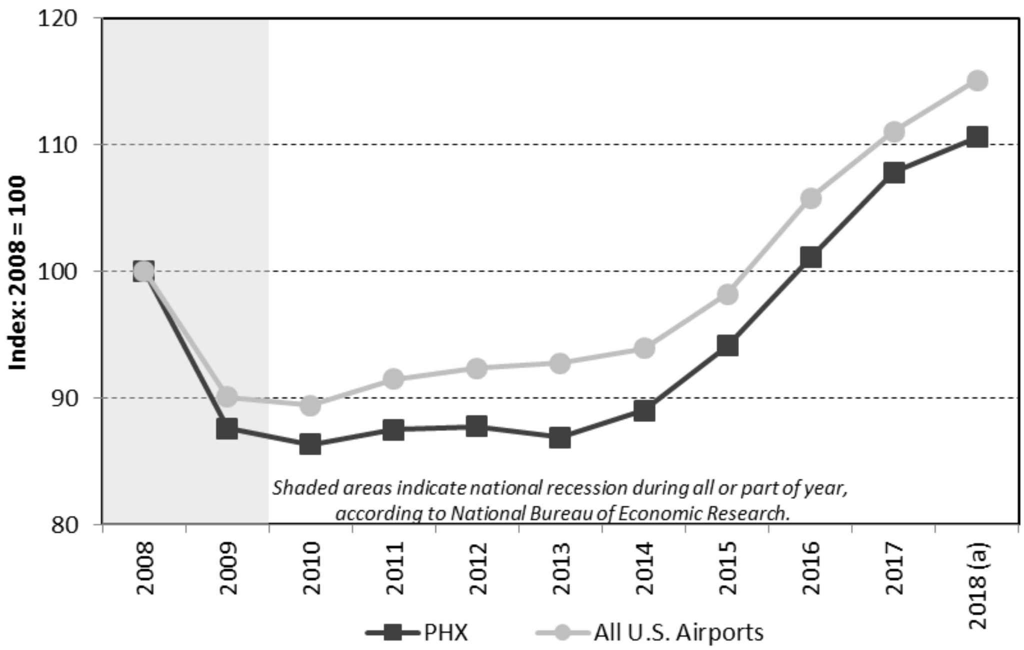

Note: In December 2017 and June 2018, there was no net change, year-over-year.

Source: City of Phoenix Aviation Department.

## Domestic Originating Passengers

Figure 12 shows that the trend in domestic originating passengers at Sky Harbor generally mirrors the nationwide pattern of growth. Relative to the nation, Sky Harbor underwent a more pronounced decline during and after the 2008-2009 economic recession.

Figure 12
**Index of Outbound Domestic Originating Passengers**
Phoenix Sky Harbor International Airport and All U.S. Airports
(for the 12 months ended June 30, unless otherwise noted)




*(a)* Data for the 12 months ended March 31, 2018, the most recent data available.

Source: U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100.

Figure 13 shows domestic originating passengers and average domestic airfares at Sky Harbor from FY 2008 to FY 2018. In general, fare increases dampen passenger traffic while fare decreases tend to stimulate traffic. For 5 years following the 2008-2009 economic recession, average airfares at Sky Harbor increased steadily while the number of originating passengers experienced little net change. In FY 2015 through FY 2018, however, a decline in average airfares coincided with strong growth in the number of domestic originating passengers.

The average airfares shown in Figure 13, as reported by the airlines to the U.S. DOT, exclude charges for optional services, such as checked baggage, preferred seating, in-flight meals, entertainment, and ticket changes. Such charges have become widespread in the airline industry since 2006. As a result, the average airfares shown understate the amount actually paid by airline passengers for their travel, particularly for FY 2018. Optional service charges that were previously included in the ticket price are not all separately reported to the U.S. DOT. They have been estimated by industry analysts to amount to an effective average surcharge on domestic airfares of approximately 5% of ticket fare revenues, although the percentage varies widely by airline and market.

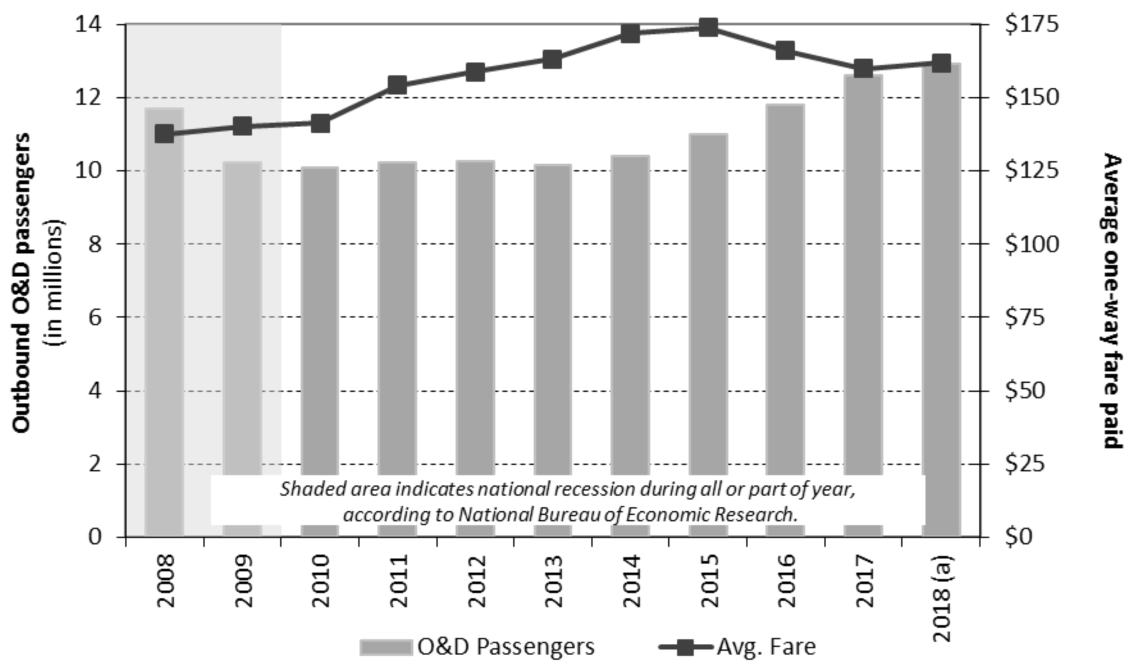
Figure 13

**Domestic Originating Passengers and Average Fare Paid**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(Fiscal Years ended June 30, unless otherwise noted)




Note: Average one-way fares shown are net of all taxes, fees, and passenger facility charges and exclude ancillary fees charged by the airlines.

*(a)* Data for the 12 months ended March 31, 2018, the most recent data available.

Source: U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100.

Table 19 presents data on domestic originating passengers and average airfares for the top 15 domestic originating passenger markets from Sky Harbor. This table illustrates the stimulative effect of lower airfares on passenger traffic and, conversely, the dampening effect of higher airfares. For example, the four Sky Harbor markets with decreases in passenger volumes between FY 2008 and FY 2017, namely, Los Angeles, Las Vegas, San Diego, and Salt Lake City, experienced the largest increases in average airfares among the top 15 markets. By contrast, two of the four Sky Harbor markets recording the largest increases in passenger volumes, Minneapolis-St. Paul and Dallas/ Ft. Worth, experienced decreases in average airfares; while fares in the other two markets, Denver and Seattle, remained relatively stable.

Table 19

**Comparison of Passengers and Fares Paid in Sky Harbor's Top 20 Domestic Originating Markets**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(Fiscal Years ended June 30, unless otherwise noted; ranked by 2018 passengers)

| | | Domestic outbound O&D passengers | | | | | | Average one-way fare paid *(b)* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | % of total | | 2008-2018 Increase (decrease) | | | | 2008-2018 Increase (decrease) | |
| Rank | City market / *Airport* | 2008 | 2018 *(a)* | 2008 | 2018 *(a)* | Number | Percent | 2008 | 2018 *(a)* | Number | Percent |
| 1 | Los Angeles | 1,187,167 | 1,029,594 | 10.2% | 8.0% | (157,573) | (13.3)% | $82.88 | $116.57 | $33.69 | 40.7% |
| | *Los Angeles* | *392,842* | *424,738* | *3.4* | *3.3* | *31,896* | *8.1* | *82.81* | *106.23* | *23.42* | *28.3* |
| | *Orange County* | *303,711* | *268,479* | *2.6* | *2.1* | *(35,232)* | *(11.6)* | *87.41* | *129.64* | *42.22* | *48.3* |
| | *Burbank* | *252,997* | *177,218* | *2.2* | *1.4* | *(75,779)* | *(30.0)* | *80.76* | *115.88* | *35.11* | *43.5* |
| | *Ontario* | *196,465* | *128,072* | *1.7* | *1.0* | *(68,393)* | *(34.8)* | *78.46* | *122.29* | *43.83* | *55.9* |
| | *Long Beach* | *41,152* | *31,087* | *0.4* | *0.2* | *(10,065)* | *(24.5)* | *84.20* | *125.52* | *41.33* | *49.1* |
| 2 | Chicago *(c)* | 651,981 | 787,607 | 5.6 | 6.1 | 135,626 | 20.8 | 139.70 | 143.27 | 3.57 | 2.6 |
| 3 | San Francisco *(d)* | 670,857 | 765,809 | 5.7 | 5.9 | 94,952 | 14.2 | 118.26 | 133.99 | 15.72 | 13.3 |
| 4 | Denver | 531,031 | 749,201 | 4.5 | 5.8 | 218,170 | 41.1 | 92.90 | 96.06 | 3.16 | 3.4 |
| 5 | New York *(e)* | 492,818 | 579,821 | 4.2 | 4.5 | 87,003 | 17.7 | 190.98 | 222.90 | 31.92 | 16.7 |
| 6 | Seattle | 402,080 | 573,710 | 3.4 | 4.4 | 171,630 | 42.7 | 129.63 | 130.91 | 1.27 | 1.0 |
| 7 | Minneapolis-St Paul | 338,963 | 471,360 | 2.9 | 3.7 | 132,397 | 39.1 | 144.31 | 131.47 | (12.83) | (8.9) |
| 8 | Dallas/Ft. Worth *(f)* | 303,317 | 467,306 | 2.6 | 3.6 | 163,989 | 54.1 | 149.99 | 140.86 | (9.13) | (6.1) |
| 9 | Washington DC/Baltimore *(g)* | 311,326 | 351,839 | 2.7 | 2.7 | 40,513 | 13.0 | 202.55 | 232.55 | 30.00 | 14.8 |
| 10 | Las Vegas | 472,082 | 332,479 | 4.0 | 2.6 | (139,603) | (29.6) | 77.86 | 102.62 | 24.76 | 31.8 |
| 11 | Portland | 265,125 | 332,360 | 2.3 | 2.6 | 67,235 | 25.4 | 120.69 | 130.59 | 9.90 | 8.2 |
| 12 | San Diego | 384,510 | 306,946 | 3.3 | 2.4 | (77,564) | (20.2) | 76.26 | 117.74 | 41.48 | 54.4 |
| 13 | Salt Lake City | 286,202 | 276,992 | 2.5 | 2.1 | (9,210) | (3.2) | 106.61 | 131.21 | 24.60 | 23.1 |
| 14 | Detroit | 259,730 | 274,096 | 2.2 | 2.1 | 14,366 | 5.5 | 148.91 | 168.83 | 19.92 | 13.4 |
| 15 | Atlanta | 192,806 | 252,748 | 1.7 | 2.0 | 59,942 | 31.1 | 173.25 | 175.40 | 2.15 | 1.2 |
| | Total—top 15 markets | 6,749,995 | 7,551,868 | 57.8% | 58.5% | 801,873 | 11.9% | $121.86 | $140.63 | $18.77 | 15.4% |
| | All other markets | 4,929,160 | 5,361,963 | 42.2 | 41.5 | 432,803 | 8.8 | 158.79 | 191.38 | 32.59 | 20.5 |
| | Total—all markets | 11,679,155 | 12,913,831 | 100.0% | 100.0% | 1,234,676 | 10.6% | $137.44 | $161.70 | $24.26 | 17.6% |

Note: Figures may not add to totals shown because of rounding.

*(a)* Data shown is for the 12 months ended March 31, 2018, the most recent data available.

*(b)* Average one-way fares shown are net of all taxes, fees, and passenger facility charges and exclude ancillary fees charged by the airlines.

*(c)* Market includes O'Hare and Midway airports.

*(d)* Market includes San Francisco, Oakland, and San Jose airports.

*(e)* Market includes LaGuardia, Newark, and Kennedy airports.

*(f)* Market includes Dallas/Fort Worth Airport and Love Field.

*(g)* Market includes Dulles, Reagan, and Baltimore airports.

Source: U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100

## PASSENGER FACILITY CHARGE-ELIGIBLE PASSENGERS

Airport sponsors are allowed to impose a passenger facility charge (PFC) on eligible enplaned passengers to generate revenues for airport projects that preserve or enhance safety, security, or capacity; mitigate noise impacts; or provide opportunities for enhanced competition among air carriers.

According to federal regulation, certain enplaned passengers are exempt from paying a PFC. The exemption with widest application at most airports, including Sky Harbor, is for passengers who are traveling on frequent flyer award tickets and flight crews. During the 12 months ended March 31, 2018 (the most recent data available), an estimated 10.1% of originating passengers were exempted due to flying on frequent-flyer program award tickets. Additional federal exclusions include: certain passengers on multi-segment connecting flights (based on a maximum charge of $18.00 per round trip ticket – or four flight segments)*; certain passengers using tickets purchased outside the United States; and passengers flying "Essential Air Service" routes. Additionally, the City currently excludes certain other small classes of users providing nonscheduled service at Sky Harbor. Transit, or through, passengers also do not pay a PFC, but this class of passengers is not included in the definition of enplaned passengers.

PFC-eligible enplaned passengers by fiscal year are imputed based upon annual PFC collections, enplaned passengers, and the net PFC rate charged. Table 20 shows that the estimated PFC-eligible percentage was 86.0% in FY 2018.

Table 20
**PFC-Eligible Enplaned Passengers**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(Fiscal Years ended June 30; passengers and PFC collections in thousands)

| Fiscal Year | Enplaned passengers | PFC collections | Net PFC rate *(a)* | Estimated PFC-eligible enplaned passengers | Estim. PFC-eligible percentage |
|---|---|---|---|---|---|
| 2016 | 22,056 | $83,595 | $4.39 | 19,042 | 86.3% |
| 2017 | 21,820 | 83,600 | 4.39 | 19,043 | 87.3 |
| 2018 | 22,219 | 83,917 | 4.39 | 19,116 | 86.0 |

*(a)* The City imposes a $4.50 charge; however, per federal regulation 11 cents of each PFC is held by the airlines as compensation for collecting, handling, and remitting the PFC revenue. Airlines withhold this collection fee even on PFCs refunded as a result of ticket cancellations or changes.

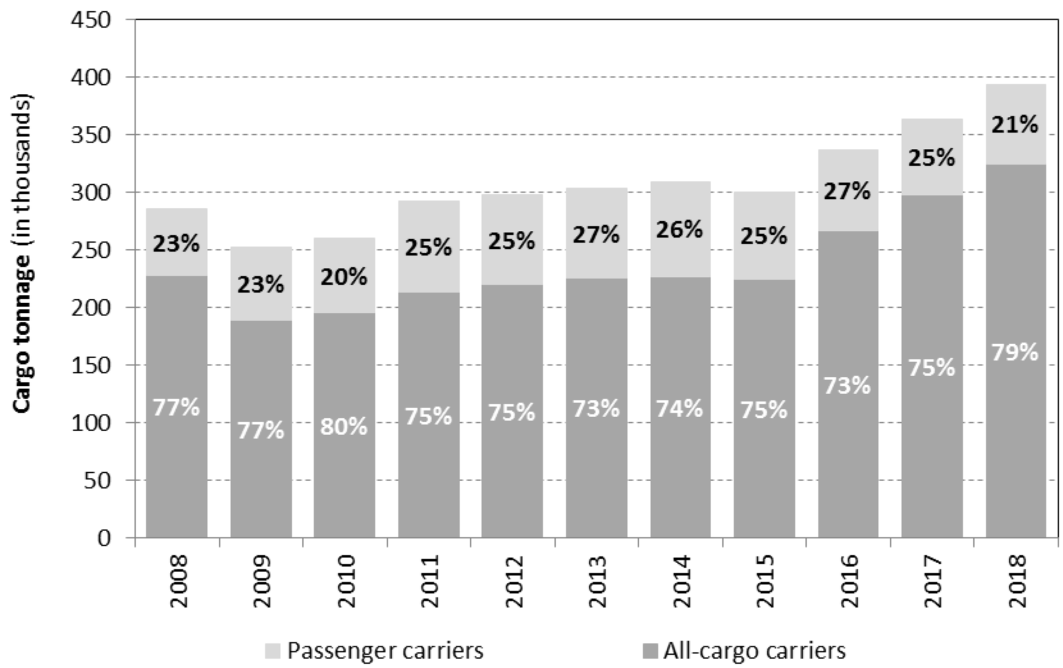
Source: City of Phoenix Aviation Department.

*Passengers are required to pay PFCs to the first two airports at which they enplane on an outbound trip, and the last two airports at which they enplane on a return trip. For example, a passenger traveling between Los Angeles and Miami on the round trip LAX-PHX-DFW-MIA-DFW-PHX-LAX would pay PFCs to LAX and PHX for the outbound leg and DFW and PHX on the return leg.

## AIR CARGO ACTIVITY

Figure 14 shows that air cargo activity at Sky Harbor has increased over the past 10 years, from approximately 286,000 tons in FY 2008 to 394,000 tons in FY 2018. The top two all-cargo carriers at Sky Harbor in FY 2018 were FedEx (33% market share) and UPS (25%), while American (10%) and Southwest (4%) represented the largest passenger airlines by cargo tonnage.

Figure 14
**Total Air Cargo Tonnage by Type of Carrier**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(Fiscal Years ended June 30)




Notes: Enplaned and deplaned freight and mail shown in tons.
Figures may not add to totals shown because of rounding.

Source: City of Phoenix Aviation Department.

## KEY FACTORS AFFECTING FUTURE AIRLINE TRAFFIC

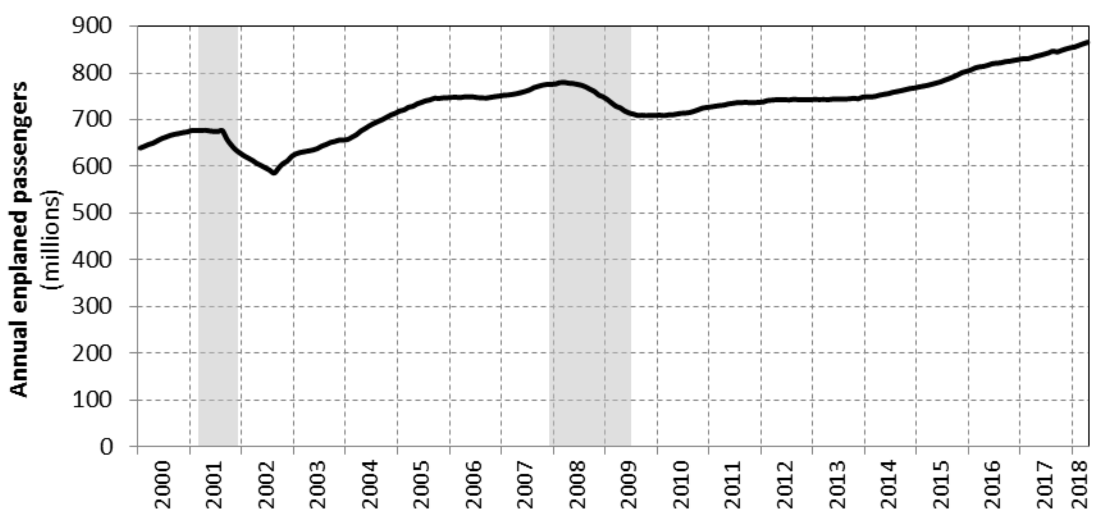
In addition to the demographics and economy of the Airport service region, as discussed earlier, key factors that will affect future airline traffic at Sky Harbor include:

- Economic, political, and security conditions
- Financial health of the airline industry
- Airline service and routes
- Airline competition and airfares
- Availability and price of aviation fuel
- Aviation safety and security concerns
- Capacity of the national air traffic control system
- Capacity of Sky Harbor
- Air service at Phoenix-Mesa Gateway Airport

### Economic, Political, and Security Conditions

Historically, airline passenger traffic nationwide has correlated closely with the state of the U.S. economy and levels of real disposable income. As illustrated on Figure 15, recessions in the U.S. economy in 2001 and 2008-2009 and associated high unemployment reduced discretionary income and resulted in reduced airline travel.

Figure 15
**Historical Enplaned Passengers on U.S. Airlines**




Notes: Data shown are 12-month moving averages of enplaned passengers on scheduled and non-scheduled flights to domestic and international destinations.
Shaded areas indicate months of economic recession.

Sources: Bureau of Transportation Statistics, T100 Market and Segment, www.rita.dot.gov, accessed August 2018; National Bureau of Economic Research, U.S. Business Cycle Expansions and Contractions, www.nber.com.

With the globalization of business and the increased importance of international trade and tourism, international economics, trade balances, currency exchange rates, government policies, and political relationships all influence passenger traffic at major U.S. airports.

Concerns about hostilities, terrorist attacks, other security and public health risks, and associated travel restrictions also affect travel demand to and from particular international destinations. Beginning in March 2017, the Trump administration issued various orders seeking to restrict travel to the United States from certain countries, mainly in the Middle East and Africa. Following court challenges, in June 2018, the U.S. Supreme Court upheld the administration's most recent travel restrictions. While it remains to be seen how the restrictions are implemented, increased scrutiny by U.S. Customs and Border Protection could discourage or prevent some travel.

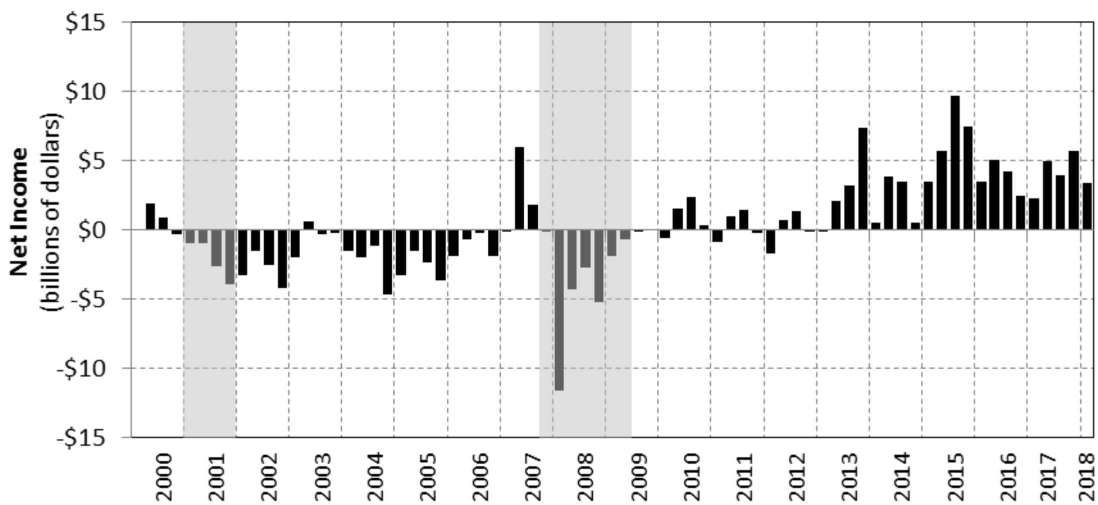
Sustaining current domestic and international passenger traffic nationally and at Sky Harbor, and achieving forecast increases at Sky Harbor, will depend partly on global economic growth, stable and secure international conditions, and government policies that do not unreasonably restrict or deter travel.

## Financial Health of the Airline Industry

The number of passengers at Sky Harbor will depend partly on the profitability of the U.S. airline industry and the associated ability of the industry and individual airlines, particularly American and Southwest, to make the necessary investments to provide service. Figure 16 shows historical net income for U.S. airlines.

Figure 16

**Quarterly Net Income (Loss) for U.S. Airlines**




Notes: Includes scheduled service on U.S. carriers only.
Shaded areas indicate quarters of economic recession.
Data for the fourth quarter of 2005 and the first quarter of 2006 were adjusted to account for United bankruptcy claims which were settled for less than had been originally reported.

Source: Bureau of Transportation Statistics, Net Income, F41 Schedule P12, www.transtats.gov, accessed August 2018.

As a result of the 2001 economic recession, the disruption of the airline industry that followed the September 2001 attacks, increased fuel and other operating costs, and price competition, the industry experienced huge financial losses. In 2001 through 2006, the major U.S. passenger airlines collectively recorded net losses of approximately $46 billion. To mitigate those losses, all of the major network airlines restructured their route networks and flight schedules and reached agreements with their employees, lessors, vendors, and creditors to cut costs. Between 2002 and 2005, Delta, Northwest, United, and US Airways all filed for Chapter 11 bankruptcy and restructured their operations.

In 2007, the U.S. passenger airline industry as a whole was profitable, recording net income of approximately $7 billion, but in 2008, oil and aviation fuel prices increased to unprecedented levels. In 2008 and 2009, the U.S. passenger airline industry recorded net losses of approximately $26 billion. The industry responded by, among other actions, grounding less fuel-efficient aircraft, eliminating unprofitable routes and hubs, reducing seat capacity, and increasing airfares. Between 2007 and 2009, the U.S. passenger airlines collectively reduced domestic capacity (as measured by available seat-miles) by approximately 10%.

From 2010 to 2013, the U.S. passenger airline industry as a whole recorded net income of approximately $18 billion, notwithstanding sustained high fuel prices, by controlling capacity and nonfuel expenses, increasing airfares, recording high load factors, and increasing ancillary revenues. Between 2009 and 2013, the airlines collectively increased domestic seat-mile capacity by an average of 1.0% per year. American filed for bankruptcy protection in 2011.

In 2014, the U.S. passenger airline industry reported net income of $9 billion, assisted by reduced fuel prices in the second half of the year (as discussed in the later section, "Availability and Price of Aviation Fuel"). In 2015, the industry achieved record net income of $26 billion as fuel prices decreased further, demand remained strong, and capacity control allowed average fares and ancillary charges to remain high. Strong industry profitability continued in 2016, 2017, and early 2018. Sustained industry profitability will depend on, among other factors, economic growth to support airline travel demand, continued capacity control to enable increased airfares, and stable fuel prices.

Consolidation of the U.S. airline industry has resulted from the acquisition of Trans World by American (2001), the merger of US Airways and America West (2005), the merger of Delta and Northwest (2009), the merger of United and Continental (2010), the acquisition of AirTran by Southwest (2011), the merger of American and US Airways (2013), and the acquisition of Virgin America by Alaska (2016).

Such consolidation has resulted in four airlines (American, Delta, Southwest, and United) and their regional affiliates now accounting for approximately 80% of domestic seat-mile capacity. The consolidation has contributed to industry profitability, a trend that is expected by airline industry analysts to continue over the near term. However, any resumption of financial losses could cause one or more U.S. airlines to seek bankruptcy protection or liquidate. The liquidation of any of the large network airlines would drastically affect airline service at certain connecting hub airports and change airline travel patterns nationwide.

## Airline Service and Routes

Sky Harbor accommodates travel demand to and from the Airport service region and serves as a connecting hub. The number of origin and destination passengers at Sky Harbor depends primarily on the intrinsic attractiveness of the region as a business and leisure destination, the propensity of its residents to travel, and the airline fares and service provided at Sky Harbor and at other competing airports. The number of connecting passengers, on the other hand, depends primarily on the airline fares and service provided at Sky Harbor.

The large airlines have developed hub-and-spoke systems that allow them to offer high-frequency service to many destinations. Because most connecting passengers have a choice of airlines and intermediate airports, connecting traffic at an airport depends primarily on the route networks and flight schedules of the airlines serving that airport and competing hub airports. Since 2003, as the U.S. airline industry has consolidated, airline service has been drastically reduced at many former connecting hub airports, including those serving St. Louis (American, 2003-2005), Dallas-Fort Worth (Delta, 2005), Pittsburgh (US Airways, 2006-2008), Las Vegas (US Airways, 2007-2010), Cincinnati (Delta, 2009-2011), Memphis (Delta, 2011-2013), and Cleveland (United, 2014).

As discussed in earlier sections, Sky Harbor is a connecting hub for American and one of the largest focus cities in Southwest's route network. As a result, much of the connecting passenger traffic at Sky Harbor results from the route networks and flight schedules of American and, to a lesser extent, Southwest. If either or both of these airlines were to reduce connecting service at Sky Harbor, such service would not necessarily be replaced by other airlines, although reductions in service by any airline would create business opportunities for others. A hypothetical reduction in passenger traffic as a result of reduced connecting airline service at Sky Harbor is discussed in the later section "Stress Test Forecast."

## Airline Competition and Airfares

Airline fares have an important effect on passenger demand, particularly for relatively short trips for which automobile and other surface travel modes are potential alternatives, and for price-sensitive "discretionary" travel. The price elasticity of demand for airline travel increases in weak economic conditions when the disposable income of potential airline travelers is reduced. Airfares are influenced by airline capacity and yield management; passenger demand; airline market presence; labor, fuel, and other airline operating costs; taxes, fees, and other charges assessed by governmental and airport agencies; and competitive factors. Future passenger numbers, both nationwide and at Sky Harbor, will depend, in part, on the level of airfares.

Overcapacity in the industry, the ability of consumers to compare airfares and book flights easily via the Internet, and other competitive factors combined to reduce airfares between 2000 and 2005. During that period, the average domestic yield for U.S.-flag airlines decreased from 16.1 cents to 13.8 cents per passenger-mile. In 2006 through 2008, as airlines reduced capacity and were able to sustain fare increases, the average domestic yield increased to 15.9 cents per passenger-mile. In 2009, yields again decreased, but, beginning in 2010, as airline travel demand increased and seat capacity was restricted, yields increased to 17.7 cents per passenger-mile by 2015. Between 2015 and 2017, domestic yields decreased to 16.6 cents per passenger-mile, reflecting lower aviation fuel prices and increased airline competition.

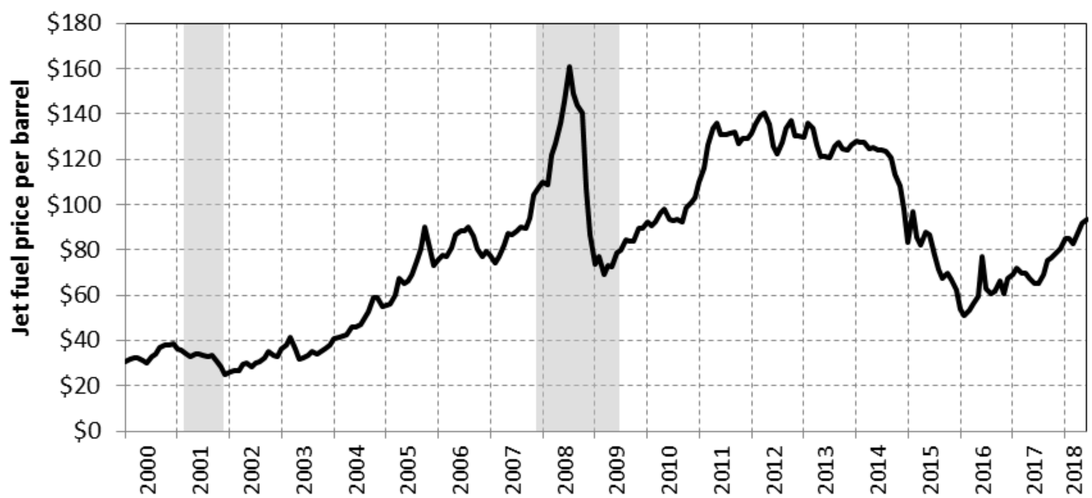
Beginning in 2006, charges have been introduced by most airlines for optional services such as checked baggage, preferred seating, in-flight meals, and entertainment, thereby increasing the effective price of airline travel more than these yield figures indicate.

### Availability and Price of Aviation Fuel

The price of aviation fuel is a critical and uncertain factor affecting airline operating economics. Figure 17 shows the historical fluctuation in aviation fuel prices since 2000. Beginning in 2003, aviation fuel prices increased as a result of the invasion and occupation of Iraq; political unrest in other oil-producing countries; the growing economies of China, India, and other developing countries; and other factors influencing the demand for and supply of oil. By mid-2008, average fuel prices were three times higher than they were in mid-2004 and represented the largest airline operating expense, accounting for between 30% and 40% of expenses for most airlines. Fuel prices decreased sharply in the second half of 2008 as demand for oil declined worldwide, but then increased beginning in early 2009 as demand increased.

Between 2011 and 2014, aviation fuel prices were relatively stable, partly as a result of increased oil supply from U.S. domestic production made possible by the hydraulic fracturing of oil-bearing shale deposits and other advances in extraction technologies. As of mid-2014, average fuel prices were approximately three times those prevailing at the end of 2003.

Figure 17
**Historical Aviation Fuel Prices**




Notes: Data shown are monthly averages and were converted from gallons to barrels.
Shaded areas indicate months of economic recession.

Source: Bureau of Transportation Statistics, Airline Fuel Costs and Consumption, F41 Schedule P12A, [www.transtats.gov](http://www.transtats.gov), accessed August 2018.

Beginning in mid-2014, an imbalance between worldwide supply and demand resulted in a precipitous decline in the price of oil and aviation fuel. Decreased demand from China and other developing countries, combined with the lifting of trade sanctions on Iran and a continued surplus in the worldwide supply resulted in reductions in fuel prices through early 2016. Fuel prices have since increased, but the average price of aviation fuel at mid-2018 was still approximately 75% of the price at mid-2014. Lower fuel prices are having a positive effect on airline profitability as well as far-reaching implications for the global economy.

Airline industry analysts hold differing views on how oil and aviation fuel prices may change in the near term, although, absent unforeseen disruptions, prices are expected to remain stable for some time. There is widespread agreement that fuel prices are likely to increase over the long term as global energy demand increases in the face of finite oil supplies that are becoming more expensive to extract, although some economists predict that the development of renewable sources of energy, pressures to combat global climate change, the widespread use of electric cars, and other trends will eventually result in a decline in the demand for oil and associated downward pressure on fuel prices.

Aviation fuel prices will continue to affect airfares, passenger numbers, airline profitability, and the ability of airlines to provide service. Airline operating economics will also be affected as regulatory costs are imposed on the airline industry as part of efforts to reduce aircraft emissions contributing to climate change.

### Aviation Safety and Security Concerns

Concerns about the safety of airline travel and the effectiveness of security precautions influence passenger travel behavior and airline travel demand. Anxieties about the safety of flying and the inconveniences and delays associated with security screening procedures lead to both the avoidance of travel and the switching from air to surface modes of transportation for short trips.

Safety concerns in the aftermath of the September 2001 terrorist attacks were largely responsible for the steep decline in airline travel nationwide in 2002. Since 2001, government agencies, airlines, and airport operators have upgraded security measures to guard against changing threats and maintain confidence in the safety of airline travel. These measures include strengthened aircraft cockpit doors, changed flight crew procedures, increased presence of armed federal air marshals, federalization of airport security functions under the Transportation Security Administration (TSA), more effective dissemination of information about threats, more intensive screening of passengers and baggage, and deployment of new screening technologies. The TSA has introduced “pre-check” service to expedite the screening of passengers who have submitted to background checks. Concerns about the safety of air travel security were heightened in 2016 by gun and bomb attacks at Brussels Airport (in March) and Istanbul Ataturk Airport (in June).

Historically, airline travel demand has recovered after temporary decreases stemming from terrorist attacks or threats, hijackings, aircraft crashes, and other aviation safety concerns. Provided that there are no major events and precautions by government agencies, airlines, and airport operators serve to maintain confidence in the safety of commercial aviation without imposing unacceptable inconveniences for airline travelers, future demand for airline travel will depend primarily on economic, not safety or security, factors.

### Capacity of the National Air Traffic Control System

Demands on the national air traffic control system have, in the past, caused delays and operational restrictions affecting airline schedules and passenger traffic. The FAA is gradually implementing its Next Generation Air Transportation System (NextGen) air traffic management programs to modernize and automate the guidance and communications equipment of the air traffic control system and enhance the use of airspace and runways through improved air navigation aids and procedures. Since 2007, airline traffic delays nationwide have decreased as a result of reduced numbers of aircraft operations (down approximately 17% between 2007 and 2017), but, as airline travel increases in the future, flight delays and restrictions can be expected.

### Capacity of Sky Harbor

In addition to any future constraints that may be imposed by the capacity of the national air traffic control and national airport systems, future growth in airline traffic at Sky Harbor will depend on the capacity of Sky Harbor itself. The Aviation Department believes Sky Harbor's airfield and terminal capacity – including the improvements contained in the Aviation CIP – are sufficient to accommodate forecast growth through the forecast period.

### Air Service at Phoenix-Mesa Gateway Airport

The City is a member government in the Phoenix-Mesa Gateway Airport Authority, which owns and operates Phoenix-Mesa Gateway Airport, located approximately 30 miles southeast of Sky Harbor. In FY 2018, approximately 720,000 passengers enplaned at Gateway, far fewer than the 22.2 million passengers enplaned at Sky Harbor. However, Gateway presents an alternative for existing or future airline service to the Airport service region.

## AIRLINE TRAFFIC FORECASTS

Forecasts of airline traffic at Sky Harbor through FY 2023 were developed on the basis of the economic outlook for the Airport service region, trends in historical airline traffic, and key factors likely to affect future traffic, all as discussed earlier in this Report. Forecasts for Sky Harbor included in the FAA's *Terminal Area Forecast* (TAF), issued in January 2018, were also reviewed.

In developing the forecasts in this Report, it was assumed that, over the long term, airline traffic at Sky Harbor will increase as a function of growth in the economy of the Airport service region and continued airline service. It was assumed that airline service at Sky Harbor will not be constrained by the availability of aviation fuel, the capacity of the air traffic control system or the Airport, charges for the use of aviation facilities, or government policies or actions that restrict growth.

The traffic forecasts for Sky Harbor were developed on the basis of the assumptions that:

1. The U.S. economy will experience sustained growth in GDP averaging between 2.0% and 2.5% per year, an average rate of GDP growth generally consistent with that projected by the Congressional Budget Office, as described in the earlier section "Economic Outlook."

2. The economy of the Airport service region will grow at a faster rate than the U.S. economy as a whole.

3. Demand for passenger travel to and from the Airport service region will remain strong based on the strength of the local economy, population growth, and the region's relative attractiveness as a tourist and convention destination.

4. Sky Harbor will continue to serve primarily domestic originating passengers and, secondarily, as a connecting hub for the operations of American and as one of the key airports in the route system of Southwest.

5. Airlines will add service to meet travel demand at Sky Harbor and competition among airlines will ensure competitive airfares for flights from the airport.

6. A generally stable international political environment and safety and security precautions will ensure airline traveler confidence in aviation without imposing unreasonable inconveniences.

7. There will be no major disruption of airline service or airline travel behavior as a result of international hostilities, terrorist acts or threats, or government policies restricting or deterring travel.

8. Airlines at Phoenix-Mesa Gateway Airport will continue to serve primarily leisure visitors to the Airport service region, and will not capture a materially increased share of the passenger market currently served by the airlines at Sky Harbor.

### Enplaned Passenger Forecast

The number of enplaned passengers increased 1.8% at Sky Harbor in FY 2018. Figure 18 shows that the number of originating passengers is estimated to have increased, and the number of connecting passengers to have decreased, in the final quarter of FY 2018, in line with actual results from the first three quarters of the fiscal year.

Advance schedule filings by the airlines (which are subject to change) indicate a 2.8% increase in the number of departing seats at Sky Harbor between the first half of FY 2018 and the first half of FY 2019 (compared with an estimated nationwide increase of 4.4%). On the basis of advance airline schedules and projected trends in airline capacity, passenger load factors, and flight completion factors, the number of enplaned passengers at Sky Harbor is forecast to be 22.5 million in FY 2019, up 1.4% from the number enplaned in FY 2018.

Between FY 2019 and FY 2023, the number of enplaned passengers is forecast to increase 275,000 enplaned passengers per year, in line with historical trends, which equates to an average growth rate of 1.2%. This is lower than the average rate forecast by the FAA for Sky Harbor in the TAF (2.2% per year). A higher rate of growth is not unusual in passenger forecasts prepared for purposes of facility and operational planning, such as the TAF, compared with forecasts such as the one presented herein, prepared for purposes of financial planning.

The number of enplaned passengers at Sky Harbor is forecast to be 23.6 million in FY 2023, an increase of 6.3% from FY 2018. Connecting passengers are forecast to account for a slightly smaller share of enplaned passengers in FY 2023 (32.0%) than as estimated for FY 2018 (32.5%). Figure 19 presents the forecast of enplaned passengers graphically. Table 21 presents historical and forecast enplaned passengers at Sky Harbor by originating and connecting components, and provides domestic and international subtotals.

Figure 18

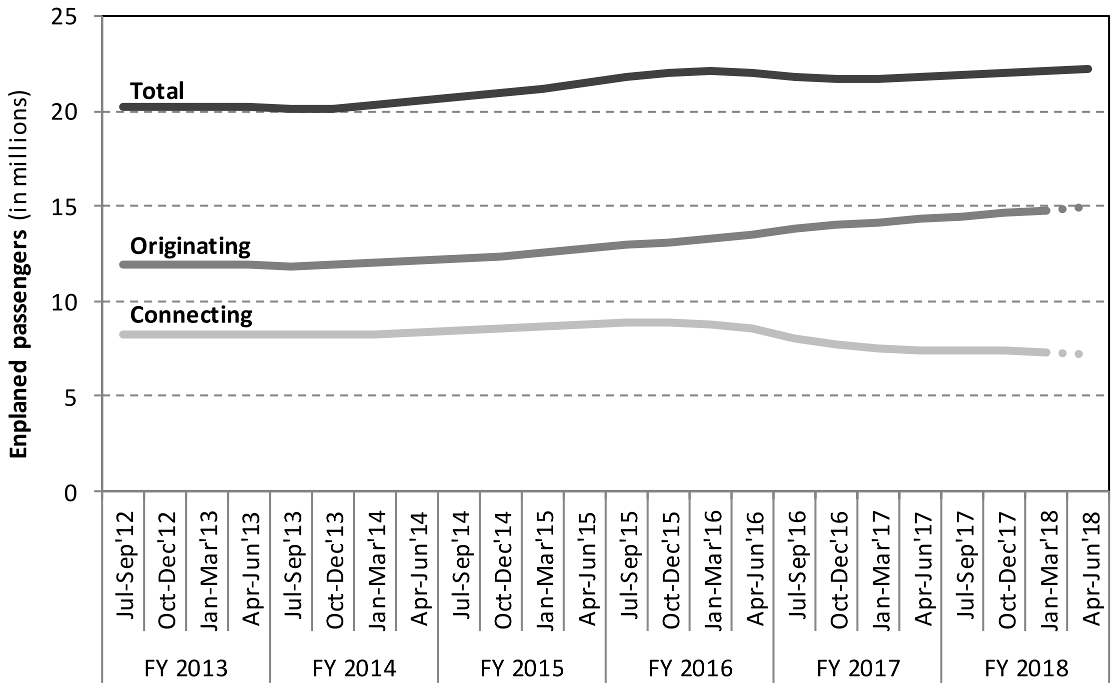
**Rolling 12 Month Enplaned Passengers**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(Fiscal Years ended June 30)

This forecast was prepared on the basis of the information and assumptions given in the text. The achievement of any forecast is dependent upon the occurrence of future events which cannot be assured. Therefore, the actual results may vary from the forecast, and the variance could be material.




Note: FY 2018 total reflects actual results, originating and connecting values are estimated for the final quarter on the basis of 3 quarters of U.S. DOT O&D Survey data.

Source: City of Phoenix Aviation Department; U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100.

Figure 19

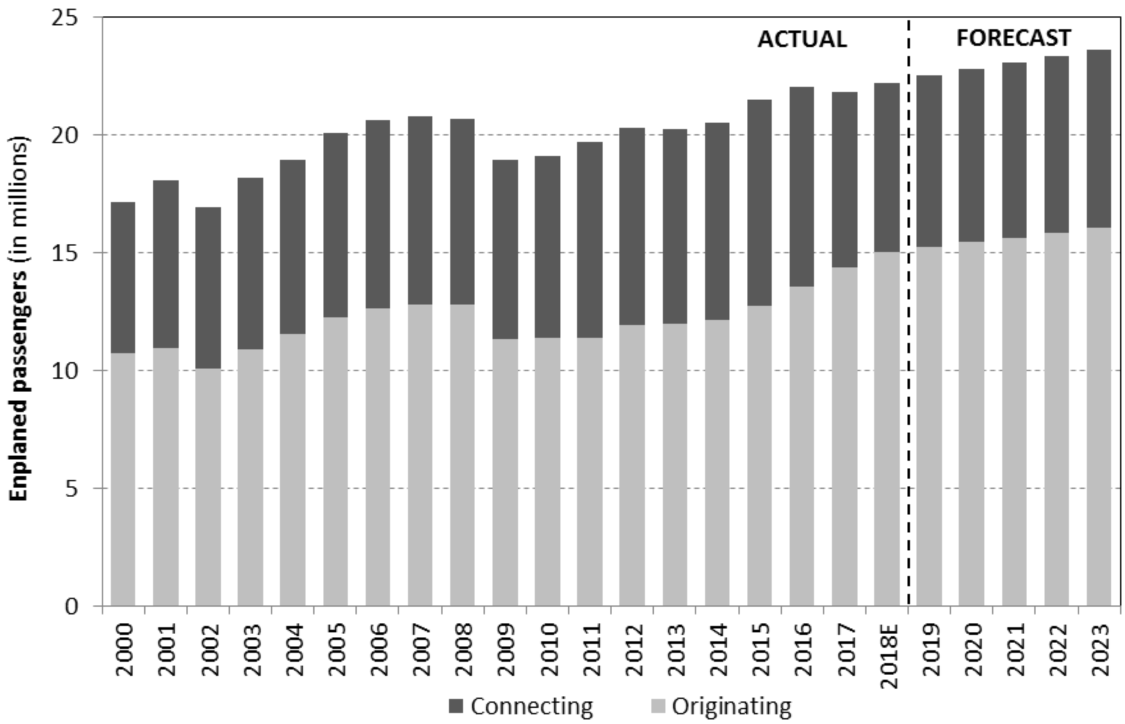
**Enplaned Passenger Forecast**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(Fiscal Years ended June 30)

This forecast was prepared on the basis of the information and assumptions given in the text. The achievement of any forecast is dependent upon the occurrence of future events which cannot be assured. Therefore, the actual results may vary from the forecast, and the variance could be material.




Note: FY 2018 total reflects actual results; originating and connecting values are estimated on the basis of 3 quarters of U.S. DOT O&D Survey data.

Sources: Actual—City of Phoenix Aviation Department; U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedules T100 and 298C T1.
Forecast—LeighFisher, July 2018.

Table 21

**Historical and Forecast Enplaned Passengers by Sector and by Type of Passenger**

City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(Fiscal Years ended June 30; passengers in thousands)

This forecast was prepared on the basis of the information and assumptions given in the text. The achievement of any forecast is dependent upon the occurrence of future events which cannot be assured. Therefore, the actual results may vary from the forecast, and the variance could be material.

| | | | By type of passenger | | | | | Annual percent |
|---|---|---|---|---|---|---|---|---|
| Fiscal | By flight destination | | Originating | | | | | increase |
| Year | Domestic | International | Resident | Visitor | Total | Connecting | **Total** | (decrease) |
| 2013 | 19,094 | 1,142 | 5,513 | 6,463 | 11,975 | 8,261 | **20,236** | |
| 2014 | 19,404 | 1,115 | 5,518 | 6,637 | 12,155 | 8,363 | **20,519** | 1.4% |
| 2015 | 20,349 | 1,140 | 5,751 | 6,987 | 12,738 | 8,751 | **21,489** | 4.7 |
| 2016 | 20,984 | 1,071 | 6,147 | 7,391 | 13,538 | 8,517 | **22,056** | 2.6 |
| 2017A | 20,813 | 1,008 | 6,558 | 7,827 | 14,385 | 7,435 | **21,820** | (1.1) |
| 2018E | 21,178 | 1,041 | 6,853 | 8,146 | 14,999 | 7,220 | **22,219** | 1.8 |
| 2019F | 21,455 | 1,070 | 6,961 | 8,274 | 15,235 | 7,290 | **22,525** | 1.4 |
| 2020 | 21,710 | 1,090 | 7,055 | 8,385 | 15,440 | 7,360 | **22,800** | 1.2 |
| 2021 | 21,965 | 1,110 | 7,149 | 8,496 | 15,645 | 7,430 | **23,075** | 1.2 |
| 2022 | 22,220 | 1,130 | 7,242 | 8,608 | 15,850 | 7,500 | **23,350** | 1.2 |
| 2023 | 22,475 | 1,150 | 7,336 | 8,719 | 16,055 | 7,570 | **23,625** | 1.2 |
| | Average annual percent increase (decrease) | | | | | | | |
| 2013-2017 | 2.2% | (3.1%) | 4.4% | 4.9% | 4.7% | (2.6%) | **1.9%** | |
| 2017-2018 | 1.8 | 3.3 | 4.5 | 4.1 | 4.3 | (2.9) | **1.8** | |
| 2018-2023 | 1.2 | 2.0 | 1.4 | 1.4 | 1.4 | 1.0 | **1.2** | |

Notes: A = Actual; E = Estimated; F = Forecast.
Domestic and international subtotals for FY 2018 reflect actual results; originating and connecting subtotals are estimated on the basis of 3 quarters of U.S. DOT O&D Survey data.
Figures may not add to totals shown because of rounding.

Sources: Actual—City of Phoenix Aviation Department; U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100.
Forecast—LeighFisher, July 2018.

It was assumed that the ratio of PFC–eligible passengers to total enplaned passengers would be 86.0% throughout the Forecast Period. Table 22 presents the PFC-eligible passenger forecast derived from the enplaned passenger forecast.

Table 22
**Actual and Forecast PFC-Eligible Enplaned Passengers**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(Fiscal Years ended June 30; passengers in thousands)

This forecast was prepared on the basis of the information and assumptions given in the text. The achievement of any forecast is dependent upon the occurrence of future events which cannot be assured. Therefore, the actual results may vary from the forecast, and the variance could be material.

| Year | Enplaned passengers | Estimated PFC-eligible percentage | Estimated PFC-eligible enplaned passengers |
|---|---|---|---|
| 2016 | 22,056 | 86.3% | 19,042 |
| 2017 | 21,820 | 87.3 | 19,043 |
| 2018A | 22,219 | 86.0 | 19,116 |
| 2019F | 22,525 | 86.0 | 19,372 |
| 2020 | 22,800 | 86.0 | 19,608 |
| 2021 | 23,075 | 86.0 | 19,845 |
| 2022 | 23,350 | 86.0 | 20,081 |
| 2023 | 23,625 | 86.0 | 20,318 |

Notes: A = Actual; F = Forecast.

Sources: Actual—City of Phoenix Aviation Department.
Forecast—LeighFisher, July 2018.

## Forecast Aircraft Departures and Landed Weight

Table 23 shows forecasts of aircraft departures and landed weight at Sky Harbor, which were derived from the passenger forecasts using assumed trends in average seat occupancy, aircraft seat capacity, and aircraft size.

Between FY 2018 and FY 2023, average aircraft seating capacity and passenger load factors at Sky Harbor were assumed to increase, with the result that the number of aircraft departures is forecast to increase an average of 0.6% per year and landed weight is forecast to increase an average of 1.0% per year—both slower rates of growth than forecast for enplaned passengers.

Table 23

**Historical and Forecast Flight Operations and Landed Weight**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(Fiscal Years ended June 30; enplaned passengers and departing seats in thousands)

This forecast was prepared on the basis of the information and assumptions given in the text. The achievement of any forecast is dependent upon the occurrence of future events which cannot be assured. Therefore, the actual results may vary from the forecast, and the variance could be material.

| Fiscal Year | Enplaned passengers | Departing seats *(a)* | Flight operations *(b)* | Landed weight (millions) |
|---|---|---|---|---|
| 2013 | 20,236 | 24,762 | 402,148 | 24,950 |
| 2014 | 20,519 | 24,858 | 395,470 | 24,943 |
| 2015 | 21,489 | 25,773 | 395,482 | 25,601 |
| 2016 | 22,056 | 26,282 | 401,390 | 26,002 |
| 2017 | 21,820 | 26,226 | 398,130 | 25,853 |
| 2018A | 22,219 | 26,157 | 393,968 | 26,108 |
| 2019F | 22,525 | 26,609 | 398,100 | 26,542 |
| 2020 | 22,800 | 26,879 | 400,600 | 26,804 |
| 2021 | 23,075 | 27,119 | 402,700 | 27,021 |
| 2022 | 23,350 | 27,358 | 404,800 | 27,259 |
| 2023 | 23,625 | 27,596 | 406,900 | 27,481 |
| | Average annual percent increase (decrease) | | | |
| 2013-2017 | 1.9% | 1.4% | (0.3%) | 0.9% |
| 2017-2018 | 1.8 | (0.3) | (1.0) | 1.0 |
| 2018-2023 | 1.2 | 1.1 | 0.6 | 1.0 |

Notes: A = Actual; F = Forecast.
Includes passenger and all-cargo airline operations and landed weight.
Excludes general aviation and military operations.

*(a)* 2018 value is estimated.

*(b)* Sum of flight arrivals and departures.

Sources: Historical—City of Phoenix Aviation Department; U.S. DOT, Schedule T100.
Forecast—LeighFisher, July 2018.

## Stress Test Forecast

A stress test forecast of enplaned passengers was developed to provide the basis for conducting a sensitivity analysis of Sky Harbor's financial results to hypothetical reductions in passenger numbers, such as could occur under conditions of weak economic growth or recession, restricted seat capacity, high airfares, and reduced connecting airline service such as could result from changes in airline network strategies. For the purpose of this stress test forecast, it was assumed that reduced airline flight activity would more adversely affect traffic connecting through Sky Harbor than traffic originating in or destined for the Airport service region.

The reduction in passengers forecast in FY 2019 and FY 2020 in this stress test depicts the potential effect of a more substantial hub "downsizing" by the primary airline accommodating connecting traffic at Sky Harbor, American, than occurred between FY 2016 and FY 2017. In the stress test scenario, additional air service reductions by American at Sky Harbor result in fewer connecting opportunities and a consequent further reduction in connecting traffic. For the 12 months ended March 31, 2018, American's enplaned passengers were split approximately 50% connecting and 50% originating (see Table 5 in "Airline Traffic Analysis"). If such a stress scenario were to occur, American's originating passengers would likely increase to 55-60% of their total enplaned passengers. Even in such a situation, however, Sky Harbor would continue to retain some level of connecting activity by virtue of: (1) its large population of local travelers which supports frequent air service and, thereby, incidental connections; (2) its favorable geographic location for connecting passenger flow to and from the southwest United States with minimal circuity; and (3) other airline responses, most notably by Southwest Airlines, which accommodated 2.1 million connecting passengers during the 12 months ended March 31, 2018—more than one quarter of Sky Harbor's total.

The number of enplaned passengers for the stress test in FY 2023 is forecast to be 19.7 million, compared with 23.6 million for the base forecast. Relative to the base forecast for FY 2023, originating passenger numbers are forecast to be 10% lower and connecting passenger numbers are forecast to be 30% lower. Originating passengers account for approximately 73% of the FY 2023 total for the stress test forecast, compared with 68% for the base forecast.

Table 24 presents the stress test forecast relative to the base forecast. Figure 20 depicts the stress test forecast graphically. As shown in Figure 20, stress test passenger numbers forecast for FY 2023 are close to the numbers in FY 2011, simulating 12 years of no net growth in passenger volumes. The decline in originating passengers between FY 2018 and FY 2020 is of approximately the same magnitude as the decline in originating passengers experienced at Sky Harbor in FY 2002, following the events of 9/11. The more substantial reduction in connecting activity is nearly twice the size of that which occurred in FY 2017 and returns connecting passenger levels to those last recorded in FY 1999, prior to America West's merger with US Airways (now American).

The summary of projected financial results using the stress test forecast of enplaned passengers is included in Exhibit I-2.

Table 24

**Base Case and Stress Test Forecasts**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(Fiscal Years ended June 30; in thousands)

The base case forecast was prepared on the basis of the information and assumptions given in the text. The stress test forecast was based upon hypothetical assumptions. The achievement of any forecast is dependent upon the occurrence of future events which cannot be assured. Therefore, the actual results may vary from the forecast, and the variance could be material.

| | Actual | | | | | Actual/ Estimated | Forecast | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| **Base case** | | | | | | | | | | | |
| Enplaned passengers | 20,236 | 20,519 | 21,489 | 22,056 | 21,820 | 22,219 | 22,525 | 22,800 | 23,075 | 23,350 | 23,625 |
| Originating passengers | 11,975 | 12,155 | 12,738 | 13,538 | 14,385 | 14,999 | 15,235 | 15,440 | 15,645 | 15,850 | 16,055 |
| Connecting passengers | 8,261 | 8,363 | 8,751 | 8,517 | 7,435 | 7,220 | 7,290 | 7,360 | 7,430 | 7,500 | 7,570 |
| **Stress test** | | | | | | | | | | | |
| Enplaned passengers | 20,236 | 20,519 | 21,489 | 22,056 | 21,820 | 22,219 | 20,685 | 19,155 | 19,155 | 19,430 | 19,705 |
| Originating passengers | 11,975 | 12,155 | 12,738 | 13,538 | 14,385 | 14,999 | 14,505 | 14,015 | 14,015 | 14,220 | 14,425 |
| Connecting passengers | 8,261 | 8,363 | 8,751 | 8,517 | 7,435 | 7,220 | 6,180 | 5,140 | 5,140 | 5,210 | 5,280 |
| **Percent reduction from Base** | | | | | | | | | | | |
| Enplaned passengers | | | | | | - | (8%) | (16%) | (17%) | (17%) | (17%) |
| Originating passengers | | | | | | - | (5) | (9) | (10) | (10) | (10) |
| Connecting passengers | | | | | | - | (15) | (30) | (31) | (31) | (30) |

Note: FY 2018 total reflects actual results; originating and connecting values are estimated on the basis of 3 quarters of U.S. DOT O&D Survey data.

Sources: Historical—City of Phoenix Aviation Department; U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100.
Forecast—LeighFisher, July 2018

Figure 20

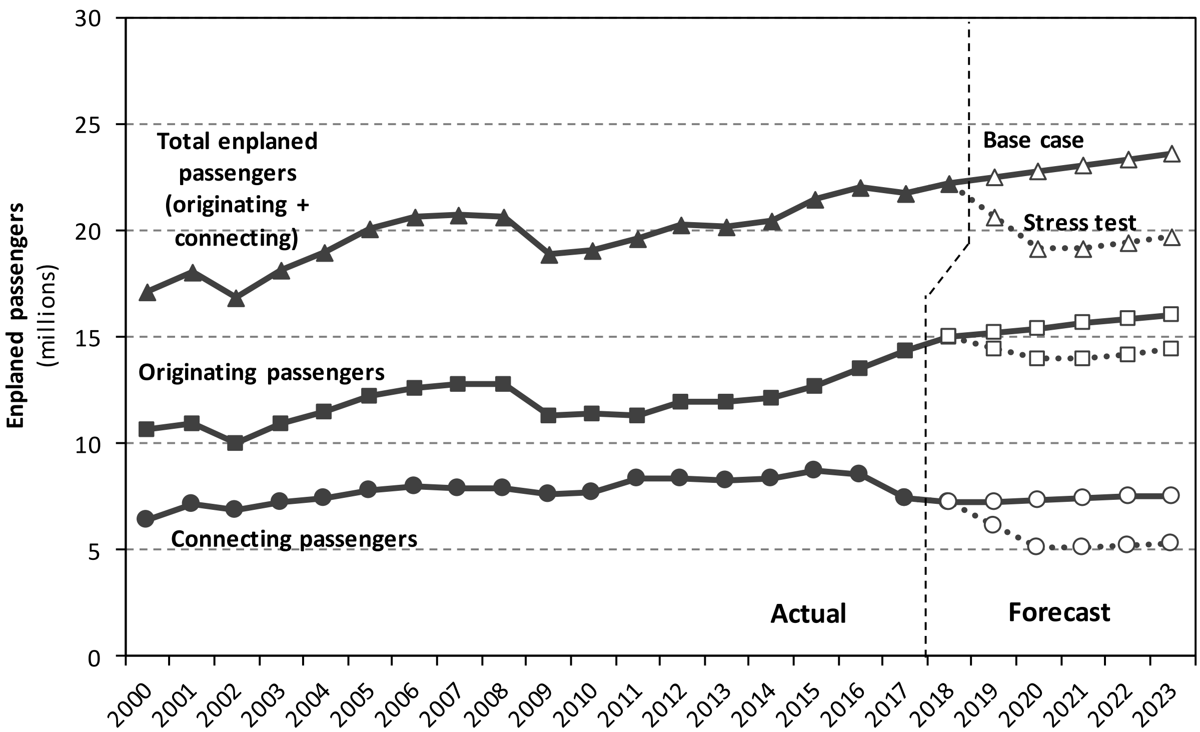
**Base Case and Stress Test Forecasts of Enplaned Passengers**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(Fiscal Years ended June 30)

The base case forecast was prepared on the basis of the information and assumptions given in the text. The stress test forecast was based upon hypothetical assumptions. The achievement of any forecast is dependent upon the occurrence of future events which cannot be assured. Therefore, the actual results may vary from the forecast, and the variance could be material.




Note: FY 2018 total reflects actual results; originating and connecting values are estimated on the basis of 3 quarters of U.S. DOT O&D Survey data.

Sources: Historical—City of Phoenix Aviation Department; U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedules T100 and 298C T1.
Forecast—LeighFisher, July 2018.

# FINANCIAL ANALYSIS

The purpose of the Report is to evaluate the ability of the City to satisfy the requirements of the Rate Covenant and the Junior Lien Rate Covenant during the forecast period taking into account the proposed 2018 Senior Bonds and outstanding Senior Lien and Junior Lien Bonds. The forecast covers the fiscal year ending June 30, 2019 (FY 2019) through FY 2023, inclusive (the Forecast Period).

## FRAMEWORK FOR AIRPORT SYSTEM FINANCIAL OPERATIONS

The City accounts for Airport system financial operations as a separate Aviation Enterprise Fund according to generally accepted accounting principles for governmental entities, federal regulations related to airlines rates and related City ordinances, the requirements of the City bond ordinances, and the City Purchase Agreements, as discussed below.

### Organization and Management

The Airport is operated as a self-supporting enterprise through the City's Aviation Department.* The Phoenix City Council establishes the major policies attendant to the development and operation of the Airport. The City operates under a Council-Manager form of government. The City Council consists of a Mayor and eight Council members. The Mayor is elected at-large. Council members are elected for 4-year staggered terms from separate districts on a non-partisan ballot. The Mayor and each member of Council have equal voting powers. The City Council appoints the City Manager who administers the policies relative to the Airport. The City Manager appoints the Director of Aviation Services. The City Council adopts ordinances establishing fee structures for use of Airport facilities, including airline rates and charges.

The Phoenix Aviation Advisory Board is made up of nine members appointed by the City Council to 4-year terms and meets on a monthly basis. The Board provides non-binding advisory recommendations regarding Airport fees, including airline rates and charges, concession agreements, leases, master plans, noise studies, and development plans for the Airport.

The Aviation Department is headed by the Director of Aviation Services who reports to a Deputy City Manager. The Director of Aviation Services is responsible for executing the aviation policies of the City Council and administering the operations of the Airport. Reporting to the Director of Aviation Services are three Assistant Aviation Directors, who together with the Director of Aviation Services head the Aviation Department staff. Certain accounting, bond financing, treasury, and related financial functions are performed by the City's Finance Department.

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*The City owns Sky Harbor and two general aviation airports that are collectively defined as "Airport" in the City Ordinances and City Purchase Agreements. References in this section of the Report to "Airport" include all three airports. The City also is a fifth member government in the Phoenix-Mesa Gateway Airport Authority, which owns and operates Phoenix-Mesa Gateway Airport, however Phoenix-Mesa Gateway Airport is excluded from the definition of Airport.

## Airline Rates and Charges

The Phoenix City Code defines the terms and conditions by which airlines at Sky Harbor may use the airfield in common with other users and may occupy and use exclusive, joint, and common space in the terminal buildings. The City does not have long-term lease agreements with the airlines governing the use and occupancy of terminal space or the airfield at Sky Harbor. The terms are formalized in letters from the City authorizing month-to-month occupancy until otherwise terminated.

Additionally, Sky Harbor does not have a formal agreement with the airlines governing the rates and charges methodology for landing, terminal, and other fees. The Phoenix City Code provides that airline rents, fees, and charges be calculated pursuant to a compensatory rate-setting methodology. The City bears the risk of any shortfall in non-airline revenues and retains the benefit of any surplus in non-airline revenues for discretionary Airport-related use. The Director of Aviation Services has the authority, within certain limits, to adjust airline fees pursuant to Ordinance G-6394.

Customarily, the rate budget is established at the beginning of the fiscal year, but the Aviation Director has the authority to change rates at any time during a fiscal year as necessary, provided the resulting Cost Per Enplanement (CPE) remains below the large hub median. The City reviews proposed rate changes and capital expenditures with airline representatives. Following the end of each fiscal year, the actual information for such fiscal year replaces the budgeted and estimated amounts used in the rate calculation to determine actual airline obligations for such fiscal year. The difference between these actual airline obligations and the amounts actually paid by the airlines is cleared through a settlement process.

Airline Revenues consist of landing fees, terminal rentals, and other charges paid to the City by airlines for use and occupancy of the Airport. For the purpose of the Report, it is assumed that the City will annually calculate and adjust airline fees during the Forecast Period using a compensatory rate-setting methodology, and that airlines at Sky Harbor will pay such fees.

## Bonds and Other Obligations

Outstanding Airport Bonds consist of Senior Bonds, Junior Bonds, and Other Airport Bond Obligations. The Airport also has outstanding the Rental Car Facility Charge Revenue Bonds, Series 2004, that are special revenue obligations as described later.

The City has utilized the City of Phoenix Civic Improvement Corporation (CIC) to issue airport bonds on its behalf. The CIC enters into a Bond Indenture with the Bond Trustee. The City is obligated to make payments to the CIC through a City Purchase Agreement with the CIC. The payment obligations are limited to: (1) with respect to Senior Bonds, certain available Net Airport Revenues, Passenger Facility Charges, to the extent irrevocably committed, and Other Available Funds, and (2) with respect to Junior Bonds, certain available Designated Revenues, 2010 Recovery Zone Economic Development Bonds (RZEDB) Subsidy Payments (Series 2010B Junior Bonds only), and Passenger Facility Charges, to the extent irrevocably committed, and Other Available Funds. There is no obligation or pledge of the full faith and credit or the ad valorem taxing powers of the City. Relevant bond documents are identified on Figure 21.

Figure 21
**Bonds and Authorizing Documents**
City of Phoenix Aviation Department

| MASTER AIRPORT REVENUE BOND ORDINANCE | | | |
|---|---|---|---|
| **Senior Bonds** | | **Junior Bonds** | |
| Senior Bond Indenture | Senior City Purchase Agreement | Junior Bond Indenture | Junior City Purchase Agreement |

| OTHER OBLIGATIONS |
|---|
| General Obligation Bonds |

| CFC ORDINANCE | |
|---|---|
| **Rental Car Facility Charge Revenue Bonds** | |
| Rental Car Bond Indenture | Rental Car City Purchase Agreement |

Source: City of Phoenix Aviation Department.

## Senior Lien Obligations

All outstanding Bonds and Parity Bonds (Senior Lien Obligations) were issued under (1) City Ordinance No. S-21974, as amended (the Bond Ordinance), (2) Bond Indentures between the CIC and the Bond Trustee, and (3) the respective City Purchase Agreements between the City and the CIC. Bonds are secured by a pledge of Net Airport Revenues.*

In Section 4.3 of the Bond Ordinance (and Section 4.6(a) of the Junior Lien City Purchase Agreement) (the Rate Covenant) the City covenants that:

> it will in each Fiscal Year establish, maintain and enforce schedules of rates, fees and charges for the use of the Airport (i) sufficient to produce Net [Airport] Revenues at least equal to 125% of the amount required to be paid into the Bond Fund from the Revenue Fund, after subtracting Other Available Funds deposited in the Bond Fund, in such Fiscal Year and after subtracting any Passenger Facility Charge Credit applicable to such Fiscal Year…and (ii) sufficient to [fund the required bond fund reserves].

To issue additional Senior Lien Obligations for other than refunding purposes, the City is required under Section 3.3 of the Bond Ordinance to meet an historical and a prospective test (together, the Additional Bonds Test):

> An officer of the City shall certify that either the Net [Airport] Revenues for the most recently completed Fiscal Year for which audited financial statements** are available or the Net Revenues for 12 consecutive months out of the most recent 18 calendar months,

*The term Net Airport Revenues means Revenues of the Airport, after provision for payment of all Cost of Maintenance and Operation.
**This is also known as the Comprehensive Annual Financial Report (CAFR).

> in each case together with Other Available Funds* deposited in the Bond Fund during such period, (i) were sufficient to satisfy the rate covenant set forth in Section 4.3 and (ii) would have been at least equal to 120% of Maximum Annual Debt Service for all Bonds to be Outstanding, including the Parity Bonds [i.e., Senior Lien Obligations] proposed to be issued; and
>
> A Consultant provides a report which projects that Net [Airport] Revenues will be sufficient to satisfy the rate covenant set forth in Section 4.3 (including any Parity Bonds [i.e., Senior Lien Obligations] to be issued) in each Fiscal Year after subtracting from the amount required to be paid into the Bond Fund from the Revenue Fund any applicable Passenger Facility Charge Credit**, which report addresses the period of time beginning with the first full Fiscal Year following the issuance of the Parity Bonds [i.e., Senior Lien Obligations] through the later of (i) three Fiscal Years following the expected date of completion (as provided to the Consultant by an officer of the City) of any construction projects to be financed at the Airport with the proceeds of the relevant Parity Bonds [i.e., Senior Lien Obligations] or (ii) five Fiscal Years following the issuance of the Parity Bonds [i.e., Senior Lien Obligations].

Senior Lien Obligations may be issued for refunding purposes without meeting the Additional Bonds Test described above, if the following conditions are met: an officer of the City certifies "that the Maximum Annual Debt Service…of all series to be Outstanding immediately after the date of…delivery of such refunding bonds is not greater than 110% of the Maximum Annual Debt Service…prior to…delivery of such refunding bonds…" and, the "bonds being refunded will no longer be Outstanding upon issuance of the refunding bonds."

The City reserved the right in the Bond Ordinance to provide for the issuance of obligations payable from Net Airport Revenues on a basis subordinate to the Senior Lien Obligations (i.e., Junior Lien Obligations and other Airport obligations as described below), but the Bond Ordinance does not specify terms and conditions applicable to such subordinate obligations other than to recognize that the flow of funds set forth therein may be altered to allow for payments to be made on a subordinate basis to the Bonds.

## Junior Lien Obligations

Through the issuance of the 2010 Junior Bonds, the 2015 Junior Bonds, and the 2017 Junior Bonds (Junior Lien Obligations), the City re-established a Junior Lien, with the terms and conditions of the Junior Lien defined in (1) Bond Indentures between the CIC and the Bond Trustee, and (2) a Junior Lien City Purchase Agreement dated August 1, 2010, (2010 Junior Lien City Purchase Agreement), a Junior Lien City Purchase Agreement dated December 1, 2015 (2015 Junior Lien City Purchase Agreement), and a Junior Lien City Purchase Agreement dated December 1, 2017 (2017 Junior Lien

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*The term Other Available Funds means unrestricted grant money and other moneys available to the Airport which are not included in the definition of Revenues or Airport Revenues. Under the City Purchase Agreements, no credit is allowed for Other Available Funds so deposited.

**The Passenger Facility Charge Credit is defined to be "the amount of principal of and/or interest to come due on specified Bonds during any Fiscal Year to which Passenger Facility Charges…have received all required governmental approvals and have been irrevocably committed…to be used to pay [Debt Service] on such specified Bonds…unless such Passenger Facility Charges…are subsequently included in the definition of Airport Revenues."

City Purchase Agreement), each between the city and the CIC (Junior Lien City Purchase Agreements). The Junior Bonds are secured by a pledge of Designated Revenues.*

In Section 4.6(b) of the Junior Lien City Purchase Agreement (the Junior Lien Rate Covenant) the City covenants that, in addition to meeting the terms and conditions of the Rate Covenant pertaining to Senior Bonds, it will in each Fiscal Year establish, maintain, and enforce schedules of rates, fees, and charges for the use of the Airport (i) sufficient to produce Designated Revenues at least equal to 110% of the annual debt service requirements of the Junior Lien Obligations (net of Other Available Funds deposited into the Bond Fund in such Fiscal Year and after subtracting any Passenger Facility Charge Credit applicable to such Fiscal Year), and (ii) sufficient to fund the required bond fund reserves.

To issue additional Junior Lien Obligations for other than refunding purposes, the City is required under Section 4.3 of the Junior Lien City Purchase Agreement to meet an historical <u>or</u> a prospective test (together, the Junior Lien Additional Bonds Test):

> An officer of the City shall certify that either the Designated Revenues for the most recently completed Fiscal Year for which audited financial statements are available or the Designated Revenues for any 12 consecutive months out of the most recent 24 calendar months were sufficient to satisfy the rate covenant set forth in Section 4.6(b) hereof and would have been at least equal to 110% of the Maximum Annual Junior Lien Debt Service for all Junior Lien Obligations to be Outstanding, including the Junior Lien Obligations proposed to be issued; or
>
> A Consultant provides a report which projects that Designated Revenues will be sufficient to satisfy the rate covenant set forth in Section 4.6(b) (including any Junior Lien Obligations to be issued) in each Fiscal Year after subtracting from the amount required to be paid into the Junior Lien Bond Fund from the Revenue Fund any applicable Passenger Facility Charge Credit, which report addresses the period of time beginning with the first full Fiscal Year following the issuance of the Junior Lien Obligations through the later of (i) three Fiscal Years following the expected date of completion (as provided to the Consultant by an officer of the City) of any construction projects to be financed at the Airport with the proceeds of the relevant Junior Lien Obligations or (ii) five Fiscal Years following the issuance of the Junior Lien Obligations.

Junior Lien Obligations may be issued for refunding purposes without meeting the Junior Lien Additional Bonds Test described above, if certain conditions are met.

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*The term Designated Revenues means Net Airport Revenues after provision for payment of Senior Lien Obligations.

### Other Airport Obligations

Other Airport obligations are subordinate to the Senior Lien Obligations and Junior Lien Obligations and currently consist of General Obligation Bonds and the obligations to the lender under Short-Term Financing Program.

- Airport general obligation bonds are general obligations of the City, but no Airport Revenues are formally pledged to such bonds. Although the City's payment obligations are secured by its full faith and credit, the City has historically paid the principal and interest on these obligations from the Airport Improvement Fund, consistent with the provisions of the Bond Ordinance pertaining to the priority of payments from Net Airport Revenues.

- The City has a $200 million Short-Term Financing Program under a revolving credit agreement (Short-Term Financing Program). The Short-Term Financing Program previously utilized commercial paper and may do so in the future. The Short-Term Financing Program is supported by Net Airport Revenues on a basis subordinate to the Senior Lien Obligations and the Junior Lien Obligations, consistent with the provisions of the Bond Ordinance pertaining to the priority of payments from Net Airport Revenues. As of the date of this Report, the City's outstanding principal balance on draws was $100 million for the Terminal 3 Modernization project (to be repaid with proceeds from the 2018 Senior Bonds). The City intends to continue the Short-Term Financing Program and use it to fund the major projects in the Aviation CIP on an interim basis.

### Special Revenue Obligations

The City is the obligor with respect to one issue of special revenue obligations that relates to Special Purpose Facilities, which is the Rental Car Facility Charge Revenue Bonds, Series 2004, issued to fund construction of the RCC. These obligations are not secured by Net Airport Revenues and are payable solely from Customer Facility Charges related to the operational activity at the RCC. Debt service relating to special revenue obligations is excluded from annual debt service.

## AVIATION CAPITAL IMPROVEMENT PROGRAM

The Aviation Department has developed an Aviation Capital Improvement Program (Aviation CIP)* through FY 2023 with project costs totaling $2.0 billion. For purposes of this Report, an additional $75.0 million of contingency spending is included during the Forecast Period. The 2018 Senior Bonds will repay the portions of the Short-Term Financing Program used to fund a portion of the Terminal 3 Modernization project. The largest projects in the Aviation CIP are the PHX Sky Train Stage 2, The Terminal 3 Modernization, and the Terminal 4 Concourse S1, which are estimated to cost $745 million, $580 million, and $310 million, respectively. Additionally, the City has completed Terminal 4 International Facility Improvements project and will be embarking on a West GTC Station project. The project categories in the Aviation CIP and their estimated costs by year are shown on Exhibit A-1. The project categories in the Aviation CIP and their estimated funding are shown on Exhibits A-2 and A-3. Major categories of projects are explained below.

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*The Aviation Department has developed an Aviation Capital Improvement Program (Aviation CIP) through FY 2023 with project costs totaling $2.0 billion. For purposes of this Report, the major projects (PHX Sky Train Stage 2, Terminal 3 Modernization, Terminal 4 Concourse S1) were adjusted to be represented on a cash flow basis rather than a budgetary basis.

The Aviation Department plans to fund certain project costs of the Aviation CIP through Airport Improvement Program (AIP) grants administered by the FAA, state grants, Passenger Facility Charge (PFC) revenues, Customer Facility Charge (CFC) revenues, Airport Improvement Funds (or local funds), and the proceeds of bonds. The City uses a Short-Term Financing Program to provide interim funding for large Aviation CIP projects including the Terminal 3 Modernization, Terminal 4 Concourse S1, and PHX Sky Train Stage 2 projects, and plans to issue additional bonds during the Forecast Period.

The Aviation Department monitors demand forecasts and facility capacity frequently and is obliged periodically to respond to unanticipated requirements for capital investments. Management is responsive to a rapidly changing aviation industry that is affected by global, national, and local economic and other factors (see the chapter "Airline Traffic Analysis" and caption "Key Factors Affecting Future Airline Traffic"). Such factors could affect the traffic levels at Sky Harbor and thus could affect the demand and need for certain capital projects. Therefore, the Aviation CIP as presented in this Report may be modified in future years.

## Terminal 3 Modernization

The Terminal 3 Modernization project is a multiyear program to enhance the customer experience and provide a more efficient terminal for passengers. Major features of the project include a consolidated security checkpoint (completed fall 2016), new common use ticket counters (completed fall 2016), additional baggage processing capacity, baggage carousels, replacement of gates, and expanded passenger drop-off curb. The multi-phase, design-build project includes three major components: Terminal Processor, South Concourse, and North Concourse. The project is expected to be complete in 2020.

The Terminal 3 Modernization project includes a gate replacement and infrastructure upgrade that will allow Sky Harbor to close an aging Terminal 2 and relocate airlines to Terminal 3. Terminal 2 and Terminal 3 rely on systems that are over 30 years old and have capacity deficiencies or operational inefficiencies that will be significantly improved by the renewal of these systems. The upgrades are expected to lower operating costs, raise the level of service, and increase system reliability. Greater efficiency will be achieved by converting to common use ticket counters and gates that increase utilization though technology. The project is expected to be delivered to a LEED Silver standard and will move passengers to their gate in a way that is faster, more pleasant, and in a fashion that drives increased revenue through food, beverage, and retail concessions.

Figure 22
**Terminal 3 Modernization Project**
**Schedule of Deliverables**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport

| | **Anticipated Completion** |
|---|---|
| New Ticket Hall, new Security Checkpoint, new Vertical Circulation Cores, Consolidated Campus Building | Completed, Fall 2016 |
| New Baggage Area and Circulation, completion of Terminal Processor, additional Concession and Airline Space | In progress, Spring 2019 |
| Construct New South Concourse – 10 Gates | In progress, Spring 2019 |
| Renovate North Concourse – 10 Gates | Fall 2020 |
| Addition to South Concourse – 5 Gates | Fall 2020 |

Source: City of Phoenix Aviation Department.

## PHX Sky Train

The PHX Sky Train is an automated people mover system that will connect all of the Sky Harbor's terminals and parking facilities to VALLEY METRO Light Rail (regional public transit system) and the RCC. The train is an integral part of the airport's transportation infrastructure plan and an important link to the regional transportation system. It is designed to be a long-term solution to growing traffic congestion in and around Sky Harbor. The project will be completed in three stages (Stage 1, Stage 1a, and Stage 2). The first two stages are complete and in service, connecting the light rail system and the Sky Harbor's largest parking facility to Terminals 3 and 4, with a walkway to Terminal 2. These two project stages were finished on schedule and nearly $45 million under the combined budget of $884 million. When complete by mid 2022, Stage 2 will link Stage 1 and Stage 1a with the future West GTC and the RCC.

The PHX Sky Train's electric train cars run twenty-four hours a day arriving at a station approximately every three minutes during peak periods, delivering passengers to their destinations within five minutes after boarding. Since its opening in April 2013, the PHX Sky Train has carried over 20 million passengers and replaced busing as the mode of transportation between terminals and parking facilities.

## Terminal 4 Concourse S1

On March 8, 2017, Southwest President Tom Nealon announced that Southwest Airlines would be increasing service to the Phoenix area. This announcement came with the request for the Airport to construct the final concourse at Terminal 4 and a commitment to occupy the associated gates upon its completion. The future S1 concourse will be located on the southwestern corner of Terminal 4 when it is completed in early 2022. With approximately 8 planned gates, the S1 concourse will allow Southwest the additional capacity the airline needs to continue to grow in the Phoenix market. The project scope will also include a second bridge connector from the south concourses at Terminal 4 to the north. This connection will enable greater security efficiency and flexibility as passengers will be able to access any of the north or south gates from any one of the terminal's 4 security checkpoints.

## West GTC Station

The West GTC Station is planned to be an approximately 20-acre commercial development, potentially featuring a mix of hotel, commercial office building, and parking garage uses. The development will be located on airport property with direct access to a PHX Sky Train station. The West GTC Station will be at the center of the future development. The completed 5-mile train system is expected to transport a total of more than 80,000 passengers per day when the Rental Car Center extension opens in 2022. The Airport issued a Request for Qualifications from interested developers of which four have been qualified to submit development concepts to be evaluated and potentially pursued through a future procurement during FY 2019. The City's investment in the West GTC Station is included in the PHX Sky Train budget.

Ancillary developments described (e.g., hotel, commercial, parking) may be delivered using public-private-partnerships and therefore are not included in the Aviation CIP. Potential revenues from such ancillary developments (i.e., land lease or 3rd party payments) are not reflected in the forecast of Net Revenues contained in this Report. The City plans to advance with said developments only in circumstances where Net Revenues are enhanced above and beyond baseline conditions assuming no ancillary developments advance.

## Other Aviation CIP Projects

Other Aviation CIP projects are listed below:

- **Air Cargo ($5.2 million):** Includes work to be done on the West Apron of the West Air Cargo area to add more aircraft parking positions.

- **Development Studies ($5.3 million):** Projects in this category include planning and development studies.

- **General Aviation ($10.0 million):** Projects include apron and hangar repair projects.

- **Infrastructure ($4.5 million):** Project to create the Geographic Information System (GIS) data and Airport Airspace analysis report for FAA, hardware upgrades, and customer self-service additions.

- **Land Acquisition ($3.9):** Acquisition of land near the Airport.

- **Parking Facilities ($14.4 million):** Includes lighting upgrades and other improvements.

- **Roadways ($3.7 million):** Includes roadway landscaping and Terminal 4 roadway lighting improvements.

- **Runway and Taxiway Improvements ($117.0 million):** Projects include Terminal 4 north apron reconstruction, Terminal 2 concourse demo and apron reconstruction , runway 8-26 Keel reconstruction, connector reconstruction, taxiway pavement rehabilitation and maintenance; infield pavement projects; and utility access upgrades.

- **Security Facilities ($3.7 million):** Projects related to Sky Harbor security include construction of command center and emergency operations center, Terminal 3 and 4 surveillance camera upgrades, and a comprehensive airport security action plan.

- **Terminal 3 ($0.6 million):** Projects include South Concourse electric GSE chargers and terminal development concept design.

- **Terminal 4 ($29.6 million):** Projects in this category include carpet replacement with Terrazzo flooring, retail infrastructure improvements, Terminal 4 retrofit study, Terminal 4 transfer bridges, Master Plan signage implementation, and restroom remodeling.

- **Deer Valley Airport ($50.0 million):** Projects include aircraft run-up area improvements, taxiway connector improvements and relocation, hangar replacement, taxiway construction, DVT West Perimeter Road phase 1, tie-down ramp construction, North Ramp reconstruction, and parking lot improvements.

- **Goodyear Airport ($36.9 million):** Projects include hangar and apron rehabilitation, reconstruction of public access road, property purchases, master plan updates, drainage improvements, and taxiway rehabilitation and strengthening.

- **Phoenix-Mesa Gateway Airport ($5.2 million):** The City is providing limited capital funding as part of its investment in Mesa Gateway.

- **Other Miscellaneous and Contingency ($33.1 million):** This amount is funding for aviation contingency, including planned terminal and airfield modifications, security and communication enhancement, and potential grant projects. Funds ($75.0 million) are also established for certain years in the forecast. Contingency funds and projects have not yet been adopted by City Council.

## PLAN OF FINANCE

The major sources of funds for projects in the Aviation CIP are shown in Exhibit A-2 and Exhibit B. The Aviation Department plans to fund certain project costs of the Aviation CIP through Airport Improvement Program (AIP) grants administered by the FAA, passenger facility charge (PFC) revenues, customer facility charges (CFCs), Airport Improvement Funds, and the proceeds of borrowings.

The City is eligible to receive FAA grants under the AIP for up to 75% of the costs of eligible projects. Grants are received as either entitlement grants, based on the number of enplaned passengers, program funding and formulas, or as discretionary grants, based on FAA determination of the priority of projects at airports nationally. FAA authorization and AIP funding have been approved through the FAA Reauthorization Act of 2018.

In the future the City may issue additional Senior Lien Obligations under the Bond Ordinance on parity with other outstanding Senior Lien Obligations.  Additionally, the City may issue additional Junior Lien Obligations on parity with outstanding Junior Lien Obligations.  The City may also issue other obligations.  The plan of finance for the 2018 Senior Bonds and future bonds is described below.

## 2018 SENIOR BONDS – PLAN OF FINANCE

The City intends to issue the 2018 Senior Bonds, in the par amount of $229,465,000.*  Proceeds from the 2018 Senior Bonds are expected to be used for the following purposes:

- Repay $100 million of Short-Term Financing Program funds used for portions of the Terminal 3 Modernization project.
- Fund an additional $127 million of ongoing expenditures, primarily in FY 2019, for the Terminal 3 Modernization project.
- Fund the required bond fund reserves.
- Pay the costs of issuing the 2018 Senior Bonds, including underwriters' discount and financing, legal, and other costs.

## FUTURE BONDS

For the purposes of this Report, additional Senior Lien and Junior Lien Obligations are assumed to be issued driving the Forecast Period.

- The Senior Lien Obligations are assumed in FY 2021 (Series 2020 Senior Improvement Bonds) to fund portions of Terminal 4 Concourse S1.
- The Junior Lien Obligations are assumed in FY 2020 (Series 2019 Junior Improvement Bonds) to fund portions of the PHX Sky Train Stage 2.

No other projects in the Aviation CIP assume funding from additional bonds.

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*Preliminary and subject to change.

## PASSENGER FACILITY CHARGES

The City's PFC program is administered in accordance with regulations set forth in 14 Code of Federal Regulations (CFR) Part 158. As discussed in the previous section under the caption "Historical Passengers and Airline Activity" under the subsection "PFC Eligible Passengers," PFCs are fees imposed on enplaned passengers up to a $4.50 level for the purpose of generating revenues for airport projects that preserve or enhance safety, security, or capacity; mitigate noise impacts; or provide opportunities for enhanced competition among air carriers. Allowable costs under the regulations include reasonable and necessary costs to carry out approved projects, including payment of debt service.

### PFC Approvals

The City imposes a $4.50 PFC per eligible enplaned passenger at Sky Harbor. The City has the authority to collect and use $3.0 billion for PFC-eligible projects. The City's largest application, known as PFC 6, as amended, provides collection authority in the amount of $1,972 million. (See Table 25.)

Table 25
**Summary of PFC 6 Approval**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(in thousands)

| | Pay-as-you-go | Bond Funds | Total |
|---|---|---|---|
| PHX Sky Train *(a)* | | | |
| Construction | $ 270,000 | $ 753,072 | $ 1,023,072 |
| Interest | - | 765,564 | 765,564 |
| Subtotal | $ 270,000 | $ 1,518,636 | $ 1,788,636 |
| Other Projects | | | |
| Construction | $ 139,308 | $ 19,525 | $ 158,833 |
| Interest | - | 24,936 | 24,936 |
| Subtotal | $ 139,308 | $ 44,461 | $ 183,769 |
| Total | $ 409,308 | $ 1,563,097 | $ 1,972,405 |

*(a)* Includes funding for PHX Sky Train Stage 1, Stage 1a, and Stage 2.

Source: FAA Final Agency Decision for 09-09-C-02-PHX, February 20, 2015.

The PFC 6 application provided approval for the PHX Sky Train project in the amount of $1,788.6 million to fund Stage 1, Stage 1a, and Stage 2. The PHX Sky Train was approved at a $4.50 PFC level as a single project, although it was recognized that construction would be sequenced based upon available financial capacity and other considerations. The approval included amounts for construction, as well as interest and financing costs associated with the planned issuance of bonds.

The City's most recently approved application, known as PFC 8, was approved by the FAA in the amount of $70.0 million in February 2018. PFC 8 provides approval for various PFC eligible projects including construction related to the Terminal 3 Modernization project.

The City is in the process of developing a new PFC application, known as PFC 9. The City plans to submit the application to the FAA in calendar year 2019. PFC 9 will be used to fund other PFC eligible projects, possibly including apron work around Terminal 4 S1 Concourse and Terminal 3 South Concourse. Additionally, the airport plans to upgrade Terminal 4 Fire Alarm Systems. For purposes of this Report, it is assumed that the Airport will receive approval for PFC 9 in FY 2019. See Exhibit D for a forecast of PFC revenues and expenditures by year.

Through June 30, 2018, the City had received $1,615.0 million in PFC Revenues. (See Table 26.)

Table 26
**PFC Authority and Revenues**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(as of June 30, 2018; in millions)

| PFC Applications | | Approval Amount | | Revenues Applied | | Remaining Authority |
|---|---|---|---|---|---|---|
| Closed PFCs *(a)* | $ | 875.2 | $ | 875.2 | $ | - |
| Open PFCs | | | | | | |
| PFC 6 | $ | 1,972.4 | $ | 637.1 | $ | 1,335.3 |
| PFC 7 | | 82.2 | | 66.9 | | 15.2 |
| PFC 8 | | 70.0 | | 35.9 | | 34.1 |
| Subtotal Open PFCs | $ | 2,124.5 | $ | 739.9 | $ | 1,384.6 |
| PFC 9 Future *(b)* | | 21.6 | | - | | 21.6 |
| Total All PFC Applications | $ | 3,021.4 | $ | 1,615.1 | $ | 1,406.3 |

*(a)* Closed PFCs are PFC applications that have been physically and financially completed and therefore closed and are no longer active.
*(b)* PFC 9 to be submitted to the FAA.

Sources: Federal Aviation Administration and City of Phoenix Aviation Department.

## PFC Framework

Under the Bond Ordinance and Senior and Junior Lien City Purchase Agreements, PFCs are excluded from the definition of Airport Revenues and Designated Revenues, respectively. Principal and interest due on specified Senior Lien Obligations* and Junior Lien Obligations, to which PFCs have been irrevocably committed or otherwise held in trust and set aside to pay debt service (the Passenger

*Currently there are no Senior Lien Obligations to which PFCs have been irrevocably committed.

Facility Charge Credit and Junior Lien Passenger Facility Charge Credit, respectively) are excluded from debt service for the purposes of the Additional Bonds Test, Junior Lien Additional Bonds Test, Rate Covenant, and Junior Lien Rate Covenant.

Annual PFC Revenues are irrevocably committed in an amount equal to:

- 100% of the Junior Lien Airport Revenue Bonds Series 2010A and Series 2010B,
- 30% of the Junior Lien Airport Revenue Bonds Series 2015A,
- 100% of the Junior Lien Airport Revenue Refunding Bonds Series 2015B, and
- 100% of the Junior Lien Airport Revenue Refunding Bonds Series 2017D.

The irrevocable commitment of annual PFC Revenues is to the extent received by the City in any Fiscal Year, beginning on the date of issuance and ending June 30, 2023 (the Commitment Period), unless subsequently extended or reestablished by the City in its discretion, to pay debt service. Junior Bonds are secured by Designated Revenues (Net Airport Revenues after making all payments required for the benefit of the Senior Lien Obligations), irrevocably committed PFC Revenues, and irrevocably committed 2010 RZEDB Subsidy Payments pertaining to the Series 2010B Junior Bonds.

## 2010 RZEDB Subsidy Payments

The CIC and the City expect to receive cash subsidy payments rebating a portion of the interest on the Series 2010B Junior Bonds from the United States Treasury (the 2010 RZEDB Subsidy Payments). The City covenants that it will take reasonable actions necessary to apply for and receive the 2010 RZEDB Subsidy Payments and, irrevocably commits, for the life of the bonds, to transfer such amounts to the Series 2010B Interest Subaccount of the PFC Interest Account (the depository for the Junior Lien Passenger Facility Charge Credit). Any 2010 RZEDB Subsidy Payments received by the CIC or the City will not constitute Airport Revenues, but will be irrevocably committed by the City and CIC towards the interest payments on the 2010B Junior Bonds. Sequestration reductions were 6.9% of the subsidy payment for the federal government's fiscal year ending September 30, 2017, 6.6% for federal fiscal year ending September 30, 2018, and will be 6.2% for federal fiscal year ending September 30, 2019.

## RZEDB and PFC Revenue Forecast Assumptions

The Debt Service Requirements for the Junior Lien Obligations to be paid from the 2010 RZEDB Subsidy Payments and PFC Revenues during the Forecast Period (see Exhibit C) in this Report are excluded from the calculation of debt service coverage as permitted by the Bond Ordinance and Junior Lien City Purchase Agreement. For the purposes of this Report, we assumed the City will continue to collect a $4.50 PFC per eligible enplaning passenger (net fee of $4.39 after airline compensation). Exhibit D contains the Application and Use of PFC Revenues assuming the 2010 RZEDB Subsidy Payments (45% of interest) less a sequestration reduction (6.2%) are received on a timely basis through the Forecast Period. Should the subsidy be less than the full amount, the City plans to transfer additional PFC Revenues for payment of the Series 2010B Junior Bonds.

PFC Revenues were assumed to be used in the following manner during the Forecast Period:

- To pay 100% debt service on the Series 2010A and Series 2010B Junior Bonds, 30% of debt service on the Series 2015A Junior Bonds, and 100% debt service on the Series 2015B Junior Bonds and the Series 2017D Junior Refunding Bonds, through the irrevocable commitment period.

- To pay debt service on the anticipated Series 2019 Junior Improvement Bonds, which are expected to fund a portion of PHX Sky Train Stage 2.

- For existing approved projects contained in PFC 6, PFC 7, and PFC 8.

- For other PFC-eligible projects contained in the Aviation CIP, for which PFC approval will be obtained before utilizing PFC revenues on such projects. For example, certain projects or contingency identified in the Aviation CIP are funded in whole or part using PFC 9 or future PFC funds, which are not yet approved by the FAA. For the purposes of this Report, we classify such projects as PFC 9 or Future PFC funded, and we assume the PFC funds will be approved as necessary during the Forecast Period such that PFCs can be utilized as a funding source.

## DEBT SERVICE REQUIREMENTS

Exhibit C presents estimated debt service requirements on the Senior Lien Obligations and Junior Lien Obligations.

### Other Airport Obligations

#### *General Obligation Bonds*

Exhibit C also presents estimated debt service requirements on the outstanding Airport General Obligation bonds. Outstanding principal on this obligation as of July 1, 2018 was $7.9 million.

#### *Short-Term Financing Program*

The City has a Short-Term Financing Program which it intends to use for interim funding of Aviation CIP projects. The current $200 million Short-Term Financing Program is assumed to be maintained throughout the Forecast Period. For the purposes of this Report, it is assumed that the Short-Term Financing Program through FY 2023 will be used for interim funding for major projects in the Aviation CIP and will be repaid through periodic issuance of additional bonds.

The Short-Term Financing Program is subordinate to the Senior Lien Obligations and the Junior Lien Obligations. The Short-Term Financing Program is supported by Junior Subordinate Lien Revenues.* Costs associated with the Short-Term Financing Program were estimated by Frasca & Associates based on the following assumptions: no amortization of principal throughout the Forecast Period; an interest rate of 2.0% in FY 2019 and 3.0 % thereafter; and commitment fees based upon the terms of the existing revolving loan agreement. Short-Term Financing Program requirements are not included in the debt service requirements on Exhibit C and are reflected as an Airport Improvement Fund expenditure on Exhibit G.

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*Junior Subordinate Lien Revenues is defined in the Short-Term Financing Program documents.

## COST OF MAINTENANCE AND OPERATION

In the Bond Ordinance, the term Cost of Maintenance and Operation (or operating expenses) means "all expenditures (exclusive of depreciation and interest on money borrowed) which are necessary to the efficient maintenance and operation of the Airport and its facilities, such expenditures to include the items normally included as essential expenditures in the operating budgets of municipally owned airports." This Report relies upon the City's actual expenditures on a budgetary basis as reported in the Aviation Department's audited CAFR, Schedule 1, as adjusted to comply with the Bond Ordinance for the best representation of historical Cost of Maintenance and Operation (See section "Accounting Bases" below).

### Recent Historical Trends

Operating expenses in FY 2016 and FY 2017 grew 1.8% and 6.5% respectively due primarily to incremental expenses associated with the PHX Sky Train Stage 1 project. Operating expenses in FY 2016 grew 1.8%, and include PHX Sky Train Stage 1a expenses for a partial year of operation and realized contractual savings due to the decrease in busing services at the Airport.

### FY 2019 Budget

Operating expenses in the FY 2019 budget are expected to increase 6.5% over the FY 2018 estimated actual. The largest increases are in Contractual Services, which are expected to increase approximately $9.0 million. This increase is primarily due to difference between budgeted and actual expenses incurred relative to airfield pavement maintenance and security requirements (see Tables 27 and 28).

Table 27

**Operating Expenses by Character**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(Fiscal Years ending June 30; in thousands)

| | Actual 2017 | Estimate *(a)* 2018 | Budget *(a)* 2019 | % Change FY '17-'18 | % Change FY '18-'19 |
|---|---|---|---|---|---|
| Personal Services | $ 116,353 | $ 120,461 | $ 127,293 | 3.5% | 5.7% |
| Contractual Services | 113,745 | 112,086 | 121,327 | (1.5) | 8.2 |
| Supplies | 12,070 | 11,225 | 11,274 | (7.0) | 0.4 |
| Equipment/Minor Improvements | 2,948 | 4,485 | 4,479 | 52.1 | (0.1) |
| Total Budgeted Operating Expenditures | $ 245,116 | $ 248,258 | $ 264,374 | 1.3% | 6.5% |

| | % Total 2017 | % Total 2018 | % Total 2019 |
|---|---|---|---|
| Personal Services | 47.5% | 48.5% | 48.1% |
| Contractual Services | 46.4 | 45.1 | 45.9 |
| Supplies | 4.9 | 4.5 | 4.3 |
| Equipment/Minor Improvements | 1.2 | 1.8 | 1.7 |
| Total Budgeted Operating Expenditures | 100% | 100% | 100% |

Notes: Figures may not add to totals shown due to rounding.

*(a)* Amounts represent the Aviation Department's estimate for FY 2018 and budget for FY 2019.

Source: City of Phoenix Aviation Department.

Table 28
**Operating Expenses by Division**
**2019 Budget**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(Fiscal Year ended June 30, 2019; in thousands)

| | Personal Services | Contractual Services | Supplies | Equipment/ Minor Imp. | Other Services | Total |
|---|---|---|---|---|---|---|
| Aviation Divisions | | | | | | |
| Facilities & Services | $ 39,331 | $ 50,288 | $ 6,823 | $ 2,622 | $ - | $ 99,064 |
| Operations | 13,575 | 27,266 | 1,173 | 425 | - | 42,439 |
| Technology | 5,848 | 9,262 | 2,114 | 862 | - | 18,085 |
| Aviation Administration | 2,913 | 3,041 | 19 | - | - | 5,972 |
| Business & Properties | 3,860 | 12,205 | 19 | - | - | 16,084 |
| Public Relations | 2,319 | 3,223 | 97 | - | - | 5,638 |
| Financial Management | 2,216 | 994 | 14 | - | 220 | 3,443 |
| General Aviation | 3,335 | 1,370 | 234 | - | - | 4,939 |
| Planning & Environmental & CMD | 2,058 | 2,785 | 6 | - | - | 4,849 |
| Design & Construction | (614) | 2,681 | 21 | - | - | 2,088 |
| Contracts & Services | 2,385 | 2,408 | 9 | - | - | 4,802 |
| Public Safety & Security | 4,940 | 5,805 | 746 | - | 350 | 11,841 |
| Aviation Divisions: Subtotal | $ 82,164 | $ 121,327 | $ 11,274 | $ 3,909 | $ 570 | $ 219,245 |
| | | | | | | |
| Inter-Departmental Services | | | | | | |
| Police | $ 23,098 | $ - | $ - | $ - | $ - | $ 23,098 |
| Fire | 15,437 | - | - | - | - | 15,437 |
| Parks & Recreation | 11 | - | - | - | - | 11 |
| Information Technology | 678 | - | - | - | - | 678 |
| Law & Civil | 1,229 | - | - | - | - | 1,229 |
| Audit | 651 | - | - | - | - | 651 |
| Other | 4,025 | - | - | - | - | 4,025 |
| Inter-Departmental Services: Subtotal | $ 45,129 | $ - | $ - | $ - | $ - | $ 45,129 |
| | | | | | | |
| Total Expenses | $ 127,293 | $ 121,327 | $ 11,274 | $ 3,909 | $ 570 | $ 264,374 |

Note: Amounts represent the Aviation Department's budget for FY 2019.

Source: City of Phoenix Aviation Department.

### *Personal Services*

Personal services are budgeted at $127.3 million in FY 2019, or 48.1% of total operating expenses. Personal services operating expenses are directly related to salaries and employee benefits. Overall, personal services expense is budgeted to increase $3.8 million compared to FY 2018.

Interdepartmental charges/credits, which are included in personal services, are budgeted at $45.1 million in FY 2019, or 35.4% of total operating expenses. Interdepartmental charges/credits include the cost of City services related to the Airport. Major services include: police ($23.1 million), fire ($15.4 million), direct City administrative services ($4.7 million, including internal audit, information technology, finance, and others), and City legal services ($1.2 million).

### *Contractual Services*

In FY 2019, contractual services are budgeted at $121.3 million, or 45.9% of total operating expenses, making it the largest expense category. Major elements of the contractual services category are summarized below.

- **Utilities.** Utilities are $20.3 million in the FY 2019 budget and include electricity, water, solid waste disposal, and gas, telephone, and sewer services.

- **Public Parking.** Parking contracts are budgeted at $13.2 million in the FY 2019 budget and major contractors includes Ace Parking Management and Scheidt & Bachmann USA. Ace Parking Management provides general parking management oversight, cleaning, maintenance, and security monitoring services. Scheidt & Bachmann provides revenue control services. The City retains all revenues from the public parking operations.

- **Baggage Handling**. Elite Line Services operates, maintains, and repairs certain baggage handling systems at a FY 2019 budgeted cost of $2.0 million.

- **Bus Service.** Transfer Services provides the airport-wide shuttle bus services at Sky Harbor for a FY 2018 budgeted cost of $14.2 million. Services covered under the contract include Rental Car Center and emergency busing. The contract expires June 2020 and is based on a per hour fee which includes overhead.

- **Custodial Services.** The budgeted amount for contractual custodial services in FY 2019 is $9.3 million.

- **PHX Sky Train Operations.** Bombardier Transportation Holding USA, Inc. was awarded a 10-year contract to Design-Build-Operate-Maintain the PHX Sky Train Stage 1 and 1a. The budgeted amount for operating and maintenance services in FY 2019 is $9.3 million.

### *Supplies and Equipment/Minor Improvements*

Remaining operating expenses are primarily related to supplies and equipment/minor improvements. In FY 2019, these two expense categories are collectively budgeted at $15.2 million, or 5.7% of total operating expenses.

## FY 2019-2023 Forecast

The FY 2019-2023 forecast includes a base forecast of operating expenses with no incremental operating expenses assumed. A forecast of total operating expenses is summarized below.

### *Base Cost of Maintenance and Operation*

Cost of Maintenance and Operation expenses are forecast to increase at an annual rate of 3.1% in FY 2019 through FY 2023. The Aviation Department expects to continue to constrain expense growth over the Forecast Period to help offset the impact of the Aviation CIP on airline tenants that are charged on the basis of cost recovery, as described earlier.

### *Incremental Cost of Maintenance and Operation*

The Aviation Department assumes no additional incremental costs of Maintenance and Operation related to the Terminal 3 Modernization project since incremental increases would be offset by savings related to the closure of Terminal 2 for airline operations. Additionally, the Terminal 3 Modernization project includes a number of investments (as described earlier) that enable the Aviation Department to operate and maintain Terminal 3 more efficiently. For these reasons the Aviation Department assumes incremental savings of $4.0 million in FY 2021 (full year).

The Aviation Department assumes incremental costs of $2.5 million in FY 2022 (partial year) and $5.2 million in FY 2023 (full year) related to the Terminal 4 Concourse S1 project.

The Aviation Department assumes no additional incremental costs of Maintenance and Operation related to the PHX Sky Train Stage 2 project since incremental increases would be offset by savings related to the rental car busing operations which are projected to be $15.1 million in FY 2019.

### *Total Cost of Maintenance and Operation*

The total Cost of Maintenance and Operation are shown in Exhibit E. The City believes the forecast rate of expense growth (3%) is reasonable based upon (1) historical trends, (2) the FY 2019 budget, (3) projected O&M costs (and savings) for new facilities, and (4) Management objectives relative to future growth and expectations regarding internal staffing and contracted services.

## Central Service Cost Allocation

Central service cost allocation expenses are charges for certain City services provided to the Aviation Department and not otherwise directly charged to the Aviation Department. The amount of allocation is determined on an annual basis by the City Finance Department. The Aviation Department does not directly pay these expenditures through its operating budget nor does it plan for these costs through its operation and maintenance budget.

The Cost of Maintenance and Operation as defined in the Bond Ordinance and clarified by bond counsel does not include the central service cost allocation. The forecast of Net Airport Revenues, Designated Revenues, Rate Covenant, and Additional Bonds Test do not include this allocation, which is directly paid using the Airport Improvement Fund to the extent funds are available. In FY 2019 the allocation is budgeted at $9.7 million. Thereafter, the allocation is forecast to grow at a rate of 2.0% per year.

## AIRPORT REVENUES

The term Revenues (or Airport Revenues) means all revenues or income received by the City directly or indirectly from the use and operation of the Airport, except for certain exclusions. (See Table 29.) Revenues also include interest on invested money and profits realized from the sale of investments held in funds established pursuant to the Bond Ordinance, except for the Construction Fund, the Project Fund, and the Rebate Fund.* This Report relies upon the Aviation Department's audited CAFR, Schedule 1, as adjusted to comply with the Bond Ordinance, as the best representation of actual historical Revenues (See section "Accounting Bases" below).

Excluded from Revenues are monies received from state and federal grants, proceeds received from property damage insurance claims that are used to repair or replace Airport facilities or property, PFC Revenues, 2010 RZEDB Subsidy Payments, proceeds received from the sale of any bonds or other obligations, and Special Purpose Facilities revenues.

### Landing and Terminal Fees

Landing and terminal fees include airline revenues; nonairline terminal revenues; and miscellaneous other landing and terminal fees.

#### *Airline Revenues*

As noted earlier under the caption "Framework for Airport System Financial Operations" under the subsection "Airline Rates and Charges" the rate budget is established at the beginning of the fiscal year. For purposes of this Report, it is assumed that the City will annually calculate and adjust airline fees during the Forecast Period using a compensatory rate-setting methodology, and that airlines at Sky Harbor will pay such charges.

Under the compensatory rate-setting methodology, components of the Terminal 3 Modernization project will be included in the rate base through debt service and amortization of City funded assets as these components are completed. This results in higher forecasted year-over-year airline revenue increases in FY 2019 and FY 2020 of 4.6% and 9.7% respectively.

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*The Construction Fund is a special fund into which proceeds of Senior Lien Obligations issued for the purpose of improving and extending the Airport are deposited. The Rebate Fund is a special fund created to collect interest earnings subject to "rebate" under United States Treasury Regulations.

Table 29

**Total Revenues**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

(Fiscal Years ending June 30; in thousands)

| | 2018 Estimate | | 2023 Forecast | | '18-'23 |
|---|---|---|---|---|---|
| | Revenues | % Ttl | Revenues | % Ttl | CAGR |
| **Operating Revenues** | | | | | |
| Landing and Terminal Fees | | | | | |
| Airline Landing Fees | $ 52,090 | 13.0% | $ 59,908 | 13.1% | 2.4% |
| Airline Terminal Fees | 81,244 | 20.3 | 110,625 | 24.2 | 5.3 |
| Total Airline Revenues (less Baggage System Fees) | $ 133,333 | 33.2% | $ 170,534 | 37.4% | 4.2% |
| Baggage System Fees | 3,870 | 1.0 | 4,568 | 1.0 | 2.8 |
| Jetway Rental | 703 | 0.2 | 703 | 0.2 | 0.0 |
| Common Use | 6,965 | 1.7 | 9,501 | 2.1 | 5.3 |
| FIS Fees | 2,219 | 0.6 | 2,359 | 0.5 | 1.0 |
| Total Airline Revenues | $ 147,090 | 36.7% | $ 187,665 | 41.1% | 4.1% |
| Nonairline Terminal Revenues | 36,975 | 9.2 | 39,590 | 8.7 | 1.1 |
| Misc. other Landing and Terminal Fees | 15,843 | 3.9 | 17,662 | 3.9 | 1.8 |
| Total Landing and Terminal Fees | $ 199,907 | 0.5 | $ 244,918 | 0.5 | 3.4 |
| Ground Transportation | | | | | |
| Parking (public and Employee) | $ 87,948 | 21.9% | $ 91,824 | 20.1% | 0.7% |
| Car Rentals | 41,716 | 10.4 | 42,295 | 9.3 | 0.2 |
| Total parking and Car Rentals | $ 129,664 | 32.3% | $ 134,118 | 29.4% | 0.6% |
| other | 8,776 | 2.2 | 13,010 | 2.9 | 6.8 |
| Total Ground Transportation | $ 138,440 | 34.5% | $ 147,128 | 32.2% | 1.0% |
| Hangars | $ 4,079 | 1.0% | $ 5,471 | 1.2% | 5.0% |
| Land Rental | 18,209 | 4.5 | 17,186 | 3.8 | -1.0 |
| Building and Facility Rentals | 3,281 | 0.8 | 3,174 | 0.7 | -0.5 |
| Facility Lease Reimbursement (RCC) | 8,140 | 2.0 | 8,640 | 1.9 | 1.0 |
| other | 6,811 | 1.7 | 7,056 | 1.5 | 0.6 |
| Total other Revenues | $ 40,520 | 10.1% | $ 41,528 | 9.1% | 0.4% |
| **Total operating Revenues** | $ 378,867 | 94.4% | $ 433,574 | 95.0% | 2.3% |
| **Interest Income** | 7,019 | 1.7 | 5,491 | 1.2 | -4.0 |
| **Total Revenues prior to RCC Reimbursement** | $ 385,886 | 96.2% | $ 439,065 | 96.2% | 2.2% |
| **RCC Busing Service Reimbursement (a)** | 15,309 | 3.8 | 17,357 | 3.8 | 2.1 |
| **Total Revenues** | $ 401,195 | 100.0% | $ 456,422 | 100.0% | 2.2% |

Notes: Columns may not add to total due to rounding.

*(a)* Reimbursement of Transportation O&M Expenses for Rental Car busing using available CFC revenues.

Sources: City of Phoenix Aviation Department and LeighFisher.

## Common Use and Federal Inspection Services Fees

Common use fee revenues are determined by the number of departures (turns) on common use gates at the Airport. The common use fee charge is indexed to the terminal rental rate and assumes the average cost of a typical gate. The full service charge for domestic users is $804 per turn.

Airlines also pay a Federal Inspection Services (FIS) fee per passenger for all international passengers arriving at the Airport at a rate of $4.00.

### *Nonairline Terminal Revenues*

In general, concession revenues are related to the following factors: (1) the rental provisions set out in concession agreements; (2) the level and mix of passenger traffic and spending patterns; (3) inflation; (4) the ability of concessionaires to increase revenues by increasing prices or increasing volume; and (5) various other factors, such as concessions environment, store locations and merchandise mix.

Except as specifically noted below, the forecasts of concession revenues apply the following assumptions: (1) prevailing rental provisions will remain in effect over the Forecast Period; (2) concession revenues will increase in relation to enplaned passengers; (3) increases in concession prices will be constrained below the general level of inflation; and (4) the development of concession revenue will not be constrained by facilities or new development.

**Food and Beverage.** Food and beverage revenues consist mainly of rents and concession fees paid by concessionaires for in-terminal operations. Most contracts provide for a concession fee equal to scheduled percentages of gross sales subject to a minimum annual guarantee. The City has major exclusive concession agreements at Sky Harbor as follows: (1) Host International, Inc. and SSP America, Inc. covering food and beverage operations in Terminal 3 (expires in 2030) (2) Kind Hospitality, JMJ-LLC, First Class Concessions covering food and beverage operations in Terminal 2 (month-to-month), (3) Host International, Inc. and SSP America covering food and beverage operations in Terminal 4 (expires in 2025). Revenues were forecast in relation to enplaned passengers, assuming no material change in contract terms or any expansion of space devoted to concessionaires. Terminal 3 is undergoing a modernization that will result in various temporary closures of existing food service, however such closures will be managed in phases to ensure continuity of service and revenues. For purposes of this Report no adjustment was made to decrease revenues associated with Terminal 3 due to temporary closures, nor were increases assumed due to new food and beverage options.

**General Merchandise.** General merchandise revenues consist of concession fees paid by news, gift, duty free, and specialty retail shops. Revenues were forecast in relation to enplaned passengers, assuming no material change in contract terms with concessionaires or any expansion of space devoted to concessionaires. The City has over 45 contracts with different vendors including Paradies, Stellar Partners, Casa Unlimited, Hudson Group, and others. Nearly all of the agreements have substantially similar terms providing for concession fees equal to scheduled percentages of gross sales subject to a minimum annual guarantee. The agreements for general merchandise operations in Terminal 2 are month-to-month. The agreements for general merchandise operations in Terminal 3 are also month to month. Terminal 3 is undergoing a modernization that will result in various temporary closures of general merchandise vendors, however such closures will be managed in phases to ensure continuity of service and revenues. New contracts are anticipated for Terminal 3 sometime in FY 2019. For purposes of this Report no adjustment was made to decrease revenues associated with Terminal 3 due to temporary closures, nor were increases assumed due to new merchandise options. General merchandise contracts for Terminal 4 expire FY 2025.

**Advertising.** The Aviation Department currently has contracts with Alliance/Lamar for advertising in Terminal 2, Terminal 3, Terminal 4, and both Clear Channel Outdoor for outdoor/billboard advertising and American Outdoor for outdoor/billboard advertising. The contracts provide for a concession fee equal to a percentage of gross receipts or a minimum annual guarantee, whichever is greater. Advertising revenues were approximately $3.4 million in FY 2018. Thereafter, revenues are expected to increase with enplaned passengers and an assumed consumer price growth rate of 1.5%.

### *Miscellaneous Other Landing and Terminal Fees*

This revenue category comprised around $16.0 million of annual revenues in FY 2018. This category generally relates to non-signatory airlines and includes tenant office rent, commercial use permit fees, and air cargo fees.

## Ground Transportation

Ground transportation includes public parking, employee parking, car rentals, and other ground transportation such as per trip fees generated from taxis, transportation network companies (TNCs), and other ground transportation providers.

### *Public Parking*

Public parking at Sky Harbor is accommodated in three types of facilities: terminal garages, economy garages, and economy surface lots. Parking customers are divided into two distinct groups determined by their duration of stay: hourly customers and daily customers.

Hourly customers stay for less time than required to reach the daily maximums per parking structure and primarily park in the terminal garages. Hourly customers constitute the majority of the parking transactions (53%), but only 8% of the overall public parking revenues.

Daily customers stay for more time than needed to reach the daily maximum per parking structure. Daily customers park in all of the parking structures and are a smaller portion of total parking transactions (47%), but produce 92% of the overall public parking revenues. Table 30 summarizes the daily rates, total capacity, and revenues for each of Sky Harbor's parking facilities.

FY 2017 public parking revenues decreased, from $75.3 million in FY 2016 to $75.1 million in FY 2017 or 0.2%. Originating enplaned passengers increased 6.0% over this period, meaning that a smaller percentage of originating enplaned passengers utilized the parking facilities, and/or those passengers utilizing the parking facilities parked on average for shorter durations, and/or those passengers parked in more cost-effective locations. For example, revenues in the Terminal 4 garage decreased whereas revenues in the East Economy Garage and Surface Lot both increased.

Table 30
**Parking Facility Rates, Revenues, and Capacity**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport

| | Prior Daily Rates ($) | Current Daily Rates ($) | Revenues FY2017 ($) | Revenues FY2018 ($) | Revenues Change ($) | Approx. Public Spaces | Spaces as % of Total (%) | FY'18 Rev. as % of Total (%) |
|---|---|---|---|---|---|---|---|---|
| Parking Facilities | | | | | | | | |
| Terminal Garages | | | | | | | | |
| T-2 | 25.00 | 26.00 | $ 1,015 | $ 934 | $ (81) | 244 | 1.1 | 1.2 |
| T-3 | 25.00 | 27.00 | 4,019 | 3,790 | (229) | 1,874 | 8.8 | 4.8 |
| T-4 | 25.00 | 27.00 | 36,654 | 37,212 | 558 | 6,406 | 30.0 | 47.1 |
| Subtotal | | | $ 41,688 | $ 41,937 | $ 249 | 8,524 | 39.9 | 53.0 |
| T-2 Other | 9.00/11.00 | 10.00/12.00 | $ 3,390 | $ 3,412 | $ 21 | 1,957 | 9.2 | 4.3 |
| East Economy Garages | 11.00 | 14.00 | $ 17,060 | $ 18,932 | $ 1,872 | 5,840 | 27.3 | 23.9 |
| Economy Surface Lots | | | | | | | | |
| West Economy | 7.00 | 7.00 | $ 1,675 | $ 1,636 | $ (39) | 1,368 | 6.4 | 2.1 |
| East Economy | 9.00 | 12.00 | 11,330 | 13,163 | 1,833 | 3,687 | 17.2 | 16.6 |
| Subtotal | | | $ 13,005 | $ 14,799 | $ 1,794 | 5,055 | 23.6 | 18.7 |
| Total Parking | | | $ 75,144 | $ 79,080 | $ 3,936 | 21,376 | 100.0 | 100.0 |

Note: Hourly rates in all locations are $4.00 per hour.

FY 2017 was the first full year affected by the legal operation of TNC service at the Airport, which likely contributed to the FY 2017 revenue growth lagging originating enplaned passenger growth. Additionally, in FY 2017 the City entered into 2-year agreements with two valet companies to provide scheduled and on-demand valet service. The service is being offered only in Terminal 4 on a limited basis, and on a pilot basis to be reevaluated during the 2-year timeframe. The agreements require each company to contribute to a Minimum Annual Guarantee (MAG) or a percentage of their gross sales.

In November 2017, the City adjusted the daily parking rates in all of the locations as shown in Table 30. This contributed to an increase in FY 2018 of $3.9 million. Since the rate increase was only effective for 8 months of the fiscal year, it is reasonable to expect that (all things being equal) there will be additional revenues generated in FY 2019 due to the rate increase.

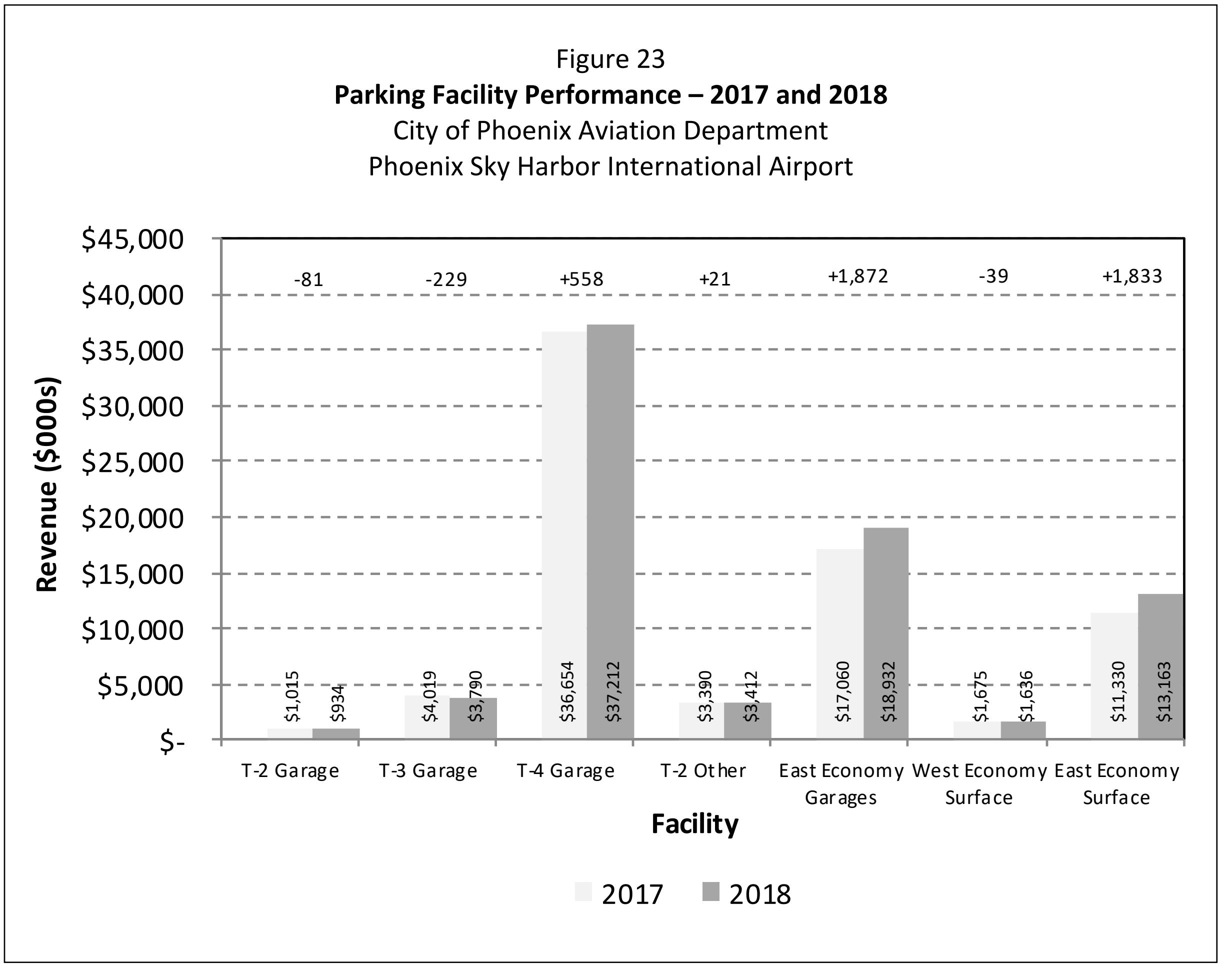
The Aviation Department has the authority to adjust rates pursuant to an existing City Council approval dating back to April 2008, so long as the daily rates remain below the maximum authorized approved level for each parking location

### *Employee Parking*

Employee parking includes paid parking for approximately 12,000 permitted employees that are provided access to designated employee parking locations at Sky Harbor. Employee parking revenues were estimated at $8.7 million in FY 2018. Revenues are forecast assuming no change to the number of permitted employees and no change to employee parking rates during the Forecast Period.

Table 31
**Parking Facility Rates Approvals**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport

| | Approved by Council | Current |
|---|---|---|
| Terminal Garages | | |
| T-2 | $ 35.00 | $ 26.00 |
| T-3 | 35.00 | 27.00 |
| T-4 | 35.00 | 27.00 |
| T-2 Other | 14.00 | 10.00/12.00 |
| East Economy Garages | 16.00 | 14.00 |
| Economy Surface Lots | | |
| West Economy | 14.00 | 7.00 |
| East Economy | 14.00 | 12.00 |




### *Rental Car*

Rental car revenues are derived from: (1) on-Airport concession agreements at Sky Harbor that specify the greater of 10% of revenues or minimum annual guarantees (MAGs) to be remitted over the term of a contract year ($34.5 million for FY 2019), and (2) ordinances requiring off-Airport rental car companies doing business at Sky Harbor to remit 7% of airport-derived revenues ($0.1 million for FY 2018).

**On-Airport Concession Revenues.** The City has on-Airport rental car concession agreements with the following twelve rental car brands that are owned by six parent companies operating at Sky Harbor: Avis, Budget, Payless (owned by Avis Budget Group); Hertz, Dollar, Thrifty (owned by the Hertz Corp); Enterprise, National, Alamo (owned by Enterprise Holdings, Inc.); and Sixt, Fox, and Advantage which are independent. The prior concession agreements expired at the end of June 2017, and new 10-year agreements were executed. These concession agreements authorize the companies to operate automobile rental businesses at Sky Harbor subject to various conditions, including the payment of a concession fee equal to the greater of 10% of gross receipts or a minimum annual guarantee. The MAG for the majority of the brands is subject to automatic adjustment to the greater of 85% of the previous year's concession fees or the current MAG. The rental car agreements do not allow assignment in the event of consolidation, or reductions in minimum annual guarantee. (See Table 32)

Table 32
**Rental Car Minimum Annual Guarantee**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(for contract year ending June 30; in thousands)

| | 2018 | 2019 |
|---|---|---|
| ABG TTL (Avis,Budget, Payless) | $ 8,907 | $ 8,849 |
| Hertz ( Hertz, Dollar, Thrifty) | 10,635 | 9,309 |
| EHI (Enterprise, National, Alamo) | 8,531 | 11,812 |
| Sixt | 1,701 | 1,701 |
| Fox | 1,300 | 1,300 |
| Advantage | 1,576 | 1,576 |
| Total | $ 32,650 | $ 34,547 |

On-Airport rental car concession revenues are forecast as a function of visitor enplaned passengers, rental car transactions, transaction days, rental car rates per transaction day, company market share, and MAGs. In FY 2017, rental car rates per transaction day were $51.48 per day on average, the average length of rental was 4.09 days, and there were 1.917 million transactions. In FY 2018, rental car rates per transaction day dropped slightly to $50.11 per day on average, the average length of rental increased to 4.37 days, and transactions dropped to 1.877 million (or 2.1%). The forecast assumes that rental car rates per transaction day increase at 0.5% per year and the average length of rental will remain unchanged at 4.37 days. The forecast of transactions assumes a 1.7% reduction in FY 2019 followed by a return to growth in FY 2020 and beyond of approximately 0.2% per year.

**Off-Airport Revenues.** Off-Airport rental car companies are subject to a 7% fee on the share of gross revenues derived from customers transported between Sky Harbor and the RCC. Revenues are forecast to increase with the rate of growth in visitor enplaned passengers.

### *Other Ground Transportation*

Other ground transportation services include commercial vehicles, most notably taxicabs, limos, and hotel/motel shuttles, as well as the recent (June 2016) introduction of transportation network companies (TNCs) such as Uber and Lyft into the Airport market (collectively defined as the Other Ground Transportation Market).

Effective June 2016, the City eliminated collection of permit fees at the Airport, and implemented a per trip fee structure in which a fee is collected for each revenue-producing trip. Table 33 illustrates the current and planned per trip fee structure.

Table 33

**Ground Transportation per Trip Fee Structure 2017-2019**

City of Phoenix Aviation Department

Phoenix Sky Harbor International Airport

| (1) Vehicle Size | Beginning January 1, 2017 | Beginning January 1, 2018 | Beginning January 1, 2019 |
|---|---|---|---|
| 1 - 8 seats | $2.25 | $2.56 | $3.25 |
| 9 - 23 Seats | $2.75 | $3.25 | $4.25 |
| 24+ Seats | $6.50 | $6.97 | $9.00 |

| (2) Vehicle Size | Beginning January 1, 2017 | Beginning January 1, 2018 | Beginning January 1, 2019 |
|---|---|---|---|
| 1 - 8 seats | $3.25 | $3.02 | $3.25 |
| 9 - 23 Seats | $4.25 | $3.95 | $4.25 |
| 24+ Seats | $9.00 | $8.37 | $9.00 |

Notes:

(1) All authorized providers permitted prior to June 18, 2016.

(2) All authorized providers permitted on or after June 18, 2016

Source: City of Phoenix Aviation Department.

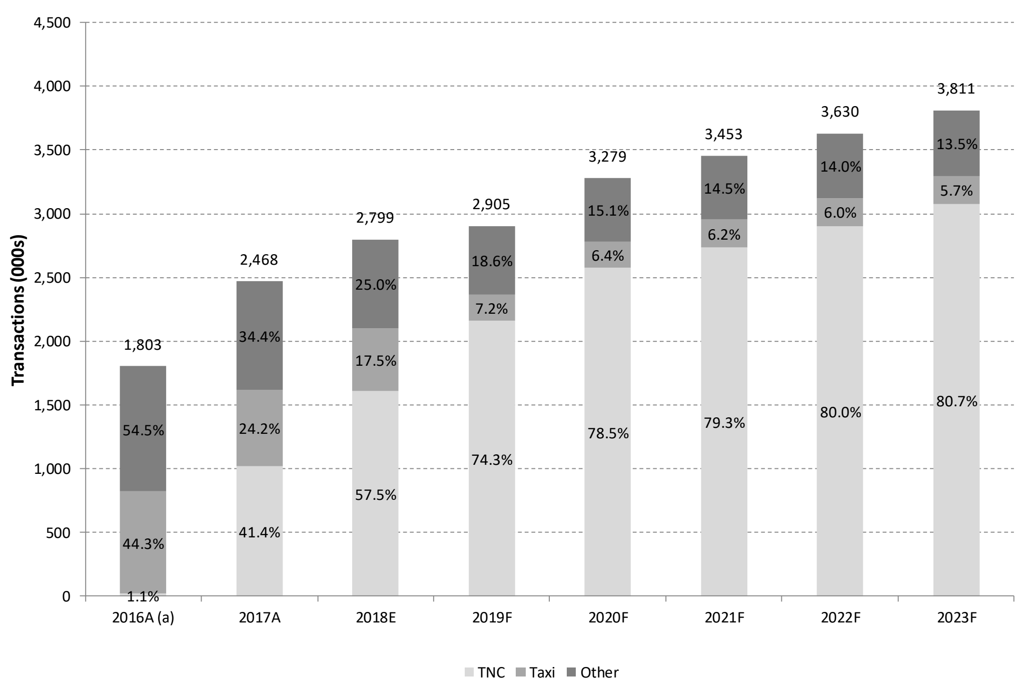
The City committed to collecting only the amount necessary to cover its cost of administering the ground transportation program during the first 3 years of the program, and established revenue targets in 2017, 2018, and 2019 of $7.0 million, $7.8 million, and $8.7 million, respectively. If revenue exceeds the annual target, the trip fees for the subsequent year may be adjusted lower based upon the actual trip data in order to stay at or below the target for that year.

While there is still limited historical data to draw upon, preliminary indications are that, in addition to capturing portions of existing ground transportation and car rental markets, TNCs are also, due to their convenience, expanding the size of the ground transportation market by accommodating passengers who may have otherwise relied upon nonrevenue modes of transportation to and from the Airport (e.g. family, friends). TNCs now represent the largest portion of the Airport's Other Ground Transportation Market, and are estimated to have accounted for 58% in FY 2018, an increase from 41% in FY 2017.

As TNC market share has increased, the market shares of other ground transportation services, most notably taxicabs, van services, and prearranged pickup services, have decreased. For example, taxicabs accounted for 17% of the Other Ground Transportation Market in FY 2018, down from 44% in FY 2016 (prior to the introduction of TNCs).

The forecast assumes that transactions for the Ground Transportation Market will continue to increase, driven primarily by strong growth in TNCs. FY 2018 total market transactions were estimated at 2.8 million and are forecast to increase to 3.8 million by FY 2023. Over this period, TNCs are forecast to grow from 58% of the Other Ground Transportation Market to approximately 80% by FY 2023. Over this same period of time other ground transportation providers are forecast to decrease in absolute amounts as well as in overall market share. Beginning January 1, 2019 and in future forecast years, we assume the City will charge the January 1, 2019 rates, but will eliminate the revenue targets and caps. Revenues are forecast to increase from $8.7 million in FY 2018 to 13.0 million by FY 2023.

Figure 24
**Ground Transportation Transactions**
City of Phoenix Aviation Department
Phoenix Sky Harbor International Airport
(for the 12 months ending June 30; transactions in thousands)




*(a)* TNCs commenced service at the Airport on 6/18/2016, and accounted for 1.1% of ground transportation transactions in FY 2016.

Sources: Actual—City of Phoenix Aviation Department;
Forecast—LeighFisher.

## Other Revenues

Other revenues include the following:

- **Hangars, Land Rentals,** and **Building and Facility Rentals.** Hangars, land, and building, and facilities are leased from the Airport by tenants including Greyhound Lines, JP Morgan Chase, FedEx, UPS, and various rental car companies doing business at the Airport. The leases are adjusted annually based on CPI. Hangar, Land Rental, and Building and Facility Rental revenues are assumed to continue to grow based on an assumed inflation rate ranging from 1.5% to 3.0% throughout the Forecast Period. The Airport assumes any new or expiring lease agreements will not have a material effect on future revenues.

- **Facility Lease Reimbursements.** The RCC sits within the Sky Harbor boundary on a 141-acre site west of the terminal buildings and has 5,613 ready/return garage spaces and a 113,000 square-foot customer service building. The facility houses on-Airport rental car companies at one location (including a parcel for small operators). Additionally, off-Airport rental car companies are required to transport Sky Harbor customers to and from the rental car center. Facility lease reimbursements are made by tenants pursuant to long term ground leases that expire January 2026. The reimbursements are calculated annually by the Aviation Department to recover the costs of operating and maintaining the common areas of the rental car center. Reimbursements are forecast to increase at the base rate of growth in Operating and Maintenance expenses.

- **Other.** This minor category of revenue includes fuel sales, security badge fees, delinquent fees, certain fuel sales, recovery of damage claims, and other miscellaneous income.

## Non-Operating Revenues

Non-operating revenues include the Rental Car busing reimbursement amounts and interest income. The busing service reimbursement is provided using available customer facility charge (CFC) funds and is forecast as a function of the operating expenses eligible for such reimbursement contained in the forecast Cost of Maintenance and Operation for a given year. Interest income is forecast based upon available fund balances at earnings rates of 1.0%.

## Funding of the Busing Service Reimbursement

The CIC, on behalf of the City, issued the Rental Car Facility Charge Revenue Bonds, Series 2004, (CFC Bonds) for the rental car center project. As noted above under the section “Framework for Airport Financial System Operations” under the caption “Bonds and Other Obligations” and under the subsection “Special Revenue Obligations,” the CFC Bonds are not payable from Airport Revenues but are secured from a CFC imposed by City Council, paid by rental car customers, and remitted by rental car companies obtaining customers from Sky Harbor. Both on-Airport and off-Airport rental car companies are currently required to collect and remit a $6.00 CFC per transaction day (including a $4.50 Pledged Rate and a $1.50 non-pledged rate).

The City deposits CFC receipts with a trustee for the benefit of the CFC Bonds. The total CFC receipts to be deposited during FY 2018 with the CFC trustee are estimated to be approximately $48.6 million. The CFC trustee uses the deposited CFC receipts and interest earnings thereon to pay debt service on the CFC Bonds, pay certain costs, make monthly transfers to the City to fund payment of the rental car busing service operating expenses described above in the “Cost of Maintenance and Operation” section, maintain reserves at their required balances, and fund certain related capital expenditures. The Aviation Department's FY 2018 budget for Cost of Maintenance and Operation expenses contained rental car busing service operating expenses of $15.3 million, which are being reimbursed by the CFC trustee.

The CFCs are pledged in priority to (1) certain incidental administrative costs, (2) debt service on CFC Bonds and related reserve funds, and (3) certain CFC-eligible operating expenses, generally related to the rental car buses (described earlier) defined as Transportation O&M Expenses in the documents relating to the CFC Bonds, and (4) related Maintenance and Operation reserve funds. Since the CFC Bonds are special obligations of the CIC secured by CFCs, the debt service is excluded from the Additional Bonds Test, Junior Lien Additional Bonds Test, and Rate Covenant, and Junior Lien Rate Covenant calculations in this Report. Additional operating expenses, such as facility operations costs, are charged annually to the rental car companies using a cost-based methodology through the facility lease and are not reimbursed with CFCs.

## ACCOUNTING BASES

The Aviation Department, through the Aviation Enterprise fund within the City, reports its financial operations as a governmental enterprise in accordance with generally accepted accounting principles (GAAP) for governmental entities and the accrual basis of accounting.

Under the accrual basis of accounting, revenues and expenses are recognized and recorded when earned or incurred. Budgetary accounting is on a modified accrual basis plus encumbrances. Differences between the two bases of reporting include the treatment of (1) central service cost allocations; (2) encumbrances; (3) grant revenues; (4) investment income; and (5) reserves on fund balances. As a result, differences exist between the treatment of accounting transactions under the budgetary and accrual basis of accounting and some of the differences may be material.

This Report relies primarily upon the Bond Ordinance as a basis for presentation. Therefore, references to certain terms such as Cost of Maintenance and Operation, and Revenues, have meanings that are defined under the Bond Ordinance, which may be different than as set forth in GAAP. In certain cases, for the purposes of debt service coverage and rate covenant compliance, the City may rely upon Other Available Funds as defined in the Bond Ordinance, though not included in the definition of Revenues, essentially has an impact similar to a revenue in calculating debt service coverage and rate covenant compliance. For example, Other Available Funds may include grant funds that are not typically included as revenue under GAAP.

Additionally, while Airport Revenues as defined in the Bond Ordinance do not include CFC receipts, amounts reimbursed to the City by the CFC trustee to pay the rental car busing service operating expenses included as a Cost of Maintenance and Operation under the Bond Ordinance are included as Airport Revenues or Revenues.

The Bond Ordinance should be read in its entirety for an understanding of the defined terms as references contained in this Report do not purport to be comprehensive.

The Aviation Department's audited CAFR, Schedule 1, as adjusted to comply with the Bond Ordinance, is used as the best representation of historical Cost of Maintenance and Operation expenses and Revenues.

## APPLICATION OF REVENUES

The Bond Ordinance in Section 2.2, and the 2010 Junior Lien City Purchase Agreement in Section 2.6 and pursuant to Section 2.5 of the 2015 Junior Lien City Purchase Agreement and Section 2.5 of the 2017 Junior Lien City Purchase Agreement, defines the application of Revenues with respect to priority and amount. The City is permitted by subsequent ordinance to establish additional funds or subaccounts relating to the payment of obligations subordinate in lien to the payment of the Senior Lien Obligations.

As depicted on Figure 25, the City is required to deposit all Revenues into the Revenue Fund and apply Revenues in the following amounts and order of priority:

1. **Operation and Maintenance Fund.** The City shall from time to time deposit into the Operation and Maintenance Fund amounts sufficient to pay the Cost of Maintenance and Operation.

2. **Senior Bond Fund.** The City shall deposit monthly into the Principal Account and the Interest Account of the Bond Fund amounts equal to the Principal Requirement and the Interest Requirement, respectively.

3. **Senior Bond Reserve Funds.** The City shall, from time to time, deposit into the Bond Reserve Fund and every separate bond reserve fund established for Senior Lien Obligations not secured by the Bond Reserve Fund, amounts then required to be deposited to the Bond Reserve Fund or any separate bond reserve fund.

4. **Junior Bond Fund and Reserve Funds.** In Section 2.4 of the 2010 Junior Lien City Purchase Agreement and pursuant to Section 2.3 of the 2015 Junior Lien City Purchase Agreement and Section 2.3 of the 2017 Junior Lien City Purchase Agreement, the City established a Junior Lien Bond Fund for the payment of Junior Lien Obligations, which contains a Junior Lien Interest Account and a Junior Lien Principal Account. The City shall deposit into the Junior Bond Funds the amounts necessary to pay Junior Lien Interest and Principal Requirements and make required reserve fund deposits after taking into account the Junior Lien Passenger Facility Charge Credit.

5. **Junior Subordinate Lien Obligations.** The City has not previously established a specific fund for payment of debt service on Junior Subordinate Lien Obligations, but Junior Subordinate Lien Revenues would be applied to such payment when due prior to deposit to the Airport Improvement Fund.

6. **Airport Improvement Fund.** The City may from time to time deposit into the Airport Improvement Fund such amounts as it determines. Amounts in the Airport Improvement Fund may be used for any lawful purpose. Under Section 2.6 of the Bond Ordinance, the City is allowed to pay obligations for general obligation bonds and lease or installment purchase agreements from the Airport Improvement Fund. Additionally, the Airport Improvement Fund is used to hold adequate discretionary reserves for Cost of Maintenance and Operation Expenses, internal Capital Reserves, and debt service reserves for Senior Lien Obligations (none required under the Ordinance).*

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*An agreement between the City and the CIC related to the issuance of the CFC Bonds requires the trustee of the CFC Bonds to hold and maintain a reserve fund equal to one-half of the amount to be transferred to the

## APPLICATION OF PFC REVENUES

In Section 2.4 of the Junior Lien City Purchase Agreement and pursuant to Section 2.5 of the 2010 Junior Lien City Purchase Agreement, the City established a PFC Revenue Fund, which contains a PFC Interest Account (including a Series 2010B Interest Subaccount) and a PFC Principal Account. Annually, the City shall deposit, during the Commitment Period, all PFC Revenues into the PFC Revenue Account for application in the following amounts and order of priority:

1. **PFC Interest Account.** The City shall deposit monthly into the PFC Interest Account of the PFC Revenue Fund until the amount on deposit is equal to 100% of the 2010 Junior Lien Interest Requirements with respect to the Series 2010A and Series B Junior Bonds, 30% of the Junior Lien Interest Requirements of the Series 2015A Junior Bonds, 100% of the Junior Lien Interest Requirements of the Series 2015B Junior Bonds, and 100% of the Junior Lien Interest Requirements of the Series 2017D Junior Bonds for the then current Bond Year.

2. **PFC Principal Account.** The City shall deposit monthly into the PFC Principal Account of the PFC Revenue Fund until the amount on deposit is equal to (i) the 2010 Junior Lien Principal Requirement with respect to the Series 2010A and Series 2010B Junior Bonds for the then current Bond Year and (ii) 30% of the Junior Lien Principal Requirements of the Series 2015A Junior Bonds, 100% of the Junior Lien Principal Requirements of the Series 2015B Junior Bonds, and 100% of the Junior Lien Principal Requirements of the Series 2017D Junior Bonds.

3. **2010 Junior Lien Bond Reserve Fund, Junior Lien Parity Reserve Fund and 2015B Junior Lien Bond Reserve Fund.** The City shall deposit monthly the amounts necessary to maintain the amount on deposit in the 2010 Junior Lien Bond Reserve Fund (Series 2010A, Series 2010B and Series 2010C Junior Bonds), the Junior Lien Parity Reserve Fund (Series 2015A and Series 2017D Junior Bonds) and the 2015B Junior Lien Bond Reserve Fund (Series 2015B Junior Bonds) at the applicable reserve requirement to the extent amounts have been withdrawn to pay debt service on Junior Bonds secured by that fund.

Additionally, to the extent PFC Revenues in any month exceed the requirements of the PFC Interest Account, the PFC Principal Account, the 2010 Junior Lien Bond Reserve Fund, the Junior Lien Parity Reserve Fund, and the 2015B Junior Lien Bond Reserve Fund, remaining PFCs may be applied to any other fund or account as permitted under the Junior Lien City Purchase Agreement or for any lawful purpose.

Amounts on deposit in the PFC Interest Account and the PFC Principal Account shall be transferred to the Junior Lien Bond Fund to pay Junior Lien Interest Requirements and Junior Lien Principal Requirements, respectively, as provided for in Section 2.4 of the 2010 Junior Lien City Purchase

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City for reimbursement of the rental car busing service expenses during the upcoming bond year. The agreement also requires the City to hold a reserve, which was funded from CFC receipts and is maintained by amounts transferred from the CFC trustee, equal to one and a half times the reimbursement amount. Should there be a deficiency in the reserve held by the CFC trustee that cannot be replenished from available CFC funds and that the City chooses not to replenish from its CFC-funded reserve, the City is then required by the agreement to use “amounts on deposit in the Airport Improvement Fund . . . not required to pay debt service on . . . Airport Obligations” to cure the deficiency.

Agreement, pursuant to Section 2.3 of the 2015 Junior Lien City Purchase Agreement and pursuant to Section 2.3 of the 2017 Junior Lien City Purchase Agreement.

As described in Section 5.3 of the Junior Lien Bond Indentures, payments transferred to the Junior Lien Bond Fund shall be applied in the following manner and order of priority:

1. **2010/2017 Junior Lien Interest Accounts.** The Bond Trustee shall deposit in December and June an amount equal to the interest to be paid on the Outstanding 2010/2017 Junior Bonds as it becomes due.

2. **2010/2017 Junior Lien Principal Accounts.** The Bond Trustee shall deposit in June of each year in each Bond Year in which 2010/2015/2017 Junior Bonds mature or are subject to mandatory redemption an amount equal to the principal amount at maturity plus an amount equal to any mandatory sinking fund redemption requirements.

3. **2010/2015/2017 Junior Lien Redemption Accounts.** Optional prepayments made by the City of any installment of principal that is to be applied to redeem 2010/2015/2017 Junior Bonds shall be credited to the Junior Lien Redemption Account.

2010 RZEDB Subsidy Payments are to be deposited to the Series 2010B Subaccount of the PFC Interest Account and applied to interest on the Series 2010B Junior Bonds.

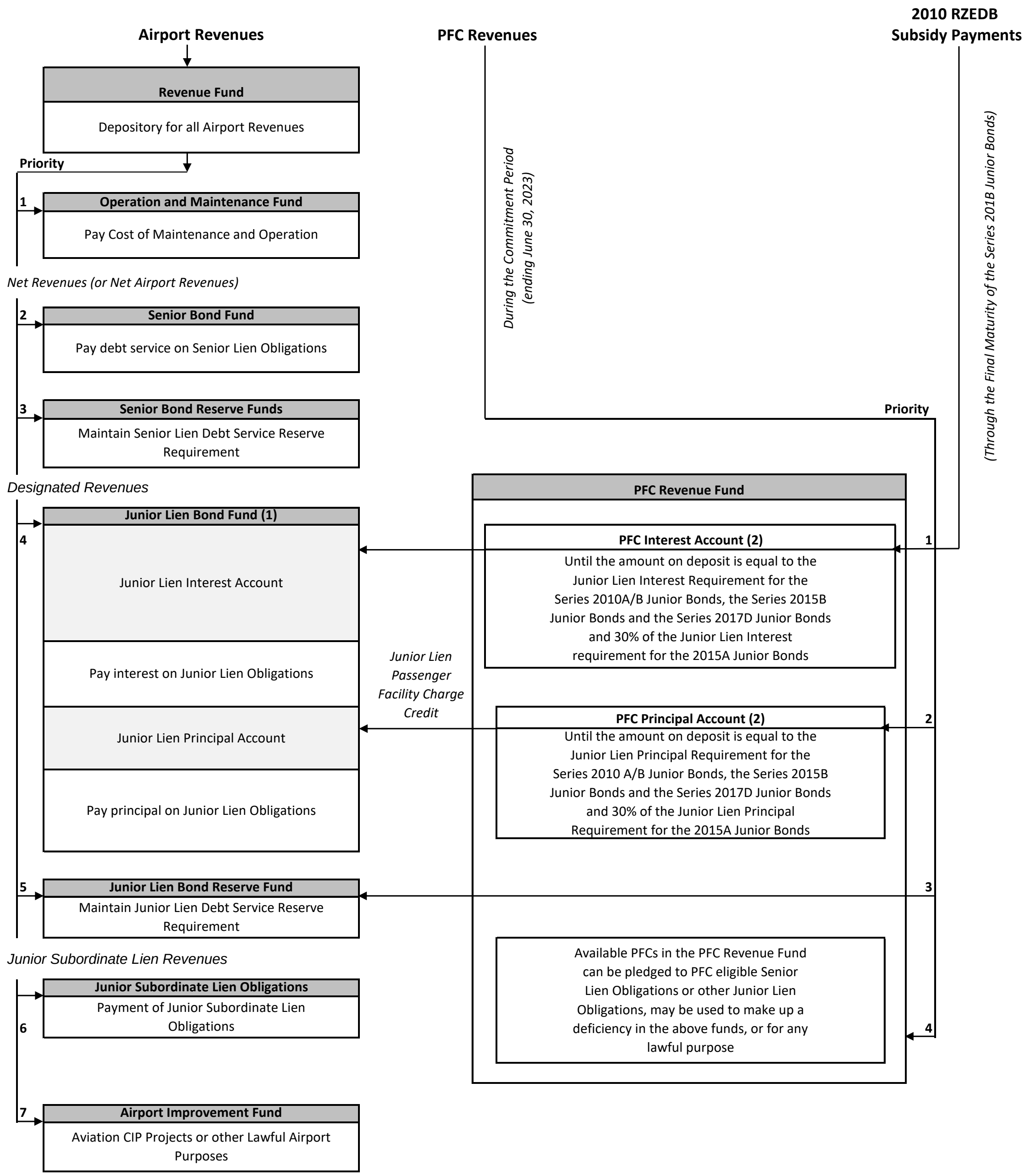
Exhibit G presents the application of Revenues during the Forecast Period.

Figure 25

**Application of Revenues and PFC Revenues**

**Bond Ordinance and Junior Lien City Purchase Agreement**

City of Phoenix Aviation Department




(1) PFC Revenues will be transferred to the 2010 Junior Lien Bond Reserve Fund, the Junior Lien Parity Reserve Fund and the 2015B Junior Lien Bond Reserve Fund to the extent amounts have been withdrawn to pay debt service on the Series 2010A/B Junior Bonds (as defined herein), the Series 2015 Junior Bonds (as defined herein) and the Series 2017D Junior Bonds, respectively.

(2) The PFC Interest Account and PFC Principal Account are accounts within the PFC Revenue Fund. Additionally, there is a Series 2010B Interest Subaccount of the PFC Interest Account where 2010 RZEDB Subsidy Payments are deposited for payment of interest on the 2010B Junior Bonds.

Source: City of Phoenix Aviation Department.

## DEBT SERVICE COVERAGE AND RATE COVENANT COMPLIANCE

Debt service coverage and rate covenant compliance are discussed below for Senior Lien Obligations and Junior Lien Obligations.

### Senior Lien Obligations

In Section 4.3 of the Bond Ordinance (the Rate Covenant), the City covenants that "it will in each Fiscal Year establish, maintain and enforce schedules of rates, fees and charges for the use of the Airport (i) sufficient to produce Net [Airport] Revenues at least equal to 125% of the amount required to be paid into the Bond Fund from the Revenue Fund, net of Other Available Funds deposited in the Bond Fund, in such Fiscal Year and net of any Passenger Facility Charge Credit applicable to such Fiscal Year…and (ii) sufficient to produce amounts required to be deposited in the Bond Reserve Fund and any separate bond reserve fund for such Fiscal Year."

Exhibit H demonstrates satisfaction of the Rate Covenant during the Forecast Period.

### Junior Lien Obligations

In Section 4.6(b) of the Junior Lien City Purchase Agreements, the City covenants that "it will in each Fiscal Year establish, maintain, and enforce schedules of rates, fees, and charges for the use of the Airport (i) sufficient to produce Designated Revenues at least equal to 110% of the amount required to be paid into the Junior Lien Bond Fund from the Revenue Fund, net of Other Available Funds deposited in the Junior Lien Bond Fund, in such Fiscal Year after subtracting any Junior Lien Passenger Facility Charge Credit applicable to such Fiscal Year"…"and (ii) sufficient to produce amounts required to be deposited in the 2010 Junior Lien Bond Reserve Fund and any separate reserve fund for the Junior Lien Obligations for such Fiscal Year."

Exhibit H demonstrates satisfaction of the Junior Lien Rate Covenant during the Forecast Period.

## STRESS TEST FINANCIAL PROJECTIONS

Exhibit I-1 summarizes forecast financial results through FY 2023 as presented in Exhibits A through H and discussed in the preceding sections. Revenues were estimated assuming the baseline forecasts of enplaned passengers and aircraft landed weight presented in Tables 21-23 in the earlier chapter. (See the chapter "Airline Traffic Analysis" and caption "Airline Traffic Forecasts" and the subsection "Enplaned Passenger Forecast.")

Exhibit I-2 summarizes projected financial results through FY 2023 associated with the stress test passenger forecasts of enplaned passengers and aircraft landed weight presented in Table 24. (See the chapter "Airline Traffic Analysis" and caption "Airline Traffic Forecasts" and the subsection "Stress Test Forecast.") All assumptions underlying the stress scenario financial projections are the same as those for the baseline financial forecasts, except revenues forecast based on passenger numbers, such as PFC revenues, concession revenues, parking revenues, and rental car revenues. If such a scenario were to occur, the Aviation Department could evaluate additional actions such as facility closure(s), revisions to the Aviation CIP, or increases to non-airline revenues. No adjustment is made to the Aviation CIP, or the estimated funding plan, notwithstanding the reduced passenger traffic.

Under the stress test scenario, the Aviation Department is able to satisfy the requirements of the Rate Covenant and Junior Lien Rate Covenant.

**Exhibit A-1**

**ESTIMATED COSTS AND CASH FLOW**
**AVIATION CAPITAL IMPROVEMENT PROGRAM**
**CITY OF PHOENIX AVIATION DEPARTMENT**
**(Fiscal Years ending June 30; in thousands)**

| Group<br>Category | Total<br>Costs | Subtotal<br>'19-'23 | Prior | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|
| **Major Capital Projects** | | | | | | | | |
| Terminal 3 Modernization | $ 580,000 | $ 190,577 | $ 389,423 | $ 180,577 | $ 10,000 | $ - | $ - | $ - |
| Terminal 4 Concourse S1 | 310,000 | 309,951 | 49 | 85,213 | 68,279 | 135,927 | 20,533 | - |
| PHX Sky Train Stage 2 | 745,000 | 683,167 | 61,833 | 199,450 | 293,828 | 140,665 | 27,693 | 21,530 |
| **Subtotal Major Capital Projects** | $ 1,635,000 | $ 1,183,695 | $ 451,305 | $ 465,240 | $ 372,107 | $ 276,592 | $ 48,226 | $ 21,530 |
| **Other Capital Projects ('19-'23)** | | | | | | | | |
| Air Cargo | $ 5,154 | $ 5,154 | | $ - | $ - | $ 225 | $ 4,929 | $ - |
| Development Studies | 5,327 | 5,327 | | 4,661 | 306 | - | 360 | - |
| General Aviation | 9,983 | 9,983 | | 1,224 | - | 379 | 8,380 | - |
| Infrastructure | 4,502 | 4,502 | | 4,502 | - | - | - | - |
| Land Acquisition | 3,915 | 3,915 | | 3,915 | - | - | - | - |
| Parking Facilities | 14,436 | 14,436 | | 14,436 | - | - | - | - |
| Roadways | 3,680 | 3,680 | | 3,680 | - | - | - | - |
| Runway and Taxiway Improvements | 117,002 | 117,002 | | 50,149 | 29,315 | 25,332 | 7,942 | 4,265 |
| Security Facilities | 3,704 | 3,704 | | 3,704 | - | - | - | - |
| Terminal 3 | 593 | 593 | | 39 | 554 | - | - | - |
| Terminal 4 | 29,603 | 29,603 | | 16,539 | 461 | 4,201 | 4,201 | 4,201 |
| Deer Valley Airport | 49,986 | 49,986 | | 15,432 | 10,853 | 1,743 | 813 | 21,144 |
| Goodyear Airport | 36,869 | 36,869 | | 9,867 | 9,892 | 1,406 | 5,145 | 10,559 |
| Phoenix-Mesa Gateway Airport | 5,200 | 5,200 | | 1,300 | 1,300 | 1,300 | 1,300 | - |
| Other Miscellaneous and Contingency | 33,136 | 33,136 | | 30,136 | 3,000 | - | - | - |
| Subtotal Other Capital Projects | $ 323,091 | $ 323,091 | | $ 159,585 | $ 55,681 | $ 34,586 | $ 33,070 | $ 40,169 |
| Additional Contingency | $ 75,000 | $ 75,000 | | $ - | $ 5,000 | $ 5,000 | $ 5,000 | $ 60,000 |
| **Subtotal Other Capital Projects ('19-'23)** | $ 398,091 | $ 398,091 | | $ 159,585 | $ 60,681 | $ 39,586 | $ 38,070 | $ 100,169 |
| **Total All Projects** | $ 2,033,091 | $ 1,581,786 | $ 451,305 | $ 624,825 | $ 432,788 | $ 316,178 | $ 86,296 | $ 121,699 |

Source: City of Phoenix Aviation Department.

**Exhibit A-2**

**PLANNED FUNDING**
**AVIATION CAPITAL IMPROVEMENT PROGRAM**
**CITY OF PHOENIX AVIATION DEPARTMENT**

| Group / Category | Total | Grants | PFC Paygo | CFC Paygo and Bonds | Series 2017 Senior Improvement Bonds | Series 2018 Senior Improvement Bonds | Series 2019 Junior Improvement Bonds | Series 2020 Senior Improvement Bonds | AIF |
|---|---|---|---|---|---|---|---|---|---|
| | | **Funding Sources** | | | | | | | |
| **Major Capital Projects** | | | | | | | | | |
| Terminal 3 Modernization | $ 580,000 | $ - | $ 68,000 | $ - | $ 205,000 | $ 227,000 | $ - | $ - | $ 80,000 |
| Terminal 4 Concourse S1 | 310,000 | - | - | - | - | - | - | 240,000 | 70,000 |
| PHX Sky Train Stage 2 | 745,000 | - | 130,000 | 273,000 | - | - | 342,000 | - | - |
| **Subtotal Major Capital Projects** | $ 1,635,000 | $ - | $ 198,000 | $ 273,000 | $ 205,000 | $ 227,000 | $ 342,000 | $ 240,000 | $ 150,000 |
| **Other Capital Projects ('19-'23)** | | | | | | | | | |
| Air Cargo | $ 5,154 | $ 3,608 | $ 1,392 | $ - | $ - | $ - | $ - | $ - | $ 155 |
| Development Studies | 5,327 | - | 613 | - | - | - | - | - | 4,714 |
| General Aviation | 9,983 | 6,131 | - | - | - | - | - | - | 3,852 |
| Infrastructure | 4,502 | 1,177 | - | - | - | - | - | - | 3,325 |
| Land Acquisition | 3,915 | - | - | - | - | - | - | - | 3,915 |
| Parking Facilities | 14,436 | - | - | 4,097 | - | - | - | - | 10,339 |
| Roadways | 3,680 | - | - | - | - | - | - | - | 3,680 |
| Runway and Taxiway Improvements | 117,002 | 80,279 | 31,776 | - | - | - | - | - | 4,948 |
| Security Facilities | 3,704 | 1,859 | 1,205 | - | - | - | - | - | 640 |
| Terminal 3 | 593 | 415 | - | - | - | - | - | - | 178 |
| Terminal 4 | 29,603 | - | 11,754 | - | - | - | - | - | 17,849 |
| Deer Valley Airport | 49,986 | 42,442 | - | - | - | - | - | - | 7,543 |
| Goodyear Airport | 36,869 | 31,644 | - | - | - | - | - | - | 5,226 |
| Phoenix-Mesa Gateway Airport | 5,200 | - | - | - | - | - | - | - | 5,200 |
| Other Miscellaneous and Contingency | 33,136 | 2,956 | 2,126 | 28 | - | - | - | - | 28,026 |
| Subtotal Other Capital Projects | $ 323,091 | $ 170,511 | $ 48,865 | $ 4,125 | $ - | $ - | $ - | $ - | $ 99,590 |
| Additional Contingency | $ 75,000 | - | 25,000 | - | - | - | - | - | 50,000 |
| **Subtotal Other Capital Projects** | $ 398,091 | $ 170,511 | $ 73,865 | $ 4,125 | $ - | $ - | $ - | $ - | $ 149,590 |
| **Total Capital Projects** | $ 2,033,091 | $ 170,511 | $ 271,865 | $ 277,125 | $ 205,000 | $ 227,000 | $ 342,000 | $ 240,000 | $ 299,591 |

Source: City of Phoenix Aviation Department.
Notes: Major Capital Projects include prior funding; all other projects do not include prior funding.

**Exhibit A-3**

**PLANNED FUNDING FOR MAJOR CAPITAL PROJECTS**
**AVIATION CAPITAL IMPROVEMENT PROGRAM**
**CITY OF PHOENIX AVIATION DEPARTMENT**
**(Fiscal Years ending June 30; in thousands)**

| | Total Costs | Subtotal '19-'23 | Prior | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|
| **Terminal 3 Modernization** | | | | | | | | |
| PFC Pay-as-you-go (PFC 7) | $ 24,559 | $ - | $ 24,559 | $ - | $ - | $ - | $ - | $ - |
| PFC Pay-as-you-go (PFC 8) | 43,441 | 6,143 | 37,298 | 6,143 | - | - | - | - |
| Future Senior/Junior Lien Obligations - Non-PFC Bonds | 432,000 | 150,933 | 281,067 | 150,933 | - | - | - | - |
| Airport Improvement Fund | 80,000 | 33,502 | 46,498 | 23,502 | 10,000 | - | - | - |
| **Subtotal Terminal 3 Modernization** | $ 580,000 | $ 190,577 | $ 389,423 | $ 180,577 | $ 10,000 | $ - | $ - | $ - |
| **Terminal 4 Concourse S1** | | | | | | | | |
| Future Senior/Junior Lien Obligations - Non-PFC Bonds | $ 240,000 | $ 240,000 | $ - | $ 85,213 | $ 68,279 | $ 65,976 | $ 20,533 | $ - |
| Airport Improvement Fund | 70,000 | 69,951 | 49 | - | - | 69,951 | - | - |
| **Subtotal Terminal 4 Concourse S1** | $ 310,000 | $ 309,951 | $ 49 | $ 85,213 | $ 68,279 | $ 135,927 | $ 20,533 | $ - |
| **PHX Sky Train Stage 2** | | | | | | | | |
| PFC Pay-as-you-go (PFC 6) | $ 130,000 | $ 70,128 | $ 59,872 | $ 55,128 | $ 15,000 | $ - | $ - | $ - |
| Future Senior/Junior Lien Obligations - PFC Bonds | 342,000 | 340,039 | 1,961 | 66,967 | 83,184 | 140,665 | 27,693 | 21,530 |
| Future Obligations - CFC Bonds | 193,000 | 193,000 | - | 77,355 | 115,645 | - | - | - |
| CFC Pay-as-you-go | 80,000 | 80,000 | - | - | 80,000 | - | - | - |
| **Subtotal PHX Sky Train Stage 2** | $ 745,000 | $ 683,167 | $ 61,833 | $ 199,450 | $ 293,828 | $ 140,665 | $ 27,693 | $ 21,530 |
| **All Major Capital Projects** | | | | | | | | |
| PFC Pay-as-you-go (PFC 7) | $ 24,559 | $ - | $ 24,559 | $ - | $ - | $ - | $ - | $ - |
| PFC Pay-as-you-go (PFC 8) | 43,441 | 6,143 | 37,298 | 6,143 | - | - | - | - |
| PFC Pay-as-you-go (PFC 6) | 130,000 | 70,128 | 59,872 | 55,128 | 15,000 | - | - | - |
| Future Senior/Junior Lien Obligations - PFC Bonds | 342,000 | 340,039 | 1,961 | 66,967 | 83,184 | 140,665 | 27,693 | 21,530 |
| Future Senior/Junior Lien Obligations - Non-PFC Bonds | 672,000 | 390,932 | 281,067 | 236,145 | 68,279 | 65,976 | 20,533 | - |
| Future Obligations - CFC Bonds | 193,000 | 193,000 | - | 77,355 | 115,645 | - | - | - |
| CFC Pay-as-you-go | 80,000 | 80,000 | - | - | 80,000 | - | - | - |
| Airport Improvement Fund | 150,000 | 103,453 | 46,547 | 23,502 | 10,000 | 69,951 | - | - |
| **Total All Major Capital Projects** | $ 1,635,000 | $ 1,183,695 | $ 451,305 | $ 465,240 | $ 372,107 | $ 276,592 | $ 48,226 | $ 21,530 |

Source: City of Phoenix Aviation Department.

**Exhibit B**

**PLAN OF FINANCE**
**CITY OF PHOENIX AVIATION DEPARTMENT**
**(in thousands)**

| | Series 2018 Senior Improvement Bonds /1 | Series 2019 Junior Improvement Bonds /2 | Series 2020 Senior Improvement Bonds /3 |
|---|---|---|---|
| **SOURCES OF FUNDS** | | | |
| Par Amount of Bonds | 229,465 | $ 379,515 | $ 298,190 |
| Premium / (Discount) | 18,080 | 2,944 | (12,991) |
| **Total All Sources** | $ 247,545 | $ 382,459 | $ 285,199 |
| | | | |
| **USES OF FUNDS** | | | |
| Project Fund Deposit | $ 227,000 | $ 342,000 | $ 240,000 |
| Escrow Deposit | - | - | - |
| Debt Service Reserve Fund Deposit | 18,246 | 36,664 | 19,852 |
| Debt Service Coverage Fund | - | - | - |
| Capitalized Interest Fund Deposit | - | - | 22,364 |
| Cost of Issuance | 1,377 | 2,277 | 1,789 |
| **Total Uses of Funds** | $ 247,545 | $ 382,459 | $ 285,199 |

Source: City of Phoenix Aviation Department; Frasca & Associates.

Notes:
1. Interest rates as of September 10, 2018 plus 50 basis points.
2. Interest rates as of August 19, 2018 plus 150 basis points.
3. Interest rates as of August 19, 2018 plus 200 basis points.

**Exhibit C**

**DEBT SERVICE**
**CITY OF PHOENIX AVIATION DEPARTMENT**
**(Fiscal Years ending June 30; in thousands)**

The forecasts presented in this exhibit were prepared using information from the sources indicated, and assumptions listed below, and as provided in the accompanying text. Inevitably, some of the assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, there are likely to be differences between the forecasts and actual results, and those differences may be material.

| | Historical 2015 | 2016 | 2017 | Estimate 2018 | Forecast 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|
| **Revenue Bond Obligations** | | | | | | | | | |
| Senior Lien Obligations | | | | | | | | | |
| Existing Senior Lien Obligations | $ 48,732 | $ 48,775 | $ 48,797 | $ 36,694 | $ 16,246 | $ 16,246 | $ 16,250 | $ 16,248 | $ 16,243 |
| Series 2017A Senior Improvement Bonds /1 | - | - | - | 7,634 | 12,492 | 12,495 | 12,490 | 12,493 | 12,492 |
| Series 2017B Senior Refunding Bonds /1 | - | - | - | 5,300 | 8,672 | 8,672 | 11,682 | 16,612 | 14,977 |
| Series 2017C Senior Refunding Bonds /1 | - | - | - | 5,551 | 10,024 | 16,802 | 4,926 | - | - |
| Series 2018 Senior Improvement Bonds /1 | - | - | - | - | 10,053 | 14,735 | 14,739 | 14,739 | 14,740 |
| Series 2020 Senior Improvement Bonds /1 | - | - | - | - | - | - | - | 9,925 | 19,851 |
| Total Senior Lien Obligations | $ 48,732 | $ 48,775 | $ 48,797 | $ 55,179 | $ 57,487 | $ 68,950 | $ 60,088 | $ 70,016 | $ 78,303 |
| Junior Lien Obligations | | | | | | | | | |
| 2010 Junior Lien Obligations (incl. 2017 adv. ref.) | | | | | | | | | |
| Series 2010A / 2017D Advance Refunding | $ 43,456 | $ 42,913 | $ 42,458 | $ 40,867 | $ 39,443 | $ 39,439 | $ 38,330 | $ 38,331 | $ 38,328 |
| Series 2010B | 1,409 | 1,409 | 1,409 | 1,409 | 1,409 | 1,409 | 1,409 | 1,409 | 1,409 |
| Series 2010C | 1,604 | 1,604 | 1,604 | 1,604 | 1,604 | 1,604 | 1,604 | 1,604 | 11,779 |
| Subtotal 2010 Junior Lien Obligations | $ 46,469 | $ 45,926 | $ 45,471 | $ 43,880 | $ 42,455 | $ 42,452 | $ 41,343 | $ 41,344 | $ 51,516 |
| Series 2015A Junior Improvement Bonds | - | 3,368 | 6,184 | 6,187 | 6,186 | 6,186 | 6,187 | 6,184 | 6,186 |
| Series 2015B Junior Refunding Bonds | - | 508 | 933 | 933 | 933 | 933 | 933 | 933 | 933 |
| Series 2019 Junior Improvement Bonds /2 | - | - | - | - | - | 18,976 | 18,976 | 18,976 | 18,976 |
| Total Junior Lien Obligations | $ 46,469 | $ 49,802 | $ 52,587 | $ 50,999 | $ 49,574 | $ 68,547 | $ 67,439 | $ 67,436 | $ 77,610 |
| Other Airport Bond Obligations / General Obligation Bonds | $ 206 | $ 197 | $ 197 | $ 197 | $ 4,717 | $ 3,428 | $ - | $ - | $ - |
| **Total Bond Obligations** | $ 95,407 | $ 98,774 | $ 101,581 | $ 106,376 | $ 111,778 | $ 140,925 | $ 127,526 | $ 137,452 | $ 155,913 |
| **Summary** | | | | | | | | | |
| Senior Lien Obligations (including future obligations) | $ 48,732 | $ 48,775 | $ 48,797 | $ 55,179 | $ 57,487 | $ 68,950 | $ 60,088 | $ 70,016 | $ 78,303 |
| Junior Lien Obligations (including future obligations) | 46,469 | 49,802 | 52,587 | 50,999 | 49,574 | 68,547 | 67,439 | 67,436 | 77,610 |
| Other Airport Bond Obligations / General Obligation Bonds | 206 | 197 | 197 | 197 | 4,717 | 3,428 | - | - | - |
| **Total Bond Obligations** | $ 95,407 | $ 98,774 | $ 101,581 | $ 106,376 | $ 111,778 | $ 140,925 | $ 127,526 | $ 137,452 | $ 155,913 |

Source: City of Phoenix Aviation Department; Frasca & Associates.
Notes: 1. Series 2017 Senior, Series 2018 Senior and Series 2020 Senior Improvement Bonds are structured to produce approximate level annual debt service over 30 year terms.
2. Series 2019 Junior PFC Improvement are structured to produce approximately level annual aggregate PFC-supported debt service through 2048/2049.

**Exhibit D**

**APPLICATION AND USE OF PASSENGER FACILITY CHARGE (PFC) REVENUES**
**CITY OF PHOENIX AVIATION DEPARTMENT**
**(Fiscal Years ending June 30; in thousands except for per passenger fees)**

The forecasts presented in this exhibit were prepared using information from the sources indicated, and assumptions listed below, and as provided in the accompanying text. Inevitably, some of the assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, there are likely to be differences between the forecasts and actual results, and those differences may be material.

| | | Historical 2015 | 2016 | 2017 | Estimate 2018 | Forecast 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|---|
| **PFC collections and PFC debt service** | | | | | | | | | | |
| Enplaned passengers | | 21,489 | 22,056 | 21,820 | 22,219 | 22,525 | 22,800 | 23,075 | 23,350 | 23,625 |
| Multiplied by: Percent of PFC eligible passengers /1 | | 90.1% | 86.3% | 87.3% | 86.0% | 86.0% | 86.0% | 86.0% | 86.0% | 86.0% |
| PFC eligible enplaned passengers | | 19,357 | 19,042 | 19,043 | 19,116 | 19,372 | 19,608 | 19,845 | 20,081 | 20,318 |
| PFC per passenger fee | | $ 4.50 | $ 4.50 | $ 4.50 | $ 4.50 | $ 4.50 | $ 4.50 | $ 4.50 | $ 4.50 | $ 4.50 |
| Less: PFC airline collection fee | | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| Net PFC per passenger fee | | $ 4.39 | $ 4.39 | $ 4.39 | $ 4.39 | $ 4.39 | $ 4.39 | $ 4.39 | $ 4.39 | $ 4.39 |
| PFC Collections (or passenger fees) | | $ 84,976 | $ 83,595 | $ 83,600 | 83,917 | $ 85,041 | $ 86,079 | $ 87,117 | $ 88,156 | $ 89,194 |
| PFC applied to Debt Service | | | | | | | | | | |
| 2010 Junior Lien Obligations (incl. 2017 adv. ref.) | | | | | | | | | | |
| Series 2010A / 2017D Advance Refunding | | $ (43,456) | $ (42,913) | $ (42,458) | $ (40,867) | $ (39,443) | $ (39,439) | $ (38,330) | $ (38,331) | $ (38,328) |
| Series 2010B (Net of 2010 RZEDB Subsidy Payments) | | (821) | (818) | (819) | (817) | (814) | (814) | (814) | (814) | (814) |
| Subtotal 2010 Junior Lien Obligations | | $ (44,277) | $ (43,731) | $ (43,276) | $ (41,684) | $ (40,257) | $ (40,254) | $ (39,144) | $ (39,145) | $ (39,142) |
| 2015 Junior Lien Obligations | | | | | | | | | | |
| Series 2015A Junior Improvement Bonds | | $ - | $ (1,010) | $ (1,855) | $ (1,856) | $ (1,856) | $ (1,856) | $ (1,856) | $ (1,855) | $ (1,856) |
| Series 2015B Junior Refunding Bonds | | - | (508) | (933) | (933) | (933) | (933) | (933) | (933) | (933) |
| Subtotal 2015 Junior Lien Obligations | | $ - | $ (1,518) | $ (2,788) | $ (2,789) | $ (2,789) | $ (2,789) | $ (2,789) | $ (2,788) | $ (2,788) |
| Series 2019 Junior Improvement Bonds | | $ - | $ - | $ - | $ - | $ - | $ (18,976) | $ (18,976) | $ (18,976) | $ (18,976) |
| PFC passenger fees net of Debt Service | | $ 40,699 | $ 38,346 | $ 37,535 | $ 39,445 | $ 41,996 | $ 24,061 | $ 26,209 | $ 27,247 | $ 28,287 |
| **PFC cash flow net of debt service** | | | | | | | | | | |
| PFC Fund beginning balance | | | | | $ - | $ 71,861 | $ 31,212 | $ 32,418 | $ 49,099 | $ 70,419 |
| **Deposits** | | | | | | | | | | |
| PFC passenger fees net of debt service | | | | | $ 39,445 | $ 41,996 | $ 24,061 | $ 26,209 | $ 27,247 | $ 28,287 |
| Interest Income | | | | | 99 | 105 | 60 | 66 | 68 | 71 |
| **Total Deposits** | | | | | $ 39,544 | $ 42,101 | $ 24,121 | $ 26,274 | $ 27,315 | $ 28,358 |
| **Withdrawals** | | | | | | | | | | |
| Pay-as-you-go expenditures | '19-'23 | | | | | | | | | |
| Major Capital Projects | | | | | | | | | | |
| Terminal 3 Modernization (PFC 7) | $ - | | | | | $ - | $ - | $ - | $ - | $ - |
| Terminal 3 Modernization (PFC 8) | (6,143) | | | | | (6,143) | - | - | - | - |
| PHX Sky Train Stage 2 (PFC 6) | (70,128) | | | | | (55,128) | (15,000) | - | - | - |
| Subtotal Major Capital Projects | $ (76,271) | | | | | $ (61,271) | $ (15,000) | $ - | $ - | $ - |
| Other Capital Projects | | | | | | | | | | |
| PFC 7 | $ (10,302) | | | | | $ (10,302) | $ - | $ - | $ - | $ - |
| PFC 8 - FY 2018+ Spending | (13,854) | | | | | (10,572) | (824) | (824) | (484) | (1,152) |
| PFC 9 | (21,622) | | | | | (399) | (7,091) | (8,671) | (2,731) | (2,731) |
| Future Applications | (28,087) | | | | | (207) | - | (99) | (2,781) | (25,000) |
| Subtotal Other Capital Projects | $ (73,865) | | | | | $ (21,479) | $ (7,915) | $ (9,593) | $ (5,995) | $ (28,882) |
| **Total withdrawals** | | | | | | $ (82,750) | $ (22,915) | $ (9,593) | $ (5,995) | $ (28,882) |
| **PFC Fund ending balance** | | | | | $ 71,861 | $ 31,212 | $ 32,418 | $ 49,099 | $ 70,419 | $ 69,894 |

Source: City of Phoenix Aviation Department and LeighFisher.
Notes: 1. Imputed from enplaned passengers, net PFC rate, and total PFC collections for historical years. Timing variances exist between when PFCs are collected by airlines and when they are remitted to the airport, which can result in annual fluctuations of PFC collections and percent eligible passengers.

**Exhibit E**

**EXPENSES**
**CITY OF PHOENIX AVIATION DEPARTMENT**
**(Fiscal Years ending June 30; in thousands)**

The forecasts presented in this exhibit were prepared using information from the sources indicated, and assumptions listed below, and as provided in the accompanying text. Inevitably, some of the assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, there are likely to be differences between the forecasts and actual results, and those differences may be material.

| | Historical 2015 | 2016 | 2017 | Estimate 2018 | Budget 2019 | Forecast 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|
| **Cost of Maintenance and Operation /1** | | | | | | | | | |
| Base Expenses | | | | | | | | | |
| Personal Services | $ 105,760 | $ 105,591 | $ 116,353 | $ 121,218 | $ 127,293 | $ 131,112 | $ 135,045 | $ 139,097 | $ 143,269 |
| Contractual Services | 105,198 | 108,376 | 113,745 | 113,318 | 121,327 | 124,967 | 128,716 | 132,578 | 136,555 |
| Supplies | 11,092 | 11,686 | 12,070 | 11,216 | 11,274 | 11,613 | 11,961 | 12,320 | 12,690 |
| Equipment/Minor Improvements and Other Services | 4,115 | 4,583 | 2,948 | 3,861 | 4,479 | 4,614 | 4,752 | 4,895 | 5,042 |
| Subtotal Base Expenses | $ 226,165 | $ 230,236 | $ 245,116 | $ 249,613 | $ 264,374 | $ 272,306 | $ 280,475 | $ 288,889 | $ 297,556 |
| % Growth | 0.7% | 1.8% | 6.5% | 1.8% | 5.9% | 3.0% | 3.0% | 3.0% | 3.0% |
| Incremental Savings from Terminal 2 Closure | $ - | $ - | $ - | $ - | $ - | $ - | $ (4,000) | $ (4,120) | $ (4,244) |
| Incremental Expenses Terminal 4 Concourse S1 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 2,500 | $ 5,150 |
| Total Expenses | $ 226,165 | $ 230,236 | $ 245,116 | $ 249,613 | $ 264,374 | $ 272,306 | $ 276,475 | $ 287,269 | $ 298,462 |
| % Growth | 0.7% | 1.8% | 6.5% | 1.8% | 5.9% | 3.0% | 1.5% | 3.9% | 3.9% |
| **Rates and Charges Operating Budget and Forecast** | | | | | | | | | |
| Total Expenses | | | | | $ 264,374 | $ 272,306 | $ 276,475 | $ 287,269 | $ 298,462 |
| Central Services Staff and Administration | | | | | 9,662 | 9,855 | 10,052 | 10,253 | 10,458 |
| Less: Equipment/Minor Improvements and Other Services | | | | | (4,479) | (4,614) | (4,752) | (4,895) | (5,042) |
| Rates and Charges Operating Budget and Forecast | | | | | $ 269,557 | $ 277,547 | $ 281,775 | $ 292,628 | $ 303,879 |
| **Rates and Charges Operating Budget and Forecast - Allocation by Cost Center** | | | | | | | | | |
| Terminal 2 | | | | | $ 14,370 | $ 14,315 | $ - | $ - | $ - |
| Terminal 3 | | | | | 20,852 | 22,101 | 23,430 | 24,125 | 24,840 |
| Terminal 4 | | | | | 77,416 | 82,053 | 86,988 | 92,066 | 97,372 |
| Subtotal Terminals | | | | | $ 112,637 | $ 118,469 | $ 110,418 | $ 116,191 | $ 122,212 |
| Runways | | | | | 34,791 | 36,828 | 38,399 | 39,538 | 40,710 |
| Apron | | | | | 7,520 | 9,794 | 10,212 | 10,515 | 10,826 |
| SR Channel | | | | | 486 | 735 | 766 | 789 | 812 |
| West Air Cargo | | | | | 1,825 | 1,903 | 1,988 | 2,047 | 2,108 |
| South Air Cargo | | | | | 2,079 | 2,164 | 2,256 | 2,323 | 2,392 |
| All Other | | | | | 110,217 | 107,654 | 117,762 | 121,253 | 124,848 |
| Total | | | | | $ 269,557 | $ 277,547 | $ 281,802 | $ 292,655 | $ 303,907 |

Source: City of Phoenix Aviation Department and LeighFisher.
Notes: 1. Includes Transportation O&M Expenses for Rental Car busing reimbursed using available CFC revenues.

## Exhibit F

### REVENUES
### CITY OF PHOENIX AVIATION DEPARTMENT
### (Fiscal Years ending June 30; in thousands)

The forecasts presented in this exhibit were prepared using information from the sources indicated, and assumptions listed below, and as provided in the accompanying text. Inevitably, some of the assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, there are likely to be differences between the forecasts and actual results, and those differences may be material.

| | Historical 2015 | 2016 | 2017 | Estimate 2018 | Forecast 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenues** | | | | | | | | | |
| Landing and Terminal Fees | | | | | | | | | |
| Airline Landing Fees | $ 52,188 | $ 48,347 | $ 49,889 | $ 52,090 | $ 52,685 | $ 54,412 | $ 55,393 | $ 57,789 | $ 59,908 |
| Airline Terminal Fees | 70,613 | 70,406 | 73,086 | 81,244 | 87,037 | 99,202 | 87,819 | 100,659 | 110,625 |
| Subtotal Airline Landing and Terminal Revenues | $ 122,800 | $ 118,753 | $ 122,975 | $ 133,333 | $ 139,722 | $ 153,613 | $ 143,213 | $ 158,447 | $ 170,534 |
| Baggage System Fees | 3,390 | 4,698 | 3,140 | 3,870 | 4,059 | 4,181 | 4,306 | 4,435 | 4,568 |
| Jetway Rental | 716 | 702 | 719 | 703 | 703 | 703 | 703 | 703 | 703 |
| Common Use | 4,184 | 5,373 | 5,660 | 6,965 | 7,099 | 7,912 | 7,075 | 8,791 | 9,501 |
| FIS Fees | 563 | 1,078 | 1,557 | 2,219 | 2,249 | 2,277 | 2,304 | 2,331 | 2,359 |
| Total Airline Revenues | $ 131,653 | $ 130,603 | $ 134,052 | $ 147,090 | $ 153,833 | $ 168,686 | $ 157,602 | $ 174,709 | $ 187,665 |
| Nonairline Terminal Revenues | 36,887 | 35,256 | 35,534 | 36,975 | 37,535 | 38,046 | 38,558 | 39,073 | 39,590 |
| Misc. Other Landing and Terminal Fees | 11,260 | 12,892 | 15,328 | 15,843 | 15,614 | 16,104 | 16,608 | 17,127 | 17,662 |
| Total Landing and Terminal Fees | $ 179,799 | $ 178,752 | $ 184,914 | $ 199,907 | $ 206,982 | $ 222,836 | $ 212,768 | $ 230,909 | $ 244,918 |
| Ground Transportation | | | | | | | | | |
| Parking (Public and Employee) | $ 80,933 | $ 84,389 | $ 84,171 | $ 87,948 | $ 89,671 | $ 89,794 | $ 90,481 | $ 91,157 | $ 91,824 |
| Car Rentals | 41,053 | 39,448 | 41,885 | 41,716 | 41,221 | 41,503 | 41,777 | 42,040 | 42,295 |
| Total Parking and Car Rentals | $ 121,986 | $ 123,837 | $ 126,056 | $ 129,664 | $ 130,892 | $ 131,297 | $ 132,257 | $ 133,198 | $ 134,118 |
| Other Ground Transportation Revenues | 4,976 | 6,013 | 5,340 | 8,776 | 9,581 | 11,257 | 11,830 | 12,415 | 13,010 |
| Total Ground Transportation | $ 126,962 | $ 129,849 | $ 131,396 | $ 138,440 | $ 140,473 | $ 142,555 | $ 144,088 | $ 145,612 | $ 147,128 |
| Other Revenues | | | | | | | | | |
| Hangars | $ 3,787 | $ 3,741 | $ 3,922 | $ 4,079 | $ 4,201 | $ 4,327 | $ 5,157 | $ 5,312 | $ 5,471 |
| Land Rental | 11,684 | 12,010 | 11,084 | 18,209 | 14,381 | 14,813 | 15,507 | 16,215 | 17,186 |
| Building and Facility Rentals | 3,037 | 2,973 | 5,673 | 3,281 | 3,223 | 2,905 | 2,992 | 3,082 | 3,174 |
| Facility Lease Reimbursement (RCC) | 7,216 | 7,229 | 8,044 | 8,140 | 7,677 | 7,907 | 8,144 | 8,388 | 8,640 |
| Other | 5,404 | 7,681 | 5,440 | 6,811 | 6,704 | 6,788 | 6,875 | 6,964 | 7,056 |
| Total Other Revenues | $ 31,129 | $ 33,634 | $ 34,163 | $ 40,520 | $ 36,187 | $ 36,740 | $ 38,675 | $ 39,961 | $ 41,528 |
| **Total Operating Revenues** | $ 337,891 | $ 342,235 | $ 350,474 | $ 378,867 | $ 383,641 | $ 402,130 | $ 395,531 | $ 416,483 | $ 433,574 |
| **Interest Income** | 1,842 | 3,092 | 4,177 | 7,019 | 4,313 | 4,858 | 4,855 | 5,379 | 5,491 |
| **Total Revenues prior to RCC Reimbursement** | $ 339,733 | $ 345,327 | $ 354,651 | $ 385,886 | $ 387,954 | $ 406,989 | $ 400,386 | $ 421,862 | $ 439,065 |
| **RCC Busing Service Reimbursement /1** | 14,488 | 14,837 | 16,190 | 15,309 | 15,126 | 15,884 | 16,361 | 16,851 | 17,357 |
| **Total Revenues** | $ 354,221 | $ 360,164 | $ 370,841 | $ 401,195 | $ 403,080 | $ 422,873 | $ 416,746 | $ 438,713 | $ 456,422 |

Source: City of Phoenix Aviation Department and LeighFisher.

Notes: 1. Reimbursement of Transportation O&M Expenses for Rental Car busing using available CFC revenues.

**Exhibit F-1**

**AIRLINE REVENUES AND COST PER ENPLANED PASSENGER**
**CITY OF PHOENIX AVIATION DEPARTMENT**
**(Fiscal Years ending June 30; in thousands except CPE)**

The forecasts presented in this exhibit were prepared using information from the sources indicated, and assumptions listed below, and as provided in the accompanying text. Inevitably, some of the assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, there are likely to be differences between the forecasts and actual results, and those differences may be material.

| | Historical 2017 | Estimate 2018 | Budget 2019 | Forecast 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|
| **Airline Revenues*** | | | | | | | |
| Airline Landing Fees | $ 51,301 | $ 52,090 | $ 52,685 | $ 54,412 | $ 55,393 | $ 57,789 | $ 59,908 |
| Airline Terminal Fees | | | | | | | |
| Exclusive Space | $ 49,716 | $ 54,475 | $ 57,998 | $ 66,803 | $ 59,495 | $ 69,506 | $ 77,103 |
| Joint Use Fees | 24,088 | 26,262 | 29,039 | 32,399 | 28,324 | 31,152 | 33,522 |
| Subtotal Airline Terminal Fees | $ 73,805 | $ 80,737 | $ 87,037 | $ 99,202 | $ 87,819 | $ 100,659 | $ 110,625 |
| Subtotal Airline Landing and Terminal Revenues | $ 125,105 | $ 132,827 | $ 139,722 | $ 153,613 | $ 143,213 | $ 158,447 | $ 170,534 |
| Baggage System Fees | 3,140 | 3,870 | 4,059 | 4,181 | 4,306 | 4,435 | 4,568 |
| Jetway Rental | 719 | 703 | 703 | 703 | 703 | 703 | 703 |
| Common Use | 5,660 | 6,965 | 7,099 | 7,912 | 7,075 | 8,791 | 9,501 |
| FIS Fees | 1,557 | 2,219 | 2,249 | 2,277 | 2,304 | 2,331 | 2,359 |
| Overnight Parking Fees | 500 | 527 | 542 | 559 | 576 | 593 | 611 |
| **Total Airline Revenues** | $ 136,682 | $ 147,110 | $ 154,375 | $ 169,245 | $ 158,177 | $ 175,302 | $ 188,276 |
| Less: Est. Cargo Landing Fees | (3,378) | (3,734) | (3,670) | (3,790) | (3,859) | (4,026) | (4,173) |
| Less: Est. Cargo Overnight Parking Fees | (500) | (527) | (542) | (559) | (576) | (593) | (611) |
| Less: Est. G.A. Landing Fees | (151) | (157) | (159) | (164) | (167) | (174) | (181) |
| Other Misc. Adj. | 924 | (759) | - | - | - | - | - |
| **Airline Revenues for CPE Calculation** | $ 133,578 | $ 141,932 | $ 150,004 | $ 164,732 | $ 153,576 | $ 170,509 | $ 183,311 |
| % Change | 2.4% | 6.3% | 5.7% | 9.8% | -6.8% | 11.0% | 7.5% |
| **Enplaned Passengers** | 21,820 | 22,219 | 22,525 | 22,800 | 23,075 | 23,350 | 23,625 |
| % Change | -1.1% | 1.8% | 1.4% | 1.2% | 1.2% | 1.2% | 1.2% |
| **Cost per Enplaned Passenger** | $ 6.12 | $ 6.39 | $ 6.66 | $ 7.23 | $ 6.66 | $ 7.30 | $ 7.76 |
| % Change | 3.5% | 4.3% | 4.3% | 8.5% | -7.9% | 9.7% | 6.3% |

Source: City of Phoenix Aviation Department and LeighFisher.
Notes: Historical and estimate years include mscellaneous account entries such as settlement, accruals and offsetting accounting entries; budget and forecast assume these entries offset and are equal to zero.

**Exhibit G**

**FORECAST APPLICATION OF REVENUES**
**CITY OF PHOENIX AVIATION DEPARTMENT**
**(Fiscal Years ending June 30; in thousands)**

The forecasts presented in this exhibit were prepared using information from the sources indicated, and assumptions listed below, and as provided in the accompanying text. Inevitably, some of the assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, there are likely to be differences between the forecasts and actual results, and those differences may be material.

| | | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| **APPLICATION OF REVENUES** | [A] | | | | | |
| Revenues | | $ 403,080 | $ 422,873 | $ 416,746 | $ 438,713 | $ 456,422 |
| Application of Revenues | | | | | | |
| Operation and Maintenance Fund | | $ 264,374 | $ 272,306 | $ 276,475 | $ 287,269 | $ 298,462 |
| Senior Lien Bond Fund | | 57,487 | 68,950 | 60,088 | 70,016 | 78,303 |
| Subtotal | | $ 321,861 | $ 341,256 | $ 336,562 | $ 357,285 | $ 376,765 |
| Junior Lien Bond Fund (incl. Future Bonds) | | 49,574 | 68,547 | 67,439 | 67,436 | 77,610 |
| Less: Junior Lien Passenger Facility Charge Credit | | (43,045) | (62,018) | (60,909) | (60,909) | (60,907) |
| Less: 2010 RZEDB Subsidy Payments | | (595) | (595) | (595) | (595) | (595) |
| Total | [B] | $ 327,796 | $ 347,190 | $ 342,498 | $ 363,217 | $ 392,874 |
| Deposit to Airport Improvement Fund | [C=A-B] | $ 75,285 | $ 75,682 | $ 74,248 | $ 75,496 | $ 63,548 |
| **Total Application of Revenues** | | $ 403,080 | $ 422,873 | $ 416,746 | $ 438,713 | $ 456,422 |
| **AIRPORT IMPROVEMENT FUND ACTIVITY** | | | | | | |
| Beginning balance | | $ 400,671 | $ 318,466 | $ 355,102 | $ 339,159 | $ 391,673 |
| Deposits: | | | | | | |
| Available Revenues | [=C] | 75,285 | 75,682 | 74,248 | 75,496 | 63,548 |
| Uses of Funds: | | | | | | |
| Short-Term Financing Program - Annual Fee | | (800) | (800) | (800) | (800) | (800) |
| Short-Term Financing Program - Interest on Draws | | (2,067) | (1,115) | (392) | - | - |
| General Obligation Bonds | | (4,717) | (3,428) | - | - | - |
| Central Services Staff and Administration | | (9,662) | (9,855) | (10,052) | (10,253) | (10,458) |
| Payoff of Series 2008B/D Bonds | | (13,390) | - | - | - | - |
| Prior Year Commitments | | (29,410) | | | | |
| Pay-as-you-go funding | | | | | | |
| Other Capital Projects | | (73,941) | (13,848) | (8,997) | (11,929) | (40,876) |
| Terminal 3 Modernization | | (23,502) | (10,000) | - | - | - |
| Terminal 4 Concourse S1 | | - | - | (69,951) | - | - |
| Ending balance | | $ 318,466 | $ 355,102 | $ 339,159 | $ 391,673 | $ 403,087 |

Source: City of Phoenix Aviation Department and LeighFisher.

**Exhibit H**

**FORECAST NET REVENUES AND DEBT SERVICE COVERAGE**
**CITY OF PHOENIX AVIATION DEPARTMENT**
**(Fiscal Years ending June 30; in thousands except for coverage calculations)**

The forecasts presented in this exhibit were prepared using information from the sources indicated, and assumptions listed below, and as provided in the accompanying text. Inevitably, some of the assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, there are likely to be differences between the forecasts and actual results, and those differences may be material.

| | | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| **Net Airport Revenues** | | | | | | |
| Revenues | | $ 403,080 | $ 422,873 | $ 416,746 | $ 438,713 | $ 456,422 |
| Less: Cost of Maintenance and Operation | | 264,374 | 272,306 | 276,475 | 287,269 | 298,462 |
| Net Airport Revenues | [A] | $ 138,706 | $ 150,567 | $ 140,271 | $ 151,444 | $ 157,960 |
| **Senior Lien Obligations** | | | | | | |
| Principal and Interest Requirements | [B] | $ 57,487 | $ 68,950 | $ 60,088 | $ 70,016 | $ 78,303 |
| **Senior Lien Obligation Debt Service Coverage** | [A/B] | **2.41** | **2.18** | **2.33** | **2.16** | **2.02** |
| Required Deposits to Senior Bond Reserve Fund | [C] | $ - | $ - | $ - | $ - | $ - |
| **Designated Revenues** | [D=A-B-C] | $ 81,219 | $ 81,617 | $ 80,184 | $ 81,429 | $ 79,657 |
| **Junior Lien Obligations** | | | | | | |
| Principal and Interest Requirements | | $ 49,574 | $ 68,547 | $ 67,439 | $ 67,436 | $ 77,610 |
| Less: Junior Lien Passenger Facility Charge Credit | | (43,045) | (62,018) | (60,909) | (60,909) | (60,907) |
| Less: 2010 RZEDB Subsidy Payments | | (595) | (595) | (595) | (595) | (595) |
| Net Principal and Interest Requirements | [E] | $ 5,934 | $ 5,934 | $ 5,935 | $ 5,933 | $ 16,109 |
| Required Deposits to Junior Bond Reserve Fund | [F] | $ - | $ - | $ - | $ - | $ - |
| **Junior Lien Obligation Debt Service Coverage** | [D/E] | **13.69** | **13.75** | **13.51** | **13.73** | **4.94** |
| **Revenues Net of Junior and Senior Lien Debt Service** | [G=D-E-F] | $ 75,285 | $ 75,682 | $ 74,248 | $ 75,496 | $ 63,548 |
| **Other Airport Obligations** | | | | | | |
| Airport General Obligation Bonds | | $ 4,717 | $ 3,428 | $ - | $ - | $ - |
| Total Debt Service on Other Airport Obligations | [H] | $ 4,717 | $ 3,428 | $ - | $ - | $ - |
| **Aggregate Debt Service Coverage Ratios** | | | | | | |
| Senior and Junior Lien Obligations | [A/(B+E)] | **2.19** | **2.01** | **2.12** | **1.99** | **1.67** |
| All Obligations | [A/(B+E+H)] | **2.04** | **1.92** | **2.12** | **1.99** | **1.67** |

Source: City of Phoenix Aviation Department and LeighFisher.

**Exhibit I-1**

**SUMMARY OF PROJECTED FINANCIAL RESULTS: BASE CASE PASSENGER FORECAST**
**CITY OF PHOENIX AVIATION DEPARTMENT**
**(Fiscal Years ending June 30; in thousands except for CPE and coverage calculations)**

The forecasts presented in this exhibit were prepared using information from the sources indicated, and assumptions listed below, and as provided in the accompanying text. Inevitably, some of the assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, there are likely to be differences between the forecasts and actual results, and those differences may be material.

| | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| **ENPLANED PASSENGERS** | 22,525 | 22,800 | 23,075 | 23,350 | 23,625 |
| **FORECAST NET REVENUES AND DEBT SERVICE COVERAGE** | | | | | |
| **Net Airport Revenues** | | | | | |
| Revenues | | | | | |
| Airline Landing Fees | $ 52,685 | $ 54,412 | $ 55,393 | $ 57,789 | $ 59,908 |
| Airline Terminal Fees | 87,037 | 99,202 | 87,819 | 100,659 | 110,625 |
| Baggage System Fees | 4,059 | 4,181 | 4,306 | 4,435 | 4,568 |
| Jetway Rental | 703 | 703 | 703 | 703 | 703 |
| Common Use | 7,099 | 7,912 | 7,075 | 8,791 | 9,501 |
| FIS Fees | 2,249 | 2,277 | 2,304 | 2,331 | 2,359 |
| Subtotal Airline Revenues | $ 153,833 | $ 168,686 | $ 157,602 | $ 174,709 | $ 187,665 |
| % Growth | 4.6% | 9.7% | -6.6% | 10.9% | 7.4% |
| Cost Per Enplaned Passenger (CPE) | $ 6.66 | $ 7.23 | $ 6.66 | $ 7.30 | $ 7.76 |
| % Growth | 4.3% | 8.5% | -7.9% | 9.7% | 6.3% |
| Parking | 89,671 | 89,794 | 90,481 | 91,157 | 91,824 |
| Car Rentals | 41,221 | 41,503 | 41,777 | 42,040 | 42,295 |
| All Other | 118,356 | 122,889 | 126,887 | 130,807 | 134,639 |
| Total Revenues | $ 403,080 | $ 422,873 | $ 416,746 | $ 438,713 | $ 456,422 |
| Less: Cost of Maintenance and Operation | (264,374) | (272,306) | (276,475) | (287,269) | (298,462) |
| **Net Airport Revenues** | $ 138,706 | $ 150,567 | $ 140,271 | $ 151,444 | $ 157,960 |
| Less: Net Senior Lien Obligations Requirements | (57,487) | (68,950) | (60,088) | (70,016) | (78,303) |
| **Designated Revenues** | $ 81,219 | $ 81,617 | $ 80,184 | $ 81,429 | $ 79,657 |
| Less: Net Junior Lien Obligations Requirements | (5,934) | (5,934) | (5,935) | (5,933) | (16,109) |
| **Junior Subordinate Lien Revenues / Deposit to AIF** | $ 75,285 | $ 75,682 | $ 74,248 | $ 75,496 | $ 63,548 |
| **Debt Service Coverage Ratios Per Bond Documents** | | | | | |
| Senior Lien Obligations | **2.41** | **2.18** | **2.33** | **2.16** | **2.02** |
| Junior Lien Obligations | **13.69** | **13.75** | **13.51** | **13.73** | **4.94** |
| **Aggregate Debt Service Coverage Ratios** | | | | | |
| Senior and Junior Lien Obligations | **2.19** | **2.01** | **2.12** | **1.99** | **1.67** |
| All Obligations | **2.04** | **1.92** | **2.12** | **1.99** | **1.67** |

Source City of Phoenix Aviation Department and LeighFisher.

**Exhibit I-2**

**SUMMARY OF PROJECTED FINANCIAL RESULTS: STRESS TEST SCENARIO PASSENGER FORECAST**
**CITY OF PHOENIX AVIATION DEPARTMENT**
**(Fiscal Years ending June 30; in thousands except for CPE and coverage calculations)**

This scenario was based upon hypothetical assumptions, as described in the text.

| | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| **ENPLANED PASSENGERS** | 20,685 | 19,155 | 19,155 | 19,430 | 19,705 |
| **FORECAST NET REVENUES AND DEBT SERVICE COVERAGE** | | | | | |
| **Net Airport Revenues** | | | | | |
| Revenues | | | | | |
| Airline Landing Fees | $ 52,685 | $ 54,412 | $ 55,393 | $ 57,789 | $ 59,908 |
| Airline Terminal Fees | 87,037 | 99,202 | 87,819 | 100,659 | 110,625 |
| Baggage System Fees | 4,059 | 4,181 | 4,306 | 4,435 | 4,568 |
| Jetway Rental | 703 | 703 | 703 | 703 | 703 |
| Common Use | 7,099 | 7,238 | 6,396 | 7,966 | 8,629 |
| FIS Fees | 2,065 | 1,913 | 1,913 | 1,940 | 1,968 |
| Subtotal Airline Revenues | $ 153,649 | $ 167,649 | $ 156,531 | $ 173,492 | $ 186,402 |
| % Growth | 4.5% | 9.1% | -6.6% | 10.8% | 7.4% |
| Cost Per Enplaned Passenger (CPE) | $ 7.24 | $ 8.55 | $ 7.96 | $ 8.71 | $ 9.24 |
| % Growth | 13.4% | 18.0% | -6.8% | 9.4% | 6.0% |
| Parking | 85,795 | 82,317 | 81,969 | 82,686 | 83,393 |
| Car Rentals | 39,411 | 37,991 | 37,783 | 38,071 | 38,350 |
| All Other | 114,736 | 115,479 | 118,596 | 122,240 | 125,794 |
| Total Revenues | $ 393,591 | $ 403,435 | $ 394,879 | $ 416,490 | $ 433,939 |
| Less: Cost of Maintenance and Operation | (264,374) | (272,306) | (276,475) | (287,269) | (298,462) |
| **Net Airport Revenues** | $ 129,216 | $ 131,130 | $ 118,404 | $ 129,221 | $ 135,477 |
| Less: Net Senior Lien Obligations Requirements | (57,487) | (68,950) | (60,088) | (70,016) | (78,303) |
| **Designated Revenues** | $ 71,729 | $ 62,179 | $ 58,316 | $ 59,205 | $ 57,174 |
| Less: Net Junior Lien Obligations Requirements | (5,934) | (5,934) | (5,935) | (5,933) | (16,109) |
| **Junior Subordinate Lien Revenues / Deposit to AIF** | $ 65,795 | $ 56,245 | $ 52,381 | $ 53,273 | $ 41,065 |
| **Debt Service Coverage Ratios Per Bond Documents** | | | | | |
| Senior Lien Obligations | **2.25** | **1.90** | **1.97** | **1.85** | **1.73** |
| Junior Lien Obligations | **12.09** | **10.48** | **9.83** | **9.98** | **3.55** |
| **Aggregate Debt Service Coverage Ratios** | | | | | |
| Senior and Junior Lien Obligations | **2.04** | **1.75** | **1.79** | **1.70** | **1.43** |
| All Obligations | **1.90** | **1.67** | **1.79** | **1.70** | **1.43** |

Source: City of Phoenix Aviation Department and LeighFisher.

# APPENDIX B
## City of Phoenix, Arizona — Description
### OVERVIEW

Phoenix is the fifth largest city in the United States, the state capital of Arizona and the center of the metropolitan area encompassed by Maricopa County (the "*County*"). This metropolitan area also includes the cities of Mesa, Chandler, Glendale, Scottsdale, Tempe, Peoria, Surprise, Avondale, Goodyear, Buckeye and El Mirage; the towns of Gilbert, Queen Creek, Fountain Hills, and Paradise Valley as well as several smaller cities and towns and all unincorporated areas of the County. It is situated 1,117 feet above sea level in the semi-arid Salt River Valley. The area is well known for its mild, sunny winters and hot summers and receives average rainfall of 7.58 inches annually.

Phoenix was founded in 1870 as an agricultural community. In 1881, it was incorporated as a city. The City Charter under which it is presently governed was adopted in 1913 and has been amended from time to time. The City has grown steadily since its inception and has shown especially strong growth since 1950. The 1900 census recorded Phoenix's population at 5,544. In 1950, the City occupied 17 square miles with a population of almost 107,000 ranking it 99th among American cities. The 2010 census recorded Phoenix's population at 1,447,128. As of August 1, 2018 the City encompasses 519.52 square miles.

**Population Statistics**
**Phoenix, Maricopa County and Arizona**

| Area | 1950 | 1970 | 1990 | 2000 | 2010 | 2017 | Percent Change 1950-17 | Percent Change 1990-17 |
|---|---|---|---|---|---|---|---|---|
| Phoenix | 106,818 | 584,303 | 983,403 | 1,321,045 | 1,447,128 | 1,626,078 | 1,422.3% | 65.4% |
| Maricopa County | 331,770 | 971,228 | 2,122,101 | 3,072,149 | 3,817,117 | 4,307,033 | 1,198.2 | 103.0 |
| State of Arizona | 749,587 | 1,775,399 | 3,665,228 | 5,130,632 | 6,392,017 | 7,016,270 | 836.0 | 91.4 |

Source: Population figures are from the U.S. Department of Commerce Census Bureau.

Phoenix is served by main lines of the Union Pacific and Burlington Northern Santa Fe Railroads, a busline (Greyhound Trailways), and 10 transcontinental, 34 interstate and 39 intrastate truck lines. Phoenix Sky Harbor International Airport, located approximately 4 miles from downtown Phoenix, is served by the following scheduled airlines: Air Canada, Alaska, American, Boutique Air, British Airways, Jazz Aviation (Air Canada Express) Compass (Delta Connection), Delta, Frontier, Great Lakes, Hawaiian, JetBlue, Mesa (American Eagle, United Express), SkyWest (American Eagle, Delta Connection, and United Express), Southwest, Spirit, Sun Country, United, Volaris and WestJet. Interstate 10, Interstate 17, U.S. Highway 60, State Routes 51, 74, 85, 87, 88, 143 and Loops 101, 202, and 303 all traverse the metropolitan area.

The metropolitan area is presently served by 34 elementary school districts, 6 high school districts, 15 unified school districts and 2 technical institutes, operating over 783 schools. Education is also provided by public charter schools and private and parochial schools located throughout the metropolitan area. Maricopa County Community College District serves the educational needs of the Phoenix area through 10 institutions. Arizona State University (ASU) houses 17 colleges and schools and has a total enrollment of more than 103,000 undergraduate, graduate and professional students on four campuses in Metro Phoenix and online. ASU's main campus is located just east of Phoenix in the city of Tempe. The Arizona State University West campus opened in 1991, is located in northwest Phoenix, and has an enrollment of over 4,000 students. The Arizona State University Polytechnic campus opened in 1996, is located in southeast Metro Phoenix in the city of Mesa, and has an enrollment of more than 4,800 students. The Arizona State University Downtown Phoenix campus opened in 2006 and has an enrollment of more than 11,465 students. Grand Canyon University, a private university offering undergraduate and postsecondary degree programs, has a main campus located northwest of downtown

Phoenix on 33rd Avenue and Camelback Road. As of December 31, 2017, enrollment at Grand Canyon University was over 83,284 including both on-campus and online students. The City also contains a private graduate school and a number of private universities, colleges, and technical institutions. The 2016 American Community Survey conducted by the U.S. Census Bureau estimated that more than 64.1% of the adult residents of the County attended college, compared to 59.5% nationally.

## SIGNIFICANT DEVELOPMENTS

### Downtown Development

In 1979, the City adopted the Downtown Redevelopment Area plan for a 1.5 square mile area of downtown to revitalize the urban center of the City. Redevelopment efforts to date have resulted in the construction of residential units as well as numerous public and private redevelopment projects that have produced several amenities and services for employers, residents and visitors.

In 1984, a group of downtown business leaders founded the Phoenix Community Alliance. The group's express purpose is to work with government and other development interests to accomplish the highest quality downtown revitalization possible. They have been involved in a program of cooperative planning between government and private interests and have been focusing their attention on bringing increased housing, especially ownership housing, to downtown. The Phoenix Community Alliance's 2011-2016 Action Plan provided three goals: facilitating quality land development in downtown Phoenix, attracting investment to downtown Phoenix, and sharpening downtown Phoenix's competitive advantage.

In December 2004, the City Council adopted a ten-year plan for downtown entitled "Downtown Phoenix: A Strategic Vision and Blueprint for the Future" (the "*Downtown Strategic Plan*"). The Downtown Strategic Plan was developed by the combined efforts of the City, Phoenix Community Alliance, Downtown Phoenix Partnership, and Arizona State University. The Downtown Strategic Plan served as a framework for the City to pursue the comprehensive revitalization of downtown Phoenix and serves as a guide for decision-making as specific plans and projects are pursued.

The Downtown Phoenix Urban Form Project (the "*Urban Project*") was a collaborative planning process to revise downtown zoning, to shape future growth and to help realize the City's vision for a livelier, more integrated and sustainable downtown. The City embarked on this Urban Project due to heightened development interest in downtown Phoenix while acknowledging the unique development challenges of the infill urban environment. The Urban Project was completed in April 2010 when the City Council approved Chapter 12 of the Phoenix Zoning Ordinance (the "*Downtown Code*").

Downtown Phoenix Inc. ("*DPI*"), a nonprofit entity formed in 2013, was created for the purpose of enhancing the economic and cultural vitality of downtown Phoenix. It serves as an umbrella organization to "broaden the tent" of the downtown community and improve coordination amongst downtown focused organizations, resulting in greater efficiency and effectiveness among nonprofits, such as Downtown Phoenix Partnership, Phoenix Community Alliance and the Downtown Phoenix Community Development Corporation. DPI serves as a City liaison to downtown stakeholders, including neighborhood and business organizations, assisting the City in communicating with the community by providing guidance and advice as needed. DPI also collaborates with the City to expand and enhance special events downtown, in addition to working on assignments, such as studying the potential expansion of the Enhanced Municipal Services District boundaries.

### General Plan

In 1985, the City Council adopted the General Plan, a long-range plan based on the Urban Village Concept. The overall goal of the Urban Village Concept (now referred to as the Urban Village Model) is to offer Phoenix residents a choice of lifestyles in which residents may live, work and enjoy leisure time activities within the same urban village. The Urban Village Model also gives residents the opportunity to play a major role in shaping these choices. It is a unique concept that has provided a high degree of citizen participation in local land use planning processes.

The General Plan guides future development in Phoenix through the establishment of fifteen urban villages, each with an approximate population of 125,000. Each village has its own village planning committee. The committees, guided by and responsible to the City Council, are comprised of 15-21 citizens, most of whom live in their respective villages. Planning activities include identifying the attitudes, problems, and issues impacting their village; formulating goals and policies that reflect the unique needs of their planning area; developing land use plans that will guide future growth in their village, and reviewing rezoning applications and development proposals.

In 1998, the State of Arizona passed the Growing Smarter legislation and in 2000 passed the Growing Smarter Plus legislation. The legislation required that the City update its General Plan, and amend or readopt the General Plan every ten years. It also requires that any changes to the General Plan be presented by public hearing to the citizens, be approved by at least two-thirds of the City Council and then be voted upon by the citizens. The City's General Plan was adopted by the City Council on December 5, 2001 and was approved by voters on March 12, 2002. In the opinion of management, the Growing Smarter and Growing Smarter Plus legislation provides processes and tools that can contribute to better planned, coordinated and balanced development. While the original legislation set a ten year deadline to readopt or amend the General Plan, in 2010 the State legislature extended the deadline to July 1, 2015.

On July 1, 2009, the City Council approved plans to implement a public participation process in developing the Phoenix General Plan Update. In August 2012, the Planning and Development Department, in partnership with the Mayor and City Council, launched PlanPHX in an effort to enhance community outreach. In order to facilitate public participation, the PlanPHX project included the debut of www.myplanphx.com. The website served as an interactive and innovative way for Phoenix residents to be involved in the Phoenix General Plan Update. In addition to the website, the Planning and Development Department conducted meetings throughout the community to obtain input and ideas from residents. The Phoenix General Plan Update focuses on five Core Values — Connecting People and Places, Building the Sustainable Desert City, Creating an Even More Vibrant Downtown, Celebrating our Diverse Communities and Neighborhoods, and Strengthening Our Local Economy. The General Plan Update was unanimously approved by the Phoenix Planning Commission on January 13, 2015. The General Plan Update was approved by the City Council on March 4, 2015 and was approved by voters in the August 25, 2015 Citywide election.

**Phoenix Convention Center**

Redevelopment of the downtown Phoenix area has accompanied the construction and expansion of the Phoenix Convention Center (previously Phoenix Civic Plaza). Opened in 1972, the original convention and cultural center facility encompassed eight city-blocks in downtown Phoenix, having a capacity of 10,000 persons and containing a variety of meeting and exhibition halls in addition to Symphony Hall.

In 1980, the City Council authorized the first expansion of the Phoenix Convention Center, adding a new structure connected directly to the existing facility. The additional space expanded the total convention space to 306,000 square feet. Construction of the $55 million addition commenced in late 1982 and was completed in June 1985, effectively doubling the size of the facility. In November 1995, the City completed a $31.5 million modernization and refurbishing program for the Phoenix Convention Center.

In 1998, construction began on the Civic Plaza East Garage, a 2,891-space parking facility to serve Phoenix Convention Center patrons and other downtown visitors. Included within the garage is approximately 25,000 square feet of commercial space. The garage was completed in the fall of 1999.

On June 22, 2001, the Arizona Legislature appointed the Ad Hoc Study Committee on Phoenix Civic Plaza/ Convention Facility Expansion (the "*Committee*") to make recommendations on several issues regarding Phoenix Convention Center expansion, including potential funding sources and State involvement. The membership included four State Senators, four State Representatives and nine public members. The Committee recognized the significant statewide benefit of convention business and unanimously recommended that the State develop a program to provide matching funds for major convention center improvements.

On November 6, 2001, City of Phoenix voters approved a ballot proposition authorizing the City to incur debt and expend public funds in an amount up to $300 million from City funding sources and in an amount up to $300 million in State or other non-City funding sources for the construction, expansion, modification and improvement of the Phoenix Convention Center. In June 2003, the Arizona Legislature approved spending up to $300 million in State money to match the City's contribution. Combined, the $600 million expansion project effectively tripled the size of the facility by adding approximately 600,000 square feet of meeting and exhibition space.

In 2001, City of Phoenix voters approved an additional $18.5 million in general obligation bonds for the renovation of the adjacent Symphony Hall. In order to minimize disruption to event activity, the construction schedule for Symphony Hall was aligned with the first phase of the Phoenix Convention Center expansion. In June 2003, the City Council approved the final development concept and selected the design team and the construction management team for the Phoenix Convention Center expansion and Symphony Hall renovation.

Construction of phase one of the Phoenix Convention Center expansion and the Symphony Hall renovation began in June 2004. Symphony Hall re-opened September 3, 2005 after renovations were completed during phase one. Significant improvements to Symphony Hall included a new entrance, plaza facing, wall paneling, carpeting, seating, roofing and an upgraded lobby. Phase one of the Phoenix Convention Center expansion, known as the West Building, was completed in July 2006. The four-level West Building includes a 45,000 square foot ballroom, an Executive Conference Center, 64,000 square feet of exhibition hall space and 27,000 square feet of meeting space.

Phase two construction on the new Phoenix Convention Center North Building was completed in December 2008. The four-level North Building features amenities such as a 46,000 square foot street-level ballroom, 56 meeting rooms, over 300,000 square feet of exhibition hall space on the lower level, 190,000 square feet of exhibition hall space on the upper level and a food court with six themed eateries. The North Building is connected to the West Building via a pedestrian bridge on the third level and below ground through the lower level exhibition hall. The fully expanded Phoenix Convention Center, which welcomed its first convention in January 2009, now offers approximately 900,000 square feet of rentable convention space and is one of the top 25 facilities in the country in terms of size.

The Phoenix Convention Center expansion had a significant impact on Arizona during the five-year construction period. From December 18, 2003 through November 30, 2008, 95 percent of the work was performed by Arizona residents, 11,684 people were employed on the project, $89.0 million was paid in wages and $26.9 million was paid in state construction taxes.

The expanded Phoenix Convention Center surpassed its projected goals for 2009, hosting 68 conventions with approximately 309,379 delegates, which equated to an economic impact of approximately $449 million in direct spending. Since its expansion in 2009, the Phoenix Convention Center has hosted 607 conventions, or an average of 60 conventions per year, with an estimated 2,287,653 delegates through 2018. The Phoenix Convention Center is projected to host over 65 conventions in 2019 with an estimated economic impact of over $400 million.

**Business Development**

The City of Phoenix Community and Economic Development Department (CEDD) strategically positions Phoenix as a globally competitive and sustainable city. Developing a modern economy is rooted in aligning economic development initiatives around Phoenix's core strengths: focusing on targeted industry sectors with the highest impact and opportunity for sustained growth, expanding the pipeline of job-creating businesses, enhancing the Phoenix business climate and improving Phoenix's competitive position in the new economic environment.

CEDD works to attract and grow quality businesses that strengthen and diversify Phoenix's economy through job growth, private investment and creating a sense of place for our community. The Arizona Commerce Authority, Greater Phoenix Economic Council and the Greater Phoenix Chamber of Commerce are strong allies in these endeavors. With these partners, the City continues several initiatives aimed at workforce development, creating and maintaining high quality jobs and industry diversification. These partnerships also establish sound economic development programs that enhance regional and statewide competitiveness.

From fiscal year 2006-07 through fiscal year 2016-17, CEDD and its partners have directly assisted in the attraction of 205 new employers to the City of Phoenix. These companies represent more than 33,500 new jobs and approximately $2.4 billion in new capital investment.

**Arts, Cultural and Sports Facilities**

The Orpheum Theatre was built in 1929 in downtown Phoenix for vaudeville performances and movie exhibitions. The City purchased the theatre in 1984 and it was listed on the National Register of Historic Places the following year. In 1988, citizens approved funding $7 million towards a renovation of the theatre, with the Orpheum Theatre Foundation providing additional funding of $7 million. The theatre, built in the Spanish Baroque Revival architectural style, reopened in early 1997 and is the last remaining example of theatre palace architecture in Phoenix. The 1,364-seat Orpheum Theatre is now an internationally recognized showcase for arts and entertainment and hosts a variety of productions which draw thousands of people to the vibrant downtown venue annually.

The Herberger Theater Center, a performing arts facility, opened in October 1989 adjacent to the Phoenix Convention Center. Located on a one-block site immediately north of the original Phoenix Convention Center, the Herberger Theater Center was financed with $18 million in public and private funds. Renovations to the Herberger Theater were performed during the summer of 2010 and included refurbishment of seating, platforms, lighting, carpet and paint on the 801-seat Center Stage and 343-seat Stage West. The renovations included the addition of exterior public space, upgraded outdoor signage and a new private second floor lounge and balcony for theater VIPs. The renovations were completed in October 2010 at a cost of approximately $16 million.

The Phoenix Art Museum, located at Central Avenue and McDowell Street began an expansion in December 2004. The $50 million project added nearly 30,000 square feet to the museum complex, most of which is utilized for exhibition space to benefit the museum's 290,000 annual visitors. $18.2 million of the total project cost was financed with bond funds approved by Phoenix voters in 2001. The remaining funds were raised from individuals and philanthropic organizations. The expansion was completed in November 2006.

The Arizona Science Center is located in Heritage and Science Park, a multi-block downtown cultural center, and received City funding from general obligation bonds approved by the voters in 1988. The Arizona Science Center, which cost $47 million, encompasses nearly 127,000 square feet including a 200-seat planetarium and a 285-seat IMAX Theater. The City contributed land and $20 million to the project, with the balance funded by private contributions. The Arizona Science Center opened in April 1997. In addition, an 800-space parking garage was developed. The parking garage was completed in November 1995.

In January 2000, an agreement between the City and a private company was reached for development of a 4,800-seat entertainment facility on a City owned site at the northwest corner of Washington Street and Fourth Avenue. The Comerica Theatre (formerly Dodge Theatre) totals 165,000 square feet and cost approximately $39 million. Construction began in September 2000 and was completed in April 2002.

In November 1988, the City entered into negotiations with the Phoenix Suns Limited Partnership (the "*Suns*") for the development and operation of a 20,000-seat downtown sports arena to be located immediately south of the Phoenix Convention Center. Final agreements between the City and the Suns were approved by the City Council in July 1989. The construction cost of the arena and adjacent garage was $100 million. The City acquired and cleared the land for the project at a cost of $12.8 million and contributed $35 million toward construction. The Suns contributed an additional $515,000 for land acquisition and were responsible for the balance of the construction costs (approximately $52 million). Construction began in November 1990 and America West Arena (currently Talking Stick Resort Arena) opened in June 1992.

A multi-phased renovation of Talking Stick Resort Arena began in the spring of 2001 and was completed in early 2005. Exterior renovations included the addition of a 15,000 square foot climate controlled pavilion on the main entrance plaza, expansion of the north façade to accommodate street level restaurants along Jefferson Street and the construction of a pedestrian passageway from Jefferson Street to Jackson Street. The interior renovations consisted of concourse improvements, seating enhancements and additional restrooms. The second phase of renovations brought significant technology improvements including a new scoreboard and wraparound LED boards, as well as expansion of the Platinum Club, and other core building improvements, all of which ensure the Center's continued state of the art status. The renovations were completed at a total cost of approximately $57 million funded jointly by the City and the Suns.

Major League Baseball owners awarded a Phoenix-based ownership group a major league baseball franchise in March 1995. The team, the Arizona Diamondbacks, began play in March 1998. A $354 million, 48,500-seat, natural grass baseball stadium was constructed at the southwest corner of Jefferson Street and Seventh Street in downtown Phoenix through a public/private partnership. Public participation was authorized in early 1994, when the Maricopa County Stadium District approved the expenditure of $238 million for the development of the stadium. The balance of the construction costs were financed by the team ownership group.

In April 2009, the City completed construction on the Civic Space Park. The 2.77-acre park in the heart of downtown Phoenix, bounded by First and Central Avenues and Van Buren and Fillmore Streets, offers residents, workers, students and visitors a unique urban design. The park contains sustainable features such as solar panel shade structures, which generate power for the park's lighting and electrical needs and pervious concrete and pavers to reduce heat reflection and allow rainfall to seep through to the ground. The park also includes interactive water and light features, green spaces and a 100-foot aerial art sculpture. The historic 1926 A.E. England Building is located inside Civic Space Park and hosts an auditorium as well as office, meeting and retail space.

On August 31, 2011 the Community and Economic Development and Phoenix Convention Center Department entered into a 20 year public private partnership with the Legends Entertainment District. The district, which utilizes digital signage to stimulate activity within downtown, is generally bounded on the north and south sides of Jefferson Street from First Avenue to Seventh Street and includes sites such as Chase Field, Talking Stick Resort Arena, the Phoenix Convention Center South Building and the Phoenix Convention Center East Garage.

In 2011, the City's Community and Economic Development Department acquired a site on Central Avenue across from the Phoenix Art Museum for the construction of the Arizona Opera Center. The new building, which opened in March 2013, is a 28,000 square foot performing arts facility that includes performance and rehearsal space, administrative offices, and educational and public meeting facilities. The City contributed $3.2 million of general obligation bonds towards the $5.2 million facility. The Arizona Opera Center building is owned by the City and operated by Arizona Opera.

In 2015, the City facilitated the creation of an entertainment district in downtown Phoenix (the "*Entertainment District*"). The Entertainment District encompasses about one-square mile of downtown Phoenix and is intended to foster economic development by bringing more businesses to the area. Previously, potential businesses were prohibited from applying for a liquor license if they were within 300 feet of a church or school, per Arizona State law. The Phoenix City Council now has the option to consider an exemption for liquor licenses within the district. The creation of the Entertainment District serves as a development tool that supports the growth of a vibrant downtown with a mix of businesses and nightlife.

**Commercial Development**

In the 1970s, Arizona's three major commercial banks (at that time The Valley National Bank of Arizona, First Interstate Bank, and The Arizona Bank) located their high-rise headquarters buildings in the downtown area. In addition, the Citibank building (now Compass Bancshares), consisting of 113,000 square feet of space situated on the northwest corner of Van Buren Street and First Avenue, was opened on August 1, 1989.

The 1970s also saw the development of two downtown high-rise hotels. The Hyatt and Renaissance (formerly the Wyndham) properties combine to provide 1,242 hotel rooms in downtown Phoenix. As an outgrowth of the many downtown development and redevelopment projects during the 1990s and 2000s, there was a rapid increase in hotel room demand from business, leisure and convention travelers visiting the area. To meet this demand, the City constructed a new 1,000-room hotel on the northwest corner of Third Street and Van Buren Street. Adjacent to the Arizona Center and several office and entertainment venues, the hotel contains approximately 10,000 square feet of retail space, including a coffee shop, lounge, restaurant, and fitness facilities; a 30,000 square foot ballroom; and additional meeting space. Starwood Hotels and Resorts was selected as the hotel's operator under the company's Sheraton flag. Design of the hotel began in early 2005 and construction began in March 2006. The Sheraton Grand Phoenix Hotel opened September 2008 and supports the additional hotel demand generated by the expansion of the Phoenix Convention Center. The opening of the hotel increased the number of hotel rooms in downtown Phoenix to 2,850.

The Trammell Crow Company completed construction of an $80 million, 26-story, 450,000 square foot high-rise office building (currently called One Renaissance), including 40,000 square feet of retail, in the center of downtown Phoenix in 1988. In conjunction with this project, the City constructed a 1,456 space underground public parking garage to support the parking needs generated by the Trammell Crow building and other downtown projects. This $15 million project was dedicated in December 1988. In response to a successful leasing effort, Trammell Crow Company constructed a second office building (called Two Renaissance) which opened in January 1990 on the half-block immediately north of their first building, consisting of 475,000 square feet including 15,000 square feet of retail.

Culminating an effort initiated by the Phoenix Community Alliance, the City entered into an agreement with The Rouse Company in September 1987 to develop a $515 million mixed-use development project to the north of the Phoenix Convention Center known as the Arizona Center. The development includes office and retail use as well as a three-acre public plaza. Arizona Public Service occupies a 450,000 square foot office tower, which was completed in March 1989. In March 1998, a 5,000-seat 24-screen movie theater opened.

The Barron Collier Company and Opus West initiated a mixed-use downtown development project in 1998. The plans for Collier Center included three high-rise towers with 1.5 million square feet of office space, 200,000 square feet of retail shops and restaurants, and parking for 2,400 vehicles. The project is located on a 7.2-acre site bounded by Washington, Jefferson, First and Third Streets. Collier Center's Phase I, a $500 million, 23-story office tower, was completed in September 2000 and is the Arizona headquarters for Bank of America. The tower contains over 500,000 square feet of office space, 85,000 square feet of retail space and a 1,500-space underground parking garage.

Construction of the 20-story, 410,000 square foot One North Central Building (formerly the Phelps Dodge Building), including 10,000 square feet of retail and 975 on-site parking spaces, began in February 2000. The building is located on the northeast corner of Washington Street and Central Avenue in downtown Phoenix. Construction was completed in November 2001.

In 2005, the City exchanged the City-owned historic Hanny's Building located at First and Adams Streets for the historic A.E. England Building located next to the ASU Downtown Phoenix campus at 424 North Central.

The A.E. England Building, owned and operated by the City Parks and Recreation Department, was renovated for mixed retail and community use. The 30,000 square foot Hanny's Building was renovated into a restaurant that opened in December 2008. The Historic Preservation Commission and the City assisted with approximately $400,000 of the estimated $4 million renovation costs.

The City entered into an agreement with One Central Park East Associates LLC to develop a $185 million 26-story office tower at the northwest corner of First and Van Buren streets. The Freeport McMoRan Center houses the world headquarters for Freeport-McMoRan Copper & Gold Inc. (formerly Phelps Dodge Corporation) and the Westin Hotel. The City provided property tax assistance and abandonment of right-of-way for the 485,700 square foot building of Class A office space, 8,500 square feet of ground level retail space and 590 parking spaces. Construction began in October 2007 and was completed in November 2009. The Westin, which opened in March 2011, occupies nine floors of the Freeport McMoRan Center and includes 242 over sized guest rooms averaging 550 square feet.

In March 2012, the office space vacated by Freeport McMoRan at One North Central Avenue, (the former Phelps Dodge Building) was leased to the Arizona Summit Law School, formerly the Phoenix School of Law. The school relocated its private law school from the Phoenix mid-town corridor into the downtown area to improve student and faculty access to the various courts and for convenient access and close proximity to retail and entertainment venues.

CityScape is an approximately 5-acre, mixed-use development that blends urban living with work, shopping and entertainment and includes restaurants, a hotel, offices and outdoor event space. The project encompasses two blocks in downtown Phoenix and is one block from the Talking Stick Resort Arena and within two blocks of Chase Field. Construction on CityScape began in the fall of 2007 and the first phase opened in March 2010. The first phase includes 660,000 square feet of Class A office space, 200,000 square feet of retail, 1,300 parking spaces and redevelopment of Patriot's Square Park. Construction of the second phase commenced in February 2011 and included construction of the 242 room Hotel Palomar which was completed in June 2012. The final phase of the project, The Residences at CityScape, is comprised of 224 high-rise apartment units, constructed above the Hotel Palomar. The Residences at CityScape opened in the spring of 2014.

In 2010, the City entered into a development agreement with Hansji Hotels to develop the Luhrs City Center Marriott at the Northwest corner of Central Avenue and Madison Street. Construction on the hotel, which houses two brands, Residence Inn by Marriott and Courtyard by Marriott, began in late 2014. The two hotels share a lobby and other amenities, such as the fourth-floor pool. The 19-story Luhrs City Center Marriott offers 320 guest rooms and ground-floor retail space, while retaining the existing historic buildings on the same city block. The project incorporated the 10-story Luhrs Building, built in 1924, the 14-story Luhrs Tower, built in 1929, along with the one-story Luhrs Post Office Station & Arcade that connects the two high-rises. Construction was completed in April 2017 and resulted in $85,000,000 in capital investment.

In the spring of 2018, a 210-room, 11-story Hampton Inn hotel opened in downtown Phoenix. This $44M hotel is well positioned to serve both the Phoenix Convention Center and the Arizona State University downtown campus.

In 2017, RED Development and Streetlights commenced construction of a dense, vibrant, urban development in the heart of downtown, with a capital investment of nearly $160 million. The project will include approximately 300 multi-family, for rent, high-rise residential units in one tower with 150,000 square feet of creative, open, office space attractive to technology and innovative tenants and 50,000 square feet of commercial space including an urban Fry's grocery store in the other tower, plus 1,000 above and below grade structured parking stalls and streetscape improvements. This project is expected to be completed in 2020.

**Biotechnology and Education**

In spring of 2002, the City and the State of Arizona, in partnership with the County's three State universities, various foundations and the private sector, formalized two proposals to the International Genomics

Consortium (IGC) and the Translational Genomics Research Institute (TGen) to locate their new headquarters in downtown Phoenix. The City agreed to construct a six-story, 170,000 square foot research facility for IGC and TGen located at Fifth and Van Buren Streets. Construction began in late July 2003 with occupancy occurring in December 2004.

In August 2004, the Arizona Board of Regents, the University of Arizona (U of A) and ASU (collectively, the Arizona Biomedical Collaborative) entered into a memorandum of understanding outlining a combined vision to expand the U of A's colleges of medicine and pharmacy in downtown Phoenix, perform complementary research and develop facilities at the Phoenix Biomedical Campus (PBC) located on Van Buren Street between Fifth and Seventh Streets. The U of A College of Medicine has renovated three historic former Phoenix Union High School buildings located on the PBC for the first phase of the medical school. The $27 million renovation project began in March 2005 and was completed in September 2006. The first Arizona Biomedical Collaborative building (ABC I) is a four-story, 85,000 square foot building located just north of the historic Phoenix Union High School buildings along Fifth Street. Research within ABC I focuses on several areas including cancer, diabetes, neurological and cardiovascular diseases. The $30 million facility includes academic space for the ASU Department of Biomedical Informatics on floors one and two and wet lab space for the U of A College of Medicine on floors three and four. Construction began in September 2005 and was completed July 2007.

In July 2012, the U of A Health Sciences Education Building (HSEB) opened and now houses the U of A College of Pharmacy and Northern Arizona University's Allied Healthcare Programs. This approximately $140 million, 260,000 square-foot six-story academic facility has provided space for the expansion of the U of A College of Medicine in downtown Phoenix. The U of A was also the recipient of a $15 million American Recovery and Reinvestment Act stimulus grant for the development of a below-grade research core. At build-out, the 30-acre PBC is expected to include more than six million square feet of research, academic and clinical development.

The next phase of construction at the PBC commenced in February 2013 with the groundbreaking of the Arizona Cancer Center. The $100 million, five-story, 220,000 square-foot facility is located on the northwest corner of 7th and Fillmore Streets and opened in the fall of 2015. This outpatient clinical facility is anticipated to host approximately 60,000 patient visits and 500,000 annual visitors.

In June 2014, the Arizona Board of Regents approved plans to construct the Biosciences Partnership Building, which will be the largest and most recent development on the PBC. The 10-story, 245,000 square-foot, $136 million facility will focus on research and will be located just north of the current HSEB. Groundbreaking for the Biosciences Partnership Building was held in October 2014 and the facility opened February 23, 2017. At full occupancy, the facility will employ an estimated 360 healthcare professionals.

To help serve the growing PBC, construction began in the fall of 2014 on a 1,200-car parking structure at 5th and Fillmore Streets. The eight-level privately developed project will provide parking for the neighboring institutions in the Phoenix Biomedical Campus, as well as paid public parking. The $19.0 million facility was opened in November 2015.

In order to meet the additional business needs of the growing biomedical sector, the City is looking beyond the 30-acre downtown PBC. The City is collaborating with ASU and the Mayo Clinic to develop the 600-acre Arizona Biomedical Corridor in North Phoenix. The City is working with developer KUD International and the Arizona State Land Department to purchase and develop 225 of the 600 acres. The Mayo Clinic completed its $314 million proton beam therapy facility within the Corridor in February 2016.

In 2004, ASU and the City of Phoenix entered into a partnership to develop the ASU Downtown Phoenix campus. Phoenix voters committed $223 million to the ASU Downtown Phoenix campus in the 2006 bond election. The campus is located in downtown Phoenix between Van Buren and Fillmore Streets on the north and south and First Avenue and Seventh Street on the west and east, respectively. Over 11,400 students were enrolled in degree programs at the ASU Downtown Phoenix campus during the fall 2017 semester.

As part of the first phase of the ASU Downtown Phoenix campus, which opened in August 2006, ASU began to offer a wide range of undergraduate and graduate programs from the College of Public Programs and the University College. The second phase brought programs from the state-of-the-art Walter Cronkite School of Journalism and Mass Communications, KAET/Channel 8 and the College of Nursing & Healthcare Innovation to the ASU Downtown Phoenix campus.

As part of the second phase of the ASU Downtown Phoenix campus expansion, construction was completed on the 82,000 square foot ASU College of Nursing and Healthcare Innovation II facility. The innovative design creates a sense of arrival for the northeast corner of the campus and downtown. With over a third of the materials utilized for this project containing recycled content, the new facility achieved the Leadership in Energy and Environmental Design (LEED) certified Gold status and has received 14 awards including Best Education Facility in America and the LEED Building of the Year. ASU invested $1.5 million in tenant improvements to finish the remaining fifth floor space of the ASU Nursing and Health Innovation II facility for executive offices, meeting space and staff workstations, which were completed in July 2013.

The second phase was completed with the addition of a student union and a student residence hall. The U.S. Post Office building at Central Avenue and Fillmore Street houses the student union for the ASU Downtown Phoenix campus. Retail postal services remain in the building, and a veranda was added along the south side of the building to be used for concerts, outdoor films and other activities. The conversion of the U.S. Post Office building was completed in March 2010. Taylor Place, a new student residence hall was constructed on the campus between First and Second Streets on Taylor Street. Taylor Place was completed in August 2009 and accommodates 1,294 beds. In early 2012, ASU began construction on the 18,870 square foot Student Center @ the Post Office located on the lower and first floors of the historic post office. Construction was completed in time for the 2013 spring semester.

In August 2012, construction of the new ASU student recreation center began. The Sun Devil Fitness Complex is a five-story, 64,000-square-foot facility with state-of-the-art weight and fitness areas, three multi-purpose studios for group fitness and mind/body classes, a two-court gymnasium, a rooftop outdoor leisure pool and a multi-purpose area for student clubs to utilize. The $25 million facility is located on First Avenue north of Van Buren Street, next to the YMCA. With classroom space for the Exercise and Wellness academic program on the second floor, the new facility adds to the existing YMCA services and serves both ASU students and YMCA members. The Sun Devil Fitness Complex opened to students and members in August 2013.

The ASU Sandra Day O'Connor College of Law relocated to downtown Phoenix from the Tempe main campus with the completion of the Beus Center for Law and Society building. The City of Phoenix invested $12 million in the project, located on a square block bounded by First, Second, Taylor and Polk Streets. Construction on the $129 million, 280,000-square-foot facility began in June 2014 and completed in August 2016.

In 2018, ASU committed to relocate the ASU Thunderbird School of Global Management (Thunderbird) from Glendale, Arizona to a new building on the square block also containing the ASU Sandra Day O'Connor College of Law. Thunderbird is moving to a temporary space at the Arizona Center before moving the graduate school to a new $60 million, 100,000-square-foot, four-story building at the corner of Second and Polk Streets in 2020. The City of Phoenix has agreed to invest $13.5 million into the project.

The anticipated economic impact of the ASU Downtown Phoenix campus is estimated to be $570 million, including the creation of 7,700 jobs. The City and ASU are working together to develop the State's workforce through education, generating academic and intellectual capital.

**Neighborhood Revitalization and Downtown Housing**

The City's downtown redevelopment efforts are complemented by Neighborhood Services Department (NSD) programs through which NSD works to preserve and improve the physical, social and economic health of Phoenix neighborhoods. NSD has created programs to assist neighborhoods citywide and aggressively works to revitalize targeted neighborhoods. City projects are complemented by neighborhood-based programs such as clean-ups, blight elimination and graffiti prevention that are often led by neighborhood stakeholders, including businesses, residents and schools.

Targeted neighborhood strategies are more comprehensive and concentrated in approach, involving redevelopment of blighted or under-used properties, proactive code enforcement, housing rehabilitation, infill housing development, infrastructure improvements, neighborhood capacity building and economic development. Targeted neighborhoods include Neighborhood Initiative Areas, Redevelopment Areas, West Phoenix Revitalization Area, Rental Renaissance Neighborhoods and other City designated revitalization areas.

In order to make a meaningful impact towards the revitalization of distressed neighborhoods, NSD uses a strategic approach to address citywide needs and revitalization activities to enhance the physical environment and to improve neighborhoods. Federal programs that address blight elimination and neighborhood revitalization priorities including owner occupied housing rehabilitation and homeownership opportunities support the NSD strategies while enhancing the quality of life of Phoenix residents.

Beginning in the late 1990s, downtown Phoenix saw the development of several market rate projects for the first time in nearly a decade. From 1997 through 2003, nearly 1,300 housing units were built and available for occupancy in downtown. The units included apartments, lofts, condominiums and multi-family housing.

In the summer of 2003, Post Properties and Desert Viking Properties, LLC completed a rehabilitation project of a 12,300 square foot retail structure located at Roosevelt Street and Third Avenue. The Gold Spot Market was reopened on July 17, 2003.

In August 2003, Artisan Homes, Inc. began building 105 ownership housing units on a 5.5 acre site bounded by Fifth and Seventh Streets and Roosevelt and Portland Streets. Artisan Village is an urban, mixed-use row house and townhouse residential project featuring ownership and unique live/work units with 3,000 square feet of street level retail opportunities, streetscapes, green belts, open spaces and 1,200 square feet dedicated for cultural use. The total project cost approximately $18 million and was completed in March 2006.

In March 2004, the City entered into an agreement with Portland Place Partners to develop vacant land on Portland Street between Third Avenue and Central Avenue. Portland Place is an urban residential development that consists of 54 units in a six-story condominium tower and brownstones. Construction of Portland Place was completed in July 2007. The next phase of development, Portland on the Park, began construction in the spring of 2015 and was completed in the spring of 2017. This luxury condominium project sits adjacent to the City's Hance Park on Portland Ave, between 1st and 2nd Ave. The $54,000,000 Portland on the Park project has added 170 condos to the historic Roosevelt neighborhood.

Since 2004, residential housing projects have been developed in downtown Phoenix with several additional projects currently under construction. Over the past ten years, downtown has gained over 3,300 market rate units and 1,200 affordable units. These new units have been developed as urban infill and adaptive reuse as well as low, mid and high-rise development projects.

On July 1, 2004, the City Council authorized staff to enter into a disposition and development agreement with Urban Form Development, LLC for a mixed-use residential project on City-owned property located at 215/217 East McKinley Street. Named 215 East McKinley, the development includes 14 residential units. Construction began in March 2006 and was completed in the fall of 2007.

WP South Acquisitions, LLC began construction in the spring of 2005 of a mixed-use residential project on a City-owned parcel and adjacent privately-owned property at the northwest corner of Fourth and Fillmore Streets. Alta Phoenix Lofts consists of approximately 325 market-rate rental residential units in an eight-story building with up to 10,000 square feet of street level commercial space and live/work units and a six-story parking structure with 450 parking spaces. Occupancy began in March 2009.

The Summit at Copper Square, a $32 million project adjacent to Chase Field, was completed in late 2007. The 22-story residential project on the southwest corner of Fourth Street and Jackson Street, consists of 167 ownership loft, studio, and luxury condominium units.

Grace Communities completed demolition of an office building located at the northeast corner of First Avenue and Monroe Street in June 2005 and constructed the tallest residential tower in Arizona. 44 Monroe consists of a 34-story mixed-use high-rise with 196 ownership condominium units, a recreation area, fitness center, theater, parking and approximately 3,300 square feet of commercial development. The $140 million project was completed in August 2008. In June 2010, ST Residential purchased 44 Monroe and converted the condominiums into rental units.

The City of Phoenix obtained a HOPE VI (Home Ownership Opportunities for People Everywhere) grant from the U.S. Department of Housing and Urban Development (HUD) to fund the revitalization of the Matthew Henson public housing site and surrounding community. The overall goals of HOPE VI are to assist public housing authorities in replacing severely distressed housing, increasing resident self-sufficiency and home ownership opportunities, creating incentives to encourage investment, and lessening concentrations of poverty by promoting mixed-income communities. The HOPE VI Special Redevelopment Area encompasses the area between Seventh and Fifteenth Avenues and Grant and Pima Streets. The project is a concentrated, mixed-income development of 611 affordable housing units with a community resource center, youth activity center, public parks, community gardens and swimming pools. Demolition and reconstruction began in December 2003. Eligible residents began to return to the communities in December 2005 and final occupancy occurred in the fall of 2008.

Concord Eastridge began development of a major multi-family, mixed-use residential project in 2011. The $52 million project, Roosevelt Point, occupies a three acre site in downtown Phoenix located between Roosevelt and McKinley Streets and Third and Fourth Streets. The privately funded project consists of 327 units and a 5-level parking garage and several thousand square feet of street-level retail. The project is intended to serve the growing population of students attending classes at the ASU Downtown Phoenix campus and the Phoenix Biomedical Campus. Construction began in the spring of 2012 and was completed in September 2013.

In January 2013, the developer of the CityScape project began construction on a 242 luxury apartment complex, Residences at CityScape, situated atop the 10-story Hotel Palomar at the intersection of Jefferson Street and Central Avenue. Construction was completed in the spring of 2014. The Residences at CityScape extends 25 stories above street level and provides the apartment residents access to all of the hotel's amenities, including a private pool deck.

Art HAUS is a market rate residential project that completed construction in July 2016. The project includes twenty-five urban dwellings located in Midtown Phoenix consisting of simple yet bold forms organized around inter-connected semi-private resident courtyards. Dwellings consist of seven three-level townhomes, fifteen two-level lofts and three single-level flats ranging from 560 to 1,800 square feet. The project was constructed on the remnant parcel behind the Arizona Opera Center at Central Avenue and McDowell Road. The $5.5 million project is within walking distance of the Midtown Arts District.

Cloquet Metrowest, LLC completed a $17 million, five-story mixed-use development, named Union, in the summer of 2017. The Union includes 8,000 square feet of street-level restaurant/retail space, structured parking and 80 market-rate, multifamily residential units on a 0.9 acre site in the Historic Roosevelt neighborhood, at the southwest corner of Roosevelt Street and First Avenue.

In the summer of 2017, Alliance Residential completed the Broadstone Arts District project, a $49 million four-story, multi-family, rental residential infill project with 280 apartments. This development is on a 4.0 acre site at the northeast corner of McDowell Road and Alvarado Street.

In the fall of 2017, CA Ventures broke ground on The Link PHX. The Link PHX is a 30-story high-rise residential rental project with ground floor commercial space. This is the first phase of a three phase project that will ultimately generate $175 million of new investment in downtown Phoenix.

**Government Facilities**

A 601,000 square-foot Phoenix City Hall was built on Washington Street between Second and Third Avenues, immediately north of the existing Calvin C. Goode Municipal Building. The project, completed in 1994, includes a 1,500-space parking structure that contains 43,000 square feet of office and retail space and is located between Washington and Jefferson Streets and Third and Fourth Avenues.

The Burton Barr Central Library celebrated its grand opening in May 1995. The five-story, 284,000 square-foot library accommodates more than 1 million volumes and has seating for up to 800 patrons. The facility was designed to meet the needs of library patrons well into the 21st century.

Construction of the Phoenix Municipal Court Valdemar A. Cordova Building, a nine-story, 375,000 square-foot City criminal justice facility, was completed in the fall of 1999. The building is located on the northwest corner of Washington Street and Third Avenue, directly west of Phoenix City Hall. The project cost $79 million. It is estimated that between 3,000 and 4,000 customers per day visit this facility, making it the largest volume court in the State.

The Federal government completed construction of a 550,000 square-foot federal courthouse in September 2000. The Sandra Day O'Connor U.S. Courthouse is located on two blocks bounded by Jefferson and Washington Streets and Fourth and Sixth Avenues in downtown Phoenix. The project cost approximately $110 million and includes courtrooms and related office space.

The County constructed a new courthouse in downtown Phoenix at First Avenue and Madison Street. The new 16-story courthouse provides 683,000 square feet of space, including 32 criminal courtrooms. Construction of the $340 million courthouse was completed in February 2012.

Maricopa County began construction of a new Maricopa County Sheriff's Office (MCSO) Headquarters in June 2012. Completed in 2014, the five-story, $92.5 million facility is located on Fifth Avenue and Jefferson Street and houses MCSO administrative staff, and the 911 call center operations. The building contains approximately 128,000 square feet of space with 75 parking spaces below ground.

**Downtown Streetscape**

Construction on an $8.9 million streetscape project in downtown Phoenix was completed in February 1995. The project added pedestrian lighting, landscaping and street furniture to pedestrian-oriented streets in the downtown area. The improvements are concentrated along Adams Street between Second Avenue and Second Street, Monroe Street between Third Avenue and Seventh Street, Second Street from Van Buren to Jefferson Streets, and Third Street between Van Buren and Monroe Streets. Project boundaries were chosen to create a pedestrian link between Phoenix City Hall, the Orpheum Theater, Talking Stick Resort Arena, the Arizona Center and the Heritage and Science Park.

In the fall of 2000, the City and the County reached an agreement wherein the County would be responsible for funding the streetscape build out of Jackson Street from First Avenue to Ninth Avenue and the City would be responsible for its maintenance. The $3.2 million project included a three-month community input process to identify the parameters of the street layout, landscape, sidewalk, lighting and design elements. Construction began March 2004 and was completed in November 2004.

In the fall of 2006, the City began construction of two streetscape projects on the ASU Downtown Phoenix campus. The projects, which included Taylor Mall and First Street, were completed in January 2009. Taylor Mall is a tree-lined, pedestrian-friendly sidewalk and street between the Civic Space Park and Arizona Center that contains public art, inviting benches, and sustainable water features. A traffic signal and crosswalk allows pedestrians to cross Central Avenue and light rail tracks to enter the Civic Space Park safely from Taylor Mall. In addition, the west side of First Street from Polk Street to McKinley Street has been improved with lighting, shade and landscaping.

In late 2012, the City completed construction of a 2006 voter approved bond project which improved downtown streetscapes on First Street from Fillmore to McKinley streets. The City received an award from the Arizona Community Tree Council for the First Street streetscape project for the beautification of the urban environment through the use of trees.

In 2015, the City completed construction on a streetscape project improvement on Roosevelt Street between Central Avenue and Fourth Street. The project was funded through a $750,000 Federal Transportation Enhancement Grant. The improvements include new sidewalks, bike lanes, street lights, shade trees, benches, public art and other amenities. A second phase of this project on Roosevelt Street, from Fourth Street to Seventh Street was completed in August 2016.

In 2017, the Renaissance Hotel, which fronts Adams Street from Central Ave to 1st Street, began a $9.5M capital improvement program that took recommendations from the Adams Street Activation Study. The improvements included relocating the valet area from Adams St. to 1st Street, structured shade elements along the south façade, drought tolerant landscaping and decorative street pavers. This investment transformed Adams Street into a more pedestrian friendly space and set a high standard for future development along Adams Street.

**Transit/Light Rail**

Central Station, the City's downtown transit center located on the northwest corner of Central Avenue and Van Buren Street was constructed in 1997. The 2.7-acre site includes a 4,000 square-foot passenger services building for ticket sales, security, and restrooms; a 16,000 square-foot passenger plaza that includes passenger information, seating and shade; and bus loading and circulation areas for 6 bus routes, Dial-a-Ride and DASH (Downtown Area Shuttle), as well as east and westbound light rail services. The total cost of the project was approximately $9.3 million, with the Federal Transit Administration funding 80% and the City funding 20% of the project. Central Station received a $3.7 million renovation, completed in July 2011, to modernize the facility, improve security, and incorporate sustainable elements. The transit center improvements were one of five major transit capital projects funded by the American Recovery and Reinvestment Act (ARRA). The other four projects include a $1.4 million expansion of the 40th Street and Pecos Road park-and-ride that was completed in June 2010, the construction of a new $3.4 million park-and-ride at the southwest corner of Interstate 17 and Happy Valley Road that was completed in January 2011, the construction of a new $2.7 million park-and-ride at the southwest corner of 27th Avenue and Baseline Road that was completed in February 2012 and a $4.0 million project to make Americans with Disabilities Act (ADA) related improvements to 400 bus stops in Phoenix that was completed in October 2012.

On March 14, 2000, City of Phoenix voters approved a 0.4% sales tax increase to be levied for a period of twenty years to provide funding for a light rail system as well as mass transit, including expanded bus service and other transportation improvements. Construction of an approximately $1.4 billion, 20-mile light rail system connecting north central Phoenix (19th Avenue and Bethany Home Road) with Sky Harbor International Airport (via the PHX Sky Train®), Tempe and Mesa (Main Street and Sycamore Road) began in the fall of 2004 and opened for operations in December 2008. The total cost of the project was funded with Federal grant funds, City sales tax revenues and other local funding sources.

In March 2008, the City entered into an intergovernmental agreement with Valley Metro Rail, Inc. (METRO) to design, build, operate and maintain an extension to the light rail system. The Northwest Extension (NWE) as initially planned would extend the original light rail system 4.9 miles northwest from 19th Avenue and

Montebello (just south of Bethany Home Road) to 25th Avenue and Mountain View Road. The project will be completed in two phases. Construction of Phase I, which extended the light rail system 3.2 miles from 19th Avenue and Montebello to 19th Avenue and Dunlap, began in January 2013 and opened for service to the public in March 2016. Phase II will extend the light rail system another 1.7 miles from 19th Avenue and Dunlap over the I-17 freeway on Mountain View Road with a terminus on the west side of the freeway near Metrocenter mall to be completed in 2023. The City, in partnership with Valley Metro, began the environmental assessment for phase II during the spring of 2015. The Transit Excise Tax has already funded 33% of the construction costs for the NWE and the Maricopa County Transportation Excise Tax is funding the remaining 67% of the construction costs. No additional borrowing by the City is expected to be required for the City to fund capital costs of the NWE. The NWE operating costs will be funded with Transit Excise Tax revenues, fares, advertising revenues, and Federal preventive maintenance funds. The first new station along the existing Valley Metro Rail line will be completed early 2019 and will serve the communities and future development near 50th Street and Washington Street. A South Central Extension is anticipated to be completed in late 2023 and will connect with the current light rail system in downtown Phoenix and run south to Baseline Road.

The city of Mesa received local and regional approval in August 2010 to move forward with the Central Mesa Extension, which extended the System 3.1 miles from Sycamore Drive and Main Street to Mesa Drive and Main Street. Construction on the Central Mesa Extension began in May 2012, with service beginning in August 2015. The Federal Transit Administration funded 64% of the Central Mesa Extension construction costs and the Maricopa County Transportation Excise Tax funded the remaining 36% of the construction costs. The Gilbert Road Extension will be completed late spring 2019 and will extend the light rail on Main Street from Mesa Drive to Gilbert Road in Mesa. The city of Tempe is planning to begin construction in 2018 on the Tempe Streetcar. Tempe Streetcar is the first modern streetcar line in the Valley and will connect riders to the light rail system, neighborhoods, major business centers, and regional events. Streetcar vehicles are smaller than light rail vehicles and operate individually, not linked together in trains. Streetcar stops are similar to bus stops and occur more frequently than light rail stations. The Tempe Streetcar is scheduled to be completed in 2021.

The City has also made major renovations to two of its bus transit centers. Renovations to the Sunnyslope Transit Center and the Paradise Valley Mall Transit Center were completed in June 2007 and June 2009, respectively. The renovations provided much needed improvements to the facilities, including security upgrades. The City recently developed a new park-and-ride facility along the Baseline Road corridor at 24th Street, which opened in April 2015. In addition, the City upgraded and expanded the Desert Sky Mall Transit Center to serve residents in West Phoenix. This much needed facility, which provides shade, security, covered parking and public art opened to the public in December 2015. The new Desert Sky Mall Transit Center cost $8.2 million for land, design and construction.

The City has also made substantial improvements to its bus operating and maintenance facilities. These facilities are the backbone of the transit system, as they provide fueling, cleaning, and maintenance for the City's bus fleet, as well as administrative space for the bus operations contract service providers. In November 2007, a new $50 million West Transit Facility was completed and opened for operations. This facility provides additional capacity to operate and maintain buses for the Phoenix transit system. The facility was designed to accommodate 250 buses and replace a rented facility, which could only accommodate 75 buses. The additional capacity will help address future expansion of the Phoenix bus system with the passage of Prop 104.

Improvement plans for the bus operating and maintenance facilities also includes renovations to the two existing facilities, the North Transit Facility and the South Transit Facility. Upgrades to these facilities include improvements to life safety, security, building code upgrades, roofing replacements, HVAC equipment replacement, and fueling system upgrades. The North Transit Facility renovation was completed in November 2013, while work at the South Transit Facility began in the summer of 2015 and is scheduled to be completed in the spring of 2018, with a total cost of $23 million for design and construction.

In August 2014, a 34-person group, the Citizens Committee on the Future of Phoenix Transportation, was created to address the 2020 expiration of the transit tax and to review the public transit and street transportation needs of the City. After six months of meetings and over 100 public engagement events, the committee forwarded their recommendations to the City Council, whom approved the plan in March 2015 and placed Prop 104 on the ballot. On August 25, 2015, voters approved a new comprehensive transportation plan and funding tax proposal that increased the existing tax rate dedicated for transportation. The dedicated sales tax rate was increased from the previous 0.4% sales tax rate to 0.7% and became effective January 1, 2016, with a sunset date of December 31, 2050. Only the revenue collected from the original 0.4% transit sales tax is currently pledged to the Transit Excise Tax Bonds. The increased tax will continue to fund expanded local bus and Dial-A-Ride service, bus rapid transit service, neighborhood circulators and the operation of the light rail system. In addition, funding will provide for expanded bus and light rail service hours and routes, high capacity transit corridors, and infrastructure improvements to bus stops, maintenance facilities and transit centers. Street improvements will also be funded by the increased tax including pavement maintenance, new bicycle lanes, sidewalk installation and traffic signal enhancements.

**Phoenix Sky Harbor Center**

The creation of Phoenix Sky Harbor Center was approved by the City Council in 1984, and in 1985, $19,150,000 in City bonds were issued for the development of 550 City-owned acres into a high quality business office, technological and industrial center. Located immediately west of Phoenix Sky Harbor International Airport, Phoenix Sky Harbor Center is generally bordered by I-17 to the south, 16th Street to the west, the Southern Pacific Railroad to the north and 24th Street to the east. Phoenix Sky Harbor Center is bisected by I-10, which provides convenient transportation access to the site and to Phoenix Sky Harbor International Airport.

The initial acquisition and infrastructure development phase of Phoenix Sky Harbor Center was completed in 1993. Among the earliest occupants were Honeywell, Sky Chefs Inc., Miller Brands of Phoenix and Arrow Electronics. These initial tenants built distribution space, office buildings, warehouses and manufacturing facilities totaling over 1.16 million square feet.

Bank of America, N.A. established its credit card operations at Sky Harbor Center in 1991. The Bank of America Credit Card Center has approximately 2,000 employees and includes a 400,000 square-foot complex on 30 acres. In November 1995, Bank of America, N.A. completed construction of an additional 150,000 square-foot structure for credit card operations, which employs approximately 1,100 employees. In 2013, First States Investors Inc. sold the property to GPT GIG BOA Portfolio Owner, LLC, with Bank of America, N.A. remaining the main tenant of the property.

In July 1993, the City received approval for the relocation and expansion of Foreign Trade Zone (FTZ) No. 75 to a 375-acre site at Sky Harbor Center. The FTZ was established to allow companies who import large amounts of foreign products to defer paying duties on these products until they are shipped to retail outlets. The FTZ boundaries were modified to include air cargo operations at the Airport.

In April 2002, America West Airlines (now American Airlines) completed construction of a $35 million, 15,000 square-foot flight training center and systems operation control facility on a 17-acre site at Sky Harbor Center.

In December 2005, Bank One (now JPMorgan Chase) completed a $70 million, 400,000 square-foot regional processing center to support its banking and financial operations. The facility accommodates nearly 3,000 employees. JPMorgan Chase added a fourth level (330 parking spaces) to the existing parking garage on the facility to accommodate the hiring of additional employees.

Other sizeable tenants at Phoenix Sky Harbor Center include First Group America dba Greyhound Lines, Charlie Case dba Community Tire, Level 3 Communications, Grand Stable & Carriage Co. LLC, LTJ Skyline, the City of Phoenix, Horseheads Industrial Capital II, LLC, 801 S. 16th Industrial, LLC and Honeywell International Inc.

In July 2001, the City Council approved the concept of a consolidated rental car center (RCC) for Phoenix Sky Harbor International Airport. On June 1, 2002, the City initiated a $3.50 daily customer facility charge (CFC) collected by the rental car companies on all rentals to be used to fund the construction, operation and maintenance of the RCC. The CFC was subsequently increased to $4.50 on September 1, 2003 and to $6.00 effective January 1, 2009. The RCC is located on approximately 141 acres within Sky Harbor Center and opened on January 19, 2006. The development includes a customer service building, car service facility, a 5,651 space parking garage, bus fleet, bus maintenance facility, and associated site improvements, infrastructure, roadways, landscaping and signage. The project was funded with CFC revenues and bond funds and cost approximately $285 million.

**Phoenix Sky Harbor International Airport**

In November 1990, construction was completed on Terminal 4 at Phoenix Sky Harbor International Airport (the "*Airport*") at a cost of $276 million. The original facility included 4 domestic concourses housing 44 gates, one international concourse with 4 gates, and a 3,400-space parking facility. In July 1994, the City Council approved expansion of Terminal 4 to add 10 domestic gates to the international concourse. Construction of the new facilities was completed in February 1996. In September 1995, America West Airlines (now American Airlines) announced plans to expand its Phoenix operations over the next several years. In March 1998, the City Council approved an airport capital expansion program funded primarily by passenger facility charges and airport revenue bonds. Approved and completed projects included rebuilding runways in concrete, construction of two new airport fire stations, a new Terminal 4 concourse to provide more capacity for American Airlines and additional parking facilities at Terminal 4. The airport is currently in early design stages of a new concourse at Terminal 4, which Southwest Airlines has already committed to utilize.

In February 2007, the City Council approved a $2.9 billion, ten-year Airport Development Program (ADP). The ADP included the design and construction of the PHX Sky Train®, development of additional gates and facility rehabilitation and maintenance. The national economic recession ending in 2009 negatively impacted the airline industry and resulted in reductions to passenger traffic at the Airport. As a result of traffic and revenue declines, Airport management reduced operating expenditures and deferred some non-essential capital projects. Even with these reductions and deferrals, management continued design and construction of phase one of the PHX Sky Train® project and other vital Airport projects. In 2010, air passenger traffic at Sky Harbor International Airport stabilized and began to recover.

Terminal 3, which opened in 1979, contains approximately 639,000 square feet and 10 gates. The Terminal 3 Modernization project, which began construction in 2014, consists of incremental improvements to Terminal 3 with the purpose of removing Terminal 2 from service, providing for passenger growth in Terminal 3, increasing passenger flow efficiencies and increasing concession revenue. The $580 million modernization project has three independent phases that allow the project to be completed as demand requires and finances allow. When complete, airlines currently operating in Terminal 2 will be moved into the expanded Terminal 3 facilities. Upon completion of the Terminal 3 Modernization project, Terminal 3 will contain approximately 710,000 square feet and 25 gates.

PHX Sky Train® is an automated people mover designed to carry over 35 million riders annually through seven stations at Sky Harbor along an elevated guideway spanning approximately five miles. The PHX Sky Train® provides a new front door to the Airport, offering a seamless connection with the light rail transit station at 44th Street and Washington. Stage 1 of the PHX Sky Train® connects Phoenix's light rail system, Sky Harbor's east economy parking garages and Terminal 4 and began service on April 8, 2013. Stage 1a (the Terminal 3 Line Extension) began service on December 8, 2014 and runs from Terminal 4 to Terminal 3 with a walkway connection to Terminal 2. The two stages were completed more than $45 million under the combined budget of $884 million. The PHX Sky Train® now connects all of the Airport's terminal facilities to Valley Metro Rail, and helps relieve significant traffic congestion during peak times in the terminal core.

In October 2016, the City Council approved the final extension of the PHX Sky Train®, which will extend service from Terminal 3 to the Rental Car Center. The train extension project has a budget of $745 million and commenced construction in February 2018.

### Property Tax Supported Bond Program

In order to help meet the City's future capital financing needs, a comprehensive property tax supported general obligation bond program was initiated in the summer of 2005. A citizens bond committee consisting of approximately 700 private citizens was appointed by the Mayor and City Council to review the City's capital requirements and recommend a total bond program to the voters. This is the traditional approach used by the City for bond elections since 1950. The program culminated in a special bond election on March 14, 2006 when the voters approved all seven propositions totaling $878.5 million in new general obligation bond authorizations. The propositions and the amount of bonds authorized are shown in the following table. There is currently $152.3 million of authorized bonds that have not yet been issued.

| 2006 Bond Program | Amount Authorized |
|---|---|
| Police, Fire and Homeland Security | $177,000,000 |
| Education Facilities | 198,700,000 |
| Library and Youth, Senior and Cultural Facilities | 133,800,000 |
| Parks, Open Space and Recreational Facilities | 120,500,000 |
| Streets, Storm Sewers and Flood Protection | 147,400,000 |
| Affordable Housing and Neighborhood Revitalization | 85,000,000 |
| Computer Technology | 16,100,000 |
| Total | $878,500,000 |

## PHOENIX CITY GOVERNMENT

Phoenix operates under a Council-Manager form of government as provided by its Charter which was adopted in 1913. The City Council consists of a Mayor and eight Council members, elected by the people on a non-partisan ballot. At a special election held on October 3, 1989, Phoenix voters passed Proposition 105 which amended the City Charter to provide for four year staggered terms and a limit of two such terms for the Mayor and Council members. On November 6, 2001, Phoenix voters passed Proposition 101 which amended the City Charter to allow Council members to serve up to three consecutive four-year terms, with no limit on the number of terms that could be served over a lifetime. On August 28, 2018, Phoenix voters passed Proposition 411 which amended the City Charter by changing City Council elections from the fall of odd-numbered years to November of even-numbered years to coincide with county and statewide elections. The initial implementation of Proposition 411 will extend current Council members' terms by a year, so the next elections can occur in even-numbered years. The Mayor is elected at-large, while Council members are elected by voters in each of eight separate districts they represent. The Mayor and each Council member have equal voting power.

The Council is responsible for policy making. It appoints advisory boards, commissions and committees and also appoints Municipal Court Judges and the City Manager.

The City Manager is responsible for executing Council policies and administering City operations. Reporting to the City Manager is an Assistant City Manager, a Special Assistant, the Budget and Research Director, the Chief Financial Officer, the City Auditor and the City Attorney.

The City government is responsible for furnishing basic municipal services. Primary services delivered by the City's 30 departments, 18 functions and 14,440 employees include police, Municipal Court, fire protection, parks, recreation, libraries, sanitation, water, sewer, transportation (including streets and public transit), airports, building safety, public works, neighborhood improvement and housing, community and economic development and convention and cultural services. These services are being provided in fiscal year 2018-19 through an adopted operating budget of $4,421.9 million. Of this, the general purpose funds budget totals $1,296.7 million, which is for general municipal services and excludes enterprise activities such as water, sewer, refuse and airports and special revenue funds such as grants, secondary property taxes, Arizona Highway User Revenues, impact fees and voter-approved dedicated sales taxes.

### Elected Officials

*On May 29, 2018, Greg Stanton resigned as Mayor to run for a U.S. Congressional seat. On June 11, 2018, Councilmember Thelda Williams was appointed Mayor Pro Tempore by the City Council to serve until a new Mayor is elected by the public. The election for mayor will be held on November 6, 2018, with a possible run-off election to be held on March 12, 2019. Ms. Williams will continue to serve as the Councilmember from her district while serving as Mayor Pro Tempore.*

*Councilmembers Daniel Valenzuela and Kate Gallego resigned their council seats on July 18, 2018 and August 7, 2018, respectively, to run for the vacant mayoral position. The City Council appointed Vania Guevara to represent District 5 and Felicita Mendoza to represent District 8 as Interim Councilmembers until new Councilmembers are elected by the public. The election for the two council seats will be held on March 12, 2019, with a possible run-off election to be held on June 5, 2019.*

THELDA WILLIAMS, MAYOR PRO TEMPORE AND COUNCILMEMBER, DISTRICT 1

Interim Mayor Williams began her third consecutive term on the City Council in January 2016, having previously served on the Council from 1989 to 1996 and as interim mayor in 1994. Before rejoining the City Council, Ms. Williams served on the Maricopa County Animal Care and Control Agency, the Governor's Commission to Prevent Violence Against Women and the Phoenix Sky Harbor International Airport Master Plan Committee. Currently, Ms. Williams serves on the Phoenix-Mesa Gateway Airport Authority, the Luke (AFB) West Valley Council and the Childhelp USA Advisory Board.

JIM WARING, VICE MAYOR, DISTRICT 2

Councilmember Waring began his second consecutive full term on the City Council in January 2018. Mr. Waring has been an active member of the community for many years and has volunteered on many City and charitable organizations, including the Paradise Valley Village Planning Committee, Phoenix Planning Commission and Neighborhood Block Watch Committee. For his contributions, he has earned awards from the Arizona Federation of Taxpayers (Champion of the Taxpayer), National Federation of Independent Business (Guardian of Small Business), and the Arizona Chamber of Commerce (Senator of the Year). In addition, he was recognized for his work fighting domestic violence by the Arizona Coalition Against Domestic Violence (Legislator of the Year twice) and the Men's Anti Violence Network (Man of the Year). Councilmember Waring was awarded the Arizona Veterans Hall of Fame Copper Shield Award and the National Guard Association of the United States Medal of Merit. Mr. Waring was an Arizona State Senator for seven years and has served on the staffs at Arizona State University, the Arizona Board of Regents and Northern Arizona University. Mr. Waring received his PhD in Public Administration from Arizona State University's School of Public Affairs and his undergraduate degree from Northern Illinois University.

SAL DICICCIO, COUNCILMEMBER, DISTRICT 6

Councilmember DiCiccio began his third consecutive full term on the City Council in January 2018. Mr. DiCiccio previously served on the City Council from 1994 to 2000. Mr. DiCiccio currently works with state, tribal, county and municipal governments as well as national business entities to develop business opportunities in Arizona. Mr. DiCiccio has served on several boards and committees including the Arizona Municipal Tax Code Commission, the State Land Conservation Task Force, the Arizona Growing Smarter Working Advisory Committee, the Maricopa County Planning Commission and the Arizona FARE Committee. Mr. DiCiccio was also a member of the Fiesta Bowl Committee and the Board of Directors for the Arizona Center for the Blind. Mr. DiCiccio is a member of the South East Valley Regional Association of Realtors and the National Association of Realtors. Mr. DiCiccio is a small business professional and holds a bachelor's degree in business from Arizona State University.

VANIA GUEVARA, INTERIM COUNCILMEMBER, DISTRICT 5

Interim Councilmember Vania Guevara was appointed to the Phoenix City Council to represent District 5 in August 2018. Prior to being appointed to the City Council, Councilmember Guevara was Deputy Chief of Staff to District 5 City Councilmember Daniel Valenzuela where she worked directly in community engagement. The Councilmember is currently a substitute teacher for the Washington and Pendergast elementary school districts. Ms. Guevara has earned a Juris Doctorate from Arizona Summit Law School and holds a Master of Public Administration and a bachelor's degree in political science.

FELICITA MENDOZA, INTERIM COUNCILMEMBER, DISTRICT 8

Interim Councilmember Felicita Mendoza was appointed to the Phoenix City Council to represent District 8 in August 2018. Prior to being appointed to the City Council, Ms. Mendoza worked in the City of Phoenix council offices for the past 11 years, most recently serving as Chief of Staff to District 7 City Councilmember Michael Nowakowski. She holds a bachelor's degree in political science from Arizona State University.

MICHAEL NOWAKOWSKI, COUNCILMEMBER, DISTRICT 7

Councilmember Nowakowski began his third consecutive full term on the City Council in January 2016. Mr. Nowakowski is currently the Vice President of Communications of a non-profit radio station, coming from previous work with the Catholic Diocese of Phoenix where he served as Assistant Director of the Office of Youth and Young Adult Ministry. Mr. Nowakowski has served on several boards and committees including co-chairman of the 2006 City of Phoenix Historic Preservation Bond Committee, member of the City of Phoenix

Police Chief’s Advisory Board, founding member of the Mayor’s Anti-Graffiti Task Force, City of Phoenix Census 2000 Committee, Phoenix Union High School Superintendent’s Advisory Board, chairman of Santa Rosa Neighborhood Council and in 2008 was appointed commissioner for the Western Maricopa Enterprise Zone. Mr. Nowakowski holds a bachelor’s degree in liberal arts in religious studies from Arizona State University.

LAURA PASTOR, COUNCILMEMBER, DISTRICT 4

Councilmember Pastor began her second consecutive term on the City Council in January 2018. Ms. Pastor is Director of Achieving a College Education Program at South Mountain Community College and was a classroom elementary teacher for four years. Previously, Ms. Pastor was with the Department of Employment and Rehabilitation Services at the Arizona Department of Economic Security and was Special Assistant to the Arizona Director of Insurance. Ms. Pastor is a member of the Phoenix Union High School District Board and serves on the O’Connor House Speak Out Against Domestic Violence and Mi Familia Vota advisory boards. She is a former member of the Hispanic Advisory Board of Maricopa Community Colleges, Maricopa Transportation Advisory Board, the Homeless Task Force, and Phoenix Day. Ms. Pastor has a bachelor’s degree in education from Arizona State University and a Master of Public Administration from City University of New York.

DEBRA STARK, COUNCILMEMBER, DISTRICT 3

Councilmember Stark began her first term on the City Council in March 2017 to fill the District 3 position left vacant upon the resignation of Bill Gates. Ms. Stark has spent her entire career in local government working for the City of Phoenix, the County, and the City of Peoria. At the City of Phoenix, Ms. Stark was the Planning and Development Director from 2005 to 2012. She is currently the President of the Arizona Chapter of the American Planning Association and serves as a Board Member for the Arizona Council of the Urban Land Institute and Southwest Center for HIV/AIDS. Ms. Starks holds a bachelor’s degree in sociology from Western Kentucky University and a master’s degree in planning from Arizona State University.

**Administrative Staff**

ED ZUERCHER
*City Manager*

Ed Zuercher was appointed City Manager in February 2014, after serving as Acting City Manager since October 2013. Prior to his appointment as City Manager, Mr. Zuercher had been the Assistant City Manager since November 2009 and served as a Deputy City Manager since November 2007. Before working in the City Manager’s Office, Mr. Zuercher served as Co-Chief of Staff to the Mayor, Executive Assistant to the City Manager, Assistant to the City Manager, Public Transit Director and Management Assistant in the City Manager’s Office and Budget & Research Department. Originally from Kansas, he participated in the City of Phoenix Management Intern Program from 1993 to 1994. Mr. Zuercher served as chairperson of the Public Safety Pension Retirement System from 2005-2009 and currently serves on the Greater Phoenix Convention and Visitors Bureau board. He has a Master of Public Administration from the University of Kansas and an undergraduate degree from Goshen College.

MILTON DOHONEY, JR
*Assistant City Manager*

Mr. Dohoney was appointed Assistant City Manager on April 21, 2014. Mr. Dohoney brings nearly 30 years of executive experience leading organizations in three cities. He worked for seven years as City Manager of Cincinnati, Ohio and for three years as Chief Administrative Officer of Lexington Fayette Urban County Government in Kentucky. He also served nearly 20 years with the City of Louisville, Kentucky in the capacities of an Assistant Community Services Director, Chief Administrative Officer and Public Safety Director. Mr. Dohoney is the recipient of many awards, including Administrator of the Year in 2013 from the American

Society for Public Administration Greater Cincinnati Chapter; YMCA Black Achievers Award in 2010; and Kentucky Commission on Human Rights Spirit for Justice Medal in 2012. He earned his master's degree in Personnel Management/Human Resources from the University of Louisville and his bachelor's degree in Psychology from Indiana University Southeast.

DEANNA JONOVICH
*Deputy City Manager*

Ms. Jonovich has worked for the City since 2000. She previously served as the Human Services Director and has worked in a variety of management positions in the Human Services Department. Prior to joining the City, she was the Community Services Director for four years in Gila County where she assisted with the creation of the first Arizona Fuel Fund to assist low-income individuals and families with utility assistance. Ms. Jonovich has a master's degree in administration and an undergraduate Bachelor of Science in Business Administration, both from Northern Arizona University. Ms. Jonovich remains very active in the community and currently serves on the Arizona Coalition to End Homelessness, Valley of the Sun United Way Hunger Council, Build Arizona Steering Committee, Local Initiative Support Corporation, Maricopa Association of Governments Technical Committee, and Neighborhood Housing Services.

BRAD HOLM
*City Attorney*

Mr. Holm was named City Attorney in July 2015. His background includes more than 30 years of experience in law and litigation in municipal, commercial, construction, aviation, architectural, engineering and environmental law matters. He has served as outside counsel to the City, and has served as general counsel for the Phoenix-Mesa Gateway Airport Authority, negotiating contracts with federal agencies, providing representation at public meetings and resolving conflicts among federal, state and local agencies. Mr. Holm is a member of the State Bar of Arizona in good standing and was recognized in Best Lawyers in America 2015 and Southwest Super Lawyers 2011 through 2015. Mr. Holm received a bachelor's degree in Political Science from Brigham Young University and obtained his law degree from the J. Reuben Clark Law School, also at BYU.

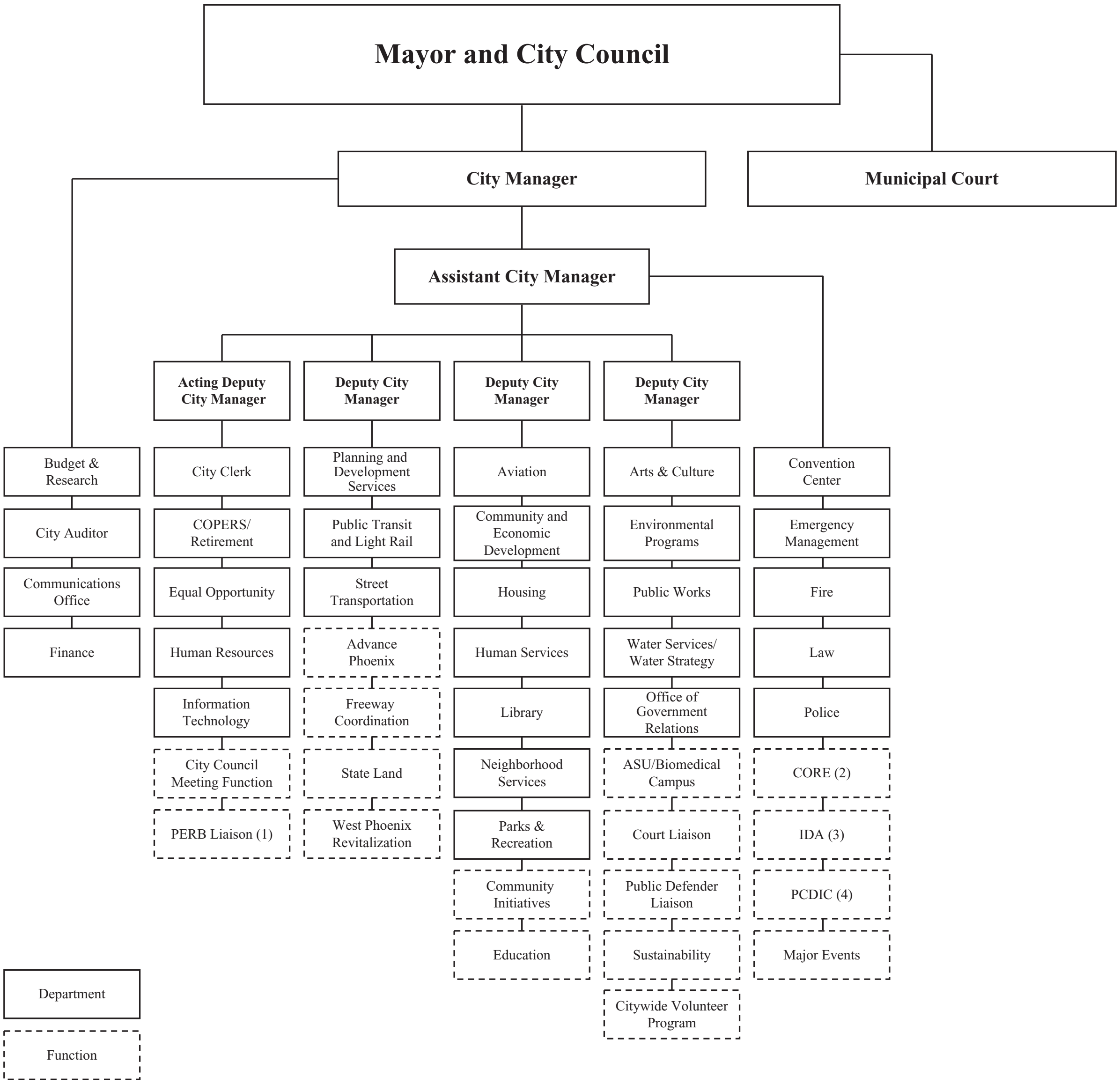
DENISE OLSON
*Chief Financial Officer*

Ms. Olson was appointed Chief Financial Officer in November 2015. She began her career with the City in 1994 in the Finance Department, working as an economist in the Utilities Accounting Division and the Financial Accounting and Reporting Division. She became Deputy Finance Director in 2006, and was promoted to Assistant Finance Director in 2012. Throughout her career she has managed financial planning, financial systems applications and support, procurement, city controller functions, financial accounting and reporting and has been involved in the planning and issuances of debt to fund capital expenditures. Ms. Olson has a bachelor's degree in Business Administration with majors in Human Resources and Economics from New Mexico State University, and a Master of Public Administration from Arizona State University.

JAMES E. BENNETT
*Director of Aviation Services*

Mr. Bennett began his current role for the City in October 2015. In a career spanning nearly 35 years, Mr. Bennett has served as President and Chief Executive Officer of the Metropolitan Washington Airports Authority, operating Ronald Reagan Washington National and Washington Dulles International Airports. He also worked in private industry as chief executive officer for the Abu Dhabi Airports Company overseeing five airports within the Emirate of Abu Dhabi and as president of his own consulting firm providing consultation for both foreign and domestic transportation companies. From 1988 to 1996, Mr. Bennett was Phoenix's Assistant Aviation Director assisting with successful community discussions leading to a third runway at Sky Harbor, overseeing the construction and development of Sky Harbor's Terminal 4 and supervising the Airport's finance, engineering, planning and maintenance operations, among other duties. Mr. Bennett has a Bachelor's of Aviation Management degree from Auburn University and a Master of Public Administration degree from the University of Michigan. His numerous professional affiliations include being the former chairman of the American Association of Airport Executives and past president of the Arizona Airports Association. Mr. Bennett was recently honored by the American Association of Airport Executives' (AAAE) with its Distinguished Service Award. This award is presented to airport executives in honor of an exemplary career and contributions to the airport industry.

# CITY OF PHOENIX




1 - Phoenix Employee Relations Board

2 - Comprehensive Organization Review Evaluation.

3 - Phoenix Industrial Development Authority.

4 - Phoenix Community Development and Investment Corporation.

Effective July 5, 2018

**Awards**

The City of Phoenix and its employees have been recognized professionally for numerous awards including the following accomplishments:

- **Certificate of Achievement for Excellence in Financial Reporting**

This award (formerly the Certificate of Conformance in Financial Reporting) recognizes the completeness, accuracy and understandability of the City's Comprehensive Annual Financial Reports. Awarded to the City of Phoenix by the Government Finance Officers Association each year since 1976, and to the City of Phoenix — Aviation Department CAFR each year since 2016, the first year of the Aviation CAFR.

- **Employees' Retirement Plan Certificate of Achievement for Excellence in Financial Reporting**

Awarded to the City of Phoenix by the Government Finance Officers Association for its component unit financial report each year since 1985. The Certificate of Achievement is the highest form of recognition in the area of public employee retirement system accounting and financial reporting.

- **Distinguished Budget Presentation Award**

Awarded to the City of Phoenix Budget and Research Department each year since 1990 by the Government Finance Officers Association for the completeness and understandability of its budget document.

- **2017 Arizona Forward — Governor's Award for Arizona's Future**

Arizona Forward awarded its prestigious Governor's Award for Arizona's Future to the City of Phoenix for its landmark 2017 agreement with the Gila River Indian Community to preserve endangered Colorado River water in Lake Mead. In all, Phoenix received nine awards at Arizona Forward's 37th Annual Environmental Excellence Awards, including four Crescordia Awards, the highest honor in each category. Mayor Greg Stanton and the Phoenix City Council unanimously approved the Colorado River Conservation Agreement in June 2017 in partnership with the Gila River Indian Community, the U.S. Bureau of Reclamation and the Walton Family Foundation. Under the agreement, Phoenix works with the Tribe to preserve 13 billion gallons of its annual portion of Colorado River water in Lake Mead, which helps preserve water levels in the dangerously over-allocated reservoir.

- **2017 Nations's Highest Performing City**

The City of Phoenix has been named the nation's highest performing city by Governing Magazine and Living Cities through the first-ever national "Equipt to Innovate" survey. Equipt to Innovate is a new initiative launched by Governing and Living Cities. It is an integrated, collaborative framework of seven essential elements that define high-performance government and empower innovation. It is also an invitation for cities to work together, learn from each other and help drive better outcomes for their communities. The seven Equipt elements are: Dynamically Planned; Broadly Partnered; Resident-Involved; Race-Informed; Smartly Resourced; Employee-Engaged; and Data-Driven. Cities from across the country participated in the inaugural 2016 Equipt survey, assessing their capacity and competence in these seven key areas.

- **ICMA Program Excellence Awards**

  - **2017 Certificate of Excellence in Performance Management**

The International City/County Management Association (ICMA) recognized the City of Phoenix for its data-driven management and reporting efforts with a Certificate of Excellence in Performance Management. The certificate is awarded to those who track and report key outcomes, survey residents and local government employees, incorporate data into performance dashboards or other visual communications, and foster the development of a performance culture throughout their organization. Phoenix was among 25 jurisdictions receiving the Certificate of Excellence, and one of 57 recognized overall. It is the sixteenth year that Phoenix has been recognized for its accomplishments since the certificates were first awarded in 2002.

– **2017 Community Partnership Award**

The City of Phoenix was awarded the Community Partnership Award for the Phoenix/Tucson water exchange program. This award recognizes innovative programs or processes between and/or among a local government and other governmental entities, private sector businesses, individuals, or nonprofit agencies to improve the quality of life for residents or provide more efficient and effective services. The exchange agreement between Phoenix and Tucson takes advantage of the unique infrastructure of each city's water system. Tucson's system relies on wells, Phoenix relies on surface water, and a canal connects the two cities.

- **2017 Water Resource Utility of the Future Today Award**

The City of Phoenix Water Services Department was honored as a 'Utility of the Future Today' for the department's forward-thinking initiatives. The recognition program is administered by four water sector organizations — the National Association of Clean Water Agencies (NACWA), the Water Environment Federation (WEF), the Water Environment & Reuse Foundation (WE&RF) and WateReuse — with input from the U.S. Environmental Protection Agency (EPA). The Phoenix Water Department was one of just 25 water utilities in the country to receive this recognition. The Utility of the Future Today recognition celebrates the achievements of forward-thinking, innovative water utilities that are providing resilient value-added service to communities. The recognition focuses specifically on community engagement, watershed stewardship and recovery of resources such as water, energy and nutrients.

- **2017 AAAE Airport Innovation Award**

The Airport Innovation Accelerator – established by the American Association of Airport Executives (AAAE) as a hub for innovation to drive creative approaches and build airports of the future – has selected Phoenix Sky Harbor International Airport to receive the second annual Airport Innovation Award for its creative work to improve the passenger experience and deploy cutting-edge technologies. The Airport Innovation Award was established by the Airport Innovation Accelerator to honor Innovative developments that are a model for airports around the country. Phoenix secured the award for a portfolio of creative innovation to enhance the passenger experience and make airport operations more efficient. The award was presented to Phoenix officials at the third Annual Airport Innovation Forum in Seattle.

- **Outstanding Achievement in Innovation**

– **2017 Outstanding Achievement in Innovation**

The Alliance for Innovation awarded the City of Phoenix an Outstanding Achievement in Innovation Award for PHXteens Program. Developed to help teenagers better connect with the community and to realize their full potential, the PHXteens program launched in September 2016 and is facilitated out of eight community and recreation centers located throughout the city. During its inaugural year, 233 teens registered for the program. Additionally, teens participated in 31 cultural and 24 recreational field trips, 70 teen council meetings, 28 workshops, and 2,439 volunteer hours.

– **2016 Outstanding Achievement in Innovation**

FitPHX is the recipient of the Alliance for Innovation's Outstanding Achievement in Local Government Innovation Award. FitPHX is a citywide initiative with the goal of improving health and wellness in the region and making Phoenix area one of the healthiest in the nation. The initiative has created innovative collaboration between government, private sector, non-profits and universities to develop programming that gives citizens tools and education to be healthier. In 2015, FitPHX provided services to nearly 14,000 participants and raise $350,000 to support its programming.

– **2013 Outstanding Achievement in Innovation**

The Alliance for Innovation awarded the City of Phoenix an Outstanding Achievement in Innovation Award for its organizational review, which resulted in a leaner work force and more efficient delivery of services. The goals of the organizational review were to eliminate layers of supervision, broaden the span of control, streamline services, identify efficiencies and reduce the size of government. Through these goals, the City was able to improve services to residents by providing for faster decision making and enhanced organizational flexibility and communications, leading to the smallest City government in 40 years, as measured by employees per capita.

– **2012 Outstanding Achievement in Innovation**

The Alliance for Innovation awarded the City of Phoenix an Outstanding Achievement in Innovation Award for the Innovation and Efficiency Task Force. Created in January 2010, the task force is comprised of City staff and public members who explore, develop and implement innovative processes that result in a more efficient delivery of City services and maximize the use of limited taxpayer dollars.

- **2016 President's "E" Award for Export Service**

The City of Phoenix was a 2016 winner of the President's "E" Award for Export Service. The President's "E" Award was initiated in 1962 by President John F. Kennedy to recognize excellence by companies and municipalities for contributions to U.S. exporting. Phoenix is only the fifth city to earn the honor in 54 years. It is typically reserved for companies and private sector entities. The City earned the award by demonstrating a sustained commitment to export expansion with significant and broad-based support to grow exports from Phoenix, which is responsible for more than half of the exports from the State of Arizona. The support included the launch of the City's export boot camp initiative, which teaches local small- and medium-sized businesses how to trade abroad.

- **2016 Platinum Award for Utility Excellence**

The City of Phoenix Water Services Department was honored for utility excellence by the Association of Metropolitan Water Agencies (AMWA) at its 2016 Executive Management Conference. The City's Water Department was one of ten water utilities in the country to receive the Platinum Award for Utility Excellence. The Platinum Award recognizes outstanding achievement in implementing the nationally recognized Attributes of Effective Utility Management.

- **2015 Mayors' Climate Protection Awards**

Awarded to the City by the U.S. Conference of Mayors, the annual Mayors' Climate Protection award recognizes mayors for innovative programs that increase energy efficiency and reduce greenhouse gas emissions. The City earned the award for the Energize Phoenix Program, a large-scale, three-year building energy efficiency program, which catalyzed $56 million in energy upgrades along a ten-square-mile urban corridor of Phoenix surrounding the newly-constructed Metro light rail. Phoenix partnered with Arizona State University and APS, Arizona's largest electricity provider, to leverage $25 million in program funding from the U.S. Department of Energy and $31 million in utility funding to transform the downtown core into a green corridor. It focused on a diverse mix of single- and multi-family residential buildings and small commercial buildings offering significant rebates and financing for energy efficient upgrades.

- **2015 Sister Cities Best Overall Sister City Program Award**

In July 2015, the Phoenix Sister Cities Commission received the Sister Cities International Best Overall Sister City Program in the U.S. for cities with a population of 500,000 or more award, its highest honor. This is the eight time in the past 21 years that Phoenix has won this award. Phoenix Sister Cities highlights include a new and improved Youth Ambassador Exchange Program; a significant increase in arts and culture projects including the second annual WorldFEST celebration promoting its 10 sister cities; the Vincenzo Bellini Opera project with Catania, Italy; a police training program for Hermosillo, Mexico; and economic development projects with Chengdu, China; Catania, Italy; and Calgary, Canada as well as trade missions with Calgary and Catania.

- **National Association of Clean Water Agencies (NACWA) Awards**
  - **2015 NACWA Platinum Peak Performance Award**

The National Association of Clean Water Agencies (NACWA) honored the City of Phoenix Water Services Department with the Platinum Award for seven consecutive years of perfect National Pollutant Discharge Elimination System permit compliance. NACWA is a nationally recognized leader in water quality, environmental policy and ecosystem protection issues. The City treats wastewater from 2.5 million people in Phoenix, Glendale, Mesa, Scottsdale and Tempe.

  - **2012 NACWA Gold Peak Performance Award**

The NACWA honored the City of Phoenix Water Services Department with the Gold Award for consistently meeting all National Pollutant Discharge Elimination System permit limits during the calendar year. The City's 23rd Avenue Wastewater Treatment Plant and 91st Avenue Multi-Cities Wastewater Treatment Plant were presented the award to recognize 100 percent compliance with regulatory discharge limits.

- **2014 World Airport Award (WAA)**

SkyTrax World Airport Awards (WAA) recognized Phoenix Sky Harbor International Airport as the 7th best airport in the world serving 40-50 million passengers. WAA is the leading global award for the world's best airports, as voted by travelers from over 160 countries and 410 airports worldwide, in the largest airport customer satisfaction survey. The ranking was determined by airline customers and evaluates traveler experiences across key performance indicators: check-in, arrivals, transfers, shopping, security, immigration processing and departure.

- **2014 Top Ten Digital Cities Award**

In November 2014, the City of Phoenix was named a Top Ten City in the Center for Digital Government's 2014 Digital Cities Survey. The award honors cities with best practices in public sector information and communications technology.

- **National Association of Housing and Redevelopment Officials (NAHRO) Award**
  - **2014 NAHRO Award**

In August 2014, the City's Neighborhood Services Department (NSD) received the Award of Merit for designing the Neighborhood Stabilization Program as an innovative, multi-faceted delivery approach to revitalize communities affected by the foreclosure crisis. With funding from the U.S. Department of Housing and Urban Development, accomplishments of the program include 395 homes rehabilitated to energy efficiency building standards, 191 homebuyers receiving down-payment assistance, 102 demolition projects completed using green methods and strategies, and a rescued subdivision featuring 14 newly constructed, solar-powered, single-family homes Gold certified to the National Green Building Standard.

  - **2011 NAHRO Award**

In October 2011, NSD received three Awards of Merit. NSD was honored for a pilot program that allows residents to use mobile devices to report blight, a code violation resolution volunteer assistance program and the Isaac Neighborhood Initiative Area. Since 1993, the City has used the Neighborhood Initiative Area strategy in the Isaac community to do comprehensive and concentrated neighborhood revitalization which continues to make significant progress in improving the economic, physical and social health of the neighborhood.

  - **2010 NAHRO Award**

In November 2010, the City received an Award of Excellence for the Housing Department's McCarty on Monroe senior housing development. McCarty on Monroe consists of 34 public housing units and 35 low-income housing tax credit units. All units are clustered around a central, landscaped courtyard, creating a sense of community and interaction among the residents. McCarty on Monroe combines quality affordable housing for seniors and immediate access to light-rail while preserving history and adding green design.

- **2014 NBC-LEO City Cultural Diversity Award**

  In March 2014, the City of Phoenix was recognized by the National Black Caucus of Local Elected Officials (NBC-LEO) of the National League of Cities for its "Phoenix Against Domestic Violence - A Roadmap to Excellence" Program. The Roadmap to Excellence Program is a five-year strategic plan to end domestic violence in the City. More than 50 community partners, including private and nonprofit organizations, collaborated to create a plan that includes a community and media campaign focusing on five strategies: community awareness, coordinated service delivery, systems reform, "Phoenix as a Model," and community partnerships.

- **2013 Sunny Award**

  Awarded to the City of Phoenix by Sunshine Review, a national nonprofit organization dedicated to government transparency. The award honors the most transparent government websites in the nation. This is the fourth time the City has won the award.

- **2013 NGWA Outstanding Groundwater Protection Award**

  The National Ground Water Association (NGWA) annually awards the Groundwater Protection Award to the organization that exhibits outstanding science, engineering, or innovation in the area of protecting groundwater. The City of Phoenix Water Services Department received the award for incorporating innovative technologies in the aquifer restoration program. Phoenix was the first city in the country to use the technology, which has reduced annual operations and maintenance costs by over $110,000.

- **2013 Technology "Best of the Web" Award**

  The City of Phoenix Information Technology Services Department received a "Best of the Web" award from the Multi-State Information Sharing and Analysis Center for the City's Information Security and Privacy website.

- **2013 National Institute of Senior Centers (NISC)**

  A Program of Excellence Award was received by the City of Phoenix Human Services Department for its FitPHX Senior Champions Passport Program in the Nutrition, Fitness and Health Promotion category. The program is offered at the City's fifteen senior centers.

- **2012 NBC-LEO City Cultural Diversity Award**

  In March 2012, the City of Phoenix was recognized by the National Black Caucus of Local Elected Officials (NBC-LEO) of the National League of Cities for the City Manager's Community Engagement and Outreach Task Force. The task force was established in 2010 as a community-based, long-term effort to enhance the relationship between the Phoenix Police Department and the community.

- **2010 Desert Peaks Award**

  In June 2010, the City of Phoenix received an award from Maricopa Association of Governments for its Urban Education Initiatives, on which it collaborated with Arizona State University and the University of Arizona to create the ASU Downtown Phoenix Campus and the Phoenix Biomedical Campus. The award recognizes excellence in regionalism.

- **2010 LEED Platinum Certification Award**

  In June 2010, the City of Phoenix Nina Mason Pulliam Rio Salado Audubon Center was the recipient of the U.S. Green Building Council's award for its use of the Leadership in Energy and Environmental Design (LEED) rating system. Located in the heart of the Rio Salado Habitat Restoration Area, the center received the award for the environmental friendliness and sustainability of the facility. The center is a gateway to a lush Sonoran riparian habitat used by more than 200 species of birds and other wildlife.

- **2009 All-America City Award**

The City of Phoenix was the recipient of the National Civic League's All-America City award, the fifth time the City has earned the recognition, for its collaborative projects that involve the community and address critical issues. The City highlighted the newly developed urban education campuses (Arizona State University Downtown Phoenix Campus and Phoenix Biomedical Campus), the Phoenix Parks and Preserve Initiative and the innovative library teen spaces.

- **2008 LEED Silver Certification Award**

The City of Phoenix Convention Center was the recipient of the U.S. Green Building Council's award for its use of the Leadership in Energy and Environmental Design (LEED) rating system. The Convention Center's West Building was designed to achieve LEED certification for energy use, lighting, water and material use as well as incorporating a variety of other sustainable strategies.

- **2008 Pro Patria Award**

The City of Phoenix was the recipient of an Employer Support of the Guard and Reserve (ESGR) award for supporting employees deployed in Operation Enduring/Iraqi Freedom. The Pro Patria award is presented annually to employers who demonstrate exceptional support for U.S. national defense by adopting personnel policies that make it easier for employees to participate in the National Guard and Reserve.

- **Carl Bertelsmann Prize**

Awarded in 1993 to the City of Phoenix and Christchurch, New Zealand, recognizing each as being the best managed city governments in the world. The international competition for the most efficiently operated city was sponsored by the Bertelsmann Foundation, a research and philanthropic arm of Bertelsmann AG, the second largest media organization in the world. Cities were judged on several categories including customer service, decentralized management, planning and financial controls, employee empowerment and administrative innovation.

## ECONOMY & DEMOGRAPHICS (1)

### Overview

In 1912, Arizona was admitted as the 48th state of the United States of America. At the time, the state was home to less than 300,000 residents. Arizona has grown immensely since its induction to the U.S., both in population and economic terms. The U.S. Census Bureau estimates the Arizona population was 7,016,270 as of July 1, 2017. Arizona is the sixth largest state in terms of area, and is ranked number one in terms of the percentage of designated Indian tribal land. However, the majority of the population is concentrated in urban areas. The Phoenix-Mesa-Scottsdale Metropolitan Statistical Area (the Phoenix MSA) was home to 67.5% of the state's population in 2017, and only 5% of Arizona residents lived in nonmetropolitan areas. Nationally, the Phoenix MSA was ranked as the 11th most populous metro area, and the city of Phoenix as the 5th most populous U.S. city.

At the beginning of the 20th century, the Arizona economy relied heavily on copper, cattle, cotton, climate, and citrus. Today, however, the significant population growth can be tied to the diversification of the local economy. Arizona is now home to many higher value-added sectors such as aerospace and defense, financial services, and the semi-conductor industry.

Despite the growing population and expanding economy, the Phoenix MSA is a sprawling metropolitan area with a low-density population. The topography of the City of Phoenix, the state capital and largest city in the Phoenix MSA, is generally flat and surrounded by scattered, low mountain ranges, which makes the area conducive to a variety of activities. The subtropical desert climate encourages residents to participate in outdoor recreation and draws in tourists to enjoy the warm weather throughout the year. The Phoenix MSA accounted for about 70% of total state employment in 2017, with the primary source of private nonfarm employment being professional and business services. Retail and wholesale trade, education and health services, leisure and hospitality, and financial activities were also major sources of employment.

The 2008 recession hit Arizona hard. Approximately 300,000 jobs were lost between 2008 and 2010. Many of these jobs were in sectors that had previously helped the state to grow such as construction, business services and retail. Population inflows stalled, and the residential real estate market in particular suffered. However, both population and construction is on the rise, and the real estate markets are optimistic. Low business costs and business-friendly regulatory systems entice businesses to locate in the area. The state's advantageous location in the Canada-Mexico corridor and its abundance of skilled and available workers have contributed to the Phoenix MSA's recovery from the recession and its bright outlook for future growth.

The Arizona economy has steadily improved. According to the U.S. Census Bureau, more than 75,000 new jobs were filled in the Phoenix MSA between 2016 and 2017. This resulted in a 3.55% increase in employment when compared to 2016. Local economists expect 2018 to result in additional wage and salary employment growth of 3.1%.

### Key Phoenix MSA Statistics:

- Home to 4,737,270 residents, making it the 11th most populous MSA in the nation.
- More than 2 million residents employed in 2017.
- Unemployment rate of 4.2% in 2017.

(1) The economic information contained herein was prepared for the City of Phoenix by the L. William Seidman Research Institute, W.P. Carey School of Business, Arizona State University on August 3, 2018.

- Enjoyed 5.4% compound annual growth rate in construction, 4.2% in financial activities, and 3.9% in information, 2011 through 2017.
- Experienced compound annual growth rates of more than 3.5% in leisure and hospitality, professional and business services, and education and health services.
- Experienced 2.8% total nonfarm growth rate in 2017 compared to 2016.
- Annual total nonfarm job growth rates higher than the State of Arizona and the nation.
- Accounted for more than 75% of annual statewide Gross Domestic Product (GDP) in 2016, and had a 0.3% compound annual GDP growth rate, 2011 through 2016.
- 23rd largest U.S. exporter by merchandise export value ($12.8 billion in 2016).
- Mexico (27.5%), Canada (10.1%), and China (7.9%) are the top foreign markets for goods exports.
- The total annual number of housing permits has tripled between 2011 and 2017.
- Approximately 70% of the housing permits in 2017 were for single residential units.
- A combination of steady population and job growth is expected to boost consumer spending and attract retailers to the Phoenix MSA.
- Healthy tenant demand decreased vacancy rates in the office market during the first half of 2018, and developers are optimistic for continued growth.
- The vacancy rate in the industrial market reached 6.4%, the lowest rate in over a decade.

**Key City of Phoenix Statistics:**

- Home to 1,626,078 residents as of July 1, 2017, remaining the 5th most populous U.S. city.
- Accounts for 34.3% of the population of the Phoenix MSA, and 23.2% of the state’s population.
- Gender balance, with most residents either Caucasian (44.4%) or Hispanic/Latino (41.8%).
- 65.7% of population ages 16 and older currently are members of the civilian labor force.
- 33.5% of working residents held jobs in management, business, science and the arts in 2016.
- Services or sales and office occupations accounted for a further 46.0% of residents’ jobs in 2016.
- $49,328 median household income in 2016.
- 613,463 housing units in 2017.
- The average household ranged from 2.8 people for renter-occupied to 2.9 people for owner-occupied properties in 2016.
- The median age of City of Phoenix residents in 2016 was 33.4 years.

**Population**

The Phoenix MSA covers 14,587 square miles. It includes both Maricopa County (9,223 square miles) and Pinal County (5,364 square miles). Phoenix is the principal city of the Phoenix MSA, encompassing 517.9 sq. miles and with 1.63 million residents in 2017, according to the Census Bureau. Eight other cities with populations in excess of 125,000 included within the Phoenix MSA are Mesa, Chandler, Gilbert, Glendale, Scottsdale, Tempe, Peoria, and Surprise.

The U.S. Census Bureau ranked Phoenix the 14th most populous MSA in the 2010 Census and the 11th most populous MSA as of July 1, 2017.

The following table compares the population of the Phoenix MSA with 21 peer MSAs. The peer MSAs consist of every western metro of more than one million people, plus other Sun Belt metros of more than 2 million people. Population growth remained strong in metro Phoenix during 2017. The Phoenix MSA ranked 8th in population growth between 2011 and 2017 compared to the 22 MSAs listed in the table.

In recent years, the population has also grown faster in the Phoenix MSA than the rest of the state. For example, in 1990 the Phoenix MSA accounted for 61.1% of the State of Arizona's total population. In 2000, it accounted for 63.4% of the State of Arizona's total population. In 2010, the Phoenix MSA accounted for 65.6% of the State of Arizona's total population. In 2017, it accounted for 67.5% of the State of Arizona's total population. The Tucson MSA (Pima County) was home to 14.6% of the state's residents in 2017. Five other metro areas combined (Flagstaff, Lake Havasu City-Kingman, Prescott, Sierra Vista-Douglas, and Yuma) accounted for 12.9% of the state's population, with the remaining 5% living in nonmetropolitan areas.

It is important to note that in 1994, the U.S. Office of Management and Budget (OMB) redefined the Phoenix MSA to include both Maricopa and Pinal counties. However, the rate of population growth in the Phoenix MSA has continued to outpace the rate of population growth in the State of Arizona.

**Population**
**Metropolitan Statistical Areas**
**(In thousands)**

| | Census | Population Estimates as of July 1 | | | | | | | Percent Growth |
|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2011-17 |
| Phoenix-Mesa-Scottsdale, AZ | 4,192.9 | 4,247.9 | 4,321.7 | 4,390.6 | 4,470.7 | 4,558.1 | 4,648.5 | 4,737.3 | 11.5% |
| Atlanta-Sandy Springs-Roswell, GA | 5,286.7 | 5,373.0 | 5,451.6 | 5,517.0 | 5,605.1 | 5,702.3 | 5,795.7 | 5,884.7 | 9.5 |
| Austin-Round Rock, TX | 1,716.3 | 1,780.6 | 1,834.6 | 1,883.5 | 1,942.3 | 2,000.8 | 2,060.6 | 2,115.8 | 18.8 |
| Charlotte-Concord-Gastonia, NC-SC | 2,217.0 | 2,256.2 | 2,293.8 | 2,334.0 | 2,376.1 | 2,424.1 | 2,475.5 | 2,525.3 | 11.9 |
| Dallas-Fort Worth-Arlington, TX | 6,426.2 | 6,571.5 | 6,706.0 | 6,817.2 | 6,950.7 | 7,101.0 | 7,253.4 | 7,399.7 | 12.6 |
| Denver-Aurora-Lakewood, CO | 2,543.5 | 2,599.6 | 2,646.2 | 2,696.3 | 2,749.8 | 2,807.2 | 2,851.8 | 2,888.2 | 11.1 |
| Houston-The Woodlands-Sugar Land, TX | 5,920.4 | 6,057.9 | 6,183.7 | 6,329.6 | 6,496.9 | 6,664.2 | 6,798.0 | 6,892.4 | 13.8 |
| Las Vegas-Henderson-Paradise, NV | 1,951.3 | 1,966.5 | 1,996.3 | 2,026.1 | 2,065.0 | 2,110.3 | 2,156.7 | 2,204.1 | 12.1 |
| Los Angeles-Long Beach-Anaheim, CA | 12,828.8 | 12,939.5 | 13,041.5 | 13,132.3 | 13,209.4 | 13,283.8 | 13,328.3 | 13,353.9 | 3.2 |
| Miami-Fort Lauderdale-West Palm Beach, FL | 5,564.6 | 5,696.3 | 5,780.9 | 5,863.0 | 5,943.7 | 6,026.0 | 6,107.4 | 6,158.8 | 8.1 |
| Orlando-Kissimmee-Sanford, FL | 2,134.4 | 2,176.4 | 2,227.4 | 2,272.2 | 2,327.9 | 2,391.0 | 2,453.3 | 2,509.8 | 15.3 |
| Portland-Vancouver-Hillsboro, OR-WA | 2,226.0 | 2,258.8 | 2,285.2 | 2,309.3 | 2,342.4 | 2,382.2 | 2,423.1 | 2,453.2 | 8.6 |
| Riverside-San Bernardino-Ontario, CA | 4,224.9 | 4,298.3 | 4,341.4 | 4,378.1 | 4,425.8 | 4,472.9 | 4,523.7 | 4,580.7 | 6.6 |
| Sacramento-Roseville-Arden-Arcade, CA | 2,149.1 | 2,174.0 | 2,192.7 | 2,213.6 | 2,239.5 | 2,266.9 | 2,295.2 | 2,324.9 | 6.9 |
| Salt Lake City, UT | 1,087.9 | 1,107.5 | 1,124.3 | 1,141.5 | 1,152.7 | 1,167.0 | 1,186.0 | 1,203.1 | 8.6 |
| San Antonio-New Braunfels, TX | 2,142.5 | 2,193.6 | 2,236.4 | 2,279.9 | 2,328.4 | 2,379.1 | 2,426.2 | 2,474.0 | 12.8 |
| San Diego-Carlsbad, CA | 3,095.3 | 3,139.8 | 3,179.8 | 3,216.5 | 3,256.9 | 3,290.0 | 3,317.2 | 3,337.7 | 6.3 |
| San Francisco-Oakland-Hayward, CA | 4,335.4 | 4,399.2 | 4,463.2 | 4,528.7 | 4,596.0 | 4,658.0 | 4,699.1 | 4,727.4 | 7.5 |
| San Jose-Sunnyvale-Santa Clara, CA | 1,836.9 | 1,869.8 | 1,898.6 | 1,928.3 | 1,954.2 | 1,977.6 | 1,990.9 | 1,998.5 | 6.9 |
| Seattle-Tacoma-Bellevue, WA | 3,439.8 | 3,496.9 | 3,552.2 | 3,610.6 | 3,667.2 | 3,728.6 | 3,802.7 | 3,867.0 | 10.6 |
| Tampa-St. Petersburg-Clearwater, FL | 2,783.2 | 2,829.1 | 2,847.2 | 2,872.5 | 2,916.8 | 2,973.8 | 3,036.5 | 3,091.4 | 9.3 |
| Tucson, AZ | 980.3 | 987.3 | 991.5 | 994.8 | 1,000.9 | 1,005.3 | 1,012.5 | 1,022.8 | 3.6 |

Source: U.S. Census Bureau.

As of July 1, 2017, the U.S. Census Bureau ranked the city of Phoenix as the 5th most populous city in the United States. This is the same ranking as of July 2016.

**Ten Most Populous U.S. Cities, July 1, 2017**

| Rank | City | State | Total Population |
|---|---|---|---|
| 1 | New York | New York | 8,622,698 |
| 2 | Los Angeles | California | 3,999,759 |
| 3 | Chicago | Illinois | 2,716,450 |
| 4 | Houston | Texas | 2,312,717 |
| 5 | Phoenix | Arizona | 1,626,078 |
| 6 | Philadelphia | Pennsylvania | 1,580,863 |
| 7 | San Antonio | Texas | 1,511,946 |
| 8 | San Diego | California | 1,419,516 |
| 9 | Dallas | Texas | 1,341,075 |
| 10 | San Jose | California | 1,035,317 |

Source: U.S. Census Bureau.

**City of Phoenix Population**
**As a Percent of the Phoenix MSA and the State (1)**

| Year | City of Phoenix | Maricopa and Pinal Population (Combined) | Percentage of State of Arizona Population |
|---|---|---|---|
| 2017 | 1,626,078 | 34.3% | 23.2% |
| 2016 | 1,602,042 | 34.5 | 23.2 |
| 2015 | 1,575,039 | 34.6 | 23.2 |
| 2014 | 1,547,729 | 34.6 | 23.1 |
| 2013 | 1,521,182 | 34.6 | 23.0 |
| 2012 | 1,495,880 | 34.6 | 22.9 |
| 2011 | 1,467,519 | 34.5 | 22.7 |

(1) The estimates are based on the 2010 Census and reflect changes to the April 1, 2010 population due to the Count Question Resolution program and geographic program revisions.

Source: U.S. Census Bureau.

**Employment**

Arizona was named the 48th state on February 14, 1912. At the time, the state primarily depended on extraction-based operations such as copper, cattle, cotton, climate, and citrus. However, rapid population growth post World War II attributed to a diversification of the state's economy into higher value-added sectors such as advanced manufacturing, aerospace and defense, bioscience, and financial services.

Between 1990 and 2008, Arizona's civilian labor force saw growth of more than 80%. On average, approximately 95.7% of Arizona's civilian labor force was employed each year between 1990 and 2008. Civilian labor force employment has again been on the rise since 2011. In 2017, a total of 2,206,218 people in the civilian labor force in the Phoenix MSA were employed. This was a 3.5% increase in Phoenix MSA employment compared to the previous year, and represented 70.0% of the state's total employment in 2017.

**Comparison of the Phoenix MSA's Labor Force**
**Status with 21 Peer MSAs (1)**
**(not seasonally adjusted)**

| MSA | Labor Force (in thousands) 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|
| Phoenix-Mesa-Scottsdale, AZ | 2,044.3 | 2,044.3 | 2,055.4 | 2,107.6 | 2,170.0 | 2,234.2 | 2,303.8 |
| Atlanta-Sandy Springs-Roswell, GA | 2,760.2 | 2,791.0 | 2,789.9 | 2,808.5 | 2,847.0 | 2,944.9 | 3,034.6 |
| Austin-Round Rock, TX | 960.8 | 987.7 | 1,019.5 | 1,047.8 | 1,072.3 | 1,116.7 | 1,152.6 |
| Charlotte-Concord-Gastonia, NC-SC | 1,153.9 | 1,173.8 | 1,185.4 | 1,205.5 | 1,240.7 | 1,277.2 | 1,315.8 |
| Dallas-Fort Worth-Arlington, TX | 3,374.4 | 3,420.2 | 3,474.2 | 3,535.3 | 3,579.5 | 3,695.0 | 3,795.3 |
| Denver-Aurora-Lakewood, CO | 1,431.2 | 1,448.2 | 1,463.9 | 1,486.2 | 1,505.3 | 1,541.3 | 1,590.4 |
| Houston-The Woodlands-Sugar Land, TX | 3,041.2 | 3,112.3 | 3,182.6 | 3,239.7 | 3,255.2 | 3,293.1 | 3,326.2 |
| Las Vegas-Henderson-Paradise, NV | 995.1 | 999.5 | 1,004.3 | 1,019.5 | 1,038.7 | 1,050.6 | 1,072.6 |
| Los Angeles-Long Beach-Anaheim, CA | 6,474.9 | 6,477.4 | 6,532.5 | 6,576.7 | 6,591.1 | 6,657.4 | 6,742.8 |
| Miami-Fort Lauderdale-West Palm Beach, FL | 2,859.2 | 2,906.7 | 2,937.8 | 2,992.2 | 2,996.2 | 3,047.9 | 3,135.0 |
| Orlando-Kissimmee-Sanford, FL | 1,146.9 | 1,162.6 | 1,179.4 | 1,203.6 | 1,220.8 | 1,259.5 | 1,302.9 |
| Portland-Vancouver-Hillsboro, OR-WA | 1,214.8 | 1,198.8 | 1,180.6 | 1,199.0 | 1,229.3 | 1,273.5 | 1,310.5 |
| Riverside-San Bernardino-Ontario, CA | 1,867.0 | 1,879.3 | 1,893.1 | 1,921.0 | 1,956.9 | 1,984.9 | 2,024.6 |
| Sacramento-Roseville-Arden-Arcade, CA | 1,045.2 | 1,047.9 | 1,046.5 | 1,047.2 | 1,055.9 | 1,070.9 | 1,081.9 |
| Salt Lake City, UT | 573.6 | 584.2 | 598.1 | 604.8 | 616.4 | 634.8 | 653.6 |
| San Antonio-New Braunfels, TX | 1,039.1 | 1,053.3 | 1,072.8 | 1,089.0 | 1,105.0 | 1,140.5 | 1,165.9 |
| San Diego-Carlsbad, CA | 1,524.6 | 1,540.4 | 1,543.2 | 1,544.3 | 1,554.9 | 1,570.3 | 1,584.7 |
| San Francisco-Oakland-Hayward, CA | 2,345.5 | 2,392.6 | 2,413.6 | 2,447.7 | 2,493.5 | 2,540.4 | 2,574.7 |
| San Jose-Sunnyvale-Santa Clara, CA | 968.1 | 987.0 | 1,000.8 | 1,021.5 | 1,039.1 | 1,053.8 | 1,070.9 |
| Seattle-Tacoma-Bellevue, WA | 1,879.9 | 1,895.3 | 1,910.4 | 1,939.2 | 1,972.0 | 2,021.3 | 2,068.8 |
| Tampa-St. Petersburg-Clearwater, FL | 1,398.4 | 1,410.6 | 1,420.4 | 1,433.8 | 1,441.6 | 1,476.6 | 1,511.1 |
| Tucson, AZ | 466.9 | 462.9 | 457.0 | 461.3 | 463.2 | 467.5 | 475.6 |

(1) The 2011-2017 data was subject to revision on April 20, 2018.

Source: U.S. Bureau of Labor Statistics.

The top source of total nonfarm employment, expressed as a percentage of total employment in the Phoenix MSA, was professional and business services (16.9%). Professional and business services include professional, scientific and technical services, the management of companies and enterprises administrative and waste management services. Other notable sources of employment were retail and wholesale trade (15.7%), education and health services (15.1%), government (11.7%), and leisure and hospitality (10.9%). The industries listed in the following table are referred to as "supersectors" by the U.S. Bureau of Labor Statistics.

**2017 Wage & Salary Employment:**
**Phoenix MSA, Arizona, and U.S.**

| | Total Employed (in thousands) | | | Percent of Employed | | |
|---|---|---|---|---|---|---|
| **Industry** | **Phoenix MSA** | **State of Arizona** | **U.S.** | **Phoenix MSA** | **State of Arizona** | **U.S.** |
| Mining & Logging | 3.2 | 11.7 | 678 | 0.2% | 0.4% | 0.5% |
| Construction | 113.5 | 145.4 | 6,955 | 5.6 | 5.3 | 4.7 |
| Manufacturing | 123.3 | 164.3 | 12,444 | 6.0 | 5.9 | 8.5 |
| Total Goods Producing | 240.0 | 321.4 | 20,077 | 11.8 | 11.6 | 13.7 |
| Retail & Wholesale Trade | 318.6 | 426.3 | 21,773 | 15.7 | 15.4 | 14.8 |
| Transportation, Warehousing, Utilities | 75.5 | 97.9 | 5,721 | 3.7 | 3.5 | 3.9 |
| Information | 35.8 | 45.2 | 2,795 | 1.8 | 1.6 | 1.9 |
| Financial Activities | 186.2 | 213.9 | 8,455 | 9.2 | 7.7 | 5.8 |
| Professional & Business Services | 344.8 | 420.3 | 20,467 | 16.9 | 15.2 | 14.0 |
| Education & Health Services | 307.3 | 426.6 | 23,186 | 15.1 | 15.4 | 15.8 |
| Leisure and Hospitality | 222.6 | 319.2 | 16,052 | 10.9 | 11.5 | 10.9 |
| Other Services | 65.5 | 88.5 | 5,776 | 3.2 | 3.2 | 3.9 |
| Government | 237.7 | 413.3 | 22,322 | 11.7 | 14.9 | 15.3 |
| Total Services Providing | 1,794.0 | 2,451.2 | 126,547 | 88.2 | 88.4 | 86.3 |
| Total Non-farm | 2,034.0 | 2,772.6 | 146,624 | 100.0% | 100.0% | 100.0% |

Source: Seidman Job Growth U.S.A. /U.S. Bureau of Labor Statistics.

Comparing industries, the Phoenix MSA's employment within goods-producing sectors (i.e. mining, manufacturing, and construction) was higher than the State of Arizona as a share of total employment, but lower than the nation in 2017. This reflected an emphasis within the Phoenix MSA on services. Approximately 88.2% of the employment within the Phoenix MSA in 2017 was in service providing industries. Government accounted for 237,700 of the 1.8 million services employment in the Phoenix MSA.

The following table presents the number of annual employees by industry in the Phoenix MSA, 2011 through 2017. Also included is a table comparing the Phoenix MSA compound annual growth rate by industry to the State of Arizona and the U.S. The highest compound annual growth rate in the Phoenix MSA occurred in construction (5.4%), financial activities (4.2%), and information (3.9%). There were also compound annual growth rates of more than 3.5% in leisure and hospitality, professional and business services, and education and health services.

**Non-Farm Wage and Salary Employment**
**Phoenix MSA**
**(annual employees in thousands)**

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|
| Mining & Logging | 3.2 | 3.5 | 3.6 | 3.4 | 3.3 | 3.2 | 3.2 |
| Construction | 83.0 | 88.0 | 93.4 | 95.4 | 99.0 | 105.3 | 113.5 |
| Manufacturing | 112.7 | 116.7 | 117.1 | 118.5 | 119.7 | 120.4 | 123.3 |
| Retail & Wholesale Trade | 287.1 | 289.3 | 291.9 | 299.2 | 307.6 | 313.7 | 318.6 |
| Transportation, Warehousing, Utilities | 62.3 | 63.7 | 64.1 | 65.6 | 69.3 | 73.0 | 75.5 |
| Information | 28.4 | 31.1 | 33.2 | 34.9 | 35.9 | 36.0 | 35.8 |
| Financial Activities | 145.1 | 150.3 | 158.2 | 161.6 | 167.6 | 177.8 | 186.2 |
| Professional & Business Services | 277.2 | 286.0 | 301.9 | 309.7 | 324.1 | 338.5 | 344.8 |
| Education & Health Services | 247.4 | 255.5 | 261.0 | 268.8 | 282.2 | 294.4 | 307.3 |
| Leisure and Hospitality | 177.7 | 183.3 | 191.6 | 199.1 | 208.2 | 215.6 | 222.6 |
| Other Services | 63.8 | 62.3 | 63.7 | 63.5 | 63.6 | 65.6 | 65.6 |
| Government | 229.2 | 230.6 | 231.9 | 233.0 | 233.9 | 235.8 | 237.7 |
| Total Non-farm | 1,717.1 | 1,760.3 | 1,811.6 | 1,852.7 | 1,914.4 | 1,979.3 | 2,034.1 |

Source: Seidman Job Growth U.S.A. /U.S. Bureau of Labor Statistics.

**Non-Farm Wage and Salary Employment**
**Phoenix MSA**
**(2011 to 2017 compound annual growth rate)**

| | Phoenix MSA | State of Arizona | U.S. |
|---|---|---|---|
| Mining & Logging | 0.0% | 0.1% | -2.5% |
| Construction | 5.4 | 4.6 | 3.9 |
| Manufacturing | 1.5 | 1.5 | 1.0 |
| Retail & Wholesale Trade | 1.8 | 1.5 | 1.2 |
| Transportation, Warehousing, Utilities | 3.3 | 2.7 | 2.8 |
| Information | 3.9 | 3.3 | 0.7 |
| Financial Activities | 4.2 | 3.8 | 1.6 |
| Professional & Business Services | 3.7 | 3.2 | 2.8 |
| Education & Health Services | 3.7 | 3.1 | 2.2 |
| Leisure and Hospitality | 3.8 | 3.5 | 3.1 |
| Other Services | 0.5 | 0.1 | 1.3 |
| Government | 0.6 | 0.2 | 0.2 |
| Total Non-farm | 2.9% | 2.3% | 1.8% |

Source: Seidman Job Growth U.S.A. /U.S. Bureau of Labor Statistics.

The compound annual growth for total nonfarm industries in the Phoenix MSA from 2011 to 2017 was higher than both the state's and the nation's compound annual growth for total nonfarm industries. In fact, compound annual growth in the Phoenix MSA was higher than the state's compound annual growth in all categories examined except mining and logging. Similarly, compound annual growth in the Phoenix MSA was higher than the nation's compound annual growth in all categories examined except government. Between 2011 and 2017, the compound annual growth rate for employment in goods producing industries was 3.2% in the Phoenix MSA, a higher growth rate than the state's 2.8% and the nation's 1.8%. For service providing industries, the compound annual growth rate in the Phoenix MSA was 2.8%, higher than the state, 2.3%, and the nation, 1.8%. The table below shows that the Phoenix MSA's total nonfarm job growth in percent terms was higher than the growth rates for the State of Arizona and the nation from 2011 through 2017.

**Comparison of Total Annual Job Growth Rates**

| Year | Phoenix MSA | State of Arizona | U.S. |
|---|---|---|---|
| 2017 | 2.8% | 2.4% | 1.6% |
| 2016 | 3.4 | 2.7 | 1.8 |
| 2015 | 3.3 | 2.6 | 2.1 |
| 2014 | 2.3 | 2.0 | 1.5 |
| 2013 | 2.9 | 2.3 | 2.0 |
| 2012 | 2.5 | 2.1 | 1.7 |
| 2011 | 1.5 | 1.1 | 1.2 |

Source: Seidman Job Growth U.S.A. /U.S. Bureau of Labor Statistics.

The following table estimates the top 50 major employers in the Phoenix MSA in 2017.

**Phoenix MSA Top 50 Employers, 2017**

| Employer | Employees | Sector |
|---|---|---|
| State of Arizona | 28,231 | Government |
| Banner Health | 26,366 | Health |
| Fry's Food Stores | 15,179 | Retail |
| Walmart | 14,736 | Retail |
| Wells Fargo | 13,892 | Finance & Insurance |
| Maricopa County | 13,297 | Government |
| City of Phoenix | 11,203 | Government |
| Intel Corporation | 11,060 | Manufacturing |
| Arizona State University | 11,017 | Education |
| Bank of America | 9,745 | Finance & Insurance |
| Mesa Unified School District 4 | 8,998 | Education |
| Honeywell | 8,568 | Manufacturing |
| United States Department of the Air Force | 8,427 | Military |
| HonorHealth | 8,327 | Health |
| Dignity Health | 8,176 | Health |
| JPMorgan Chase Bank National Association | 8,088 | Finance & Insurance |
| McDonalds | 7,078 | Retail |
| State Farm Insurance | 7,071 | Finance & Insurance |
| American Express | 7,047 | Finance & Insurance |
| United States Postal Service | 6,719 | Transportation & Distribution |
| Mayo Clinic | 6,603 | Health |
| Safeway Stores Inc | 6,436 | Retail |
| Home Depot | 6,001 | Retail |
| U Haul | 5,652 | Real Estate, Rental & Leasing |
| CVS Pharmacy Inc | 5,602 | Retail |
| Unitedhealth Group | 5,591 | Health |
| Amazoncom | 5,443 | Retail |
| Maricopa County Community College District | 5,430 | Education |
| Walgreen Co | 5,411 | Retail |
| Bashas Inc | 5,410 | Retail |
| Chandler Unified School District 80 | 5,386 | Education |
| Pinnacle West Capital Corporation | 5,356 | Utility |
| Target Stores Inc | 5,258 | Retail |
| SRP | 5,121 | Utility |
| Paradise Valley Unified School District 69 | 4,009 | Education |
| Peoria Unified School District 11 | 3,961 | Education |
| Go Daddy Software Inc | 3,956 | Manufacturing |
| Salt River Pima Maricopa Indian Community | 3,940 | Arts, Entertainment & Recreation |
| Gilbert Unified School District 41 | 3,904 | Education |
| Abrazo Healthcare | 3,846 | Health |
| Grand Canyon University | 3,843 | Education |
| Costco Wholesale | 3,800 | Retail |
| USAA Phoenix Office | 3,700 | Finance & Insurance |
| Avnet Inc | 3,694 | Wholesale |
| City of Mesa | 3,690 | Government |
| The Boeing Company | 3,642 | Manufacturing |
| Deer Valley Unified School District 97 | 3,640 | Education |
| Phoenix Children's Hospital | 3,619 | Health |
| Vanguard | 3,616 | Finance & Insurance |
| Marriott | 3,607 | Accommodation & Food Services |

Source: Maricopa Association of Governments 2017 Employer Database.

## Unemployment

The following table summarizes the proportion of the civilian labor force unemployed each year in the Phoenix MSA since 2011. Unemployment declined throughout the time period. The 2017 unemployment rate was less than half the 2011 Phoenix MSA unemployment rate. The table also shows that the unemployment rate in the Phoenix MSA was lower than the unemployment rates in the State of Arizona and the nation, 2011 through 2017.

**Civilian Labor Force Unemployment (1)**
**Phoenix MSA, State of Arizona, AND THE U.S.**
**(not seasonally adjusted)**

| | | Unemployment Rate | | |
|---|---|---|---|---|
| Year | Phoenix MSA Unemployment Number | Phoenix MSA Unemployment Rate | State of Arizona Unemployment Rate (2) | U.S. Unemployment Rate |
| 2017 | 97,575 | 4.2% | 4.9% | 4.4% |
| 2016 | 103,600 | 4.6 | 5.4 | 4.9 |
| 2015 | 112,752 | 5.2 | 6.1 | 5.3 |
| 2014 | 123,921 | 5.9 | 6.8 | 6.2 |
| 2013 | 137,385 | 6.7 | 7.7 | 7.4 |
| 2012 | 150,728 | 7.4 | 8.3 | 8.1 |
| 2011 | 176,738 | 8.6 | 9.5 | 8.9 |

(1) The 2011-2017 data was subject to revision on April 20, 2018.

(2) State of Arizona Unemployment Rate, 2013 through 2017, reflects revised population controls and BLS model reestimation.

Source: U.S. Bureau of Labor Statistics.

The following table compares the unemployment rate in the Phoenix MSA with 21 peer MSAs. The peer MSAs consist of every western metro of more than one million people, plus other Sun Belt metros of more than 2 million people. The table estimates that nine of the peer MSAs had a higher unemployment rate than the Phoenix MSA in 2017.

**Comparison of the Phoenix MSA'S Labor Force And Unemployment Status with 21 peer MSAs (1) (not seasonally adjusted)**

| | Unemployment rate (percent of labor force) | | | | | | |
|---|---|---|---|---|---|---|---|
| **MSA** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| Phoenix-Mesa-Scottsdale, AZ | 8.6% | 7.4% | 6.7% | 5.9% | 5.2% | 4.6% | 4.2% |
| Atlanta-Sandy Springs-Roswell, GA | 9.9 | 8.8 | 7.8 | 6.7 | 5.7 | 5.1 | 4.5 |
| Austin-Round Rock, TX | 6.6 | 5.7 | 5.2 | 4.2 | 3.4 | 3.3 | 3.1 |
| Charlotte-Concord-Gastonia, NC-SC | 10.6 | 9.3 | 7.9 | 6.2 | 5.5 | 4.8 | 4.3 |
| Dallas-Fort Worth-Arlington, TX | 7.6 | 6.6 | 6.1 | 5.0 | 4.1 | 3.9 | 3.6 |
| Denver-Aurora-Lakewood, CO | 8.3 | 7.7 | 6.6 | 4.8 | 3.7 | 3.1 | 2.7 |
| Houston-The Woodlands-Sugar Land, TX | 7.8 | 6.6 | 6.0 | 4.9 | 4.6 | 5.3 | 5.0 |
| Las Vegas-Henderson-Paradise, NV | 13.2 | 11.3 | 9.7 | 8.0 | 6.8 | 5.9 | 5.2 |
| Los Angeles-Long Beach-Anaheim, CA | 11.4 | 10.2 | 9.0 | 7.6 | 6.1 | 5.0 | 4.4 |
| Miami-Fort Lauderdale-West Palm Beach, FL | 9.6 | 8.2 | 7.1 | 6.3 | 5.5 | 4.9 | 4.3 |
| Orlando-Kissimmee-Sanford, FL | 10.0 | 8.4 | 7.0 | 6.0 | 5.2 | 4.5 | 3.8 |
| Portland-Vancouver-Hillsboro, OR-WA | 9.0 | 8.0 | 7.1 | 6.1 | 5.2 | 4.6 | 3.9 |
| Riverside-San Bernardino-Ontario, CA | 13.0 | 11.5 | 9.8 | 8.1 | 6.6 | 6.0 | 5.1 |
| Sacramento-Roseville-Arden-Arcade, CA | 11.8 | 10.3 | 8.7 | 7.1 | 5.9 | 5.3 | 4.5 |
| Salt Lake City, UT | 6.6 | 5.3 | 4.4 | 3.7 | 3.4 | 3.2 | 3.1 |
| San Antonio-New Braunfels, TX | 7.1 | 6.3 | 5.8 | 4.6 | 3.8 | 3.8 | 3.5 |
| San Diego-Carlsbad, CA | 10.3 | 9.1 | 7.8 | 6.4 | 5.2 | 4.7 | 4.0 |
| San Francisco-Oakland-Hayward, CA | 9.1 | 7.8 | 6.5 | 5.2 | 4.2 | 3.8 | 3.3 |
| San Jose-Sunnyvale-Santa Clara, CA | 9.5 | 8.0 | 6.6 | 5.3 | 4.3 | 3.9 | 3.3 |
| Seattle-Tacoma-Bellevue, WA | 8.7 | 7.2 | 5.9 | 5.3 | 4.8 | 4.4 | 4.1 |
| Tampa-St. Petersburg-Clearwater, FL | 9.9 | 8.2 | 6.9 | 6.0 | 5.2 | 4.6 | 3.9 |
| Tucson, AZ | 8.5 | 7.4 | 6.8 | 6.0 | 5.5 | 5.0 | 4.5 |

(1) The 2011-2017 data was subject to revision on April 20, 2018.

Source: U.S. Bureau of Labor Statistics.

### Gross Domestic Product

Gross Domestic Product, or GDP, is the monetary value of all finished goods and services produced in the U.S. on an annual or quarterly basis. GDP includes all public and private sector purchases, government expenditures, investments, and the difference between exports and imports. This metric is often used by economists to describe the health of the U.S. economy. Between 2001 and 2008, the Phoenix MSA was a major contributor to the state's GDP, accounting for more than 75% of the value. In 2009 and 2010, the Phoenix MSA's annual contribution to state GDP fell to approximately 74%. Since 2011, GDP of the Phoenix MSA has increased steadily, as has its contribution to the overall state GDP.

## Phoenix MSA
## Annual Contribution to GDP
## In the State of Arizona

| Year | Gross Domestic Product (millions of current dollars) Phoenix MSA | State of Arizona | Phoenix MSA Percent Contribution to State |
|---|---|---|---|
| 2016 | $230,070 | $304,357 | 75.6% |
| 2015 | 220,087 | 293,318 | 75.0 |
| 2014 | 209,567 | 281,069 | 74.6 |
| 2013 | 199,872 | 270,469 | 73.9 |
| 2012 | 195,629 | 264,693 | 73.9 |
| 2011 | 186,384 | 254,192 | 73.3 |

Source: U.S. Bureau of Economic Analysis.

Between 2001 and 2007, private industries were the top contributor to total GDP. Private Industries contributed on average 90.3% of the Phoenix MSA's total GDP, while the average annual government contribution was 9.7%. When the recession began in 2008, the GDP contribution of the Phoenix MSA's private industries fell, hitting 88.8% in 2010. The following table estimates the percent contribution (in current dollars) of different Phoenix MSA industry sectors to GDP in the State of Arizona. The total annual contribution of private industries to GDP in the Phoenix MSA rose to 89.5% between 2011 and 2016. Finance, insurance, real estate, rental, and leasing on average accounted for 24.7% of the Phoenix MSA's total GDP between 2011 and 2016. Professional and business services accounted for 12.6% of total GDP between 2011 and 2016.

## Phoenix MSA
## GDP Contribution by Industry Sector

| Industry Sector | GDP Contribution (millions of dollars) | | | | | |
|---|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Private Industries | | | | | | |
| Agriculture, Forestry, Fishing, and Hunting | $ 787 | $ 755 | $ 936 | $ 1,040 | $ 747 | $ 635 |
| Mining | 2,259 | 2,387 | 2,059 | 2,434 | 1,810 | 1,382 |
| Utilities | 4,342 | 3,835 | 3,841 | 3,929 | 4,023 | 4,279 |
| Construction | 6,959 | 7,578 | 8,500 | 8,699 | 8,857 | 9,705 |
| Manufacturing | 16,661 | 17,729 | 15,849 | 17,636 | 18,426 | 18,713 |
| Wholesale Trade | 12,887 | 13,999 | 13,775 | 13,927 | 14,519 | 14,688 |
| Retail Trade | 15,111 | 15,497 | 15,257 | 16,594 | 17,429 | 18,059 |
| Transportation and Warehousing | 5,648 | 6,014 | 5,842 | 6,165 | 6,708 | 7,124 |
| Information | 5,249 | 5,470 | 6,142 | 6,805 | 7,192 | 7,702 |
| Finance, Insurance, Rental, Real Estate & Leasing | 43,916 | 47,001 | 49,454 | 51,727 | 55,584 | 58,618 |
| Professional & Business Services | 22,798 | 23,829 | 25,236 | 26,536 | 28,221 | 30,037 |
| Education & Health Care | 17,244 | 17,812 | 18,155 | 18,872 | 20,029 | 21,295 |
| Arts, Entertainment & Recreation, and Accommodation & Food Services | 8,096 | 8,557 | 9,242 | 9,154 | 9,641 | 10,133 |
| Other Services (excluding Government) | 3,845 | 4,056 | 4,100 | 4,389 | 4,631 | 4,805 |
| Total Private Industries | $165,802 | $174,519 | $178,388 | $187,907 | $197,817 | $207,175 |
| Government | 20,581 | 21,112 | 21,482 | 21,661 | 22,270 | 22,896 |
| Total All Industries | $186,383 | $195,631 | $199,870 | $209,568 | $220,087 | $230,071 |

Source: U.S. Bureau of Economic Analysis.

The following table compares the Phoenix MSA's real GDP with 21 peer MSAs, expressed in 2009 dollars.* The table suggests that the Phoenix MSA's average annual real GDP from 2011 through 2016 was $192.1 billion in chained 2009 dollars. In 2016, the Phoenix MSA ranked 9th among the 22 MSAs examined in this report, while the Tucson, AZ MSA ranked last in the group. However, the primary measure of economic performance internationally is per capita GDP. The second GDP table therefore compares the real GDP per capita contributions of the Phoenix MSA with the 21 peer MSAs.

The average annual real GDP per capita contribution in the Phoenix MSA from 2011 through 2016 was $43,190. For the most recent year available (2016), real GDP per capita in the Phoenix MSA was $43,602, expressed in chained 2009 chained dollars. The Phoenix MSA ranks 19th among the MSAs when considering real GDP per capita. This ranking is vastly lower than when considering nominal real GDP. The compound annual growth rate for the Phoenix MSA from 2011 through 2016 was 0.3%.

**Real GDP**
**Peer Metropolitan Statistical Areas**

| | Real GDP (millions of chained 2009 dollars) (1) | | | | | |
|---|---|---|---|---|---|---|
| | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** |
| Phoenix-Mesa-Scottsdale, AZ | $182,413 | $187,477 | $188,076 | $193,190 | $198,049 | $203,253 |
| Atlanta-Sandy Springs-Roswell, GA | 274,621 | 278,537 | 288,509 | 299,881 | 308,761 | 320,171 |
| Austin-Round Rock, TX | 93,413 | 98,992 | 104,902 | 111,421 | 119,914 | 125,816 |
| Charlotte-Concord-Gastonia, NC-SC | 122,522 | 125,472 | 126,707 | 130,280 | 136,196 | 140,815 |
| Dallas-Fort Worth-Arlington, TX | 372,206 | 391,232 | 412,265 | 432,289 | 457,409 | 471,278 |
| Denver-Aurora-Lakewood, CO | 153,031 | 157,916 | 159,987 | 169,519 | 176,148 | 180,446 |
| Houston-The Woodlands-Sugar Land, TX | 385,028 | 408,515 | 425,043 | 434,848 | 456,245 | 442,458 |
| Las Vegas-Henderson-Paradise, NV | 83,297 | 83,380 | 85,247 | 86,308 | 93,001 | 96,595 |
| Los Angeles-Long Beach-Anaheim, CA | 760,055 | 782,013 | 796,785 | 827,992 | 866,578 | 884,836 |
| Miami-Fort Lauderdale-West Palm Beach, FL | 247,940 | 254,161 | 251,037 | 267,639 | 280,390 | 287,775 |
| Orlando-Kissimmee-Sanford, FL | 98,899 | 99,420 | 108,654 | 106,542 | 109,345 | 111,767 |
| Portland-Vancouver-Hillsboro, OR-WA | 148,621 | 142,586 | 138,916 | 141,338 | 147,412 | 151,817 |
| Riverside-San Bernardino-Ontario, CA | 115,863 | 114,642 | 119,358 | 122,408 | 127,354 | 130,716 |
| Sacramento-Roseville-Arden-Arcade, CA | 94,869 | 95,590 | 97,640 | 99,965 | 103,006 | 107,127 |
| Salt Lake City, UT | 64,477 | 65,892 | 66,175 | 67,976 | 71,253 | 73,424 |
| San Antonio-New Braunfels, TX | 83,814 | 88,033 | 93,734 | 100,487 | 106,032 | 109,348 |
| San Diego-Carlsbad, CA | 179,174 | 181,381 | 186,894 | 189,206 | 189,998 | 190,656 |
| San Francisco-Oakland-Hayward, CA | 321,282 | 337,958 | 350,660 | 367,608 | 385,619 | 406,294 |
| San Jose-Sunnyvale-Santa Clara, CA | 172,532 | 178,834 | 188,663 | 202,592 | 223,759 | 236,855 |
| Seattle-Tacoma-Bellevue, WA | 245,216 | 256,930 | 264,336 | 273,702 | 281,373 | 293,551 |
| Tampa-St. Petersburg-Clearwater, FL | 109,929 | 112,552 | 118,066 | 117,754 | 121,048 | 126,166 |
| Tucson, AZ | 33,855 | 34,979 | 33,905 | 33,453 | 32,520 | 32,590 |

Source: U.S. Bureau of Economic Analysis.

(1) Chained 2009 dollars.

* These are chained dollars, which is a method of adjusting real dollar amounts for inflation over time, to enable comparisons from different years. The U.S. Department of Commerce introduced the chained-dollar measure in 1996. Chained dollars generally reflect dollar figures computed with 2009 as the base year.

**Real GDP Per Capita**
**Peer Metropolitan Statistical Areas**

| | Real GDP per Capita (chained 2009 dollars) (1) | | | | | | Compound Annual Growth Rate |
|---|---|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
| Phoenix-Mesa-Scottsdale, AZ | $42,933 | $43,345 | $42,782 | $ 43,123 | $ 43,357 | $ 43,602 | 0.3% |
| Atlanta-Sandy Springs-Roswell, GA | 51,106 | 51,088 | 52,292 | 53,495 | 54,178 | 55,300 | 1.6 |
| Austin-Round Rock, TX | 52,455 | 53,967 | 55,714 | 57,392 | 60,014 | 61,183 | 3.1 |
| Charlotte-Concord-Gastonia, NC-SC | 54,298 | 54,680 | 54,269 | 54,800 | 56,171 | 56,911 | 0.9 |
| Dallas-Fort Worth-Arlington, TX | 56,639 | 58,357 | 60,511 | 62,242 | 64,516 | 65,154 | 2.8 |
| Denver-Aurora-Lakewood, CO | 58,838 | 59,640 | 59,296 | 61,589 | 62,713 | 63,246 | 1.5 |
| Houston-The Woodlands-Sugar Land, TX | 63,563 | 66,094 | 67,209 | 67,023 | 68,634 | 65,332 | 0.6 |
| Las Vegas-Henderson-Paradise, NV | 42,362 | 41,777 | 42,095 | 41,798 | 44,091 | 44,810 | 1.1 |
| Los Angeles-Long Beach-Anaheim, CA | 58,726 | 59,977 | 60,693 | 62,722 | 65,309 | 66,477 | 2.5 |
| Miami-Fort Lauderdale-West Palm Beach, FL | 43,518 | 43,976 | 42,861 | 45,131 | 46,718 | 47,438 | 1.7 |
| Orlando-Kissimmee-Sanford, FL | 45,456 | 44,654 | 47,873 | 45,863 | 45,902 | 45,783 | 0.1 |
| Portland-Vancouver-Hillsboro, OR-WA | 65,757 | 62,315 | 60,072 | 60,242 | 61,813 | 62,606 | -1.0 |
| Riverside-San Bernardino-Ontario, CA | 26,951 | 26,402 | 27,254 | 27,642 | 28,456 | 28,869 | 1.4 |
| Sacramento-Roseville-Arden-Arcade, CA | 43,622 | 43,574 | 44,090 | 44,619 | 45,425 | 46,650 | 1.4 |
| Salt Lake City, UT | 58,202 | 58,606 | 57,972 | 58,956 | 61,030 | 61,900 | 1.2 |
| San Antonio-New Braunfels, TX | 38,200 | 39,347 | 41,078 | 43,105 | 44,520 | 45,006 | 3.3 |
| San Diego-Carlsbad, CA | 57,049 | 57,011 | 58,070 | 58,059 | 57,746 | 57,465 | 0.1 |
| San Francisco-Oakland-Hayward, CA | 73,049 | 75,798 | 77,545 | 80,165 | 83,068 | 86,830 | 3.5 |
| San Jose-Sunnyvale-Santa Clara, CA | 92,311 | 94,332 | 98,036 | 104,004 | 113,665 | 119,695 | 5.3 |
| Seattle-Tacoma-Bellevue, WA | 70,103 | 72,317 | 73,231 | 74,638 | 75,494 | 77,273 | 2.0 |
| Tampa-St. Petersburg-Clearwater, FL | 38,863 | 39,525 | 41,110 | 40,386 | 40,742 | 41,609 | 1.4 |
| Tucson, AZ | 34,272 | 35,244 | 34,019 | 33,348 | 32,256 | 32,070 | -1.3 |

(1) Chained 2009 dollars.

Source: U.S. Bureau of Economic Analysis.

## Income

Exclusively focused on money, per capita income is derived by dividing the total aggregate income by the total population. In the table below, per capita income in 2016 dollars in the Phoenix MSA was $29,653. The Phoenix MSA was 15th out of the 22 peer MSAs.

**Per Capita Income**
**Peer Metropolitan Statistical Areas**

| | Per Capita Income (2016 dollars) |
|---|---|
| Phoenix-Mesa-Scottsdale, AZ | $29,653 |
| Atlanta-Sandy Springs-Roswell, GA | 32,055 |
| Austin-Round Rock, TX | 36,708 |
| Charlotte-Concord-Gastonia, NC-SC | 31,733 |
| Dallas-Fort Worth-Arlington, TX | 32,156 |
| Denver-Aurora-Lakewood, CO | 38,106 |
| Houston-The Woodlands-Sugar Land, TX | 31,863 |
| Las Vegas-Henderson-Paradise, NV | 27,295 |
| Los Angeles-Long Beach-Anaheim, CA | 32,594 |
| Miami-Fort Lauderdale-West Palm Beach, FL | 29,535 |
| Orlando-Kissimmee-Sanford, FL | 26,918 |
| Portland-Vancouver-Hillsboro, OR-WA | 35,290 |
| Riverside-San Bernardino-Ontario, CA | 24,152 |
| Sacramento-Roseville-Arden-Arcade, CA | 32,896 |
| Salt Lake City, UT | 29,885 |
| San Antonio-New Braunfels, TX | 26,728 |
| San Diego-Carlsbad, CA | 34,328 |
| San Francisco-Oakland-Hayward, CA | 49,579 |
| San Jose-Sunnyvale-Santa Clara, CA | 48,995 |
| Seattle-Tacoma-Bellevue, WA | 41,584 |
| Tampa-St. Petersburg-Clearwater, FL | 29,616 |
| Tucson, AZ | 26,700 |

Source: American Community Survey 2016 (One Year Estimate).

The next table shows total personal income and per capita personal income in current dollars for the Phoenix MSA for 2011 through 2016. The Bureau of Economic Analysis defines personal income as "…the income received by, or on behalf of, all persons from all sources: from participation as laborers in production, from owning a home or unincorporated business, from the ownership of financial assets, and from government and business in the form of transfer receipts". *

By including income from global, as well as domestic sources, personal income is a measurement far wider in scope than the American Community Survey's concept of per capita income shown in the previous table. Per capita personal income derived by calculating the total personal income divided by total population. The 2016 per capita personal income estimate in the Phoenix MSA of $42,218 was $1,672 greater than the state per capita personal income of $40,546.

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* Bureau of Economic Analysis. Local Area Personal Income: 2016 news release, November 16, 2017. Available at: https://www.bea.gov/newsreleases/regional/lapi/lapi_newsrelease.htm

**Phoenix MSA**
**Total Personal and per Capita Personal Income**

| Year | Total Personal Income (in thousands dollars) | Per Capita Personal Income (in current dollars) | Per Capita Personal Income Annual Percent Change |
|---|---|---|---|
| 2016 | $196,801,479 | $42,218 | 1.9% |
| 2015 | 189,306,602 | 41,443 | 4.2 |
| 2014 | 178,114,443 | 39,758 | 4.2 |
| 2013 | 167,760,664 | 38,160 | 1.0 |
| 2012 | 163,407,229 | 37,780 | 3.8 |
| 2011 | 154,596,814 | 36,386 | 4.4 |

Source: U.S. Bureau of Economic Analysis.

The Greater Phoenix Blue Chip Consensus Panel forecasts that current personal income in the Phoenix MSA will increase by 5.4% in 2018 and 5.9% in 2019.

## Exports

In 2016, the Phoenix MSA was the 23rd largest U.S. exporter by merchandise export value based on origin of movement zip code data collected by the International Trade Administration. In total, the Phoenix MSA exported more than $12.8 billion goods that year. This was almost $1 billion less than 2015 (a decline of 7.1%).

Mexico was the top foreign market, accounting for 27.5% of the Phoenix MSA's total goods exports. Canada accounted for 10.1% of the Phoenix MSA's total goods exports, and China 7.9%.

**Phoenix MSA**
**Annual Exports**

| Year | Value (millions dollars) | Annual Growth Rate |
|---|---|---|
| 2016 | $12,838,188,632 | -7.1% |
| 2015 | 13,821,528,121 | 8.3 |
| 2014 | 12,764,439,477 | 11.3 |
| 2013 | 11,473,532,187 | 5.9 |
| 2012 | 10,834,262,990 | -0.7 |
| 2011 | 10,914,400,733 | 16.8 |
| 2010 | 9,342,732,987 | 17.6 |
| 2009 | 7,947,525,373 | -37.0 |
| 2008 | 12,623,577,611 | -1.5 |
| 2007 | 12,818,200,421 | 17.0 |
| 2006 | 10,954,781,866 | 29.3 |

Source: International Trade Administration.

## Real Estate Market

The 2008-2009 recession hit the real estate market particularly hard. An overabundance of single-family residential buildings in conjuncture with a high foreclosure rate between 2008 and 2011 and a decline in population growth particularly wounded the Phoenix MSA. However, the Phoenix real estate market has significantly improved since the recession.

**New Privately Owned Housing Units Authorized**
**Phoenix MSA and Arizona**

| | 1 Unit | | 2 Units | | 3 or 4 Units | | 5+ Units | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | MSA | AZ | MSA | AZ | MSA | AZ | MSA | AZ | MSA | AZ |
| 2017 | 20,471 | 28,072 | 302 | 432 | 212 | 273 | 8,327 | 10,695 | 29,312 | 39,472 |
| 2016 | 18,433 | 24,853 | 410 | 484 | 161 | 168 | 9,579 | 10,073 | 28,583 | 35,578 |
| 2015 | 16,621 | 22,311 | 168 | 222 | 186 | 225 | 5,427 | 6,152 | 22,402 | 28,910 |
| 2014 | 11,557 | 16,841 | 156 | 230 | 125 | 137 | 8,503 | 9,789 | 20,341 | 26,997 |
| 2013 | 12,959 | 18,386 | 128 | 214 | 201 | 213 | 5,449 | 6,396 | 18,737 | 25,209 |
| 2012 | 11,931 | 16,189 | 176 | 244 | 161 | 210 | 3,699 | 5,083 | 15,967 | 21,726 |
| 2011 | 7,297 | 10,306 | 18 | 54 | 80 | 115 | 1,686 | 2,532 | 9,081 | 13,007 |

Source: U.S. Census Bureau.

The total number of permits issued in 2017, compared to 2011, increased by 303.5% in the State of Arizona, and 322.8% in the Phoenix MSA. Approximately 70% of the permitting in both jurisdictions in 2017 was for single units. Permitting always occurs before housing starts. However, a stronger indicator of economic conditions is housing completions.

**Population and Housing Units (1)**
**City of Phoenix**

| Year | Population (2) | Change in Population | Housing | Change in Housing Units (3) |
|---|---|---|---|---|
| 2017 | 1,579,253 | 19,233 | 613,463 | 4,060 |
| 2016 | 1,560,020 | 32,511 | 609,403 | 6,144 |
| 2015 | 1,527,509 | 21,070 | 603,259 | 2,670 |
| 2014 | 1,506,439 | 20,688 | 600,589 | 3,913 |
| 2013 | 1,485,751 | 21,024 | 596,676 | 2,949 |
| 2012 | 1,464,727 | 12,761 | 593,727 | 1,600 |
| 2011 | 1,451,966 | 6,344(4) | 592,127 | 1,978(4) |

(1) The population and housing unit figures reflect the change to the 2010 decennial census that resulted from the census count question resolution program, which added 463 housing units and 1,496 residents to the previously published figures.

(2) Maricopa Association of Governments uses a different methodology and different data to estimate population.

(3) The change in the number of housing units is equal to the number of housing completions plus the number of units annexed less the number of units demolished.

(4) Change over five quarters from the decennial census figure on April 1, 2010.

Source: Maricopa Association of Governments.

An estimated 89.0% of housing units were occupied in the city of Phoenix in 2016.* 52.7% of the occupied housing units in the City of Phoenix in 2016 were owner occupied, and 47.3% renter occupied. The average household size in each was very similar, 2.9 for owner-occupied units, and 2.8 for renter-occupied units. The

* Data for 2017 is currently unavailable.

median dollar value of an owner-occupied home in the City of Phoenix was $178,200 in 2016. The gross median rent for an occupied unit in 2015 was $914 per month.

**New Housing Starts (1)**

| Year | City of Phoenix |
|---|---|
| 2018 (2) | 3,500 |
| 2017 | 6,832 |
| 2016 | 6,972 |
| 2015 | 4,611 |
| 2014 | 5,138 |
| 2013 | 3,131 |
| 2012 | 4,434 |
| 2011 (3) | 1,628 |
| 2010 | 2,401 |
| 2009 | 1,971 |

(1) Reflects housing permits authorized, by units, including single-family, multi-family and mobile homes.

(2) Data through June 2018.

(3) Data source changed in 2011 from Arizona State University to the U.S. Census Bureau.

Source: Center for Real Estate Theory and Practice, College of Business Administration, Arizona State University, and the United States Census Bureau.

According to CB Richard Ellis, retail market growth has been hindered during the first half of 2018 primarily due to multiple big-box move outs. However, Phoenix remains one of the fastest growing metros in the nation in terms of both population and employment. During the second quarter of 2018, the vacancy rate settled at 8.40% while the average asking lease rate reached $17.96 per square foot, setting the record high for the last decade. Total inventory increased by 590,123 square feet over the previous year, while net absorption experienced a decrease.

**Retail Real Estate Market**
**Phoenix MSA**

| Year | Vacancy Rate | Net Absorption (square feet) | Change in Inventory (square feet) |
|---|---|---|---|
| 2018 (1) | 8.4% | -112,444 | 590,123 |
| 2017 | 8.1 | 1,601,498 | 580,776 |
| 2016 | 8.9 | 1,321,833 | 1,204,766 |
| 2015 | 9.1 | 1,150,192 | 164,859 |
| 2014 | 9.6 | 1,487,313 | -49,225 |
| 2013 | 10.2 | 1,579,202 | -325,959 |
| 2012 | 11.0 | 1,879,005 | 184,392 |
| 2011 | 12.2 | -152,647 | 24,353 |

Source: CB Richard Ellis.

(1) Year-to-date data through June 2018.

**Office Real Estate Market**
**Phoenix MSA**

| Year | Vacancy Rate | Net Absorption (square feet) | Change in Inventory (square feet) |
|---|---|---|---|
| 2018 (1) | 16.2% | 897,284 | -200,176 |
| 2017 | 16.4 | 2,839,559 | 2,731,217 |
| 2016 | 17.4 | 3,219,853 | 1,045,155 |
| 2015 | 19.3 | 3,779,039 | 3,763,828 |
| 2014 | 21.1 | 1,969,716 | 1,107,906 |
| 2013 | 22.4 | 1,712,366 | -35,566 |
| 2012 | 23.9 | 2,020,529 | 973,282 |
| 2011 | 25.5 | 1,857,433 | 3,144,910 |

(1) Year-to-date data through June 2018.

Source: CB Richard Ellis.

**Industrial/Commercial Real Estate Market**
**Phoenix MSA**

| Year | Vacancy Rate | Net Absorption (square feet) | Change in Inventory (square feet) |
|---|---|---|---|
| 2018 (2) | 6.4% | 4,728,639 | 3,490,669 |
| 2017 | 6.8 | 9,898,893 | 6,988,240 |
| 2016 | 8.0 | 9,497,677 | 5,136,644 |
| 2015 | 10.1 | 7,046,663 | 3,966,434 |
| 2014 | 11.0 | 6,214,680 | 6,791,313 |
| 2013 | 11.4 | 8,783,982 | 8,902,571 |
| 2012 | 10.9 | 7,405,168 | 3,358,724 |
| 2011 | 12.4 | 7,753,111 | 1,954,037 |

(2) Year-to-date data through June 2018.

Source: CB Richard Ellis.

With approximately 2.9 million square feet of space remaining under construction at the end of the second quarter, the Phoenix office market continues to perform well in 2018. Net absorption totaled to 897,284 at the close of the quarter leading to a decrease in vacancy. Meanwhile, the average asking rental rate continued to climb to $25.61 per square foot. Developers show optimism for the market as the construction continues to grow, specifically in the southeast valley.*

The Phoenix industrial market also shows strong performance during the first half of 2018. The vacancy rate reached its lowest level since the second quarter of 2016, settling at 6.40%, while the average asking lease rate remained at $0.64 per square foot. Demand outpaced supply as manufacturing, third party logistics, e-commerce, and food and beverage companies vie for space throughout the Valley. Meanwhile, developers respond to demand as inventory increased 3,490,669 square feet by the end of the quarter.**

* CBRE Phoenix Office Market View, Phoenix Office, Q2 2018

** CBRE Phoenix Industrial & Logistics Market View, Phoenix Office, Q2 2018

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# APPENDIX C

## State Expenditure Limitation

Since fiscal year 1982-83, the City has been subject to an annual expenditure limitation imposed by the Arizona Constitution. This limitation is based upon the City's actual 1979-80 expenditures adjusted annually for subsequent growth in population and inflation. The 2018-19 expenditure limit supplied by the Economic Estimates Commission was $1,519,645,951. The City increased this limit to $7,354,461 to adjust for additional voter-approved modifications, as described below.

The Constitution exempts certain expenditures from the limitation. The principal exemptions for the City of Phoenix are payments for debt service and other long-term obligations, as well as expenditures of federal funds and certain State-Shared Revenues. Exemptions associated with revenues not expended in the year of receipt may be carried forward and used in later years. The 1979-80 expenditure base may also be adjusted for the transfer of functions between governmental jurisdictions.

The Constitution provides four processes, all requiring voter approval, to modify the expenditure limitation:

1. A four-year home rule option.
2. A permanent adjustment to the 1979-80 base.
3. A one-time override for the following fiscal year.
4. An accumulation for pay-as-you-go capital expenditures.

Phoenix voters have approved four-year home rule options on a regular basis since the implementation of the expenditure limitation. The current home rule option which was approved in 2015 allows the City Council, after hearings are held for each council district, to establish the annual budget as the limit. This four-year home rule option is in effect through 2019-20.

On November 3, 1981, Phoenix voters approved four propositions that allow the City to accumulate and expend local revenues for "pay-as-you-go" capital improvements without being subject to the State spending limit. These capital improvement exclusions include annual amounts of up to $5,000,000 for Aviation, $6,000,000 for Sanitary Sewers, $2,000,000 for Streets and $6,000,000 for Water. These exclusions were approved on a permanent basis and do not require voter reapproval except to raise or lower the annual amounts.

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# APPENDIX D

## Retirement and Pension Plans

Substantially all full-time employees and elected officials of the City are covered by one of three pension plans: the City of Phoenix Employees' Retirement System, the State of Arizona Public Safety Personnel Retirement System or the Elected Officials' Retirement Plan.

### City of Phoenix Employees' Retirement System

The City of Phoenix Employees' Retirement System (the *"Plan"*), a single-employer defined benefit pension plan, covers all full-time eligible employees of the City, with the exception of sworn City police and fire personnel and elected officials. Periodic employer contributions to the Plan are determined on an actuarial basis using the "individual entry age normal cost method." Normal cost is funded on a current basis. Since August, 2015, the actuarial accrued liability is amortized over a closed twenty year period with one year phase in as a level percentage of payroll. Periodic contributions for both normal cost and the amortization of the actuarial accrued liability are based on the level percentage of payroll method and are required by City Charter to be made to the pension fund each year by the City. The funding strategy for normal cost and the actuarial liability should provide sufficient resources to pay employee pension benefits on a timely basis.

The Governmental Accounting Standards Board (GASB) issued GASB Statement No. 68, Accounting and Financial Reporting for Pensions, which improves accounting and financial reporting for pensions. This Statement replaces the requirements of Statement No. 27, Accounting for Pensions by State and Local Governmental Employers, as well as the requirements of Statement No. 50, Pension Disclosures, as they relate to pensions that are provided through pension plans administered as trusts or equivalent arrangements that meet certain criteria. The requirements of this Statement were effective for financial statements for periods beginning after June 15, 2014, and the City implemented GASB Statement No. 68 in fiscal year 2015. Additional information regarding the City's financial statements, including reporting of the City's net position and the net pension liability, is available in the City's Comprehensive Annual Financial Report (CAFR). The CAFR is available at http://emma.msrb.org or www.phoenix.gov under Departments-Finance-Comprehensive Annual Financial Report or by calling the City at (602) 262-7166. The most recent report of the Actuary and the Plan's annual financial reports are available online at https://phoenix.gov/copers/pension-plan-reports.

The City's actuarially determined contribution, actual contribution and covered payroll for the last three fiscal years follows:

**Schedule of Employer Contributions**
**(in thousands)**

| Fiscal Year Ended June 30, | Actuarially Determined Contribution | Actual Contribution | Percentage Contributed | Covered Employee Payroll | Actual Contribution as a percentage of Covered Employee Payroll |
|---|---|---|---|---|---|
| 2018 | $159,006 | $229,006 | 144% | $526,667 | 43.48% |
| 2017 | 152,153 | 152,153 | 100 | 521,295 | 29.19 |
| 2016 | 119,844 | 119,844 | 100 | 473,974 | 25.28 |

The actuarially determined recommended pension contribution rate is 31.47% for fiscal year 2018-19 and 31.77% for fiscal year 2019-20.

The following schedule shows the funding progress of the plan for the last three fiscal years. The total actuarial accrued liability increased $8,230,000 from 2015 to 2016, $145,315,000 from 2016 to 2017 and $96,594,000 from 2017 to 2018. As of June 30, 2018, the unfunded actuarial accrued liability was $1,663,199,000, compared with a shortfall of $1,726,745,000 at June 30, 2017 and $1,700,921,000 at June 30, 2016. The percent funded ratios, based on an actuarial value of assets, were 60.6% as of June 30, 2018, 58.2% as of June 30, 2017 and 57.3% as of June 30, 2016.

**Schedule of Changes in Net Pension Liability and Related Ratios**
(in thousands)

| | Fiscal Year 2018 | Fiscal Year 2017 | Fiscal Year 2016 |
|---|---|---|---|
| **Total Pension Liability** | | | |
| Service cost | $ 73,072 | $ 72,876 | $ 80,757 |
| Interest on the total pension liability | 293,883 | 293,258 | 293,206 |
| Changes of benefit terms | — | — | (3,229) |
| Differences between expected and actual experience | (42,785) | 429 | (76,891) |
| Changes of assumptions | — | 2,420 | (69,420) |
| Benefit payments, including refunds of employee contributions | (227,576) | (223,668) | (216,193) |
| Net change in total pension liability | 96,594 | 145,315 | 8,230 |
| Total pension liability—beginning | 4,129,452 | 3,984,137 | 3,975,907 |
| Total pension liability—ending | $4,226,046 | $4,129,452 | $3,984,137 |
| **Plan Fiduciary Net Position** | | | |
| Employer contributions | $ 229,006 | $ 152,153 | $ 119,844 |
| Employee contributions | 33,340 | 30,870 | 29,523 |
| Pension plan net investment income | 166,513 | 243,211 | 9,171 |
| Benefit payments, including refunds of member contributions | (227,576) | (223,668) | (216,409) |
| Pension plan administrative expense | (376) | (380) | (234) |
| Net change in plan fiduciary net position | 200,907 | 202,186 | (58,105) |
| Plan fiduciary net position—beginning | 2,353,607 | 2,151,421 | 2,209,526 |
| Plan fiduciary net position—ending | 2,554,514 | 2,353,607 | $2,151,421 |
| Net pension liability—ending | $1,671,532 | $1,775,845 | $1,832,716 |
| Plan fiduciary net position as a percentage of the total pension liability | 60.45% | 57.00% | 54.00% |
| Covered payroll | $ 526,667 | $ 521,295 | $ 473,974 |
| Net pension liability as a percentage of covered payroll | 317.38% | 340.66% | 386.67% |

Actuarial assumptions used to determine the total pension liability in the June 30, 2018 valuation were based on the results of the actuarial experience study covering the period from July 1, 2009 through June 30, 2014. Those assumption, applied to all periods included in the measurement, are as follows:

| | |
|---|---|
| Investment Rate of Return | 7.25% |
| Inflation | 2.5% |
| Salary Increase Rate | Individual salary increases are composed of a price inflation component, a real wage growth component, and a merit or longevity component that varies by age. Total salary increases range from 9.60% at age 20 to 3.00% for members age 65 and older. |
| Cost of Living Adjustment | 1.25% |
| Mortality | CalPERS Employee Mortality and CalPERS Healthy Annuitant tables both without Scale BB Projection, and also the RP-2014 Disabled Retiree Mortality table without MP-2014 Projection |

Based on the assumption that employee and City contributions to the Plan will continue to follow the established contribution policy and the sufficiency of the Fiduciary Net Position, the long-term expected rate of return on the Plan's investments, 7.25%, was applied as the single rate to all periods of projected benefit payments to determine the total pension liability.

**City of Phoenix Pension Reform**

In January 2011, the Mayor and City Council appointed members of a Pension Reform Task Force (the "*Task Force*") to work with management, outside consultants and other stakeholders to review and possibly recommend changes to the Plan. On September 25, 2012, after several revisions, the Task Force presented a final report to the Mayor and City Council, including recommended amendments to the City Charter. At the September 25, 2012 meeting, the Mayor and City Council directed staff to draft proposed revisions to City Charter language for referral to the March 2013 ballot based on the Task Force's recommendations.

At a special election held on March 12, 2013, voters approved changes to the Plan. The changes affected new employees hired on and after July 1, 2013 and are expected to save the City approximately $829 million over 25 years. The changes exclude public safety employees and elected officials, each covered under separate pension plans. The following is a summary of the voter-approved changes:

- The retirement eligibility age will increase an average of approximately 3.5 years
- The employer and employee contribution rates will be based on a 50/50 split of the actuarially determined rate necessary to fully fund the annual required contribution (ARC)
- The benefit formula components will be changed to a graduated multiplier based on years of service, matching the State of Arizona retirement plan
- Prior to these changes, the City Charter required full funding of the ARC, but prohibited the City from contributing an amount greater than the ARC. The voter-approved changes allow the City to contribute an amount greater than the ARC
- The Investment Policy for the Plan will be updated to allow for investments that meet the Prudent Investor Rule

On July 1, 2013 as a result of the voter approved changes, a two-tier system was created under the Plan. A Tier 1 employee is any employee hired by the City before July 1, 2013, or any employee hired by the City on or after July 1, 2013 who participated in the Arizona State Retirement System prior to July 1, 2011. A Tier 2 employee is any employee hired by the City on or after July 1, 2013 who is not a Tier 1 employee. Effective July 1, 2013, Tier 1 employees continued to contribute 5% of their compensation to the Plan, and Tier 2 employees contributed one-half of the total required actuarial percentage. The contribution rate for the City is the total projected percentage less the member contribution rates for each tier.

In November 2014, the Mayor created the Civilian Retirement Security Ad Hoc Committee (the "*Committee*") to address further pension reform. The Committee, which included members of the City Council along with community and business leaders, met over three months to consider several options for reform. In February 2015, the Committee unanimously recommended a stacked hybrid plan ("Prop 103") that was expected to save the City over $38 million over 20 years starting January 1, 2016. The most significant changes under this plan are for employees hired after January 1, 2016 to be classified as Tier 3 employees. Tier 3 employees would be subject to the following benefit changes:

- Final Average Salary calculation changed to a five-year average
- Pension multiplier reduced to 1.85% of salary per year of service through the first 10 years of employment, gradually increasing to 2.0% at 20 years of service
- Elimination of the sick leave service credit
- Eliminates the ability for employees previously employed by the state or other cities in Arizona to join the City of Phoenix as Tier 1 employees
- Makes compensation above $125,000 per year non-pensionable; the cap would increase each year to match inflation.

Prop 103 will continue the 50/50 split in the contribution rate for new hires, but create a ceiling in the employee rate of 11% of their compensation. This ceiling will apply to both Tier 2 and Tier 3 employees to help improve the recruitment and retention of employees. The City Council approved the plan on March 4, 2015, and on August 25, 2015 voters also approved Prop 103, which became effective on January 1, 2016.

**Citizen Pension Reform Initiative**

On November 4, 2014, Phoenix voters considered and rejected an initiative known as Proposition 487 — The Phoenix Pension Reform Act of 2014 that if approved, would have amended the Phoenix City Charter and changed City retirement benefits for both current and future employees. The City is unable to predict whether and in what form, future initiatives may be proposed regarding the Plan and what the impact of such initiatives might be.

**State of Arizona Public Safety Personnel Retirement System**

The City of Phoenix also contributes to an agent multiple-employer defined benefit pension and health insurance premium subsidy plan, the Arizona Public Safety Personnel Retirement System (APSPRS), for sworn police officers and firefighters. The APSPRS functions as an investment and administrative agent for the City of Phoenix with respect to the plans for police officers and firefighters.

Periodic employer contributions to the pension and health insurance premium subsidy plans are determined on an actuarial basis using the entry age normal cost method. Normal cost is funded on a current basis. The City's unfunded actuarial accrued liability is funded over a closed period, and as of June 30, 2016, the City had 20 years remaining in the amortization period. Senate Bill 1442, passed by the State Legislature on April 17, 2017, authorized the governing body of an employer to make a one-time request to increase the amortization to a closed period not exceeding 30 years. On June 21, 2017, the City Council voted to submit a request to the APSPRS Board of Trustees to increase the City's amortization period from 20 years to 30 years. The change is reflected in the employer contribution rate beginning with the July 1, 2018 contribution, and represents the minimum required contribution percentage. Periodic contributions for both normal cost and the amortization of the unfunded actuarial accrued liability are based on the entry age normal cost method. The funding strategy for normal cost and the unfunded actuarial accrued liability should provide sufficient resources to pay employee pension benefits on a timely basis.

The System, for both police and fire personnel, is funded via member contributions of 7.65% of compensation for employees whose membership date was prior to July 20, 2011, and 11.65% of compensation for employees whose membership date began on or after July 20, 2011. Employees whose membership date was on or after January 1, 2012 have the option of participating in the hybrid plan for non-social security positions with contributions of 14.65%, of which 3% goes toward a defined contribution plan and is matched by the employer. Employer rates are set by an actuarial valuation and expressed as a percent of compensation. For fiscal year ended June 30, 2018, the required employer contribution rates were 67.30% and 62.69% for Police and Fire, respectively, which amounted to $139.5 million and $74.7 million.

**Schedule of Changes in Net Pension Liability and Related Ratios**
**for Reporting Date ended June 30,**
(thousands)

| | POLICE | | |
|---|---|---|---|
| | Fiscal Year 2018 | Fiscal Year 2017 | Fiscal Year 2016 |
| **Total Pension Liability** | | | |
| Service cost | $ 58,148 | $ 47,232 | $ 47,490 |
| Interest on the total pension liability | 217,244 | 199,120 | 195,645 |
| Changes of benefit terms | 22,618 | 171,696 | — |
| Difference between expected and actual experience of total pension liability | 1,601 | 3,644 | (42,065) |
| Changes of assumptions | 107,195 | 100,323 | — |
| Benefit payments, including refunds of employee contributions | (164,031) | (170,877) | (142,444) |
| Net change in total pension liability | 242,775 | 351,138 | 58,626 |
| Total pension liability—Beginning | 2,949,525 | 2,598,387 | 2,539,761 |
| Total pension liability—Ending | $3,192,300 | $2,949,525 | $2,598,387 |
| **Plan Fiduciary Net Position** | | | |
| Employer contributions | $ 113,645 | $ 92,298 | $ 80,311 |
| Employee contributions | 31,289 | 31,061 | 28,941 |
| Net investment income | 139,676 | 7,019 | 43,559 |
| Benefit payments, including refunds of employee contributions | (164,031) | (170,877) | (142,444) |
| Pension plan administrative expense | (1,236) | (1,010) | (1,063) |
| Other(1) | 652 | 411 | (842) |
| Net change in plan fiduciary net position | 119,995 | (41,098) | 8,462 |
| Plan fiduciary net position—Beginning | 1,171,617 | 1,212,715 | 1,204,253 |
| Plan fiduciary net position—Ending | 1,291,612 | $1,171,617 | $1,212,715 |
| Net pension liability—Ending | $1,900,688 | $1,777,908 | $1,385,672 |
| Plan fiduciary net position as a percentage of the total pension liability | 40.46% | 39.72% | 46.67% |
| Covered valuation payroll(2) | $ 231,023 | $ 225,236 | $ 215,928 |
| Net pension liability as a percentage of covered valuation payroll | 822.73% | 789.35% | 641.73% |

(1) Other changes include adjustments for prior year GASB 68 and reserve transfer to/from employer and employee reserves.

(2) Does not necessarily represent covered payroll as defined in GASB Statement No. 82.

**Schedule of Changes in Net Pension Liability and Related Ratios for Reporting Date ended June 30,**

(thousands)

| | FIRE | | |
|---|---|---|---|
| | Fiscal Year 2018 | Fiscal Year 2017 | Fiscal Year 2016 |
| **Total Pension Liability** | | | |
| Service cost | $ 31,155 | $ 25,101 | $ 25,159 |
| Interest on the total pension liability | 114,721 | 107,388 | 106,101 |
| Changes of benefit terms | 9,098 | 95,865 | — |
| Difference between expected and actual experience of total pension liability | 5,985 | (22,672) | (24,035) |
| Changes of assumptions | 61,290 | 51,468 | — |
| Benefit payments, including refunds of employee contributions | (88,133) | (108,988) | (72,612) |
| Net change in total pension liability | 134,116 | 148,162 | 34,613 |
| Total pension liability—Beginning | 1,558,108 | 1,409,946 | 1,375,333 |
| Total pension liability—Ending | $1,692,224 | $1,558,108 | $1,409,946 |
| **Plan Fiduciary Net Position** | | | |
| Employer contributions | $ 56,671 | $ 49,932 | $ 43,076 |
| Employee contributions | 16,694 | 16,039 | 14,250 |
| Net investment income | 76,651 | 3,927 | 24,513 |
| Benefit payments, including refunds of employee contributions | (88,133) | (108,988) | (72,612) |
| Pension plan administrative expense | (679) | (565) | (599) |
| Other(1) | 11 | 1,050 | (536) |
| Net change in plan fiduciary net position | 61,215 | (38,605) | 8,092 |
| Plan fiduciary net position—Beginning | 649,296 | 687,901 | 679,809 |
| Plan fiduciary net position—Ending | 710,511 | $ 649,296 | $ 687,901 |
| Net pension liability—Ending | $ 981,713 | $ 908,812 | $ 722,045 |
| Plan fiduciary net position as a percentage of the total pension liability | 41.99% | 41.67% | 48.79% |
| Covered valuation payroll(2) | $ 127,530 | $ 124,322 | $ 121,291 |
| Net pension liability as a percentage of covered valuation payroll | 769.79% | 731.02% | 595.30% |

(1) Other changes include adjustments for prior year GASB 68 and reserve transfer to/from employer and employee reserves.

(2) Does not necessarily represent covered payroll as defined in GASB Statement No. 82.

Actuarial assumptions used to determine the total pension liability in the June 30, 2018 actuarial valuation were based on the results of the actuarial experience study covering the period from July 1, 2011 through June 30, 2016. Those assumptions, applied to all periods included in the measurement, are as follows:

| | |
|---|---|
| Actuarial Cost Method | Entry Age Normal |
| Asset Valuation Method | Fair Value of Assets |
| Payroll Growth | 3.5% |
| Price Inflation | 2.5% |
| Salary Increases | 3.5% to 7.5% including inflation |
| Investment Rate of Return | 7.4%, net of investment and administrative expense |
| Retirement Age | Experience-based table of rates that is specific to the type of eligibility condition. Last updated for the 2017 valuation pursuant to an experience study of the period July 1, 2011 – June 30, 2016. |

| | |
|---|---|
| Mortality | RP-2014 mortality tables projected backwards 1 year to 2013 with MP-2014 (110% of female healthy annuitant mortality table.) Future mortality improvements are assumed each year using 75% of scale MP-2016. |

The cost-of-living adjustment will be based on the average annual percentage change in the Metropolitan Phoenix-Mesa Consumer Price Index published by the United States Department of Labor, Bureau of Statistics. The assumed future permanent benefit increase used for this valuation is 1.75%.

**Schedule of Contributions for Measurement Date ended June 30,**
(thousands)

| | Year Ended June 30, | Actuarially Determined Contribution | Actual Contribution(1) | Contribution Deficiency (Excess) | Covered Valuation Payroll(2) | Actual Contribution as a % of Covered Valuation Payroll |
|---|---|---|---|---|---|---|
| **POLICE** | 2017 | $113,645 | $113,645 | $ — | $231,023 | 49.19% |
| | 2016 | 92,298 | 92,298 | — | 225,236 | 40.98 |
| | 2015 | 80,311 | 80,311 | — | 215,928 | 37.19 |
| **FIRE** | 2017 | $ 56,671 | $ 56,671 | $ — | $127,530 | 44.44% |
| | 2016 | 49,932 | 49,932 | — | 124,322 | 40.16 |
| | 2015 | 43,076 | 43,076 | — | 121,291 | 35.51 |

(1) Actual contributions are based on covered payroll at the time of contribution. It is the actuary's understanding that the City's practice is to contribute the percent-of-payroll employer contribution rate (or flat dollar amount if there are no active employees) shown in the actuarial valuation report. Because of this understanding, the Actuarially Determined Contributions shown in the Schedule of Employer contributions are the actual contributions made by the City in the fiscal year. Fiscal year 2017 actual contributions represent contributions made subsequent to the measurement date.

(2) Does not necessarily represent covered employee payroll as defined in GASB Statement No. 82.

The actuarially determined recommended pension contribution rates for Police was 48.17% for fiscal year 2016-17, and is 67.30% for fiscal year 2017-18 and 59.76% for fiscal year 2018-19. The actuarially determined recommended pension contribution rates for Fire was 45.44% for fiscal year 2016-17, and is 62.69% for fiscal year 2017-18 and 57.48% for fiscal year 2018-19.

**APSPRS Pension Reform**

On April 29, 2011, the Governor signed into law Senate Bill 1609 ("SB 1609"), which created significant pension reform to the APSPRS.

The following is a summary of changes to the APSPRS required by SB 1609:

- Revise the formula used to calculate cost of living adjustments (COLA)
- Increase member contribution rate from 7.65% to 11.65% by fiscal year 2015-16
- Eliminate the Deferred Retirement Option Plan (DROP) for employees hired after January 1, 2012
- Increase the number of years of service required to become retirement eligible from 20 to 25
- Increase the number of consecutive years of salary used to compute pension from three to five
- Calculated pension cannot exceed 80% of the five consecutive years' average

On February 20, 2014, the Arizona Supreme Court upheld a lower court ruling that provisions of SB 1609 revising the formula used to calculate cost of living adjustments of members of the Arizona Elected Officials Retirement Plan (EORP) violated the Arizona Constitution to the extent those provisions applied to elected officials hired prior to January 1, 2012. Because that Supreme Court ruling applies to invalidate the same language in similar provisions of SB 1609 which relate to APSPRS, COLA increases for members hired prior to January 1, 2012 and affected by SB 1609 will be restored retroactively, which required rate increases from employers, including the City. The APSPRS Board allowed employers to phase-in the pension contribution rate increase over 3 years beginning with the 2015-16 fiscal year. The City's contribution rate for fiscal year 2015-16 increased 7.96% for fire and 9.31% for police due the phase-in. In fiscal year 2016-17 the City's contribution rate increased 4.93% for fire and 6.05% for police. The City is unable to determine the rate increase for the last year of the phase-in or any potential savings due to other provisions of SB 1609.

On November 10, 2016, the Arizona Supreme Court upheld another lower court ruling that provisions of SB 1609 which increased employee contribution rates and curtailed certain benefit increases were also unconstitutional. The decision means that many current employees will receive refunds, while some retirees will receive retroactive benefit increases. The issuance of refunds by the City will have minimal effect on contribution rates. Neither of the Supreme Court decisions will impact the ability of the City to fulfill its obligations on its bonds. The City is not aware of any other pending lawsuits regarding SB 1609.

In February 2016, the Governor signed Senate Bills 1428 and 1429 to further reform the APSPRS. Most of the changes only affect new hires who start after June 30, 2017. Those changes include requiring new public safety employees to serve until age 55 before being eligible for full pension benefits, splitting the annual pension cost 50/50 between employers and new employees, and providing new hires the option of choosing a 100% defined contribution plan in place of a defined benefit (or pension) plan. The one change that could affect current retirees and those hired both before and after June 30, 2017, is a 2% annual cap on cost-of-living adjustments, which would be tied to the metropolitan Phoenix-Mesa Consumer Price Index. For the cost-of-living cap to apply to current members of APSPRS, it needed to be approved by voters. Proposition 124, which capped the cost of living adjustments for current and new members, was approved by voters on May 17, 2016.

**Elected Officials' Retirement Plan**

The Elected Officials' Retirement Plan (EORP) is a cost sharing multiple-employer defined benefit pension plan of which the City of Phoenix is a contributing employer and covers the Mayor and City Council, effective January 4, 1988. As a condition of coverage, members are required to contribute a percentage of their compensation.

The City contributed an actuarially determined rate of 32.99% for fiscal year 2012 and 36.44% for fiscal year 2013, to fully fund benefits for active members. For the first six months of fiscal year 2014, the City contribution rate was 39.62%. Effective January 1, 2014, the State Legislature closed the EORP to new members and changed the contribution rate to 23.50% for both the EORP and for the newly created Elected Officials' Defined Contribution Retirement System (EODCRS). All elected officials, appointed or elected on or after January 1, 2014 and not previously a member of the EORP, become members of the EODCRS, a defined contribution plan.

In 2017, a trial court ruled that the 23.50% level per cent employer contribution rate for the defined benefit plan was unconstitutional without supplemental funding because it was insufficient to cover the actuarial computed unfunded liabilities.

In March 2018, the Arizona State Legislature introduced Senate Bill 1478 ("SB 1478"), which proposed to eliminate the 23.50% employer contribution rate and replace it with an actuarially determined employer contribution rate. SB 1478 requires the contribution rate to be sufficient to meet both the normal cost and the unfunded accrued liability amortized over a closed period of at least 20 years, but not more than 30 years, beginning July 1, 2018. The Governor signed SB 1478 into law on May 16, 2018. The passage of this law will not materially impact the City's ability to fulfill its obligations relating to the 2018 Bonds.

The City's required contribution and actual contribution percentage for the Elected Officials' cost-sharing multiple-employer retirement plan for the last three fiscal years follows:

| | Contributions Required and Contributions Made | | |
|---|---|---|---|
| | Fiscal Year Ending | Annual Pension Cost (APC) | Percentage Of APC Contributed |
| Pension | 6/30/18 | $ 60,435 | 100% |
| Health | 6/30/18 | 0 | 100 |
| Pension | 6/30/17 | 136,563 | 100 |
| Health | 6/30/17 | 0 | 100 |
| Pension | 6/30/16 | 131,240 | 100 |
| Health | 6/30/16 | 0 | 100 |

**Additional Information**

Additional information regarding the City's Retirement and Pension Plans, including trend information and detailed assumptions, is available in the City's Comprehensive Annual Financial Report (CAFR) under the headings "Pension Plans" and "Required Supplementary Information". The CAFR is available at http://emma.msrb.org or www.phoenix.gov under Departments-Finance-Comprehensive Annual Financial Report or by calling the City at (602) 262-7166.

Pension reform for EORP will appear on the November ballot. The reform requires a replacement of the permanent benefit increase, or PBI, with a cost-of-living-adjustment (capped at 2 percent v. current 4% cap) based on annual changes recognized by the U.S. Department of Labor Bureau of Labor Statistics' Consumer Price Index for the Phoenix-Mesa-Scottsdale CBSA.

Effective July 1, 2018, that new employer contributions rate is 61.5% and is to be applied to all elected official payrolls, regardless of what retirement system or plan they may be in.

Additional information regarding the APSPRS and the Elected Officials Retirement Plan, including annual financial reports, actuary reports, trend information and detailed assumptions is available at www.psprs.com/investments--financials/annual-reports.

# APPENDIX E

## Health Care Benefits for Retired Employees

In June 2004, the Governmental Accounting Standards Board (GASB) issued Statement No. 45 (GASB 45) which addresses how state and local governments should account for and report costs and obligations related to post-employment health care and other post-employment non-pension benefits (OPEB). GASB 45 generally requires that the annual cost of OPEB and the outstanding obligations and commitments related to OPEB be accounted for and reported in essentially the same manner as pensions. Annual OPEB costs typically will be based on actuarially determined amounts that, if paid on an ongoing basis, would provide sufficient resources to pay benefits as they come due. The provisions of GASB 45 do not require governments to fund their OPEB plans. GASB 45 establishes accounting standards, including disclosure requirements for the post employment plans, the funding policies, the actuarial valuation process and assumptions, and the extent to which the plans have been funded over time.

The City implemented GASB Statement No. 45, Accounting and Financial Reporting by Employers for Post-employment Benefits Other Than Pensions, effective July 1, 2007, and is implementing these requirements prospectively. The City's annual OPEB expense is calculated based on the annual required contribution (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed 30 years. This calculation is used to determine the ARC for both the Medical Expense Reimbursement Plan and the Long-Term Disability Program.

### Medical Expense Reimbursement Plan

The City provides certain post-employment health care benefits for its retired employees. Retired employees meeting certain qualifications are eligible to participate in the City's health insurance program along with the City's active employees. Employees eligible to retire in 15 years or less from August 1, 2007, will receive a monthly subsidy from the City's Medical Expense Reimbursement Plan (MERP) when they retire. Contributions by the City (plus earnings thereon) are the sole source of funding for the MERP. In December 2007, the City established the City of Phoenix MERP Trust to fund all or a portion of the City's share of liabilities incurred in providing the benefits as reflected in Administrative Regulation 2.42—Medical Expense Reimbursement Plan for Retirees and Eligible Surviving Spouses or Qualified Domestic Partners. A five-member Board of Trustees has been delegated responsibility for fiduciary oversight of the MERP Trust, subject to oversight of the City Council.

The monthly subsidy reimburses retirees for qualified medical expenses, including hospital, doctor and prescription drug charges. The City's contribution varies with length of service or bargaining unit, from $117 to $202 per month for each retiree. Retirees may be eligible for additional City contributions depending on their bargaining unit, retirement date, or enrollment in the City's medical insurance program.

The following table shows the funding progress of the MERP as of July 1, 2017, the most recent actuarial valuation date. The OPEB valuation is updated biennially, with the next valuation to have an effective date of July 1, 2019.

**Schedule of Funding Progress**

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (UAAL) (b - a) | Percent Funded (a/b) | Annual Covered Payroll (c) | UAAL as a Percentage of Covered Payroll (b - a)/(c) |
|---|---|---|---|---|---|---|
| 7/1/2017 | $159,328,000 | $360,295,000 | $200,967,000 | 44.2% | $318,823,000 | 63.0% |

The City has established a trust for the MERP benefits and contributes the ARC each year to fund the OPEB liability. The City has developed an investment policy for the trust with the objective of achieving a long-term return on assets contributed to the trust of 7.0 percent. The City's Comprehensive Annual Financial Report (CAFR) reflects proper treatment and note disclosure of Health Care Benefits for Retired Employees in accordance with GASB 45 beginning with the fiscal year ended June 30, 2008.

The City's annual OPEB cost, employer contributions and the percentage of annual OPEB cost contributed to the MERP for the last three years were as follows (in thousands):

| Fiscal Year Ended | Annual OPEB Cost | Employer Contributions | Percentage of Annual OPEB Cost Contributed |
|---|---|---|---|
| 6/30/2018 | $22,465 | $25,881 | 115.2% |
| 6/30/2017 | 27,860 | 27,863 | 100.7 |
| 6/30/2016 | 27,897 | 27,898 | 100.0 |
| 6/30/2015 | 27,937 | 27,936 | 100.0 |
| 6/30/2014 | 29,508 | 29,508 | 100.0 |
| 6/30/2013 | 34,021 | 34,021 | 100.0 |
| 6/30/2012 | 33,456 | 33,456 | 100.0 |
| 6/30/2011 | 38,007 | 38,007 | 100.0 |
| 6/30/2010 | 37,574 | 17,204 | 45.8 |
| 6/30/2009 | 37,967 | 43,579 | 114.8 |

The number of participants as of July 1, 2017, the effective date of the biennial OPEB valuation, follows. There have been no significant changes in the number covered by the MERP or the type of coverage since that date.

| | General City | Public Safety | Total |
|---|---|---|---|
| Active employees | 2,313 | 2,083 | 4,396 |
| Retirees and Beneficiaries | 5,903 | 2,866 | 8,769 |
| Total | 8,216 | 4,949 | 13,165 |

**Post Employment Health Plan**

Benefit eligible employees with more than 15 years until retirement eligibility, as of August 1, 2007, receive $150 per month while employed by the City as a defined contribution to the Post Employment Health Plan (PEHP). This is a 100% employer-paid benefit. The program provides employees who have a payroll deduction for City medical insurance coverage (single or family) with a PEHP account. This account is to be used by the employee when he/she retires or separates employment with the City for qualified medical expenses (including health insurance premiums).

**Long-Term Disability Program**

Long-term disability (LTD) benefits are available to regular, full-time, benefit-eligible employees under the age of 75 who have been employed by the City for at least 12 consecutive months. The benefit is also available to job-share employees working 50% time as long as the employee has worked 24 months in a regular full-time position. The program provides income protection of 66⅔ percent of an employee's monthly base salary following a continuous three-month waiting period from the last day worked; provided all leave accruals have been exhausted, continuing to age 80, (PPSLA, PLEA and Fire bargaining unit members) and age 75 for all other eligible employees and elected official. Employees receiving long-term disability benefits are entitled to continuation of group medical, dental and life insurance for a specified period. Contributions to the LTD Trust by the City (plus earnings thereon) are the sole source of funding for the LTD program. The City pays 100 percent of the cost for this benefit.

In November 2008, the City established the City of Phoenix Long-Term Disability Trust to fund all or a portion of the City's liabilities incurred in providing the benefits as reflected in Administrative Regulation 2.323 City of Phoenix Long-Term Disability Program. A five-member Board of Trustees has been delegated responsibility for fiduciary oversight of the LTD Trust, subject to oversight of the City Council and City Manager. The LTD Trust issues a separate report that can be obtained through the City of Phoenix, Finance Department, Financial Accounting and Reporting Division, 251 W. Washington Street, 9th Floor, Phoenix, Arizona, 85003.

The following table shows the funding progress of the LTD plan as of July 1, 2017, the most recent actuarial valuation date. The OPEB valuation is updated biennially, with the next valuation to have an effective date of July 1, 2019.

**Schedule of Funding Progress**

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (UAAL) (b - a) | Percent Funded (a/b) | Annual Covered Payroll (c) | UAAL as a Percentage of Covered Payroll (b - a)/(c) |
|---|---|---|---|---|---|---|
| 7/1/17 | $76,911,000 | $57,353,000 | $(19,558,000) | 134.1% | $804,784,000 | (2.43)% |

The City's annual OPEB cost, employer contributions and the percentage of annual OPEB cost contributed to the LTD plan for the last three years were as follows (in thousands):

| Fiscal Year Ended | Annual OPEB Cost | Employer Contributions | Percentage of Annual OPEB Cost Contributed |
|---|---|---|---|
| 6/30/2018 | $1,772 | $1,643 | 92.7% |
| 6/30/2017 | 1,514 | 1,381 | 91.2 |
| 6/30/2016 | 1,074 | 1,335 | 124.3 |
| 6/30/2015 | 2,578 | 2,581 | 100.1 |
| 6/30/2014 | 2,719 | 2,751 | 101.2 |
| 6/30/2013 | 2,872 | 2,971 | 103.4 |
| 6/30/2012 | 2,391 | 2,018 | 84.4 |
| 6/30/2011 | 2,965 | 997 | 33.6 |
| 6/30/2010 | 2,456 | 848 | 34.5 |
| 6/30/2009 | (323) | — | N/A |

The number of participants as of July 1, 2017, the effective date of the biennial OPEB valuation, follows. There have been no significant changes in the number or category of employees covered under the LTD plan since that date.

| | General City | Public Safety | Total |
|---|---|---|---|
| Current Active Employees | 8,110 | 4,554 | 12,664 |
| Currently Disabled Employees | 264 | 18 | 282 |
| Total Covered Participants | 8,374 | 4,572 | 12,946 |

## Actuarial Valuations

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the City are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the City and plan members) and include the types of benefits provided at the time of each valuation. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

## Additional Information

Additional information regarding the City's Health Care Benefits for Retired Employees, including the actuarial methods and detailed assumptions used to calculate the ARC, is available in the City's Comprehensive Annual Financial Report (CAFR) under the heading "Other Postemployment Benefits (OPEB)". The CAFR is available at http://emma.msrb.org or www.phoenix.gov under Departments-Finance-Comprehensive Annual Financial Report or by calling the City at (602) 262-7166.

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# APPENDIX F

### Summary of Certain Provisions of Legal Documents

The following information summarizes or paraphrases certain provisions of the Airport Revenue Bond Ordinance, the City Purchase Agreement and the Indenture. Such information is not a full statement of the terms of such documents and, accordingly, is qualified by reference to the full text thereof.

### Certain Definitions

The following are definitions in summary form of certain terms used in the Airport Revenue Bond Ordinance, the City Purchase Agreement and the Indenture:

*"Airport"* means the airports of the City presently known as "Phoenix — Sky Harbor International Airport," "Phoenix — Goodyear Airport," and "Phoenix — Deer Valley Airport," including all additions, extensions and improvements thereto which may be made while any Bonds remain Outstanding, including all property and facilities of every nature owned or operated by the City and used in connection with its airports or for airport purposes, including but without limitation, lands, rights-in-land, terminals and other buildings and facilities, hangars, runways, ramps, shops, stores and similar facilities located in the terminal building areas, parking meters and facilities, facilities for limousine, taxi and car rental services, restrooms, sinks, showers, toilets, luggage lockers, repair shops, facilities for the sale of oil and fuel, communication facilities, restaurant and bar facilities, and all other property and facilities of every nature located on or used in connection with the airports and the land on which each is located, and including airport facilities not described in this definition if such facilities have been added to the definition of Airport by subsequent resolution or ordinance of the City.

*"Airport Improvement Fund"* means the fund of that name created in Article II of the Airport Revenue Bond Ordinance.

*"Airport Revenues"* or *"Revenues"* means all income and revenue received by the City directly or indirectly from the use and operation of the Airport, including but without limitation, revenues pledged, dedicated or allocated for the benefit of the Airport, rentals, landing fees, use charges, income from the sale of services, fuel, oil and other supplies or commodities, income from the use for agricultural purposes of portions of the Airport not currently used for Airport purposes, fees from concessions, amounts received from or in behalf of the Arizona National Guard, parking meter and parking lot receipts, storage locker and restroom income, income from communication services, fees or income from limousine, taxi and car rental services, bar and restaurant income, advertising revenues, receipts derived from the lease or any other contractual arrangement with respect to the use of the Airport, receipts from the sale of any property of the Airport, proceeds of any insurance covering business interruption loss.

Airport Revenues and Revenues also includes income received from the investment of any monies held in the funds and accounts (other than the Construction Fund and the Rebate Fund) created under the Airport Revenue Bond Ordinance.

Airport Revenues and Revenues shall not include the following: (i) money received as grants or gifts from the United States of America or the State of Arizona, except to the extent that any such money shall be received as payments for use of the Airport or its facilities; (ii) proceeds received on insurance resulting from casualty damage to assets of the Airport to the extent such proceeds are used to repair or replace facilities or property of the Airport; (iii) rentals or other charges derived by the City under and pursuant to a lease or leases relating to Special Purpose Facilities; (iv) the proceeds of the sale of any Bonds or other obligations issued for Airport purposes; or (v) receipts from Passenger Facility Charges.

*"Airport Revenue Bond Ordinance"* means Ordinance No. S-21974 adopted by the Mayor and Council of the City on April 20, 1994, as amended to date and as further supplemented and amended from time to time.

*"Bondholder"* means the registered owner of one or more Bonds.

*"Bond Fund"* means the fund of that name described in Article II of the Airport Revenue Bond Ordinance.

*"Bond Payment Date"* means the dates established for the payment of interest on any Bonds or Principal Requirement on any Bonds as set forth in the Series Ordinance authorizing such Bonds.

*"Bond Reserve Fund''* means a common reserve for the Series 2018 Bonds as may be secured thereby under their terms.

*"Bond Year"* means a twelve-month period beginning July 2 of the calendar year and ending on the next succeeding July 1, or such other period as set forth in a Series Ordinance.

*"Bonds"* or *"Parity Bonds"* or *"Senior Lien Obligations"* means obligations payable from Net Airport Revenues.

*"City"* means the City of Phoenix, Arizona.

*"City Manager"* means the official of the City performing the duties now performed by the City Manager.

*"City Purchase Agreement"* or *"Agreement"* means, the City Purchase Agreement dated as of November 1, 2018, by and between the Corporation and the City, as amended or supplemented from time to time with the consent of the Trustee, as provided in the Indenture.

*"City Representative"* means the actual, acting or interim Chief Financial Officer of the City or any other person at any time designated to act on behalf of the City by written certificate furnished to the Corporation and the Trustee, if any, containing the specimen signature of such person and signed by the City Manager or his designee. Such certificate may designate one or more alternates.

*"Clerk"* or *"City Clerk"* means the official of the City performing the duties now performed by the City Clerk.

*"Code"* means the Internal Revenue Code of 1986, as amended and supplemented from time to time, and shall be deemed to include the United States Treasury Regulations, including temporary and proposed regulations, to the extent applicable to the Series 2018 Bonds for the use of proceeds of the Series 2018 Bonds or the Airport.

*"Commercial Paper"* means Senior Lien Obligations with a maturity of not more than 270 days from the date of issuance and which are issued and reissued from time to time.

*"Compound Interest Bonds"* means Bonds which for a stated period of time bear interest which interest is calculated based on regular compounding, payable only (i) at maturity or earlier redemption or (ii) on a specified date, from and after which such Bonds bear interest payable on a regularly scheduled basis. Bonds described in clause (ii), above, shall be deemed to be *"Compound Interest Bonds"* until the specified date on which the compounded interest ceases to accrue.

*"Construction Fund"* means the fund of that name referred to in Article II of the Airport Revenue Bond Ordinance.

*"Consultant"* means a firm of consultants or professionals experienced in the development, planning, financing, operation or management of airports or airport facilities.

*"Cost of Maintenance and Operation"* means all expenditures (exclusive of depreciation and interest on money borrowed) which are necessary to the efficient maintenance and operation of the Airport and its facilities, such expenditures to include the items normally included as essential expenditures in the operating budgets of municipally owned airports.

*"Council"* means the Mayor and Council of the City of Phoenix or such other body as may from time to time be acting as the body which governs said City.

*"Credit Facility"* means a bank, financial institution, insurance company or indemnity company enhancing the credit of any Bonds by assuring holders of such Bonds that principal of and interest on said Bonds will be paid promptly when due and includes the issuance of an insurance policy, surety bond or other form of security for the Bond Reserve Fund as described in Article II, Section 2.6 of the Airport Revenue Bond Ordinance.

*"Debt Service Reserve Requirement"* means, with respect to the Senior Lien Obligations, Maximum Annual Debt Service, provided that if the Debt Service Reserve Requirement is satisfied with the proceeds of obligations the interest on which is excludible from gross income for federal income tax purposes, then the amount of proceeds used in order to satisfy the Debt Service Reserve Requirement shall not exceed any restrictions relating to the use of such funds for such purpose set forth in the Code. The Debt Service Reserve Requirement may be recalculated from time to time as Bonds are rendered no longer Outstanding.

*"Derivative Product"* means an agreement of the City entered into in accordance with Section 2.13 of the Airport Revenue Bond Ordinance.

*"Event of Default"* means one of the events defined as such in the City Purchase Agreement or Indenture as the case may be.

*"Finance Director"* means the official of the City performing the duties now performed by the Finance Director.

*"Financed Property"* means the property actually funded with proceeds of the Series 2018 Bonds.

*"Fiscal Year"* means the 12-month period used by the City for its general accounting purposes as the same may be changed from time to time, said fiscal year currently extending from July 1 to June 30.

*"Indenture"* means, the Bond Indenture dated as November 1, 2018 between the Corporation and the Trustee.

*"Independent Certified Public Accountant"* means a firm of certified public accountants which is not in the regular employ of the City on a salary basis.

*"Interest Account"* means the account of that name established in Article II of the Airport Revenue Bond Ordinance.

*"Interest Requirement"* means the amount of interest falling due on the next Bond Payment Date, net of any amounts deposited in the Interest Account or Construction Fund which are available to pay interest on Bonds.

*"Investment Earnings"* means all interest received on and profits derived from investments made with any money held under the Indenture.

*"Junior Lien Bond Fund"* means the Junior Lien Bond Fund established pursuant to the Junior Lien Obligation Documents.

*"Junior Lien Compound Interest Bonds"* means Junior Lien Obligations which for a stated period of time bear interest which interest is calculated based on regular compounding, payable only (i) at maturity or earlier redemption or (ii) on a specified date, from and after which such Junior Lien Obligations bear interest payable on a regularly scheduled basis. Junior Lien Obligations described in clause (ii), above, shall be deemed to be *"Junior Lien Compound Interest Bonds"* until the specified date on which the compounded interest ceases to accrue.

*"Junior Lien Credit Facility"* means a Credit Facility with respect to the Junior Lien Obligations.

*"Junior Lien Interest Account"* means the Junior Lien Interest Account of the Junior Lien Bond Fund established pursuant the Junior Lien Obligation Documents.

*"Junior Lien Interest Requirement"* means the amount of interest due on Junior Lien Obligations.

*"Junior Lien Obligation Documents"* means any ordinance, indenture, contract or agreement of the City constituting or authorizing Junior Lien Obligations.

*"Junior Lien Obligations"* means obligations payable from Designated Revenues.

*"Junior Lien Parity Reserve Fund"* means the Junior Lien Parity Reserve Fund established pursuant to the City Purchase Agreement for the benefit of the Series 2015A Junior Bonds and assigned to the Junior Trustee and as may be further assigned in the event such fund shall become a parity reserve fund for the benefit of additional Junior Obligations.

*"Junior Lien Principal Requirement"* means, as of any date of calculation, the sum of (a) the principal amount due on Junior Lien Obligations plus (b) the amount of principal of Junior Lien Obligations required to be redeemed pursuant to a mandatory redemption feature. In computing the Junior Lien Principal Requirement, an amount of Junior Lien Obligations required to be redeemed pursuant to mandatory redemption in each year shall be deemed to fall due in that year and (except in case of default in observing a mandatory redemption requirement) shall be deducted from the amount of Junior Lien Obligations maturing on the scheduled maturity date. In the case of Junior Lien Obligations supported by a Junior Lien Credit Facility, the Junior Lien Principal Requirements for such Junior Lien Obligations shall be determined in accordance with the principal retirement schedule specified in the Junior Lien Obligation Documents authorizing the issuance or providing for the sale of Junior Lien Obligations, rather than any amortization schedule set forth in such Junior Lien Credit Facility. Junior Lien Obligation Documents authorizing Junior Lien Obligations which are Junior Lien Compound Interest Bonds may amend the definition of *"Junior Lien Principal Requirement.* "

*"Junior Trustee"* means the trustee with respect to an issue of Junior Lien Obligations.

*"Maximum Annual Debt Service"* means an amount of money equal to the highest aggregate Principal Requirement and Interest Requirements to fall due and payable in the current or any future Bond Year of all Outstanding Bonds, as adjusted for any Derivative Product entered into with a Qualified Counterparty in accordance with Section 2.13 of the Airport Revenue Bond Ordinance and less any applicable Passenger Facility Charge Credit. For purposes of the Senior Lien Obligation Documents, an adjustment for a Derivative Product with a Qualified Counterparty pursuant to Section 2.13 of the Airport Revenue Bond Ordinance means: (i) the City shall treat the amount or rate of interest payable with respect to the Parity Bonds to which such Derivative Product relates as the interest rate payable under such Derivative Product; and (ii) the City may disregard the notional principal amount of any such Derivative Product with a Qualified Counterparty. In case any Bonds outstanding or proposed to be issued shall bear interest at a variable rate, the Interest Requirement of such Bonds in each Bond Year during which such variable rate applies shall be computed at the lesser of (i) the maximum rate which such Bonds may bear under the terms of their issuance or (ii) the rate of interest established for long-term bonds by the 20-year bond index most recently published by The Bond Buyer of New York, New York, prior to the date of computation (or in the absence of such published index, some other index selected in good faith by the Finance Director of the City after consultation with one or more reputable, experienced investment bankers as being equivalent thereto) (the *"Variable Rate Assumption").* With respect to any Bonds issued as Commercial Paper or proposed to be issued, the Principal Requirement shall be calculated as if the entire amount of Commercial Paper authorized to be issued under the Series Ordinance were to be amortized over a term of 30 years commencing in the year in which such Commercial Paper is issued or proposed to be issued and with substantially level annual debt service payments and the Interest Requirement shall be computed using the Variable Rate Assumption.

*"Maximum Annual Junior Lien Debt Service"* means an amount equal to the highest aggregate Junior Lien Principal Requirements and Junior Lien Interest Requirements to fall due and payable in the current or any future Bond Year of all Outstanding Junior Lien Obligations, as adjusted pursuant to any Junior Lien Derivative Product with a Qualified Junior Lien Counterparty in accordance with the Junior Lien Obligation Documents and less any applicable Junior Lien Passenger Facility Charge Credit. In case any Junior Lien Obligations outstanding or proposed to be issued shall bear interest at a variable rate, the Junior Lien

Interest Requirement of such Junior Lien Obligations in each Bond Year during which such variable rate applies shall be computed at the lesser of (i) the maximum rate which such Junior Lien Obligations may bear under the terms of their issuance or (ii) the rate of interest established for long-term bonds by the 20-year bond index most recently published by *THE BOND BUYER* of New York, New York, prior to the date of computation (or in the absence of such published index, some other index selected in good faith by the Chief Financial Officer of the City after consultation with one or more reputable, experienced investment bankers as being equivalent thereto) (the *"Junior Lien Variable Rate Assumption").* With respect to any Commercial Paper issued or proposed to be issued, the Junior Lien Principal Requirement shall be calculated as if the entire amount of Commercial Paper authorized to be issued under the Junior Lien Obligation Documents were to be amortized over a term of 30 years commencing in the year in which such Commercial Paper is issued or proposed to be issued and with substantially level annual debt service payments and the Junior Lien Interest Requirement shall be computed using the Junior Lien Variable Rate Assumption.

*"Moody's"* means Moody's Investors Service, Inc. and its successors or assigns.

*"Net Airport Revenues"* or *"Net Revenues"* means the Revenues of the Airport, after provision for payment of all Cost of Maintenance and Operation.

*"Operation and Maintenance Fund"* means the fund of that name established in Article II of the Airport Revenue Bond Ordinance.

*"Other Available Funds"* means passenger facility charges, unrestricted grant money and other monies available to the Airport which are not included in the definition of Revenues or Airport Revenues.

*"Other Available Monies"* means Other Available Funds which the City elects to make available for a particular purpose.

*"Outstanding"* means all obligations of the class concerned which shall have been issued and delivered except:

(a) obligations in lieu of which other obligations have been issued under agreement to replace lost, mutilated or destroyed obligations,

(b) obligations surrendered by the holders in exchange for other obligations and

(c) obligations for the payment of which provision has been made as provided in the Senior Lien Obligation Documents or Junior Lien Obligation Documents.

*"Passenger Facility Charge Credit"* means the amount of principal of and/or interest to come due on specified Bonds during any Fiscal Year to which Passenger Facility Charges, state and/or federal grants or other monies have received all required governmental approvals and have been irrevocably committed or are held in the Bond Fund or otherwise in trust by or on behalf of the Paying Agent and are to be set aside exclusively to be used to pay Interest Requirements and/or Principal Requirements on such specified Bonds during the period of such commitment (unless such Passenger Facility Charges, state and/or other monies are subsequently included in the definition of Airport Revenues).

*"Passenger Facility Charges"* means charges collected by the City pursuant to the authority granted by the Aviation Safety and Capacity Expansion Act of 1990 and 14 CFR Part 158, as amended from time to time, in respect of any component of the Airport and interest earnings thereon, net of amounts that collecting air carriers are entitled to retain for collecting, handling and remitting such passenger facility charge revenues.

*"Paying Agent"* means the paying agent for each series of Bonds as set forth in the Series Ordinance authorizing such Bonds.

*"Permitted Investments"* means, to the extent from time to time permitted by law (including provisions of the City Charter) as investments for City money:

(a) Qualified Permitted Investments;

(b) obligations of, or obligations guaranteed as to the timely payment of principal and interest by, the United States of America or any agency or instrumentality thereof when such obligations are backed by the full faith and credit of the United States of America;

(c) Federal Housing Administration debentures which must not be redeemable prior to their stated maturity;

(d) obligations of the Federal Home Loan Mortgage Corporation (including only securities guaranteed as to timely payment of principal and interest);

(e) obligations of the Farm Credit System;

(f) obligations of Federal Home Loan Banks;

(g) obligations of the Federal National Mortgage Association (excluding interest-only stripped securities);

(h) federal funds, unsecured certificates of deposit, time deposits and banker's acceptances (in each case, having maturities of not more than 365 days) of any bank, the short-term obligations of which are rated in one of the two highest applicable rating categories by the Rating Agency;

(i) deposits which are fully insured by the Federal Deposit Insurance Corporation *("FDIC");*

(j) debt obligations rated in one of the two highest applicable rating categories by the Rating Agency (excluding securities that do not have a fixed par value and/or whose terms do not promise a fixed dollar amount at maturity or call date);

(k) commercial paper having maturities not in excess of one year rated in one of the two highest applicable rating categories by the Rating Agency;

(l) investment in money market funds rated in one of the two highest applicable rating categories by the Rating Agency;

(m) repurchase agreements with any transferor with long-term unsecured debt rated in the highest applicable rating categories or commercial paper rated in one of the two highest applicable rating categories by the Rating Agency; and

(n) U.S. Treasury STRIPS (stripped by the Federal Reserve Bank of New York) and any stripped securities assessed or rated in one of the two highest applicable rating categories by the Rating Agency.

*"PFC Revenue Fund"* means the PFC Revenue Fund established pursuant to the Junior Lien Obligation Documents.

*"PFC Revenues"* means Passenger Facility Charges, to the extent received by the City in each Fiscal Year, plus interest earnings on the PFC Revenue Fund.

*"Principal Account"* means the account of that name created in Article II of the Airport Revenue Bond Ordinance.

*"Principal Payment Date"* means the dates established for the payment of Principal Requirements on any Bonds as set forth in the Series Ordinance authorizing such Bonds.

*"Principal Requirement"* means, as of any date of calculation, the sum of (a) the principal amount of Bonds falling due during the then current Bond Year plus (b) the amount of principal of Bonds required to be redeemed pursuant to a mandatory redemption feature during the then current Bond Year. In computing the Principal Requirement, an amount of Bonds required to be redeemed pursuant to mandatory redemption in each year shall be deemed to fall due in that year and (except in case of default in observing a mandatory redemption requirement) shall be deducted from the amount of Bonds maturing on the scheduled maturity date. In the case of Bonds supported by a Credit Facility, the Principal Requirements for such Bonds shall be determined in accordance with the principal retirement schedule specified in the proceedings authorizing

the issuance of such Bonds, rather than any amortization schedule set forth in such Credit Facility. A Series Ordinance authorizing the issuance or providing for the sale of Parity Bonds which are Compound Interest Bonds may amend the definition of *"Principal Requirement"*.

*"Property"* means collectively, the Financed Property and the Refinanced Property.

*"Purchase Price"* means the sum of the payments required by the City Purchase Agreement to be paid by the City to or for the account of the Corporation.

*"Qualified Counterparty"* means a counterparty to a Derivative Product (i) which is a bank, insurance company, indemnity company, financial institution or any similar or related company with a credit rating in one of the two highest rating categories of the Rating Agency, or if none of the Series 2018 Bonds are then rated by Moody's or S&P, any other nationally recognized rating agency or (ii) the obligations of which are guaranteed by an entity described in clause (i).

*"Qualified Junior Lien Counterparty"* means a counterparty to a Junior Lien Derivative Product

(i) which is a bank, insurance company, indemnity company, financial institution or any similar or related company with a credit rating in one of the two highest rating categories of the Rating Agency, or if none of the Junior Lien Obligations are then rated by Moody's or S&P, any other nationally recognized rating agency, (ii) the obligations of which are guaranteed by an entity described in clause (i), or (iii) the obligations of which are fully secured by obligations described in items (i) or (ii) of the definition of Qualified Permitted Investments which are (A) valued not less frequently than monthly and have a fair market value, exclusive of accrued interest, at all times at least equal to 105% of the principal amount of the investment, together with the interest accrued and unpaid thereon, (B) held by the Junior Trustee (who shall not be the provider of the collateral) or by any Federal Reserve Bank or a depository acceptable to the Junior Trustee, (C) subject to a perfected first lien on behalf of the Junior Trustee, and (D) free and clear from all third-party liens.

*"Qualified Permitted Investments"* means any one or more of the following classes of investments:

(i) direct obligations issued by the United States government or one of its agencies or obligations fully guaranteed by the United States government as to principal and interest;

(ii) any other evidences of an ownership interest in obligations or in specified portions thereof (which may consist of specified portions of the interest thereon) of the character described in clause above; and

(iii) to the extent permitted by law at the time of making such investment, any obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (a) which are not callable at the option of the obligor or otherwise prior to maturity or as to which irrevocable notice has been given by the obligor to call such bonds or obligations on the date specified in the notice, (b) which are fully secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or bonds or other obligations of the character described in clause (i) or clause (ii) above, which fund may be applied only to the payment of interest when due, principal of and redemption premium, if any, on such bonds or other obligations on the maturity date or dates thereof or the specified redemption date or dates pursuant to such irrevocable instructions, as appropriate, and (c) as to which the principal of and interest on the bonds and obligations of the character described in clause (i) or clause (ii) above, which have been deposited in such fund along with any cash on deposit in such fund is sufficient to pay interest when due, principal of and redemption premium, if any, on the bonds or other obligations described in this clause (iii) on the maturity date or dates thereof or on the redemption date or dates specified in the irrevocable instructions referred to in subclause (a) of this clause (iii), as appropriate.

*"Rating Agency"* means Moody's if any of the Series 2018 Bonds are then rated by Moody's and S&P if the Series 2018 Bonds are then rated by S&P.

*"Refinanced Property"* means the property actually funded with proceeds of the 2018 Loan.

*"Revenue Fund"* means the fund of that name created in Article II of the Airport Revenue Bond Ordinance.

*"Revolving Credit Agreement"* shall mean the Revolving Credit Agreement dated as of September 19, 2017 between the City and the Credit Agreement Provider.

*"S&P"* means S&P Global Ratings, a division of Standard & Poor's Financial Services LLC and its successors or assigns.

*"Senior Lien Obligations"* means Bonds, Parity Bonds or other obligations payable from Net Airport Revenues.

*"Senior Lien Obligation Documents"* means any ordinance, indenture, contract or agreement of the City or Corporation constituting or authorizing Senior Lien Obligations.

*"Senior Lien Parity Debt Service Reserve Requirement"* means, as of the date of issuance of the Series 2018 Bonds, $        , which is the least of: (i) Maximum Annual Debt Service for the Series 2017 Bonds and the Series 2018 Bonds, (ii) 10% of the stated principal amount of the Series 2017 Bonds and the Series 2018 Bonds and (iii) 125% of the average annual Principal Requirements and Interest Requirements with respect to the Series 2017 Bonds and the Series 2018 Bonds. The Senior Lien Parity Debt Service Reserve Requirement may be recalculated from time to time as Senior Lien Obligations secured by the Senior Lien Parity Reserve Fund are rendered no longer Outstanding or in the event the City elects to make the Senior Lien Parity Reserve Fund a parity reserve fund for the benefit of additional Senior Obligations. In the event the City elects to make the Senior Lien Parity Reserve Fund a parity reserve fund for the benefit of additional Senior Obligations, the requirements set forth above shall be determined on an aggregate basis according to the Senior Obligations secured by the Senior Lien Parity Reserve Fund

*"Senior Lien Parity Reserve Fund"* means the Senior Lien Parity Reserve Fund established pursuant to the 2017 City Purchase Agreement and the City Purchase Agreement and assigned to the 2017 Trustee pursuant to the 2017 Indenture and to the Trustee pursuant to the Indenture for the benefit of the Series 2018 Bonds and as may be further assigned in the event such fund shall become a parity reserve fund for the benefit of additional Senior Lien Obligations.

*"Series Ordinance"* means an ordinance or ordinances (which may be supplemented by one or more ordinances) to be adopted prior to the delivery of any series of Parity Bonds; said ordinance as supplemented shall establish the date or dates of the pertinent series of Parity Bonds, the schedule of maturities thereof, whether any will be Compound Interest Bonds, the name of the purchaser of each series of Parity Bonds, the purchase price thereof, the rate or rates of interest to be borne thereby and the method by which interest is to be calculated, and the terms and conditions, if any, under which such Bonds may be made subject to redemption (mandatory or optional) prior to maturity and such other details as the City may determine.

*"Special Purpose Facilities"* means (1) hangars, aircraft overhaul, maintenance or repair shops, reservation centers, motels, hotels, storage facilities, garages, cargo handling buildings and necessary ramp areas incidental thereto, and other similar facilities, (2) projects as now or hereafter provided in the Industrial Development Financing Act (Title 35, Chapter 5 of the Arizona Revised Statutes), and (3) such other facilities or projects as the City shall designate as a Special Purpose Facility, and the cost of construction and acquisition of which facilities are financed with the proceeds of bonds, notes, leases, purchase agreements or other obligations which are payable solely from revenues of the Special Purpose Facility or revenues of the user of the Special Purpose Facilities.

*"Supplement"* means a supplemental indenture entered into in accordance with Article VIII of the Indenture.

*"Tax Exemption Certificate"* means the Tax Exemption Certificate and Agreement relating to the Tax - Exempt Bonds.

*"Trustee"* means U.S. Bank National Association in its capacity as trustee under the Indenture, or any successor thereto.

*"2017 City Purchase Agreement"* means, the City Purchase Agreement dated as of November 1, 2017, by and between the Corporation and the City, as amended or supplemented from time to time with the consent of the 2017 Trustee, as provided in the 2017 Indenture.

*"2017 Indenture"* means, the Bond Indenture dated as November 1, 2017 between the Corporation and the 2017 Trustee.

*"2017 Trustee"* means U.S. Bank National Association in its capacity as trustee under the 2017 Indenture, or any successor thereto.

*"2018 Bond Payment Date"* means a date on which principal or interest shall be payable on the 2018 Senior Lien Bonds in accordance with their respective terms as long as any Series 2018 Bonds are Outstanding.

*"2018 Interest Account"* means the 2018 Interest Account of the 2018 Senior Lien Bond Fund.

*"2018 Interest Requirement"* means the Interest Requirement for the Series 2018 Bonds.

*"2018 Loan"* means the revolving tax-exempt loan extended pursuant to the Revolving Credit Agreement in the principal amount of $100,000,000.

*"2018 Principal Account"* means the 2018 Principal Account of the 2018 Senior Lien Bond Fund.

*"2018 Principal Requirement"* means the Principal Requirement for the Series 2018 Bonds.

*"2018 Redemption Account"* means the 2018 Redemption Account of the 2018 Senior Lien Bond Fund.

*"2018 Senior Lien Bond Fund"* means the 2018 Senior Lien Bond Fund established pursuant to Section 5.1 of the Indenture.

**The Airport Revenue Bond Ordinance**

SECTION 2.1. *Pledge.* All Bonds are special obligations of the City payable from and secured by the Net Airport Revenues and monies, securities and funds pledged therefore. There are hereby pledged for the payment of Principal Requirement, Interest Requirement and redemption premium on the Series 2018 Bonds in accordance with their terms and the provisions of the Airport Revenue Bond Ordinance and any Series Ordinance, subject to the provisions of any Series Ordinance permitting the application thereof for the purposes and on the terms and conditions set forth in the Series Ordinance, (1) the Net Airport Revenues, and (2) monies held in the Bond Fund established or confirmed by the Airport Revenue Bond Ordinance or any Series Ordinance.

SECTION 2.2. *Establishment of Funds.* For a description of Section 2.2, as modified by the City Purchase Agreement and the Junior Lien Obligation Documents, see *"SECURITY AND SOURCE OF PAYMENT- Flow of Funds."*

SECTION 2.3. *Operation and Maintenance Fund.* Amounts deposited in the Operation and Maintenance Fund shall be used to pay Cost of Maintenance and Operation.

SECTION 2.4. *Bond Fund.* Amounts deposited in the Bond Fund shall be deposited into either the Principal Account or the Interest Account. Amounts deposited in the Principal Account shall be used to pay Principal Requirements and amounts held in the Interest Account shall be used to pay Interest Requirements on Bonds. Monies in the Principal Account and Interest Account shall be transferred at least one business day before each Principal Payment Date or Bond Payment Date, as applicable, to the appropriate Paying Agent for each series of Bonds.

SECTION 2.5. *Bond Reserve Fund.* Amounts held in the Bond Reserve Fund shall be used to make payments on any Bonds secured by the Bond Reserve Fund to the extent there are insufficient funds in the Bond Fund to make such payment. The City hereby agrees to fund the Bond Reserve Fund in an amount equal to the Debt Service Reserve Requirement provided that the initial funding of the Bond Reserve Fund and any subsequent increase in the Bond Reserve Fund due to the issuance of Parity Bonds secured thereby shall be made in equal monthly deposits over not more than a twenty-four (24) month period from the date of issuance of the Parity Bonds. In the event amounts are withdrawn from the Bond Reserve Fund in order to make payments on any Bonds secured thereby or in the event amounts in the Bond Reserve Fund are valued and the value thereof is less than the Debt Service Reserve Requirement, the City agrees to replenish the Bond Reserve Fund to the Debt Service Reserve Requirement by payment under the method described above, commencing on the first day of the month following such withdrawal from the Bond Reserve Fund or valuation of the Bond Reserve Fund. The City reserves the right to establish a separate bond reserve fund for any Parity Bonds which pursuant to the terms of the Series Ordinance authorizing such Parity Bonds is not secured by the Bond Reserve Fund.

The funding of any separate bond reserve fund for a series of the Refunding Bonds may be made by depositing a surety bond or similar financial instrument into such separate bond reserve fund provided that the surety bond or similar financial instrument meets the requirements set forth below with regard to funding the Bond Reserve Fund with a surety bond or similar financial instrument. The funding of any separate bond reserve fund and the replenishment of the separate bond reserve fund shall be set forth in the Series Ordinance establishing such separate bond reserve fund, provided that the funding and replenishment of such separate bond reserve fund may be made pro rata with any funding or replenishment of the Bond Reserve Fund.

The City reserves the right at any time to deposit a surety bond or similar financial instrument into the Bond Reserve Fund in order to fund the Bond Reserve Fund to the required level. If the City chooses to deposit a surety bond or similar financial instrument into the Bond Reserve Fund, then the City shall receive a certificate or opinion to the effect that the surety bond or financial instrument is a binding obligation of the issuer thereof and shall receive evidence that the issuer thereof has a credit rating in one of the top two rating categories of a nationally recognized credit rating service, and, if the surety bond or similar financial instrument is replacing proceeds of obligations the interest on which is excludible from gross income for federal income tax purposes, then the City shall also receive an opinion of a firm of attorneys experienced in the practice of municipal bond law which opinion is to the effect that replacing such proceeds with a surety bond or similar financial instrument will not adversely affect the exclusion from gross income of the interest on such obligations for federal income tax purposes. Each such surety bond or similar financial instrument shall be unconditional and irrevocable and shall provide such security as is described in this section with respect to which the surety bond or similar financial instrument is purchased. Notwithstanding Article VIII, the City reserves the right, if it deems it necessary in order to acquire such surety bond or other financial instrument, to amend the Airport Revenue Bond Ordinance without the consent of any of the holders of the Series 2018 Bonds in order to provide for the repayment of amounts drawn under such surety bond or other financial instrument, in order to secure the amounts to be repaid which security may be subordinate only to payments of Cost of Maintenance and Operation and payments into the Bond Fund, or to grant the provider of such surety bond or other financial instrument such additional rights as the City deems necessary. Further, in lieu of making deposits to the Bond Reserve Fund or any separate bond reserve fund pursuant to this Section 2.5, the City may transfer the amounts which would have been deposited to the Bond Reserve Fund or any separate bond reserve fund to a Credit Facility as reimbursement for amounts paid under any insurance policy, surety bond or other similar financial instrument.

In the event the Bond Reserve Fund contains both cash or Permitted Investments and a surety bond or other financial instrument, then the cash and Permitted Investments shall be liquidated prior to drawing upon the surety bond or financial instrument. Further, replenishment of the Bond Reserve Fund shall be made first to the reinstatement of such surety bond or other financial instrument and then, at the option of the City, to cash or Permitted Investments.

SECTION 2.6. *Airport Improvement Fund.* Amounts held in the Airport Improvement Fund may be used for any lawful airport purpose including but not limited to the payment of obligations of the City relating to the

Airport including general obligation bonds issued for airport purposes and any obligations owed by the City pursuant to leases or installment purchase agreements or other obligations relating to the Airport.

SECTION 2.7. *Construction Fund.* A special fund is hereby created and designated *"City of Phoenix Airport Construction Fund"* (the *"Construction Fund'')* into which the City shall deposit proceeds of Parity Bonds hereafter issued for the purpose of improving and extending the Airport. The money in said fund shall be applied to the payment of the cost of adding to, extending, improving, bettering and reconstructing the Airport and related facilities, or for the repayment of advances made for that purpose in accordance with and subject to the provisions and restrictions set forth in this Section or may be transferred to the Bond Fund if necessary to pay Principal Requirements or Interest Requirements on Bonds or if funds have been deposited therein to pay capitalized interest on Bonds. Any monies in said fund not presently needed for the payment of current obligations during the course of construction may be invested in Permitted Investments which provide funds in a manner expected to meet the needs of the project being financed. Any such investments shall be held for the account of the Construction Fund until maturity or until sold, and at maturity or upon such sale the proceeds received therefrom including accrued interest and premium, if any, shall be immediately deposited in said fund and shall be disposed of in the manner and for the purposes herein provided. Monies may be transferred from the Construction Fund in accordance with policies of the City relating to the expenditure of City monies.

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SECTION 2.9. *Investment of Funds and Accounts.* Money in the aforementioned funds and accounts shall be invested and reinvested in Permitted Investments at the highest rates reasonably available (except to the extent that a restricted yield is required or advisable under the Code). Money in the Interest Account and the Principal Account may be invested by the City in Permitted Investments maturing or redeemable at the option of the holder prior to the next succeeding Bond Payment Date or Principal Payment Date, as applicable, but whenever the aggregate of the money in said accounts exceeds the amount necessary to pay interest and principal falling due on the next Bond Payment Date, such excess may be invested in Permitted Investments maturing or redeemable at the option of the holder prior to the next following Bond Payment Date. Whenever any money in the Bond Reserve Fund invested as above provided is needed for the payment of Principal Requirements of or Interest Requirements on the Series 2018 Bonds the City shall cause such investments to be liquidated at current market prices, to the amount required, without further instructions and shall cause the proceeds of such liquidation to be applied to the payment of Principal Requirements and Interest Requirements. Money in each of said funds shall be accounted for as a separate and special fund apart from all other City funds, provided that investments of money therein may be made in a pool of investments together with other money of the City of Phoenix so long as sufficient Permitted Investments in said pool, not allocated to other investments of contractually or legally limited duration, are available to meet the requirements of the foregoing provisions hereof.

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SECTION 2.13. *Derivative Products.* The City reserves the right to enter into arrangements involving derivative products including swap agreements, forward agreements, interest rate agreements, and other similar agreements, to the extent permitted by law, and make payments on such agreements from Net Airport Revenues, and reserves the right to establish funds, accounts and subaccounts to make payment on such agreement and reserves the right to revise the flow of funds set forth in Section 2.2 of the Airport Revenue Bond Ordinance provided that such revisions do not result in payments under such agreements being made on a basis which is senior to the payment of any Bonds. To the extent the City enters into such agreements and pledges Net Airport Revenues to the payment of such agreements on a parity with the Series 2018 Bonds, such agreements may only be incurred if the City satisfies the relevant Parity Bonds test set forth in Article III subject to the provisions set forth below in this Section 2.13. In determining whether the Parity Bonds test is satisfied in connection with any such agreements, the City is permitted to treat the amount or rate of interest on those agreements or on the Parity Bonds to which the applicable agreement applies as the amount or rate of interest payable under such agreement, provided that any agreement is with a Qualified Counterparty, thus the City is permitted to include the interest rate payable under such agreements in calculating the additional bonds test established in Article III. Further, the City is permitted to disregard the notional principal amount of any such agreement provided that such agreement is with a Qualified Counterparty. The City agrees to give written notice to the Rating Agency not less than thirty (30) days prior to entering into a Derivative Product payable from Net Airport Revenues.

SECTION 3.1. *No Prior Lien Bonds nor Parity Bonds Except as Herein Permitted.* The Series 2018 Bonds shall enjoy complete parity of lien on the Net Airport Revenues despite the fact that any of the Series 2018 Bonds may be delivered at an earlier date than any other of the Series 2018 Bonds. The City shall not (i) issue other obligations of any kind or nature or (ii) assume any additional obligations in connection with the acquisition by the City of other Airport facilities, payable from or enjoying a lien on the Net Airport Revenues or any part thereof having priority over or (except as hereinafter permitted) parity with the Series 2018 Bonds.

SECTION 3.2. *Additional Bonds for Refunding Purposes.* Any or all of the Series 2018 Bonds may be refunded at maturity, upon redemption in accordance with their terms or with the consent of the holders thereof, and the refunding bonds so issued shall constitute Parity Bonds; *provided, however,* that:

(a) An officer of the City shall certify that the Maximum Annual Debt Service becoming due and payable from the date of such determination to maturity or earlier redemption on the Series 2018 Bonds of all series to be Outstanding immediately after the date of authentication and delivery of such refunding bonds is not greater than 110% of the Maximum Annual Debt Service becoming due and payable from the date of such determination to maturity or earlier redemption on the Series 2018 Bonds of all series Outstanding immediately prior to the authentication and delivery of such refunding bonds; and

(b) The bonds being refunded will no longer be Outstanding upon the issuance of the refunding bonds.

SECTION 3.3. *Parity Bonds Generally.* Parity Bonds may also be issued pursuant to a Series Ordinance if the following conditions are satisfied:

(a) An officer of the City shall certify that either the Net Revenues for the most recently completed Fiscal Year for which audited financial statements are available or the Net Revenues for 12 consecutive months out of the most recent 18 calendar months, in each case together with Other Available Funds deposited in the Bond Fund during such period,* (i) were sufficient to satisfy the rate covenant set forth in Section 4.3 and (ii) would have been at least equal to 120% of Maximum Annual Debt Service for all Bonds to be Outstanding, including the Parity Bonds proposed to be issued; and

(b) A Consultant provides a report which projects that Net Revenues will be sufficient to satisfy the rate covenant set forth in Section 4.3 (including any Parity Bonds to be issued) in each Fiscal Year after subtracting from the amount required to be paid into the Bond Fund from the Revenue Fund any applicable Passenger Facility Charge Credit, which report addresses the period of time beginning with the first full Fiscal Year following the issuance of the Parity Bonds through the later of (i) three Fiscal Years following the expected date of completion (as provided to the Consultant by an officer of the City) of any construction projects to be financed at the Airport with the proceeds of the relevant Parity Bonds or (ii) five Fiscal Years following the issuance of the Parity Bonds.

SECTION 4.1. *In General.* The City hereby makes the following covenants, in addition to all other covenants in this Bond Ordinance, with each and every successive holder of any of the Series 2018 Bonds (including Parity Bonds) so Jong as any of said Bonds remain Outstanding.

SECTION 4.2. *Maintenance of the Airport in Good Condition.* The City shall maintain the Airport in good condition and operate the same in a proper and economical manner.

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* The additional bonds test in the Junior Lien Obligation Documents for Senior Lien Obligations does not permit the inclusion of Other Available Funds for purposes of Section 3.3(a).

SECTION 4.3. *Rate Covenant.* The City covenants that it will in each Fiscal Year establish, maintain and enforce schedules of rates, fees and charges for the use of the Airport (i) sufficient to produce Net Airport Revenues at least equal to 125% of the amount required to be paid into the Bond Fund from the Revenue Fund, after subtracting Other Available Funds deposited in the Bond Fund, in such Fiscal Year and subtracting any Passenger Facility Charge Credit applicable to such Fiscal Year, provided that for purposes of this Section, the Principal Requirement and Interest Requirement for a series of Bonds to which a Derivative Product with a Qualified Counterparty applies may be determined after giving effect to the amount of interest paid on the Series 2018 Bonds plus/minus the amount due to/from the Qualified Counterparty with regard to the interest it has paid on the Derivative Product and exclusive of any payment which may be owed by the City upon termination prior to maturity of such Derivative Product and (ii) sufficient to produce amounts required to be deposited in the Series 2018 Bond Reserve Fund and any separate bond reserve fund for such Fiscal Year.

SECTION 4.4. *Books and Records.* The City shall maintain proper books and records accounting for the operation of the Airport. Such books and records shall be kept in accordance with standard accounting practices and procedures customarily used for airports of similar nature to the Airport. The City will cause such books to be audited annually by an Independent Certified Public Accountant.

SECTION 4.5. *Insurance.* The City will cause to be procured and maintained insurance (which may take the form of or include an adequately-funded program of self-insurance) covering the Airport properties and operations, of such kind and in the amounts normally carried by airports of comparable size, location and operations, including, but without limitation, fidelity insurance, public liability insurance, property damage insurance, fire and extended coverage insurance, use and occupancy or rental value insurance, product liability insurance, workmen's compensation insurance and hanger keeper's liability insurance. To the extent the City accumulates and maintains a fund for self-insurance, such insurance may be substituted for all or part of the insurance otherwise required to be carried under the provisions of this paragraph. All policies providing use and occupancy or rental value insurance shall be made payable to and deposited with the City and the City shall have the sole right to receive any proceeds of such policies and to collect any receipt for claims thereunder; provided, however, that any and all proceeds of use and occupancy or rental value insurance paid to the City shall be deposited by it forthwith to the credit of the Revenue Fund.

Note: the blacklined text below reflects the Ordinance Amendment described in "SECURITY AND SOURCES OF PAYMENT - Summary of Proposed Amendment to Airport Revenue Bond Ordinance" and "APPENDIX I - Form of Bondholder Consent to Ordinance Amendment."

Section 4.6. *Sale or Lease of Airport.* The City covenants not to sell essential Airport property, whether real or personal, unless an officer of the City certifies that the City will be able to continue to meet the rate covenant set forth in Section 4.3 hereof in each of the five years after the sale or certifies that the value of the property to be sold and sold within the last twelve months does not exceed five percent (5%) of the total fair market value of the assets of the Airport as determined by an officer of the City.

Notwithstanding any of the foregoing provisions of this section, leases and other agreements and contracts for use of any services or facilities of the airport in effect at the time of delivery of the Series 2018 Bonds shall not be subject to revision except by agreement between the parties, with the concurrence of the Consultants, and the City may enter into new leases, or other agreements or contracts for the use of services or facilities of the Airport on such terms and for such periods of times as the City shall determine to be proper; provided, however, that no such new lease, agreement or contract shall provide for the payments of rents, fees or charges at a rate less than the rate prevailing at the Airport for similar services or facilities at the time of delivery of the Series 2018 Bonds unless such rents, fees or charges shall be approved by the Consultants; and provided further that no such new lease agreement or contract (except land leases and except those which provide for a fixed minimum rental or a percentage of gross income, whichever is larger) shall be for a term exceeding 3 years unless:

1. It be negotiated on a net rent basis (a "net lease"), or

2. It contains provisions for renegotiation of the amount of the required payments without limit of intervals of not more than 3 years beginning with the date thereof;

and providing further that (other than a net lease, whether or not it provides for a fixed minimum rental or a percentage of gross income) no new lease, agreement or contract which provides for a fixed minimum rental or a percentage of gross income, whichever is larger shall be for a term exceeding 10 years unless it contains provision for renegotiation of the fixed minimum rental and of the percentage of gross income without limit at the end of the initial 10 years, and at the end of each 5-year period thereafter.

SECTION 4.7. *Satisfaction of Liens.* The City will from time to time duly pay and discharge or cause to be paid and discharged all taxes, assessments and other governmental charges, if any, lawfully imposed upon the Airport or any part thereof or upon the Net Airport Revenues, as well as any lawful claims for labor, materials or supplies which if unpaid might by law become a lien or charge upon the Airport or the Revenues or any part thereof or which might impair the security of the Series 2018 Bonds, except when the City in good faith contests its liability to pay the same.

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SECTION 7.1. *Provision for Payment.* Bonds for the payment or redemption of which sufficient monies or sufficient Qualified Permitted Investments (as evidenced by the report of an Independent Certified Public Accountant) shall have been deposited with a bank or trust company doing business in the State of Arizona (whether upon or prior to the maturity or the redemption date of such Bonds) shall be deemed to be paid and no longer Outstanding under this Ordinance; *provided, however,* that if such Bonds are to be redeemed prior to the maturity thereof, notice of such redemption shall have been duly given or firm arrangements shall have been made for the giving thereof. Qualified Permitted Investments shall be considered sufficient for purposes of this Article VII only if said investments fall due and bear interest in such amounts and at such times as will assure sufficient cash (whether or not such Qualified Permitted Investments are redeemed by the City thereof pursuant to any right of redemption) to pay currently maturing interest and to pay principal and redemption premiums if any when due on the Series 2018 Bonds without rendering the interest on any Bonds taxable under the Code.

The City may at any time surrender to the Registrar for cancellation by it any Bonds previously authenticated and delivered hereunder which the City may have acquired in any manner whatsoever. All such Bonds, upon such surrender and cancellation, shall be deemed to be paid and retired.

SECTION 8.1. *Supplemental Ordinances and Resolutions Not Requiring Consent of Bondholders.* The City, from time to time and at any time, subject to the conditions and restrictions in this Ordinance contained, may enact one or more ordinances or resolutions or both which thereafter shall form a part hereof, for any one or more or all of the following purposes:

(a) To add to the covenants and agreements of the City in the Airport Revenue Bond Ordinance contained, other covenants and agreements thereafter to be observed or to surrender, restrict or limit any right or power herein reserved to or conferred upon the City (including but not limited to the right to issue Parity Bonds under Article III of the Airport Revenue Bond Ordinance);

(b) To make such provisions for the purpose of curing any ambiguity, or of curing, correcting or supplementing any defective provision contained in the Airport Revenue Bond Ordinance, to permit the issuance of coupon Bonds, capital appreciation bonds or cross over refunding bonds, or in regard to matters or questions arising under the Airport Revenue Bond Ordinance, as the City may deem necessary or desirable and not inconsistent with the Airport Revenue Bond Ordinance but only if such modifications do not result in materially diminishing the security hereby granted to the owners of any Bonds at the time Outstanding.

(c) To increase the size or scope of the Airport.

(d) To make amendments with respect to the use of an insurance policy, surety bond or other form of security in the Bond Reserve Fund and of the type referred to in Section 2.12 of the Airport Revenue Bond Ordinance with respect to changes in the City's accounting system.

Any supplemental ordinance or resolution authorized by the provisions of Section 8.1 of the Airport Revenue Bond Ordinance may be enacted by the City without the consent of or notice to the owners of any of the Series 2018 Bonds at the time Outstanding, notwithstanding any of the provisions of Section 8.2 of the Airport Revenue Bond Ordinance.

SECTION 8.2. *Supplemental Ordinances Requiring Consent of Bondholders.* With the consent (evidenced as provided in Article VI of the Airport Revenue Bond Ordinance) of the owners of not less than 51% in principal amount of the Series 2018 Bonds, the City may from time to time and at any time adopt an ordinance or ordinances supplemental hereto for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of the Airport Revenue Bond Ordinance or of any supplemental ordinance; *provided, however,* that no such supplemental ordinance shall (1) extend the fixed maturity of any Bond or reduce the rate of interest thereon or extend the time of payment of interest, or reduce the amount of the principal thereof, or reduce or extend the time for payment of any premium payable on the redemption thereof, without the consent of the owner of each Bond so effected, or (2) reduce the aforesaid percentage of owners of the Series 2018 Bonds required to approve any such supplemental ordinance without the consent of the owners of all Bonds, or (3) deprive the owner of a Bond of the right to payment of the Bond or from the Net Revenues, in each case, without the consent of the owners of all Bonds so effected. For purposes of determining whether the 51% test of the preceding sentence shall have been met, the principal amount of any Compound Interest Bonds from time to time Outstanding shall be determined by reference to the accreted value of such Compound Interest Bonds on the date of such determination. No amendment may be made under this Section 8.2 which affects the rights or duties of the insurer of any of the Series 2018 Bonds or any Credit Facility (including the issuer of any insurance policy or surety bond deposited in the Bond Reserve Fund or any separate bond reserve fund) without its consent.

It shall not be necessary for the consent of the Bondholders under Section 8.2 of the Airport Revenue Bond Ordinance to approve the particular form of any proposed supplemental ordinance, but it shall be sufficient if such consent shall approve the substance thereof.

Promptly after the enactment by the City of any supplemental ordinance pursuant to the provisions of Section 8.2 of the Airport Revenue Bond Ordinance, the City shall cause the Registrar to mail a notice by registered or certified mail to the registered owners of all Bonds Outstanding at their addresses shown on the Bond Register or at such other address as is furnished in writing by such registered owner to the Registrar setting forth in general terms the substance of such supplemental ordinance.

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**The City Purchase Agreement**

SECTION 2.1. *Agreement to Issue Series 2018 Bonds; Application of Series 2018 Bonds Proceeds.* (a) In order to provide a deposit to the Construction Fund, to provide a funds for the prepayment of the 2018 Loan, to provide a deposit to the Senior Lien Parity Reserve Fund and to pay for costs of issuance of the Series 2018 Bonds, the Corporation will cause to be issued under the Indenture the Series 2018 Bonds, maturing and bearing interest as provided in the Indenture, as executed and delivered on the date of issuance of the Series 2018 Bonds.

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SECTION 2.3. *Construction Fund.* The Construction Fund established for deposit of a portion of the proceeds of the Series 2018 Bonds pursuant to Section 2.7 of the Airport Revenue Bond Ordinance shall be maintained and invested by the City or the Corporation on behalf of and at the direction of, the City. A portion of the net proceeds of the Series 2018 Bonds shall be deposited in the Construction Fund pursuant to Section 5.2(a) of the Bond Indenture. In addition, the City may, but shall not be required to deposit additional funds in the Construction Fund. Monies in the Construction Fund shall be disbursed by the City, subject to Section 2.7 of the Airport Revenue Bond Ordinance, for the following purposes and for no other purposes:

(i) costs and expenses relating to the issuance, sale and delivery of the Series 2018 Bonds, provided that such costs and expense paid from proceeds of the Series 2018 Bonds shall not exceed two percent of the proceeds of the Series 2018 Bonds;

(ii) payment for labor, services and materials used or furnished in the improvement and construction of the Financed Property, and all real and personal property deemed necessary in connection with the Financed Property and for the miscellaneous expenses incidental to any of the foregoing including the premium on each performance and payment bond;

(iii) reimbursement of capital expenditures relating to the Financed Property advanced prior to the issuance of the Series 2018 Bonds; and

(iv) payment of the portion of the Purchase Price representing interest on the Series 2018 Bonds during the construction and acquisition of the Financed Property.

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SECTION 2.4. *Revised Flow of Funds Under Airport Revenue Bond Ordinance and Junior Lien Obligation Bond Documents.* As authorized by Section 2.2 of the Airport Revenue Bond Ordinance, the revised flow of funds set forth in Section 2.5 of the Junior Lien City Purchase Agreement dated as of December 1, 2015 between the City and the Corporation is hereby included by reference.

SECTION 2.5. *Derivative Products.* The City reserves the right to enter into Derivative Products pursuant to Section 2.13 of the Airport Revenue Bond Ordinance.

SECTION 2.6. *Senior Lien Parity Reserve Fund.* (a) In accordance with Section 2.5 of the Airport Revenue Bond Ordinance, the City has established with the 2017 Trustee, as assignee of the Corporation under the 2017 Indenture, the Senior Lien Parity Reserve Fund, which fund is hereby made available to the Trustee, as assignee of the Corporation under the Indenture for the benefit of the owners of the Senior 2018 Bonds the Senior Lien Parity Reserve Fund shall be available to make payments on the Series 2017 Bonds and the Series 2018 Bonds and except as provided in Section 2.6(d) of the 2017 City Purchase Agreement and Section 2.6(d) hereof, shall not be available to make payments on any other Senior Lien Obligations or any of the City's obligations hereunder other than pursuant to Section 3.3(a), (b) and (c) of the 2017 City Purchase Agreement with respect to the Series 2017 Bonds and pursuant to Section 3.3(a), (b) and (c) hereof with respect to the Series 2018 Bonds.

(b) The Senior Lien Parity Reserve Fund shall be funded in an amount equal to the Senior Lien Parity Debt Service Reserve Requirement as set forth in Section 2.1 hereof. The Senior Lien Parity Reserve Fund may be funded with cash, Permitted Investments (as defined in the Airport Revenue Bond Ordinance) or a surety bond or other similar financial instrument meeting the requirements of Section 2.5 of the Airport Revenue Bond Ordinance but with a rating of "Aaa" by Moody's and "AAA" by S&P if in the form of a surety bond or insurance policy (a *"Qualified Surety Bond").* In the event the City chooses to provide Qualified Surety Bond in substitution for the initial cash deposit or a subsequent Qualified Surety Bond, the City shall receive a certificate or an opinion to the effect that the Qualified Surety Bond is a binding obligation of the issuer thereof and shall receive evidence that the issuer thereof has the required credit ratings. Any substitution of a Qualified Surety Bond for a cash deposit funded from 2017 Tax-Exempt Bonds or the Series 2018 Bonds shall be subject to receipt by the City of an opinion of nationally recognized bond counsel that such substitution will not cause interest or any of the 2017 Tax-Exempt Bonds or the Series 2018 Bonds, as applicable, to become includible in gross income for federal income tax purposes. Each such Qualified Surety Bond shall be unconditional and irrevocable and shall provide such security as is described in Section 2.5 of the Airport Revenue Bond Ordinance. In the event the Senior Lien Parity Reserve Fund contains both cash or Permitted Investments and a surety bond or other financial instrument, then the cash and Permitted Investments shall be liquidated prior to drawing upon the surety bond or financial instrument. Further, replenishment of the Senior Lien Parity Reserve Fund shall be made, subject to the flow of funds established in Section 2.4 hereof, first to the reinstatement of such Qualified Surety Bond and then, at the option of the City, to cash or Permitted Investments. In the event the amount on deposit in the Senior Lien Parity Reserve Fund consists of cash or Permitted Investments with a value in excess of the Senior Lien Parity Debt Service Reserve Requirement plus the Debt Service Reserve Requirement for any other Senior Lien Obligations secured thereby, the Trustee shall, at the direction of the City, transfer such excess to the City.

(c) In the event amounts are withdrawn from the Senior Lien Parity Reserve Fund to pay principal of or interest on the Series 2017 Bonds or any other Senior Lien Obligations secured thereby, the City shall replenish the Senior Lien Parity Reserve Fund as required by Section 2.4 hereof and/or reimburse the provider of a Qualified Surety Bond on a pro rata basis with amounts to be used to reimburse a Credit Facility for Senior Lien Obligations other than the Series 2017 Bonds or other Senior Lien Obligations secured thereby, and/or replenish any other reserve funds established for Senior Lien Obligations.

(d) At the direction of the City, upon notice to the Trustee, Section 2.4 and this Section 2.6 may be amended without notice to, or consent of the owners of the Series 2017 Bonds or the Series 2018 Bonds to provide that the Senior Lien Parity Reserve Fund shall be a parity reserve fund for the benefit of one or more additional series of Senior Obligations. In connection with any such amendment, the Senior Lien Parity Debt Service Reserve Requirement shall be modified only to the extent necessary to reflect on an aggregate basis the principal amount and annual debt service requirements of the Senior Obligations to be secured by the Senior Lien Parity Reserve Fund. The Trustee is authorized to enter into an intercreditor agreement (or jointly signed closing certificate) with the trustee for any Senior Lien Obligations to be secured by the Senior Lien Parity Reserve Fund to acknowledge the parity nature of the Senior Lien Parity Reserve Fund.

SECTION 2.7. *Additional Requirements for Qualified Surety Bond.* (a) A Qualified Surety Bond which is a letter of credit shall be payable in one or more draws upon presentation by the beneficiary of a sight draft accompanied by its certificate that it then holds insufficient funds to make a required payment of principal or interest on the Senior Obligations secured by the Senior Lien Parity Reserve Fund. The draws shall be payable within two days of presentation of the sight draft. The letter of credit shall be for a term of not less than three years. The issuer of the letter of credit shall be required to notify the City and the applicable trustees, not later than three months prior to the stated expiration date of the letter of credit, as to whether such expiration date shall be extended, and if so, shall indicate the new expiration date.

(b) If such notice indicates that the expiration date shall not be extended, the City shall deposit in the Senior Lien Parity Reserve Fund an amount sufficient to cause the cash or Permitted Investments on deposit in the Senior Lien Parity Reserve Fund together with any other qualifying credit instruments, to equal the Senior Lien Parity Debt Service Reserve Requirement, such deposit to be paid in equal installments over the remaining term of the letter of credit, unless a replacement Qualified Surety Bond is provided. The letter of credit shall permit a draw in full not less than two weeks prior to the expiration or termination of such letter of credit if the letter of credit has not been replaced or renewed. The Trustee shall draw upon the letter of credit prior to its expiration or termination unless an acceptable replacement is in place or the Senior Lien Parity Reserve Fund is fully funded in its required amount.

(c) The obligation to reimburse the issuer of a Qualified Surety Bond for any fees, expenses, claims or draws upon such Qualified Surety Bond shall be subordinate to the payment of debt service on the Senior Lien Obligations secured by the Senior Lien Parity Debt Service Reserve Fund. The right of the issuer of a Qualified Surety Bond to payment or reimbursement of its fees and expenses shall be subordinate to cash replenishment of the Senior Lien Parity Reserve Fund, and, subject to the second and third succeeding sentences, its right to reimbursement for claims or draws shall be on a parity with the cash replenishment of the Senior Lien Parity Reserve Fund. The Qualified Surety Bond shall provide for a revolving feature under which the amount available thereunder will be reinstated to the extent of any reimbursement of draws or claims paid. If the revolving feature is suspended or terminated for any reason, the right of the issuer of the Qualified Surety Bond to reimbursement will be further subordinated to cash replenishment of the Senior Lien Parity Reserve Fund to an amount equal to the difference between the full original amount available under the Senior Lien Parity Reserve Fund credit instrument and the amount then available for further draws or claims.

If (i) the issuer of a Qualified Surety Bond becomes insolvent or (ii) the issuer of a Qualified Surety Bond defaults in its payment obligations thereunder or (iii) the claims-paying ability of the issuer of the insurance policy or surety bond falls below a S&P “AAA” or a Moody’s “Aaa” or (iv) the rating of the issuer of the letter of credit falls below a S&P “AA” or Moody’s “Aa” (in each case without regard to “+”s or “-”s or numerical distinctions within a rating category), the obligation to reimburse the issuer of the Qualified Surety Bond shall be subordinate to the cash replenishment of the Senior Lien Parity Reserve Fund.

(d) If (i) the revolving reinstatement feature described in the preceding paragraph is suspended or terminated or (ii) the rating of the claims paying ability of the issuer of the surety bond or insurance policy falls below a S&P “AAA” or a Moody’s “Aaa” or (iii) the rating of the issuer of the letter of credit falls below S&P “AA” or Moody’s “Aa” (in each case without regard to “+”s or “-”s or numerical distinctions within a rating category), the City shall either (i) deposit into the Senior Lien Parity Reserve Fund an amount sufficient to cause the cash or permitted investments on deposit in the Senior Lien Parity Reserve Fund to equal the Senior Lien Parity Debt Service Reserve Requirement, such amount to be paid over the ensuing five years in equal installments deposited at least semi - annually or (ii) replace such instrument with a Qualified Surety Bond within six months of such occurrence.

In the event the rating of the claims-paying ability of the issuer of the surety bond or insurance policy falls below “A” or the rating of the issuer of the letter of credit falls below “A” (in each case without regard to “+”s or “-”s or numerical distinctions within a rating category), or (iii) the issuer of the Qualified Surety Bond defaults in its payment obligation or (iv) the issuer of the Qualified Surety Bond becomes insolvent, the Corporation shall cause the City to either (A) deposit into the Senior Lien Parity Reserve Fund in an amount equal to the Senior Lien Parity Debt Service Reserve Requirement, such amount to be paid over the ensuing year in equal installments on at least a semi-annual basis or (B) replace such instrument with a Qualified Surety Bond within six months of such occurrence.

(e) Where applicable, the amount available for draws or claims under the Qualified Surety Bond may be reduced by the amount of cash or permitted investments deposited in the Senior Lien Parity Reserve Fund pursuant to subparagraph (c).

(f) If the City chooses the above described alternatives to a cash-funded Senior Lien Parity Reserve Fund, any amounts owed by the City to the issuer of such credit instrument as a result of a draw thereon or a claim thereunder, as appropriate, shall be included in any calculation of debt service requirements required to be made pursuant to Sections 3.3 and 4.3 of the Airport Revenue Bond Ordinance.

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SECTION 3.1. *Agreement of Sale.* The Corporation hereby sells and conveys to the City, and the City hereby purchases from the Corporation, the Financed Property. In consideration for the sale of the Financed Property and the prepayment of the 2018 Loan, the City hereby agrees that it will pay to the account of the Corporation at the designated office of the Trustee, as the Purchase Price of the Property, but only from the Net Airport Revenues as hereinafter prescribed, an amount equal to the aggregate of the sums prescribed by Section 3.3 hereof and elsewhere in this City Purchase Agreement.

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SECTION 3.3. *Amounts of Purchase Price Payable Upon Issuance of Series 2018 Bonds.* The City agrees that it will pay, solely from the Net Airport Revenues or amounts available in the Senior Lien Parity Reserve Fund, as the Purchase Price of the Property, the aggregate of the amounts for which provision is made in this Section and elsewhere in this City Purchase Agreement.

(a) On or before the last Business Day preceding each 2018 Bond Payment Date, commencing with the first 2018 Bond Payment Date, until principal of and interest on the Series 2018 Bonds shall have been fully paid or provision for the payment thereof shall have been made in accordance with the Indenture, the City shall pay to the Trustee for deposit into the 2018 Interest Account (but solely from the Net Airport Revenues or Other Available Monies) a sum equal to the 2018 Interest Requirement falling due on the next succeeding 2018 Bond Payment Date.

(b) On or before the last Business Day preceding each Bond Payment Date on which principal of the Series 2018 Bonds is payable, until principal of and interest on the Series 2018 Bonds has been fully paid or provision for the payment thereof shall have been made in accordance with the Indenture, the City shall pay to the Trustee for deposit into the 2018 Principal Account (but solely from the Net Airport Revenues or Other Available Monies) a sum equal to the 2018 Principal Requirement for the then current Bond Year.

(c) If at any 2018 Bond Payment Date following delivery of the Series 2018 Bonds the balance available in the 2018 Senior Lien Bond Fund is insufficient to make required payments of principal and interest due on such date, subject to the limitations in Sections 3.5 and 4.1 hereof, the City will pay any such deficiency in sufficient time to prevent default in the payment of principal of or interest on the Series 2018 Bonds falling due on such 2018 Bond Payment Date. However, any amount at any time held by the Trustee in the 2018 Interest Account or the 2018 Principal Account shall be credited against the aforesaid obligations that are next required to be met by the City, but only to the extent such amount is in excess of the amount required for payment of past due interest or principal, respectively, on any Parity Bonds, whether or not such Parity Bonds shall have been presented for payment.

(d) The City shall pay the amounts required to replenish the Senior Lien Parity Reserve Fund and reimburse the provider of a Qualified Surety Bond as set forth in Section 2.5 and 2.6 hereof.

(e) The City shall pay to the Trustee its fees and expenses in accordance with the provisions of the Indenture.

(f) In the event the City should fail to pay when due any of the amounts required in this Section, the item or installment so in default shall continue as an obligation of the City payable solely from the Net Airport Revenues, and amounts available in the Senior Lien Parity Reserve Fund until the amount in default shall have been fully paid, and the City agrees to pay the same with interest thereon at the rate applicable to the corresponding maturities of Series 2018 Bonds, from the date said payment was to be made to the date of payment by the City until paid.

(g) The City shall pay to the official entitled to collect the same, when due, all taxes of whatever nature, if any, that may be imposed upon the Property, the Corporation, its property, operations or income, whether by state, local or federal government, and including every governmental charge whether for services rendered or not, which the Corporation is required or may be required by law to pay with respect to the Property.

(h) To the extent not paid from proceeds of the Series 2018 Bonds, the City shall pay to the Corporation amounts sufficient to reimburse the Corporation for all its expenses in connection with the issuance of the Series 2018 Bonds and this City Purchase Agreement if and when paid by the Corporation. Such amounts, if any, shall be paid from the Designated Revenues to the Corporation or, if a City Representative submits a requisition, signed by an officer of the Corporation, accompanied by invoices showing that the payments represented thereby have been made for purposes approved by the City, such amounts shall be paid from Designated Revenues as directed by the Corporation.

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SECTION 3.5. *Limitation on Source of City Payments.* Except to the extent the City determines to make payments from Other Available Monies, all amounts to be paid by the City under any section of this City Purchase Agreement shall be payable solely from the Net Airport Revenues or amounts available in the Senior Lien Parity Reserve Fund. Under no circumstances shall amounts paid under this City Purchase Agreement from Other Available Monies constitute a pledge of such Other Available Monies and amounts payable by the City hereunder shall never constitute a general obligation of the City or a pledge of ad valorem taxes by the City.

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SECTION 4.2. *City's Obligations Constituting Parity Bonds.* This City Purchase Agreement and the City's obligations to make payments under Section 3.3 hereof constitute *"Parity Bonds"* under the Airport Revenue Bond Ordinance. The City Ordinances and this City Purchase Agreement constitute a Series Ordinance under the Airport Revenue Bond Ordinance. The Corporation, or the Trustee, as their respective interests appear, shall have the right to enforce all the covenants and agreements of the City in the Airport Revenue Bond Ordinance (which are incorporated by reference herein).

SECTION 4.3. *Subordinate Obligations.* The City reserves the right to issue or enter into obligations payable from Net Airport Revenues that are subordinate to the City's obligations hereunder.

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SECTION 5.1. *In General.* The City hereby makes the following covenants, in addition to those contained in the Airport Revenue Bond Ordinance and in Article IV hereof, so long as any of the Series 2018 Bonds remain Outstanding under the Indenture.

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SECTION 5.3. *Maintenance and Utilities.* All maintenance and repair of the Property and utilities therefor shall be the responsibility of the City. In exchange for the payment of the Purchase Price hereunder, the Corporation agrees to provide nothing more than the Property and the discharge of amounts prepaid under the Revolving Loan Agreement.

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SECTION 7.1. *Events of Default.* Any one or more of the following events (herein called "Events of Default") shall constitute a default hereunder:

(a) An Event of Default under Section 5.1 of the Airport Revenue Bond Ordinance; or

(b) The City shall fail to make any payment of the Purchase Price under Section 3.3(c), (d) or (e) of the City Purchase Agreement for a period of 30 days after notice of such failure shall have been given in writing to the City by the Corporation or by the Trustee; or

(c) The City shall fail to perform any other covenant herein for a period of 30 days after written notice specifying such default shall have been given to the City by the Corporation or the Trustee, provided that if such failure be such that it cannot be remedied within such 30-day period, it shall not be deemed an Event of Default so long as the City diligently tries to remedy the same.

SECTION 7.2. *Remedies on Default by City.* Upon the occurrence of an Event of Default as above defined, the Corporation shall, but only if requested to do so by the Trustee, without further demand or notice, exercise any of the available remedies at law or in equity, including, but not limited to, specific performance, however, under no circumstances may amounts due hereunder be accelerated. The Corporation may assign any or all of its rights and privileges under this Section to the Trustee, and upon furnishing evidence of such assignment to the City, the Trustee may, subject to Section 7.12 of the Indenture, exercise any or all of such rights or privileges as it may deem advisable.

SECTION 7.3. *Default by Corporation.* The Corporation shall in no event be in default in the performance of any of its obligations hereunder unless and until the Corporation shall have failed to perform such obligation within 30 days or such additional time as is reasonably required to correct any such default after notice by the City to the Corporation properly specifying wherein the Corporation has failed to perform any such obligation.

No default by the Corporation shall relieve the City of its obligations to make the various payments herein required, so long as any of the Series 2018 Bonds remain outstanding; however, the City may exercise any other remedy available at law or in equity to require the Corporation to remedy such default so long as such remedy does not interfere with or endanger the payments required to be made to the Trustee under the Indenture.

## The Indenture

The information set forth below summarizes or paraphrases certain provisions of the Indenture.

SECTION 1.3. *All Series 2018 Bonds Equally and Ratably Secured; Series 2018 Bonds Not General Obligations of the Corporation.* All Series 2018 Bonds issued hereunder and at any time Outstanding shall in all respects be equally and ratably secured hereby, without preference, priority, or distinction on account of the date or dates or the actual time or times of the issuance or maturity of the Series 2018 Bonds, so that all Series 2018 Bonds at any time issued and Outstanding hereunder shall have the same right, lien and preference hereunder and shall all be equally and ratably secured hereby.

The Series 2018 Bonds shall be payable solely out of the revenues and any other security pledged hereby and shall not constitute an indebtedness or general obligation of the Corporation or the City within the meaning of any State constitutional provision or statutory limitation and shall never constitute or give rise to a pecuniary liability of the Corporation or the City or be a charge against their general credit or a charge against the general credit or the taxing powers of the State or any political subdivision thereof. The Corporation has no taxing power.

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SECTION 5.3. *Flow of Funds.* So long as any Series 2018 Bonds are Outstanding, in each Bond Year, payments received by the Trustee shall be applied in the following manner and order of priority:

(a) *2018 Interest Account.* The Trustee shall deposit to the 2018 Interest Account on or before the last Business Day of each December and June an amount equal to the amount of interest to be paid on Outstanding Series 2018 Bonds on the next 2018 Bond Payment Date. Monies in the 2018 Interest Account shall be used to pay interest on the Series 2018 Bonds as it becomes due.

(b) *2018 Principal Account.* The Trustee shall deposit to the 2018 Principal Account on or before the last Business Day of each June (in each Bond Year ending on a date on which Series 2018 Bonds mature or are subject to mandatory redemption), an amount equal to the principal amount at maturity [plus an amount equal to any mandatory sinking fund redemption requirement] of Series 2018 Bonds Outstanding which will mature [or be subject to mandatory redemption] on the last day of such Bond Year. Monies in the 2018 Principal Account shall be used to retire Series 2018 Bonds by payment at their scheduled maturity or their mandatory sinking fund retirement date.

(c) *2018 Redemption Account.* If the City makes an optional prepayment of any installment of principal which is to be applied to redeem Series 2018 Bonds in accordance with Section 3.2(a) hereof and specifying the amount and maturities of Series 2018 Bonds to be redeemed and the optional redemption date, the amount so paid shall be credited to the 2018 Redemption Account and applied promptly by the Trustee, first, to cause the amounts credited to the 2018 Interest Account or the 2018 Principal Account of the 2018 Senior Lien Bond Fund, in that order, to be not less than the amounts then required to be credited thereto, and, second, to retire Series 2018 Bonds by purchase, redemption or both purchase and redemption in accordance with the City's directions.

Any balance remaining in the 2018 Redemption Account after the purchase or redemption of Series 2018 Bonds in accordance with the City's directions shall be transferred to the 2018 Interest Account.

SECTION 5.4. *Senior Lien Parity Reserve Fund.*

(a) In accordance with Section 2.5 of the Airport Revenue Bond Ordinance, Section 2.6 of the 2017 City Purchase Agreement and Section 2.6 of the City Purchase Agreement, the Corporation has assigned to the 2017 Trustee and the Trustee the Senior Lien Parity Reserve Fund which shall be available to make payments on the Series 2017 Bonds and the Series 2018 Bonds and shall not be available to make payments on any Bonds (as defined in the Airport Revenue Bond Ordinance), (except as otherwise provided in Section 2.6(d) of the 2017 City Purchase Agreement, Section 2.6(d) of the City Purchase Agreement and Section 5.4(c) of the 2017 Indenture and Section 5.4(c) hereof) or any of the City's obligations under the 2017 City Purchase Agreement other than pursuant to Section 3.3(a), (b) and (c) thereof and under the City Purchase Agreement other than pursuant to Section 3.3(a), (b) and (c) thereof. In the event there is not on deposit the amounts at the times in the respective accounts described in Section 5.3(a), (b) or (c) hereof, the amount of such deficiency shall be paid directly from the Senior Lien Parity Reserve Fund.

(b) The Senior Lien Parity Reserve Fund may be funded with cash, Permitted Investments or a Qualified Surety Bond meeting the requirements of Sections 2.6 and 2.7 of the 2017 City Purchase Agreement and Sections 2.6 and 2.7 of the City Purchase Agreement and Section 2.5 of the Airport Revenue Bond Ordinance. As described in Section 5.2 hereof, the City has caused to be deposited with the Trustee cash in an amount equal to the Senior Lien Parity Debt Service Reserve Requirement. In the event the City chooses to provide a Qualified Surety Bond in substitution for the initial cash deposit or a subsequent Qualified Surety Bond, the City shall receive a certificate or an opinion to the effect that the Qualified Surety Bond is a binding obligation of the issuer thereof and shall receive evidence that the issuer thereof has the required credit ratings. Any substitution of a Qualified Surety Bond for a cash deposit funded from Series 2018 Bond proceeds shall be subject to receipt by the City of an opinion of nationally recognized bond counsel that such substitution will not cause interest or any of the Series 2018 Bonds to become includible in gross income for federal income tax purposes. Each such Qualified Surety Bond shall be unconditional and irrevocable and shall provide such security as is described in Section 2.5 of the Airport Revenue Bond Ordinance.

In the event the Senior Lien Parity Reserve Fund contains both cash or Permitted Investments and a surety bond or other financial instrument, then the cash and Permitted Investments shall be liquidated prior to drawing upon the surety bond or financial instrument. Further, replenishment of the Senior Lien Parity Reserve Fund shall be made, subject to the flow of funds established in Sections 2.4 of the 2017 City Purchase Agreement and Section 2.4 of the City Purchase Agreement, first to the reinstatement of such Qualified Surety Bond and then, at the option of the City, to cash or Permitted Investments. In the event the amount on deposit in the Senior Lien Parity Reserve Fund consists of cash or Permitted Investments with a value in excess of the Senior Lien Parity Debt Service Reserve Requirement, the 2017 Trustee shall and the Trustee, at the direction of the City, transfer such excess to the City.

(c) At the direction of the City, upon notice to the Trustee, this Section, Section 2.6 of the 2017 City Purchase Agreement and Section 2.6 of the City Purchase Agreement may be amended without notice to, or consent of the owners of the Series 2017 Bonds or the Series 2018 Bonds to provide that the Senior Lien Parity Reserve Fund shall be a parity reserve fund for the benefit of one or more additional series of Senior Obligations. In connection with any such amendment, the Senior Lien Parity Debt Service Reserve Requirement shall be modified only to the extent necessary to reflect on an aggregate basis the principal amount and annual debt service requirements of the Senior Obligations to be secured by the Senior Lien Parity Reserve Fund. The Trustee is authorized to enter into an intercreditor agreement (or jointly signed closing certificate) with the trustee for any Senior Lien Obligations to be secured by the Senior Lien Parity Reserve Fund to acknowledge the parity nature of the Senior Lien Parity Reserve Fund.

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SECTION 6.1. *Payment of Principal and Interest.* Subject to the limited liability and sources of payment specified herein, the Corporation covenants that it will promptly cause to be paid amounts due on the Series 2018 Bonds at the place, on the dates and in the manner provided herein and in said Series 2018 Bonds according to the terms thereof. The amounts due on the Series 2018 Bonds are payable solely from monies held or received by the Trustee hereunder or under the City Purchase Agreement, all of which are hereby specifically assigned and pledged to such payment in the manner and to the extent specified herein and nothing herein or in the Series 2018 Bonds shall be construed as assigning or pledging any other funds or assets of the Corporation.

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SECTION 6.4. *Rights under City Purchase Agreement.* The Corporation agrees that the Trustee in its own name or in the name of the Corporation upon notice to the Corporation may enforce all rights of the Corporation and all obligations of the City (except with respect to the Corporation's rights to indemnity and to reimbursement or payment of expenses and fees and certain other rights that are not assigned hereunder) under the City Purchase Agreement for and on behalf of the Bondholders, whether or not the Corporation is then in default hereunder.

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SECTION 7.1. *Events of Default.* Each of the following is hereby declared an "Event of Default" hereunder:

(a) If payment of any installment of interest on any Series 2018 Bond shall not be made in full when the same becomes due and payable;

(b) If payment of the principal or redemption premium, if any, on any Series 2018 Bond shall not be made in full when the same becomes due and payable;

(c) If, under the provisions of any law for the relief or aid of debtors, any court of competent jurisdiction shall assume custody or control of all or any part of the interests pledged hereunder and such custody or control shall continue for more than 60 days;

(d) If the Corporation shall default in the due and punctual performance of any other of the covenants, conditions, agreements and provisions on its part to be performed as provided herein or in the Series 2018 Bonds and such default shall continue for 30 days after written notice specifying such default and requiring the same to be remedied shall have been given to the Corporation and the City by the Trustee, unless within such 30 days the Corporation shall have commenced and be diligently pursuing in good faith appropriate corrective action to the satisfaction of the Trustee; the Trustee may give such notice in its discretion and shall give such notice at the written request of the Bondholders of not less than 25% in principal amount of the Series 2018 Bonds then Outstanding;

(e) Any *"Event of Default"* under the City Purchase Agreement; or

(f) The City fails to comply with any applicable provision of the Tax Exemption Certificate with the result that interest on any of the Tax-Exempt Bonds becomes includible in gross income for purposes of federal income taxes.

SECTION 7.2. *Remedies and Enforcement of Remedies.* (a) Upon the occurrence and continuance of any Event of Default and in accordance with Article VII hereof and Article VII of the City Purchase Agreement, the Trustee may, and upon the written request of the Bondholders of not less than a majority in principal amount of the Series 2018 Bonds Outstanding, together with indemnification of the Trustee to its satisfaction therefor, shall, proceed forthwith to protect and enforce its rights and the rights of the Series 2018 Bondholders hereunder and the Series 2018 Bonds by such suits, actions or proceedings as the Trustee, being advised by counsel, shall deem expedient, including but not limited to, an action for the recovery of any amounts due hereunder or for damages for the breach of this Indenture, and the Trustee may pursue any other remedy which the law affords, including the remedy of specific performance. The Trustee shall also have those remedies which the Corporation is provided pursuant to Article VII of the City Purchase Agreement, subject to any limitations on such remedies set forth in Article VII

(b) Regardless of the happening of an Event of Default and subject to Section 7.7 of the Indenture, the Trustee, if requested in writing by the Bondholders of not less than a majority in principal amount of the Series 2018 Bonds then Outstanding shall, upon being indemnified to its satisfaction therefor, institute and maintain such suits and proceedings as it may be advised shall be necessary or expedient (i) to prevent any impairment of the security hereunder by any acts which may be unlawful or in violation hereof, or (ii) to preserve or protect the interests of the Bondholders, provided that such request is in accordance with law and the provisions hereof and, in the sole judgment of the Trustee, is not unduly prejudicial to the interest of the Bondholders of Series 2018 Bonds not making such request.

SECTION 7.3. *No Acceleration.* In no event shall the Trustee have the right to accelerate or cause to become immediately due and payable or payable in advance of their scheduled maturity dates, other than an optional redemption pursuant to this Indenture and then only to the extent of the amount to be so redeemed and only pursuant to Article III of the Indenture, amounts due hereunder.

SECTION 7.4. *Application of Revenues and Other Monies After Default.* During the continuance of an Event of Default all monies received by the Trustee pursuant to any right given or action taken under the provisions of this Article, shall, after payment of the costs and expenses of the proceedings resulting in the collection of such monies and of the fees, expenses and advances incurred or made by the Trustee with respect thereto, be deposited in the 2018 Senior Lien Bond Fund, and all amounts held by the Trustee hereunder shall be applied as follows:

*First:* To the payment of amounts, if any, payable pursuant to the Tax Exemption Certificate;

*Second:* To the payment to the Persons entitled thereto of all installments of interest (including interest on amounts unpaid when due on the Series 2018 Bonds) then due, and, if the amount available shall not be sufficient to pay in full any installment or installments then due, then to the payment thereof ratably, according to the amounts due thereon to the Persons entitled thereto, without any discrimination or preference; and

*Third:* To the payment to the Persons entitled thereto of the unpaid Principal Installments or redemption price of any Series 2018 Bonds which shall have become due, whether at maturity or by call for redemption, in the order of their due dates, and if the amounts available shall not be sufficient to pay in full all the Series 2018 Bonds due on any date, then to the payment thereof ratably, according to the amounts of Principal Installments or redemption price due on such date, to the Persons entitled thereto, without any discrimination or preference.

Whenever monies are to be applied by the Trustee pursuant to the provisions of this Section, such monies shall be applied by it at such times, and from time to time, as the Trustee shall determine, having due regard for the amount of such monies available for application and the likelihood of additional monies becoming available for such application in the future. Whenever the Trustee shall apply such monies, it shall fix the date upon which such application is to be made and upon such date interest on the amounts of principal of the Series 2018 Bonds to be paid on such dates shall cease to accrue. The Trustee shall give such notice as it may deem appropriate of the deposit with it of any such monies and of the fixing of any such date, and shall not be required to make payment to the Bondholder of any unpaid Series 2018 Bond until such Series 2018 Bond shall be presented to the Trustee for appropriate endorsement of any partial payment or for cancellation if fully paid.

Whenever all principal of and interest on the Series 2018 Bonds which has become due has been paid under the provisions of this Section and all expenses and charges of the Trustee have been paid and the 2018 Senior Lien Bond Fund contains the amounts then required to be credited thereto, any balance remaining shall be paid to the City.

SECTION 7.5. *Remedies Not Exclusive.* No remedy by the terms hereof conferred upon or reserved to the Trustee or the Series 2018 Bondholders is intended to be exclusive of any other remedy, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or existing at law or in equity or by statute on or after the date hereof.

SECTION 7.6. *Remedies Vested in Trustee.* All rights of action (including the right to file proof of claims) hereunder or under any of the Series 2018 Bonds may be enforced by the Trustee, without the possession of any of the Series 2018 Bonds or the production thereof in any trial or other proceedings relating thereto. Any such suit or proceeding may be brought without the necessity of joining as plaintiffs or defendants any Bondholders of the Series 2018 Bonds. Subject to the provisions of Section 7.4 of the Indenture, any recovery or judgment shall be for the equal benefit of the Bondholders of the Outstanding Series 2018 Bonds.

SECTION 7.7. *Individual Series 2018 Bondholder Action Restricted.* (a) No Bondholder of any Series 2018 Bond shall have any right to institute any suit, action or proceeding in equity or at law for the enforcement hereof or for the execution of any trust hereunder or for any remedy hereunder except for the right to institute any suit, action or proceeding in equity or at law for the enforcement of the Trustee's duties and powers hereunder upon the occurrence of all of the following events:

(i) The Bondholders of at least a majority in principal amount Series 2018 Bonds Outstanding, shall have made written request to the Trustee to proceed to exercise the powers granted herein; and

(ii) Such Series 2018 Bondholders shall have offered the Trustee reasonable security or indemnity as provided in Section 8.2(e) of the Indenture; and

(iii) The Trustee shall have failed or refused to exercise the duties or powers herein granted for a period of 60 days after receipt by it of such request and offer of indemnity; and

(iv) During such 60-day period no direction inconsistent with such written request has been delivered to the Trustee by the Bondholders of a greater majority in principal amount of Series 2018 Bonds then Outstanding.

(b) No one or more Bondholders of Series 2018 Bonds shall have any right in any manner whatsoever to affect, disturb or prejudice the security hereof or to enforce any right hereunder except in the manner herein provided and for the equal benefit of the Bondholders of all Series 2018 Bonds Outstanding.

(c) Nothing contained herein shall affect or impair, or be construed to affect or impair, the right of the Bondholder of any Series 2018 Bond (i) to receive payment of the principal of or interest on such Series 2018 Bond, as the case may be, on or after the due date thereof or (ii) to institute suit for the enforcement of any such payment on or after such due date; provided, however, no Bondholder of any Series 2018 Bond may institute or prosecute any such suit or enter judgment therein if, and to the extent that, the institution or prosecution of such suit or the entry of judgment therein would, under applicable law, result in the surrender, impairment, waiver or loss of the lien hereof on the monies, funds and properties pledged hereunder for the equal and ratable benefit of all Bondholders of Series 2018 Bonds.

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SECTION 7.8. *Termination of Proceedings.* In case any proceeding taken on account of an Event of Default shall have been discontinued or abandoned for any reason or shall have been determined adversely to the Trustee or the Series 2018 Bondholders, then the Corporation, the Trustee and the Series 2018 Bondholders shall be restored to their former positions and rights hereunder, and all rights and powers of the Trustee and the Series 2018 Bondholders shall continue as if no such proceeding had been taken.

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SECTION 9.1. *Supplements not Requiring Consent of Series 2018 Bondholders.* The Corporation acting through the Corporation Representative and the Trustee may, but without the consent of or notice to any of the Bondholders, enter into one or more supplements for one or more of the following purposes:

(a) To cure any ambiguity or formal defect or omission herein or to correct or supplement any provision herein which may be inconsistent with any other provision herein, or, to make any other provisions with respect to matters or questions arising hereunder provided such action shall, in the opinion of the Trustee, not materially adversely affect the interests of the Bondholders;

(b) To grant or confer upon the Bondholders any additional rights, remedies, powers or authority that may lawfully be granted or conferred upon them;

(c) To secure additional revenues or provide additional security or reserves for payment of the Series 2018 Bonds;

(d) To comply with the requirements of any state or federal securities laws or the Trust Indenture Act of 1939, as from time to time amended, if required by law or regulation lawfully issued thereunder;

(e) To provide for the appointment of a successor trustee or co-trustee pursuant to the terms of Section 8.6 and Section 8.11 hereof;

(f) To permit Series 2018 Bonds in bearer form, provided that with respect to the Series 2018 Bonds, only if, in the opinion of Bond Counsel received by the Corporation and the Trustee, such action will not cause the interest on any Series 2018 Bonds to become includible in gross income for purposes of federal income taxes;

(g) To preserve the exclusion of the interest on the Series 2018 Bonds from gross income for purposes of federal or State income taxes and to preserve the power of the Corporation to continue to issue bonds or other obligations (specifically not limited to the Series 2018 Bonds authorized hereby) the interest on which is likewise exempt from federal and State income taxes; and

(h) To adopt procedures for the disclosure of information to Series 2018 Bondholders and to others in accordance with any guidelines for such purpose promulgated by the American Bankers Association or some other similar national organization, as such guidelines may be made applicable to the Indenture by agreement of the Trustee, the Corporation and the City.

(i) To provide for the Senior Lien Parity Reserve Fund to be a parity reserve fund for the benefit of one or more series of Senior Lien Obligations as set forth in Section 5.4(c) of the Indenture.

SECTION 9.3. *Execution and Effect of Supplements.* (a) In executing any Supplement, the Trustee and Corporation shall be entitled to receive and to rely upon an opinion of counsel stating that the execution of such Supplement is authorized or permitted hereby. The Trustee may but shall not be obligated to enter into any such Supplement which affects the Trustee's own rights, duties or immunities.

(b) Any Supplement under this Article which adversely affects the rights of the City shall not become effective unless and until the City, at its sole discretion, shall have consented in writing to the execution and delivery of such Supplement. In this regard the Trustee shall cause notice of the proposed execution and delivery of any such Supplement together with a copy of the proposed Supplement to be delivered to the City at least ten days prior to the date of its proposed execution and delivery in the case of a Supplement referred to in Section 9.1 of the Indenture and at least ten days prior to the date of mailing of the notice of the proposed execution and delivery in the case of a Supplement referred to in Section 9.2.

(c) Upon the execution and delivery of any Supplement in accordance with this Article, the provisions hereof shall be modified in accordance therewith and such Supplement shall form a part hereof for all purposes and every Bondholder of a Series 2018 Bond theretofore or thereafter authenticated and delivered hereunder shall be bound thereby.

(d) Any Series 2018 Bond authenticated and delivered after the execution and delivery of any Supplement in accordance with this Article may, and if required by the Corporation or the Trustee shall, bear a notation in form approved by the Corporation and Trustee as to any matter provided for in such Supplement. If the Corporation shall so determine, upon advice of Bond Counsel, new Series 2018 Bonds so modified as to conform in the opinion of the Trustee and the Corporation to any such Supplement may be executed by the Corporation and authenticated and delivered by the Trustee in exchange for and upon surrender of Series 2018 Bonds then Outstanding.

SECTION 9.4. *Amendments to City Purchase Agreement Not Requiring Consent of 2008 Bondholders.* The Corporation and the Trustee may, without the consent of or notice to any of the Bondholders consent to and join with the City in the execution and delivery of any amendment, change or modification of the City Purchase Agreement as may be required:

(a) by the provisions thereof;

(b) to cure any ambiguity or formal defect or omission therein or to correct or supplement any provision therein which may be inconsistent with any other provision therein, or to make any other provisions with respect to matters or questions arising thereunder provided such action shall, in the opinion of the Trustee, not materially adversely affect the interests of the Bondholders;

(c) to provide for the Senior Lien Parity Reserve Fund to be a parity reserve fund for the benefit of one or more series of Senior Lien Obligation as set forth in Section 2.6(d) thereof;

(d) to preserve the exclusion of the interest on the Series 2018 Bonds from gross income for purposes of federal or State income taxes and to preserve the power of the Corporation to continue to issue bonds or other obligations (specifically not limited to the Series 2018 Bonds authorized hereby) the interest on which is likewise exempt from federal and State income taxes in connection with any other change therein which in the opinion of the Trustee will not materially adversely affect the interests of the Bondholders or the Trustee.

(e) In addition, the Corporation and the City may amend Exhibit A to the City Purchase Agreement at any time without notice to or consent of the Trustee or the Bondholders.

SECTION 9.5. *Amendments to City Purchase Agreement Requiring Consent of Series 2018 Bondholders.*

(a) Except for amendments, changes or modification to the City Purchase Agreement referred to in Section 9.4 of the Indenture and subject to the terms and provisions and limitations contained in this Article and not otherwise, the Trustee may consent to and join with the City in the execution and delivery of any amendment, change or modification to the City Purchase Agreement only upon the consent of not less than a majority in principal amount of Series 2018 Bonds then Outstanding, given as provided in this Section, provided, however, no such amendment, change or modification may affect the obligation of the City to make payments under the City Purchase Agreement or reduce the amount of or extend the time for making such payments without the consent of the Bondholders of all Series 2018 Bonds then Outstanding.

(b) If at any time the Corporation and the City shall request the consent of the Trustee to any such amendment, change or modification to the City Purchase Agreement the Trustee shall, upon being reimbursed or satisfactorily indemnified by the City with respect to expenses, cause notice of the proposed amendment, change or modification to be given in the same manner as provided in Section 9.2 of the Indenture with respect to Supplements hereto. Such notice shall briefly set forth the nature of the proposed amendment, change or modification and shall state that copies thereof are on file at the office of the Trustee for inspection by all Series 2018 Bondholders.

(c) If the consent to and approval of the execution of such amendment, change or modification is given by the Bondholders of not less than the aggregate principal amount or number of Series 2018 Bonds specified in subsection (a) within the time and in the manner provided by Section 9.2 hereof with respect to Supplements hereto, but not otherwise, such amendment, change or modification may be consented to, executed and delivered upon the terms and conditions and with like binding effect upon the Bondholders as provided in Sections 9.2 and 9.3 of the Indenture with respect to Supplements hereto.

SECTION 10.1. *Discharge.* If payment of all principal of, premium, if any, and interest on all of the Series 2018 Bonds in accordance with their terms and as provided herein is made, or is provided for in accordance with this Article and Article VII of the Airport Revenue Bond Ordinance, and if all other sums, if any, payable by the Corporation hereunder shall be paid, then the liens, estates and security interests granted hereby shall cease. Thereupon, upon the request of the Corporation, and upon receipt by the Trustee of an opinion of counsel addressed to the Corporation and Trustee stating that all conditions precedent to the satisfaction and discharge of the lien hereof have been satisfied, the Trustee shall execute and deliver proper instruments acknowledging such satisfaction and discharging the lien hereof and the Trustee shall transfer all property held by it hereunder, other than monies or obligations held by the Trustee for payment of amounts due or to become due on the Series 2018 Bonds, to the Corporation, the City or such other Person as may be entitled thereto as their respective interests may appear. Such satisfaction and discharge shall be without prejudice to the rights of the Trustee thereafter to charge and be compensated or reimbursed for services rendered and expenditures incurred in connection herewith.

The Corporation or the City may at any time surrender to the Trustee for cancellation any Series 2018 Bonds previously authenticated and delivered which the Corporation or the City may have acquired in any manner whatsoever and such Series 2018 Bonds upon such surrender and cancellation shall be deemed to be paid and retired.

SECTION 10.2. *Providing for Payment of Series 2018 Bonds.* Payment of all or any part of the Series 2018 Bonds in authorized denominations may be provided for by the deposit with the Trustee or a qualified institution under Article VII of the Airport Revenue Bond Ordinance as agent for the Trustee (the *"Depository Trustee")* of monies or Qualified Permitted Investments which are not redeemable in advance of their maturity dates, or which are redeemable in advance of their maturity dates only at the option of the Bondholder thereof, or both. The monies and the maturing principal and interest income on such Qualified Permitted Investments, if any, shall be sufficient, as evidenced by a certificate of an independent nationally recognized certified public accountant or firm of such accountants addressed to, and acceptable to the City, to pay when due the principal or redemption price of and interest on such Series 2018 Bonds. The monies and Qualified Permitted Investments shall be held by the Trustee irrevocably in trust for the Bondholders of such Series 2018 Bonds solely for the purpose of paying the principal, or redemption price of and interest on such Series 2018 Bonds as the same shall mature, come due or become payable upon prior redemption, and, if applicable, upon simultaneous direction, expressed to be irrevocable, to the Trustee and the Depository Trustee as to the dates upon which any such Series 2018 Bonds are to be redeemed prior to their respective maturities.

If payment of Series 2018 Bonds is so provided for, the Trustee or the Depository Trustee shall mail a notice so stating to each Bondholder of a Series 2018.

Series 2018 Bonds, the payment of which has been provided for in accordance with this Section, shall no longer be deemed Outstanding hereunder or secured hereby. The obligation of the Corporation in respect of such Series 2018 Bonds shall nevertheless continue but the Bondholders thereof shall thereafter be entitled to payment only from the monies or Qualified Permitted Investments deposited with the Trustee or the Depository Trustee to provide for the payment of such Series 2018 Bonds.

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# APPENDIX G

**Proposed Form of Legal Opinion of Bond Counsel**
**[Letterhead of Greenberg Traurig, LLP]**
**[To Be Dated Closing Date]**

We hereby certify that we have examined a certified copy of the proceedings of the City of Phoenix Civic Improvement Corporation (the *"Corporation"*) passed preliminary to the issue of its Senior Lien Airport Revenue Bonds, Series 2018 in the amount of $ (the *"Series 2018 Bonds"*) in fully registered form, dated the date of initial authentication and delivery thereof. The Series 2018 Bonds are being issued to prepay certain obligations (the *"2018 Loan"*) previously issued to finance improvements to the airport facilities of the City of Phoenix, Arizona (the *"City"*) and to finance additional improvements to such facilities.

We have examined the law and such documents and matters as we have deemed necessary to render this opinion, including, without limitation, the original or a copy identified to our satisfaction as being a true copy of the Indenture (as defined herein).

As to questions of fact material to the opinions expressed herein, we have relied upon, and have assumed due compliance with the provisions of, the proceedings and other documents, and have relied upon certifications and representations furnished to us without undertaking to verify the same by independent investigation, including, without limitation, the use to be made of the proceeds of the Series 2018 Bonds. Reference is made to certifications of and opinions of counsel to parties other than the Corporation with respect to the existence and powers of such parties to enter into and perform the instruments referred to, the authorization, execution and delivery of such instruments by such parties and such instruments being binding upon and enforceable against such parties; we express no opinion as to such matters.

The Series 2018 Bonds are being issued pursuant to a Bond Indenture, dated as of November 1, 2018 (the *"Indenture"*) between the Corporation and U.S. Bank National Association, as trustee (the *"Trustee"*). The Series 2018 Bonds are payable solely, as to both principal and interest, from payments made by the City under the City Purchase Agreement, dated as of November 1, 2018 (the *"City Purchase Agreement"*) between the Corporation and the City.

Based upon the foregoing, we are of the opinion as of this date, which is the date of initial delivery of the Series 2018 Bonds against payment therefor, that:

1. The Indenture, the City Purchase Agreement and the Series 2018 Bonds have been duly authorized, executed and delivered by the Corporation and are valid and binding upon and enforceable against the Corporation.

2. The Series 2018 Bonds constitute special obligations of the Corporation, and the principal of and interest and any premium on the Series 2018 Bonds (collectively, *"debt service"*), unless paid from other sources, are payable solely from the revenues and other monies pledged and assigned by the Indenture to secure that payment. Those revenues and other monies include payments required to be made by the City under the City Purchase Agreement, and the City's obligation to make those payments is secured by a pledge of Net Airport Revenues (as defined in the City Purchase Agreement) received from the City's airport facilities. The Indenture creates the pledge which it purports to create in the pledged revenues and of other monies in the funds and accounts created by the Indenture (other than the Construction Fund and the Rebate Fund), which pledge will be perfected only as to the revenue and other monies on deposit in the funds and accounts created by the Indenture and held by the Trustee. The Series 2018 Bonds and the payment of debt service are not secured by an obligation or pledge of any monies raised by taxation; the Series 2018 Bonds do not represent or constitute a debt or pledge of the general credit of the Corporation, the City or the State of Arizona; and the City Purchase Agreement, including the City's obligation to make the payments required thereunder, does not represent or constitute a debt or pledge of the general credit of the City.

3. The Internal Revenue Code of 1986, as amended (the *"Code"*), includes requirements which the City and the Corporation must continue to meet after the issuance of the Series 2018 Bonds in order that interest on the Series 2018 Bonds be excludable from gross income for federal income tax purposes. The failure of the City and the Corporation to meet these requirements may cause interest on the Series 2018 Bonds to be included in gross income for federal income tax purposes retroactive to their date of issuance. The City and the Corporation have covenanted to take the actions required by the Code in order to maintain the excludability from gross income for federal income tax purposes of interest on the Series 2018 Bonds. (Subject to the limitations in the next to last paragraph hereof, the City and the Corporation have full legal power and authority to comply with such covenants.) Under existing statutes, regulations, rulings and court decisions, subject to the assumption stated in the last sentence of this paragraph, interest on the Series 2018 Bonds is excludable from the gross income of the owners thereof for federal income tax purposes (except for interest on any Series 2018 Bond for any period during which such Series 2018 Bond is owned by a person who is a substantial user of the Property (as defined in the City Purchase Agreement) or any person considered to be related to such person (within the meaning of Section 147(a) of the Code)), and, if the foregoing is the case, the interest on the Series 2018 Bonds is exempt from income taxation under the laws of the State of Arizona. Interest on the Series 2018 Bonds will be treated as an item of tax preference for purposes of the federal alternative minimum tax imposed on individuals. For corporations, tax legislation enacted in 2017 eliminated the alternative minimum tax for taxable years beginning after December 31, 2017; no opinion is being provided with respect to the alternative minimum tax imposed on corporations for taxable years beginning before December 31, 2017. We express no opinion regarding other federal tax consequences resulting from the ownership, receipt or accrual of interest on, or disposition of, the Series 2018 Bonds. In rendering the opinion expressed above, we have assumed continuing compliance with the tax covenants referred to above that must be met after the issuance of the Series 2018 Bonds in order that interest on the Series 2018 Bonds not be included in gross income for federal tax purposes.

In rendering the foregoing opinions, we have assumed and relied upon compliance with the City's and the Corporation's covenants and the accuracy, including with respect to the application of the proceeds of the 2018 Loan and the Series 2018 Bonds, respectively, which we have not independently verified, of the City's and the Corporation's representations and certifications contained in the transcript. The accuracy of those representations and certifications, and the City's and the Corporation's compliance with those covenants, may be necessary for the interest on the Series 2018 Bonds to be and remain excluded from gross income for federal and State income tax purposes and for certain of the other tax effects stated above. Failure to comply with certain requirements subsequent to issuance of the Series 2018 Bonds could cause interest on the Series 2018 Bonds to be included in gross income for federal and State income tax purposes retroactively to the date of issuance of the Series 2018 Bonds. We have also relied upon the parity test certificate of LeighFischer Inc. as to the ratio of Net Airport Revenues to Maximum Annual Debt Service for the period identified therein (as such terms are defined in the City Purchase Agreement).

The rights of the owners of the Series 2018 Bonds and the enforceability of those rights under the Series 2018 Bonds and the documents referred to above may be subject to bankruptcy, insolvency, reorganization, moratorium and similar laws affecting creditors' rights and the enforcement of those rights may be subject to the exercise of judicial discretion in accordance with general principles of equity.

Our opinion represents our legal judgment based upon our review of the law and the facts we deem relevant to render such opinion and is not a guarantee of a result. This opinion is given as of the date hereof and we assume no obligation to review or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

Respectfully submitted,

# APPENDIX H

## Form of Continuing Disclosure Undertaking

This Continuing Disclosure Undertaking (the *"Undertaking"*), dated November , 2018, is executed and delivered by the City of Phoenix, Arizona (the *"City"*), in connection with the issuance of $ City of Phoenix Civic Improvement Corporation Senior Lien Airport Revenue Bonds, Series 2018 (the *"Series 2018 Bonds"*). The Series 2018 Bonds are being issued pursuant to Bond Indenture, dated as of November 1, 2018 (the *"Indenture"*), by and between the City of Phoenix Civic Improvement Corporation (the *"Corporation"*) and U.S. Bank National Association, as trustee (the *"Trustee"*). The City covenants and agrees as follows:

1. *Purpose of this Undertaking*. This Undertaking is executed and delivered by the City as of the date set forth below, for the benefit of the beneficial owners of the Series 2018 Bonds and in order to assist the Participating Underwriters in complying with the requirements of the Rule (as defined below). The City represents that it will be the only obligated person with respect to the Series 2018 Bonds at the time the Series 2018 Bonds are delivered to the Participating Underwriters and that no other person is expected to become so committed at any time after issuance of the Series 2018 Bonds.

2. *Definitions*. The terms set forth below shall have the following meanings in this Undertaking, unless the context clearly otherwise requires.

*"Annual Financial Information"* means the financial information and operating data set forth in *Exhibit I*.

*"Annual Financial Information Disclosure"* means the dissemination of disclosure concerning Annual Financial Information and the dissemination of the Audited Financial Statements as set forth in Section 4.

*"Audited Financial Statements"* means the audited financial statements of the City prepared pursuant to the standards and as described in *Exhibit I*.

*"City Purchase Agreement"* means the City Purchase Agreement dated as of November 1, 2018, and by and between the City and the Corporation.

*"Commission"* means the Securities and Exchange Commission.

*"Dissemination Agent"* means any agent designated as such in writing by the City and which has filed with the City a written acceptance of such designation, and such agent's successors and assigns.

*"EMMA"* means the Electronic Municipal Market Access system of the MSRB. As of the date of this Undertaking, information regarding submissions to EMMA is available at http://emma.msrb.org.

*"Event"* means the occurrence of any of the events set forth in *Exhibit II*.

*"Exchange Act"* means the Securities Exchange Act of 1934, as amended.

*"Listed Event"* means the occurrence of material events set forth in *Exhibit II*, provided that with respect to any Event qualified by the phrase "if material," materiality shall be interpreted under the Exchange Act. If an Event is not qualified by the phrase "if material," such Event shall in all cases be material.

*"Listed Events Disclosure"* means dissemination of disclosure concerning a Listed Event as set forth in Section 5.

*"MSRB"* means the Municipal Securities Rulemaking Board.

*"Participating Underwriter"* means each broker, dealer or municipal securities dealer acting as an underwriter in the primary offering of the Series 2018 Bonds.

*"Rule"* means Rule 15c2-12 adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

*"State"* means the State of Arizona.

*"Undertaking"* means the obligations of the City pursuant to Sections 4 and 5 hereof.

3. *CUSIP Number/Final Official Statement.* The CUSIP Numbers of the Series 2018 Bonds are as follows:

| Maturity Date | CUSIP No. | Coupon | Maturity Date | CUSIP No. | Coupon |
|---|---|---|---|---|---|

The Official Statement relating to the Series 2018 Bonds is dated October , 2018 (the *"Final Official Statement"*).

4. *Annual Financial Information Disclosure.* Subject to Section 9 of this Undertaking, the City shall disseminate its Annual Financial Information and its Audited Financial Statements (in the form and by the dates set forth in *Exhibit I*) to the MSRB through EMMA in an electronic format. The City is required to deliver such information in such manner and by such time so that such entities receive the information by the dates specified.

If any part of the Annual Financial Information can no longer be generated because the operations to which it is related have been materially changed or discontinued, the City will disseminate a statement to such effect as part of its Annual Financial Information for the year in which such event first occurs.

If any amendment is made to this Undertaking, the Annual Financial Information for the year in which such amendment is made shall contain a narrative description of the reasons for such amendment and its impact on the type of information being provided.

5. *Listed Events Disclosure.* Subject to Section 9 of this Undertaking, the City hereby covenants that it will disseminate in a timely manner not in excess of ten business days after the occurrence of the event, Listed Events Disclosure to the MSRB through EMMA in an electronic format as prescribed by the MSRB. Notwithstanding the foregoing, notice of optional or unscheduled redemption of any of the Series 2018 Bonds or defeasance of any Series 2018 Bonds need not be given under this Undertaking any earlier than the notice (if any) of such redemption or defeasance is given to the holders of the Series 2018 Bonds pursuant to the Indenture.

6. *Duty to Update.* The City shall determine, in the manner it deems appropriate, the address of EMMA or such alternate repository specified by the MSRB each time it is required to file information with such entities.

7. *Consequences of Failure of the City to Provide Information.* The City shall give notice in a timely manner to the MSRB through EMMA, of any failure to provide Annual Financial Information Disclosure when the same is due hereunder.

In the event of a failure of the City to comply with any provision of this Undertaking, the Beneficial Owner of any Series 2018 Bond may seek mandamus or specific performance by court order, to cause the City to comply with its obligations under this Undertaking. A default under this Undertaking shall not be deemed an event of default under the City Purchase Agreement or the Indenture, and the sole remedy available to holders of the Series 2018 Bonds under this Undertaking in the event of any failure of the City to comply with this Undertaking shall be an action to compel performance.

8. *Amendments; Waiver.* Notwithstanding any other provision of this Undertaking, the City by certified resolution or ordinance authorizing such amendment or waiver, may amend this Undertaking, and any provision of this Undertaking may be waived only if:

(a) The amendment or waiver is made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature, or status of the City, or type of business conducted;

(b) This Undertaking, as amended or affected by such waiver, would have complied with the requirements of the Rule at the time of the primary offering, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(c) The amendment or waiver does not materially impair the interests of the beneficial owners of the Series 2018 Bonds, as determined by parties unaffiliated with the City (such as the Trustee) or by approving vote of the holders of the Series 2018 Bonds pursuant to the Indenture at the time of the amendment.

The Annual Financial Information containing amended operating data or financial information resulting from such amendment or waiver, if any, shall explain, in narrative form, the reasons for the amendment or waiver and the impact of the change in the type of operating data or financial information being provided. If an amendment or waiver is made specifying the generally accepted accounting principles (*"GAAP"*) to be followed in preparing financial statements and such changes are material, the Annual Financial Information for the year in which the change is made shall present a comparison between the financial statements or information prepared on the basis of the new accounting principles. Such comparison shall include a qualitative discussion of the differences in the accounting principles and the impact of the change in the accounting principles in the presentation of the financial information in order to provide information to investors to enable them to evaluate the ability of the City to meet its obligations. To the extent reasonably feasible, such comparison also shall be quantitative. If the accounting principles of the City change or the Fiscal Year of the City changes, the City shall file a notice of such change in the same manner as for a notice of Listed Event.

9. *Termination of Undertaking.* The Undertaking of the City shall be terminated hereunder if the City shall no longer have liability for any obligation on or relating to repayment of the Series 2018 Bonds under the City Purchase Agreement. The City shall give notice in a timely manner if such event occurs, to the MSRB through EMMA in electronic format as prescribed by the MSRB.

10. *Dissemination Agent.* The City may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Undertaking, and may discharge any such Agent, with or without appointing a successor Dissemination Agent.

11. *Additional Information.* Nothing in this Undertaking shall be deemed to prevent the City from disseminating any other information, using the means of dissemination set forth in this Undertaking or any other means of communication, or including any other information in any Annual Financial Information Disclosure or Listed Events Disclosure, in addition to that which is required by this Undertaking. If the City chooses to include any information from any document or Listed Events Disclosure in addition to that which is specifically required by this Undertaking, the City shall have no obligation under this Undertaking to update such information or include it in any future Annual Financial Information Disclosure or Listed Events Disclosure.

12. *Beneficiaries*. This Undertaking has been executed in order to assist the Participating Underwriters in complying with the Rule; however, this Undertaking shall inure solely to the benefit of the City, the Dissemination Agent, if any, and the beneficial owners of the Series 2018 Bonds, and shall create no rights in any other person or entity.

13. *Recordkeeping*. The City shall maintain records of all Annual Financial Information Disclosure and Listed Events Disclosure including the content of such disclosure, the names of the entities with whom such disclosure was filed and the date of filing such disclosure.

14. *Assignment*. The City shall not transfer obligations under the City Purchase Agreement unless the transferee agrees to assume all obligations of the City under this Undertaking or to execute an undertaking meeting the requirements of the Rule.

15. *Governing Law.* This Undertaking shall be governed by the laws of the State.

CITY OF PHOENIX, ARIZONA

By Ed Zuercher
Its City Manager

By: ______________________________
Denise M. Olson
Chief Financial Officer

ATTEST:

By: ______________________________
City Clerk

APPROVED AS TO FORM:

By: ______________________________
City Attorney

## EXHIBIT I

## ANNUAL FINANCIAL INFORMATION AND TIMING AND AUDITED FINANCIAL STATEMENTS

"Annual Financial Information" means financial information and operating data of the type contained in the Final Official Statement under the following tables or captions:

(1) Table 3 — "City of Phoenix Civic Improvement Corporation Senior Lien Airport Revenue Bonds Outstanding";

(2) Table 4 — "City of Phoenix Civic Improvement Corporation Junior Lien Airport Revenue Bonds Outstanding";

(3) Table 5 — "City of Phoenix, Aviation Department Enterprise Fund Comparative Schedule of Revenues, Expenditures, Historical Debt Service Coverage and Changes in Fund Balances" (most recently completed Fiscal Year);

(4) Table 6 — "Airlines Reporting Enplaned Passengers and Air Cargo" (most recently completed Fiscal Year);

(5) Table 7 — "Total Enplaned Passengers by Airline" (most recently completed Fiscal Year);

(6) "Aviation Capital Improvement Program" (most recent capital improvement program as of the most recently completed Fiscal Year, but excluding Table 9;

(7) Table 10 — "Historical Average Cost Per Enplanement" (most recently completed Fiscal Year);

(8) Table 11 — "Historical PFC Collections" (most recently completed Fiscal Year); and

(9) Table 12 — "PFC Approvals and Revenues".

All or a portion of the Annual Financial Information and the Audited Financial Statements as set forth below may be included by reference to other documents which have been submitted to the MSRB through EMMA or filed with the Commission. If the information included by reference is contained in a Final Official Statement, the Final Official Statement must be available from the MSRB or the Commission. The City shall clearly identify each such item of information included by reference.

Annual Financial Information exclusive of Audited Financial Statements will be provided to the MSRB through EMMA by February 1 of each year, commencing February 1, 2018. Audited Financial Statements as described below should be filed at the same time as the Annual Financial Information. If Audited Financial Statements are not available when the Annual Financial Information is filed, unaudited financial statements shall be included, to be followed up by Audited Financial Statements when available.

Audited Financial Statements will be prepared according to GAAP, as applied to governmental units as modified by State law.

If any change is made to the Annual Financial Information as permitted by Section 4 of the Undertaking, the City will disseminate a notice of such change as required by Section 4, including changes in Fiscal Year or GAAP.

**EXHIBIT II**
**EVENTS FOR WHICH LISTED**
**EVENTS DISCLOSURE IS REQUIRED**

1. Principal and interest payment delinquencies
2. Non-payment related defaults, if material
3. Unscheduled draws on debt service reserves reflecting financial difficulties
4. Unscheduled draws on credit enhancements reflecting financial difficulties
5. Substitution of credit or liquidity providers, or their failure to perform
6. Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Series 2018 Bonds, or other material events affecting the tax status of the Series 2018 Bonds
7. Modifications to the rights of Bondholders, if material
8. Bond calls, if material, and tender offers
9. Defeasances
10. Release, substitution or sale of property securing repayment of the Series 2018 Bonds, if material
11. Rating changes
12. Bankruptcy, insolvency, receivership or similar event of the City*
13. The consummation of a merger, consolidation, or acquisition involving the City or the sale of all or substantially all of the assets of the City, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material
14. Appointment of a successor or additional trustee or the change of name of a trustee, if material

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* The event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the City in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the City, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the City.